Section 9406

Dispersant Tools, Job Aids and Decision Process

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Dispersant Tools, Job Aids and Decision Process

9406.1 Introduction

The Region X RRT and Northwest Area Committee have established pre-approval zones, case-by-case approval zones, and no use zones for the use of dispersants. This appendix contains tools and job aids to assist responders when use of dispersants is being considered.

9406.2 Dispersant Decision in Pre-Approval Zone

The Dispersant Pre-Approval Zone is as follows:

Marine waters 3 to 200 nautical miles from the coastline or an island shoreline ***except*** for waters designated as a part of a National Marine Sanctuary and the Makah Tribe Usual and Accustomed marine area or waters within three miles of the border of the Country of Canada or the Makah Tribe Usual and Accustomed marine area

In a pre-approved zone, typically the FOSC working in a Unified Command will trigger a process to evaluate the applicability of dispersant use by setting that as an objective, ideally during the initial UC Objectives meeting. It is expected that the FOSC Checklist will be completed by the Technical Specialists within the Environmental Unit, with input from appropriate members of the Operations Section, Liaison and Information Officer as needed. The RRT will be notified by the FOSC as soon as practicable following a dispersant use decision. An After Action report will be completed by the FOSC.

9406.3 Dispersant Decision in Case-by-Case Approval Zone

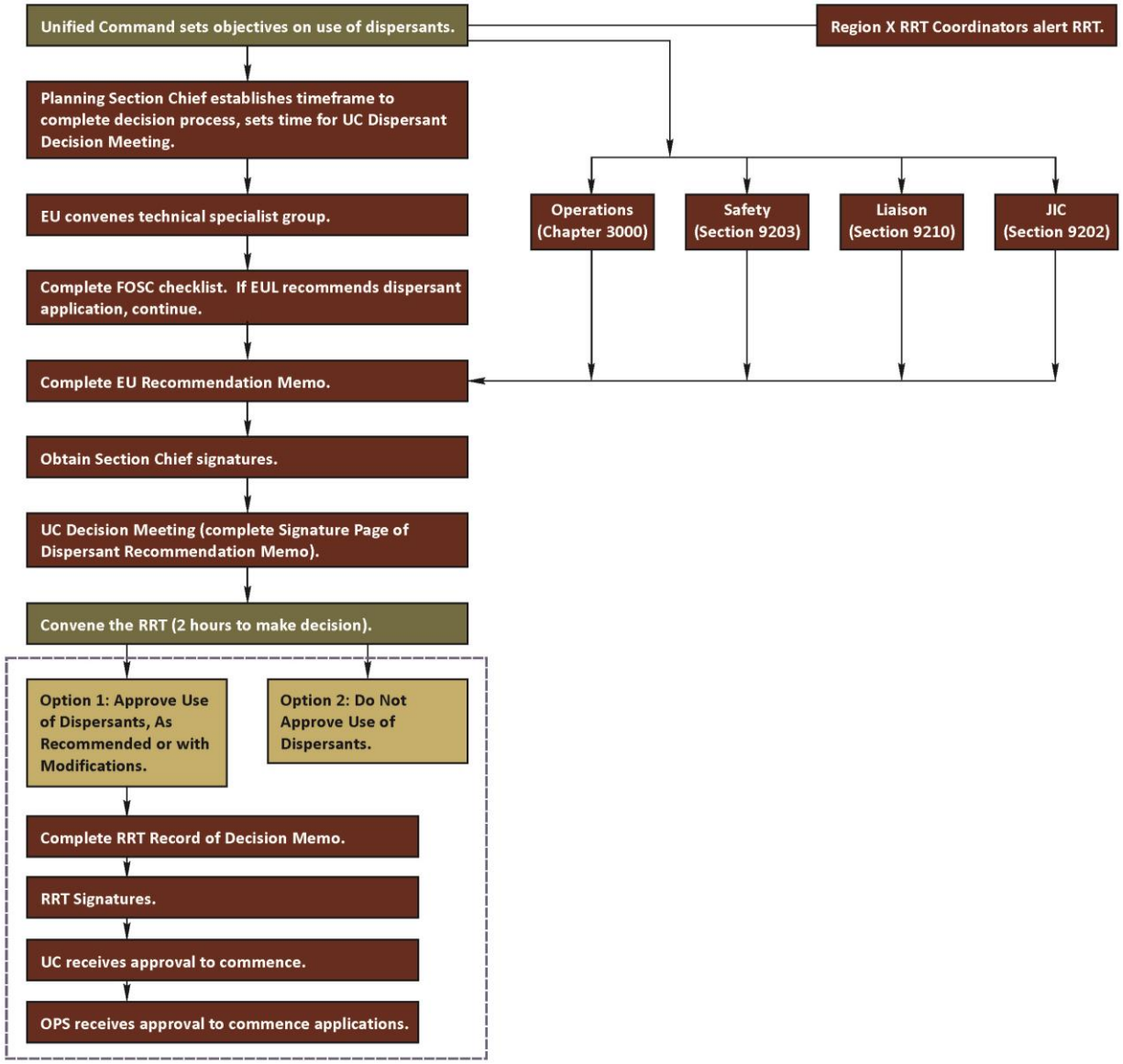
The Dispersant Case-by-Case Approval Zones are as follows:

