Connecticut
Maine
Massachusetts
New Hampshire
Rhode Island
Vermont

The

Environmental Protection Agency's

INLAND AREA CONTINGENCY PLAN

for

Region I – New England

Report Oil & Chemical Spills
1-800-424-8802

United States Environmental Protection Agency
Office of Site Remediation and Restoration
Emergency Planning and Response Branch
Boston, Massachusetts

SDMS 284809

Letter of Promulgation

This Area Contingency Plan (ACP), and the corresponding Area Committee, are required by Title IV, Section 4202 of the Oil Pollution Act of 1990 (OPA), which amends Subsection (j) of Section 311 of the Federal Water Pollution Control Act (FWPCA) (33 U.S.C. 1321 (j)) as amended by the Clean Water Act (CWA) of 1977 (33 U.S.C. 1251 et seq). As required, it was developed under the direction of a U.S. Environmental Protection Agency (EPA) On-Scene Coordinator (OSC) to address the requirements of the National Planning and Response System.

Through Executive Order 12777, the President delegated to the Administrator of EPA the responsibility for designating inland areas, appointing the committees for the inland areas, and approving the ACPs for inland areas. The Administrator designated the inland zone of the 10 pre-existing Standard Federal Regions as the areas for OPA planning purposes, and established the pre-existing Regional Response Teams (RRTs) as the Area Committees. In EPA Region I, the Regional Administrator re-delegated the authority to develop and approve ACPs to the Director of the Office of Site Remediation and Restoration (OSRR) (Delegation No. 2-91 September 29, 1995).

This ACP was developed in conjunction with the National Oil and Hazardous Substances Pollution Contingency Plan (NCP), and the Region I Regional Oil and Hazardous Substances Pollution Contingency Plan (RCP). It contains the information required by OPA section 4202 for the purpose of addressing discharges or the substantial threat of discharges of oil, including and information regarding the structure of the National Oil and Hazardous Substances Response System (NRS), authorities, definitions, and abbreviations. Area-specific information includes federally-recognized tribal and state authorities, and procedures related to emergency response actions, notification of release/discharge, waste management and disposal, and cost recovery.

EPA's jurisdictional responsibilities are renewed in a Memorandum of Understanding (MOU) between the EPA Administrator, the Secretary of the Department of the Interior, and the Secretary of the Department of Transportation. This MOU is codified in Appendix B to 40 CFR 112 – Oil Pollution Prevention, and is effective February 3, 1994. EPA is responsible for non-transportation-related facilities landward of the coastline, and the U.S. Coast Guard is responsible for the seaward side of the coastline. Therefore, the geographic area this Plan addresses is the inland area of EPA Region I, including both the land and inland waters of the states of Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, and Vermont, and all federally-recognized tribal lands within these states. The EPA OSC for the Inland Zone is the Chief of the Emergency Response and Removal Section II.

The original version of this Plan is comprised of two volumes dated December, 1993. Volume I was revised in September, 1998. Volume II was not updated. This updated version of the Plan has been reformatted into one document, and is no longer comprised of two volumes. It has been revised and upgraded to include the use of web-based and geographic information system (GIS) technology. This Plan is available on the EPA Region I website at www.epa.gov/region1, and includes web links where ever possible to make the most current information available to the user. The environmentally sensitive areas in all six New England States are now available on the web,

presented on scalable maps that can be downloaded. This plan is effective on the date approved by the Director of EPA's Office of Site Remediation and Restoration. Recommendations or comments about this plan are invited, and should be sent to the address below.

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This plan will be kept under continual review. Changes, additional information, or corrections will be promulgated as necessary.

Susan Studlien, Director
Office of Site Remediation and Restoration
United States Environmental Protection Agency
Region I – New England

9-7-06
Date

RECORD OF AMENDMENTS

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ABBREVIATIONS AND ACRONYMS

ACP:	Area Contingency Plan
AOT:	Vermont Agency of Transportation
APHIS:	Animal and Plant Health Inspection Service
Army CST:	U.S. Army National Guard Civil Support Detachment
ASCS:	Agricultural Stabilization and Conservation Service
ATSDR:	Agency for Toxic Substances and Disease Registry
BIA:	Bureau of Indian Affairs
BLM:	Bureau of Land Management
BOA:	Basic Ordering Agreement
BMF:	Massachusetts Bureau of Municipal Facilities
BRP:	Massachusetts Bureau of Resource Protection
BWP:	Massachusetts Bureau of Waste Prevention
BWSC:	Massachusetts Bureau of Waste Site Cleanup
CANUTEC:	Canadian Transport Emergency Center
CBIRF:	U. S. Marine Corps Chemical and Biological Incident Response Force
CERCLA:	Comprehensive Environmental Response, Compensation, and Liability Act of 1980
CDC:	Center for Disease Control
CFR:	Code of Federal Regulations
CHEMNET:	Chemical Response Network
CHLOREP:	Chlorine Emergency Plan
COE:	U.S. Army Corps of Engineers
CT DEP:	Connecticut Department of Environmental Protection
CWA:	Clean Water Act (33 USC 1321)
DEC:	Vermont Department of Environmental Conservation
DMR:	Department of Marine Resources
DOC:	Department of Commerce
DOD:	Department of Defense
DOE:	Department of Energy
DOI:	Department of the Interior
DOJ:	Department of Justice
DOL:	Department of Labor
DOMS	Department of Defense Director of Military Support
DOS:	Department of State
DOT:	Department of Transportation
DRAT:	District Response Advisory Team
DRG:	District Response Group
DRS:	Maine Division of Response Services
EC:	Environment Canada
ECF:	Environmental Contingency Fund
EMA:	Rhode Island Emergency Management Agency
EMD:	Emergency Management Division
EOEA:	Massachusetts Executive Office of Environmental Affairs

EPCRA:	Emergency Planning and Community Right-to-Know Act (SARA Title III)
ERD:	Emergency Response Division
ERT:	Emergency Response Team (EPA)
ESA:	Environmentally Sensitive Area (ESA)
ESF:	Emergency Support Functions
FEMA:	Federal Emergency Management Agency
FCO:	Federal Coordinating Officer
FDA:	Food and Drug Administration
FNS:	Food and Nutrition Service
FPN:	Federal Project Number
FRMAP:	Federal Radiological Monitoring and Assessment Plan
FRP:	Facility Response Plan
FS:	Forest Services
FSIS:	Food Safety and Inspection Service
FWPCA:	Federal Water Pollution Control Act
FWSEA:	Fish and Wildlife and Sensitive Environments Annex
GSA:	General Services Administration
HAZMAT:	Hazardous Materials Response Team
HHS:	Department of Human and Health Safety
IC:	Incident Commander
ICS:	Incident Command System
IF&W:	Department of Inland Fisheries and Wildlife
IJC:	International Joint Commission
IJAT:	International Joint Advisory Team
IMH:	The U.S. EPA Incident Management Handbook
IO:	Information Officer
JIC:	Joint Information Center
LEPC:	Local Emergency Planning Committee
MA DEP:	Massachusetts Department of Environmental Protection
MASS:	Modeling and Simulation Studies (NOAA)
MCP:	Massachusetts Contingency Plan
ME DEP:	Maine Department of Environmental Protection
MEMA:	Maine Emergency Management Agency
MFCMA:	Magnuson Fishery Conservation and Management Act
MMS:	Mineral Management Service
MSO:	Marine Safety Office
NCP:	National Oil and Hazardous Substances Pollution Contingency Plan
NH DES:	New Hampshire Department of Environmental Services
NIH:	National Institutes of Health
NIMS:	National Incident Management System
NMFS:	National Marine Fisheries Service
NOAA:	National Oceanic and Atmospheric Administration (Department of Commerce)
NPFC:	National Pollution Fund Center
NPS:	National Park Service
NPTM:	National Pesticide Telecommunication Network
NRC*:	National Response Center

NRDA:	Natural Resource Damage Assessments
NRS:	National Response System
NRT:	National Response Team
NRU:	National Response Unit
NSF:	National Strike Force
NSCC:	National Scheduling Coordinating Committee
NWS:	National Weather Service
OCSRP:	Connecticut Oil and Chemical Spill Response Division
OEP:	Public Health Service Office of Emergency Preparedness
OEPC:	Office of Environmental Policy and Compliance
OPA:	Oil Pollution Act of 1990
OPS:	Office of Pipeline Safety
ORIA:	Office of Radiation and Indoor Air
ORP:	Office of Radiation Programs (EPA)
OSC:	On-Scene Coordinator
OSH Act:	Occupational Safety and Health Act
OSHA:	Occupational Safety and Health Administration
OSLTF:	Oil Spill Liability Trust Fund
OSRR:	Office of Site Remediation and Restoration (EPA)
PHMSA:	Pipeline and Hazardous Materials Safety Administration (DOT)
PHS:	U.S. Public Health Service
PIAT:	Public Information and Assist Team (USCG)
POLREP:	Pollution Report
PREP:	The National Preparedness for Response Exercise Program
PRFA:	Pollution Removal Funding Authorization
PRP:	Potentially-Responsible Party
PSTN:	Pesticide Safety Team Network
RCP:	Regional Oil and Hazardous Substances Pollution Contingency Plan
RCRA:	Resource Conservation and Recovery Act
REET:	Regional Environmental Emergency Team
REO:	Regional Environmental Officer
RERT:	Regional Emergency Response Team
RI DEM:	Rhode Island Department of Environmental Management
RJRT:	Regional Joint Response Team
RROC:	Regional RCRA Off-site Coordinator
RP:	Responsible Party
RPM:	Remedial Project Manager
RRT:	Regional Response Team
SARA:	Superfund Amendment and Reauthorization Act of 1986
SERC:	State Emergency Response Commission
SDWA:	Safe Drinking Water Act
SMOA:	Superfund Memorandum of Agreement
SONS:	Spill of National Significance
SPCC:	Spill Prevention, Control, and Countermeasures Program
SSC:	Scientific Support Coordinator
SUPSALV:	U.S. Navy Supervisor of Salvage

TSCA:	Toxic Substances Control Act
UC:	Unified Command
USCG:	United States Coast Guard
USDA:	United States Department of Agriculture
EPA:	United States Environmental Protection Agency
USFWS:	United States Fish and Wildlife Service
USGS:	United States Geological Survey
USN:	United States Navy
VT ANR:	Vermont Agency of Natural Resources
VT DEC:	Vermont Department of Environmental Conservation

*NRC - The NCP references both the Nuclear Regulatory Commission and the National Response Center. In order to avoid confusion, the NCP and this ACP will not abbreviate Nuclear Regulatory Commission and use the abbreviation "NRC" only with respect to the National Response Center.

DEFINITIONS

Definitions contained herein, unless otherwise specified, are the same as those contained in the NCP, Section 300.5 ("Definitions") and OPA section 1001 ("Definitions").

Additional definitions are listed below:

Area Committee: As defined by sections 311(a)(18) and (j)(4) of the Clean Water Act (CWA), as amended by OPA, means the entity appointed by the President consisting of members from federal, state, local, and tribal agencies with responsibilities that include preparing an Area Contingency Plan for the area designated by the President. The Area Committee may include ex-officio (i.e., non-voting) members (e.g., industry and local interest groups).

Area Contingency Plan (ACP): As defined by sections 311(a)(19) and (j)(4) of CWA, as amended by OPA, means the plan prepared by an Area Committee, that in conjunction with the NCP, shall address the removal of a discharge including a worst-case discharge and the mitigation or prevention of a substantial threat of such a discharge from a vessel, offshore facility, or onshore facility operating in or near an area designated by the President.

Bioremediation: The deliberate introduction of microbiological cultures, enzyme additives, or nutrient additives into an oil discharge in order to significantly increase the rate of biodegradation to mitigate the effects of the discharge

CERCLA: The Comprehensive Environmental Response Compensation and Liability Act of 1980, as amended by the Superfund Amendments and Reauthorization Act of 1986.

Boundary: (1) A continuous demarcation line separating the Inland Zone from the Coastal Zone; (2) The demarcation line that separates United States response from Canadian response within the Gulf of Maine (as stated in the Joint Canada-United States Marine Pollution Contingency Plan and as determined by the World Court, in October 1984).

Burning Agents: Additives use either physical or chemical means to increase the combustibility of the materials to which they are applied.

Chemical Countermeasures: Those elements, compounds or mixtures that coagulate, disperse, dissolve, emulsify, foam, neutralize, precipitate, reduce, solubilize, oxidize, concentrate, congeal, entrap, fix, make the pollutant mass more rigid or viscous, or otherwise facilitate the mitigation of deleterious effects or the removal of the pollutant from the water. Chemical countermeasures include biological additives, dispersants, sinking agents, miscellaneous oil spill control agents, and burning agents but do not include sorbents.

Coastal Waters: The waters of the coastal zone (except for the Great Lakes, Lake Champlain, and specified ports and harbors on inland rivers). Precise boundaries are identified in U.S. Coast Guard (USCG)/U.S. Environmental Protection Agency (EPA) agreements, federal Regional Contingency Plans and Area Contingency Plans.

Coastal Zone: United States waters subject to the tide, United States waters of the Great Lakes, specified ports and harbors on inland rivers, waters of the contiguous zone, other waters of the high seas subject to the NCP, and the land surface or land substrata, ground waters, and ambient air proximal to those waters. The term coastal zone delineates an area of federal responsibility for response action. Precise boundaries are determined by EPA/USCG agreements and identified in regional contingency plans. The USCG provides the OSC and the Chairmanship of the Regional Response Team (RRT), during environmental emergencies in this zone.

Connecticut Department of Environmental Protection (CT DEP): The lead state agency for response to the release of oil or hazardous substances in Connecticut.

Contingency Plan: (1) A document used by federal, tribal, state, and local agencies to guide their planning and response procedures regarding spills of oil, hazardous substances, or other emergencies; (2) a document used by industry as a response plan to spills of oil, hazardous substances, or other emergencies occurring upon their transportation vehicle, or at their facilities.

Cooperative Agreement: A legal instrument EPA uses to transfer money, property, services, or anything else of value, to a recipient to accomplish a public purpose in which substantial EPA involvement is anticipated during the performance of the project.

Damages: As defined by Section 1001 of the OPA, means any damages specified in section 1002(b) of the Act, and includes the cost of assessing these damages.

Discharge: As defined by Section 311(a)(2) of CWA, includes, but is not limited to, any spilling, leaking, pumping, pouring, emitting, emptying, or dumping of oil, but excludes discharges in compliance with a permit under Section 402 of CWA, discharges resulting from circumstances identified and reviewed and made a part of the public record with respect to a permit issued or modified under Section 402 of the CWA, and subject to a condition in such permit, or continuous or anticipated intermittent discharges from a point source, identified in a permit or permit application under Section 402 of the CWA, that are caused by events occurring within the scope of relevant operating or treatment systems. For purposes of the NCP, discharge also means substantial threat of discharge.

Dispersants: Those chemical countermeasures that emulsify, disperse, or solubilize oil into the water column, or promote the surface spreading of oil slicks to facilitate dispersal of the oil into the water column.

Drinking Water Supply: As defined by section 101(7) of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), means any raw or finished water source that is or may be used by a public water system (as defined in the Safe Drinking Water Act [SDWA]) or as drinking water by one or more individuals.

Emergency Planning and Community Right-to-Know Act (EPCRA): Title III Section 300 of SARA; the legislation that created a system of state and local planning agencies for chemical emergencies and provided a way for communities to gain information about potential chemical

hazards. EPCRA's mandates cover three main topics: emergency planning, emergency notification requirements, and requirements for reporting hazardous chemical inventories.

Environment: As defined by section 101(8) of CERCLA, means the navigable waters, the waters of the contiguous zone, and the ocean waters of which the natural resources are under the exclusive management authority of the United States under the Magnuson Fishery Conservation and Management Act (MFCMA); and any other surface water, ground water, drinking water supply, land surface and subsurface strata, or ambient air within the United States or under the jurisdiction of the United States.

Environmentally Sensitive Area (ESA): An especially delicate or sensitive natural resource that requires protection in the event of a pollution incident. Designations of areas considered to be sensitive can be found in Annex 1 of this document. In addition to this definition, Area Committees may include any areas determined to be "sensitive" for OPA planning purposes.

Exclusive Economic Zone: As defined by the OPA section 1001, means the zone established by Presidential Proclamation Numbered 5030, dated March 10, 1983, including the ocean waters of the areas referred to as "eastern special areas" in Article 3(1) of the Agreement between the United States of America and the Union of Soviet Socialist Republics on the Maritime Boundary, signed June 1, 1990.

Facility: As defined by section 101(9) of CERCLA, any building, structure, installation, equipment, pipe or pipeline (including any pipe into a sewer or publicly owned treatment works), well, pit, pond, lagoon, impoundment, ditch, landfill, storage container, motor vehicle, rolling stock, or aircraft, or any site or area where a hazardous substance has been deposited, stored, disposed of, or placed or otherwise come to be located but does not include any consumer product in consumer use or any vessel. As defined by section 1001 of the OPA, any structure, group of structures, equipment, or device, (other than a vessel, which is used for one or more of the following purposes: Exploring for, drilling for, producing, storing, handling, transferring, processing, or transporting oil. This term includes any motor vehicle, rolling stock, or pipeline used for one of more of these purposes.

Groundwater: As defined by section 101(12) of CERCLA, means water in a saturated zone or stratum beneath the surface of land or water.

Hazardous Substance: As defined by Section 101(14) of CERCLA, means any substance designated pursuant to Section 311(b)(2)(A) of the CWA; any element, compound, mixture, solution, or substance designated pursuant to Section 102 of CERCLA; any hazardous waste having the characteristics identified under or listed pursuant to Section 3001 of the Solid Waste Disposal Act (but not including any waste the regulation of which under the Solid Waste Disposal Act [42 U.S. C. 6901 et seq.] has been suspended by Act of Congress); any toxic pollutant listed under Section 307(a) of the CWA; any hazardous air pollutant listed under Section 112 of the Clean Air Act; and any imminently hazardous chemical substance or mixture with respect to which the EPA Administrator has taken action pursuant to Section 7 of the Toxic Substances Control Act (TSCA). This term does not include petroleum, including crude oil or any fraction thereof which is not otherwise specifically listed or designated as a hazardous substance in the

first sentence of this paragraph, and the term does not include natural gas, natural gas liquids, liquified natural gas, or synthetic gas usable for fuel (or mixtures of natural gas and synthetic gas).

Herding Agents: Commonly defined as chemical countermeasures used to coagulate oil released to the environment to facilitate removal of that oil from the environment.

Incident Command System (ICS): A standardized on-scene emergency management construct specifically designed to provide for the adoption of an integrated organizational structure that reflects the complexity and demands of single or multiple incidents, without being hindered by jurisdictional boundaries. ICS is the structure outlined by the NRP using the NIMS construct.

Inland Waters: Those waters of the United States in the inland zone, waters of the Great Lakes, Lake Champlain, and specified ports and harbors on inland rivers.

Inland Zone: The environment inland of the coastal zone excluding the Great Lakes and specified ports and harbors on inland rivers. The term inland zone delineates an area of federal responsibilities for response actions. Precise boundaries are determined by EPA/USCG agreements and identified in federal regional contingency plans. EPA provides the OSC and the Chairmanship of the RRT, during environmental emergencies in this zone.

Lead Agency: The agency that provides the OSC or IC to plan and implement response actions under the NCP. EPA, the USCG, another federal agency, or a state (or political subdivision of a state) operating pursuant to a contract or cooperative agreement executed pursuant to section 104(d)(1) of CERCLA, or designated pursuant to a Superfund Memorandum of Agreement (SMOA) entered into pursuant to subpart F of the NCP or other agreements may be the lead agency for a response action. In the case of a release of a hazardous substance, pollutant, or contaminant, where the release is on, or the sole source of the release is from, any facility or vessel under the jurisdiction, custody, or control of Department of Defense (DOD) or Department of Energy (DOE), then DOD or DOE will be the lead agency. Where the release is on, or the sole source of the release is from, any facility or vessel under the jurisdiction, custody, or control of a federal agency other than EPA, the USCG, DOD, or DOE, then that agency will be the lead agency for remedial actions and removal actions other than emergencies. The federal agency maintains its lead agency responsibilities whether the remedy is selected by the federal agency for non-NPL sites or by EPA and the federal agency or by EPA alone under CERCLA section 120. The lead agency will consult with the support agency, if one exists, throughout the response process.

Local Emergency Planning Committee (LEPC): A group of local representatives appointed by the State Emergency Response Commission (SERC) to prepare a comprehensive emergency plan for the local emergency planning district, as required by the Emergency Planning and Community Right-to-Know Act (EPCRA), Title II Section 301(c) of SARA.

Maine Department of Environmental Protection (ME DEP): The lead state agency for response to the release of oil or hazardous substances in Maine.

Massachusetts Department of Environmental Protection (MA DEP): The lead state agency for response to the release of oil or hazardous substances in Massachusetts.

Miscellaneous Oil Spill Control Agent: Any product, other than a dispersant, sinking agent, surface washing agent, surface collecting agent, bioremediation agent, burning agent, or sorbent that can be used to enhance oil spill cleanup, removal, treatment, or mitigation.

National Pollution Funds Center (NPFC): As defined by section 7 of Executive Order 12777, the NPFC is the entity established by the Secretary of the Department of Transportation whose function is the administration of the Oil Spill Liability Trust Fund (OSLTF). This includes access to the OSLTF by federal agencies, states, and designated trustees for removal actions and initiation of natural resource damage assessments, as well as claims for removal costs and damages.

Native American Tribe: Any Indian tribe, band, nation, of other organized group or community which is recognized as eligible for the special programs and services provided be the United States to Indians because of their status as Indians and has governmental authority over lands belonging to, or controlled by the tribe.

Natural Resource Trustees: Officials representing federal, foreign, tribal, and state governments who are authorized to act pursuant to Section 107(f) of CERCLA, Section 311(f)(5) of the CWA, or Section 1006 of the OPA when there is injury or threat to natural resources, including their supporting ecosystems, as a result of a release of a hazardous substance or a discharge of oil.

National Response Plan: The National Response Plan establishes a comprehensive all-hazards approach to enhance the ability of the United States to manage domestic incidents. The plan incorporates best practices and procedures from incident management disciplines—homeland security, emergency management, law enforcement, firefighting, public works, public health, responder and recovery worker health and safety, emergency medical services, and the private sector—and integrates them into a unified structure. It forms the basis of how the federal government coordinates with state, local, and tribal governments and the private sector during incidents.

National Response System (NRS): The mechanism for coordinating response actions by all levels of government in support of the OSC/RPM. The NRS is composed of the NRT, RRTs, OSC/RPM, Area Committees, and Special Teams and related support entities. The NRS is capable of expanding or contracting to accommodate the response effort required by the size or complexity of the discharge or release.

Natural Resources: Land, fish, wildlife, biota, air, water, ground water, drinking water supplies, and other such resources belonging to, managed by, held in trust by, appertaining to, or otherwise controlled by the United States (including the resources of the exclusive economic zone defined by the Magnuson Fishery Conservation and Management Act of 1976), any state or local government, any foreign government, any Native American Tribe, or, if such resources are subject to a trust restriction on alienation, any member of an Native American Tribe.

Navigable Waters: As defined by 40 CFR 110.1, the term navigable waters includes: (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 that 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, 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 (a) through (d) of this definition, including adjacent wetlands; and (f) Wetlands adjacent to waters identified in (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 United States. Water of the United States do not include prior converted cropland. Notwithstanding the determination of an area's status as prior converted cropland by any other federal agency, for the purposes of the CWA, the final authority regarding CWA jurisdiction remains with EPA.

New Hampshire Department of Environmental Services (NH DES): The lead state agency for response to the release of oil or hazardous substances in New Hampshire.

Offshore Facility: As defined by section 101(17) of CERCLA and section 311(a)(11) of the CWA, means any facility of any kind located in, on, or under any of the navigable waters of the United States, and any facility of any kind which is subject to the jurisdiction of the United States and is located in, on, or under any other waters, other than a vessel or a public vessel.

Oil: As defined by Section 311(a)(1) of CWA, means oil of any kind or in any form, including, but not limited to, petroleum, fuel oil, sludge, oil refuse, and oil mixed with wastes other than dredged spoil. Oil, as defined by Section 1001 of OPA means oil of any kind or in any form, including, but not limited to, petroleum, fuel oil, sludge, oil refuse, and oil mixed with wastes other than dredged oil, but does not include petroleum, including crude oil or any fraction thereof, which is specifically listed or designated as a hazardous substance under paragraphs (A) through (F) of Section 101(14) of CERCLA (42 U.S.C. 9601) and which is subject to the provisions of that Act.

Oil Spill Liability Trust Fund (OSLTF): As defined by the NCP, the fund established under Section 9509 of the Internal Revenue Code of 1986 (26 U.S.C. Section 9509).

On-Scene Coordinator (OSC): As defined by the NCP, the federal official predesignated by EPA or USCG to coordinate and direct federal responses under Subpart D of the NCP, or the official designated by the lead agency to coordinate and direct removal actions under Subpart E of the NCP.

Person: As defined by section 101(21) of CERCLA, an individual, firm, corporation, association, partnership, consortium, joint venture, commercial entity, United States government, state, municipality, commission, political subdivision of a state, or any interstate body. As defined by section 1001 of the OPA, an individual, corporation, partnership, association, state, municipality, commission, or political subdivision of a state, or any interstate body.

Pollution Report (POLREP): A message describing significant developments, during the course of an incident.

Potentially Responsible Party (PRP): Any individual(s), or company(ies) identified as potentially liable under CERCLA for cleanup or payment for costs of cleanup of hazardous substance sites. PRPs may include individual(s), or company(ies) identified as having owned, operated, or in some other manner contributed wastes to hazardous substance sites.

Regional Response Team (RRT): The federal response organization (consisting of representatives from selected federal and state agencies) which acts as a regional body responsible for planning and preparedness before an oil spill occurs and for providing advice to the OSC in the event of a major or substantial spill.

Release: As defined by section 101(22) of CERCLA, means any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing into the environment (including the abandonment or discarding of barrels, containers, and other closed receptacles containing any hazardous substance or pollutant or contaminant), but excludes: Any release which results in exposure to persons solely within a workplace, with respect to a claim which such persons may assert against the employer of such persons; emissions from the engine exhaust of a motor vehicle, rolling stock, aircraft, vessel, or pipeline pumping station engine; release of source, byproduct, or special nuclear material from a nuclear incident, as those terms are defined in the Atomic Energy Act of 1954, if such release is subject to requirements with respect to financial protection established by the Nuclear Regulatory Commission under section 170 of such Act, or, for the purposes of section 104 of CERCLA or any other response action, any release of source, byproduct, or special nuclear material from any processing site designated under section 102(a)(1) or 302(a) of the Uranium Mill Tailings Radiation Control Act of 1978 (42 U.S.C. 7901 et seq.); and the normal application of fertilizer. For purposes of the NCP, release also means threat of release.

