Department of Transport

Dispersant Use Consent Framework

1. Purpose

The purpose of this guidance note is to outline the consent framework for the use of dispersants in or adjacent to Western Australian (WA) State waters during a Marine Oil Pollution (MOP) incident resulting from a shipping or offshore petroleum activity.

* State waters relates to the Territorial Sea Baseline (TSB) to 3nm and also includes some areas around offshore atolls and islands

2. Background

The use of dispersants in response to a MOP incident may be considered by an Incident Controller (IC).

Dispersants act to break up surface oil slicks into small droplets that descend into the water column where they are more easily biodegraded. Dispersant efficacy depends on number of factors including, but not limited to; the dispersant type, the oil type, weather conditions and whether the oil is fresh or weathered. In the right conditions, dispersant application can assist in the natural dispersion of oil and reduce environmental impacts.

The Department of Transport (DoT) acknowledges that the use of dispersants is not always an effective response option and in some instances may lead to a net environmental harm. As such there are controls around its use in and adjacent to WA State waters during a MOP incident.

This guidance note should be read in conjunction with DoT's State Emergency Management Plan for Marine Oil Pollution (WestPlan – MOP) and DoT's related Oil Spill Contingency Plans (OSCPs).

3. State Legislation and Consent Authority

In accordance with the Western Australian *Emergency Management Act 2005* and the *Emergency Management Regulations 2006*, the WA DoT Marine Safety General Manager is the Hazard Management Agency (HMA) for the MOP hazard in State waters.

The HMA has overall responsibility for ensuring there is an adequate response to a MOP emergency in State waters. During an actual or impending MOP emergency in State waters, the HMA, or their designated proxy, will assume the role of State Marine Pollution Controller (SMPC). The SMPC provides overall strategic management of the response and executive level support and guidance to the Incident Controller (IC).

Shipping Related Incident – Originating in State Waters

Beyond the State based emergency management framework outlined above, ship based incidents that result in a release of oil into the marine environment are responded to in

accordance with the National Plan for Maritime Environmental Emergencies (National Plan) {Refer to WestPlan – MOP for further details}.

An exemption granted in accordance with the Commonwealth *Environmental Protection and Biodiversity Conservation Act 1999* allows the application of dispersant in both Australian and State waters provided it is in accordance with the National Plan.

Offshore Petroleum Activity Related Incident – Originating in State Waters

The Department of Mines and Petroleum (DMP) regulates dispersant use in WA State waters in response to a petroleum activity related incident, including those originating in WA State waters, in accordance with the following WA legislation:

- *Petroleum and Geothermal Energy Resources (Environment) Regulations 2012*
- *Petroleum (Submerged Lands) (Environment) Regulations 2012*
- *Petroleum Pipelines (Environment) Regulations 2012*

Under these regulations a person must not apply dispersant to an oil spill unless the Minister for Mines and Petroleum, or the appropriate HMA prescribed under the *Emergency Management Act 2005*, has given written consent to the application of dispersant.

In April 2015, DMP provided written guidance that 'consultation with DoT's HMA should be undertaken prior to written consent being provided by the Minister for Mines and Petroleum for the application of dispersant to an oil spill in WA State waters originating from a petroleum activity approved under the Western Australian *Petroleum Pipelines Act 1969*, the Western Australian *Petroleum (Submerged Lands) Act 1982*, and/or the Western Australian *Petroleum and Geothermal Energy Resources Act 1967.*

In effect this means that the HMA will either be the consent authority or will be consulted by the Minister for Mines and Petroleum where a request to apply dispersants in State waters is made by an Incident Controller.

4. National Legislation and Consent Authority in Commonwealth Waters

Shipping Related Incident –Originating in Commonwealth Waters

As nominated in the National Plan, the Australian Maritime Safety Authority (AMSA) is the Jurisdictional Authority and Control Agency for ship based MOP incidents in Commonwealth waters. In this role, AMSA has the decision making authority in relation to the application of dispersants beyond State waters.

Offshore Petroleum Activity Related Incident – Originating in Commonwealth Waters

The National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA) administer the Commonwealth *Offshore Petroleum and Greenhouse Gas Storage (Environment) Regulations 2009* (Environment Regulations). The Environment Regulations require that an offshore petroleum activity in Commonwealth waters must have an environment

plan (EP), which includes an oil pollution emergency plan (OPEP), accepted by NOPSEMA before the activity commences.

The EP submission process provides the mechanism for an offshore petroleum titleholder to gain acceptance for the use of specific oil spill dispersant products and deployment strategies in Commonwealth waters prior to any incidents.

Any dispersant use in response to a pollution incident from an offshore petroleum activity must be carried out in accordance with an accepted EP and no additional approvals are required to implement these response arrangements.

DoT Involvement in National Consent Process

During a response to either a shipping or petroleum activity MOP incident originating in Commonwealth waters, the use of dispersants does not require the consent of the SMPC. However, where the application of dispersant in adjacent waters could impact State waters, DoT request early notification.

This notification is to be provided to DoT through the HMA (or SMPC if activated).

5. Consent Process in State Waters

During a response to either a shipping or offshore petroleum activity MOP incident in State waters, regardless of source, the use of dispersants requires the written consent of the SMPC. Any approach to the SMPC for consent to use dispersants must be made by the relevant IC.

