

NATIONAL PLAN

RESPONSE, ASSESSMENT AND TERMINATION OF CLEANING FOR OIL CONTAMINATED FORESHORES



Document History

This guidance is a revision of the version that was endorsed by the National Plan Environment Working Group in 2007; which expanded on the version endorsed by the ESC Workshop in 2001. The Final version is the result of revision after input from ES&T Workshop 2014, National Plan Recovery Technical Group May 2015 and ES&T Workshop 2015. It was endorsed by ES&T Network in August 2015.

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INTRODUCTION

One of the many challenges in responding to a maritime environmental emergency (i.e. a spill) is deciding when to stop. To aid these decisions responders need to understand:

- what is at risk (threatened resources)
- what they are trying to protect (environmental values)
- the most appropriate cleaning method to apply
- what is an acceptable level of cleanliness (endpoint)
- when an acceptable level of cleanliness has been achieved (monitoring).

This document provides structured guidance for identifying this information and including it as environmental components of a *Foreshore Response Plan* and a *Foreshore Inspection and Sign-off Agreement*.

This document is written for people carrying out the function of the Environment Unit in the Planning (or Intelligence) Section of a spill response and who have a basic understanding of marine environmental emergencies and the associated nomenclature. It is a guidance only and may be used or adapted for use, in association with jurisdictional marine oil and/or hazardous and noxious substances spill response plans and procedures.

For the purposes of this guidance, foreshore includes the shoreline and adjacent intertidal and subtidal zones, soft and hard substrata and the water column.

The processes described in this guide have been successfully used in spill responses and may be applied to any aspect of the environment during a spill including open water, and the seabed.

Titleholders in the offshore petroleum industry are encouraged to use these guidance, particularly when consulting with stakeholders to determine stakeholder spill response expectations. Adopting the guidance would contribute towards an offshore titleholder demonstrating that their response arrangements are consistent with the national system. However, it remains the responsibility of the offshore petroleum industry titleholder to show why the recommendations in these guidance are appropriate to their spill response needs.

DOCUMENT STRUCTURE

This document has three sections:

Section 1 – Foreshore response plan

This section provides guidance on developing the environmental components of a *Foreshore Response Plan*. It helps identify when the potential for on-going environmental harm (or diminution of other values) is minimised and when the potential for natural restoration or rehabilitation of biological assemblages to pre-spill conditions (or other agreed environmental endpoints) is maximised. Section 1 addresses:

1. relevant criteria for setting response objectives
2. response options and actions
3. relevant environmental endpoints to help inform decisions about cessation of cleaning operations.

Section 2 – Foreshore inspection and sign-off report

This section provides guidance on how to document and undertake a *Foreshore Sign-off Inspection*. It provides a process to assist with the planning, consultation and inspection of agreed environmental clean-up criteria. The *Foreshore Inspection and Sign-off Report(s)* are the basis for a recommendation to the Incident Controller that cleaning operations should cease. Sign-off would usually be based on the results of response or impact and recovery phase monitoring programs.

The *Foreshore Inspection and Sign-off Report(s)* provides an assessment of the condition of threatened resources and environmental values and may inform ongoing impact and recovery phase monitoring undertaken after the spill response.

Section 3 – Impact and recovery monitoring

This section explains how to identify when environmental values and functions have been restored to the agreed environmental clean-up criteria. On-going impact and recovery monitoring to determine when a segment has recovered is strongly recommended. Determining whether any particular resource has recovered to pre-spill (or other agreed) condition will require a specific impact and recovery phase monitoring approach that may continue for a long time. This form of monitoring would usually focus on the condition of a threatened resource (e.g. mangrove trees). It is expected that the revised Monitoring Handbook¹ will provide further guidance on a framework for impact assessment and end-points for impact and recovery monitoring.

¹ The Monitoring Handbook is currently under review. A new edition is expected to be made available in early 2016.

1 FORESHORE RESPONSE PLAN

The Environment Unit in the Planning (or Intelligence) Section has an important role in developing the environmental components of a *Foreshore Response Plan*.

A *Foreshore Response Plan* is generally developed for each affected area, it is a sub-plan of the *Incident Action Plan* (IAP) and provides an operational guide for responders. The Foreshore Operations Monitoring team use the *Foreshore Response Plan* to assess progress of the clean-up against the objectives and standards within the plan. When the Foreshore Operations Monitoring personnel believe that the objectives have been met a comprehensive foreshore inspection can occur.