Remove or Removal: As defined by section 311(a)(8) of the CWA, refers to containment and removal of oil or hazardous substances from the water and shorelines or the taking of such other actions as may be necessary to minimize or mitigate damage to the public health or welfare of the United States (including, but not limited to, fish, shellfish, wildlife, public and private property, and shorelines and beaches) or to the environment. For the purpose of the NCP, the term also includes monitoring of action to remove a discharge.

Responsible Party: As defined by section 1001 of the OPA, means the following: (1) Vessels - In the case of a vessel, any person owning, operating, or demise chartering the vessel. (2) Onshore Facilities - In the case of an onshore facility (other than a pipeline), any person owning or operating the facility, except a federal agency, state, municipality, commission, or political subdivision of a state, or any interstate body, that as the owner transfers possession and right to use the property to another person by lease, assignment, or permit. (3) Offshore Facilities - In the case of an offshore facility (other than a pipeline or a deepwater port licensed under the Deepwater Port Act of 1974 (33 U.S.C. 1501 et seq.)), the lessee or permittee of the area in which the facility is located or the holder of a right of use and easement granted under applicable state law or the Outer Continental Shelf Lands Act (43 U.S.C. 1301-1356) for the area in which the

facility is located (if the holder is a different person than the lessee or permittee), except a federal agency, state, municipality, commission, or political subdivision of a state, or any interstate body, that as owner transfers possession and right to use the property to another person by lease, assignment, or permit. (4) Deepwater Ports - In the case of a deepwater port licensed under the Deepwater Port Act of 1974 (33 U.S.C. 1501-1524), the licensee. (5) Pipelines - In the case of a pipeline, any person owning or operating the pipeline. (6)
Abandonment - In the case of an abandoned vessel, onshore facility, deepwater port, pipeline, or offshore facility, the person who would have been responsible parties immediately prior to the abandonment of the vessel or facility.

Rhode Island Department of Environmental Management (RI DEM): The lead state agency for response to the release of oil or hazardous substances in Rhode Island.

Spill of National Significance (SONS): As defined by the NCP, means a spill that due to its severity, size, location, actual or potential impact on the public health and welfare or the environment, or the necessary response effort, is so complex that it requires extraordinary coordination of federal, tribal, state, local, and responsible party resources to contain and cleanup the discharge.

State Emergency Response Commission (SERC): A group of officials appointed by the state governor to implement the provisions of SARA Title III. The SERC coordinates and supervises the work of the Local Emergency Planning Committees (LEPC) and reviews local emergency plans annually.

Vermont Department of Environmental Conservation (VT DEC): The lead state agency for response to the release of oil or hazardous substances in Vermont.

Worst Case Discharge: The single hypothetical incident involving the discharge of oil, which is most damaging to human health and the environment. It is usually assumed that the worst case discharge overcomes preventative countermeasures. For Region I, the worst case discharge is described in Section 4.1.2 of this ACP.

INTERNET ADDRESSES

Canadian:

Canadian Coast Guard ..... http://www.ccg-gcc.gc.ca/

Canadian Transport Emergency Center (CANUTEC) ..... http://www.ec.gc.ca/

Environment Canada ..... http://www.ec.gc.ca/

Environment Canada - Atlantic Region ..... http://www.atl.ec.gc.ca/index_e.html

Environment Canada - Quebec Region ..... http://www.qc.ec.gc.ca/envcan/indexe.html

National Preparedness Canada ..... http://www.tc.gc.ca/marinesafety/oep/ers/regime/roles.htm

Federal:

Army Corps of Engineers ..... http://www.usace.army.mil/

Bureau of Indian Affairs ..... http://www.doi.gov/bureau-indian-affairs.html

National Register of Historic Places ..... http://www.cr.nps.gov/places.htm

National Response Center ..... http://www.nrc.uscg.mil/

National Response Team ..... http://www.nrt.org/

National Weather Service ..... http://www.nws.noaa.gov/

National Park Service ..... www.cr.nps.gov

Region I Regional Response Team http://www.uscg.mil/d1/response/rrt/rrt1.html

U.S. Coast Guard ..... http://www.uscg.mil/

U.S. Coast Guard Area Contingency Plans http://www.uscg.mil/d1/response/acp.html

U.S. Coast Guard Atlantic Strike Team ..... http://www.uscg.mil/hq/nsfweb/AST/astindex.html

U.S. Coast Guard District I http://www.uscg.mil/d1/

U.S. Coast Guard Marine Safety Division http://www.uscg.mil/d1/response/about.html

U.S. Coast Guard National Strike Force ..... http://www.uscg.mil/hq/nsfweb/

U.S. Coast Guard National Response Team ..... http://www.nrt.org

EPA ..... http://www.epa.gov/

EPA Environmental Response Team ..... http://www.ert.org/

EPA Oil Spill Program ..... http://www.epa.gov/oilspill/

EPA On-Scene Coordinator ..... http://www.epaosc.org/

EPA Radiological Emergency Response Program ... http://www.epa.gov/rpdweb00/rert/index.html

EPA New England http://www.epa.gov/region01/

National Response Team (members listed below) ..... http://www.nrt.org

Department of Agriculture ..... http://www.usda.gov/

Department of Commerce ..... http://www.commerce.gov/

Department of Defense ..... http://www.defenselink.mil/

Department of Energy ..... http://www.energy.gov/

Department of Health and Human Services ..... http://www.os.dhhs.gov/

Department of Interior ..... http://www.doi.gov/

Department of Justice ..... http://www.usdoj.gov/

Department of Labor ..... http://www.dol.gov/

Department of State ..... http://www.state.gov/

Department of Transportation ..... http://www.dot.gov/

Department of the Treasury ..... http://www.ustreas.gov/

Environmental Protection Agency ..... http://www.epa.gov/

Federal Emergency Management Agency ..... http://www.fema.gov/

General Services Administration ..... http://www.gsa.gov/

Nuclear Regulatory Commission ..... http://www.nrc.gov/

U.S. Coast Guard ..... http://www.uscg.mil/USCG.shtm

States:

State of Connecticut ..... http://www.ct.gov/

Department of Environmental Protection ..... http://www.ct.gov/dep/site/

Historic Preservation Office ..... http://www.cultureandtourism.org/history

State of Maine ..... http://www.maine.gov/

Department of Environmental Protection ..... http://www.state.me.us/dep/index.shtml

State of Massachusetts ..... http://www.mass.gov/portal/index.jsp

Department of Environmental Protection ..... http://www.state.ma.us/dep/

Historic Preservation Office ..... http://www.sec.state.ma.us/mhc/

State of New Hampshire ..... http://www.nh.gov/

Department of Environmental Services ..... http://www.des.state.nh.us/

Historic Preservation Office ..... http://www.nh.gov/nhdhr/

State of Rhode Island ..... http://www.ri.gov/index.php

Department of Environmental Management ..... http://www.dem.ri.gov/

State of Vermont ..... http://vermont.gov/

Department of Environmental Conservation ..... http://www.anr.state.vt.us/dec/wmd.htm

Historic Preservation Office ..... http://www.vermonthistory.org/

Tribal:

Federally Recognized

Wampanoag Tribe of Gay Head ..... http://www.wampanoagtribe.net/Pages/index

Penobscot Indian Nation ..... http://www.penobscotnation.org/

Passamaquoddy Tribe Pleasant Point ..... http://www.wabanaki.com/index.html

Passamaquoddy Tribe Indian Township Reservation ..... http://passamaquoddy.com/

Houlton Band of Maliseet Indians ..... http://www.maliseets.com/

Aroostook Band of Micmacs ..... http://www.micmac-nsn.gov/

Mohegan Tribal Nation ..... http://www.mohegannation.org/

Mashantucket Pequot Tribal Nation .http://www.foxwoods.com/TheMashantucketPequots/Home/

National Association of Tribal Historic Preservation Officers..... http://www.nathpo.org

Narragansett Indian Tribe ..... http://www.narragansett-tribe.org/

Petitioning for Federal Recognition

Schaghticoke Tribal Nation ..... office@schaghticoke.com

Golden Hill Paugeesukg Tribe..... http://paugussett.itgo.com/

Mashpee Wampanoag Indian Tribal Council, Inc. ..... http://mashpeewampanoagtribe.com/

Nipmuc Nation (Hassanamisco Band)..... http://www.nipmucnation.org/

Other:

American Petroleum Institute ..... www.api.org

CFR Online ..... http://www.access.gpo.gov/nara/cfr/cfr-table-search.html

NCP Online..... http://www.great-lakes.net/partners/epa/acp-rcp/

National Weather Service Regional Offices:

Boston, MA..... http://www.erh.noaa.gov/er/box/

Burlington, VT..... http://www.erh.noaa.gov/btv/

Caribou, ME..... http://www.erh.noaa.gov/er/car/

Gray/Portland, ME..... http://www.erh.noaa.gov/er/gyx/

SECTION 1: INTRODUCTION

The Oil Pollution Act of 1990 (OPA) and Executive Order 12777 required the United States Environmental Protection Agency (EPA) to complete Inland Area Contingency Plans (ACPs) for each Standard Federal Region. This document comprises an update to the September 1999 Region I Inland ACP.

1.1 Purpose and Objective

The purpose of this ACP is to provide an action plan to respond to a release of oil and to promote timely and effective coordination among the entire spill community, including federal, state, tribal, local, and private entities in response to a discharge or substantial threat of discharge.

1.2 Authority and Applicability

This Area Contingency Plan, and the corresponding Area Committee, are required by Title IV, Section 4202 of the OPA, which amends Subsection (j) of Section 311 of the Federal Water Pollution Control Act (FWPCA) (33 U.S.C. 1321 (j)) as amended by the Clean Water Act (CWA) of 1977 (33 U.S.C. 1251 et seq).

Through Executive Order 12777, the President delegated to the Administrator of EPA the responsibility for designating inland areas, appointing the committees for the inland areas, and approving Area Contingency Plans for inland areas. The Administrator designated the inland zone of the 10 pre-existing Standard Federal Regions as the areas for OPA planning purposes, and established the pre-existing Regional Response Teams (RRTs) as the Area Committees. In Region I, the Regional Administrator re-delegated the authority to develop and approve ACPs to the Director of the Office of Site Remediation and Restoration (OSRR).

This ACP is written in conjunction with the National Oil and Hazardous Substance Pollution Contingency Plan (NCP) (40 CFR 300) and the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA, 42 U.S.C. 9601), as amended by the Superfund Amendments and Reauthorization Act of 1986 (SARA).

1.3 Scope

This ACP applies to the Area defined below in Section 1.5 Geographic Boundaries, and is in effect for:

(1) Discharges of oil into or on the navigable waters, on the adjoining shorelines to the navigable waters, into or on the waters of the exclusive economic zone, or that may affect natural resources belonging to, appertaining to, or under the exclusive management authority of the United States (OPA section 4201); and

(2) Releases into the environment of hazardous substances and pollutants or contaminants that may present an imminent and substantial danger to public health or welfare.

This ACP expands upon the requirements set forth in the NCP, augments coordination with state and local authorities, and integrates existing state, local, and private sector plans for the Area.

1.4 Relationship to Other Plans

Federal agencies responding to discharges of oil or releases of hazardous substances operate under the NCP, as modified by any joint international plan which applies if the incident affects an area spanning a national border of the United States. The Region I RCP applies only to Region I and contains more region-specific information. This ACP operates under the RCP for Region I, but applies primarily to discharges of oil into waterways or environmentally sensitive areas. The NCP, RCP, and ACP all exist within the structure of the National Response System (NRS) and involve only responses lead by federal agencies that are members of the NRT. See Section 2.3 for a list of these agencies.

The National Response Plan covers federal response to natural or man-made disasters of any type, including those involving oil or hazardous substances and involves federal agencies that are not members of the NRT. The National Response Plan is activated if the President declares a national emergency, at which point the Federal Emergency Management Agency (FEMA) may assume the role of lead agency, supplying a Federal Coordinating Officer (FCO) to direct the response. DHS may activate NRP components for National Special Security Events and potential terrorist threats. International joint plans have been written between the United States and its neighboring countries to direct a coordinated response between the U.S. and foreign government agencies in the event of an incident that crosses U.S. national boundaries. Two such plans pertaining to EPA Region I are listed below. Both are part of the Canada-United States Joint Inland Pollution Contingency Plan.

CANUSEAST: applying to incidents involving oil or hazardous substances within both Region I and New Brunswick, Canada; and,

CANUSQUE: applying to incidents involving oil or hazardous substances within both Region I and Quebec, Canada.

The NRS also includes within its structure, tribal, state, and local (municipality, county, or district) contingency plans and facility and vessel plans required by CWA and OPA. All plans within the NRS, including this ACP, are consistent in that they use the same terminology, and describe the same methods of incident command and response operations, and the same legal requirements. This ACP does not contradict other plans within the NRS. It provides contact information for personnel in the four coastal areas, Region II and Canada for use in coordinating multi-area responses. In addition, the ACP supplies information specific to the Region I Inland Area that is useful in carrying out the activities described in other NRS contingency plans for Region I such as environmentally and economically sensitive area information, and contact information for sources of response personnel and equipment within Region I.

This ACP is used to direct all federal response activities in the inland zone of Region I except where federal or state law specifies otherwise. It is also used to organize multi-agency response efforts coordinated by federal agency personnel. When no federal assistance is required, tribal, state, and local activities or activities of a responsible party/potentially responsible party (RP/PRP) are covered by the tribal, state, local, facility, or vessel contingency plans.

The EPA Region I ACP has been developed in coordination with the NCP and the four USCG Area Contingency Plans (USCG ACPs) operating within Region I. The USCG ACPs were required by Commandant Notices 16471 of 30 September 1992 and 24 June 1996. USCG ACPs cover, in part, how to respond to an oil discharge within the coastal zone and include information similar to that included in this ACP. The Region I coastal zone, which includes all shoreline land areas and off-shore waters of the Atlantic Ocean, is completely within Coast Guard District 1, but is covered by four Coast Guard Sectors. Each USCG Sector has its own USCG ACP. Each USCG ACP is developed by an Area Committee chaired by the respective Coast Guard Captain-of-the-Port. The Captain-of-the-Port for a particular sector is the pre-designated USCG OSC for that Area.

The NCP applies to federal responses to all oil and hazardous substances incidents within the United States. The Region I RCP was prepared under the NCP. The ACPs for the inland zone and the four USCG sectors within the coastal zone of Region I have been prepared under the Region I RCP. Under these ACPs, OPA-mandated facility and vessel response plans have been prepared by all vessels and facilities meeting the requirements set forth in the OPA.

The following is a list of the USGC sectors and their coastal zone coverage.

- Sector Long Island Sound [(203)-468-4400, located in New Haven, Connecticut] covers the area extending through Long Island Sound and along the Atlantic Coast from Rye, New York to Watch Hill, Rhode Island.

- Sector Southern New England [(401)-435-2300, located in Providence, Rhode Island] covers the area extending along the Atlantic Coast from Watch Hill, Rhode Island to Manomet Point, in Plymouth, Massachusetts, including the coastal areas of Cape Cod and all islands off the Cape Cod coastline.

- Sector Boston [(617)-223-3201, located in Boston, Massachusetts] covers the area extending along the Atlantic coast from Manomet Point to the point where U.S. Rte 1 crosses the Massachusetts-New Hampshire Border at Salisbury, Massachusetts.

- Sector Northern New England [(207) 767-0303, located in Portland, Maine] covers the area extending along the Atlantic Coast from Salisbury, Massachusetts to the Maine-Canada border.

To view or download District 1 ACPs and a map showing the areas addressed by each,

visit the internet web page at http://www.uscg.mil/d1/response/acp.html.

When federal assistance is required to respond to an oil or hazardous substances incident within the Inland Zone of Region I, the EPA will be the lead agency and this ACP will apply. Federal response efforts directed to incidents occurring in the coastal zone will be led by the USCG, and the USCG ACP for the affected USCG area will apply. However, in cases in which the incident spans both Zones or there is a threat of transmission of oil or hazardous substances across the zone boundary, both the EPA and the USCG will cooperate to respond to the incident under the command of the lead agency's OSC. Refer to Appendix 1 of this ACP for the exact delineation of the jurisdictional boundary between the Inland and Coastal Zones in Region I.

1.5 Geographic Boundaries

1.5.1 Region I Inland Plan

The ACP covers only the Inland Zone of Region I. Region I is comprised of the States of Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, and Vermont and the lands of the federally-recognized Native American Tribes located within those States. See Appendix 2 for a list of federally recognized Native American Tribes in Region I, and tribes petitioning to be federally recognized. Region I is divided into the Inland Zone and the Coastal Zone. The Inland Zone includes all non-coastal land and waterways.

1.6 Areas of Special Economic and Environmental Importance

In describing areas of special economic and environmental importance, several factors should be considered. The factors include, but are not limited to: the presence and proximity of natural resources, environmentally sensitive areas, endangered species habitats, population concentrations, drainage basins and appropriate geographic and/or topographic features, water supplies, beaches, ports, recreational areas, areas of seasonal significance, and migratory bird flyways. (See Section 3.8.1. Environmentally and Economically Sensitive Areas, and Appendix 7 Environmentally and Economically Sensitive Areas within Region 1)

1.6.1 Environmentally Sensitive Areas

Environmentally sensitive areas refers to environments that may be considered habitat to fish and wildlife or contain significant biological resources other than fish and wildlife. Environmentally sensitive areas are broken down into three separate categories: habitat, management areas and biological resource areas.

A. Habitat

- Marshes, fresh
- Swamps, fresh
- Riverine, fresh, small or large

- Sheltered sand/mud flats, sheltered scarps in bedrock
- Sheltered vegetated low banks
- Muddy unvegetated substrates, vegetated low banks
- Submerged aquatic vegetation
- Sheltered manmade structures, sheltered rocky shores
- Sheltered scarps in bedrock
- Mixed sand and gravel beaches
- Fine grained sand beaches
- Eroding scarps in unconsolidated sediments
- Exposed eroding banks in unconsolidated sediments
- Exposed muddy vegetated low bank
- Exposed rocky bank
- Exposed rocky cliff
- Gravel beach
- Lakes, large
- Rip rap structure
- Shelving bedrock shore
- Small lakes/ponds
- Solid vertical manmade structure
- Stream riffle/pool
- Vegetated steeply sloping bluff
- Wave cut platforms in bedrock
- Wetlands

B. Management Areas

- National/State Forests
- National/State Conservation Areas
- Federal/State/Local preserves
- Wildlife refuges
- Federal/State land designated for protection of natural ecosystems
- Proposed wildlife areas
- Federal/State sanctuaries
- Federal/State wilderness areas
- Federal/State Management Act designated areas
- Clean lakes program critical areas
- Federal/State designated scenic or wild rivers
- Federal/State waterfowl and game management areas
- State Lands
- Private conservation areas
- National/State/Local park not water dependent

C. Biological Resource Areas

- Spawning grounds, breeding grounds or nesting areas
- Migratory pathways and feeding areas
- Critical habitat or habitat used by Federal/State designated or proposed endangered species

- Sensitive benthic communities and aquatic vegetation
- Terrestrial mammals concentration areas
- Endangered freshwater mussel beds
- Reptiles/Amphibians nursery areas, concentration areas
- Animals and plants that fall into endangered species

1.6.2 Economically Sensitive Areas

Economically sensitive areas refers to environments that are susceptible to the direct impacts of oil due to the economic value of the natural resources (e.g., from both a recreational and/or commercial perspective). Economically sensitive areas are broken down into three separate categories: water dependent commercial areas, water dependent recreational areas and anthropological areas.

A. Water Dependent Commercial Areas

- Drinking water intakes
- Industrial intakes
- Aquaculture
- Marinas
- Commercial fishing areas
- Shellfish
- Federal/State and private fish hatcheries
- Federal/State irrigation agricultural channels and water projects
- Specially designated residential, commercial, and industrial areas
- Cooling water intakes
- Agricultural areas
- Locks and Dams

B. Water Dependent Recreational Areas

- Boating
- Public recreational areas
- Sport fishing
- National/State/Local parks and beaches
- National seashore recreational areas
- National lakeshore recreational areas
- National river reach designated as recreational

C. Anthropological Areas

- Native lands
- Historic landmarks
- Archeological sites
- Heritage program sites
- Historical sites
- Land trust areas
- Human use areas

1.6.3 Identification and Mapping of Sensitive Environments

The Oil Pollution Act of 1990 requires the Area Committee to identify areas of environmental and economic importance. The Area Committee relies on the Natural Resource Trustees, State Trustees and local officials to designate sensitive areas for inclusion in the ACP. Collection of sensitive areas information falls into two main efforts: first, raw data collection and database development; second, use of existing EPA Geographic Information System (GIS) environmental and economic coverages (map data layers). The information was gathered and organized into a Sensitive Areas Database that identifies locations of fish, wildlife, their habitats, and other sensitive environments. The database also provides a mechanism to be used during a spill response for timely identification of sensitive areas and prompt implementation of protection measures. This information is available on EPA's Region I website at http://www.epa.gov/region1/er/iacp/.

1.7 Fish and Wildlife and Sensitive Environments Annex

The NCP section 40 CFR 300.210(c)(4)(i) requires that each ACP include a Fish and Wildlife and Sensitive Environments Annex, developed in consultation with the Department of the Interior. An annex that fits these requirements has been included in this ACP. The purpose of the Annex is to provide Federal On-Scene Coordinators with the information needed to (a) identify and protect fish and wildlife resources and sensitive environments, (b) contact natural resources trustees and managers, and (c) provide guidance in selecting appropriate response strategies for minimizing the adverse ecological effects of a spill, including the impacts associated with response activities.

SECTION 2: RESPONSE ORGANIZATION AND RESPONSIBILITY

2.1 Duties of President Delegated Federal Agencies

In Executive Order 12777, the President delegated certain functions and responsibilities vested in him by the OPA to the Administrator of the EPA for the Inland Zone and the Commandant of the USCG through the Secretary of Transportation for the Coastal Zone. These functions and responsibilities include designating Areas, appointing Area Committee members, determining the information to be included in ACPs, and reviewing and approving ACPs. For the coastal zones and inland zones respectively, the USCG and EPA shall assign a federal OSC to each Area to carry out these functions and responsibilities.

2.2 General Organization Concepts

The Area Committees, in conjunction with the National Response Team (NRT) and the Regional Response Teams, serve a spill planning and preparedness role within the National Response System. Each Area Committee shall be comprised of federal, state, and local agency personnel. Under the direction of the federal OSC, each Area Committee for its assigned Area shall:

- Prepare and submit an ACP for approval;
- Work with state and local officials to enhance the contingency planning of those officials and to assure pre-planning of joint response efforts, including appropriate procedures for mechanical recovery, dispersal, shoreline cleanup, protection of sensitive environmental areas, and protection, rescue, and rehabilitation of fisheries and wildlife; and
- Work with state and local officials to expedite decisions for the use of dispersants and other mitigating substances and devices.

2.2.1 National Response System and Policy

The National Response System (NRS) was developed to coordinate all government agencies with responsibility for environmental protection, in a focused response strategy for the immediate and effective clean up of an oil or hazardous substance discharge. The NRS is a three tiered response and preparedness mechanism that supports the pre-designated federal OSC in coordinating national, regional, local government agencies, industry, and the responsible party during response.

The NRS supports the responsibilities of the OSC, under the direction of the Federal Water Pollution Control Act's federal removal authority. The OSC plans and coordinates the response strategy on scene, using the support of the National Response Team (NRT), Regional Response Team (RRT), local response structure, and the responsible parties as necessary, to supply the needed trained personnel, equipment, and scientific support to complete an immediate and effective response to any oil or hazardous substance discharge.

The NRS is used for all spills, including a Spill of National Significance (SONS). When appropriate, the NRS is designed to incorporate a unified command and control support mechanism (unified command) consisting of the OSC, the state's Incident Manager, and the Responsible Party's Incident Manager. The unified command structure allows for a coordinated response effort which takes into account the federal, state, local and responsible party concerns and interests when implementing the response strategy.

A SONS is a rare, catastrophic spill event which captures the nation's attention due to actual damage incurred or a significant potential for adverse environmental impact. A SONS is defined as a spill which greatly exceeds the response capability at the local and regional levels and which, due to its size, location, and actual or potential for adverse impact on the environment is so complex, it requires extraordinary coordination of federal, state, local and private resources to contain and clean up. Only the Commandant of the Coast Guard or the Administrator of the EPA can declare a SONS.

National response policy as stated in Section 4201 of OPA 90, which amended Subsection (c) of Section 311 of the FWPCA, requires the federal OSC to "in accordance with the National Contingency Plan and any appropriate Area Contingency Plan ensure effective and immediate removal of a discharge, and mitigation or prevention of a substantial threat of a discharge, of oil or a hazardous

substance:

> "(i) into or on the navigable waters;
> (ii) on the adjoining shorelines to the navigable waters;
> (iii) into or on the waters of the exclusive economic zone; or,
> (iv) that may affect natural resources belonging to, appertaining to, or under the exclusive management authority of the United States."

In carrying out these functions, the OSC may:

> "(i) remove or arrange for the removal of a discharge, and mitigate or prevent a substantial threat of a discharge, at any time;
> (ii) direct or monitor all federal, state, and private actions to remove a discharge; and,
> (iii) recommend to the Commandant that a vessel discharging or threatening to discharge, be removed and, if necessary, destroyed."

If the discharge or substantial threat of discharge of oil or hazardous substance is of such size or character as to be a substantial threat to the public health or welfare of the United States (including but not limited to fish, shellfish, wildlife, other natural resources, and the public and private beaches and shorelines of the United States), the OSC shall direct all federal, state, and private actions to remove the discharge or to mitigate or prevent the threat of the discharge.

2.2.2 Response Management Systems

The concept of unified command simply means that all who have a jurisdictional role (i.e. F/S/T/L government, and responsible parties) at a multi-jurisdictional incident contribute to the process of:

- Determining overall incident objectives;
- Selection of strategies;
- Insuring the joint planning of tactical activities;
- Insuring integrated tactical operations; and
- Making maximum use of available resources.

The On-Scene Coordinator is the pre-designated federal official responsible for ensuring immediate and effective response to a discharge or threatened discharge of oil or a hazardous substance. The U.S. Coast Guard designates OSCs for the U.S. coastal zones, while the U.S. EPA designates OSCs for the U.S. inland zones. The NCP (§300.175) also identifies federal agencies as having specific federal coordination responsibility.

