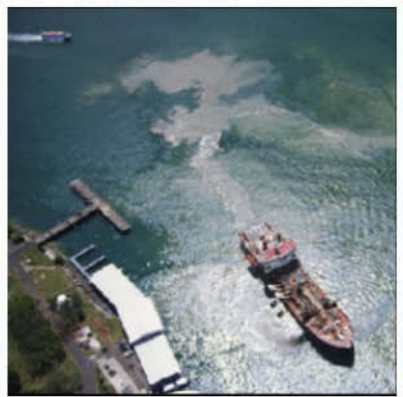


# Selection Guide for Oil Spill Applied Technologies

## Volume I - Decision-Making



RRT III



RRT IV

**\*\*\*\*ATTENTION\*\*\*\***

**Disclaimer:**

**The information provided in this document by Region III and IV Regional Response Teams is for guidance purposes only. Specific information on countermeasure categories and products used for oil spill response listed in this document does not supersede the National Oil and Hazardous Substances Pollution Contingency Plan (NCP), Subpart J, Product Schedule rule. 40 CFR Part 300.900 addresses specific authorization for use of spill countermeasures. Part 300.905 explains, in detail, the categories and specific requirements of how a product is classified under one of the following categories: dispersants, surface washing agents, bioremediation agents, surface collecting agents, and miscellaneous oil spill control agents. Products that consist of materials that meet the definitions of more than one of the product categories will be listed under one category to be determined by the USEPA. A manufacturer who claims to have more than one defined use for a product must provide data to the USEPA to substantiate such claims. However, it is the discretion of RRTs and OSCs to use the product as appropriate and within a manner consistent with the NCP during a specific spill.**

**For clarification of this disclaimer, or to obtain a copy of a current Product Schedule, please contact the USEPA Oil Program Center at (703) 603-9918.**

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# **Selection Guide for Oil Spill Applied Technologies**

## **Volume I – Decision Making**

**NOTE:** This revision of Volume I of the “Selection Guide for Oil Spill Applied Technologies” reflects many changes from the previous versions.

**Scientific and Environmental Associates, Incorporated  
and the Members of the 2002 Selection Guide Development Committee.**

**Current updates were funded under contract by the US Coast Guard,  
District 7.**

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## **SELECTION GUIDE REFERENCE MATERIALS**

The information contained within this selection guide was primarily developed from data supplied to the authors by the product vendors, as well as from the following sources:

USEPA, National Contingency Plan Product Schedule Notebook, October 1998, December 1998, February 1999, May 1999, August 1999, December 1999, April 2000, September 2002, and December 2002 revisions. Accessible from the USEPA website [www.epa.gov/oilspill/](http://www.epa.gov/oilspill/) or by calling (202) 260-2342 or (703) 603-9918.

Walker, A.H., J. Michel, G. Canevari, J. Kucklick, D. Scholz, C.A. Benson, E. Overton, and B. Shane. 1993. Chemical Oil Spill Treating Agents. Marine Spill Response Corporation, Washington, DC. MSRC Technical Report Series 93-015. 328 p.

Harless Performance Guild, Inc. 1995. Human Performance Technology. Newnan, GA.

Any additional reference materials specific to a product/technology category are provided at the conclusion of the Category summaries within Part 2 of this Selection Guide: Review/Selection of Options.

## **ACKNOWLEDGEMENTS**

The authors would also like to gratefully acknowledge the assistance of the many individuals for the development and refinement of this Selection Guide. The editors made every effort to respond to all comments received. Individuals who participated in the initial development and this subsequent update of this document are detailed in Appendix L.

## **FRONT COVER PHOTO CREDITS**

National Oceanic and Atmospheric Administration Web Page Photo Gallery  
US Coast Guard Web Page Photo Gallery  
Hyattsville, MD, Volunteer Fire Department Web Page Photo Gallery  
Boise, ID Fire Department Web Page Photo Gallery

## Selection Guide Overview

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### Context

The first line of oil spill cleanup operations on surface waters has been, and will continue to be, mechanical countermeasures such as booms and skimmers. However, when the limitations of mechanical countermeasures are met and oil threatens or continues to threaten the public interest or the environment, other response countermeasures and technologies should be considered. The effective and timely evaluation of these countermeasures may play a critical role in a successful oil spill response.

This Selection Guide is a compilation of information and guidance on the use of oil spill response technologies and actions that may be unfamiliar to Federal or state on-scene coordinators or local incident commanders. This lack of familiarity should not be equated with inexperience. Rather, experience with vendors in the field may leave decision-makers with the impression that these products and technologies don't work, aren't worth the trouble, or could jeopardize natural resource protection. Instead, once better understood, many of the technologies or products included in this Guide can be beneficial to removal actions and public safety, and provide additional protection to threatened resources and environmentally sensitive areas.

While many aspects of oil spill response operations are predictable, each incident is different because of the type and amount of product spilled, the location of the spill, the weather, or sea conditions, and what resources are threatened. Because of the potential complexities of effective oil spill response management, this Guide has been designed to simplify the evaluation of options for real-time response to actual oil spills.

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Continued on Next Page

### [Shortcut to Table of Contents](#)

## SELECTION GUIDE OVERVIEW (CONTINUED)

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### About The Selection Guide

The primary objective of this guide is to provide information and guidance to responders for the timely evaluation of non-conventional or “applied” and infrequently-used technologies, i.e., ***chemical and biological products*** and ***response strategies***, for a wide range of oil spill conditions and circumstances. The Guide contains information on ***12 types of products*** and ***5 types of strategies contained within 2 separate volumes***:

- The first volume includes ***decision-making information***, which includes information to conduct proactive evaluations by response decision-makers of a preliminary technology category, individual product, or technology during planning or incident-specific use. This information has been designed to be applicable nationwide.
- The second volume contains guidance ***procedures to implement and monitor their use***, as well as document lessons learned. Volume 2 is region-specific and should be further developed by each Regional to address their specific needs and requirements for the use of applied technologies.

