

## Appendix 7-A1: Bioremediation Policy (July 1999)

RRT3 authorizes the case-by-case use of bioremediation in coastal areas in the MOU for chemical countermeasures, which was signed in December 1997 and is described above in "Dispersants and Other Chemical Countermeasures." The policy derived from this MOU authorizes expedited procedures for obtaining authorization to use bioremediation in coastal areas only and does not address use in inland areas.

In general, appropriate conditions for use of bioremediation are:

- As a polishing technique after other methods have been used to remove free product and gross contamination;
- When further oil removal is likely to be destructive, ineffective, or cost-prohibitive;
- When nutrients are limiting rates of natural biodegradation; and
- When indigenous hydrocarbon degraders capable of degrading hydrocarbons are present in low numbers.

To implement bioremediation, an incident-specific plan will need to be developed which addresses items in the "Region III Guidance for Using Bioremediation to Treat Oil Pollution" (see Appendix 7-A2). This Region III guidance outlines the operational procedures recommended by the Region III RRT and is adapted from Region VIII.

<b>Bioremediation for RRT3 Delaware, Maryland, Virginia</b>	
<b>Reference:</b>	
<ul style="list-style-type: none"> <li>• Dispersants and other chemical countermeasures MOU, (Appendix 6)</li> <li>• Selection Guide (Appendix 8-C)</li> <li>• Region III Alternative Response Tool Evaluation System (ARTES) (Appendix 8-B)</li> <li>• Special Monitoring of Advanced Response Technologies (SMART) (Appendix 8-A)</li> <li>• Bioremediation Guidance (Appendix 7-A2)</li> </ul>	
<b>Existing MOU</b>	Provides for expedited case-by-case decision making for biological additives (not an emergency type of technology)
<b>Evaluation/Selection of bioremediation Agents</b>	ARTES
<b>Guidance for Use</b>	<p>Volume 2 Selection Guide - Operations plans (in progress) (Appendix 8-C2)</p> <p>Region III Bioremediation Guidance (Appendix 7-A2) (February 2004)</p> <ul style="list-style-type: none"> <li>- Decision-making Tools (flow chart and application form)</li> <li>- Feasibility Assessment Criteria</li> <li>- Notification Requirements</li> <li>- Work Plan and Monitoring Plan Activities</li> <li>- Documentation and Reporting Tools</li> <li>- Health and Safety Concerns</li> </ul>
<b>Monitoring:</b> SMART protocol, if appropriate, plus additional guidance in Vol. 1 of the Selection Guide (Appendix 8-C1). Also, see monitoring parameters in the Bioremediation Plan in Vol. 2 of the Selection Guide (in progress)	