EPA has adopted NIMS ICS as the response management system to organize significant emergency responses. The use of an effective response management system to organize and coordinate responses of significant magnitude is critical to the success of such a response. EPA is currently working on developing an Incident Management Handbook (IMH) to assist personnel in the use of ICS and

DHS's NIMS doctrine during incident response operations and planned events. Upon completion of this handbook it will be included as an Appendix to this document.

Where appropriate, the OSC shall establish a unified command consisting of, at a minimum, the OSC, the State Incident Commander, and the Responsible Party representative. The OSC is responsible for assigning individuals from within the response community (federal, state, local or private), as necessary, to fill the designated positions in the NRS incident level response organization. It should be noted, however, that one individual may fill several of the designated positions. These assignments will be predicated on the nature of the spill and the need for extensive manning.

Under OPA 90, the responsible party is responsible for the cleanup of a discharge, and must submit appropriate response plans defining the structure to accomplish this task, to the maximum extent practicable. OPA further requires that certain owners/operators prepare tank vessel or facility response plans defining the structure to respond to the maximum extent practicable, to a worst case discharge, and to the substantial threat of such a discharge, of oil or a hazardous substance. The RP representative or qualified individual is responsible for implementing the vessel/facility response plan.

2.2.3 State Response Systems

The Governor of each state in Region I is requested to designate a lead agency and a representative to represent the state on the RRT. Each state representative may participate fully in all activities of the RRT. The state RRT representatives are expected to coordinate with the SERCs in their respective states in order to communicate and coordinate preparedness and pre-response planning activities between the state and the RRT. State and local government agencies are encouraged to coordinate the state contingency planning efforts for response to oil or hazardous substance releases or incidents with this plan and with requirements of SARA Title III.

Each state in Region I has a state disaster plan and laws that specify that state's authority and organization for a technical response to environmental emergencies. All states can provide technical expertise to assess environmental and public health threats and damage, as well as to advise local responders. In specific circumstances, states may provide additional response capabilities in the form of contractors and funding.

The following are summaries of emergency preparedness measures for lead agencies and other state agencies for each state in Region I. Emergency response information for each state within Region I is located in Appendix 5.

2.2.3.1 Connecticut

Emergency Response - Oil Spills And Hazardous Substances Incidents: The Connecticut Department of Environmental Protection (CT DEP), Oil and Chemical Spill Response Division (OCSRD), is the designated representative of Region I RRT for the state of Connecticut and is the lead agency for the state in addressing spills. The 24-hour notification number is (860) 424-3338.

According to Section 22a-449 of the Connecticut General Statutes (CGS), whenever there is a discharge of oil; petroleum; chemical liquids; solid, liquid, or gaseous products; or a release of hazardous wastes upon any land or into any of the waters of the state or into any offshore or coastal waters, which may result in pollution, the Commissioner of Environmental Protection will determine the best and most expedient method under the circumstances to remove or contain the discharge. Connecticut environmental law establishes "strict liability" for spills of most pollutants into the environment. This means that the person or business which caused the spill and the owner of the property where the pollution occurred are responsible for cleaning it up. The party that caused the spill and the property owner are responsible to contain the spill and report the spill immediately to the CT DEP OCSRD.

The commissioner is responsible for determining the RP/PRP who caused the discharge and notifying, in writing, the chief executive officer and the local director of health of the municipality in which the discharge occurred. This notification must be provided in a timely manner.

According to the CT CGS, Section 22a-453, "The commissioner shall represent the state in its relations with the federal government and with any municipality and with any regional or interstate authority in all matters relating to oil; petroleum; chemical liquids; solid, liquid, or gaseous products; hazardous wastes pollution or contamination; or emergency resulting from the discharge, spillage, uncontrolled loss, seepage, or filtration of such substance or material or waste."

Other Agencies' Responsibilities and Requirements: The OCSRD of the CT DEP Bureau of Waste Management, is responsible for protecting the public and the environment from emergencies resulting from a release or discharge. The division also develops oil spill contingency plans for emergency situations, maintains a 24-hour state-wide emergency response capability, and supervises cleanup mitigation activities and contracts. Within the OCSRD are five program divisions.

- Emergency Response Program - Assists communities in providing 24-hour state-wide emergency response network for spill incidents and releases of hazardous materials and petroleum products.

- Marine Terminal Program - Provides terminal spill prevention training for private oil spill cooperative operators.

- Environmental Health and Safety Actions Program - Executes mitigation spill cleanup by containing releases and removing hazardous materials.

- Spill Incident Preparedness and Prevention Program - Provides training and technical assistance to fire departments and municipal, industry, and business response groups. This program also maintains Long Island Sound spill response equipment.

- Outreach Program - Maintains communications with federal, state, and local agencies involved in spill mitigation and cleanup activities by providing technical expertise and services for containment and removal.

2.2.3.2 Maine

Emergency Response - Oil Spills And Hazardous Substances Incidents: ME DEP is the designated representative of Region I RRT for the state of Maine and is the lead agency for the state in addressing spills, providing a 24-hour response capability with notification numbers as follows: in-state (800) 482-0777, out-of-state-business-hours (207) 822-6300 and out-of-state-non-business-hours (207) 657-3030 for oil spills; and in-state (800) 452-4664 and out-of-state (207) 624-7000 for hazardous substance releases. There are four ME DEP offices across the state of Maine. These offices are listed below.

- Northern Maine Regional Office
  Presque Isle, ME 04769
  (207) 764-0477

- Eastern Maine Regional Office
  Bangor, ME 04401
  (207) 941-4570

- Central Maine Regional Office
  Augusta, ME 04333
  (207) 287-7800

- Southern Maine Regional Office
  Portland, ME 04103
  (207) 822-6300

ME DEP must provide technical assistance to the RP/PRP and the

responding personnel, and ensure compliance with Maine spill regulations and other pertinent federal and state rules and regulations. Technical assistance takes the form of chemical identification, handling, and hazard information; evaluation of the threat to environmental and public safety; personal protection recommendations; containment and cleanup methods; and resource identification and location. On large spills, or where the spiller fails to respond adequately, ME DEP staff respond on site to assist in the response effort, assuming the role of Senior Response Official if necessary.

During a response, staff of the Division of Response Services (DRS) of ME DEP assume the role of technical advisors to the RP/PRP and provide on-scene assistance to that individual, as well as to those individuals or agencies involved in the response. The Director of DRS is also the state Oil Spill Coordinator, who is defined as the person designated to act as the Maine Commissioner of Environmental Protection's representative during an oil spill. In the event the RP/PRP does not respond to a spill, or is not responding adequately, the ME DEP staff in consultation with federal authorities will assume a role that would appropriately be called that of a Senior Response Official, to respond to the incident. However, if a structure exists within a local or county jurisdiction that provides a Senior Response Official, and that Senior Response Official is being utilized, DRS staff will stand ready to provide assistance to that Senior Response Official.

Once the immediate threat to public health and the environment has been mitigated, the incident is further stabilized and cleaned up under DRS supervision, most often by local cleanup contractors. Disposal of recovered material which is classified as a "special waste" or "non-recoverable oily waste" is referred by DRS staff to appropriate personnel in ME DEP.

Other Agencies' Responsibilities and Requirements: The role of liaison between a spiller and the different program areas of ME DEP is perhaps the greatest benefit that DRS can provide to those involved in a spill. The bureaus within the ME DEP as well as other state agencies have specific responsibilities in the event of a marine spill. State bureaus and agencies, and their responsibilities are listed below.

- Bureau of Remediation and Waste Management - The Bureau of Remediation and Waste Management will respond as necessary when notified of an oil spill. Bureau staff will be available to provide guidance on proper treatment, storage, and disposal of oil and oil-contaminated debris. The Bureau will also coordinate recovery damages and cleanup costs.

- Bureau of Land and Water Quality - The Bureau of Land and Water Quality will assist, at the direction of the Maine Oil Spill

Coordinator, in the assessment of damages to natural resources. Staff will be able to provide information on the use of chemical countermeasures (i.e., herding agents, dispersants, and bioremediation).

- Bureau of Air Quality - The Bureau of Air Quality is responsible for monitoring and licensing air pollution and toxic emissions. In addition, bureau staff will provide guidance if in-situ burning is being considered as a response action.

- Office of Management Services - The Office of Management Services provides support on the use of Geographic Information System (GIS) to identify sensitive areas subject to possible contamination in the event of a spill along the coast of Maine.

- Department of Inland Fisheries and Wildlife (IF&W) - IF&W will assist the Maine Oil Spill Coordinator with identifying sensitive areas and resources in the marine and inland environments that may be threatened by oil spills. IF&W will orchestrate activities related to the implementation of the wildlife rehabilitation plan, including issuance of permits to handle oiled birds. IF&W is a state Trustee of Natural Resources under the Oil Pollution Act of 1990 for birds and some mammals (seals) in or near to the marine environment.

- Department of Marine Resources (DMR) - The DMR will monitor and assess the damage to the marine environment caused by oil spills, and will assist in delineating habitat areas for priority protection and cleanup. DMR is the state Trustee of Natural Resources under the Oil Pollution Act of 1990 for marine fish, marine mammals (except seals), and other marine resources.

- Department of Conservation - The Department of Conservation is the state Trustee of Natural Resources under the Oil Pollution Act of 1990 for state lands, parks, and preserves.

- Maine Emergency Management Agency (MEMA) - MEMA is responsible for carrying out a program for emergency preparedness. This includes a broad range of functions, such as fire fighting, police, medical and health services, rescue, engineering, evacuation and transportation, and emergency welfare.

- Governor’s Office - In the event of a disaster beyond local control, an oil spill proclamation may be issued by the Governor. Once the proclamation is issued, the Governor may use all available resources of the state government and transfer the direction, personnel, or functions of state departments and agencies for the purpose of expediting emergency services.

- Maine Historic Preservation Commission - The Maine Historic Preservation Commission will assist in identifying sensitive coastline segments that contain or may contain significant archeological sites. The Commission will also assist by recommending protection and cleanup methods for sensitive coastline areas. The Maine Historic Preservation Commission will assist in federal agency responsibilities under Section 106 of the National Historic Preservation Act during a major oil spill cleanup.

2.2.3.3 Massachusetts

Emergency Response - Oil Spills and Hazardous Substances Incidents: Through the Executive Office of Environmental Affairs (EOEA), the Massachusetts Department of Environmental Protection (MA DEP) is the designated representative of Region I RRT for the state of Massachusetts. The 24-hour notification number is (888) 304-1133. MA DEP is the Trustee for Natural Resources in Massachusetts. Their responsibilities include overseeing and approving response actions to oil discharges and hazardous substance releases to the environment and to ensure protection of the environment and public safety, health, and welfare. MA DEP responsibilities are outlined in Subpart B: Organization and Responsibilities of the Massachusetts Contingency Plan (MCP) (310 CMR 40.0100). There are four MA DEP offices across the state of Massachusetts. The 24-hour notification line can be used to report a spill or incident in any area of Massachusetts. The proper office, listed below, will be contacted.

- Western Regional Office
  Springfield, MA 01103
  (413) 784-1100

- Central Regional Office
  Worcester, MA 01605
  (508) 792-7650

- Metro Boston/Northeast Regional Office
  Wilmington, MA 01887
  (978) 661-7600

- Southeast Regional Office
  Lakeville, MA 02347
  (508) 946-2700

Staff from Emergency Response (ER), provided by MA DEP, are the personnel designated for responding to and ensuring the appropriate cleanup of oil discharges and hazardous substance releases to the

environment. MA DEP ER personnel are responsible for emergency spill response and oversight of the environmental aspects of spill containment, control, and mitigation. Staff within ER can provide hands-on response with absorbents and skirt booms if the situation requires this type of response. It is anticipated, however, that all "first responder" response will be conducted by local units of government and the various Hazardous Material Response teams located throughout the state. The RP/PRP must notify the MA DEP to be in full compliance with the statutory requirements listed in the MCP (310 CMR 40.0300) for oil and hazardous materials incidents.

Response actions conducted by the RP/PRP, other persons, and/or MA DEP personnel shall be in accordance with Subpart B: Organization and Responsibilities and Subpart D: Preliminary Response Actions and Risk Reduction Measures outlined in MCP [310 CMR 40.000].

Other Agencies' Responsibilities and Requirements: The MA DEP was originally a conglomeration of multiple divisions with different mandates and responsibilities, until 1988, when it was realigned into four Bureaus with responsibility for helping cities and towns, protecting natural resources, preventing pollution, and cleaning up contaminated areas and/or sites, respectively.

These four Bureaus are as follows:

- Bureau of Municipal Facilities (BMF): BMF administers grants and revolving loans to cities, towns, municipal water or sewer districts, and other regional entities in the Commonwealth to improve their environmental infrastructure.

- Bureau of Resource Protection (BRP): Incorporating MA DEP's wetlands and waterways, water pollution and water supply programs, BRP is responsible for identifying critical inland and coastal water resources, and devising strategies for protecting and preserving them.

- Bureau of Waste Prevention (BWP): BWP is composed of MA DEP's air quality, hazardous waste management, industrial wastewater, solid waste management, and toxics use reduction programs. BWP is appointed to prevent pollution before it happens and promote maximum reuse and recycling of residential, institutional, and industrial waste.

- Bureau of Waste Site Cleanup (BWSC): BWSC is responsible for ensuring immediate and effective response to environmental emergencies, such as oil spills, as well as for assessment and cleanup of hazardous substances released to the environment.

- The responsibilities and requirements for other state agencies, with the exception of the above-mentioned bureaus, is currently unavailable pursuant to the MCP: 310 CMR Subpart B: Organization and Responsibilities, Sections 40.0102 through 40.0104: Roles of Other State Agencies and Organizations: Sections Reserved.

2.2.3.4 New Hampshire

Emergency Response - Oil Spills and Hazardous Substance Incidents: The New Hampshire Chairman of the State Emergency Response Commission (SERC). Currently, a representative from the New Hampshire Department of Environmental Services (NHDES) attends the RRT meetings and reports back to the SERC. The State of New Hampshire Department of Safety, Office of the Fire Marshal is the primary agency for the state in responding to oil and hazardous substance incidents, under the State of New Hampshire Emergency Operations Plan. However, New Hampshire regulations for reporting and removal of oil discharges and hazardous substance releases are set forth in New State Env-Wm 1600, RSA 146-A and 147-A, Env-Wm 100-1000, and WMD-01-1, which are administered by the NHDES.

Personnel from the Waste Management Division of NHDES assume primary jurisdiction of the clean-up of oil and hazardous materials incidents. NHDES maintains an office that can also serve as a communication and coordination center during coastal incidents. The NHDES office is located at 50 International Drive in Portsmouth, New Hampshire. Within NHDES, there are three divisions that have a major role in oil and hazardous substance response. These are:

- Air Resources Division - is responsible for monitoring and controlling air pollution and toxic gas releases. To fulfill this function, the Air Resources Division provides field and laboratory services for analysis of air samples and general assistance in air pollution matters affecting the health and safety of responders and the public. Also, The Health Risk Assessment Program of the Air Resources Division performs technical risk assessments to evaluate the health risk associated with exposure to toxic chemicals released into the environment.

- Waste Management Division - provides direction on proper treatment, storage, and disposal of waste from oil or hazardous substance incidents. Waste Management Division serves as the liaison to EPA during hazardous waste and oil spill incidents and oversee the long-term cleanup of contaminated sites. The Waste Management Division administers the New Hampshire State Hazardous Waste Cleanup and Oil Pollution Control Funds and provides access to licensed waste transporters and cleanup contractors. The Waste Management Division

maintains hazardous waste manifests which can be used for material identification and other purposes. In addition, the Waste Management Division conducts training in hazardous materials awareness and planning for local officials, generators, and the public.

- Water Division- provides water quality activities for surface water, and also oversees water supplies and wastewater treatment facilities. Additionally, the Water Division manages the states water resources, operates and maintains state owned dams, and protects the states wetlands.

Other Agencies' Responsibilities and Requirements: Eight other units of state government also have resources and expertise to aid response efforts. They are as follows:

- Department of Safety - assists in response efforts through the Division of Emergency Services, Communication & Management, Division of State Police, and the Division of Fire Safety. The Department of Safety provides 24-hour-notification communications facilities and back-up response communications infrastructure. Site security and crowd control, as well as evacuation and transportation-related logistics, are handled by the Department of Safety. The Department of Safety can also give technical assistance to local first responders and can assume incident command at the request of local public safety officials. Investigations of hazardous substance incidents are conducted by the Department of Safety to evaluate compliance with hazardous materials laws. The Department of Safety assists in notification and coordination of other state agencies and their activities. The Department of Safety maintains a communication center, the Emergency Operations Center, at 107 Pleasant Drive in Concord, NH. The Department of Safety assists in training and volunteer efforts during a response. The Department of Safety is responsible for evacuation procedures should evacuation become necessary. If the governor of New Hampshire declares the incident to be a state emergency, Department of Safety will assume the role of lead state agency.

- Department of Fish and Game - monitors and assesses damage to fish and other aquatic life, and can assist in the collection of water samples.

- Department of Transportation - provides personnel and equipment for containment and cleanup of spilled oil, hazardous substances, and contaminated debris. The Department of Transportation also assists in traffic control and backup communications.

- New Hampshire National Guard - plays a role only in very large scale incidents, assisting the Department of Public Safety in site security, crowd control, and evacuation activities.

- Governor's Office - has the power to declare a state emergency and to marshal federal assistance. The Governor may also involve any other state agency not mentioned above in a response.

- Department of Resources and Economic Development - provides access points to public waterways and controls activities on state beaches.

- Department of Health and Human Services - provides consultation and training on health-related and radiological issues.

2.2.3.5 Rhode Island

Emergency Response - Oil Spills and Hazardous Substances Incidents: The administrator of the Rhode Island Department of Environmental Management (RI DEM) Office of the Director is the designated representative of Region I RRT for the state of Rhode Island. The alternate representative is from the Office of Compliance and Inspection. The responsibilities of RI DEM are to oversee the cleanup and remediation of areas affected by a hazardous discharge and to judge when an area has been remediated according to federal and state guidelines. They provide a 24-hour emergency response capability: in-state 800-498-1336; out-of-state 401-222-3070. An alternate number during working hours (0830-1600) is 401-222-1360.

The primary duty of RI DEM's Emergency Response Team is to respond to and monitor the cleanup and remediation of spills and other emergency situations which pollute or threaten to pollute surface and/or groundwater, and public health and safety. In the event of a discharge, the Director, if he/she deems necessary, may require the initiation of monitoring, remedial, and cleanup actions. These actions may include, but may not be limited to, removing oil from surface waters, placing containment devices, monitoring to determine water quality, restoring impacted areas, and removing all oil-contaminated debris.

Other Agencies' Responsibilities and Requirements: Rhode Island Emergency Management Agency (RI EMA) is the coordination and communications center for Rhode Island state agencies. Several different state agencies have areas of expertise to contribute during a spill, and in the case of such an event, operate under a cooperative agreement that outlines the activities of the signatory agencies when a spill occurs. The agencies and their areas of expertise are listed below.

- RI EMA - is the coordination and communication center for the state of Rhode Island in an emergency situation;

- Rhode Island Fire Marshall - has expert knowledge and is available to advise responders on explosive and reactive spills; and

- Department of Health - has expert knowledge and is available to advise responders on radioactive incidents.

2.2.3.6 Vermont

Emergency Response - Oil Spills and Hazardous Substances Incidents: The Vermont Agency of Natural Resources (VT ANR), Department of Environmental Conservation (DEC) is the designated representative of Region I RRT for the state of Vermont. The 24-hour emergency response number in-state is (800) 641-5005 and out-of-state is (802) 244-8721. The DEC serves as the state Senior Response Official for assessing environmental impacts that could result from spills, and for directing the cleanup of areas affected by an oil discharge and/or a hazardous substance release.

Within the DEC there are specialized persons trained to handle and respond to spills. The Spill Assessment Coordinator works full-time, holds regular business office hours, and can be contacted in the event of a spill. Spill Duty Officers maintain rotating shifts 24 hours a day, 7 days a week, for complete coverage in an emergency situation in event of an oil spill and/or hazardous substance release during non-business hours and/or when the Spill Assessment Coordinator cannot be reached. The responsibilities of these personnel include responding to, assessing, and directing cleanup of oil discharges and/or hazardous substance releases.

Other Agencies' Responsibilities and Requirements: The Vermont Emergency Management Division (EMD), Department of Public Safety is the coordination and communications center for Vermont state agencies in the event of environmental disasters. Other state agencies and the areas of expertise they contribute during a spill are listed below.

- VT EMD - as stated above, the VT EMD is coordination and communication center for the state of Vermont in the event of an emergency; and,

- Agency of Transportation (AOT) - is responsible for road safety in the event of an emergency.

2.2.4 Responsible Party Response Policy

Under the statutory requirements of OPA 90, the responsible party has primary responsibility for cleanup of a discharge. The response shall be conducted in accordance with their applicable response plan. Section 4201(a) of OPA 90 states that an owner or operator of a tank vessel or facility participating in removal

efforts shall act in accordance with the National Contingency Plan and the applicable response plan. Section 4202 of OPA 90 states that these response plans shall:

> "(i) be consistent with the requirements of the National Contingency Plan and Area Contingency Plans;
> (ii) identify the qualified individual having full authority to implement removal actions, and require immediate communications between that individual and the appropriate federal official and the persons providing personnel and equipment pursuant to clause (iii);
> (iii) identify, and ensure by contract or other means approved by the President, the availability of private personnel and equipment necessary to remove to the maximum extent practicable a worst case discharge (including a discharge resulting from fire or explosion), and to mitigate or prevent a substantial threat of such a discharge;
> (iv) describe the training, equipment testing, periodic unannounced drills, and response actions of persons on the vessel or at the facility, to be carried out under the plan to ensure the safety of the vessel or facility and to mitigate or prevent the discharge, or the substantial threat of a discharge;
> (v) be updated periodically; and,
> (vi) be resubmitted for approval of each significant change."

Each owner or operator of a tank vessel or facility required by OPA 90 to submit a response plan shall do so in accordance with applicable regulations. Non-transportation-related onshore facilities, marine transportation-related facilities, and tank vessel response plan regulations, including plan requirements, are located in 40 CFR 112.20 and 33 CFR Parts 154 and 155, respectively.

As defined in OPA 90, each responsible party for a vessel or a facility from which oil is discharged, or which poses a substantial threat of a discharge, into or upon the navigable waters or adjoining shorelines or the Exclusive Economic Zone is liable for the removal costs and damages specified in Subsection (b) of Section 1002 of OPA 90. Any removal activity undertaken by a responsible party must be consistent with the provisions of the NCP, the Regional Contingency Plan (RCP), the Area Contingency Plan, and the applicable response plan required by OPA 90. If directed by the OSC at any time during removal activities, the responsible party must act accordingly.

Each responsible party for a vessel or facility from which a hazardous substance is released, or which poses a substantial threat of a discharge, is liable for removal costs as specified in the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) (42 U.S.C. 9601 et seq.).

2.2.5 Tribal Response Systems

According to 40 CFR 300.610, the head of the governing body of any federally-recognized Native American Tribe is the designated natural resource trustee for

lands and resources belonging to that tribe. Section 311(j)(4) of the CWA calls for the inclusion of tribal as well as state and local representatives on the Area Committee. There are ten federally-recognized tribes within Region I with land holdings of various sizes and 11 tribes petitioning for federal recognition as of 2 March 1999. Two of the federally-recognized tribal organizations, the Passamaquoddy Tribe of Indians: Pleasant Point Reservation, and the Wampanoag Tribe of Aquinnah, do not occupy lands within the inland area. These two tribes are described in Section 300.180 of the Region I RCP. The federally-recognized tribes within the inland area of Region I and their lands are described below. Appendix 1-US EPA/ USCG Juristictional Boundary maps also show boundaries of tribal lands and other general information. A list of emergency contacts and petitioning tribes are included in Appendix 2 and 4.

Refer also to Section 3.1.6 of the ACP for additional information.

- Houlton Band of Maliseet Indians - The lands of the Houlton Band of Maliseet Indians are comprised of four tracts totaling approximately 900 acres located in Houlton and Littleton, Maine along the Meduxnekeag River. The Houlton Band of Maliseet Indians does not presently have a comprehensive emergency response plan, but the tribe is working with the USCG, the Maine Department of Environmental Protection (ME DEP), and the EPA to formulate one. There are no sources of oil or hazardous substances on the lands of the Houlton Band of Maliseet Indians that are capable of producing a major discharge of oil or release of hazardous substances as defined in Section 2.11.2 of this ACP.

- Narragansett Indian Tribe - The Narragansett tribal lands consist of approximately 2,000 acres located in Charlestown, Rhode Island approximately 2 to 3 miles from the Atlantic Coast. The Narragansett Indian Tribe does have an oil and hazardous substances response plan in place that is currently being updated. There are no sources of oil or hazardous substances on Narragansett lands capable of producing a major discharge or release.

- Passamaquoddy Tribe of Indians: Indian Township Reservation - The Indian Township Reservation is located in Indian Township, Maine and occupies approximately 27,000 acres. Currently, no tribal oil or hazardous substances response plan is in place, but the tribe is working with the Washington County LEPC to develop a county-wide response plan. The only source of hazardous substances on the Indian Township Reservation is a water treatment facility that uses chlorine and is operated by the Passamaquoddy Tribe Department of Public Works. There are no sources of oil on the Indian Township Reservation capable of producing a major discharge of oil.

- Penobscot Indian Nation - According to a representative of the Penobscot Indian Nation, the lands of the Penobscot Nation extend along the Penobscot River, from Indian Island to a point approximately 200 miles

upstream. These lands include the bed, banks, and islands of that reach of the Penobscot River and of all branches joining that reach. The Penobscot Indian Nation is currently working with area municipalities and Penobscot County authorities to establish a coordinated County Response Team. Olamon Industries, a plastics molding facility, is the only potential source for a major release of hazardous substances on Penobscot land. There are no sources of oil on Penobscot lands capable of producing a major discharge.

- Mashantucket Pequot Tribal Nation - The Mashantucket Pequot tribal lands consist of approximately 1,200 acres located in Mashantucket, Connecticut, which is part of Ledyard, Connecticut. The Mashantucket Pequot Tribal Nation maintains a one- person hazardous materials response team under the command of the Emergency Manager, and also contracts out some response capability. The Mashantucket Pequot Tribal Nation is currently in the process of developing an oil and hazardous substances response plan. There are no sources of oil capable of producing a major discharge on Mashantucket Pequot land. The only sources of hazardous substances on Mashantucket Pequot land capable of producing a major release is the wastewater treatment facility which has several 4,000- to 5,000-gallon tanks containing wastewater treatment chemicals. These tanks are vaulted and situated below ground surface, inside the facility and are not buried.

