

Appendix V: EPA Region V Chemical Use Checklist

<u>TASK</u>	<u>RESPONSIBILITY</u>
A. COMPILE DATA	
1. Spill Data	OSC
<ul style="list-style-type: none"><li>• Circumstances</li><li>• Time/date of incident</li><li>• Location</li><li>• Type of oil product</li><li>• Volume of oil release</li><li>• Total potential of release</li><li>• Type of release (instantaneous, continuous, etc.)</li></ul>	
2. Characteristics of Spilled Oils	OSC
<ul style="list-style-type: none"><li>• Specific gravity</li><li>• Viscosity</li></ul>	
3. Weather and Water Conditions/Forecasts	SSC
<ul style="list-style-type: none"><li>• Air temperature</li><li>• Water conditions</li><li>• Water temperature</li><li>• Water depth</li></ul>	
4. Oil Trajectory Information	SSC
<ul style="list-style-type: none"><li>• 48 hour surface oil trajectory forecast<ul style="list-style-type: none"><li>– Surface area of slick</li><li>– Expected conditions of landfall</li></ul></li><li>• 48 hour dispersed or chemically treated oil trajectory forecast<ul style="list-style-type: none"><li>– Oil movement in water column</li><li>– Surface oil movement and expected landfall</li><li>– Concentration of the dispersant/oil mixture in the water column</li></ul></li></ul>	

5. Chemical Characteristics and Application Equipment

CHEMICAL CHARACTERISTICS

	Product 1	Product 2	Product 3
Chemical Name			
Trade Name			
Manufacturer			
When Available			
Location			
Characteristics			
• Toxicity			
• effectiveness			
• reactions			
• applicability			
• flash point			
Amount Available			
Type of Containers			
Application Methods			
Benefits to Problem (e.g. reduce vapor, increase viscosity)			

TRANSPORTATION and EQUIPMENT

	Company 1	Company 2	Company 3
Name			
Location			
Equipment Available			
Transportation of Equipment			

6. Comparison of the Effectiveness of Conventional Clean Methods vs. Use of Chemicals US EPA, USCG OSC  
SSC, State(s)
- Containment at the source
  - Burning
  - Shoreline protection strategies
  - Shoreline cleanup strategies
  - Time necessary to execute response
7. Habitats and Resources at Risk OSC, SSC
- Shoreline habitat type and area of impact
  - Resources
    - Endangered/threatened species
    - Critical habitat for the above species
    - Waterfowl use
    - Shellfish
    - Finfish
    - Commercial use
    - Public use areas
    - Other resources of significance
8. Other Users of the Water: Nearby and Downstream OSC
- Water supply, potable
  - Water supply, industrial

## B. RECOMMENDATIONS

US EPA, USCG OSC  
SSC, State(s)

1. Possible Options
  - Do not use chemicals
  - Use chemicals on a trial basis
  - Disperse or chemically treat to maximum extent possible with accepted methods on available equipment
2. Other Recommendations/Rationale

C. Evaluation of Decision

US EPA, USCG OSC

SSC, State(s)

1. Will the application remove a significant amount of the slick from the surface of the water?
2. Can the extent or location of the shoreline impacts be altered in a positive manner?
3. Can the damage to endangered/threatened species, mammals, and waterfowl be lessened?
4. Will the damage to habitats and resources resulting from the chemical use be less than those resulting without the use?
5. If recreational, economic, and aesthetic considerations are a higher priority than natural resource considerations, what is the most effective means of their protection?

D. Monitoring of Chemical Use

OSC, State(s)

1. Records
  - Chemical brand
  - Equipment and methods used in application
  - Dilution of chemical prior to application, if any
  - Rate of application
  - Times and area of application
  - Wind and wave conditions during application
2. Effectiveness – visual and photographic documentation
  - Oil before and after chemical application
  - Resurfacing of dispersed or chemically treated oil
  - Sampling of the water beneath the oil slick and the oil/chemical combination to determine the level of the petroleum hydrocarbons in the water
3. Environmental Impacts – visual and photographic surveys
  - The extent of shoreline impact by chemically treated and untreated oil
  - Mortality or abnormal behavior of fish, birds, or mammals
  - Comparison of shoreline areas impacted by oil and oil/chemical mixtures
  - Analysis of oil concentrations in sediments under chemically treated oil
  - Investigation of water column organisms for signs of adverse impact due to chemically treated oil
  - Collection and analysis of birds affected by chemicals or oil/chemical mixture
4. Public Health
  - Sampling water supplies for petroleum and chemical constituents