The environmental components of a *Foreshore Response Plan* identify the:

1. response area and segment(s) or sector(s)
2. threatened resources
3. environmental values
4. acceptable level(s) of cleanliness
5. optimum clean-up techniques
6. priority for response.

These environmental components may be pre-determined and available in local response plans and this should be the first point of reference in any response.

The *Foreshore Response Plan* will be updated as information becomes available and the spill response progresses.

The *Foreshore Response Plan* may be adapted to form the basis of daily Operation Section orders.

1.1 Response area and segment(s) and sector(s)

The first task is to delineate segments and sectors of the response area. Segments are generally defined by geographic areas and can be delineated into small sectors for operational convenience. For example, a segment may be a 10km beach between two rocky headlands. For operational purposes and managing teams of responders on the beach this may be further broken down into 2km sectors.

Segments and sectors standardise how responders identify response locations.

The delineation and naming of segments and sectors may have been done as part of contingency planning, but if not, is the responsibility of the Planning Section and must be done in consultation with Operations Section to ensure a common, geographic frame-of-reference throughout the response.

1.2 Threatened resources and response priorities

Identifying what are the threatened resources is the next step. Initial identification of threatened resources will usually be based on information from:

- contingency plans
- local knowledge
- the oil spill resources atlas (OSRA)
- field and/or aerial observations
- spill trajectory modelling of pollutant movement.

Threatened resources will include things like important habitats, rare or unique species, nursery areas, areas of national or international significance. When identifying threatened resources, consideration should be given to habitat and biological components and social and cultural considerations.

It is important to identify which resources are most sensitive to degradation by pollution (or response actions). This informs decisions about the most immediate protection priorities, and/or places that will require the greatest restoration effort.

Figure 1 provides an example of how a risk assessment matrix can be used to determine environment protection priorities, the criteria for assessment may be amended to suit individual circumstances. Other methods may also be used.

			Recovery Time			
			>10 yrs	5 – 10 yrs	1 – 5 yrs	<1yr
			1	2	3	4
Potential Impact (% of resource affected)	Severe (>50%)	A	1A	2A	3A	4A
	Major (30-50%)	B	1B	2B	3B	4B
	Minor (10-30%)	C	1C	2C	3C	4C
	Slight (<10%)	D	1D	2D	3D	4D

Figure 1 - Example risk assessment matrix for determining environmental protection priorities for clean-up. It is based on estimated time of recovery and local percentage of that resource threatened. This matrix does not cover all issues that may affect priority.

Source: Maritime New Zealand, A. Lane, 2007

1.3 Determine environmental value

The concept of environmental value (EV) is used to define how each part of the affected environment interacts with other aspects of the environment or how the environment is used. In general, EV's apply more to habitats than individual species and include indigenous, cultural and amenity values, where known. Common EV's in a foreshore response include:

- Default values
 - Shoreline as habitat
 - Water as habitat
- Special values
 - Wildlife contact surfaces
 - Cultural and historic value
 - Food organisms and water that may be abstracted for human consumption
 - Amenity and/or safety of beaches and structures.

EV's are assigned to segments. Some segments will have multiple values. Special Values are generally applied to small areas within segments.

Stakeholders and agencies with an interest in the outcomes of the clean-up should be involved when EV's are being set (see Section 2 below). Ideally, there is alignment of all stakeholders' expectations. The final decision rests with the Incident Controller (IC).

1.4 Acceptable level(s) of cleanliness (or required endpoint)

Table 1 provides guidance on recommended EV's and acceptable levels of cleanliness. These inform criteria for determining endpoints (which may be quantitative) that determine recommendations to stop clean-up activities.

The criteria for endpoints are intended to identify when the potential for on-going environmental harm has been minimised and the potential for natural rehabilitation towards pre-spill ecological conditions has been maximised. The criteria do not define when environmental values have been fully restored.

Specific cases may be dealt with differently as advised by relevant subject matter experts, or the parties involved in the foreshore clean-up, assessment and sign-off procedure but this should be avoided if possible.

Endpoint criteria regarding food organisms and water quality may require analytical assessment. Analytical assessment will depend on how the resource is used and the likelihood for contamination.