- Wampanoag Tribe of Aquinnah - The lands of the Wampanoag Tribe of Aquinnah consist of approximately 600 acres in Aquinnah, Massachusetts (formerly Gay Head, Massachusetts) on the western side of Martha's Vineyard. The Wampanoag Tribe of Aquinnah has no emergency response plan in place to date, but representatives of the Tribe have been involved in coordinated planning efforts with USCG, NOAA, and DOI. There are no sources of oil or hazardous substances on lands of the Wampanoag Tribe of Aquinnah capable of producing a major discharge or release.

- Aroostook Band of Micmacs - The lands of the Aroostook Band of Micmacs consist of approximately 1,000 acres on multiple tracts located on and around former Loring Air Force Base in Presque Isle, Maine. The Aroostook Band of Micmacs does not presently have an oil or hazardous substances response plan in place. At present, there are no sources of oil and hazardous substances on tribal land capable of producing a major discharge or release. However, the Aroostook Band of Micmacs is currently attempting to acquire the fuel tank farm of the former Loring Air Force Base. This tank farm is part of a site currently being remediated under CERCLA. It is not yet determined whether this acquisition will take place, or whether it will be feasible for the Aroostook Band of Micmacs to use this facility in the future. The tanks in the tank farm are empty at present.

- Mohegan Tribe - The Mohegan tribal lands cover approximately 600 acres and are located in Uncasville, Connecticut. The Mohegan Tribe has an

emergency oil and hazardous substances response plan in place through the tribal Fire Department. There are no sources of hazardous substances capable of producing a major release; however, the Mohegan Sun casino facility on Mohegan lands currently uses three oil tanks, each with a capacity of 10,000 gallons.

- Mashpee Wampanoag Indian Tribal Council Inc – The Mashpee Wampanoag Indian Tribal Council became federally recognized February 2007. Their lands consist of 150 acres in Mashpee, MA. If the BIA approves it, their land could grow to include over 120 acres of land in Middleborough, MA. Because their tribe was only recently federally recognized, information about their sources of oil or hazardous substances on their land, and their emergency oil and hazardous substance response plan is limited.

- For further information on Native American Tribes in Region I, contact the DOI BIA.

2.2.6 Other Stakeholders

Under Unified Command, other stakeholders, such as volunteer or private organizations, may participate in a response. While not a part of the Unified Command, they are integral players and should be encouraged to participate.

2.3 National Response Team

National planning, preparedness and coordination in pollution incidents is accomplished through the NRT. The NRT consists of representatives from the USCG, EPA, FEMA, DOD, DOE, USDA, DOC, HHS, DOI, DOJ, DOL, DOT, DOS, DHS, GSA, and Nuclear Regulatory Commission. For details on these agencies, see the NCP at 40 CFR 300.175 (b) and the RCP, Section 6. Other agencies may request membership on the NRT by forwarding such requests to the chairman of the NRT. The NRT is commissioned to maintain a national readiness to respond to a major discharge of oil or release of a hazardous substance. They do this by:

- Maintaining national preparedness to respond to a major discharge of oil or release of a hazardous substance, pollutant, or contaminant that is beyond regional capabilities;
- Developing procedures to build cooperation between all federal, state and local governments, and private organizations with regard to pollution response;
- Coordinating a national program to assist member agencies in planning and response and enhancing coordination of member agency preparedness programs;
- Monitoring national response-related research and development, testing, and evaluation activities of NRT agencies to enhance coordination and facilitate research in support of response activities; and
- Monitor response planning efforts of RRTs. The NRT will be activated in accordance with Section 300.34(g) of the NCP. Generally, activation will occur

when a spill crosses regional boundaries or involves significant population hazards and/or national policy issues. During response activities, it acts primarily to coordinate and oversee the response activities of the RRTs.

2.4 Regional Response Team

Regional planning and coordination of preparedness and response actions are accomplished through the RRT. The RRT agency membership parallels that of the NRT but also includes state and local representations.

2.5 Area Committee

The Area Committees, in conjunction with the NRT and the RRTs, serve a spill planning and preparedness role within the National Response System (NRS). Each Area committee shall be comprised of federal, state and local agency personnel and tribal representatives. In accordance with the OPA Section 4202 (4)(B), each "Area Committee, under the direction of the…OSC for its area, shall

(i) prepare for its area the Area Contingency Plan required under Subparagraph (C);
(ii) work with state and local officials to enhance the contingency planning of those officials and to assure preplanning of joint response efforts, including appropriate procedures for mechanical recovery, dispersal, shoreline cleanup, protection of sensitive environmental areas, and protection, rescue and rehabilitation of fisheries and wildlife; and
(iii) work with state and local officials to expedite decisions for the use of dispersants and other mitigating substances and devices."

Area planning and coordination and coordination of preparedness and response actions is accomplished through the Area Committee. The Area Committee membership includes federal, state, local, and tribal representation.

2.6 On-Scene Coordinators: General Responsibilities

The NCP at 40 CFR part 300.120 describes the general responsibilities of OSCs. The OSC directs response efforts and coordinates all other efforts at the scene of a discharge or release. OSCs are pre-designated by the regional or district head of the lead agency. EPA and the USCG pre-designate OSCs for all areas in each region except for any facility or vessel under the jurisdiction, custody, or control of other federal agencies. The USCG designates federal OSCs for the coastal zones, while EPA designates federal OSCs for the inland zones.

Under OPA, the federal OSC has responsibilities related to the establishment of Area Committees and the development of ACPs. The federal OSC chairs the Area Committee and provides general direction and guidance for the committee as it prepares the ACP.

2.7 Notification and Communications

The National Response Center (NRC) is the national communications center for handling activities related to response actions. The NRC acts as the single point of contact for all pollution incident reporting. Notice of an oil discharge or release of a hazardous substance in an amount equal to or greater than the reportable quantity must be made immediately in accordance with 33 CFR parts 300.300 and 300.405, respectively. Notification shall be made to the NRC Duty Officer, HQ USCG, Washington, DC, at (800)424-8802 or (202)267-2675. All notices of discharges or releases received at the NRC will be relayed immediately by telephone to the appropriate pre-designated Federal OSC.

If a fish and wildlife or a sensitive environment is concerned, reference the Fish and Wildlife and Sensitive Environments Annex for contacts.

Additional notifications shall be made as provided in Appendix 4, Notification Requirements.

2.7.1 State Notification Requirements

2.7.1.1 Connecticut

The commissioner of the CT DEP must be immediately notified by the spiller or RP/PRP in the event of a discharge or spill. The CT DEP (OCSRD) 24-hour emergency spill reporting phone number is (800) 424-3338. According to Section 22a-450 of the CGS, the person making the notification must report all facts which the commissioner requires to determine the necessary response action. There is no minimum reportable amount in the event of a spill in the state of Connecticut. Section 22a-450 states that the RP/PRP must submit a report to the CT DEP within 24-hours of the incident. The report must include, but is not limited to:

- location of discharge or release
- type and quantity of spill
- date and time of discharge or release
- cause of discharge or release
- name and address of owner of the ship, vehicle, machine, or establishment
- name and address of person making the report and relationship to owner

2.7.1.2 Maine

In the event of a spill, the ME DEP must immediately be notified by the spiller or the RP/PRP. The 24-hour emergency response phone numbers are as follows: in-state (800) 482-0777; out-of-state-business hours (207) 822-6300, and out-of-state-non-business-hours (207) 657-3030 for oil spills;

and in-state (800) 452-4664; out-of-state (207) 624-7000 for hazardous substances releases. The RP/PRP must also meet federal (listed above) and local notification requirements. There is no minimum reportable amount in the event of a spill in the state of Maine. According to the Maine Oil, Hazardous Materials and Solid Waste Laws of 1998, 38 MRSA § 1318-B, subsection 1, the RP/PRP causing the spill must report the release immediately to the Maine Department of Public Safety. There is a time limit of 2 hours following the spill to report the release. The RP/PRP must also submit to the ME DEP a spill prevention and control cleanup plan that meets the criteria of 38 MRSA § 1318-C, subsection 1. The plan must also include at the minimum the following information.

- time of discharge and/or release
- location of discharge and/or release
- mode of transportation or facility involved
- type and quantity of spill
- assistance required
- any other pertinent information

Under 38 MRSA § 550, a person who causes a discharge in violation of 38 MRSA § 543 is not subject to fines or civil penalties if that person reports the spill within 2 hours, promptly removes the discharge in accordance with the directions of the commissioner or his appointee, and reimburses the department for any disbursement made from the fund in connection with the discharge.

2.7.1.3 Massachusetts

The MA DEP is to be immediately notified in the event of an oil discharge and/or hazardous substance release. The 24-hour notification number is (888) 304-1133. It is the responsibility of the spiller or the RP/PRP, pursuant to the MCP [310 CMR 40.0300], to orally notify the above-mentioned department by telephone within 2 hours of a sudden discharge of hazardous substances, as well as notify any other necessary departments/agencies (i.e., federal, state, local, etc.).

The reportable quantity for a sudden discharge of petroleum to the environment is 10 gallons pursuant to the MCP [310 CMR Subsections 40.0300 and 40.1600]. In the event of a reportable spill to the environment, various reports may be required depending on the circumstances of the discharge [see MCP (310 CMR 40.0400)].

2.7.1.4 New Hampshire

State of New Hampshire regulation Env-Wm1600 states that any person responsible for or having knowledge of, a discharge or release of oil must contact the NH DES during business hours at (603) 271-3899 or contact NH DES through state police at the numbers indicated below. Further,

Env-Wm513, Env-Wm608, and Env-Wm706, state that any discharge of a hazardous waste or material which becomes a hazardous waste that poses a threat to human health or the environment, must report the spill to the DES at 603-271-3899. New Hampshire provides 24-hour emergency response capability through the New Hampshire State Police with the following notification numbers: within New Hampshire only at (800) 346-4009, and inside our outside of New Hampshire at (603) 271-3636.

Discharges of oil meeting **all** of the following criteria do not need to be reported under Env-Wm1600:

1. The discharge is less than 25 gallons.
2. The discharge is immediately contained.
3. The discharge and associated contamination are completely removed within 24 hours.
4. There is no impact to groundwater or surface water.

2.7.1.5 Rhode Island

Any and all persons who have knowledge of an oil and/or hazardous substance spill (i.e., RP/PRP, fire department, home owner, pedestrian, etc.) are required to report the spill immediately to RI DEM. Rhode Island 24-hour emergency response notification telephone numbers are: in-state (800) 498-1336; out-of-state (401) 222-1360 and (401) 222-2284. In the state of Rhode Island, there is no minimum reportable amount in the event of any type of spill. The RI DEM requires an incident report from the RP/PRP to be submitted 2 weeks after the spill. The incident report must contain the following information:

- time of discharge and/or release
- location of discharge and/or release
- mode of transportation or facility involved
- type and quantity of spill
- assistance required
- any other pertinent information

2.7.1.6 Vermont

In the event of a discharge of oil or a release of hazardous substances in the state of Vermont, the person(s) in control of the spill or the RP/PRP must immediately report the discharge to the DEC, Waste Management Division at (802) 241-3888, Monday through Friday, 7:45 a.m. to 4:30 p.m., or the Department of Public Safety, Emergency Management Division: in-state (800) 641-5005 and out-of-state (802)244-8721, 24 hours a day. The RP/PRP must also meet the above-mentioned federal notification requirements.

The minimum reportable amount in the event of a spill in Vermont is less than or equal to 2 gallons in the case of petroleum products; any amount that causes human health or environmental risk; or the equivalent to the reportable quantity under CERCLA as specified under 40 CFR Section 302.4, depending on the type of spill and the hazardous substance involved. An incident report from the person(s) in control of the spill is also required by the Waste Management Division within a maximum of 10 days following the spill. The report should be sent to The Vermont Department of Environmental Conservation, Waste Management Division, 103 South Main Street, Waterbury, VT 05671-0404, and must include the following information:

- time of discharge and/or release
- location of discharge and/or release
- mode of transportation or facility involved
- type and quantity of spill
- assistance required
- any other pertinent information

2.7.2 Public Information

In accordance with 40 CFR 300.415 (n), the lead agency shall designate a spokesperson who shall inform the community of actions taken, respond to inquiries, and provide information concerning the response action. All news releases or statements made by participating agencies shall be jointly coordinated and funneled through an Information Officer (IO) or a Joint Information Center (JIC). The spokesperson shall notify, at a minimum, immediately affected citizens, tribal, state and local officials, and when appropriate, emergency management agencies. OSCs may consider use of the RRT to assist in media relations and other community involvement activities. RP/PRPs may also implement community involvement activities.

2.8 Determination to Initiate a Response and Special Conditions

OPA Section 4201 states that the President shall, in accordance with the NCP and any appropriate ACP, ensure effective and immediate removal of a discharge, and mitigation or prevention of a substantial threat of a discharge of oil or hazardous substance. In carrying out this mandate, the President may direct or monitor all federal, state, and private actions to remove a discharge. The NCP at 40 CFR 300.130 states that EPA or the USCG is authorized to act for the United States to take response measures deemed necessary to protect public health or welfare or the environment from discharges of oil or releases of hazardous substances, pollutants, or contaminants except with respect to such releases on or from vessels or facilities under the jurisdiction, custody, or control of other federal agencies. The assigned federal OSC may initiate, or in the case of a discharge posing a substantial threat to public health or welfare is required to initiate and direct appropriate response activities. Upon approval by the federal OSC, state or local governments may initiate a government response. Initiation of a response by private

parties is addressed in Section 2.2.4.

2.9 Response Operations

Appendix 5 contains a list of response operations resources available for Region I.

2.9.1 Command Structure – Unified Command Organization

It is the intention of EPA Region I that incidents be managed according to the principles listed below.

Incident Command System - the National Incident Management System (NIMS) model Incident Command System (ICS)

Unified Command - When a federal or state agency arrives on-scene to participate in managing a response action, the agencies will utilize a unified command structure to jointly manage the spill incident. In the unified command, decisions with regard to the response will be made by consensus and documented through a single Incident Action Plan (IAP) for each operational period.

Tribal or Local Government On-Scene Coordinators - The unified command may incorporate additional tribal or local government on-scene coordinators into the command structure as appropriate.

Organizational charts for the Unified Command & Command Staff and its subordinate units are shown below in Figures 1 and 2. They serve as examples and are not meant to be all-inclusive. The functions of the Unified Command & Command Staff must be accomplished during an incident; however, they can be performed by one individual or can be expanded, as needed, into additional organizational units with appropriate delegation of authority.

Figure 1

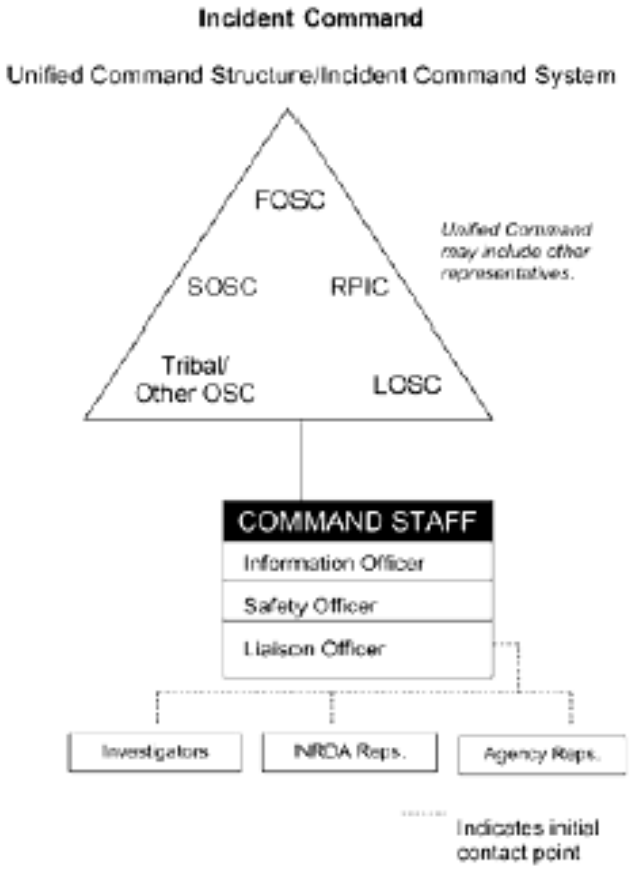
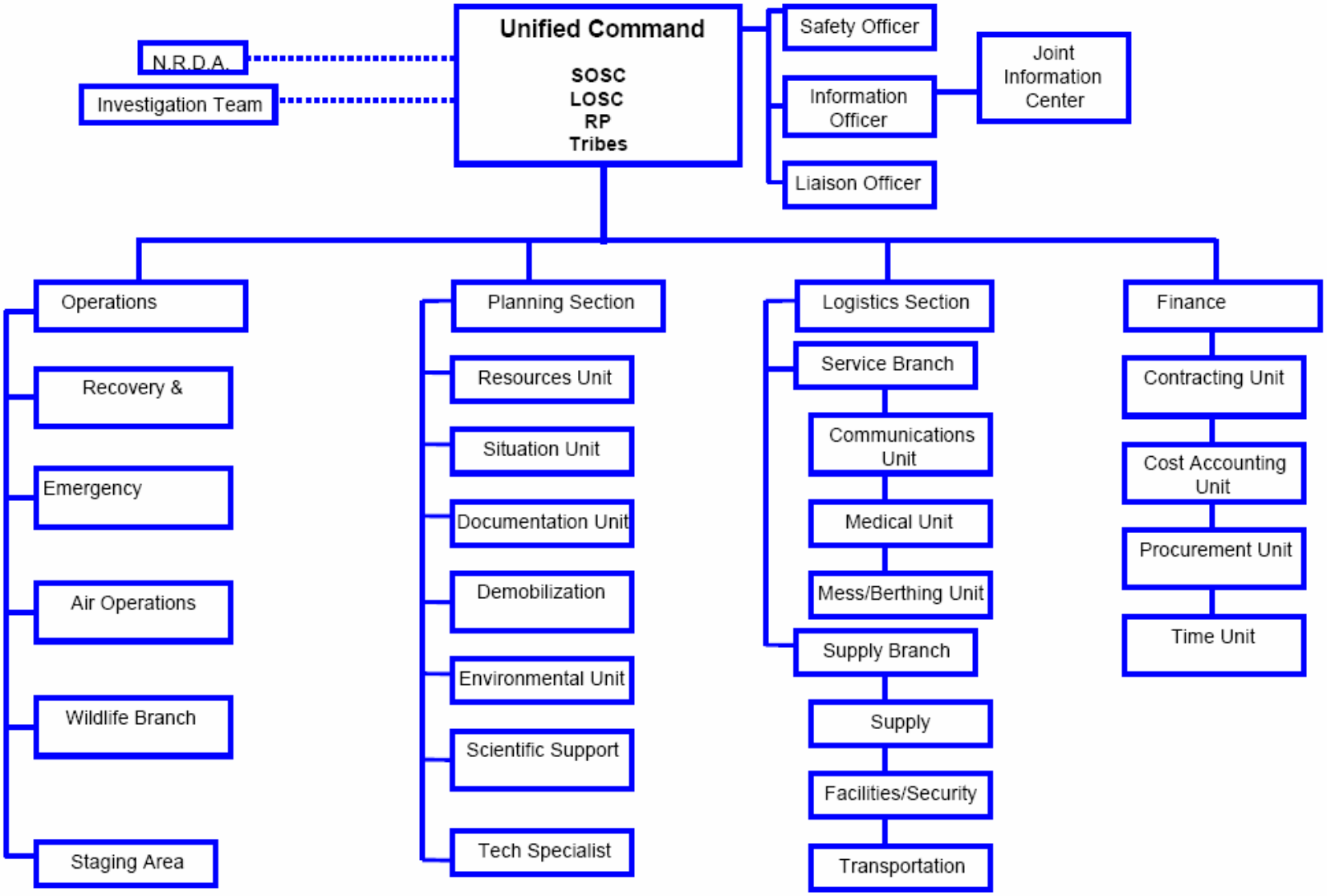
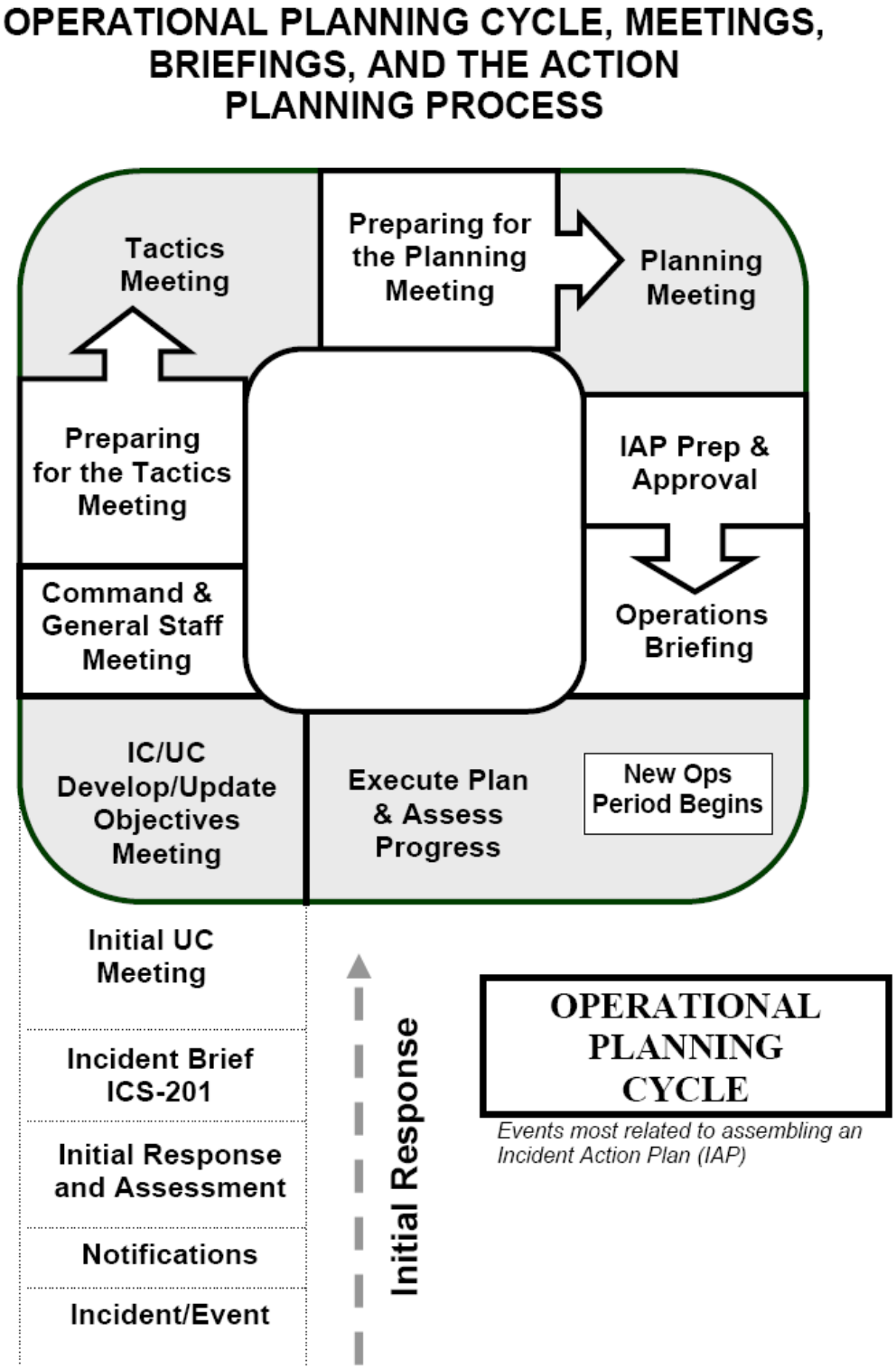

Incident Command
Unified Command Structure/Incident Command System
FOSC
SOSC
RPIC
Tribal/
Other OSC
LOSC
Unified Command may include other representatives.
COMMAND STAFF
Information Officer
Safety Officer
Liaison Officer
Investigators
NRDA Reps.
Agency Reps.
Indicates initial contact point

Figure 2


Unified Command
SOSC
LOSC
RP
Tribes
N.R.D.A.
Investigation Team
Safety Officer
Information Officer
Joint Information Center
Liaison Officer
Operations
Recovery &
Emergency
Air Operations
Wildlife Branch
Staging Area
Planning Section
Resources Unit
Situation Unit
Documentation Unit
Demobilization
Environmental Unit
Scientific Support
Tech Specialist
Logistics Section
Service Branch
Communications Unit
Medical Unit
Mess/Berthing Unit
Supply Branch
Supply
Facilities/Security
Transportation
Finance
Contracting Unit
Cost Accounting Unit
Procurement Unit
Time Unit

2.9.2 Operational Planning Cycle



2.9.3 Command/Staff Elements: Roles & Responsibilities

The Area Committee has adopted the NIMS-based Incident Command System (ICS) as the basic model for operating a coordinated response. Under the Unified Command Structure, the Federal government, state, and responsible party will each provide an On-Scene Coordinator (OSC), who will consult each other and share decision-making authority regarding spill response and clean-up management issues. Depending on the circumstances of the incident, a local or tribal entity may also provide an OSC. Together, these OSCs will jointly serve as the Unified Command.

Additional information regarding each of the positions within the Command Staff can be found in the Oil Spill Field Operations Guide (FOG) ICS-OS-420-1 dated June 2000. For positions or incident types not addressed by the FOG, refer to the US Coast Guard Incident Management Handbook 2001 Edition, (COMDTPUB P 3120.17 Apr 2001).

2.9.4 Incident Commander

Incident Commanders for oil discharges and hazardous substance releases will, whenever possible and practical, be organized under the Unified Command Structure which includes, but not limited to:

- The pre-designated Federal On Scene Coordinator (FOSC);
- The State On Scene Coordinator (SOSC);
- The representative of the Responsible Party (RP); and
- The local and/or tribal On Scene Coordinators, as appropriate.

The Unified Command is responsible for the overall management of the incident. The Unified Command directs incident activities including the development and implementation of strategic decisions, approval of the incident action plan, and approves the ordering and releasing of resources.

2.9.5 Public Information Officer

The Public Information Officer (PIO) is responsible for developing and releasing information, with Unified Command's approval, about the incident to the news media, incident personnel, and other appropriate agencies and organizations, in as timely a manner as possible. The PIO will obtain information from technical experts to provide to the press and other interested parties. The PIO is also responsible for controlling direct media access to staff within the Unified Command organization.

Keeping the public and other interested parties informed is always a primary incident objective. Staff members responsible for meeting this objective ensure elected officials and the community are well informed of the status of the incident, decisions made, and actions taken by the Unified Command. The ultimate purpose

of public information efforts conducted during an environmental emergency is to ensure the public is well informed by issuing timely, credible, and coordinated releases of accurate information to the news media, government officials, and the public. Information may come from flyover or other video coverage, phone calls, on-site interviews, Web Site postings, public meetings, or other methods.