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### Scope

The Selection Guide includes information on applied technologies to counter the effects of spilled oil on land, on inland waters (fresh and estuarine), and coastal waters.

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### Updates And Website Access

The development of new or improved products or technologies for oil spill cleanup is ongoing. Unfortunately, much of the new information concerning the efficacy of products (or technologies) in particular situations is not immediately available to responders and when it becomes available, may be “too little, too late” to have a positive impact on the operation. Similarly, the successes (or failures) of products or technologies in actual field use and under varying circumstances should be accessible to the spill response community as a whole. This Selection Guide seeks to be a source of “best available” information to responders, as well as a repository for incident feedback to keep this information and guidance as up to date as possible.

The Selection Guide will be updated as new information or new emerging technologies become available. The goal is to post the Selection Guide on a Website to facilitate easy access and information exchange among regions, and regularly update it as new information and lessons learned become available.

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Continued on Next Page

## SELECTION GUIDE OVERVIEW (CONTINUED)

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### Intended Users

The intended users for this guide are *all oil spill decision-makers*, both experienced and less experienced. They include members of the Unified Command, e.g., FOOSC, SOSOC, Industry, Incident Commander, and resource trustees, among others.

---

### When to Use

The guide should be used:

- During spill *response* by the Planning Section.
- During pre-spill *planning* in developing Area Contingency Plans and Facility Response Plans.
- To assist decision-makers in evaluating *vendor requests* to use their product(s) at *any time*.

Components of this document were developed as a job aid, i.e., sections were designed with sufficient detail to enable the decision-maker to make informed judgments for small spills without requiring outside technical support, e.g., ERT or SSC.

---

### Development Background

This Selection Guide was initially developed under the Work Plan of the Region III Regional Response Team Spill Response Countermeasures Work Group in cooperation with the Region IV Regional Response Team. This revision was sponsored by USCG District 7.

Comments from USEPA, USCG, and State OSCs and resource trustees representing Regions III, IV, and IX have guided the development of this Selection Guide, along with the input of the Selection Guide Development Committees.

For more information on the Selection Guide development, refer to Appendix L

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## SELECTION GUIDE OVERVIEW (CONTINUED)

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### Basic Reasoning

EPA and USCG OSCs in Region III indicated how they would consider using applied response technologies. Their basic *sequence of logic to consider* using applied technologies during an incident is as follows:

- Decide if applied technology(s) might provide value?
  - Decide if the OSC has the authority to use it within its useful timeframe?
  - If so, can it be here in time?
  - If so, does it have application requirements that exceed the window of opportunity?
  - If not, does it have unacceptable environmental, health and safety risks associated with its use?
  - If it has special operational requirements, is there an identified specialist (technical contact) who can provide timely advice on its effective use?
- 


### Using Applied Countermeasures

Once a decision has been made to use an applied countermeasure, then the *next actions* required to use them in the “right” way include the development of:

- A testing plan to determine the applicability of the applied technology for the current incident conditions;
  - An operations plan to effectively implement their use;
  - A monitoring plan to document their effectiveness; and
  - A report on the lessons learned from using them.
- 

### How To Proceed

The step action table below describes how to proceed within this Selection Guide:

IF you have:	AND:	THEN:
Used this guide and job aid in the past	Do not require any background information	Proceed to Part A: Screen Incident.
	Need a refresher on policy and guidance	Read the Decision Process and FAQs and then begin with Part A: Screen Incident.
NOT used this guide before		It is recommended you read the background information, beginning with Decision Process.

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## HOW TO USE THIS SELECTION GUIDE

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### **Follow The Sequence**

The Selection Guide provides a step-by-step process for determining which categories of technologies, and specific products and strategies, might be useful in various oil spill situations, during pre-spill planning or response. To document the rationale in making a technology selection, we strongly recommend that users complete the Selection Guide Worksheets as you proceed through the sequence of steps.

To evaluate requests for consideration by specific vendors, users can also go directly to Part B, the Review/Select Options section of the Guide to review information on specific products and strategies.

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### **First Step**

Table 1 contains an overview of basic information for each technology category, which orients the user on the specific technologies that are included in the Selection Guide, to give you a starting point on terminology and meaning.

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### **Now – Screen The Incident (Environmental Matrices)**

To consider the applicability of the technologies to a scenario or situation, matrices are provided to screen the incident by various characteristics. Three matrices are prepared to evaluate situations where the oil to be treated is on Inland Waters, Adjacent Lands, or Coastal Waters. Using the matrices facilitates a first-cut evaluation of the potential applicability of a technology category based on incident-specific characteristics including: a) the response phase, b) oil type, c) treatment volume, d) weather conditions, e) decision authorities, f) identification of a response problem or “consideration,” and g) monitoring considerations. Assuming a potential applied technology or strategy may provide value, proceed to Part B.

**Note:** The user may need to conduct an individual evaluation using more than one environmental matrix if the incident specific conditions warrant.

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## HOW TO USE THIS SELECTION GUIDE (CONTINUED)

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**Next – Part B,  
Review Types of  
Strategies and  
Products (Concise  
Text Descriptions)**

For each strategy or product category, a 2 to 3 page summary provides concise information to better define the strategy or product category, and identify potential concerns associated with its use. This section defines how these types of strategies or products work, that is, their mechanism of action. This section also describes their availability, application requirements, health and safety issues, operational constraints, environmental concerns, waste generation and disposal issues, what kind of decision authority is required when considering the use of a particular technology class, and where to look or go for technical assistance. Tables that contain specific information on each product or strategy in that category immediately follow these descriptions.