Endpoints should be decided in consultation with key stakeholders noting that the IC is responsible for any final decisions.

Endpoints need to be clearly communicated to Operations, along with some practical guidance about how they might be assessed. For example, “no oil sheen” end point might be assessed as the point when low pressure washing or a bucket of water poured on the area of interest does not create a sheen. For surfaces where oil should not rub off the contact surface, a suitable test may be that a sorbent pad wiped against the contaminated surface should not have any staining.

Table 1 Agreed environmental values and acceptable levels of cleanliness. The order in the table does not imply any priority of values.

Environmental value	Acceptable level(s) of cleanliness (or endpoints)
Default values	
Shoreline as habitat ¹	Need not be totally clean but remaining residues must not be mobile or inhibit potential for recovery through toxic or smothering effects ³ .
Water as habitat ²	Oil contamination should not interfere with normal animal/plant feeding, movement, life history processes and behaviour. Must not be toxic to all life stages of biota ³ .
Special values	
Wildlife contact surfaces ⁴	No visible tar balls, slicks or sheens that could adhere to organisms or interfere with normal animal/plant feeding, movement, life history processes and behaviour.
Cultural and historic value ⁵	Sensitive to, and where possible meets, requirements of cultural custodians.
Food organisms and water that may be abstracted for human consumption.	Must meet statutory guidance and/or standards for food production, residues and taints (e.g. NHMRC, NFA, ANZECC) as required.
Amenity and/or safety of beaches and structures (e.g. jetties and slipways)	No visible oil No oil on surfaces or buried in sand that rubs off on people, boats or infrastructure or causes a slip hazard. Compliance with locally relevant Guidance for Recreational Water Quality if required. Compliance with WHS requirements if required.

Explanatory Notes to Table 1

1. Shoreline includes intertidal and subtidal soft and hard substrata. Habitat is the place where organisms live. Habitat should be suitable for all organisms that naturally occur in the area e.g. algae, seagrasses, mangroves, molluscs, crustaceans, annelids, etc.
2. In this value the water is considered as habitat for plankton, fish, corals, mammals, seagrasses, aquaculture species etc. Habitat includes suitable conditions to live in as well as an appropriate environment to feed (particularly filter feeders), breathe (marine mammals and reptiles) and to otherwise sustain viable populations (i.e. support life cycle processes)
3. One measure of compliance that could be appropriate in some circumstances is compliance with ANZECC *Water Quality Guidelines for Protection of Aquatic Ecosystems* to the required level of environmental protection. ANZECC recommends guideline values be tailored to the level of protection required for a particular environment. This may have been already determined by jurisdictions. ANZECC recommends the use of locally relevant trigger values. If these are available they should be used in preference to default guideline values.
4. Surfaces: Includes water surfaces, sediment surfaces and hard surfaces. Intended to encompass hard/sediment surfaces that organisms slide across; water surface that animals might broach to breathe, feed or flee and air/water interface for air-breathing organisms. Definition of clean could include that air is suitable for marine mammals and reptiles to breathe as no surface oil would mean no air contamination.
5. Cultural values will be very diverse and particular to each cultural group and resource. Responders should consult closely and be aware that in some circumstances oiling may be preferable to disturbance of sites.

1.5 Optimum clean-up techniques

Cleaning up should not cause more harm than the pollution. Some methods are more suitable in a particular environment than others. Table 2 provides a starting point for selecting clean-up methods. The Operations Section must be consulted when determining optimum clean-up techniques. Responders should think widely and if necessary, investigate and test clean-up techniques. If possible, test options experimentally. For example, where pressure flushing is anticipated, begin with low pressure and ambient temperature water, gradually increase pressure and/or temperature until the desired effect is achieved without causing further damage.

A Net Environmental Benefit Analysis (NEBA) can be used to assess clean-up options to determine the optimum response. Response actions should not cause more environmental harm than the spill.

Optimum response techniques will be sensitive to cultural considerations and relevant representatives should be engaged in the decision making process.

When discussing response techniques with Operations should be provided with intended quantitative end-points so that the intended outcomes are clear.

Table 2 Possible clean-up options and techniques and how their application in the foreshore area.