The Area Committee recognizes there is a shared responsibility among the Unified Command representatives to ensure accurate and credible information is made available. It is also the shared role of the Unified Command representatives to ensure appropriate staffing in all positions within the Incident Command System. However, given the importance of the Public Information Officer duties, and to ensure public confidence and trust, the Public Information Officer position must be filled by a qualified representative of a federal, state, tribal, or local agency. If no such agency representative is initially available, qualified, or willing to be the Public Information Officer, a responsible party representative may, upon the Unified Command's concurrence, fill that role. Furthermore, a transition to a responsible party designated Public Information Officer may occur with the concurrence of the Unified Command. Responsible parties are encouraged to designate an Assistant Public Information Officer, who will participate in all the meetings attended by and briefings made by the Public Information Officer.

2.9.6 Safety Officer

The Safety Officer is responsible for monitoring and assessing hazardous and unsafe situations and developing measures for assuring personnel safety. Although the Safety Officer may exercise emergency authority to stop or prevent unsafe acts when immediate action is required, the Safety Officer will attempt to correct unsafe acts or conditions through the regular line of authority. The Safety Officer maintains awareness of active and developing situations, ensures the preparation and implementation of the Site Safety Plan, briefs personnel and includes safety messages in each Incident Action Plan.

2.9.7 Liaison Officer

Incidents that are multi-jurisdiction, or have several agencies involved, may require the establishment of the Liaison Officer position on the Command Staff.

Keeping the public and other interested parties informed is a primary incident objective. Staff members responsible for meeting this objective ensure that elected officials and the community are well informed of the status of the incident, the decisions made and actions taken by the Unified Command. The ultimate purpose of public information efforts conducted during an environmental emergency is to ensure the public is well informed by issuing timely, credible and coordinated releases of accurate information to the news media, government officials and the public.

The liaison officer has the following responsibilities:

• Serve as the initial point of contact for participating federal, state, and local agencies with a vested interest in the response;
• Maintain a spill response summary distribution list for public and private entities requesting spill response status reports;
• Receive and coordinate all calls from public and private entities offering assistance or requesting information; and,
• Identify public and private concerns related to the status and effectiveness of the spill response.

EPA Region I recognizes there is a shared responsibility among the Unified Command representatives to ensure accurate and credible information is made available. It is also the shared role of the Unified Command representatives to ensure appropriate staffing in all positions within the Incident Command System. However, given the importance of the Liaison Officer duties, and to ensure public confidence and trust, the Liaison Officer position must be filled by a qualified representative of a federal, state, tribal, or local agency. If no such agency representative is initially available, qualified, or willing to be the Liaison Officer, a responsible-party representative may, upon the Unified Command's concurrence, fill that role. Furthermore, a transition to a responsible party designated Liaison Officer may occur with the concurrence of the Unified Command. Responsible parties are encouraged to designate an Assistant Liaison Officer, who will participate in all the meetings attended by and briefings made by the Liaison Officer.

2.9.8 Natural Resource Damage Assessment (NRDA)

Natural Resource Damage Assessment (NRDA) is the process by which the Trustees of Natural Resources (see Section 6 and 40 CFR 600) identify and quantify the resource injuries and evaluate the monetary value ("damages") of impacted resources for the purpose of restoration. Successful pursuit of NRDA actions, either by the trustees alone or in cooperation with the RP(s), is a complex process comprising numerous tasks involving the interaction of scientists, economists, lawyers, and administrators. The DOI and NOAA NRDA rules (43 CFR 11, and 15 CFR 990, respectively), establish the procedures for determining the merits of going forth with the assessment of injury to natural resources and quantifying natural resources damages, and developing a claim for the natural resource damages resulting from the incident or the response actions for the incident based on the following three elements:

1. The cost or value of restoration to baseline conditions (i.e. the natural resources or services before the incident);
2. The cost or value of making up for interim injury or losses (i.e., the loss of natural resources or services provided by those resources from the time of the incident impact until the resources or services are returned to baseline); and,
3. The reasonable cost of assessment including restoration planning and development, agencies' indirect costs, and the legal costs.

It is important to recognize that while response and NRDA efforts are administratively separate from response to the spill, close coordination with response activities, especially in the collection of ephemeral data, will greatly reduce the potential for redundant or potentially conflicting field activities. See item c. and d., below.

Lead Administrative Trustee (LAT)

The LAT is responsible for facilitating the coordination of NRDA needs and activities of Trustee NRDA Teams with the ICS spill response operations. This includes close coordination with the planning Section for obtaining timely information on the spill and injury to natural resources. The LAT will coordinate with the Scientific Support Coordinator, OSC, the RP, and Legal specialist as necessary for possible coordination of NRDA or injury determination activities. Coordination and NRDA can also include the following:

a. Attend appropriate planning meetings to facilitate communication between NRDA Team and ICS elements.

b. Identify site access, transportation support, logistics requirements and staffing needs to the proper ICS elements.

c. Interact with ICS elements to collect information essential to NRDA.

d. Coordinate sampling requirements with the Planning and Operations sections.

e. Coordinate with the Liaison Officer and the SSC to identify other organizations available to support NRDA activities.

f. Ensure that NRDA activities do not interfere or conflict with response objectives.

See also Fish and Wildlife and Sensitive Environments Annex to the Region 1 Inland Area Contingency Plan (U.S. DOI) - Section 5.4.2

2.9.9 Incident Investigation

Investigators from federal and state agencies will not normally be a part of the Unified Command. While personnel may report to individuals that are part of the UC, the investigators should be separate so as not to introduce polarizing forces into the Unified Command system.

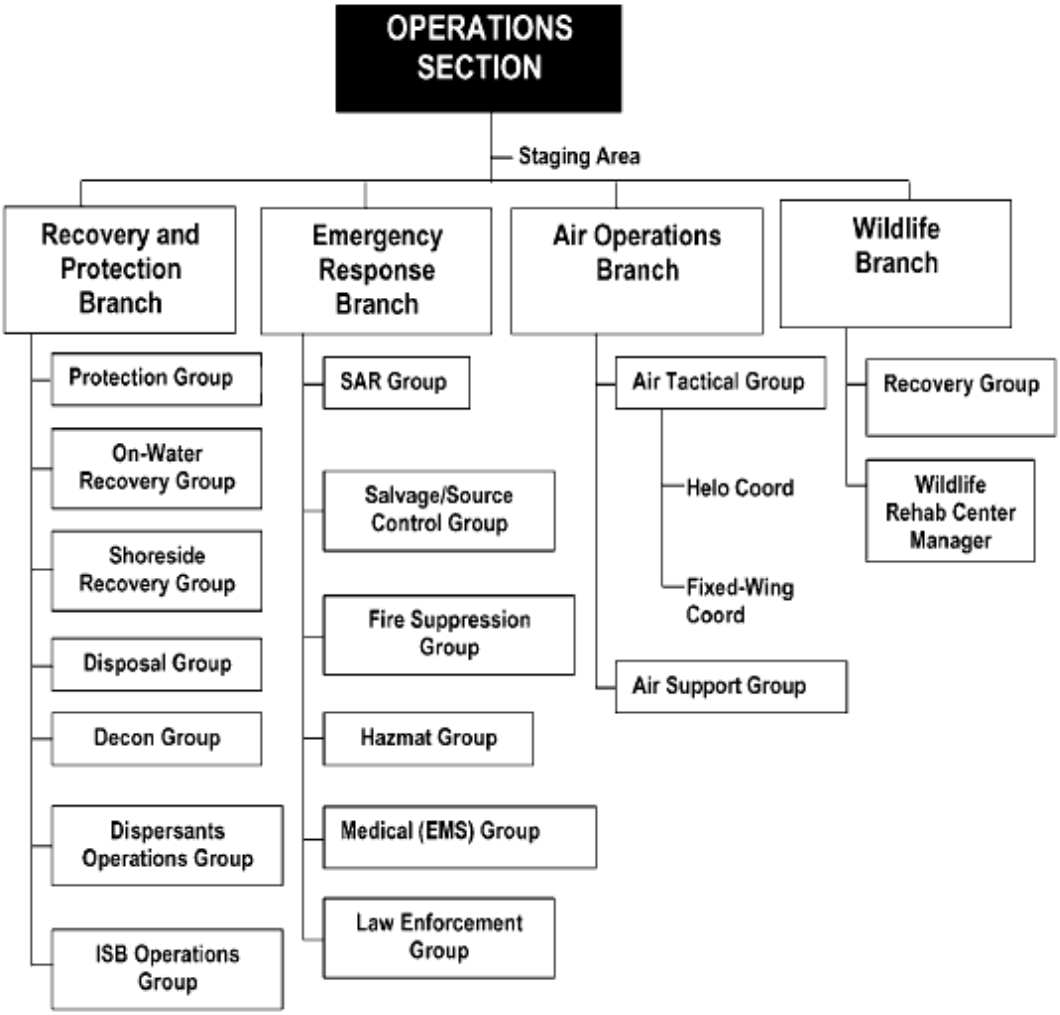
2.9.10 Operations Section Organization

The following is an organizational chart of the Operations Section and its subordinate units. It serves as an example and is not meant to be all-inclusive. The functions of the Operations Section must be accomplished during an incident; however, they can be performed by one individual or can be expanded, as needed, into additional organizational units with appropriate delegation of authority.

Information regarding the Operation Section and Staff positions within the command can be found from the US Coast Guard's Homeport Site, the Government Printing Office, or from the following site http://www.dfg.ca.gov/ospr/organizational/msb/readiness/2006%20IMH.pdf.

Figure 3

Operation Section Organization



2.10 Multi-Area Responses

In the event that an actual or threatened discharge or release moves from the area covered by one area contingency plan into another area, the authority to initiate pollution control actions shall likewise shift. In the event that an actual or potential incident affects areas covered by two or more area plans, the response mechanisms called for by both plans shall be activated. There shall be only one OSC at any time during the course of a response operation. Should a discharge or release affect two or more areas, the lead agency shall give prime consideration to the area vulnerable to the greatest threat, in determining which agency should provide the OSC. If there is disagreement as to the area most impacted or vulnerable, then the RRT will decide who the OSC should be.

The NRT will be notified in the event of a discharge which transcends regional boundaries and, if necessary, the NRT will be activated to support the pre-designated OSC in coordination of cleanup efforts, personnel and equipment in the affected regions.

2.11 Special Teams Forces and Other Assistance Available to OSCs

Agency for Toxic Substances and Disease Registry

The Agency for Toxic Substances and Disease Registry (ATSDR) maintains appropriate disease/exposure registries, provides medical care and testing of individuals during public health emergencies, develops, maintains, and informs the public concerning the effects of toxic substances, maintains a list of restricted or closed areas due to contamination, conducts research examining the relationship between exposure and illness, and conducts health assessments at contaminated sites. The ATSDR also assists the EPA in identifying most hazardous substances at CERCLA sites, develops guidelines for toxicological profiles of hazardous substances, and develops educational materials related to the health effects of toxic substances. ATSDR resources are an important tool for the OSC to use in assessing the possible effects of an environmental emergency on the public's health. A response team consisting of an emergency response coordinator, toxicologist, chemist, physician, and an environmental health scientist will be made available within twenty minutes of the call.

ATSDR may address a number of health issues including health team coordination, contingency planning, decontamination procedures, first aid/medical treatment protocols, public affairs, health threat assessment sampling plans, worker safety and health, evacuation/reentry consultation, exposure pathway assessment, and health information. ATSDR’s main office is located in Atlanta, GA, and may be contacted 24 hours per day at 404-639-0615. A regional office is co-located with EPA’s office in Boston, and can be contacted at 617-918-1490.

Department of the Interior (DOI) (USFWS and USGS)

There are numerous agencies within the Department of the Interior that the OSC coordinates with during an incident response, as shown in 40 CFR 300.175(a)(9). DOI

should be contacted through the Regional Environmental Officer, Andrew Raddant at (617) 223-8565 during business hours or (617) 592-5444 after hours.

U. S. Fish & Wildlife Service (USFWS) http://www.fws.gov/

A detailed description of the roles and responsibilities of the USFWS can be found in the Annex 1. The USFWS can provide the OSC information on the location of migratory birds, endangered species, and wildlife habitats. They deal with problems such as dispersal of birds and coordination of wildlife habitats. They also manage and can provide information on wildlife refuges within the region. The USFWS can assist the OSC in other aspects of response, such as shoreline assessments, compiling background information on and developing criteria for countermeasures use, assessing spill impacts, and developing restoration plans. USFWS involvement is determined on a case by case basis.

U. S. Geological Survey (USGS) http://www.usgs.gov/

The USGS can provide expert advice in geology, geochemical data, groundwater hydrology, and ground and surface water data.

National Park Service (NPS) http://www.nps.gov/

The Park Service can provide expertise on historical, archaeological, and recreational sources as well as sites on the National Historic Register. They can also provide information on National Parks, lakeshores, monuments, historic sites, Wild and Scenic rivers and recreation areas.

Bureau of Indian Affairs (BIA) http://www.doi.gov/bureau-indian-affairs.html

The Bureau of Indian Affairs has the responsibility to protect Native American trust resources and to facilitate an active role in planning and response for Tribal governments. BIA can assist with coordination, communication, and access to Indian lands and Tribal officials.

Bureau of Land Management (BLM) http://www.blm.gov/wo/st/en.html

BLM has expertise in minerals, soils, vegetation, habitat, archeology, and hazardous materials.

Department of Justice (DOJ)

The DOJ can provide advice on complicated legal questions arising from discharges or releases, and federal agency responses. In addition, the DOJ represents the federal government, including its agencies, in litigation relating to such discharges or releases. Other legal issues or questions shall be directed to the federal agency counsel for the agency providing the OSC for the response.

Department of Labor (DOL)

OSHA Occupational Safety and Health Administration (OSHA)

OSHA will provide the OSC with advice, guidance, and assistance regarding hazards to personnel involved in removal or control of oil discharges and hazardous substance releases, and in the precautions necessary to prevent hazards to their health and safety. Typically, they do not need to be called except where specific guidance is needed. They will usually respond to large or lengthy response efforts involving many people, where they will make their own determinations about on-scene safety precautions and make recommendations directly to the OSC. The liaison with OSHA is Robert Hooper, Assistant Regional Administrator for Technical Support in Boston, MA. He can be contacted during the day at 617-565-9860.

Environmental Monitoring and Support (EMS) Laboratory

EMS Laboratory located in Las Vegas, NV, can provide rapid aerial color or color reversal photography. These photos can be taken within 12 to 24 hours of contacting the EMS Laboratory. A full briefing can be provided by their assigned on-scene project officer 24 to 30 hours after the overflight. The photography can aid the OSC in environmental damage assessment, response scope planning, and response effectiveness. Similar rapid service is available for night mapping using thermal IR scanners.

Environmental Photographic Interpretation Center (EPIC)

EPIC is a field station of the Landscape Ecology Branch (LEB), Environmental Sciences Division - Las Vegas (ESD-LV). EPIC can provide excellent low level, high resolution aerial color photography. Services can be arranged through EPA Region I within 24 hours.

Environmental Response Team (ERT)

The Environmental Response Team (ERT) is established by EPA in accordance with its disaster and emergency responsibilities. The ERT has expertise in treatment technology, biology, chemistry, hydrology, geology, and engineering.

The ERT can provide access to special decontamination equipment for chemical releases; advice to the OSC in hazards evaluation; risk assessment; a multimedia sampling and analysis program; on-site safety, including development and implementation plans; cleanup techniques and priorities; water supply decontamination and protection; application of dispersants; environmental assessments; degree of cleanup required; and disposal of contaminated material. The ERT also provides both introductory and intermediate level training courses to prepare response personnel.

OSC or RRT requests for ERT support should be made directly to the Edison, New Jersey office. The 24-hour phone number for ERT is (732) 321-6660.

Marine Salvage Operations

For marine salvage operations, OSCs with responsibility for monitoring, evaluating, or supervising these activities should request technical assistance from DOD, the Strike Teams, or commercial salvage operators as necessary to ensure that proper actions are taken.

Marine salvage operations generally fall into five categories: afloat salvage; offshore salvage; river and harbor clearance; cargo salvage; and rescue towing. Each category requires different knowledge and specialized equipment. The complexity of such operations may be further compounded by local environmental and geographic conditions.

The nature of marine salvage and the conditions under which it occurs combine to make such operations imprecise, difficult, hazardous, and expensive. Thus, responsible parties or other persons attempting to perform such operations without adequate knowledge, equipment, and experience could aggravate, rather than relieve, the situation.

National Decontamination Team (NDT)

The NDT is the federal, technical resource for decontamination science to provide support for actions that contribute to the protection of human health, the environment, and national security. NDT will coordinate, communicate, and deliver scientific and engineering expertise, both domestically and internationally, to support hazardous materials response organizations.

The team is made up of structural engineers and industrial hygienists to assess safety of impacted structures; materials and HVAC engineers to develop decon strategies for buildings; biochemist and analytical chemists to advise on contaminant behavior and by-products; and deconologist for specialized waste treatment, transportation, and disposal options, including establishing decon procedures for unusual cases. The NDT has a 24-hour capability to respond, is available to assist EPA OSCs, will operate under NIMS within ICS, and is available to participate in drills and exercises. They can be reached at 513-487-2420.

National Response Center (NRC)

The NRC is the 24-hour communications center of the National Response Team. It is located at Coast Guard Headquarters in Washington, DC. The NRC receives telephone reports of oil spills and chemical releases nationwide through its toll free number, (800) 424-8802, and immediately relays them to the pre-designated federal On-Scene Coordinator for appropriate action. It will also channel OSC and RRT reports to the NRT, when necessary.

Public Information Assist Team (PIAT)

The Public Information Assist Team (PIAT) is an element of the NSFCC staff which is available to assist OSCs to meet the demands for public information during a response or

exercise. Its use is encouraged any time the OSC requires outside public affairs support. Requests for PIAT assistance may be made through the NSFCC or NRC.

Scientific Support Coordinator (SSC)

Scientific Support Coordinators (SSCs) from either EPA's Environmental Response Team or NOAA may be designated by the OSC as the principal advisors for scientific issues, communication with the scientific community, and coordination of requests for assistance from state and federal agencies regarding scientific studies. The SSC strives for a consensus on scientific issues affecting the response, but ensures that differing opinions within the community are communicated to the OSC.

During a response, the SSC serves on the federal OSC's staff and may, at the request of the OSC, lead the scientific team and be responsible for providing scientific support for operational decisions and for coordinating on-scene scientific activity. Depending on the nature and location of the incident, the SSC integrates expertise from governmental agencies, universities, community representatives, and industry to assist the OSC in evaluating the hazards and potential effects of releases and in developing response strategies. Generally, SSCs are provided by NOAA in coastal zones, and by EPA in the inland zone.

The OSC can obtain NOAA SSC assistance 24 hours a day by directly contacting the SSC Headquarters at (206) 343-3432, or by contacting the Regional SSC directly. The pre-designated Regional SSC for this area and primary contact for all NOAA services is Steve Lehmann, who can be contacted at 617-223-8016 during the day and via cell phone at 617-877-2806.

NOAA SSCs are assigned to USCG Districts and are supported by a scientific support team that includes expertise in environmental chemistry, oil slick tracking, pollutant transport modeling, natural resources at risk, environmental tradeoffs of countermeasures and cleanup, and information management. SSCs support the Regional Response Teams and the Area Committees in preparing regional and area contingency plans and in conducting spill training and exercises. For area plans, the SSC provides leadership for the synthesis and integration of environmental information required for spill response decisions in support of the OSC.

USCG District Response Group and District Response Advisory Team

The District Response Group (DRG) is a framework within each Coast Guard district that organizes district resources and assets to support USCG OSCs during a response to a pollution incident. Coast Guard DRGs assist the OSC by providing technical assistance, personnel, and equipment, including the Coast Guard's pre-positioned equipment. Each DRG consists of all Coast Guard personnel and equipment in its district, including fire fighting equipment, additional pre-positioned equipment, and a District Response Advisory Team (DRAT) that is available to provide support to the OSC in the event that a spill exceeds local response capabilities. Support from the DRG or DRAT must be obtained through the federal OSC.

The National Pollution Funds Center (NPFC) is responsible for implementing those portions of the OPA that have been delegated to the USCG. The NPFC is responsible for addressing funding issues arising from discharges and threats of discharges of oil. The daytime phone number for the NPFC duty officer 202-493-6700, and the after hours pager number is 800-759-7243, PIN: 20773906.

USCG National Strike Force (NSF)

The USCG National Strike Force Coordination Center, located in Elizabeth City, North Carolina, coordinates the three Coast Guard Strike Teams (Atlantic, Gulf and Pacific). The three Strike Teams provide trained personnel and specialized equipment to assist the OSC in training for spill response, stabilizing and containing the spill, and in monitoring or directing the response actions of the responsible parties and/or contractors. The OSC has a specific team designated for initial contact and may contact that team directly for any assistance. The NSFCC can provide the following support to the OSC:

- Technical assistance, equipment and other resources to augment the OSC staff during a spill response;
- Assistance in coordinating the use of private and public resources in support of the OSC during a response to, or a threat of, a worst case discharge of oil or hazardous substance;
- Review of the Area Contingency Plan, including an evaluation of equipment readiness and coordination among responsible public agencies and private organizations;
- Assistance in locating spill response resources for both response and planning, using the NSFCC's national and international computerized inventory of spill response resources;
- Coordination and evaluation of pollution response exercises; and
- Inspection of district pre-positioned pollution response equipment.

The Strike Teams are equipped with specialized containment and removal equipment and have rapid transportation (i.e. aircraft, trucks) available or at their disposal. Strike Teams can provide communications support, advice, and assistance for oil and hazardous substances removal. These teams also have knowledge of shipboard damage control and are equipped with specialized containment and removal equipment. When possible, the Strike Teams will provide training for emergency task forces to support OSCs and assist in the development of RCPs and ACPs.

U.S. NAVY

The U.S. Navy (USN) is the federal agency most knowledgeable and experienced in ship salvage, shipboard damage control, and diving. The USN has an extensive array of specialized equipment and personnel available for use in these areas as well as specialized containment, collection, and removal equipment specifically designed for salvage related and open sea pollution incidents.

The Supervisor of Salvage (SUPSALV) can provide salvage expertise and maintains a

warehouse on each coast stockpiled with salvage and response gear. (See NSFCC Spill Response Resource Inventory <SRRI> for a listing of SUPSALV equipment.)

Navy Superintendent of Salvage

As stated in the NCP, SUPSALV is the primary federal resource for marine salvage operations. SUPSALV is located at Cheatham Annex outside of Williamsburg, VA, and maintains an inventory of ready cleanup equipment. In the event of a medium or major spill, they can provide pollution response equipment within 14 hours.

The SUPSALV pollution control equipment, complete with operators and maintenance support, is available to federal OSCs on a cost reimbursable basis. Either the responsible party or the OSC can fund SUPSALV operations. Formal requests for SUPSALV assistance must be made through the Chief of Naval Operations, Navy Command Center, Washington, DC.

SUPSALV can also provide the OSC with phone consultations, evaluations of proposed salvage plans, and salvage engineers available for dispatch to the scene upon request. SUPSALV requires two to six hours to mobilize their equipment. None of the equipment will be flown in for operations. All of the equipment will be trucked in by highway and will take approximately 14 hours, once mobilized, to arrive on scene. SUPSALV is prepared to provide personnel and equipment which are as self-supporting as transportation permits; however, some support elements must be provided from local resources.

SUPSALV may be contacted as follows:

a. For information and informal "heads up" notification:
   24 Hours (NAVSEA Duty Officer) (703) 602-7527/7528
b. For official requests for mobilization and response:
   24 Hours (CNO Duty Captain) (703) 695-0231

Early “heads up” calls are encouraged, appreciated, and valuable, even if the extent of the response has not yet been determined, and especially if there is a chance that mobilization will be needed later.

Non-Navy requests for emergency assistance should be directed through the RRT in accordance with the NCP. U.S. Coast Guard requests can be initiated directly in accordance with the Navy/Coast Guard MOU found in Volume X of the Coast Guard Marine Safety Manual.

2.12 Worker Health and Safety

Response actions under the ACP will comply with the provisions for response action worker safety and health in 29 CFR 1910.120.

In a response action taken by a responsible party, the responsible party must assure that an occupational safety and health (OSH) program consistent with 29 CFR 1910.120 is made

available for the protection of workers at the response site.

In a response taken under the ACP by a lead agency, an OSH program should be made available for the protection of workers at the response site, consistent with, and to the extent required by, 29 CFR 1910.120. Contracts relating to a response action under the ACP should contain assurances that the contractor at the response site will comply with this program and with any applicable provisions of the OSH Act and state OSH laws.

When a state or political subdivision of a state, without an OSHA-approved state plan, is the lead agency for response, the state or political subdivision must comply with standards in 40 CFR Part 311, promulgated by EPA pursuant to section 126(f) of SARA. The state is the lead OSHA representative in Vermont. Connecticut operates a plan that covers state employees only. Maine, Massachusetts, New Hampshire, and Rhode Island are under federal plans.

Requirements, standards, and regulations of the Occupational Safety and Health Act of 1970 (29 U.S.C. 651 et seq.)(OSH Act) and of state laws with plans approved under section 18 of the OSH Act (State OSH laws), not directly referenced in paragraphs (a) through (d) of this section, must be complied with where applicable. Federal OSH Act requirements include, among other things, Construction Standards (29 CFR Part 1926), General Industry Standards (29 CFR Part 1910), and the general duty requirement of section 5(a)(1) of the OSH Act (29 U.S.C. 654(a)(1)). No action by the lead agency with respect to response activities under the ACP constitutes an exercise of statutory authority within the meaning of section (b)(1) of the OSH Act. All governmental agencies and private employers are directly responsible for the health and safety of their own employees.

2.13 Public Information and Community Relations

During an incident, it is imperative to give the public prompt and accurate information on the nature of the incident and the actions underway to mitigate the damage. OSCs and community relations personnel should ensure that all appropriate public and private interests are kept informed and that their concerns are considered throughout a response. They should coordinate with available public affairs/community relations resources to carry out this responsibility. At the discretion of the OSC or lead agency, a JIC shall be established or a person designated to coordinate this effort.

EPA OSCs should coordinate all community and media concerns with the EPA Office of Public Affairs. The guidelines used by the Office of Public Affairs at emergency response sites are included in Community Relations in Superfund: A Handbook, January 1992 (EPA/540/R-92/009).