---

**Then – Select a  
Specific Product or  
Strategy (Detailed  
Comparisons in  
Tables)**

When a specific type of strategy or product is identified as potentially beneficial for a situation, the tables in Part B: Review-Select Option section allow a detailed comparison of other products or strategies within that category. The information compiled in these tables allow for easy comparisons of individual product information such as: toxicity data, efficacy test results, operational considerations, availability, whether it can be used in fresh or salt water, and several other specific types information, including photos and cost information (when provided) that assists in making a well-reasoned decision.

**For More  
Information...  
See Tab 5, the  
Appendices**

The appendices in the last section (Tab 5) provide additional information, including a detailed glossary of terminology, an overview on toxicity and how to interpret toxicity data, the history, and status of the various technology categories. Case study information is being added, as it becomes available. Draft Press Release forms for media information are also included.

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## DECISION PROCESS

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### **Who And How**

The *decision flow chart* at the end of this section visually describes how decisions are made for applied technologies in the US.

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) gives the Federal On-Scene Coordinator (FOSC) primary responsibility for directing response efforts and coordinating all other efforts at the scene of a discharge or release (40 CFR § 300.105). This includes directing response efforts and coordinating all other efforts at the scene of a discharge or release.

---

### **FOSC Duties**

The FOSC is charged with initiating defensive actions as soon as possible to prevent, minimize, or mitigate threat(s) to the public health, welfare or the environment of the United States. This includes the use of chemicals and other materials to restrain the spread of the oil and mitigate its effects (40 CFR § 300.310). As part of the national response priorities, all necessary containment and removal tactics are to be used in a coordinated manner to ensure a timely, effective response that minimizes adverse impacts to the environment (40 CFR § 300.317). This may include the use of products listed on the NCP Product Schedule and in this Selection Guide.

---

### **Decision Input And Concurrence**

The FOSC is not the sole decision-maker regarding a product's use for mitigating a spill. The FOSC must first obtain concurrence of the incident-specific EPA representative to the RRT and, as appropriate, the RRT representatives from the state(s) with jurisdiction over the navigable waters threatened by the release or discharge, and, as practicable, in consultation with the DOC and DOI natural resource trustees.

There can be a pre-authorization or pre-approval agreement in place for a product or technology regulated by the NCP Product Schedule. In this case, the FOSC can proceed with the product's use according to the pre-authorization policy.

---

## DECISION PROCESS (CONTINUED)

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**What About Local Government Incident Commanders?** Decisions for public safety issues for fires are under the purview of the lead public emergency response agency. Fire Departments and HAZMAT teams have the authority to “hose down” a spill using a chemical countermeasure if they determine that the spilled oil could cause an explosion and/or threaten human health. However, the use of an applied product, even in a situation designed to prevent or reduce the threat to human health and safety, requires that the lead emergency response agency notify the FOSC of this use.

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**One Exception ... For Hazard To Human Life** “The Federal OSC may authorize the use of any dispersant ... other chemical agent, including products not listed on the NCP Product Schedule, without obtaining the concurrence of the EPA representative to the RRT and, as appropriate, the RRT representatives from the states with jurisdiction over the navigable waters threatened by the discharge or release, when, in the judgment of the OSC, the use of the product is necessary to substantially reduce a hazard to human life. *Please note that, although **non-listed products can be used, listed products should be used whenever possible.***”

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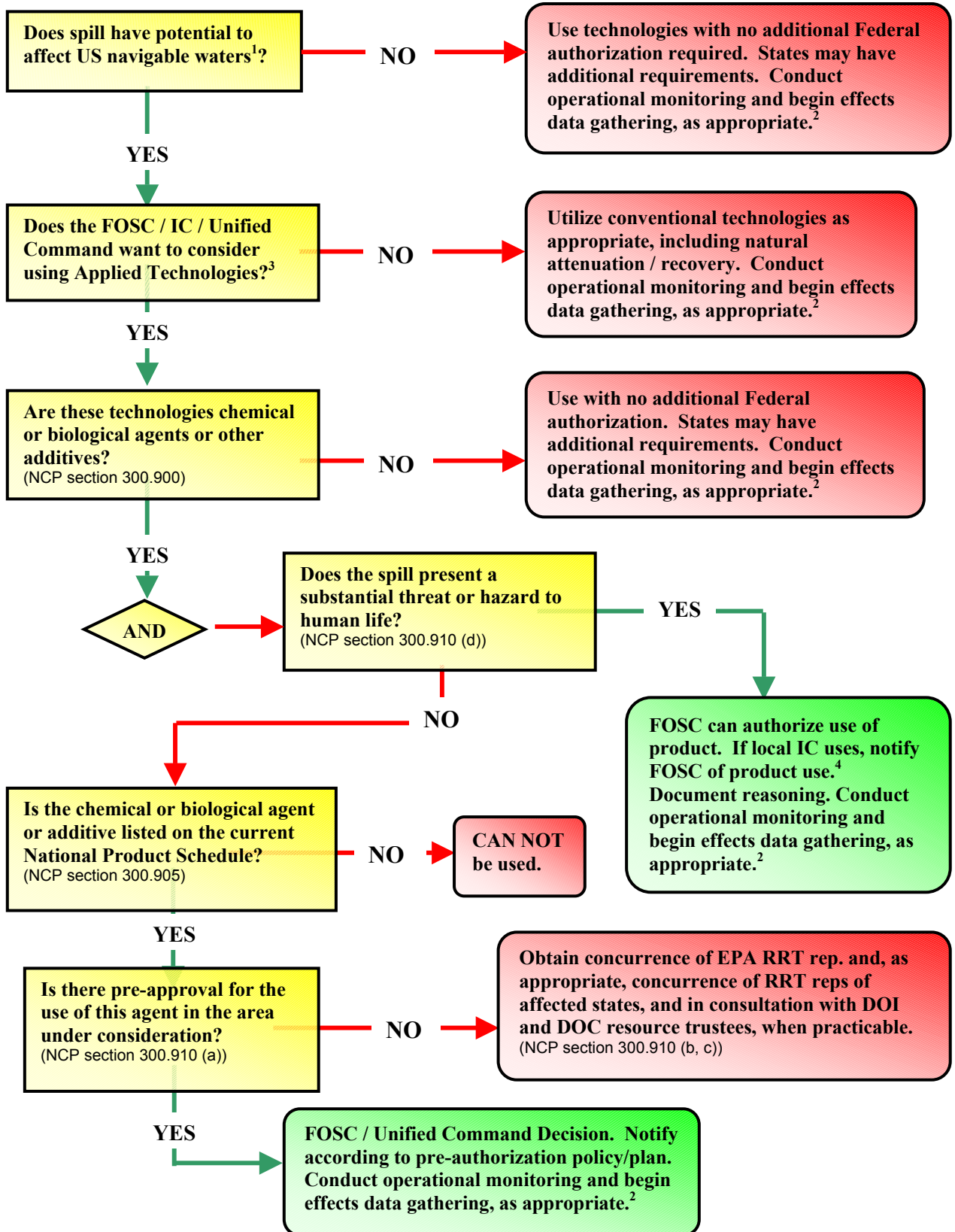
**OSC Notifications** Whenever the FOSC authorizes the use of a product pursuant to the exception language in the regulations (see paragraph above), the FOSC is to inform the EPA RRT representative, and as appropriate, the RRT representatives from the affected sates, and, when practicable, the DOI/DOC resource trustees of the use of a product, including products not on the Schedule, as soon as possible.