- All marine waters that are both within 3 nautical miles from the coastline or an island shoreline and greater than 10 fathoms (60 feet) in depth, except any area located within a designated No Dispersant Use Zone (see Section 9406.4).

- Waters designated as a part of a National Marine Sanctuary and waters that are part of the Makah Tribe Usual and Accustomed marine area which are also greater than 10 fathoms (60 feet) in depth.
- Waters of the Strait of Juan de Fuca and North Puget Sound from Point Wilson to Admiralty Head and north, and greater than 10 fathoms (60 feet) in depth.
- Marine waters within 3 miles of the borders of the Makah TribeUsual and Accustomed marine area and the country of Canada. In consideration of the use of dispersants within 3 miles of the Makah Tribe Usual and Accustomed marine area, the Region X RRT will consult with the Makah Tribal government. In considering the use of dispersants within 3 miles of the International border with Canada, the Region X RRT will consult with the Joint Coastal Pollution Response Team (Coastal JRT) comprised of representatives of the U.S. and Canadian governments. (See section 9941 for further information about the Coastal JRT).

Once Unified Command establishes Objectives to consider the use of dispersants in a Case-by-Case area, the Planning Section should consult with NOAA about the window of opportunity for effective dispersant use.

PLANNING SECTION PROCESS FOR MAKING DECISION IN CONDITIONALLY APPROVED AREAS



The PSC should then establish a period of time to complete the FOSC Checklist and the Environmental Unit Recommendation Memo, and schedule the Dispersant Decision meeting for Unified Command.

The Environmental Unit should convene technical specialists to complete the Recommendation Memo. Coordination with the Operations Section Chief, Safety Officer, Liaison Officer and information Officer is critical.

9406.4 Dispersant Decision In No Approval Zone

The No Dispersant Use Zones are as follows:

- Marine waters that are both less than three nautical miles from the coastline and less than or equal to 10 fathoms (60 feet) in depth.
- Marine waters south of a line drawn between Point Wilson (48º 08' 41" N, 122º45' 19" W) and Admiralty Head (48º 09' 20" N, 122º 40' 42" W).
- Freshwater environments.

Dispersants may only be used in these areas if, in the judgment of the FOSC, they are required to prevent or substantially reduce a hazard to human life. In this case, the FOSC should document their determination. The RRT will be notified by the FOSC as soon as practicable. An After Action report will be completed.

FOSC Dispersant Authorization Checklist

This checklist is to be completed for pre-approval areas and case-by-case decision areas.

9406.4.1 FOSC Dispersant Authorization Checklist

	Y	N	N/A	
1.				**Dispersability:** Available technical information or experience suggests that the spilled product is dispersible and will still be dispersible in the time frame of anticipated application of dispersants.
2.				**National Contingency Plan (NCP) Listed Dispersant:** The dispersant to be used is listed on the current NCP Product Schedule and is considered appropriate for the oil type and conditions.
3.				**Environmental Considerations, Inadequacy of other options:** Mechanical response equipment alone is not deemed adequate (due to the magnitude of the spill, availability, or timeliness) to protect potential resources at risk. Environmental trade-offs of dispersant use have been considered.