2.14 Documentation and Cost Recovery

Responsible parties are liable for damage claims and removal costs resulting from discharges or substantial threats of discharges of oil into or upon the navigable waters of the United States. For cases where the responsible party is either unknown, or is unable or

unwilling to meet this obligation, the Oil Spill Liability Trust Fund (OSLTF) will pay for removal costs and claims. The OSLTF is administered by the Coast Guard's National Pollution Funds Center (NPFC) in Arlington, VA, whose concurrent missions are to provide OSCs with the financial resources to ensure timely and effective response, to ensure legitimate damage claims are liquidated expeditiously, and to ensure proper documentation of expenditures to facilitate cost recovery from responsible parties.

Government expenses must be properly documented in order to recover costs. Below are cost accounting and evidence gathering recommendations. The NPFC has published a Technical Operating Procedures for Resource Documentation manual (TOPS) to assist OSCs, which contains all required forms and reports. This section will summarize the most important spill funding issues; readers are referred to the USCG website http://www.uscg.mil/npfc/Publications/tops.htm for details.

The primary person available to the OSC when discussing oil spill removal funding is the Case Officer. The NPFC assigns a Case Officer to every pollution case in which an OSC accesses the OSLTF. The Case Officer, representing a team of financial and legal specialists at NPFC, tracks the case to assist the OSC, to ensure compliance with the TOPS and to facilitate cost recovery. Funding questions which cannot be answered on scene can be directed to the Case Officer, who will generally only come on scene when requested by the OSC.

Properly completed resource documentation facilitates timely reimbursement to government agencies and contractors involved in a removal, and should be completed as soon after the time of an activity as possible, preferably daily. When completed, resource documentation must provide a complete audit trail so that compliance with applicable regulations and procedures can be verified.

Complying with documentation requirements can become complex, but methods exist to assist in this documentation. One standard method is the Pollution Incident Daily Resource Reporting System (PIDRRS), however, an NPFC approved alternate record keeping system may also be used. PIDRRS is a series of forms, instructions, and submission schedules, described in detail in the TOPS. It is based on the use of Standard Rates, which are published dollar rates for particular personnel resources, services, or products. Contractors use rates as prescribed in their BOA or as agreed to with the Contracting Officer, and Coast Guard Units use standard rates found in the Commandant Instruction 7310.0 (series). Other Government agencies may have a publication listing their standard rates, and if so should provide this to the OSC. If not, that agency should execute a Pollution Funding Authorization Agreement with the OSC. An NPFC-approved alternate system for government agencies must be an existing system for documenting activities and costs, and must be approved by the NPFC in advance.

A three level system has been developed to help determine the complexity of a case and its required resource documentation. The OSC will determine which level best applies to an incident. The following criteria are designed to assist the OSC in making this determination:

Level I - Routine

1) Total government costs will not exceed $50,000;
2) Removal activities will probably be completed within one to two weeks;
3) Removal activities are localized.

Level II - Moderately Complex

1) Total costs are between $50,000 and $200,000;
2) Removal activities occur at several locations;
3) Several external resources such as a strike team, a state agency or other government units are involved; and
4) Removal activities will take longer than two weeks to complete.

Level III - Significantly Complex

1) Total costs exceed $200,000;
2) Removal activities involve numerous contractors;
3) Removal activities occur at several locations; and
4) As in Level II, there are several external resources involved.

In each level, the contractors and other government agencies are responsible for submitting their invoices on a timely basis. Other government agencies should submit an SF-1080 and the contractors use their normal invoicing procedures as prescribed in their contract. The OSC will review resource documentation submitted, compare the daily resource documentation against the SF-1080's and invoices, and certify the receipt of services as reflected on the documentation.

Persons and government agencies which incur damages as a result of discharges or substantial threats of discharges of oil are entitled to compensation and OPA 90 provides for a mechanism to expedite this process. The Responsible Party is primarily liable for satisfying legitimate claims expeditiously. If the Responsible Party is either unknown, or is unable or unwilling to meet this obligation, or the claim is denied or remains unpaid for 90 days the NPFC will pay the claim from the OSLTF. This applies to both uncompensated removal costs and uncompensated damages resulting from the discharge. Section 1002 of OPA 90 describes damages as including natural resources, real or personal property, subsistence use, revenues, profits and earning capacity, and public services. The responsible party, as designated by the OSC, is required to advertise, in a manner directed by the NPFC, the name, address, telephone number, office hours, and work days of the person or persons to whom claims are to be presented and from whom claim information can be obtained.

If the responsible party denies responsibility, proves unwilling or unable to deal with claims, or refuses to advertise, the NPFC will assume the role of responsible party for the purpose of receiving and paying claims. As such, the NPFC will advertise as described

above, listing either their offices in Arlington, VA, or a locally established claims office, as deemed appropriate by the OSC and NPFC for the case.

2.14.1 Access to the Fund

When responding to an oil pollution incident, and when deemed appropriate, the OSC assigns a Federal Project Number (FPN) and assigns a dollar ceiling. As removal activities proceed, if it appears costs will exceed the original ceiling the OSC requests an increase to the ceiling.

The costs of all purchases, contracts, services, and authorizations of activity are applied against the ceiling. Each contractor or government agency is responsible for keeping track of their costs during the removal and for staying inside the limits given them by the OSC, or requesting more if needed.

2.14.2 State Access to the Fund

OPA '90 authorizes the President, upon request of the Governor of a State, to obligate the OSLTF for payments not to exceed $250,000 per incident, for removal costs consistent with the National Contingency Plan, required for the immediate removal of a discharge, or the mitigation or prevention of a substantial threat of a discharge, of oil. The responsibility for implementing this section of the Act has been delegated to the NPFC. The NPFC has published a TOPS for State Access, and promulgated regulations at 33 CFR Part 133 entitled, "State Access to the Oil Spill Liability Trust Fund for Removal Costs Under the Oil Pollution Act of 1990."

There are three methods available to states and/or political subdivisions thereof for payment of removal costs:

- Direct State Access to the OSLTF
- Execute a Pollution Removal Funding Authorization Agreement with the federal OSC or;
- File a claim after the fact with either the Responsible Party or the NPFC.

Requests to directly access the Fund must be made by Governors or their designated representatives to the OSC. The OSC reviews the request for eligibility under the Act and applicable regulations, then approves or denies the Governor's request. The regulations provide minimum standards to guide the OSC in making eligibility decisions. States are required to coordinate their removal actions with the OSC and retain records of expenditures. The provisions of the Federal Grant and Cooperative Agreement Act and the regulations of the U.S. Department of Transportation regarding Federal assistance programs apply to payments from the Fund, and are described in the TOPS.

In the alternative, the OSC may, at their discretion, execute a Pollution Removal Funding Authorization Agreement with the State, which effectively acts as a

contract between the State and the OSC. In this Agreement, both parties agree certain types of removal activities are authorized and costs associated with each are spelled out. Lastly, States may pay for their activities themselves, then file a claim for reimbursement with either the OSC or the Responsible Party, as appropriate.

SECTION 3: PLANNING AND PREPAREDNESS

The Area Committee should be added to the flow charts and diagrams where appropriate. The Area Committee serves as a planning and preparedness body to support the federal OSC and is encouraged to include membership from federal, state, and local governments and private entities (as ex-officio members). Area Committees are not response support bodies, and are not required to participate in response efforts, but should be comprised of response personnel.

3.1 Planning and Coordination Structure

3.1.1 National Response Team

As described in Section 300.110 of the NCP, the NRT is responsible for national planning and coordination. The NRT's membership consists of the federal agencies with responsibilities, interest and expertise in various aspects of emergency response to pollution incidents. The EPA serves as chairman and the Coast Guard serves as vice-chairman of the NRT, except when activated for a specific incident. The NRT is primarily a national planning, policy and coordination body and does not respond directly to incidents. The NRT provides policy guidance prior to an incident and assistance as requested by an OSC via an RRT during an incident. NRT assistance usually takes the form of technical advice, access to additional resources/equipment, or coordination with other RRTs.

3.1.2 Regional Response Team (RRT)

As described in Section 300.115 of the NCP, the RRTs are responsible for regional planning and coordination. There are 13 RRTs, one for each of the ten federal regions and Alaska, the Caribbean and the Pacific Basin. Each RRT has federal and state representation. EPA and the Coast Guard co-chair the RRTs. Like the NRT, RRTs are planning, policy and coordinating bodies, and do not respond directly to incidents. The RRTs develop Regional Contingency Plans for their regions. These plans address region specific issues and provide guidance to the OSCs for developing their area plans. The RRTs also provide one level of review for the Area Contingency Plans. The RRTs may be activated for specific incidents when requested by the OSC. If the assistance requested by an OSC exceeds an RRT's capability, the RRT may request assistance from the NRT. During an incident the RRT may either be alerted by telephone or convened. The cognizant RRTs will also be consulted by the OSC on the approval/disapproval of the use of chemical countermeasures when that decision has not been pre-approved.

3.1.3 Area Committees

Section 4202(a) of OPA amends Section 311(j) of the CWA to require that the Area Committee, under the direction of the federal OSC for its Area, shall be responsible for: preparing an Area Contingency Plan for its Area; working with state and local officials to enhance the contingency planning of those officials and to assure preplanning of joint response efforts, including appropriate procedures for mechanical recovery, dispersal, shoreline cleanup, protection of sensitive environmental areas, and protection, rescue, and rehabilitation of fisheries and wildlife; and working with state and local officials to expedite decisions for the use of dispersants and other mitigating substances and devices. The primary role of the Area Committee is to act as a preparedness and planning body. Area Committees are made up of experienced environmental/response representatives from federal, state and local government agencies with definitive responsibilities for the area's environmental integrity. Each member is empowered by their own agency to make decisions on behalf of the agency and to commit the agency to carrying out roles and responsibilities as described in this plan. The pre-designated federal On-Scene Coordinator for the area will serve as chairman of the Committee. He/she will designate the vice-chairman, select the Committee members, and provide general direction and guidance for the Committee. The OSC should solicit the advice of the RRT to determine appropriate representatives from federal and state agencies. The Area Committee is encouraged to solicit advice, guidance, or expertise from all appropriate sources and establish subcommittees as necessary to accomplish the preparedness and planning tasks.

Committee participants may include facility owner/operators, shipping company representatives, cleanup contractors, emergency response officials, marine pilots associations, academia, environmental groups, consultants, response organizations, and concerned citizens. The OSC will appoint the subcommittee members. The OSC directs the Area Committee's development and maintenance of the Area Contingency Plan.

The function of area committees is to enhance the involvement of local officials and geographic specific federal/state agencies in area planning.

3.1.4 State

As provided by Sections 301 and 303 of SARA, the state emergency response commission (SERC) of each state, appointed by the governor, is to designate emergency planning districts, appoint local emergency planning committees (LEPCs), supervise and coordinate their activities, and review local emergency response plans. The SERC is also to establish procedures for receiving and processing requests from the public for information generated by Title III reporting requirements and to designate an official to serve as coordinator for information.

3.1.5 Local

As provided by section 301 and 303 of SARA, emergency planning districts are designated by the SERC in order to facilitate the preparation and implementation of emergency plans. Each LEPC is to prepare a local emergency response plan for the emergency planning district and establish procedures for receiving and processing requests from the public for information generated by Title III reporting requirements. The LEPC is to appoint a chair and establish rules for the LEPC. The LEPC is to designate an official to serve as coordinator for information.

3.1.6 Tribal

As stated in Section 300.610 of the NCP, "the tribal chairmen (or heads of the governing bodies) of Indian tribes, as defined in Section 300.5, or a person designated by the tribal officials, shall act on behalf of the Indian tribes as trustees for the natural resources belonging to, managed by, controlled by, or appertaining to such Indian tribe, or held in trust for the benefit of such Indian tribe, or belonging to a member of such Indian tribe if such resources are subject to a trust restriction on alienation. When the tribal chairman or head of the tribal governing body designates another person as trustee, the tribal chairman or head of the tribal governing body shall notify the President of such designation. Such officials are authorized to act when there is injury to, destruction of, loss of, or threat to natural resources as a result of a release of a hazardous substance."

Also, Section 300.180 (b) states that "Appropriate local and state officials (including Indian tribes) will participate as part of the response structure as provided in the ACP." In 1999, the ERP Regional Administrator invited all federally recognized tribes to participate in the Region 1 Regional Response Team.

3.2 Federal Contingency Plans

There are three levels of federal contingency plans: national (the NCP), regional (RCPs), and by area (ACPs). These plans are available for inspection at EPA's region 1 library at One Congress Street, Suite 1100, Boston, Massachusetts, 02114. The NCP is also available on the internet at http://www.epa.gov/oilspill/pdfs/40cfr300.pdf. The RCP and ACP applicable to Region I are available on the internet at http://www.uscg.mil/d1/staff/m/rrt/RCP_public.pdf, and http://www.epa.gov/region1/topics/emergencies/oilspills.html, respectively.

3.2.1 The National Contingency Plan

The purpose and objectives, authority, and scope of the NCP are described in Section 300.1 through 300.3 of the NCP.

3.2.2 Regional Contingency Plans

The RRTs, working with the states, shall develop federal RCPS for each standard

federal region, Alaska, Oceania in the Pacific, and the Caribbean to coordinate timely, effective response by various federal agencies and other organizations to discharges of oil or releases of hazardous substances, pollutants, or contaminants. RCPs shall, as appropriate, include information on all useful facilities and resources in the region, from government, commercial, academic, and other sources. To the greatest extent possible, RCPs shall follow the format of the NCP and coordinate with State emergency response plans, ACPs (described in Section 300.210(c) of the NCP), and Title III local emergency response plans (described in Section 300.215 of the NCP). Such coordination should be accomplished by working with the SERCs in the region covered by the RCP. The RCP shall contain lines of demarcation between the inland and coastal zones, as mutually agreed upon by USCG and EPA.

3.2.3 Area Contingency Plans

In order to provide for a coordinated, effective federal, state, and local response, each OSC shall direct the Area Committee to develop an ACP for response in the Area. ACPs shall be developed for all Areas, because OSCs in the designated Areas have responsibility for discharges and releases, which often exceed the jurisdiction and capabilities of other responders. Boundaries for Areas are determined by EPA Regional Administrators for the inland zones. COTP areas are the Areas for the coastal zone. Jurisdictional boundaries of local emergency planning districts established by states, described in Section 300.205(c) of the NCP, shall, as appropriate, be considered in determining geographical boundaries of the designated Areas. The designated Areas may include several such local emergency planning districts, or parts of such districts. In developing the ACP, OSCs shall direct the Area Committees to coordinate with SERCs and LEPCs in the affected Area. The ACP shall provide for a well-coordinated response that is integrated and compatible with all appropriate response plans of state, local, and other non-federal entities, and especially with Title III local emergency response plans, or in the Area Committee's area of responsibility. The ACP shall, as appropriate, identify the probable locations of discharges or releases; the available resources to respond to multi-media incidents; where such resources can be obtained; waste disposal methods and facilities consistent with local and state plans developed under the Solid Waste Disposal Act, 42 U.S.C. 6901 et seq.; and a local structure for responding to discharges or releases.

The federal lead agency, EPA or USCG, shall periodically conduct drills of removal capability, without prior notice, in areas for which ACPs are required and under relevant tank vessel and facility response plans. The drills may include participation by federal, state, and local agencies, the owners and operators of vessels and facilities in the area, and private industry.

3.3 Local Emergency Response Plans

The regulations that implement SARA Title III are codified at 40 CFR Part 355. Each LEPC is to prepare an emergency response plan in accordance with section 303 of SARA

Title III and review the plan once a year, or more frequently as changed circumstances in the community or at any subject facility may require. Such Title III local emergency response plans should be closely coordinated with applicable Area contingency plans and state emergency response plans. To assure coordination with the SARA Title III program, it is recommended that the Area Committee include appropriate LEPC or other Title III representation.

3.4 Relationship to Other Plans

This Area Contingency Plan (ACP) is mandated by the NCP as an integral part of local preparedness to respond effectively to oil spills and releases of hazardous substances. It is referenced as a supporting plan to the Regional Contingency Plan of federal Region I.

3.4.1 Plan Integration

Regional response policies and preparedness activities, concerning both inland and coastal issues, are currently addressed through the RRT, and outlined in the Regional Contingency Plan, which is approved by both the EPA and USCG co-chairs. Plan integration is currently provided by overlapping membership on coastal and inland Area Committees by the state representative of the RRT, as well as by participation by EPA Region I in the appropriate coastal Area Committee and subcommittees.

3.4.2 Integration with Facility and Vessel Response Plans

Facility and vessel response plans, required by Section 4202(a)(5) of OPA, shall be reviewed and approved for consistency with this Plan (ACP). During a response, the OSC shall meet with the other responding parties to coordinate and integrate the response described in this plan with all other relevant plans including, but not limited to, federal, state, local, tribal, and private plans. The Area Committee will review effectiveness and integration of all plans based upon actual responses, exercises, and all other relevant information leading to enhancement of these plans.

3.4.3 Other Non-Governmental Plans

- SPCC

Part 112 of 40 CFR outlines the requirements for both the prevention of, and the response to, oil spills. The prevention aspect of the regulation requires preparation and implementation of spill prevention, control and countermeasures (SPCC) plans. SPCC plans are developed and maintained bulk oil storage facilities. EPA administers the SPCC program for the purpose of assuring SPCC plans are generated, compliant, and implemented. All non-transportation related facilities within EPA's jurisdiction, are required to develop plans necessary to contain a discharge of oil and prevent it from reaching navigable waters. SPCC plans must include design and engineering plans, including the installation of certain equipment, most notable secondary containment systems, such as dikes, barriers

and diversionary flow paths such that spills into waters of the U.S. will be prevented.

When such design and engineering controls are not practicable for a facility, the owner must provide a detailed contingency plan following the criteria outlined in 40 CFR Part 109. Some of these criteria include the establishment of notification procedures, identification of resources, and provisions for specific actions. For transportation-related on-shore and off-shore facilities, such as vessels, the Department of Transportation (DOT) issues regulations concerning the safe handling of hazardous materials. The Minerals Management Service of the Department of the Interior is also responsible for certain off-shore fixed facilities.

- Facility Response Plans
- Co-Op/Mutual Aid Plans
- Joint Canada-US Plan (JCP)
- Local River/Bay Cooperative Plans

3.5 Planning and Response Strategy

This plan incorporates the general planning and response strategy as outlined in the NCP and in the Vessel/Facility Response Plan regulations. In order to accomplish the goal of providing an action plan to respond to a discharge and to promote the timely and effective coordination among the spill community the area committee strategy focuses on four major elements: prevention, notification, response, and feedback.

3.5.1 Prevention

The best protection of the public health and environment is through the prevention of a discharge or release of oil or hazardous substances. Prevention requires the assessment of operations relative to risk and an identification of measures to reduce the risk of spills.

The Oil Pollution Act of 1990 requires that the ACP be implemented in conjunction with the National Contingency Plan, and adequate to remove a worst-case discharge, and to mitigate or prevent a substantial threat of such a discharge.

3.5.2 Notification

It is universally accepted that the earlier equipment arrives on-scene in an incident, the greater the capability of containing and controlling the spill and initiating a successful cleanup. An effective response requires the immediate notification of the appropriate government authorities and first responders.

Federal regulations require that notification of an oil discharge or a hazardous substance release must be made immediately to the National Response Center at (800) 424- 8802. Statutory requirements for notification are in Section 311, et seq, of CWA and Section 103, et seq, of CERCLA, respectively. Notification

requirements are codified in:

- 33 CFR 153 Control of Pollution by Oil and Hazardous Substances, Discharge Removal
- 40 CFR 110 Discharge of Oil
- 40 CFR 117 Determination of Reportable Quantities for Hazardous Substances
- 40 CFR 302 Designation, Reportable Quantities and Notification

A further description of discovery and notification procedures can be found in 40 CFR 300.300.

3.5.3 Response

The phases of operational response for oil are outlined in the NCP (see 40 CFR, sections 300.300 - 300.320). These phases include:

(1) discovery and notification
(2) preliminary assessment and initiation of action
(3) containment, countermeasures, cleanup, and disposal
(4) documentation and cost recovery

The OPA provides additional authority for carrying out a response. Under section 4201 of the OPA, the President may:

- remove or arrange for the removal of a discharge, and mitigate or prevent a substantial threat of a discharge, at any time;
- direct or monitor all federal, state, and private actions to remove a discharge; and,
- remove and, if necessary, destroy a vessel discharging, or threatening to discharge, by whatever means are available.

Furthermore, if a discharge results in a substantial threat to the public health or welfare of the United States (including but not limited to fish, shellfish, wildlife, other natural resources, and the public and private beaches and shorelines of the United States), the OSC shall direct all federal, state, and private actions to remove the discharge or to mitigate or prevent the threat of the discharge.

3.6 Natural Resource Damage Assessment

Please refer to Section 2.9.8 in this document and *Fish and Wildlife and Sensitive Environments Annex to the Region 1 Inland Area Contingency Plan (U.S. DOI) - Section 5.4.2*

3.7 Other Planning Requirements

Facilities may be subject to multiple federal and state planning requirements involving other regulations. It was proposed that the ACP list other planning requirements which

may be similar or consistent with those of OPA. The publication by the NRT of the Integrated Contingency Plan guidelines consolidates a number of planning requirements. The Area Committee supports the consolidation of emergency response planning requirements into a single facility response plan.

3.8 Resource Protection

Mitigation and cleanup of spills requires knowledge of resources at risk. Because many source locations and pollutant pathways are possible, a strict prioritization of protection strategies is difficult. However, identification of resources potentially at risk before an incident and discussion of their relative importance are useful processes both technically and from communications and human standpoints.

Sources of resource information are provided in this section. Planning is the preferred means of identifying protection strategies, as it reduces time required to implement effective protective measures and improves coordination through prior personal contact between responsible agencies. Where planning has not been completed, early notification and coordination with the appropriate agencies is critical. This section identifies types of resources to be considered for protection.

3.8.1 Environmentally and Economically Sensitive Areas

Environmentally sensitive areas (ESAs) include, but are not limited to, federal, tribal, state, and locally-managed natural resource areas, endangered species habitats, potable water intakes, marinas, and archeological and tribal use areas. Owners/operators, in the preparation of their FRPs, should also incorporate locally-managed environmentally and economically sensitive area information into the FRP.

Appendix 7, Environmentally and Economically Sensitive Areas within Region I, identifies fish and wildlife resources and their habitats and other important sensitive areas requiring protection from any direct or indirect effects from discharges. Appendix 7 contains a database report which includes an ESA number, ESA name, ESA location details, emergency contact and telephone number, ESA category name, and endangered species status. The ESA number is a unique identification label given to each ESA.

Fish and Wildlife: USFWS Field Response Coordinators are the primary federal contact for information about migratory birds, endangered and threatened species, and fish and wildlife at risk as a result of spills in the inland and coastal zones. Appendix 6 contains a list of various USFWS contacts in the region. For emergency reponse purposes contact Andrew Raddant at the DOI (617)-592-5444.

3.8.2 Culturally Significant Areas

Response efforts will attempt to protect historical and cultural resources in the course of a response. The National Register of Historic Places is the most

comprehensive list of legally recognized culturally or historically significant properties and structures. The National Register includes the following: all historic areas in the National Park System; National Historic Landmarks which have been designated by the Secretary of the Interior as significant to all Americans; and properties significant to the nation, state, or community which have been nominated by the federal, state, and local agencies and others and have been approved by the NPS. Information on the National Register of Historic Places can be found on the Internet at http://www.nps.gov/history/nr/. In addition to the National Register, Connecticut, Massachusetts, Rhode Island, and Vermont have separate State Registers and all states have listings of sites of cultural or historical value which have not yet been nominated for placement on the National Register.

Identification of culturally sensitive sites in the vicinity of a release or discharge can be accomplished by contacting the State Historic Preservation Office (SHPO) or Tribal Historic Preservation Office (THPO). A SHPO is generally associated with the State Historical Preservation Commission, which may or may not be within a department of state government. Section 101 (d)(2) of the National Historic Preservation Act provides that a THPO may assume all or any part of the functions of a SHPO with respect to tribal lands, provided a formal plan is submitted to the NPS describing how the proposed THPO functions will be carried out. A list of SHPO and THPO contacts for Region I is provided in Appendix 8. These contacts are generally available during business hours only. Additionally, information about historic properties during emergency response as well as a checklist of procedures for historic properties can be found in section 3.6 of the Annex and attachment 4 of the Annex.

Additionally, DOI's NPS has responsibility for sites located on federal lands within the region, and can provide assistance concerning these resources. If a release or spill should occur in the vicinity of a tribal land, the tribal emergency contact should be contacted directly. In addition to the tribal contact, the EPA New England Regional Indian Program Manager should be notified. The emergency contacts for federally-recognized tribes are included in Appendix 2.

3.9 National Preparedness for Response Exercise Program

The federal lead agency, USEPA or U.S. Coast Guard (USCG), shall periodically conduct drills of removal capability, without prior notice, in areas for which ACPs are required and under relevant tank vessel and facility response plans. The drills may include participation by federal, tribal, state and local agencies, the owners and operators of vessels and facilities in the area, and private industry.

The National Preparedness for Response Exercise Program (PREP) was developed to establish a workable exercise program which meets the intent of OPA. The PREP incorporates exercise requirements of the USCG, USEPA, the Department of Transportation (DOT) Pipeline and Hazardous Material Safety Administration (PHMSA), and the Mineral Management Service (MMS).

The PREP guidelines are not regulations. However, the four federal agencies have agreed that participation in PREP will satisfy all federal oil pollution response exercise requirements imposed by the OPA 90. Although participation in PREP is voluntary, those choosing not to participate in PREP are required to comply with the exercise requirements in the regulations imposed by each of the four regulatory agencies.

PREP is a structured system of internal and external exercises. The internal exercises are conducted wholly within a plan holder's organization, testing the various components of a response plan to ensure the plan is adequate for the organization to respond to an oil or hazardous substance spill. Currently, the response plans and exercises only address oil response, but may eventually address hazardous substance response.

Internal exercises include:

- Qualified Individual Notification Exercise
- Emergency Procedures Exercise for vessels and barges
- Spill Management Team Tabletop Exercises; and
- Deployment Exercise.

The internal exercises will be self-certified and self-evaluated by the plan holding organization. Each plan holder will be on a triennial cycle for exercises, which began January 1, 1994. Within this triennial cycle, each plan holder must exercise the various components of the entire response plan. The PREP document contains a list of 15 core components. These are not all-inclusive. A plan may have more or fewer components, but these generally should be in the plan. The completion of the required internal exercises over the 3-year period will satisfy the regulatory requirements for exercising the entire plan once every 3 years.