In seeking the consent of the SMPC to use dispersants in State waters, the IC is expected to have had the option assessed by a panel formed within the Incident Management Team (IMT). This panel should be chaired by the IC and include the participation of the Environmental Scientific Coordinator (ESC). The involvement of the CSIRO or other subject matter experts on the panel should also be considered.

In formulating its position on the potential use of dispersants, the panel is to use the decision making process outlined in the AMSA Protocol for Obtaining Approval for the Application of Oil Spill Control Agents to Oil at Sea or on Shorelines (See Attachment A). This process must be documented and a record retained within the IMT.

Formal requests from the IC to the SMPC must be made using the template provided as Attachment 1 in the above mentioned AMSA protocol.

Upon being asked to consent to the use of dispersants, the SMPC will confirm with the IC that the appropriate panel was formed and that the required decision making process was followed. The SMPC will also confirm the recommendation of the ESC.
In the event the ESC does not support the IC's request to use dispersants, the SMPC may seek to convene a meeting with both the IC and ESC to consider the divergent views prior to making a final decision.

In granting consent, the SMPC may impose conditions such as:

- The dispersants must be listed on the National Oil Spill Control Agent Register administered by AMSA and consistent with the Protocol for Obtaining Approval for the Application of Oil Spill Control Agents to Oil at Sea or on Shorelines (March 2013).

- Once consent is provided, the IC will direct the actual use of the dispersant in accordance with the operational situation at the time.

- Consent may be withdrawn at any time.

- Consent may be specific to geographic boundaries, times or weather conditions.

In the event that consent is granted and dispersants are used, it is a requirement that the IC closely monitor the effects and continually assesses the net environmental benefit of continuing with this response option. The results of this monitoring and evaluation should be regularly communicated to the SMPC.

6. Additional Guidance

The following guidance from the HMA should be taken into account when considering the use of dispersants in WA State waters:

- The effectiveness of dispersants on hydrocarbons exposed to the elements diminishes quickly over time. It is also the case that a long lead time may be required to get the necessary assets and equipment in place to deploy the dispersant in the required area. Consequently, the option of using dispersants should be considered as early as possible during an incident response.

- Consideration must be given to the underwater currents and the fate and transport of any dispersed sub surface hydrocarbons.

- Consideration must be given to the employment of a robust monitoring regime in the event that dispersants are used. This monitoring regime must be sufficient to determine if the use of dispersant has been effective, where the hydrocarbons have traveled and any impacts observed in the water column. If possible, baseline monitoring should be undertaken before dispersants are used.

- Consideration must be given to environmental sensitivities in the zone of potential impact (e.g. intertidal and benthic habitats, faunal usage) and key ecological windows (e.g. coral spawning, whale migration, seabird and turtle nesting, etc).

7. References

AMSA 2012 Protocol for the Register of Oil Spill Control Agents. Accessed April 2015. https://www.amsa.gov.au/environment/maritime-environmental-emergencies/national-plan/general-information/control-agents/register/index.asp. December 2012

AMSA 2013 Protocol for Obtaining Approval for the Application of Oil Spill Control Agents to Oil at Sea or on Shorelines. Accessed April 2015. https://www.amsa.gov.au/environment/maritime-environmental-emergencies/national-plan/general-information/technical/index.asp. March 2013

NOPSEMA / AMSA 2015 Australian Dispersant Acceptance Process. Accessed May 2016. http://www.nopsema.gov.au/assets/Information-papers/A446655.pdf

Australian Government

Australian Maritime Safety Authority

National Plan for Maritime Environmental Emergencies

Oil Spill Control Agents Guideline Two

PROTOCOL FOR OBTAINING APPROVAL FOR THE APPLICATION OF OIL SPILL CONTROL AGENTS TO OIL AT SEA OR ON SHORELINES

March 2013

Purpose

This Guideline sets out a best practice decision-making process for oil spill control agent (OSCA) approval application and use. It assists in answering the questions:

- Is an OSCA required?
- What information is required for approval?
- How should the decision-making process be recorded?

It is intended to support rapid, well-informed, and well documented decision-making.

Regulatory approval and incident controller agreement are both necessary

Oil spill control agents are chemical formulations (such as dispersants, surface cleaners, bioremediation agents and loose sorbents) that are released into the natural environment during a spill response to improve clean-up results. Their use must be approved by the relevant Statutory Authority. This authority will be either the State/NT or Commonwealth government having jurisdiction over the area, depending on whether the OSCA is to be used at sea, in estuaries or on coastal land.

Under the National Plan for Maritime Environmental Emergencies, Oil Spill Control Agents can be listed on the OSCA Register. To gain acceptance on the Register, OSCAs must successfully pass tests on efficacy, ecotoxicology and biodegradation. The specific requirements for each OSCA are outlined on the AMSA website page National Plan Register of Oil Spill Control Agents.

Note: Use of OSCAs in fully freshwater systems is not dealt with in this Protocol.

As the purpose of using an OSCA is to gain a beneficial outcome for both the spill clean-up and for the effected environment, the approving authority must be provided with evidence that good decision-making processes have been followed. It will need to know if:

- using the OSCA will be effective
- alternative cleaning options have been considered
- the effects of the oil and the oil/OSCA mix on the environment have been assessed (net environmental benefit assessment)
- there are any safety issues for the public or operators.