Once the threat to human life has subsided, the continued use of a product shall be in accordance with paragraphs 300.910 (a, b, and c).” (NCP section 300.910 (d)).

---

# Decision Process for Using Applied Technologies During Response

**Start Here:** (Definitions on next 4 pages)



## DECISION PROCESS FLOW CHART DEFINITIONS

---

### #1 US Navigable Waters

[Taken from 40 CFR part 300 as defined by 40 CFR 110.1] means the waters of the US including the territorial seas. This term includes, but is not limited to:

- A. all waters that are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters at are subject to the ebb and flow of the tide;
- B. interstate waters, including interstate wetlands;
- C. all other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, and wetlands, the use degradation, or destruction of which would affect or could affect interstate or foreign commerce including any such waters:
  - 1. that are or could be used by interstate or foreign travelers for recreational or other purposes;
  - 2. from which fish or shellfish are or could be taken and sold in interstate or foreign commerce;
  - 3. that are used or could be used for industrial purposes by industries in interstate commerce;
- D. all impoundments of waters otherwise defined as navigable waters under this section;
- E. tributaries of waters identified in paragraphs (a) through (d) of this definition, including adjacent wetlands; and
- F. wetlands adjacent to waters identified in paragraphs (a) through (e) of this definition; provided, that waste treatment systems (other than cooling ponds meeting the criteria of this paragraph) are not waters of the US.

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## DECISION PROCESS FLOW CHART DEFINITIONS (CONTINUED)

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### #2 **Operational Monitoring**

(a.k.a. effectiveness monitoring) is defined by Pond *et al.*, (1997) as monitoring that “provides qualitative information, through visual observations [or other specified method] by trained personnel in real-time, during the actual response, to influence operational decision-making.”

**Effects monitoring** (a.k.a. long-term data gathering) is defined as data that “provides quantitative information on the use of [a product] and the real effects following a spill to influence planning and future research” (Pond *et al.*, 1997). The longer time (weeks, or even months) involved with obtaining results from effects monitoring dictates that sampling should not be used to influence incident-specific decision-making. However, response and trustee agencies should begin gathering effects monitoring data as soon as practicable. Effects monitoring information collection is a long-term process and the results are typically not available in real-time to affect decision-making.

During a response, operational personnel need to be able to ensure the success of a response technique, and in particular, be able to direct, redirect, or discontinue the use of the response technique. Operational monitoring could be as simple as visually monitoring the effectiveness of a particular boom. Is it placed correctly? Is it functioning as expected? Is there any oil remaining to be captured with the particular boom? Or as complete as using Tier 3 Special Monitoring of Applied Response Technologies (SMART) protocols for dispersant use or *in situ* burn monitoring.

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## DECISION PROCESS FLOW CHART DEFINITIONS (CONTINUED)

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**#3 Applied Technologies** Are defined in this Selection Guide as:

Products	Strategies
<ul style="list-style-type: none"> <li>• Bioremediation agents</li> <li>• Dispersants</li> <li>• Elasticity Modifiers**</li>   <li>• Emulsion Treating Agents</li>   <li>• Fire-fighting Foams*</li> <li>• <i>In situ</i> Burning on Land</li> <li>• <i>In situ</i> Burning in Inland Waters</li> <li>• Shoreline Pre-treatment Agents**</li> <li>• Solidifiers</li> <li>• Sorbents</li> <li>• Surface Collecting Agents**</li> <li>• Surface Washing Agents</li> </ul>	<ul style="list-style-type: none"> <li>• Fast-water Booming Strategies</li> <li>• Non-floating Oil Strategies</li> <li>• Oil-and-ice Response Strategies</li> <li>• Pyrolytic Oil Response Strategies</li> <li>• Water Intake Monitoring Strategies</li> </ul>
<p>* Not required to be listed on the NCP Product Schedule.            ** As of this publication, there were no products listed on the NCP Product Schedule for these product categories.</p>	

**#4 OSC**

Decisions for public safety issues for fires are under the purview of the lead public emergency response agency. Fire Departments and HAZMAT teams have the authority to “hose down” a spill using a chemical countermeasure if they determine that the spilled oil could cause an explosion and/or threaten human health. However, the use of an applied product, even in a situation designed to prevent or reduce the threat to human health and safety, requires that the lead emergency response agency notify the FOSC of this use.