The external exercises include Area Exercises and Government Initiated Unannounced Exercises. Area Exercises test the interaction of the plan holder with the entire response community in a specific Area. For the purpose of the PREP, "Area" is defined as that specific geographic area for which a separate and distinct ACP has been developed. The Area Exercises will exercise the governmental-industry interface for pollution response. The PREP goal is to conduct 20 Area Exercises per year throughout the country, with the federal government leading six exercises and industry leading the other 14 exercises. The Area Exercises will be realistic exercises, including equipment deployment. The exercises will be developed by a design team consisting of federal, tribal, state, and local government, and industry representatives. The Area Exercises will be scheduled by the National Scheduling Coordinating Committee (NSCC), which will receive input from the Area Committees and the Regional Response Team (RRT) Co-Chairs. The various levels of input are designed to ensure all tribal, state, local, and area concerns are taken into consideration when scheduling the exercises.

Government Initiated Unannounced Exercises give the agency with primary regulatory responsibility the opportunity to evaluate the response preparedness of an industry.

PREP guidelines are available through the USCG on the internet at http://www.uscg.mil/hq/g-m/nmc/response/msprep.pdf.

SECTION 4: OPERATIONAL RESPONSE PHASES

4.1 Assessment/Classification of Discharge

When the OSC receives a report of an oil discharge or hazardous substance release, initial actions include investigating the report to determine the threat posed to human health or welfare of the United States or the environment, the type and quantity of polluting material, and the source of the discharge. The OSC then officially classifies the size (i.e., minor, medium, major) and type (e.g., substantial threat or worst case discharge) of the discharge and determines the course of action to be followed.

When an oil or hazardous substances incident occurs, the first response personnel on-scene are usually local public safety officials. Either they or someone else notifies the NRC. The NRC notifies the predesignated OSC. The OSC must then notify the trustees of actually or potentially affected natural resources. The OSC then makes an initial assessment of the incident to determine if federal assistance is required and if any immediate action is necessary to safeguard the public health and welfare. If the required response does not exceed the capabilities of tribal, state, or local response agencies, then they, along with the RP/PRP, conduct the response under the guidance of the OSC. If the OSC decides federal assistance is required, or if tribal or state officials request federal assistance, the OSC notifies the NRT, RRT, and any specialized federal units whose expertise will be required. The OSC then assumes IC or establishes a UC as described in Section 2.2.2.

4.1.1 Spill of National Significance

As described in Section 2.2.1, an oil discharge and/or hazardous substance release may be classified as a SONS by the Administrator of the EPA for discharges and/or releases occurring in the inland zone and the Commandant of the USCG for discharges and/or releases occurring in the coastal zone. For a SONS in the inland zone, the EPA Administrator may name a senior agency official to assist the OSC in communicating with the affected parties and the public and in coordinating international, federal, tribal, state, and local resources at the national level. This strategic coordination will involve, as appropriate, the NRT, RRT(s), the Governor(s) of the affected state(s), and the mayor(s) or other chief executive(s) of local governments.

4.1.2 Worst Case Discharge

The adequacy to remove a worst case discharge, or substantial threat of such discharge, is currently addressed through the NCP which outlines federal resources available to the OSC from RRT agencies.

Facilities which pose a significant and substantial threat to the environment have

provided certification that they have, by contracts or approved means, the resources capable of removing a worst case discharge from their facility. All FRPs will be reviewed for approval, which will include adequate resources to remove a facility worst case discharge. Among the requirements for approval, FRPs will also be required to be integrated with local emergency plans, prepared under the SARA Title III Emergency Planning and Community Right-to-Know Act (EPCRA).

The authority and responsibility for planning and exercising local emergency plans is vested at the local government level, through requirements of EPCRA. The state and local governments and industry have the most detailed knowledge of the local area and the situations of risk. Accordingly, LEPCs are in the best position to develop plans which adequately address hazards in their community. Currently, the Area Committee does not include membership of local government.

In terms of prevention of oil spills, including a worst case discharge, the Spill Prevention, Control, and Countermeasures (SPCC) Program, administered through EPA, requires all non-transportation-related facilities within EPA's jurisdiction, to develop plans necessary to contain a discharge of oil and prevent it from reaching navigable waters. It requires facilities to develop engineering and design plans, including the installation of certain equipment, most notable secondary containment systems, such as dikes, barriers and diversionary flow paths such that spills into waters of the United States will be prevented. As far as area spill history is concerned, there have been 17 major oil discharges (over 10,000 gallons) within the inland area since 1990.

When such design and engineering controls are not practicable for a facility, the owner must provide a detailed contingency plan following the criteria outlined in 40 CFR Part 109. Some of these criteria include the establishment of notification procedures, identification of resources, and provisions for specific actions. For transportation-related on-shore and off-shore facilities, such as vessels, the DOT issues regulations concerning the safe handing of oil and hazardous materials. DOI MMS is also responsible for certain off-shore fixed facilities.

AREA WORST CASE DISCHARGE SCENARIO

The worst case discharge involves the rupture of a three million gallon gasoline storage tank coupled with the breach of the facility secondary containment system. The incident occurs in Burlington, Vermont with ninety percent of the spill discharging to Lake Champlain. Three public water intakes are immediately impacted.

Conditions at time of spill:

1.	Time of Year	Mid April
2.	Winds	Out of the South
3.	Air Temperature	40°F

4.	Water Temperature	35°F
5.	Precipitation	Light Rain
6.	Visibility	Less than 1 mile

Initial discharger notifications would include:
NRC
USCG Station in Burlington
VT DEC
USEPA Region I - OSC
Custodians of threatened water intakes.

Initial Actions would include attempting to control the source of the release, deploying available boom, evaluating the extent of the spill, and making a determination whether to shut down the threatened water intakes. The Burlington USCG Station would provide the first federal official on the scene.

Within the first five hours a unified command post would be established in Burlington including the OSC, state representatives, local government, and representatives of the RP. Due to the size of the spill and the limitation of resources within the area, the OSC would mobilize contractors, fund management specialists, and other federal resources as may be required.

Additional Complications:
Lake Champlain borders the states of Vermont and New York, USEPA Regions I and II, the Missisquoi National Wildlife Refuge, and Canada.

Further notifications would include:

U.S. Army Corps of Engineers
USEPA Region II
Affected Natural Resource Trustees
RRT members, as appropriate
Canadian Government (Environment Canada)

The OSC would direct all clean-up activities through the incident command system. Funding of operations would be a combination of RP direct funding and OSC access to the OSLTF with appropriate enforcement and cost recovery documentation.

4.2 Operational Response Objectives

The priority response objective is protection of public health and safety, which includes response worker health and safety. Protection of the environment and public welfare (infrastructure) are also important response objectives, but are subordinate to public and worker safety. The Region I RCP describes priorities outlined in the NCP to be used in planning response strategy in greater detail.

4.3 Health and Safety

4.3.1 Worker Health and Safety

The OSC is responsible for ensuring the safety of all responders involved in responses for which his/her agency is the lead agency. Section 300.150 of the NCP (40 CFR 300.150) describes federal requirements for worker health and safety during response activities under the NCP, regardless of the lead agency. This section is incorporated herein by reference.

Section 18 of OSHA encourages states to develop and operate their own job safety and health programs. The Occupational Safety and Health Administration (OSHA) approves and monitors state plans and provides up to 50 percent of an approved plan's operating costs. Vermont is the only state within Region I operating a complete state plan. Connecticut operates a plan that covers state employees only.

4.3.2 Decontamination

Personnel responding to oil or hazardous substances incidents may become contaminated with substances from the scene in the course of response activities. A decontamination plan should be developed as part of the safety plan for an emergency response. The initial decontamination plan is based on a worst-case situation or assumes no information is available about the incident. Specific conditions (e.g. type of contaminant, amount of contamination, levels of protection required, type of protective clothing worn) are then evaluated, and the initial decontamination plan is modified to adapt as new information about site conditions becomes available. All materials and equipment used for decontamination must be disposed of properly.

In addition to routine decontamination procedures, emergency decontamination procedures must be established. In an emergency, the primary concern is to prevent the loss of life or severe injury to site personnel. If immediate medical treatment is required to save a life, decontamination should be delayed until the victim is stabilized. If decontamination can be performed without interfering with essential life-saving techniques or first aid, or if a worker has been contaminated with an extremely toxic or corrosive material that could cause severe injury or loss of life, decontamination must be performed immediately. During an emergency, provision must also be made for protecting medical personnel and disposing of contaminated clothing and equipment.

4.4 Federal Management and Disposal

The NCP, Appendix E to Part 300, Oil Spill Response, Section 5.4, states that oil recovered in cleanup operations shall be disposed of in accordance with the RCP, ACP, and any applicable laws, regulations, or requirements.

The statutory authority for RCRA is provided by the Solid Waste Disposal Act, as last amended by the Hazardous and Solid Waste Amendments (1984). The amended regulations applied to recovered oils and oily wastes. In 1992, EPA promulgated new used oil regulations as 40 CFR Part 279, incorporating the previous used oil fuel requirements formerly codified at 40 CFR 266, Subpart E (1986 - 1992 CFRs).

It is federal policy to recycle waste and used oils rather than dispose of them. Under the pre-1992 used oil regulations, used oil destined for recycling (in any way other than burning for energy recovery) was exempt from regulation as a hazardous waste. The 1992 used oil management standards addresses all current recycling activities. Recycling of waste oils and oily wastes is included in applicable state hazardous waste management regulations.

Management Methods:

Non-Hazardous Used Oil: Non-hazardous used oil may be disposed of in an industrial or a municipal solid waste landfill (each state may have additional, more stringent requirements), in accordance with 40 CFR 257 and 258.

Used Oil: The used oil management standards at 40 CFR Part 279 apply **only** to "used oil", defined as any oil that has been refined from crude oil, used, and, as a result of such use, contaminated by physical and chemical impurities. If used oil is destined for disposal, the 40 CFR Part 279 regulations reference the RCRA hazardous waste management standards.

Waste Oil: Mixtures of waste oil (i.e., spilled, unused product oils) and used oil are regulated as used oil.

Waste Oil and Oily Waste: Waste oil and oily wastes are subject to the hazardous waste management regulations at 40 CFR Parts 124, 260-266, 268, and 270.

4.5 State Management and Disposal

4.5.1 Connecticut

The CT DEP OCSRD facilitates the disposal of contaminated soils, debris, sorbent, and wastewater. The OCSRD is responsible for approving the transportation and disposal of wastes from spill cleanups. CT DEP classifies oil spill residue as “Connecticut Regulated Waste”. The CT DEP has a list of qualified and licensed professionals to handle spill residue, including disposal and treatment facilities and licensed waste haulers.

Management Methods:

According to Section 22a-449 of the CGS, the Commissioner of Environmental Protection determines the best and most expedient method under the circumstances to remove or contain the discharge.

Disposal Methods:

Section 22a-454 states that only waste management facilities permitted by the commissioner are admitted to collect, store, treat or dispose of waste oil, petroleum, chemical liquids, or hazardous wastes. The permit must be in writing and contain the terms and conditions that the commissioner deems necessary. The permit is valid for a fixed term not to exceed 5 years.
Burning Oil: The burning of oil in Connecticut is unacceptable in most cases. However, if deemed necessary by the OSC, in situ burning may be required and executed in compliance with all federal regulations.

Oil-contaminated debris: Oil contaminated debris may be collected and incinerated at a permitted facility or composted in place after chipping or grinding. The CT DEP will determine the method on a case-by-case basis.

Oil-contaminated soil: The only disposal option for oil-contaminated soil is thermal treatment at a permitted facility.

Oil-contaminated sorbent: The only option for disposal of oil-contaminated sorbent is incineration at a permitted facility.

Oil-contaminated water: After removal of free oil, vacuum trucks may be decanted behind booms during emergency recovery operations only at the discretion of the CT DEP on a case-by-case basis. In some instances, the water may require carbon filtration prior to permitted discharge to clean surface water or sanitary sewer systems.

4.5.2 Maine

ME DEP's DRS addresses issues related to waste management and disposal. Only ME DEP staff are authorized to approve transportation and disposal of hazardous substances from spill cleanups. The Maine Oil Spill Coordinator is the Director of DRS, Bureau of Remediation and Waste Management, and will act as the Maine Commissioner of Environmental Protection's representative during a marine oil spill. ME DEP classifies oil spill residues, under the Maine Contingency Plan, as "Special Waste" or " Non-Recoverable Oily Waste". ME DEP has a list of contacts that are qualified and licensed to handle spill residue, including licensed waste haulers and disposal and treatment facilities.

Management Methods:

Bioremediation: Procedures for the use of biological countermeasures are contained in the NCP, Subpart J. The OSC must obtain permission from the EPA and state representatives to the RRT before they can be applied. As the state's representative on the RRT, the Maine Oil Spill Coordinator must authorize the use of chemical and biological countermeasures.

Booms: Booms are typically classified according to form or location of use, including a flotation designed to contain or divert oil and prevent oil from splashing over the top of the boom; a skirt to prevent oil being carried beneath the boom; a ballast unit designed to hold the skirt perpendicular to the current flow; and a longitudinal strength member to join boom sections and provide an anchor.

Burning oil spills: The Maine Oil Spill Coordinator is responsible for determining whether in situ burning may be used for oil spills in Maine. The Maine Oil Spill Coordinator will consult the DEP Bureau of Air Quality on all in situ burns unless delay would hamper an immediate response, which could result in long-term damage to natural resources.

Dispersants: Chemical dispersants are effective in areas where environmental or logistical considerations will not allow the deployment of cleanup equipment and personnel. However, dispersants are not effective for oil spills in waters with low temperatures, low salinity, broken ice, or high energy.

Herding Agents: Herding agents are most effective in areas with low energy. They are usually applied at low dosage rates, and may be applied more rapidly than conventional booms. Due to these factors, added to potential low toxicity, herding agents are suitable for areas such as marinas or salt marshes.

Mechanical Recovery of Oil: In offshore areas, mechanical cleanup with skimmers usually begins immediately after containment measures have been implemented. Oil skimmers are used, in various sizes depending on the spill, to recover oil from the surface of the water.

Disposal Methods:

Oil-contaminated debris: Oily debris, as defined in the state of Maine, includes sorbents, seaweed, carcasses, and any other materials contaminated with oil as a result of a spill. Oily debris must be disposed of in accordance with federal and state law. State regulations (DEP Chapter 405.6) state the oily debris can be landfilled or incinerated and the resultant ash landfilled. The ME DEP has a contract with the Mid-Maine Waste Action Committee in Auburn for disposal of combustible oily debris.

Oil-contaminated soil: Oil-contaminated soil can be disposed of in various ways: land application/land farming; composting; and/or thermal treatment, depending on the circumstances.

Oil-contaminated sorbent: Oil-contaminated sorbents are considered by the state of Maine as oil-contaminated debris.

Oil-contaminated water: Oil-contaminated water undergoes an oil/water separation process at waste oil facilities, after which, the contaminated water may be

drummed; disposed of by discharge, with approval, to a wastewater treatment plant and/or sanitary sewer; or released to or applied to land. In some cases, the water may require carbon filtration and/or air stripping before discharge.

Waste oil: Waste oil is typically disposed of by burning in a waste oil burner. Waste oil is any petroleum-based oil which has become unusable for its original purpose due to the presence of impurities or loss of original properties. The requirements of Chapter 860 of DEP Regulations must be met for storage and transportation of waste oil.

4.5.3 Massachusetts

In Massachusetts, disposal options for waste generated from a spill vary depending on the contaminant. These options are listed below. In the event of an oil spill, only MA DEP personnel and/or a Licensed Site Professional (LSP) are authorized to approve the transportation and disposal of hazardous substances during and from spill cleanups. MA DEP classifies oil spill residues, under the MCP, as "Remediation Waste". MA DEP has a list of qualified and licensed professionals to handle spill residue, including disposal and treatment facilities and licensed waste haulers. Various permits are required for facilities and for waste haulers recycling and handling solid waste, and can be found in 310 CMR 30.000: Solid Waste Regulations.

Management Methods:

MCP 310 CMR Subpart D: Preliminary Response Actions and Risk Reduction Measures, Section 40.0400.

Disposal Methods:

Burning oil: The burning of oil spills in Massachusetts is unacceptable in most cases. However, if deemed necessary by the OSC, in situ burning may be required and executed in compliance with all federal regulations.

Oil-contaminated debris: Possible options for disposal of oil-contaminated debris are disposal in a licensed landfill, and incineration, with the resultant ash being landfilled.

Oil-contaminated soil: The only disposal option available for oil-contaminated soil is thermal treatment.

Oil-contaminated sorbent: As with oil-contaminated debris, the only option for disposal of oil-contaminated sorbent is incineration, with the resultant ash being landfilled.

Oil-contaminated wastewater: After the removal of free oil, wastewater can be drummed, released to the surface water and/or land, or discharged, with approval,

to a wastewater treatment plant and/or a sanitary sewer. There are various rules that apply to each option, and one or more option is chosen depending on the related circumstances. In some cases, if necessary, wastewater will go through a carbon filtration process before release.

4.5.4 New Hampshire

Spilled virgin oil and contaminated debris are not considered hazardous wastes in New Hampshire unless they have hazardous properties (e.g. flammability). These materials can be disposed of in solid waste landfills, and incinerators or thermal treatment facilities if they do not have hazardous properties. Personnel from the NH DES have the authority to approve disposal of oil and oil-contaminated wastes and their transportation from the scene of a discharge. NH DES personnel also coordinate the disposal and transportation of hazardous substances from the scene of a hazardous substances incident. NH DES maintains a list of permitted waste transporters that can be used to transport oil and hazardous waste. This list is available at http://www.des.nh.gov/orcb/doclist/pdf/Transporters.pdf. State and local authorities in New Hampshire are able to utilize the State of New Hampshire Contract for Chemical Waste Pickup and Disposal, And Petroleum and Hazardous Waste Cleanup and Disposal, which sets predetermined rates for specified cleanup services. Additionally, the NHDES has contracts in place which allow it to hire contractors and consultants to respond to oil and hazardous materials incidents. These contracts may be activated if the RP/PRP-lead efforts were found to be inadequate relative to the scale of the incident. NH DES also maintains a list of 41 licensed disposal facilities within 200-radial miles of Portsmouth Harbor. As a group, these facilities, of which five are in New Hampshire, have a total disposal capacity of over 12,000 tons of waste per day.

Disposal Methods:

Burning oil: The burning of oil spills in the inland zone of New Hampshire is unacceptable in most cases.

Oil-contaminated debris: Oil-contaminated debris is disposed of at facilities on the NH DES list described above. The list includes thermal treatment, incinerator, and landfill facilities.

Oil-contaminated soil: Oil-contaminated soil can be disposed of at facilities on the NH DES list described above. The list includes thermal treatment, incinerator, and landfill facilities. However, NH DES encourages the disposal of oil-contaminated soil through thermal de-sorption.

Oil-contaminated sorbent: Oil-contaminated sorbent is disposed of at facilities on the NH DES list described above. The list includes thermal treatment, incinerator, and landfill facilities.

Oil-contaminated wastewater: NH DES encourages recycling of wastewater from a

spill. Ultimately, disposal of liquid water/oil mixtures is arranged by the RP/PRP and is usually handled by a cleanup contractor.

4.5.5 Rhode Island

The Rhode Island Emergency Response Team facilitates the disposal of contaminated soils, debris, sorbent, and wastewater. Only Emergency Response personnel are authorized to approve the transportation and disposal of wastes from spill cleanups. Spill residue is allowed in Rhode Island; the RI DEM, however, does not have a list of qualified and/or licensed contacts available to handle spill residue, with the exception of licensed waste haulers. RI DEM groups oil spill residues under the classification of "Solid Waste" as virgin material.

Management Methods:

Chemical countermeasures are used only with the prior consent of the Chief of the DEM Office of Compliance and Inspection. Initially, mechanical methods are used to clean up oil discharges and chemical releases, unless otherwise permitted by the Chief of the DEM Office of Compliance and Inspection. RI DEM has a list of licensed waste haulers to be contacted when removing oil-contaminated debris from a site or area of a spill.

Disposal Methods:

According to the state of Rhode Island, oil spill cleanup debris can be removed only to the following locations: special facilities constructed within a licensed sanitary landfill; asphalt manufacturers or others that are licensed waste management facilities approved by the DEM; and any out-of-state facility that will agree to take the material and that is allowed to accept it for that particular state.

Burning oil: In most cases, burning oil is unacceptable in the state of Rhode Island. However, if deemed necessary by the OSC, in situ burning may be required and executed in compliance with all federal regulations.

Oil-contaminated debris: Options for oil-contaminated debris for Rhode Island are incineration, with the resultant ash being landfilled, and /or disposing of the debris in a licensed sanitary landfill designed for hazardous waste.

Oil-contaminated soil: Rhode Island uses thermal treatment and/or landfilling in the case of oil-contaminated soil depending on the degree of contamination.
Oil-contaminated sorbent: Options for oil-contaminated sorbent are similar to oil-contaminated debris in respect to incineration, but use of a licensed sanitary landfill for the disposal of such sorbent is limited.

Oil-contaminated water: After removal of free oil, the contaminated water can be drummed, or disposed of by discharge with approval to a local wastewater

treatment plant or sanitary sewer depending on the circumstances. In some cases, the water may require carbon filtration and/or air stripping before discharge.

4.5.6 Vermont

In Vermont, disposal options for waste generated from a spill vary depending on the contaminant and waste media. These options are listed below. In the event of an oil spill, only the VT DEC Spill Duty Officer is authorized to approve the transportation and disposal of hazardous waste during and from spill cleanups. VT DEC classifies oil spill residues as VT 02 if the waste is greater than 5% oil by weight. Although VT DEC has no qualification system, they do have licensed professionals they contact to handle spill residue, including disposal and treatment facilities, hazardous substances remediation contractors, and licensed waste haulers. No state permits are required for facilities, but in order to dispose of waste, permission from the facility must be acquired and the facility must be EPA-approved to handle hazardous waste.

Management Methods

Take all appropriate immediate actions to protect human health and the environment including, but not limited to, emergency containment measures. For further information, refer to Vermont Hazardous Waste Management Regulations [7-105(a)(1)(A)&(B)].

Disposal Methods

Burning oil: In most cases, the burning of oil spills is unacceptable in Vermont. However, if deemed necessary by the OSC, in situ burning may be required and executed in compliance with all federal regulations.

Oil-contaminated debris: In Vermont, oil-contaminated debris is disposed of by landfill or incineration with the resultant ash landfilled, depending on the situation.

Oil-contaminated soil: Options for the disposal of oil-contaminated soil in the state of Vermont are thermal treatment and/or land applying/land farming.

Oil-contaminated sorbent: As with oil-contaminated debris, oil-contaminated sorbent is disposed of by incineration, with the resultant ash landfilled.

Oil-contaminated water: After removal of free oil, the contaminated water can be drummed; disposed of by discharge with approval to a local wastewater treatment plant or sanitary sewer; or released to the land or surface water depending on the circumstances. In some cases, the water may require carbon filtration before discharge.

SECTION 5: STATE AND LOCAL INVOLVEMENT IN RESPONSE

5.1 General

Subpart F of the NCP addresses state involvement in hazardous substance response and is incorporated herein by reference. Section 6 of the RCP identifies commonwealth/state participation in a response.

5.2 EPA/STATE/LOCAL MOA

The federal, state, and local MOAs may establish the nature and extent of EPA and state and local interaction during EPA lead and state or local lead responses (including Indian tribes). EPA shall enter into MOA (MOU) discussions if requested by a state or local government.

Refer to the NCP (at Section 300.505) for a discussion of state MOAs.

SECTION 6: TRUSTEES FOR NATURAL RESOURCES

The OSC shall ensure that the trustees for natural resources are promptly notified of discharges. The OSC shall coordinate all response activities with the affected natural resource trustees and shall consult with the affected trustees on the appropriate removal action to be taken. Where the OSC becomes aware that a discharge may affect any endangered or threatened species, or their habitat, the OSC shall consult with the appropriate natural resource trustee.

6.1 Designation of Federal Trustees

The President is required to designate in the NCP those federal officials who are to act on behalf of the public as trustees for natural resources. Federal officials so designated will act pursuant to Section 107(f) of CERCLA, Section 311(f)(5) of the CWA, and Section 1006 of the OPA. As defined in Section 1001 of the OPA, natural resources includes land, fish, wildlife, biota, air, water, ground water, drinking water supplies, and other such resources belonging to, managed by, held in trust by, appertaining to, or otherwise controlled by the United States (including the resources of the exclusive economic zone).

The following individuals shall be the designated trustee(s) for general categories of natural resources: the Secretary of Commerce; the Secretary of the Interior; the Secretary for the land managing agency for natural resources located on, over, or under land administered by the United States (DOI, USDA, DOD, and DOE); and the head of authorized agencies for the management or protection of natural resources located in the United States but not otherwise described in this section or in the NCP.

Section 300.600 of the NCP designates the natural resources for which each federal trustee is responsible, and is incorporated herein by reference. Pursuant to Section 1006 of the OPA, the governor of each state shall designate state and local officials who may act on

behalf of the public as trustee for natural resources and shall notify the President of the designation.

Under Section 1006 of the OPA, the governing body of any Indian tribe shall designate tribal officials who may act on behalf of the tribe or its members as trustee for natural resources and shall notify the President of the designation.

The head of any foreign government may designate the trustee who shall act on behalf of that government as trustee for natural resources.

6.2 Functions of Trustees

Under Section 1006(c) of the OPA, natural resource trustees shall:

- Assess natural resource damages for the natural resources under their trusteeship; and ,
- Develop and implement a plan for the restoration, rehabilitation, replacement, or acquisition of the equivalent, of the natural resources under their trusteeship.

In addition, the federal trustees may, upon request of and reimbursement from a state or Indian tribe, assess damages for the natural resources under the State's or tribe's trusteeship.

Refer to RCP Subpart G for a discussion of federal and state trustees. Refer to Appendix 3 for a contact list of state trustees.

SECTION 7: PARTICIPATION BY OTHER PERSONS

NCP subpart H addresses participation by other persons and is incorporated herein by reference.

Participation by private parties in both planning and response is encouraged. PRPs are encouraged to undertake response actions in an adequate and timely manner, based on the judgment of the OSC.

Landowners are also encouraged to participate in planning and response. The landowner is a valuable resource due to his/her local knowledge. The landowner, to the extent practical and based on the federal OSC's judgment, may be included in the planning and response activities, under direction of the federal OSC. Landowners that provide access to or are affected by a spill have jurisdiction over their lands, and warrant special consideration by the responding agency or unified command. In the event that an incident poses, or has the potential to pose an imminent threat to human health and/or the environment, it is in the best interest of the landowner to provide access to an OSC.

In addition, OPA authorizes filing of claims against OSLTF by other persons. To file a claim, contact the Director, NPFC, Suite 1000, 4200 Wilson Boulevard, Arlington, VA 22203-1804,

telephone 202-493-6700.