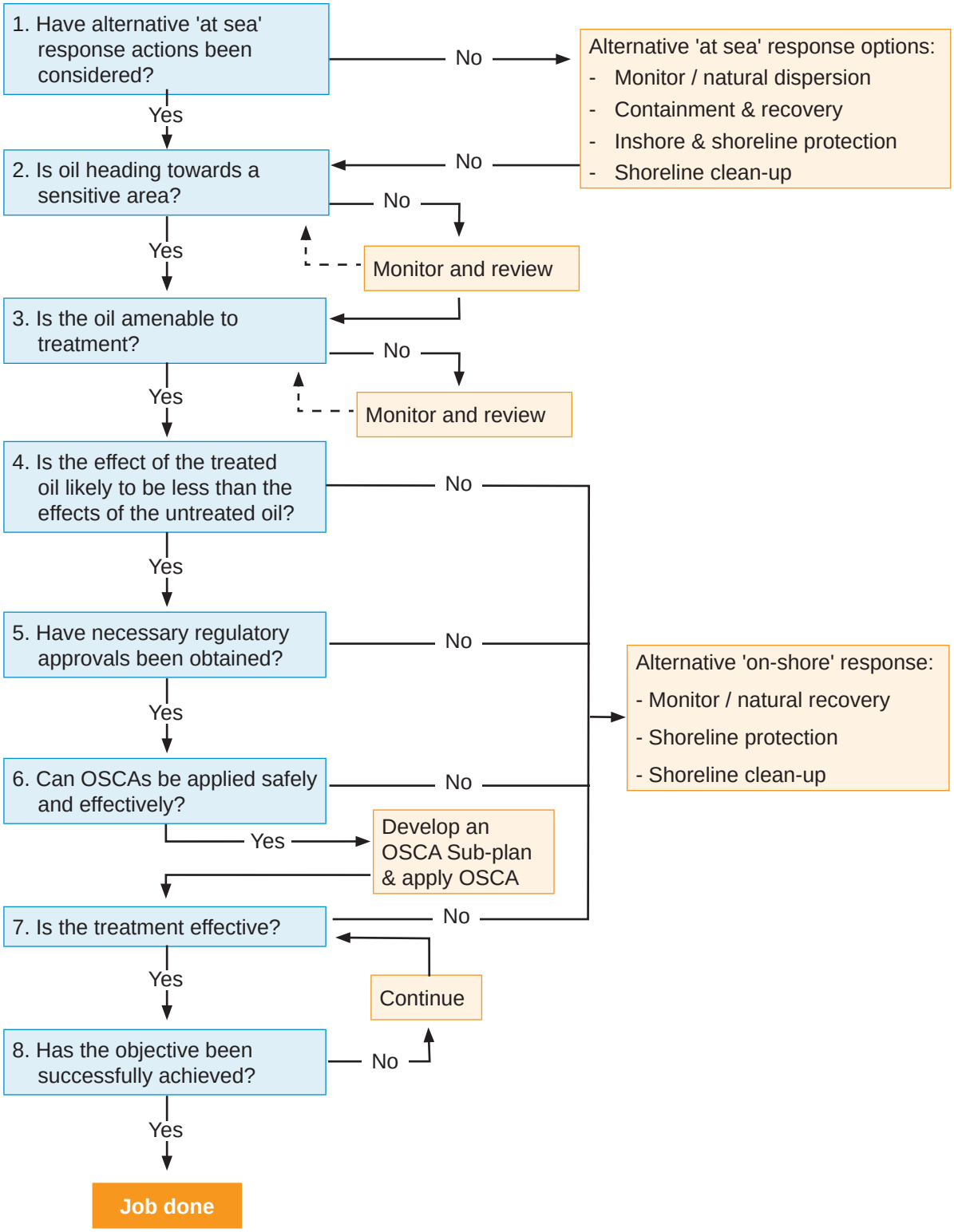
Evidence may come from the results of monitoring and testing, or come from expert advice. It is important that the reasons for providing approval are well documented and that these are regularly re-assessed and further documented, throughout the response.

Approval for the use of oil spill control agents at sea

Figure 1. outlines the sequence of considerations and decision-points (expressed as questions and assessments) required to assess whether an OSCA should be used in the marine environment. Figure 3. does the same for shoreline application. Guidelines for determining the answer at each decision-point are provided below.

A proforma “Request for Approval for the Use of Oil Spill Control Agents at Sea” (OSCA P2.1) is provided in Attachment 1.

Figure 1. Guideline for determining whether to apply for approval to apply Oil Spill Control Agents to oil at sea.



At sea use decision points

1. Have alternative 'at sea' response actions been considered?

In general, the applicability and suitability of the full range of marine oil spill response strategies will have been considered during the preparation of any oil spill contingency plan (OSCP) produced for the area or activity. Where one exists, the OSCP will identify the response methods and the conditions under which they can be used. Where an OSCP does not exist, general approaches to oil spill response should be considered and documented, as needed.

During the spill response, these options should be reassessed in light of ambient conditions and the nature of the incident. This is the role of the Incident Controller (IC) in consultation with other Incident Management Team (IMT) officers.