Response Options <i>(This is not a comprehensive list)</i>				
1. seek expert advice 2. hand collection - scooping/scraping 3. cold low pressure flushing plus sorbents and/or skimming 4. medium pressure (fire hose) flushing plus sorbents and/or skimming 5. cold high pressure flushing plus sorbents and/or skimming 6. no action, natural degradation 7. hot high pressure flushing plus sorbents and/or skimming 8. wiping with rags or using contained sorbents 9. raking/sediment turning 10. shore treatment (Oil Spill Control Agent – surface cleaning agent or bioremediation agent) 11. removal / replacement, e.g. sand, mud 12. selective removal e.g. pruning vegetation, substrate removal				
Oil volume/type	Level 1 Pool (>1.0cm)	Level 2 Cover (0.1 – 1.0cm)	Level 3 Thin Coating (0.02 – 0.1cm)	Stain (<0.01cm)
Shoreline Type				
Industrial facility structures	5,7,4	4,5,7,10	7,10,6	6
Manmade concrete and stone walls	Test methods 3 and 4	3,10	4,10,6	6
Mud flats	1	1	1	1
Sandy beach	2	2,12	6,10,12	6,10
Boulder shoreline	Test methods 3 and 4	3	4,6	6
Rock platform	2	3,4,6	3,4,6	6
Seagrass	1,2	1,2	1,2,11,12	1,6,11,12
Mangroves	1,2,11	1,2,11	1,2,10,11,12	1,6,11,12
Saltmarshes	1,2,11	1,2,11	1,2,10,11,12	1,6,11,12
Corals	1	1	1	12
Subtidal habitats	2	2,6	6,12	6,12

1.6 Priority for response

For each segment and sector use the environment protection priorities determined when identifying threatened resources and convert these into less complicated rankings to communicate priority for response e.g. high, medium or low.

Rank these in the order the Operations Section should attempt to protect or clean-up e.g. first, second, third.

1.7 Documentation and implementation

Steps 1 to 6 provide the environmental components of a *Foreshore Response Plan* based on the premise that the affected foreshore areas have EV's that will guide cleaning operations.

Table 3 provides an example of how this information could be displayed in a *Foreshore Response Plan* and be used to inform the sign-off process.

Table 3 Example foreshore response summary (noting that not all information can be displayed in such a summary)

Affected Area	Segment Number	Resources	Env. Value	Response / cleaning option	Quantitative end-point expected	Key Stakeholder
Eastern bank downstream of jetty	1-9	Intertidal hard surfaces	Habitat	Cold, low vol flushing and physical wiping	No visible oil	Landowner, EPA
Eastern bank upstream of jetty	10-15	Mangroves	Habitat	Cold low vol flushing at high tide only	Visible sheens no longer present in flushing water or as residue on sediments at low water	EPA / Fisheries
Harbour seawall	16 & 17	Intertidal hard surfaces	Habitat	Surface cleaning agents and medium pressure flushing	No visible residues of oil or cleaning agents	Landowner
Bird sanctuary	18 & 19	Soft sediments used by birds for feeding	Surface	Cold low vol flushing at high tide, careful removal of firm sediment (sand) at low tide	No visible oil and any residues in sediments do not interfere with (inhibit) normal bird feeding behavior	Parks as Landowner
bird sanctuary	18, 19 & 20	Soft surfaces used by birds wading	Surface	Cold low vol flushing at high tide, careful removal of firm sediment (sand) at low tide	No visible oil and no contamination of bird feather when birds present	Parks as Landowner
bird sanctuary	21, 22, 23	Saltmarsh, bird habitat	Surface	Cold low vol flushing at high tide only and selective pruning	No visible oil, no visible residual sheens at low water	EPA / Fisheries

2 FORESHORE INSPECTION AND SIGN-OFF PROCESS

The *Foreshore Inspection and Sign-off Report* documents the environmental values, the assessment process and the agreement that the foreshore clean-up operations have been completed to the satisfaction of the sign-off team.

The foreshore inspection and sign-off process described below is already recognised and agreed to by National Plan participants.

The process is undertaken by a sign-off team that is led by an appropriate person from the Environment Unit and includes relevant authorities and stakeholders. As far as practical, the people in the sign-off team should be those who worked on the *Foreshore Response Plan* to determine the EV(s) and the endpoints they are now going to inspect, assess and sign-off.. Ideally, sign-off team members will have been monitoring and assessing the progress towards the agreed outcomes as members of Foreshore Operations Monitoring team during the response.