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## DECISION FLOW CHART DEFINITIONS (CONTINUED)

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### References

USEPA. 1994. 40 CFR Part 300, National Oil and Hazardous Substances Pollution Contingency Plan; Final Rule. In: Federal Register, Vol. 59, No. 178, Thursday, September 15, 1994. pp. 47, 384-47, 495.

Pond, R., J.H. Kucklick, and A.H. Walker. 1997. Dispersant Use: Real-time Operational Monitoring and Long-term Data Gathering. Prepared by Scientific and Environmental Associates, Inc., Alexandria, VA. Prepared for Marine Preservation Association, Scottsdale, AZ. 23 p.

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## USING A PRODUCT DURING A RESPONSE

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### **Concurrence**

The Federal OSC may authorize the use of chemical or biological control agents listed on the NCP Product Schedule with the concurrence of the incident-specific EPA representative to the RRT and, as appropriate, the RRT representatives from the state(s) with jurisdiction over the navigable waters threatened by the release or discharge, and, as practicable, in consultation with the DOC and DOI natural resource trustees.

---

### **Incident-Specific**

RRTs or Area Committees are encouraged to address the desirability of using agents listed on the Product Schedule and develop pre-authorization or pre-approval plans, as appropriate. The EPA representative to the RRT and the RRT representatives from the state(s) with jurisdiction over the navigable waters to which the pre-authorization plan applies and the DOC and DOI natural resource trustees shall review and either approve, disapprove or approve with modification these pre-authorization plans. When a pre-authorization plan exists, the FOSC can proceed with the product's use according to the pre-authorization policy.

---

### **Pre-Authorized**

Prior to seeking this concurrence, the OSC must determine what, if any countermeasures from the Product Schedule would be applicable for the incident-specific spill conditions. Decision support guidance for choosing appropriate spill countermeasure technologies begins with several basic questions. These questions lead to the systematic approach for the Spill Countermeasure Technologies developed in the Selection Guide.

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## USING A PRODUCT DURING A RESPONSE (CONTINUED)

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### **Pre-Approval Policies**

In many cases, RRTs have developed pre-approval policies for use of certain countermeasures. Refer to the region-specific policies and/or plans that can be collected and stored in your region-specific Tabs in Volume II of this Selection Guide. This is especially true in the case of dispersants and *in-situ* burning for many regions around the country. These pre-approval policies facilitate rapid use of appropriate spill countermeasure technologies under specific circumstances.

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### **Incident-Specific Authorization**

If there is no pre-approval, the incident-specific RRT members must be convened for an incident-specific authorization. Concurrence must be obtained from USEPA and the state(s) in consultation with DOI and DOC. This approval process is often carried out in a phone conference with the incident-specific RRT members.

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## List of Products and Their Location Within This Selection Guide\*.

The following table provides the decision-maker with a quick reference guide to the products currently listed on the NCP Product Schedule (Column 1 and 2 in **bold faced type**). In several instances, products are included in this document that are not currently listed on the Product Schedule (shaded lines). These products (primarily solidifiers) have had an extensive body of research conducted on them in recent years, and most of these products are readily available and being used by spill communities outside the US. However, under the rules established by the NCP (40 CFR Subpart § 300.915), these products would be considered chemical agents, and require listing on the NCP Product Schedule prior to their use in the US. The information for these non-listed products is contained in Appendix K unless otherwise stated in the last column.

Some products on the NCP Product Schedule are listed in a Miscellaneous category, which doesn't convey the function of the product to the reader. In those cases, the authors re-evaluated the products in terms of their mechanism of action and assigned them into functional countermeasure categories [e.g., Miscellaneous products ⇒ Surface Washing Agents (PES 51)]. The classification system for all products as evaluated in this Selection Guide is presented in Column 3.

#	PRODUCT NAME	PRODUCT CLASSIFICATION ON THE NCP PRODUCT SCHEDULE	PRODUCT CLASSIFICATION WITHIN THIS SELECTION GUIDE	CATEGORY REFERENCE PAGES	PAGE(S) FOR PRODUCT-SPECIFIC INFO
1	<b>Alsocup</b>	<b>Miscellaneous</b>	Solidifier	135 to 137	139 to 140
2	<b>Aquaclean</b>	<b>Surface Washing Agent</b>	Surface Washing Agent	157 to 159	161 to 162
3	<b>BET BIOPETRO</b>	<b>Bioremediation Agent</b>	Bioremediation Agent	87 to 90	91 to 92
4	<b>Biogee-HC (Microbes HC)</b>	<b>Bioremediation Agent</b>	Bioremediation Agent	87 to 90	91 to 92
5	<b>Biosolve®</b>	<b>Surface Washing Agent</b>	Surface Washing Agent	157 to 159	161 to 162
6	<b>BR (Biota Earth)**</b>	<b>Not listed on NCP</b>	Bioremediation Agent	87 to 90	Appendix K
7	<b>CI Agent or Cheap Insurance</b>	<b>Miscellaneous</b>	Solidifier	135 to 137	139 to 140
8	<b>CN-110</b>	<b>Surface Washing Agent</b>	Surface Washing Agent	157 to 159	161 to 162
9	<b>Corexit 7664</b>	<b>Surface Washing Agent</b>	Surface Washing Agent	157 to 159	161 to 162
10	<b>Corexit 9500</b>	<b>Dispersant</b>	Dispersant	97 to 100	101 to 102
11	<b>Corexit 9527</b>	<b>Dispersant</b>	Dispersant	97 to 100	101 to 102

\* **Warning:** Ensure that the revision date of this Guide is consistent with the most recent version of the NCP Product Schedule. If dates are not consistent, the information could be outdated. **Note:** As of this publication, there are only five product categories on the NCP Product Schedule: Dispersants, Bioremediation Agents, Surface Collecting Agents, Surface Washing Agents, and Miscellaneous Oil Spill Control Agents.