OSCA Form P2.1 (Attachment 1) provides guidance on what other alternative response strategies and methods are feasible. However, the final decision on a particular operational approach always resides with the IC in consultation with the IMT officers.

2. Is the oil heading towards a sensitive area?

Three key pieces of information are required to make this assessment:

- The oil **character and behaviour**, particularly persistence.
- The oil spill 'slick' **trajectory** (direction and speed of travel, and the rate of spread)
- The **environmental character** of the 'zone of potential impact' of the oil (resources, species, habitats, value, and likely effects of contact with the oil)

Oil character and behaviour

Some oils weather rapidly and may be removed from the sea surface through evaporation of physical break-up of the slick. This may occur before and impact on a sensitive resource can happen. Oil spill trajectory modelling should provide a good indication of oil persistence and indicate this against the time of shoreline impact. However, it is also worth checking the oil's analytical data if it is available. In particular:

- **Specific gravity**; this is an indicator (but only an indicator) of oil volatility. Light oils will generally lose much of their volume due to evaporation.
- **Wax content**. Waxes are persistent and will reduce the evaporative losses of an oil.
- **Pour point**, some oils (particularly high wax oils) may have a high pour point. Below this temperature they will be solid or else highly viscous. If the ambient temperature is close to the oil's pour point then it will weather more slowly.
- **Asphaltene content.** High asphaltene oils tend to emulsify. This causes them to persist for longer at sea.

It is important that predicted oil behaviour is verified through aerial surveillance and field reporting throughout the response.

Oil spill trajectory

Computer-based oil spill trajectory models (OSTMs) can provide quite accurate results, but modelling output may take time. Manual calculations may be used initially. The following information should be obtained:

- Direction of slick travel and speed
- Extent (spread, thickness and volume) of the oil. Determining the area covered by oil, and its character can assist with estimating slick volume. This is critical is estimating the likely effectiveness of all response options, including containment and recovery operations. Note, extent and volume are extremely difficult to estimate manually – they require expert assessment.
- Resources at risk - that are likely to be hit and impacted (see paragraphs below for more detail). These also require expert assessment.
- Time to impact. This determines the required response time and may be a significant consideration in deciding on the application of dispersants.

Environmental resources at risk

If a shoreline impact is likely the relevant Oil Spill Response Atlas (OSRA) should be consulted in order to determine the resources likely to be affected. The OSRAs do not generally list the sensitivity of marine shoreline resources, but Attachment 2 provides examples of sensitive resources and areas. Wherever possible, expert opinion or evidence should also be sought.

3. Is the oil treatable?

This will depend on a number of factors including:

- Oil character (initial and at the current stage of weathering).
- Dispersant (or other OSCA) type.
- Method of application.
- Sea state (energy).

Preliminary assessment

If the oil has not been tested then the guidelines in Table 1 can be used as a preliminary assessment of whether an oil is likely to be amenable to treatment, especially for dispersants. There is less information regarding the amenability of various oils to treatments with other OSCAs.

Field testing of dispersant effectiveness

If the oil type or weathering condition is not known then a field test of dispersant effectiveness on oil at sea can be undertaken. Guidance for this test is on our website.

However, it is difficult to simulate application rates and mixing energy in this test and consequently results of this method are not always accurate. They provide indicative data only.

Trial runs

In the absence of better data, it may be necessary to run a small test application of the OSCA on the spilt oil at sea and observe its effectiveness. For dispersants, this may be necessary every new operational period (day) simply to assess continuing effectiveness as oil weathers over time.

Table 1. Indications for effective dispersant use

Parameter	Oil is generally dispersible[1] if:			
Oil character[2]	Density	The specific gravity: is less than 0.95 (i.e. >17 API)		
	Pour point	Is > 5°C below ambient sea surface temperature (non waxy oil)		
		Is below ambient sea surface temperature (waxy oil)[3]		
	Viscosity[4] at ambient temperature	v. unlikely	>10,000 cSt	under most conditions
		uncertain	5,000 - 10,000 cSt	good conditions
		possible	2,000 – 5,000 cSt	good conditions
		likely	<2,000 cSt	most conditions
Slick character	Oil thickness[5]			
	Percentage cover[6]			
Ambient conditions	Sea state	Generally work best at wind speeds between 5 -15m/s (18-54km/hr or 10-30knots). Above this wave action over-washes the slick and removes the dispersant, below this mixing energy is reduced (but vessels can provide this).		
	Wind			
	Temperature	Limiting only in that it alters oil viscosity		
	Salinity	Most dispersants are formulated to work best between 30ppt to 40ppt (seawater = 35ppt)		
	Sediment load in water			

Note:

1. *For dispersant OSCAs only - other OSCAs will be added over time as information becomes available.*
2. *This relates to the oil on the sea not fresh oil.*
3. *Waxy oils tend to change viscosity rapidly when approaching the pour point.*
4. *Viscosity of the oil will vary over time due to weathering (evaporation and emulsification) and also due to temperature.*
5. *This can be estimated by aerial surveillance or by computer modelling. The latter will give an average thickness and will not make allowance for percent coverage.*
6. *The percentage of the area of water surface to be treated which is covered by oil.*

4. Is the effect of treated oil likely to be less than the effect of untreated oil?

This is a key consideration in deciding upon the use of OSCAs and requires a "Net Environmental Benefit Assessment (NEBA)".