Background information about the incident and the extent and level of contamination should be readily available to the team. If need be, the relevant parts of the *Foreshore Response Plan* can be appended to the *Foreshore Inspection and Sign-off Report* and summarised at the beginning of the report for context.

2.1 Establish sign-off team and agree on environmental values

The sign-off team should be led by head of Environment Team and made up of relevant experts and stakeholder representatives, including:

- Control Agency/Incident Controller (e.g. Environment Unit)
- Environment Agency (e.g. EPA, Fisheries, Parks)
- Landowners (e.g. Council, Parks, private)
- Cultural (e.g. Indigenous, amenity)
- The polluter or responsible party
- Other, as required.

This sign-off team will document their agreement to the EV's assigned to each segment and the endpoints. If end-points are controversial, it may be of value to consider an independent expert (e.g. another ESC) as team leader.

2.2 Clean-up Monitoring

Response Phase monitoring – during the response phase the Foreshore Operations Monitoring team will have been monitoring and assessing their progress towards objectives of the *Foreshore Response Plan*. This process ensures effective cleaning, manages priorities, and ensures re-oiling events or other factors are not compromising the activities and objectives. This monitoring will generally be supplemented by ad hoc inspections by members of the Environment Unit.

Inspection – this occurs when the Environment Unit is advised by the Operations Section that they have met their operational objectives. The inspection is undertaken by members of the Environment Unit and may occur more than once, if their expert assessment and report is that clean-up is insufficient to meet agreed sign-off criteria or endpoints.

2.3 Sign-Off

Following confirmation that one or more foreshore areas are considered to have met the objectives of the *Foreshore Response Plan*, the sign-off team inspects these foreshore areas, and if appropriate, agrees the end-point requirements have been met, and will formally sign-off on that area of foreshore.

Depending on original priorities in response planning and the difficulties in cleaning encountered by operations teams, it may be that not all areas will be ready for inspection and sign-off together.

If foreshore inspection and assessment reveals any unacceptable level of contamination in areas, then these areas will not be signed off as of that date. These areas may be further monitored, or where appropriate, be subject to further or different cleaning techniques.

Once these new actions have been completed, formal inspections for sign-off will occur until the relevant parties agree.

Any new areas of foreshore contamination discovered during ongoing monitoring will also require clean up action where necessary.

Completed *Foreshore Inspection and Sign-off Report(s)* for a particular area or segment will inform the IC when making the final determination of when that clean-up activity or operation can cease.

2.4 The report structure

Spills have effects on the environment with costs to a wide range of values. Spill response is designed to minimise or mitigate those effects, and can be very costly in time and money. Decisions to start or stop a spill response have implications that many stakeholders are interested in. Hence, the need to carefully plan, agree and document response objectives, actions and outcomes.

The *Foreshore Inspection and Sign-off Report* becomes a significant part of that documentation and evidence process, and should, ideally, be completed in a way that its purpose, content, conclusions and recommendations can be read standalone, without extensive reference to other documents and plans. The template in Annex 1 provides an example of this.

3 MONITORING THE STATUS OF AFFECTED ENVIRONMENTS

3.1 Monitoring the extent to which environmental values have been restored

The guidance in Sections 1 and 2 above provides levels of cleaning that are intended to be sufficient to allow the return of normal ecosystem function following a maritime environmental emergency response. (Refer to the NOPSEMA web page for further information on regulatory requirements for spills from offshore petroleum activities.)

The IMT should consider whether impact and recovery phase monitoring is necessary to document the extent of recovery that has occurred and determine whether severely affected areas are recovering naturally or require further intervention to assist recovery.

The responsibility to implement this impact and recovery phase monitoring does not reside with the IMT. The IMT should discuss any recommended impact and recovery phase monitoring with the relevant jurisdictional agency responsible for the resources affected.

Monitoring and assessing ecosystem health and other environmental values should be done in accordance with standardised and repeatable survey methods targeting key condition metrics and in most cases will require a comparison with site data collected pre-spill (or baseline data where available) and/or un-impacted reference areas.