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\*\*\* EPA has determined that this product is a Sorbent. therefore, this product does not need to be listed on the NCP Product Schedule.

#	PRODUCT NAME	PRODUCT CLASSIFICATION ON THE NCP PRODUCT SCHEDULE	PRODUCT CLASSIFICATION WITHIN THIS SELECTION GUIDE	CATEGORY REFERENCE PAGES	PAGE(S) FOR PRODUCT-SPECIFIC INFO
12	Corexit 9580 Shoreline Cleaner	Surface Washing Agent	Surface Washing Agent	157 to 159	161 to 162
13	CytoSol	Surface Washing Agent	Surface Washing Agent	157 to 159	163 to 164
14	Dispersit SPC 1000™	Dispersant	Dispersant	97 to 100	101 to 102
15	Do-All #18	Surface Washing Agent	Surface Washing Agent	157 to 159	163 to 164
16	Elastol**	Not listed on NCP	Elasticity Modifier	105 to 107	107 to 109
17	Enviro-Bond 403**	SORBENT; Not required to be listed on NCP	Solidifier	135 to 137	139-140
18	Enzyt (Liquid/Crystal)**	Not listed on NCP	Bioremediation Agent	87 to 90	Appendix K
19	F-500	Surface Washing Agent	Surface Washing Agent	157 to 159	163 to 164
20	FM-186-2	Surface Washing Agent	Surface Washing Agent	157 to 159	163 to 164
21	Gold Crew SW (ECP Responders SW)	Surface Washing Agent	Surface Washing Agent	157 to 159	163 to 164
22	Imbiber Beads**	SORBENT; Not required to be listed on NCP	Sorbents	143 to 145	147
23	Inipol EAP 22	Bioremediation Agent	Bioremediation Agent	87 to 90	91 to 92
24	JD-109	Dispersant	Dispersant	97 to 100	101 to 102
25	JD-2000™	Dispersant	Dispersant	97 to 100	101 to 102
26	Land and Sea Restoration Product 001	Bioremediation Agent	Bioremediation Agent	87 to 90	91 to 92
27	Mare Clean 200	Dispersant	Dispersant	97 to 100	103 to 104
28	Micro-Blaze®	Bioremediation Agent	Bioremediation Agent	87 to 90	91 to 92
29	Nale-it	Surface Washing Agent	Surface Washing Agent	157 to 159	165 to 166
30	Nature's Way HS (Micro Clean)	Surface Washing Agent	Surface Washing Agent	157 to 159	165 to 166
31	NEOS AB 3000	Dispersant	Dispersant	97 to 100	103 to 104

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**Note:** As of this publication, there were no elasticity modifiers listed on the USEPA NCP Product Schedule. In the US, any chemical agent or other additive (excluding sorbents) that may be considered for use during an oil spill response must be listed on the NCP Product Schedule. For definitions, refer to glossary.

#	PRODUCT NAME	PRODUCT CLASSIFICATION ON THE NCP PRODUCT SCHEDULE	PRODUCT CLASSIFICATION WITHIN THIS SELECTION GUIDE	CATEGORY REFERENCE PAGES	PAGE(S) FOR PRODUCT-SPECIFIC INFO
32	Nochar A610	Not listed on NCP	Solidifier	135 to 137	Appendix K
33	Nochar A650	Not Listed on NCP	Solidifier	135 to 137	Appendix K
34	Nokomis 3-F4	Dispersant	Dispersant	97 to 100	103 to 104
35	Oil Herder	Not Listed on NCP	Surface Collecting Agent	153 to 154	Appendix K
36	Oil Spill Eater II	Bioremediation Agent	Bioremediation Agent	87 to 90	93 to 94
37	Oppenheimer Formula	Bioremediation Agent	Bioremediation Agent	87 to 90	93 to 94
38	PES-51	Miscellaneous	Surface Washing Agent	157 to 159	165 to 166
39	PRP (WAPED)	Bioremediation Agent	Bioremediation Agent	87 to 90	93 to 94
40	PX-700	Miscellaneous	Surface Washing Agent	157 to 159	165 to 166
41	Petrobiodispers	Dispersant	Dispersant	97 to 100	103 to 104
42	Petro-Clean	Surface Washing Agent	Surface Washing Agent	157 to 159	167 to 168
43	Petro-Green ADP-7	Surface Washing Agent	Surface Washing Agent	157 to 159	167 to 168
44	Petrotech 25	Surface Washing Agent	Surface Washing Agent	157 to 159	167 to 168
45	Premier 99	Surface Washing Agent	Surface Washing Agent	157 to 159	167 to 168
46	Pristine SEA I	SORBENT; Not required to be listed on NCP	Sorbent	143 to 145	147
47	Pristine Sea II	Bioremediation Agent (Biological Additive)	Bioremediation Agent	87 to 90	93 to 94
48	RapidGrab 2000™	Miscellaneous	Surface Collecting Agent	153 to 154	155
49	Rubberizer***	SORBENT; Not required to be listed on NCP	Solidifier	135 to 137	139 to 140
50	S-200	Bioremediation Agent	Bioremediation Agent	87 to 90	93 to 94