	Y	N	N/A	
4.				**Weather Conditions:** Weather and sea conditions are conducive to dispersant application by the chosen system or platform. (Generally, for aerial application: wind ≤25 knots, visibility ≥3 statute miles, and ceiling ≥1000 feet. Generally for boat application**,** a sea state that will allow the vessel to be used to conduct an effective and safe spray operation.)
5.				**General Adequacy of Dispersant Spray System and Personnel Competency:** In addition to any other requirements of the Region X RRT and Northwest Area Committee, the general criteria for evaluating the suitability for use of any dispersant system should be the ability of the party or parties requesting approval to demonstrate to the satisfaction of the FOSC, the following:
5a.				**a)** That the application system has been i. Specifically designed for its intended purpose, or ii. If not specifically designed for dispersant use, has been tested and deemed to be effective and appropriate, or iii. By some other specific means of documentation or experience, reasonably deemed to be effective and appropriate under the circumstances.
5b.				**b)** That the design and operation of the application system can reasonably be expected to apply the chemical dispersant in a manner consistent with the dispersant manufacturer's recommendations, especially with regard to dosage rates and concentrations.
5c.				**c)** That the operation will be supervised or coordinated by personnel who have experience, knowledge, specific training, and/or recognized competence with chemical dispersants and the type of system to be used.
6.				**Aerial Application Operational and Technical Issues:** In the case of Aerial Application of dispersants:
6a.				**a)** The FOSC must ensure that the Responsible Party's dispersant operation provides for a dispersant controller over the spray zone able to effectively direct the dispersant aircraft in carrying out the dispersant operation, including avoiding the spraying of birds and marine mammals that may be in the area.
6b.				**b)** Aircraft spray systems must be capable of producing dispersant droplet sizes that provide for optimal dispersant effectiveness as described in ASTM guidelines or as supported by peer-reviewed research.

	Y	N	N/A	
7.				**Boat Application Operational Technical Issues:** If the system involves spray arms or booms that extend out over the edge of a boat and have fan type nozzles that spray a fixed pattern of dispersant, the dispersant operator has confirmed that application will comply with the following ASTM standards as appropriate: a) ASTM F 1413-92 Standard Guide for Oil Spill Dispersant Application Equipment: Boom and Nozzle Systems b) ASTM F 1460-93 Standard Practice for Calibrating Oil Spill Dispersant Application Equipment Boom and Nozzle Systems c) ASTM F 1737-96 Standard Guide for Use of Oil Spill Dispersant Application Equipment during Spill Response: Boom and Nozzle Systems.
8.				**Fire Monitor Operational and Technical Issues:** If the system involves the use of a fire monitor and or fire nozzle to apply the dispersants from a boat, the dispersant operator has confirmed that application will comply with ASTM Standard F 2465-05 for fire monitors and has provided the information in paragraph 7 of the Standard titled "Information to be provided by the user" to ensure that the fire monitor meets the standard and is acceptable for use. The specific fire monitor system(s) intended for use must have been specifically designed for dispersant application and/or must have been specifically calibrated via field trial for dispersant use.
9.				**SMART Deployment:** The FOSC has activated Special Monitoring of Applied Response Technologies (SMART), including a SMART observer, at a minimum, to fly over the response zone to visually assess effectiveness of the dispersant applications (Tier I). See Section 4612 and 9670.
10.				**Wildlife Observation:** A specialist in aerial surveillance of wildlife or oil, preferably from a Trustee agency, is available to observe wildlife that should be avoided in the potential dispersant application area. If possible, wildlife observations should be conducted immediately prior to dispersant application.
11.				**Endangered Species Act (ESA) and Essential Fish Habitat (EFH) Consultations:** Endangered Species Act (ESA) consultation has been initiated in accordance with implementation of the 2001 "Interagency Memorandum of Agreement Regarding Oil Spill Planning and Response Activities under the Federal Water Pollution Control National Oil and Hazardous Substances Pollution Contingency Plan and the Endangered Species Act."