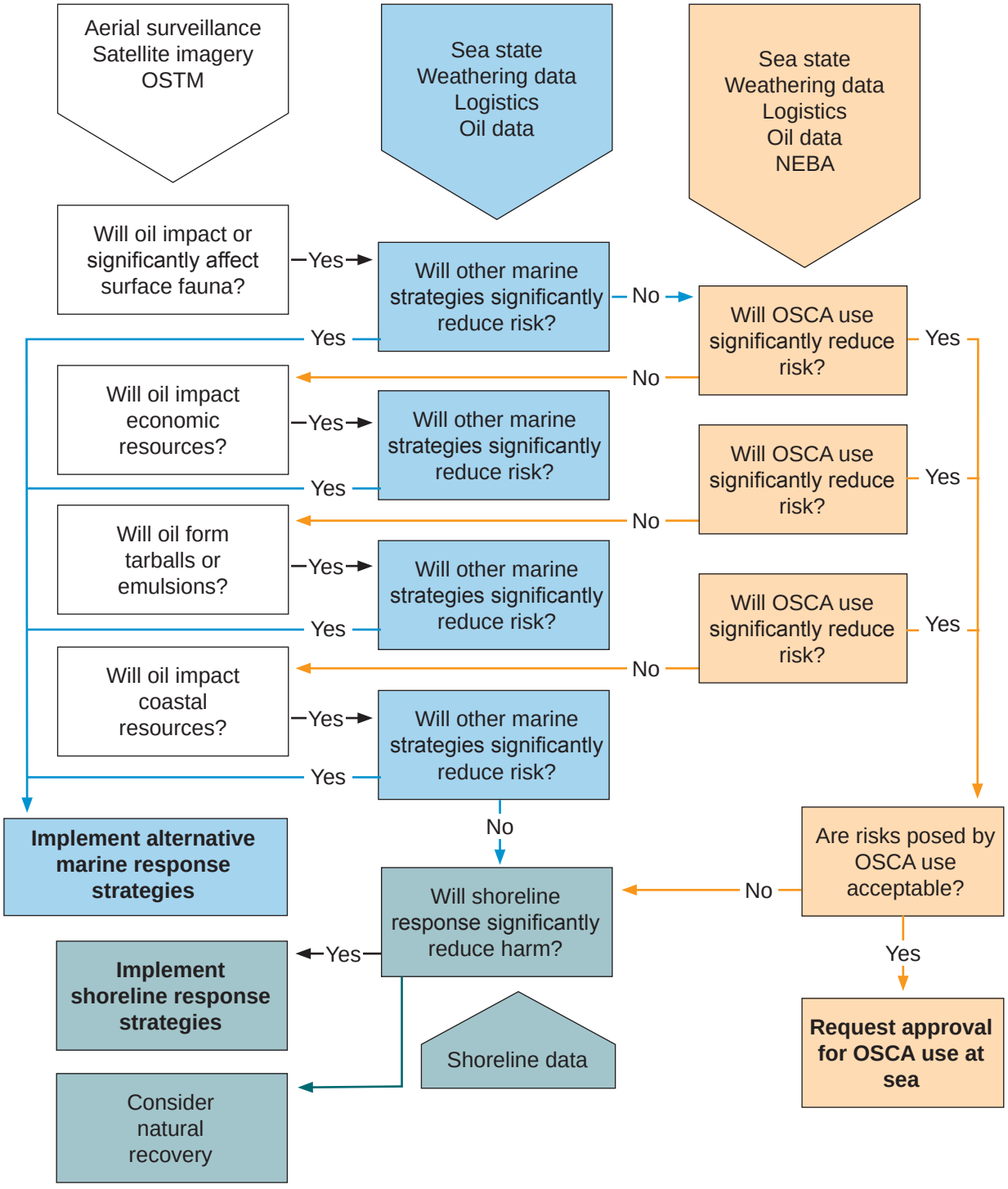
This can be a complex process requiring considerable information input. However, decisions regarding the use of dispersant (or other OSCA) often must be made quickly and so a rapid assessment is necessary. The complexity of the required NEBA will depend initially on the sensitivity of the receiving environment, including the volume of the water body, the volume of oil present and anticipated volume of dispersant (or other OSCA) likely to be used and the expected dilution and distribution of treated oil.

Figure 2 shows a typical “Decision Tree” for undertaking a rapid NEBA. It should be noted that all available information must be assessed in order to make justifiable assessments.

5. Have necessary regulatory approvals been obtained?

Approval agencies and other agencies that must be consulted are listed in the National Plan for Maritime Environmental Emergencies (National Plan) or in the relevant State Plans.

Figure 2. Guideline for determining the likely Net Environmental Benefit of using oil spill control agents on oil at sea.



6. Can OSCAs be applied safely and effectively?

This assessment will generally be undertaken by the Operations Unit of the IMT with input from the Health and Safety Coordinator (if appointed). Guidelines for dispersant application are provided in Table 2. Information for other listed OSCAs should be available in the relevant documents available with the product or on the National Plan OSCA Register website.

Table 2. Safety constraints for dispersant application.