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#	PRODUCT NAME	PRODUCT CLASSIFICATION ON THE NCP PRODUCT SCHEDULE	PRODUCT CLASSIFICATION WITHIN THIS SELECTION GUIDE	CATEGORY REFERENCE PAGES	PAGE(S) FOR PRODUCT-SPECIFIC INFO
51	SC-1000™	Surface Washing Agent	Surface Washing Agent	157 to 159	167 to 168
52	SPI Solidification Particulate**	Not listed on NCP	Solidifier	135 to 137	Appendix K
53	SX-100®	Surface Washing Agent	Surface Washing Agent	157 to 159	169 to 170
54	Sea Brat #4	Dispersant	Dispersant	97 to 100	103 to 104
55	Simple Green	Surface Washing Agent	Surface Washing Agent	157 to 159	169 to 170
56	Sorbents**	May be required to be listed; Check Appendix G	Sorbents	143 to 145	147 to 150
57	Split Decision SC	Surface Washing Agent	Surface Washing Agent	157 to 159	169 to 170
58	Step One (B&S Industrial)	Bioremediation Agent	Bioremediation Agent	87 to 90	95 to 96
59	System E.T. 20	Bioremediation Agent	Bioremediation Agent	87 to 90	95 to 96
60	Topsall #30	Surface Washing Agent	Surface Washing Agent	157 to 159	169 to 170
61	VB591 Water	Bioremediation Agent	Bioremediation Agent	87 to 90	95 to 96
62	Waste Set PS #3200	Miscellaneous	Solidifier	135 to 137	139 to 140
63	Waste Set PS #3400	Miscellaneous	Solidifier	135 to 137	139 to 140
64	WMI-2000	Bioremediation Agent	Bioremediation Agent	87 to 90	95 to 96
65	Zyme-Flow (Mari-Zyme, Petro-Zyme, Zyme-Treat)	Miscellaneous	Emulsion Treating Agent	109 to 111	112

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## FAQS - NATIONAL CONTINGENCY PLAN (NCP) PRODUCT SCHEDULE AND POLICIES

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### What Is The National Product Schedule?

Section 311(d)(2)(G) of the CWA requires that USEPA prepare a schedule of dispersants, other chemicals, and other spill mitigating devices and substances, if any, that may be used in carrying out the NCP (40 CFR § 300.900; a.k.a. Subpart J).

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### What Does It Contain?

It contains a list of dispersants and other chemical or biological products that have met the data requirements set forth by § 300.915 of the NCP. Inclusion of a product on the NCP Product Schedule indicates only that the technical product data requirements have been satisfied.

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### Caution

Being listed on the National Product Schedule does **NOT** mean that the product is recommended or endorsed by the USEPA for use on an oil spill.

The Unified Command while managing a response determines whether there is a need for a product listed on the NCP Product Schedule to control a particular spill. **In most cases, the FOSC must gain incident-specific approval to use the product.** However, some states, e.g., California, also have an acceptance list. For further clarification and details, refer to the Decision Process section and Subpart J (40 CFR § 300.900), which is included in full as Appendix F in this volume.

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### How Are Products Listed?

To list a product on the NCP Product Schedule, a manufacturer must submit technical data (e.g., effectiveness and toxicity data) on the product to the USEPA. Specific guidelines for vendors are contained in 40 CFR, Subpart J, “Use of Dispersants and Other Chemicals § 300.915”. Following data submission, the USEPA reviews the data to confirm completeness and that the procedures specified were followed.

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### Schedule Updates

The Product Schedule is updated every two months or as needed.

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## FAQs -NCP PRODUCT SCHEDULE AND POLICIES (CONTINUED)

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**Schedule Access** To access the NCP Product Schedule, contact the NCP information line: (703) 603-9918, or [www.epa.gov/oilspill/](http://www.epa.gov/oilspill/). During a spill response, decision-makers may not have immediate access to the Internet; it is advisable that decision makers have backup in their office, that can access the necessary information in a timely manner.

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**What Products Must Be Listed?** Any chemical or biological agent that would be used in the environment and which cannot be completely contained and recovered is required to be listed on the NCP Product Schedule.

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**Who Decides What Must Be Listed?** It is the job of the USEPA Oil Program (headquarters) to determine whether products must be listed on the NCP Product Schedule in order to be used during a response.

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**When Can Non-Listed Products Be Used?** If use of a product will be confined to primary or secondary containment areas that can be cleaned and the material fully recovered, such as in a concrete berm or isolated sewage system with no access to other waterways, then non-listed products may be used to respond to the incident.

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## FAQs - NCP PRODUCT SCHEDULE AND POLICIES (CONTINUED)

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### **Examples Of Inappropriate Product Use**

Fire departments and HAZMAT teams are authorized to “hose down” a spill using a chemical countermeasure if they determine that the fuel could cause an explosion and threaten human health. Nevertheless, they should make every attempt to contain the fuel/chemical mixture and prevent it from entering storm drains or other environments where 100 percent product/oil recovery or containment is not possible.

Inappropriate uses often occur when treated areas are washed clean and the runoff contaminates surrounding areas or enters storm drains or sewer systems directly. Examples of where this may happen include:

- Roads
- Parking lots
- Fields
- Railroads
- Storm drains
- Hangers and storage areas without waste containment systems

OSCs should establish a working relationship with local responders to explain that these products can be used without their permission but in accordance with the NCP.

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### **Can Bioremediation Be Used On Land?**

Even if bioremediation products are going to be used on land, their use still must be authorized. This authorization would be granted by the RRT and the OSC if the spill has or may impact navigable water. State and local regulations may apply to the application of bioremediation agents, regardless of the impact to navigable water.

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### **Sorbents, Do Not Have To Be Listed, Right?**

Normal sorbent materials can be used without being listed *Unless* they incorporate environmentally reactive chemicals or bioremediation agents to assist with their function. Some states, e.g., California, have restrictions on the use of loose sorbents as well. More information on sorbents is provided on the following pages.

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## FAQs - NCP Product Schedule and Policies (Continued)

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**What Does It Mean If A Product Is Not Listed?** Products that are not on the NCP Product Schedule, may not have performed even simple toxicological testing or efficacy testing (e.g., many sorbents, which by definition are not required to be listed on the NCP Product Schedule). These products may not have been regulated or evaluated by the reporting process as specified by the NCP Product Schedule and may pose adverse or unacceptable risks to resources or the environment.