3.2 Role of the relevant jurisdiction in impact and recovery phase monitoring

Jurisdictions and resource management agencies need to be aware that under normal circumstances impact and recovery phase monitoring following a maritime incident (also referred to as long-term, effects, scientific or “Type II” monitoring) is not the responsibility of the National Plan, the response IMT or the Control Agency.

Generally, the National Plan will only require and pay for response phase monitoring (i.e. situational awareness gathering, previously referred to as “Type I” monitoring) as this is crucial for effective decision-making and execution of the response. Response phase monitoring focuses primarily on the systematic collection of information about the spill and the effectiveness of clean-up, and occasionally on the direct effects of a particular clean-up technology that may have inherent environmental or other effects, such as the use of chemical control agents, like dispersants or surface cleaners.

Impact and recovery phase monitoring includes monitoring and information gathering to assess environmental or economic damages, and progress towards recovery. Funding for monitoring recovery or rehabilitation will therefore need to be sourced outside the National Plan. Depending on the scale of the spill and the proposed post-spill studies, funding options may be negotiated with government agencies, the ship’s insurers and the International Oil Pollution Compensation Fund (IOPC).

For spills from offshore petroleum activities, the polluter is responsible for the costs associated with cleaning up the escaped petroleum, remediating any resulting damage to the environment and carrying out environmental monitoring of the impact of the escape on the environment (OPPGGS Act 2006, Section 572C)

3.3 The National Plan Oil Spill Monitoring Handbook

The Oil Spill Monitoring Handbook² and Background Paper jointly published by the Australian Maritime Safety Authority and Maritime New Zealand, should be consulted to understand the distinction between response phase and impact and recovery monitoring.

The Handbook also provides a number of detailed methods which are primarily focussed on response phase monitoring, but also may be used or adapted in impact and recovery studies. AMSA and CSIRO are reviewing and updating the Monitoring Handbook and it is due to be re-published in 2016.

3.4 The National Plan Claims Management Guideline – Maritime Incidents

The Claims Management Guideline³ also provides guidance on monitoring studies (at section 6.51) and resourcing and funding restoration and/or reinstatement of an impaired environment (at section 6.59). The following is a summary of that guidance.

Response phase monitoring activities are considered to be an integral part of the response and are funded from the same sources as other components of the response, including through AMSA and the National Plan.

Should a spill (and effects) become latent or chronic and continue after a primary response, studies may be required to, for example, determine the volume of oil remaining on a sunken vessel and the risk of further or ongoing leaks that may result in further or chronic levels of pollution to the adjacent marine, coastal or riverine environments. In effect, the spill and the response has not fully concluded and is ongoing. AMSA may contribute to the cost of these studies, but where the initial spiller has been identified and response costs sought, the costs of ongoing risk monitoring and response, should be factored in to any future site/vessel/wreck management planning with costs met by the shipowner/ship's insurance provider.

Effects can arise from the original spill and/or the response methodologies applied at the time. It should be noted that such studies should not wait until after the response is concluded. Good practice would indicate they be started as soon as possible after the spill, and some of the information collected may also inform response actions, even though they are not primarily designed for response phase purposes.

In line with the IOPC Funds policies and Claims Manual, the National Plan may contribute to the costs of *impact and recovery phase* studies to establish the nature and extent of environmental damage caused by an oil/hazardous and noxious substances spill. In order to qualify for reimbursement it is essential that any such studies are able to contribute to a better understanding of both the effects of the original spill and the effectiveness of response strategies, tactics and techniques. In other words, AMSA may contribute to studies where the results can provide feedback about the spill and response in order to improve response effectiveness. Therefore, a study which demonstrated that no significant long-term environmental damage had occurred does not by itself exclude reimbursement for the costs of the study.

If AMSA funding is sought AMSA expects to be included in the design and oversight of the execution of such studies. AMSA will expect that the study design and execution be professional, objective and balanced. It should also meet requirements of scientific rigour and provide reliable information in a timely and useful manner.