*If the answer to any item on the checklist is "N," explanation and justification for authorization of dispersant use must be included in After-Action Report.

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9406.5 EU Recommendation Memo and Unified Command Signature Page

This memo package is completed for case-by-case decision areas.

9406.5.1 Signature Page for the Unified Command Dispersant Recommendation Memo

Incident Name and Location:
Forwarded to the Regional Response Team X (RRT X) on Date:

The Federal On-Scene Coordinator (FOSC) and Unified Command have determined that the use of dispersants (**IS/IS NOT**) a recommended response measure for the (name of incident). A Recommendation Memo has been developed and is forwarded to the RRT X under this signature page.

	Signature	Name (Print)	Date
Federal On Scene Coordinator			
State On Scene Coordinator			
Responsible Party Incident Commander			
Local On Scene Coordinator			
Tribal On Scene Coordinator			

9406.6 Dispersant Recommendation Memo

This memo has been developed by the Environmental Unit in accordance with National Contingency Plan (NCP) and Northwest Area Contingency Plan dispersant use policy. The memo provides the FOSC and Unified Command with a recommendation on appropriate action to take regarding dispersant application. Refer to ICS Form 202 for Incident Objectives (attached).

9406.6.1 Environmental Unit Recommendations

In this section, fully describe the recommendation. State whether full application of dispersants is or is not being recommended, and list all recommended limitations or conditions on its use. State whether a trial use is recommended before making the decision on full application.

This memo was developed and reviewed by:

ICS Role	Signature	Name (Print)
Environmental Unit Leader (Developed)		
Planning Section Chief (Reviewed)		
Operations Section Chief (Contributor, Reviewed)		
Safety Officer (Contributor, Reviewed)		
Information Officer (Informed)		
Liaison Officer (Informed)		

9406.6.2 Signature Page for Technical Specialists and Other Contributors in the Environmental Unit

List each technical specialist that contributed to the recommendation. So that all views can be considered by the RRT, each technical specialist may provide a statement in support of their opinion to be included in the package that is provided to the RRT.

Name and Agency (Print)	Signature	Recommendation

9406.7 Overview of the Incident

In this section provide the following information:

- Describe the location and extent of spill, and spill volume (known or estimated).
- State oil type, API gravity, viscosity and pour point. Attach MSDS.
- State whether the spill is in a location of case-by-case approval.
- State whether spill is instantaneous or continuous (include flow rate if known).
- Predicted oil spill movement (attach trajectory).
- Predicted dispersant plume flow (attach trajectory)
- Distance from shoreline.
- Depth of water.

9406.8 Rationale for Decision

The following information is provided for consideration by the RRT and as rationale for the recommendation.

9406.8.1 Dispersability

In this section, discuss the type of oil product spilled and its relative dispersability. Reference available technical information or describe whether experience suggests that the spilled product is dispersible and will still be dispersible in the time frame of anticipated application of dispersants.

9406.8.2 Dispersant Product

In this section, describe the dispersant product to be used (name). Confirm that it is on the current National Contingency (NCP) Product Schedule. Attach an MSDS.

9406.8.3 Environmental Consideration, Adequacy of Mechanical Recovery & Other Measures

In this section, summarize the discussions of the technical specialists in the Environmental Unit as well as the environmental tradeoffs between dispersing oil and relying on mechanical recovery and protection strategies. Considerations could include:

The resources at risk from this spill (attach an ICS form 232).

If considering whether mechanical response equipment alone is deemed adequate, consider the magnitude of the spill, availability, weather conditions and timeliness of equipment to protect potential resources at risk.

Describe the environmental trade-offs of dispersant use, i.e., whether some species or their habitat will benefit from dispersant use while others will be negatively impacted.

Could these potential benefits/trade-offs of dispersant use exist?