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**What Are The Limitations Even If The Product Is Listed?** Conversely, being listed on the Product Schedule does not mean that the products have been proven effective or are considered non-toxic. In fact, listed products may be highly toxic to native plants and animals.

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**Regulatory Reminder** Regulations state that you should use known products on the Schedule over unlisted ones, and should always obtain the incident-specific concurrence when using any listed product, unless a pre-approval has been coordinated and authorized by the appropriate RRT.

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**Education Is The Key** It is also important to continually educate yourself about new methods and technologies. Rapidly evolving technologies can change the need for, amount of, and/or mix of spill countermeasure technologies to be used in spill response operations.

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## FAQS TO CONSIDER FOR APPLIED TECHNOLOGIES AND PRODUCT USE

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### Question #1

Does the discharge warrant the use of a product to prevent or substantially reduce a hazard to human life?

YES: Use is authorized as per 40 CFR 300.910 (c)

NO: Use will be governed by pre-approval, case-by-case authorization from the RRT, or applicability of the NCP Product Schedule or other governing state, local, or Federal authority.

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### Question #2

Is the spill in navigable waters of the United States and adjoining shorelines, the waters of the contiguous zone, in connection with activities under the Outer Continental Shelf Lands Act, activities under the Deepwater Port Act of 1974, or activities that may affect natural resources belonging to, appertaining to, or under the exclusive management authority of the United States, e.g., resources under the Magnuson Fishery Conservation and Management Act of 1976, Endangered Species Act of 1973, and the Migratory Bird Treaty Act as amended?

YES: Authorization is required.

NO: Authorization is not required. Evaluate the product and potential use thoroughly. Products should be used only after considering environmental, health, and safety concerns.

UNKNOWN: Refer to FOSC/SOSC to determine if spill is on navigable waters.

In all cases, OSCs and other decision-makers need to be aware that their decision-making must be in compliance with various Acts, MOAs, and/or Programmatic Agreements. The Area and Regional plans establish policy and guidance for the use of technologies and what is required for such use, including compliance. The policies and guidance's for each region can be maintained in Volume II of this document.

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## FAQS TO CONSIDER FOR APPLIED TECHNOLOGIES AND PRODUCT USE (CONTINUED)

### Question #3

What monitoring is appropriate?

Part C of the Selection Guide provides some general guidance to help plan for appropriate testing and monitoring of each technology class. The Special Monitoring of Applied Response Technologies (SMART) monitoring program is cited for use with dispersant and *in situ* burn technologies.

When a product or technology listed in this Selection Guide is used, some level of monitoring is recommended and may be required under OPA and/or the NCP, if only to verify the effectiveness of the technology used and to determine when to stop using a particular response tool. **Note:** Verify with state(s) trustees to determine what, if any, additional monitoring standards are necessary according to state regulations.

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## SORBENTS AND THE NCP PRODUCT SCHEDULE

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**Description** Sorbents are essentially inert and insoluble materials that are used to remove oil and hazardous substances from water or land through adsorption, in which the oil or hazardous substance is attracted to the sorbent surface and then adheres to it. Sorbents may also use absorption, in which the oil or hazardous substance penetrates the pores of the sorbent material. Sorbents use adsorption and absorption processes alone or in combination.

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**Use** Sorbents may be used in all areas, as long as they are completely recovered after application. Sorbents are generally manufactured in a particulate form for spreading over a spill or as sheets, rolls, pillows, or booms.

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**NCP Application** The NCP Subpart J requirements do not apply if the product is a sorbent that has not been treated with any chemically reactive substance or biological additive. However, IF IN DOUBT, CONTACT USEPA TO VERIFY THE CLAIMS OF THE MANUFACTURER. If a product is defined as a sorbent, then its use requires no pre-approval or RRT approval prior to use.

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**Further Information** Contact USEPA HQ at 202-260-2342 or 703-603-9918 for further information about particular sorbent use.


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## SORBENTS AND THE NCP PRODUCT SCHEDULE (CONTINUED)

### NCP Product Schedule

The following decision table gives examples of sorbent products that do not need to be listed on the NCP product schedule prior to use. If a sorbent product contains solely those materials listed in column one and it does not incorporate environmentally reactive chemicals or bioremediation agents to assist with its function, it does not have to be listed on the NCP product schedule. Before using loose sorbents or sorbents that consist of particulate matter, check with state regulations to ensure there are no restrictions. To prove this exclusion, a vendor should supply a copy of their exclusion sorbent letter as supplied to them by the USEPA Oil Program office (A copy of a draft letter is found in Appendix C).

<b>IF sorbent material consists of:</b>	<b>AND:</b>	<b>THEN:</b>
<b>Organic:</b> <ul style="list-style-type: none"> <li>• Peat moss or straw</li> <li>• Cellulose fibers or cork</li> <li>• Corn cobs</li> <li>• Chicken, duck or other bird feathers</li> </ul>	Vendor can supply a valid USEPA exclusion sorbent letter for this product	Product can be used. It is recommended to verify with Nick Nichols at 703-603-9918.
<b>Mineral compounds:</b> <ul style="list-style-type: none"> <li>• Volcanic ash or perlite</li> <li>• Vermiculite or zeolite</li> </ul>	Vendor can supply a valid USEPA exclusion sorbent letter for this product	Product can be used. It is recommended to verify with Nick Nichols at 703-603-9918.
<b>Synthetic:</b> <ul style="list-style-type: none"> <li>• Polypropylene</li> <li>• Polyethylene</li> <li>• Polyurethane</li> <li>• Polyester</li> </ul>	Vendor can supply a valid USEPA exclusion sorbent letter for this product	Product can be used. It is recommended to verify with Nick Nichols at 703-603-9918.
<b>Other compounds or products:</b>		Contact Nick Nichols at 703-603-9918 to verify product does not require NCP schedule listing