² www.amsa.gov.au/environment/maritime-environmental-emergencies/national-plan/ESC/index.asp

³ www.amsa.gov.au/environment/maritime-environmental-emergencies/national-plan/Supporting-Documents/index.asp

Reinstatement or restoration of a damaged or impaired environment is normally considered to be a step beyond the clean-up process. In many circumstances recovery of an impaired environment will proceed through natural processes without active intervention. In some circumstances it may be desirable or necessary to enhance the natural recovery of an impaired environment following an oil spill through reasonable reinstatement or restoration measures. Where such intervention is being contemplated AMSA, in conjunction with the State/NT maritime administration, may examine ways for this to be done and provide assistance where able. Costs incurred for assessing intervention requirements, as well as those for implementing agreed, reasonable reinstatement measures, may be reimbursed by AMSA. A table of indicative activities aimed at reinstating or restoring an impaired environment following a ship-sourced pollution incident that may be reimbursable under the National Plan is included in the National Plan Claims Management Guide at Appendix E.

As noted above, in offshore incidents the polluter is responsible for the costs associated with responding to escaped petroleum products.

3.5 The International Oil Pollution Compensation Funds (IOPC) Claims Manual

The IOPC Fund Claims Manual⁴ should be consulted for further information on the circumstances under which the IOPC Fund may contribute to post-spill studies and encourages the early involvement of the Fund in planning any such studies. The Fund requires that studies are carried out with professionalism, scientific rigour, objectivity and balance and encourages the formation of a committee or other mechanism to co-ordinate any such studies. The scale of the studies should be in proportion to the extent of the contamination, key resources and environmental values effected and the predictable consequences of hydrocarbon contact.

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⁴ www.iopcfunds.org/publications/

ANNEX 1

FORESHORE INSPECTION AND SIGN-OFF REPORT

Note: This Report should be read in conjunction with the *Foreshore Response Plan* and provides a recommendation to the Incident Controller on the need for further response actions. Part 2 is completed when Environmental Values are agreed early in the response. Part 1 (Summary) and Part 3 (Inspections) are completed later as appropriate.

PART 1 – SUMMARY

Incident name

Location [*relevant Segments and Sectors*]

Recommendation to Incident Controller [*Add more lines as needed*]

Background [*Provides a brief summary of the incident and the actions taken so far – could be extracted from or refer to the overall Incident Action Plan or Foreshore Response Plan*]

Summary of Foreshore Contamination [*Provides a summary of the extent and severity of contamination resulting from the incident. Include reference to the Foreshore Response Plan imagery or maps of relevant area, including any segments determined*]

Overall summary or commentary on all segment results [*Add more lines as needed*]

Conclusion [*Add more lines as needed*]

PART 2 – SIGN-OFF TEAM AND AGREED ENVIRONMENTAL VALUES

Table 1. Effects and Values Summary [A summary of the detailed Individual Location Reports attached in appendices to this Report. Add rows as needed]

Affected Area	Segment Number	Resources / Env Value	Response / cleaning option	Descriptive or Quantitative end-point expected	Key Stakeholder

Table 2. Composition of the Inspection and Sign-off Team [Add rows as needed]

Stakeholder Agency / Organisation / Company	Officer Name and Position	Signature	Agreement Date

PART 3 – SUMMARY RESULTS OF INSPECTIONS FOR AREAS, SEGMENTS AND/OR SECTIONS AND COMPLETION SIGN-OFF

Table 3. Final Inspection Summary [A summary of the detailed Individual Location Reports attached in appendices to this Report. Add rows as needed]

Affected Area	Segment Number	Resources / Env Value	Quantitative end-point expected	Inspection Comments	Acceptable (Yes/No Conditions)

Sign-off Team [Add rows as needed]

Stakeholder Agency / Organisation / Company	Officer Name and Position	Signature	Date

ANNEX 2 INDIVIDUAL SEGMENT DETAILED INSPECTION REPORT

Date	Time
Segment <i>[May refer to more than one area/segment/section – location, general description and map, if suitable]</i>	
Resources and/or Environmental Values Affected <i>[Description of resource and what value is affected – normally addresses one resource/value combination within a single segment – use new Report for further different combinations]</i>	
Key stakeholder <i>[for resources and values identified above]</i>	
Response or cleaning options and activities <i>[should describe both expected technique and actual actions used]</i>	
Quantitative measure or endpoint of acceptability <i>[should describe what should be observed or measured as acceptable outcome]</i>	
Outcome <i>[yes / no / conditional / diverging opinion – please document and describe]</i>	
Any other observations, comments or narrative <i>[for completeness sake]</i>	
Attach relevant documentation e.g. photos	

[End of Document]