- *Dispersant use could minimize the effects of an oil spill by dispersing oil before it reaches shorelines or sensitive areas.*
- *Removing oil from the surface of the water cold reduce the potential for impacts to birds and marine mammals, and limit the action of wind on spill movement.*
- *Dispersants could effectively treat this large spill more quickly than other response methods.*
- *Dispersants could be effective in the current water, current, weather where mechanical responses are limited.*
- *Effective dispersant responses may reduce the quantity of oil requiring recovery and disposal.*
- *Proxy of water column productivity in open coastal areas (obtain upwelling index from NOAA).*

9406.8.3 Suitability of Weather for Dispersants

Include current and forecasted weather conditions and whether they are suitable for dispersant application.

9406.8.4 Weather Forecast

Include the following types of information and list the source:

- *Wind (from) direction:*
- *Wind speed: (knots)*
- *Next low tide: (ft) at (hrs)*
- *Next high tide: (ft) at (hrs)*
- *Current velocity: (kts)*
- *Current (to) direction:*
- *Predicted slick speed: (kts)*
- *Predicted slick direction.*
- *Visibility: (nautical miles)*
- *Ceiling: (feet)*
- *Sea state: (wave height in feet)*

9406.8.5 Adequacy of Equipment & Personnel for Dispersant

Name and describe the capability of the contractor(s) tasked for dispersant application operations. Describe the training and experience of the contractor(s).

State whether the application system has been specifically designed for its intended purpose, or if not, has been tested and deemed to be effective and appropriate, or by some other specific means of documentation or experience, reasonably deemed to be effective and appropriate under the circumstances.

State whether the design and operation of the application system can reasonably be expected to apply the chemical dispersant in a manner consistent with the dispersant manufacturer's recommendations, especially with regard to dosage rates and concentrations.

State whether the operation will be supervised or coordinated by personnel who have experience, knowledge, specific training, and/or recognized competence with chemical dispersants and the type of system to be used.

Answer these questions:

- *How will the ratio of dispersant-to-oil application ratio be verified?*
- *What is the "Window of opportunity" for getting dispersant on the oil (hrs from first report of spill)?*
- *What are the number of daylight hours available for first day/each day of dispersant application: (hrs from first report of spill)?*

- *What time can dispersants first be applied to the spill (hrs from first report of spill)?*
- *Will dispersants be effective after day one of the spill? YES / NO / Cannot determine at this time*

9406.8.6 Aerial Dispersant Control

(Name of contractor) has a dispersant application system on the (Name and type of aircraft). Describe the platform of the aircraft (multi-engine or single-engine). State how Operations will direct the dispersant aircraft in carrying out the dispersant operation, including avoiding the spraying of birds and marine mammals that may be in the area.

State how the aircraft spray systems will be capable of producing dispersant droplet sizes that provide for optimal dispersant effectiveness as described in ASTM guidelines or as supported by peer-reviewed research.

State the dispersant load capability (gal):

9406.8.7 Boat Application (if applicable)

(Name of contractor) has installed a dispersant application system on the (Name and type of vessel). If the system involves spray arms or booms that extend out over the edge of a boat and have fan type nozzles that spray a fixed pattern of dispersant, confirm that that application will comply with the following ASTM standards as appropriate: a) ASTM F 1413-92 Standard Guide for Oil Spill Dispersant Application Equipment: Boom and Nozzle Systems b) ASTM F 1460-93 Standard Practice for Calibrating Oil Spill Dispersant Application Equipment Boom and Nozzle Systems c) ASTM F 1737-96 Standard Guide for Use of Oil Spill Dispersant Application Equipment during Spill Response: Boom and Nozzle Systems.

State the dispersant load capability (gal):

9406.8.8 Fire Monitor Operational Technical Issues (if applicable)

If the system involves the use of a fire monitor and or fire nozzle to apply the dispersants from a boat, confirm that the application will comply with ASTM Standard F 2465-05 for fire monitors. Provide the information in paragraph 7 of the Standard titled "Information to be provided by the user" to ensure that the fire monitor meets the standard and is acceptable for use. The specific fire monitor system(s) intended for use must have been specifically designed for dispersant application and/or must have been specifically calibrated via field trial for dispersant use.

9406.8.9 Special Monitoring of Applied Response Technologies (SMART)

Describe the level of SMART that will be deployed. List the agency(s) that are providing the staff and equipment and when these assets are expected to be on scene. If initially only Tier I monitoring is available, describe when the protocol will be enhanced.