Method	Conditions for the Safe and Effective Application of Dispersants	
Aerial Application (Fixed Wing)	Wind	Less than or equal to 25 knots
	Visibility	Greater than 5.5 km (3 nmiles)
	Ceiling	>300m
	Proximity to Coast	Should not be closer than XXX km
		Should not be further than (consult aircraft safety manual)
	Other	Daylight only
Aerial Application (Helibucket)	Wind	Less than or equal to 25 knots
	Visibility	Greater than 5.5 km (3n miles)
	Ceiling	XXX
	Oil Proximity to Coast	Should avoid drift of OSCA on shore.
		Should not be further than XXX km (safety)
	Other	XXX
Vessel Application	Sea State	
	Other	Suitable PPE must be available for responders (refer to the product MSDS)

Note: For extended responses or those being undertaken under difficult conditions it may be advisable to develop an Activity Safety Plan or include safety provisions within an OSCA Sub-Plan (see below).

Development of an OSCA Sub-Plan

This Sub-Plan should set out the procedures for applying OSCAs and also include any health and safety requirements (PPE) and procedures. This Sub-Plan should reflect the scale of the application, the sensitivity of the receiving environment and any risks posed by the OSCA. It should be as simple as possible. The Sub-Plan should include:

- Objective; an appropriate “end point” at which the OSCA application is deemed to have been successful
- Management responsibility (nominated officer in charge)
- Operations
  - Methods
  - OSTM type and volumes available
  - Constraints (no go areas, depth restrictions etc.)
  - Safety (handling, storage and PPE needs)
- Logistics
  - Vessel or air base
  - Monitoring of total volumes used use (for resupply)

- Record keeping
  - Location, volumes used, dates

7. Is treatment effective?

The use of OSCAs must be monitored to ensure that the application is, and remains, effective. Oil will weather and conditions will change and so this reassessment is ongoing.

8. Has the operational objective been successfully achieved?

This is an operational decision based on monitoring of the oil slick and OSCA application.

Shoreline application decision points

OSCAs that may be used on shorelines include, dispersants specifically tested and accepted for this, other washing agents and loose sorbents. The last of these are generally recovered and so there maybe no runoff with this method. Bioremediation agents may also be applied. These are longer-term treatments.

Figure 3 outlines the sequence of considerations and assessments required for assessing the use of OSCAs on shoreline. This process is essentially the same as that for marine application but the information that is needed for each decision or assessment is different. Each step is discussed below.

1. Have alternative on-shore response actions been considered?

Generally, OSCAs are considered for use onshore only if:

- There is a need to remove oil more rapidly than can be achieved with alternative methods. This could be due to:
  - Human safety concerns
  - Potential for ongoing exposure of wildlife (e.g. seal haul-out areas, bird nesting)
  - The need to cause minimum noise of other human effects (e.g. nesting birds)
- Alternative methods are not possible, (e.g. lack of access coupled with a large impact area)
- Other methods are potentially damaging (e.g. most methods in wetlands)

2. Is oil likely to be persistent?

Oil may persist on shorelines if:

- It has penetrated into sediment or crevices (or buried) where washing energy of tides and waves is low.
- It is sticky (and washing energy from waves is low). This may occur if oil weathers to tarry or asphalt residues.
- The shoreline is sheltered and very low energy.

3. Is the oil treatable?

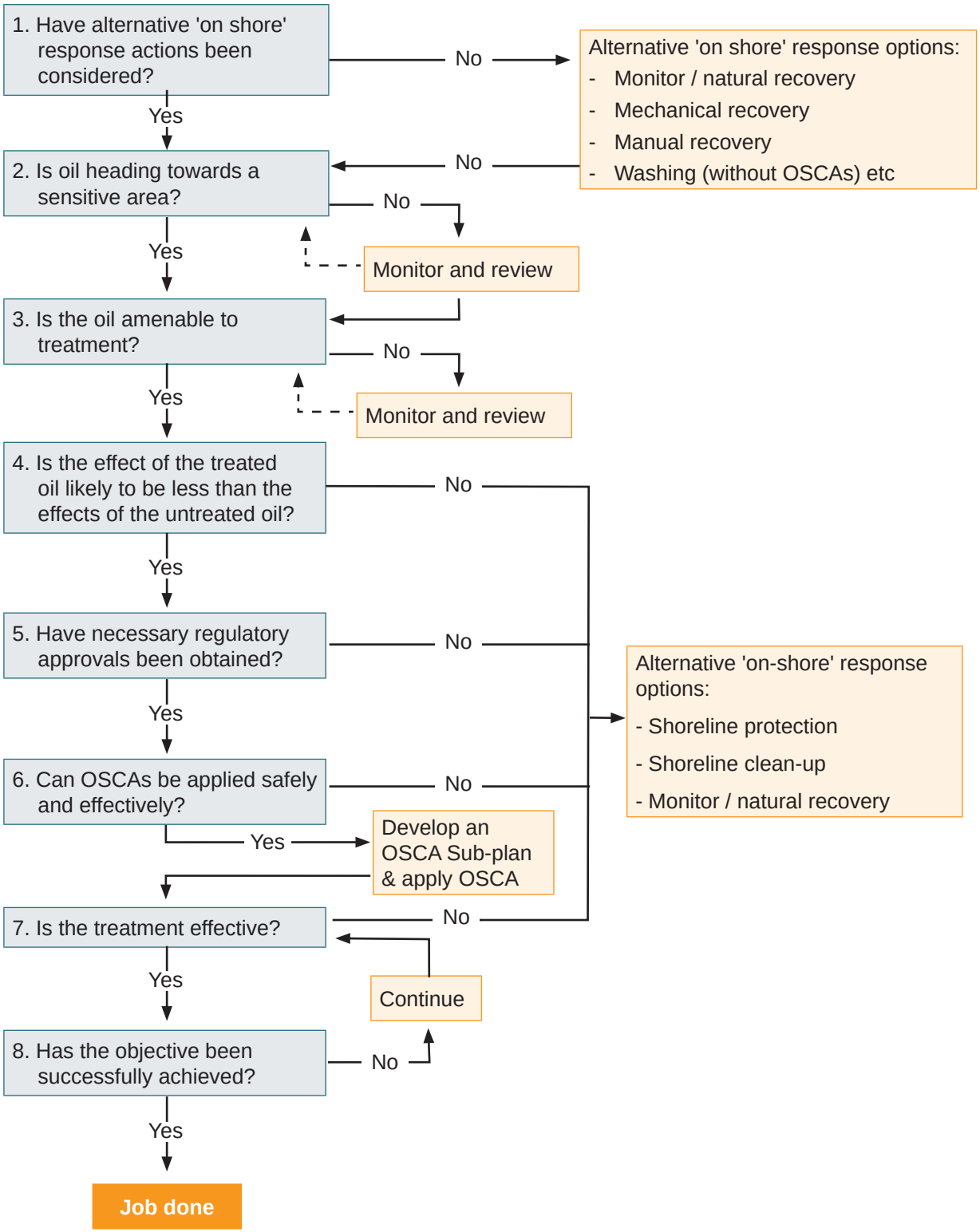
This will depend on a number of factors including:

- Oil character (initial and at the current stage of weathering)
- Nature of the substrate oiled
- Depth of oil in sediments
- OSCA type
- Method of application. For washing agents this will include the pressure of washing and temperature of OSCA and water applied.

- Wave energy (if artificial washing is not applied after OSCA application)

Generally, oils are not tested for “stickiness” and it may be necessary to undertake a test application of cleaning agents in order to determine the best method of application and overall effectiveness.

Figure 3. Guideline for Determining Whether to Request for Approval to Apply Oil Spill Control Agents to Oil on Shorelines.



4. Is the effect of the treated oil likely to be less than the effect of untreated oil?

This requires a Net Environmental Benefit Assessment (NEBA). The undertaking of a NEBA for shoreline response is considerably more complex than that for at sea response. This is because:

- There are more response options, and a number of these options can be damaging to shorelines and shoreline ecology.
- The potential for damage may be highly dependent on levels responder competency and supervision and other variables such as washing pressure or the type of equipment deployed.
- Variability of shoreline character and consequent variability of sensitivity to oil and clean-up activities.

Furthermore, OSCAs are often used onshore in association with other cleaning methods rather than as a substitute treatment. The advantage that OSCAs often bring is of a more rapid and thorough cleaning. The NEBA assessment therefore may need to compare a higher short-term level of harm against a more speedy recovery, i.e. reduced longer term harm.

5. Have the necessary regulatory approvals been obtained?

Approval agencies and other agencies that must be consulted are listed in the National Plan for Maritime Environmental Emergencies (National Plan) or in the relevant State Plans.

6. Can the OSCA be applied safely and effectively?

The safety of both the public and OSR operators must be considered. This assessment will generally be undertaken by the Occupational Health and Safety Coordinator of the Incident management Team (IMT).

Responder safety can be addressed through the provision of suitable PPE (as indicated in the product MSDS) and training of operators and other response personnel.

For public safety, the short term and longer term exposure must be considered. Exclusion of the public during and immediately after OSCA application should be mandatory.

Longer term exclusion must be based on an assessment of likely persistence of the OSCA and associated oil, potential effects on humans and fauna and possibly on ongoing monitoring of the area until the treated area is declared clean.

As with at sea applications a suitable OSCA Sub-Plan should be developed (see page 7).

7. Is the OSCA application effective?

The use of OSCAs must be monitored to ensure that the application is, and remains, effective. As oil and weather conditions change this reassessment is on-going.

8. Has the operational objectives been successfully achieved?

The ‘end point’ should be documented in the OSCA Sub-Plan.

ATTACHMENT 1

REQUEST FOR APPROVAL
FOR THE USE OF OIL SPILL CONTROL AGENTS AT SEA

Part A - Request from:

Name

Position (usual)

IMT position

ICC location

Contact details

Tel:	Mob:
Fax:	Email:

Incident name

Spill location

Request Details

Date of request

Time of request (24 hr)

OSCA type

Product name(s)

Receiving environment: ☐ At sea ▶ Likely depths of receiving water body ___ m
☐ Shoreline
☐ Other (specify)

Note:

Proposed application method(s): ☐ Fixed wing (light) ▶ Is FWAD mobilisation requested? ☐ yes ☐ no
☐ Vessel
☐ Helicopter (spray bucket)
☐ Other (specify)

Proposed location of application: Lat: Lon:

Comments/ additional requests

Authorised by

Name:	Position:
Signature:	Date:

Part B - Assessment details

Decision Point 1: Have alternative marine response strategies been considered?