Answer these questions:

- *Who will provide Special Monitoring of Applied Response Technologies (SMART) to monitor and assess the adequacy of the dispersant application?*
- *How will they apply the SMART?*
- *State what guides will be used and how observations will be documented, such as the NOAA Dispersant Application Observer Job Aid. Observations will be photographed and videotaped to help communicate them to the Unified Command and for documentation.*

The Visual Monitoring Team will be composed of *(XXX)* persons:

9406.8.9.1 Wildlife Observation

Describe the methods to be used to avoid applying dispersant to wildlife in the dispersant application area. List the specialists in aerial surveillance of wildlife that will be used to observe wildlife that should be avoided in the potential dispersant application area.

9406.9 Endangered Species Act and Essential Fish Habitat Consultations

Endangered Species Act consultations were initiated with the U.S. Fish and Wildlife Service on (*insert date*) and NOAA's National Marine Fisheries Service on (*insert date*).

9406.9.1 Site Map (attached)

9406.9.2 Safety Plan

State whether a Site Safety Plan for dispersant operations is being completed. List any safety considerations and recommended practices.

9406.9.3 Recommendation for a Trial Application (if applicable)

If the Environmental Unit is recommending a trial dispersant application, describe the recommendation and state whether the full use is dependent of the effectiveness of the trials. Also describe the monitoring guidelines for the trial run.

9406.9.4 Dispersant Trial Run (if applicable)

The initial trial application will be made from (*insert details of timing and platform*) using (*insert product name*) in an area of heavy oil accumulation (see

attached map). The trial will involve up to (*insert number*) gallons of (*insert product name*).

These factors will be evaluated in deciding whether to fully implement dispersant use *(list them*):

- *Sub current directional flow,*
- *Proximity to shore by time dispersant will actually be applied,*
- *Resources that will be impacted.*
- *Efficacy of product on oil type.*

9406.10 Anticipated Development of Dispersant Operations Plan

The initial Dispersant Operations Plan is anticipated to be completed by the Operations Section at (*insert time and date*).

9406.10.1 FOSC Checklist (full checklist attached)

9406.10.1.1 List of Potential Attachments:

- Additional Statement of the EU Technical Specialists (attached)
- MSDS of Spilled Oil (attached)
- Trajectory (attached)
- MSDS of Dispersant Product (attached)
- Current ICS-232
- Map including overflight information and potential trial application site

9406.11 Regional Response Team X (RRT X) Record of Dispersant Decision

Incident Name and Location
Date and time of RRT X consultation

In accordance with Subpart J of the National Contingency Plan (NCP), RRT X has addressed the desirability of using appropriate dispersants through the area planning process and has established pre-approval zones, case-by-case approval zones, and no use zones for the use of dispersants. It is RRT X policy that any dispersant use within a case-by-case approval zone requires concurrence from the EPA and State representatives to the RRT with jurisdiction over the waters threatened by the release or discharge. The decision to use dispersants in a case-by-case approval zone must be made in consultation with the U.S. Department of Commerce (DOC) and U.S. Department of the Interior (DOI) representatives to the RRT and tribal governments with off reservation treaty rights in the navigable waters threatened by a release or discharge of oil.

For purposes of this record of decision, the designated FOSC has completed a Dispersant Decision Memo (attached), formally recommends the use/recommends against the use of dispersants and requests a dispersant use decision from the appropriate members of RRT X.

The RRT X was convened on this date with these agencies in attendance:

- List all agencies and state whether decision makers or monitoring role.

The following decision(s) was made (Note: the RRT should add any pertinent rationale for the decision):

- ☐ The RRT X does not concur with the use of dispersants for this incident.
- ☐ The RRT X concurs with the use of dispersants as outlined in the attached plan.
- ☐ The RRT X concurs with the use of dispersants with the following modifications to the dispersant plan:

RRT Signature Page

Signatures will be obtained once the decision is made. This document will be retained to record the decision.

	Signature	Name (Print)
EPA Co-Chair		
Department of the Interior (Consultation)		
Department of Commerce (Consultation)		
Washington State		
Oregon State		
Tribal Nation		