(a) Monitor Only

i ☐ Oil moving towards sensitive resources / velocity and assessment of oil persistence indicate an impact on these.

OSTM run? ☐ yes ☐ no ADIOS run? ☐ yes ☐ no

Comment:

ii ☐ OSR monitoring resources not available (aircraft, landing sites, trained aerial observers).

Comment:

(b) Containment and Recovery

i ☐ Resources inadequate/ spill area too large. Spill moving too fast/ too close to sensitive resources. Cannot recover oil before impact.

OSRA/ESC consulted? ☐ yes ☐ no

Comment:

ii ☐ Sea states/ weather do not allow for safe or effective containment and recovery operations.

Forward forecast obtained? ☐ yes ☐ no

Summary:

(c) Shoreline (or Resource) Protection

i ☐ Impact area (e.g. length of shoreline) is too large for adequate protection strategies

Comment:

ii ☐ Inshore or onshore conditions make protection strategies unsafe or ineffective.

Safety issues? ☐ yes ☐ no Shoreline energy too high? ☐ yes ☐ no

Comment:

(d) Shoreline clean-up

i ☐ Shoreline is sensitive to oil impact/cleanup. Presence of wildlife

Comment:

ii ☐ Resources inadequate/ impact area too large/ Lack of or difficult access or logistics

Safety issues? ☐ yes ☐ no

Comment:

Additional Comments

Decision Point 2: Is oil heading towards a sensitive resource

(a) Has a trajectory analysis been undertaken? ☐ yes ☐ no

Manual calculation? ☐ yes ☐ no OSTM? ☐ yes ☐ no ADIOS? ☐ yes ☐ no

Please attach outputs

(b) Is impact on sensitive resource anticipated? ☐ yes ☐ no

Resource:
Location:
Extent of oiling (est.):

(c) Has a time of impact been estimated? ☐ yes ☐ no ▶ if yes, estimated time

Assessment/Comment

Decision Point 3: Is the oil amenable to treatment?

(a) Has oil data been obtained ☐ yes ☐ no

Comment or attach oil data

(b) Has a field assessment/ test been undertaken? ☐ yes ☐ no

Results

(c) Assessment. Is oil currently likely to be amenable? ☐ yes ☐ no

Comment

Decision Point 4: Is the effect of the treated oil less than the untreated oil?

(a) Has NEBA assessment been undertaken? ☐ yes ☐ no

Findings (please attach NEBA)

(b) Have relevant experts been consulted? ☐ yes ☐ no

If yes, who? (list)

(c) Have resources likely to be impacted by treated oil been identified? ☐ yes ☐ no

How will risks be managed?

Decision Point 5: Have necessary regulatory approvals been obtained (other than this application)?

(a) Are other approvals required? ☐ yes ☐ no

If yes, list

(b) Have approvals been sought? ☐ yes ☐ no

If yes, list

(c) Have other approvals been given? ☐ yes ☐ no

If yes, list

Decision Point 6: Can OSCAs be applied safely and effectively?

(a) Has OSCA Sub-Plan been prepared? ☐ yes ☐ no ▶ if yes, attach

(b) Have MSDS been obtained assessed and distributed? ☐ yes ☐ no

Comment

(c) Is all PPE and equipment held or on way? ☐ yes ☐ no

If yes, list

Note: Statutory approval agencies must be advised of outcomes of:
Decision Point 7 (Has treatment been effective) and
Decision Point 8 (Have operational objectives been successfully achived?)
of the OSCA Decision Tree

Other comments

ATTACHMENT 2

Potentially Sensitive Resources

Resource	Considerations
Birds	Highly sensitive and vulnerable
	May congregate (seasonally) in large numbers for feeding, roosting, nesting
	Can be attracted to oil sheen (oil can mimic baitfish oil sheen)
	Difficult to clean (low survival rates)
Mangroves and coastal swamps	Low wave energy so oil may persist
	Ecological character (community type, species, biodiversity)
	Difficult to clean without causing additional damage
	Social and economic sensitivity to oil impact and cleaning
Other shorelines	Wave energy may offer other response options
	Social and economic sensitivity to oil impact and cleaning
	Possibility of clean-up – access, substrate type (rock or sediment)
	Effects of clean-up
	Potential persistence of oil on (or in) sediments
Reefs, shoals and other shallow water communities (corals, seagrasses, sponges etc.)	Character (community type, species, biodiversity)
	Depth (intertidal forms are particularly vulnerable and sensitive)
	Sea states (vertical mixing of the oil)
	Oil character (stickiness)
Fish breeding sites and aggregations	Seasonal occurrence
	Sensitive to dispersed oil also. Consider the depth of occurrence.
Seals and Sea Lions (Pinnipeds)	Difficult to treat when oiled.
	Congregate in large numbers seasonally at locations
	Breeding, roosting/haul-out areas are of high sensitivity
Whales and Dolphins (Cetaceans)	Little evidence that adults are affected by oil or dispersed oil
	Breeding or nursing areas must be considered sensitive
	Presence of calves must be treated as sensitive

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