SECTION 8: ADMINISTRATIVE RECORD FOR EMERGENCY RESPONSE

Subpart I of the NCP addresses administrative recordkeeping for selection of response actions and is incorporated herein by reference to the extent that it applies to emergency response.

SECTION 9: USE OF DISPERSANTS AND OTHER CHEMICALS

Subpart J of the NCP addresses the use of dispersants and other chemical countermeasures, and is incorporated herein by reference. In addition, section 4202(a) of the OPA requires that each Area Committee work with state and local officials to expedite decisions for the use of dispersants and other mitigating substances and devices. Procedures found on page A-ix of Appendix 4 provide instructions when a request is made for EPA concurrency on the use of chemical countermeasure or in-situ burning for an oil spill. For convenience, the ACP collectively refers to dispersants and other chemicals listed in Subpart J of the NCP, as "chemical countermeasures."

9.1 Chemical Methods

The use of chemical agents is highly controlled and requires specific approvals prior to use. Several factors to be considered are listed below:

1. For chemicals to be effective, they must be applied as soon as possible before the oil weathers.

2. The application of chemicals represents a very large logistical undertaking in terms of physical transportation of materials and equipment, application efforts, training requirements, and cost. Logistics support should be pre-planned and staged.

3. The proper chemical must be chosen, taking the following into consideration:

(a) The availability of the chemical;
(b) The effectiveness of that chemical on the type of product spilled;
(c) The salinity of the water;
(d) Weather and sea conditions;
(e) Biogeochemical impacts of the chemical into the environment;
(f) Political and public considerations;
(g) The desired chemical reaction; and
(h) The effect of that chemical reaction on other on-going cleanup efforts.

9.2 Types of Chemical Agents

Collecting Agents (herder): Collecting agents are used to prevent spread of the oil slicks

and are applied at a specific ratio to the size of the area impacted.

Dispersing Agents: Dispersing agents may be used to reduce toxic concentrations, accelerate biological decomposition or reduce flammability of the product. They are usually applied with a coarse spray and then agitated with prop wash or fire hoses. Oil is not considered to be recoverable once a dispersing agent is applied. The oil will remain in the environment until bacteriological degradation is complete. Dispersants are usually not 100% effective. The remaining oil may recoalesce and/or resurface and require further action.

Sinking Agents: Sinking agents are chemicals used to transport oil from the surface to the bottom. Because of possible bottom contamination, the use of sinking agents is prohibited.

Biological Agents: Biological agents are nutrients, enzymes, microbiological additives introduced to the spill site to expedite the biological degradation process.

Burning Agents: Burning agents improve the combustibility of a spilled material. Sorbent materials are usually treated and used as wick to maintain the burning process. The introduction of lighter oil to improve combustion is to be discouraged. Burning agents should be used as a last resort.

Gelling Agents: Gelling agents are currently under research and development. They chemically solidify the pollutant to aid in recovery activities. Some pollutants need to be heated in order to return them to their original state.

In-Situ Burning

RRT policy on the use of in-situ burning in or off the coast or Maine, Massachusetts, New Hampshire, Rhode Island, and Vermont is defined in an MOU among EPA, USCG, and affected Federal and State natural resource trustees. This MOU is included as Appendix 9. The MOU does not apply to incidents that occur in Connecticut or off the coast of Connecticut (Long Island Sound). Decisions to use in-situ burning in those areas are made on a case-by-case basis in accordance with Subpart J of the NCP.

A checklist has been developed by the RRT that includes necessary steps and considerations in making the decision to use in-situ burning in a response. The checklist is included in Appendix 10 of this document.

For in-situ burning operations, SMART recommends deploying one or more monitoring teams downwind of the burn, at sensitive locations such as population centers. The teams begin sampling before the burn begins to collect background data. After the burning begins, the teams continue sampling for particulate concentration trends, recording them manually at fixed intervals and automatically in the data logger, and reporting them to the Monitoring Group Supervisor if the level of concern is exceeded. The Scientific Support Team forwards the data, with recommendations, to the unified command.

Chemical Countermeasures

RRT policy on the use of chemical countermeasures varies by area. Use of chemical countermeasures during response operations within the zone of Sector Boston and Sector Providence is governed by the Massachusetts/ Rhode Island Dispersant Pre-Authorization Policy (Appendix 11). Use of chemical countermeasures during response operations within USCG Sector Portland is governed by Sections 4720 through 4728 of the Maine and New Hampshire ACP (Appendix 12). These policies have been approved by all responsible natural resource trustees. A policy directing the use of chemical countermeasures in Long Island Sound is currently under development as part of the Long Island Sound ACP. A copy of the Long Island Sound Dispersant Policy will be included in this document with the policy is finalized. Additionally, the RRT has developed a unified command decision worksheet to aid responders in making the decision to use dispersants throughout Region I (Appendix 13).

Dispersant and In-Situ Burning Monitoring Program

To monitor the effectiveness and results of chemical countermeasures and in-situ burning, the RRT uses the Special Monitoring of Applied Response Technologies (SMART) program. SMART is a cooperatively designed monitoring program jointly developed by NOAA, USCG, EPA, CDC, and the Minerals Management Service. SMART relied on small, highly mobile teams that collect real-time data using portable, rugged, and easy to use instruments during dispersant and in-situ burning operations. Data are channeled to the unified command to assist in decision making and to address critical questions such as the following:

- Are particulate concentration trends at sensitive locations exceeding the level of concern?
- Are dispersants effective in dispersing the oil?

General descriptions of SMART monitoring of dispersant use or in-situ burning are included below. For a more detailed discussion of SMART, refer to the SMART Guidance Document included in Appendix 14.

Dispersants

To monitor the efficacy of dispersant application, SMART recommends three options, or tiers.

Tier I: A trained observer, flying over the oil slick and using photographic job aids or advanced remote sensing instruments, assesses dispersant efficacy and reports back to the unified command.

Tier II: Tier II provides real-time data from the treated slick. A sampling team on a boat uses a fluorometer to continuously monitor for dispersed oil one meter under the dispersant-treated slick. The team records and conveys fluorometer data to the NOAA Scientific Support Team, which it forwards with recommendations to the unified

command. Water samples are also taken for later analysis at a laboratory.

Tier III: By expanding the monitoring efforts in several ways, Tier III provides information on where the dispersed oil goes and what happens to it. Two fluorometers are used on the same vessel to monitor at two water depths. Monitoring is conducted in the center of the treated slick at several water depths, from one to ten meters. A portable water laboratory provides data on water temperature, pH, conductivity, dissolved oxygen, and turbidity.

FISH AND WILDLIFE
AND
SENSITIVE ENVIRONMENTS ANNEX
TO THE
REGION I INLAND
AREA CONTINGENCY PLAN

2008

U.S. Department of the Interior
Office of Environmental Policy and Compliance
and the U.S. Fish and Wildlife Service, Region 5

This Annex was adapted from the 2001 Southeastern
Massachusetts/Rhode Island Area Contingency Plan

FISH AND WILDLIFE AND SENSITIVE ENVIRONMENTS ANNEX TO THE REGION I INLAND AREA CONTIGENCY PLAN

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1.0 PURPOSE AND SCOPE

The purpose of this Fish and Wildlife and Sensitive Environments Annex (FWSEA, also referred to as "Annex") is to provide Federal On Scene Coordinators (FOSCs) in Region I with the information needed to (a) identify and protect fish and wildlife resources and sensitive environments; (b) contact natural resources trustees and managers; and, (c) provide guidance in selecting appropriate response strategies for minimizing the adverse ecological effects of a spill, including the impacts associated with response activities. This Annex establishes procedures and policy for meeting the objectives set forth in 40 CFR Section 300.210(c)(4)(ii) of the National Contingency Plan (NCP) and will also aid in the development of Facility Response Plans as required by 40 CFR 112.20.

2.0 OBJECTIVES

The NCP at 40 CFR §300.210(c)(4)(ii) delineates nine objectives for fish and wildlife and sensitive environments annexes. Each of the nine NCP objectives has been organized into the following four subject areas for quick reference:

2.1 Identify and Establish Priorities for Resources at Risk

Fish and wildlife resources, other sensitive resources, and appropriate resource trustees and managers are identified. Agencies to be notified and consulted in establishing incident-specific priorities for the protection of these resources are provided. Fish and wildlife and sensitive resources identified include threatened and endangered species and their designated critical habitats, environmentally sensitive lands, marine, estuarine, and freshwater environments, areas of historical, cultural and economic significance (Section 3.0).

2.2 Determine Environmental Effects of Response Actions

The probable impacts of various response methods on general environments and habitats are provided. Methods for determining and approving the appropriate response techniques for specific environments and habitats and for monitoring the effectiveness of response activities are outlined in Section 4.0.

2.3 Identify Fish and Wildlife Response Capabilities

State and Federal response capabilities and initial personnel contacts for spill response assistance and wildlife rescue and rehabilitation are outlined in Section 5.0. Section 5.0 also includes a discussion on acquisition and pre-positioning of appropriate response equipment, personnel and mutual aid agreements and OSHA training requirements for volunteers assigned to fish and wildlife rescue and rehabilitation.

2.4 Evaluate the Interface of the FWSEA with Non-Federal Plans

Please see Section 6.0 for a discussion on the compatibility of this annex with non-Federal response plans on issues affecting fish, wildlife, their habitats and sensitive environments.

3.0 IDENTIFICATION AND PRIORITIZATION OF RESOURCES AT RISK

3.1 Notification of and Consultation with Natural Resource Trustees and Managers

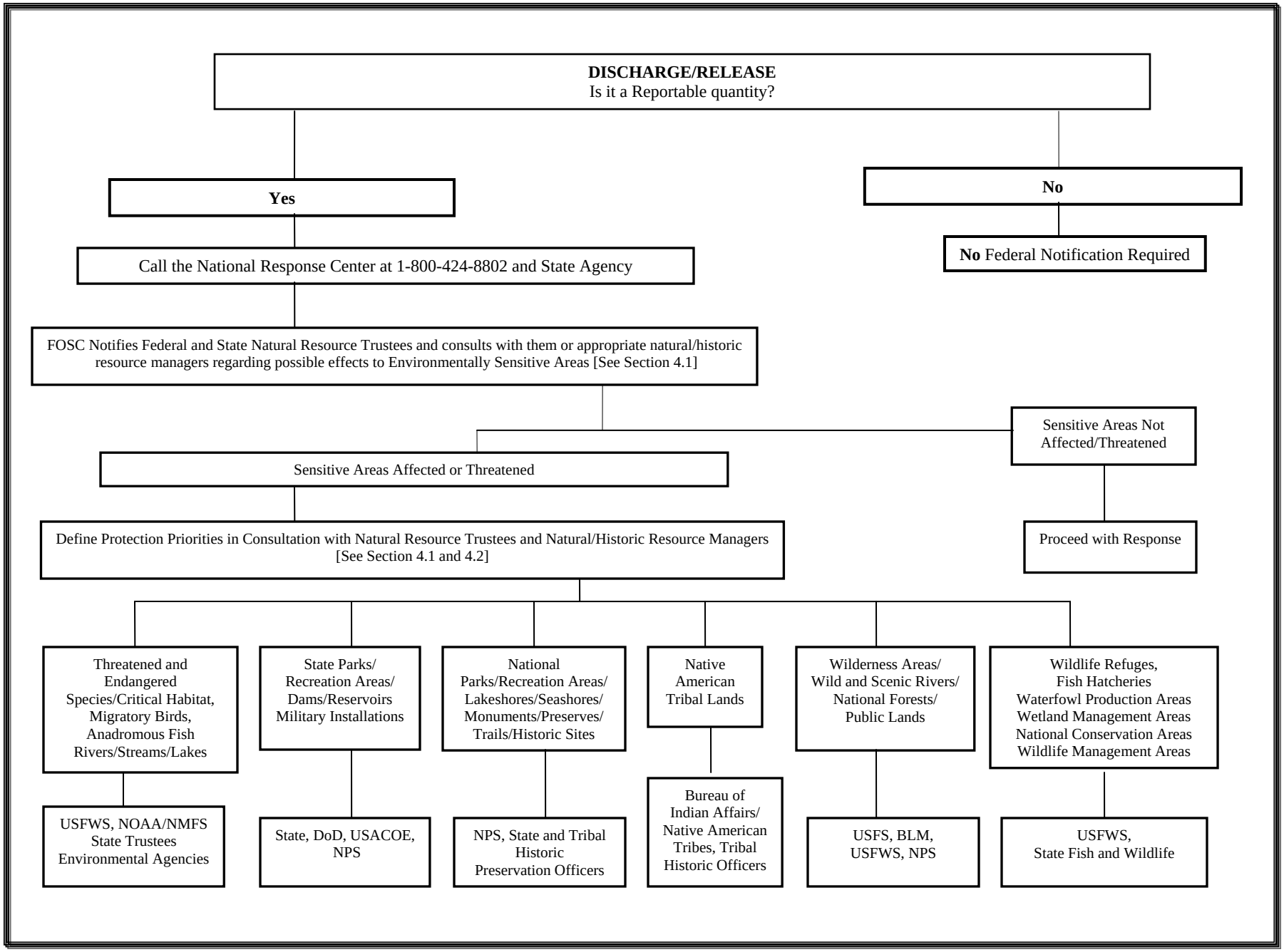
To ensure that proper steps are taken to minimize the overall impacts of an oil discharge on ecological and economic resources, the FOSC or Responsible Party (RP) must be aware of sensitive environments and/or important resource areas in its path. This is achieved through preparedness, notification of and consultation with appropriate organizations.

As required by the NCP, following notification of a spill, the Federal OSC shall notify the relevant Federal, State, or Tribal natural resource trustees and managers. Prompt notification of, and consultation with, natural resource trustee contacts and other natural resource management agencies is imperative so that their expertise can be utilized in identifying and protecting sensitive environments. Only one contact per agency should be necessary, as the persons initially contacted are responsible for notifying other critical personnel within their respective agencies. Natural resource trustees and managers will provide the OSC with information concerning the presence of trust or important natural resources, as well as technical assistance concerning impacts or potential impacts to those resources. The role of Federal Natural Resource Trustees during response activities and participation in the ICS can be found in the NRT-RRT Fact sheet, Federal Natural Resource Trustees and ICS/UC NRT-RRT, http://nrt.org/Production/NRT/NRTWeb.nsf/AllAttachmentsByTitle/A-51FRNT/$File/FNRT.pdf?OpenElement

Pursuant to Subpart G of the NCP, the following officials and agencies have been designated trustees for natural resources and their supporting ecosystems in Federal Region I: Secretary of Commerce; Secretary of the Interior; Secretaries for land managing agencies; Heads of authorized agencies; State Trustees; Native American Tribes; and Foreign Trustees. The USFWS and the States within the Region have co-trusteeship for migratory birds and federally listed species. The States are sole trustees for resident (non-migratory) fish and wildlife. Federally recognized Tribes are trustees for the natural resources, including their supporting ecosystems, belonging to, managed by, controlled by, or appertaining to Tribes. In addition to the designated natural resource trustees, there are numerous Federal and State agencies and Tribal organizations with land and resource management responsibilities and/or expertise which need to be consulted regarding response actions.

The notification and consultation flowchart in Figure 1 provides a quick reference for an OSC to use in identifying appropriate natural resource trustee agencies and managers. Attachment 1 contains Natural Resource Trustees and/or Managers contact information. See Appendix 2 of the Area Contingency Plan for contact information for Native American Tribes in Region I.

When a spill occurs, impacts to the ecosystem are usually unavoidable. However, such impacts can be minimized through pre-spill planning. Consultation and coordination with natural resource trustees and managers during the pre-spill planning phase aids in identifying and understanding potential natural resource concerns and issues as a result of spills in general.


DISCHARGE/RELEASE
Is it a Reportable quantity?
Yes
No
No Federal Notification Required
Call the National Response Center at 1-800-424-8802 and State Agency
FOSC Notifies Federal and State Natural Resource Trustees and consults with them or appropriate natural/historic resource managers regarding possible effects to Environmentally Sensitive Areas [See Section 4.1]
Sensitive Areas Not Affected/Threatened
Sensitive Areas Affected or Threatened
Proceed with Response
Define Protection Priorities in Consultation with Natural Resource Trustees and Natural/Historic Resource Managers [See Section 4.1 and 4.2]
Threatened and Endangered Species/Critical Habitat, Migratory Birds, Anadromous Fish Rivers/Streams/Lakes
State Parks/ Recreation Areas/ Dams/Reservoirs Military Installations
National Parks/Recreation Areas/ Lakeshores/Seashores/ Monuments/Preserves/ Trails/Historic Sites
Native American Tribal Lands
Wilderness Areas/ Wild and Scenic Rivers/ National Forests/ Public Lands
Wildlife Refuges, Fish Hatcheries Waterfowl Production Areas Wetland Management Areas National Conservation Areas Wildlife Management Areas
USFWS, NOAA/NMFS State Trustees Environmental Agencies
State, DoD, USACOE, NPS
NPS, State and Tribal Historic Preservation Officers
Bureau of Indian Affairs/ Native American Tribes, Tribal Historic Officers
USFS, BLM, USFWS, NPS
USFWS, State Fish and Wildlife

3.2 Sensitive Areas and Priorities

Considering the diversity and extent of sensitive natural resources in Region I it is important to reach a consensus, to the extent possible, on the highest resource priorities in order to provide for time-sensitive, coordinated, and effective protection, rescue, and restoration. Although prioritization is difficult, several criteria that may be used in making this determination include the following:

- relative abundance or scarcity of a particular resource;
- relative diversity and abundance of resources at a particular site;
- productivity of biological resources;
- areas important to specific life stages, migration patterns, or diurnal behavior;
- vulnerability to spills;
- resource sensitivity to the discharged product;
- amenability of the site to product recovery and restoration;
- protection by Federal and State laws;
- economic importance.

Priorities will be identified by the Area Committee in consultation with resource trustees and managers. The following general categories of natural resources (including their administering agencies and statutory authority) should be considered for protection and remediation:

- **Anadromous fish spawning areas** (DOI/USFWS; DOC/NOAA/NMFS)**.**

- **Listed or proposed endangered and threatened species and their Designated Critical Habitat** (DOI/USFWS/NPS, DOC/NOAA/NMFS), Endangered Species Act, (16 USC §1531, *et seq.*; 50 CFR 424.02); State-listed or proposed endangered and threatened species; Federal and state species of concern (DOI/USFWS/NPS, states).

- **National and State protected areas:**
    - National Wildlife Refuges (USFWS, National Wildlife Refuge Administration Act of 1966 (16 USC §§ 668dd-668ee, as amended) or comparable state law); Waterfowl Production Areas (DOI/FWS), National Conservation Areas (DOI/USFWS, Refuge Recreation Act, (16 USC § 460k, *et seq.*);
    - Designated Federal Wilderness Areas (DOI/BLM/USFWS/NPS, USDA/FS, National Wilderness Preservation Act (16 USC §1131, *et seq.*));
    - National Parks, National Monuments, National Lakeshore Recreational Areas (DOI/NPS, Act of August 25, 1916 (16 USC §1, *et seq.*));
    - National Wild and Scenic Rivers (DOI/NPS/USFWS/BLM, DOA/USFS, States, National Wild and Scenic Rivers Act, (16 USC §§1271-1287));
    - National Preserves (DOI/NPS);
    - National Forests (USDA/FS);
    - National Fish Hatcheries (DOI/USFWS; DOC/NOAA/NMFS);
    - Clean Lakes Program critical areas (EPA);

- Tribal lands (appropriate Tribal contact);
- State Parks, Refuges, and Wildlife Management Areas;
- State forests**;**
- Waterfowl Management Areas are designated for the protection of habitat important to waterfowl and are designated within State Wildlife Management Areas.

- **Migratory birds (waterfowl, wading birds, shorebirds, raptors, diving birds, songbirds) and their habitats** (DOI/USFWS, States Migratory Bird Treaty Act (16 USC §§ 703-712, as amended)
    - Migratory bird nesting sites (DOI/USFWS, States);
    - Colonial waterbird nesting sites (DOI/USFWS, States);
    - Concentration areas for migratory birds (DOI/USFWS).

- **Outstanding National Resource Waters/Outstanding Resource Value Waters**
    - Sites within Joint Venture Project Areas under the North American Waterfowl Management Plan (DOI/USFWS);
    - Sites under the RAMSAR Treaty on Wetlands of International importance (DOI/USFWS);
    - State Heritage Program sites;
    - State scientific and natural areas;
    - Calcareous fens;
    - State Wild and Scenic Rivers;
    - Trout streams.

- **Sensitive Recreation Areas**
  Cultural sites (archeological, historical, monuments)
  Recreational areas (boating, fishing, swimming).

- **Wetlands as** defined in 40 CFR 230.3 and by USFWS, and wetlands identified by local, state, regional, or federal levels of government (DOI/USFWS/NPS/USGS; EPA; COE; USDA/FS; state water agencies).

- **Additional state and local statutes may also apply.**

PLEASE NOTE: The above categories should be reviewed and reassessed periodically by the Area Committee. Fish and wildlife agency concerns relative to the above species and specified areas intensify at specific times of the year (e.g., breeding and migration season). Should a spill occur within these designated areas, the USFWS and appropriate state natural resource agencies should be consulted immediately to assist the OSC in determining the direction of the spill as well as other aspects of the cleanup. Knowledge of these areas may need to be refined or augmented during an actual spill.

Additional sources of information about environmentally sensitive areas may include commercially available local maps and state atlases, National Wetland Inventory maps, U.S. Geological Survey quadrangle maps, maps developed by the Area Committee, maps

developed as part of facilities plans, maps and information developed by various government agencies, and GIS.

3.3 Threatened and Endangered Species

Threatened and endangered (T&E) species live in all the states in the region. USFWS maintains state and county lists of federally threatened, endangered, and proposed species. This information is made available to other agencies and the public. **Attachment 2** contains federally listed species for each state in the region. Since the list is updated when species are added or removed, it should be verified by USFWS personnel at the time of a spill. Natural Resource Trustees, managers and other contacts are identified in Attachment 1.

*The Interagency Memorandum of Agreement Regarding Spill Planning and Response Activities under the Federal Water Pollution Control Act's National Oil and Hazardous Substances Pollution Contingency Plan and the Endangered Species Act (*herein after referred to as the MOA), signed by the USCG, EPA, NOAA, DOI, USFWS, and NMFS, aligns the consultation and coordination requirements with the pollution response responsibilities outlined in the NCP, 40 CFR 300, http://www.fws.gov/contaminants/FWS_OSCP_05/fwscontingencyappendices/O-EndangeredSpecies/FinalMOA.doc.

A guidebook was developed for the MOA by the signatory agencies to further facilitate cooperation and understanding between the agencies involved in oil spill planning and response, http://www.fws.gov/contaminants/FWS_OSCP_05/fwscontingencyappendices/O-EndangeredSpecies/MOATrainingManualVersion02.pdf. Using the MOA guidebook, checklists were developed to assist FOSCs during Pre-Spill Planning, Emergency Response and Post Response activities. See **Attachment 3** for MOA checklists.

3.4 Freshwater Environments

Freshwater environments can be divided into three broad categories: standing water, such as lakes and ponds; flowing water, which includes streams and rivers; and wetlands.

Lakes and Ponds

The near shore areas and associated emergent and submerged aquatic vegetation associated with lakes and ponds provide critical nesting and feeding habitats for migratory birds as well as important spawning, nursery and feeding areas for resident fish, amphibians and reptiles. Lakes, ponds and their dependent populations are, therefore, more vulnerable (through prolonged exposure) to spills of oil and hazardous materials than are freshwater environments that are constantly moving, such as streams and rivers.

Streams and Rivers

Streams and rivers contain unique fish, insect, mollusk and crustacean communities, as well as associated riparian vertebrate species insects (bats, songbirds, wading birds, etc.) that

depend upon those communities for food. Oil entering slower flowing streams tends to remain on the surface while oil discharged to a high velocity, turbulent stream disperses throughout the entire stream water column. As a result of the turbulent agitation, oil may become trapped in sediment along the stream bed, resulting in increased mortality to benthic organisms. Stream reaches can be subdivided into three categories: low gradient, moderate gradient, and high gradient.

Low gradient - portions of a stream are characterized by: meandering channels; moderate currents; wide zones of associated riparian vegetation, sand bars, intermediate oil residence time; numerous collection sites; and restricted mixing into the water column.

Moderate gradient - portions of a stream are characterized by: intermittent rapids, moderately wide channels, associated riparian vegetation, brisk currents, sand and gravel bars, short oil residence time, few collection sites, and significant mixing into the water column.

High gradient - portions of a stream are characterized by: numerous rapids, narrow associated riparian vegetation, strong currents, coarse gravel sediments, short oil residence time, no collection sites, and intense mixing into the water column.

Wetlands

Wetlands such as freshwater swamps, marshes, and flood plain forests act as natural hatcheries, nesting areas, food sources, and watering areas for terrestrial and aquatic wildlife. Therefore, they are crucial areas for wildlife support. Due to their typically shallow nature and lack of currents, wetlands are highly sensitive to oil spills.

The region's seasonal weather conditions can superimpose many considerations on planning and preparation for a response. Ice and snow in the winter, fluctuations of river and stream water levels, and the seasonal patterns of fish and wildlife dependence upon certain critical areas may need to be addressed.

3.5 Recreational Areas

Tourism and recreation may be impacted as a result of a spill, with restrictions or potential closures of important fishing streams, boating and canoeing areas, and other recreational amenities (e.g., beaches, marinas, boat launch sites) associated with the region's shorelines. Identifying and protecting these recreational resources should be considered during planning and response actions. Developing timely response procedures to notify and accommodate potentially impacted recreational users will help minimize the disruption.

3.6 Areas of Historical Significance

Identification of historic properties in the vicinity of a spill can be accomplished by contacting the State Historic Preservation Officer (SHPO) or Tribal Historic Preservation Officer (THPO). A list of State Historic Preservation Offices and Tribal Historic Preservation Officers for each state is provided in the **Area Contingency Plan, Appendix 8.** Additionally,

the National Park Service (NPS) has responsibility for sites located on Federal lands within the region and can provide assistance to the FOSC. Specific procedures and FOSC responsibilities are set forth in the *Programmatic Agreement on Protection of Historic Properties During Emergency Response Under the National Oil and Hazardous Substances Contingency Plan* (PA), http://www.achp.gov/NCP-PA.html

The PA states that the FOSC is responsible for ensuring that historic properties are appropriately considered in planning and during emergency response. During *pre-spill planning* activities, the PA calls for the development of an "agreed-upon mechanism" or response process that includes the following elements:

- identification of historic properties listed in or determined eligible for listing in the National Register of Historic Properties that might be affected by the ***response*** to a release or spill **and** areas not yet surveyed where there is a high potential for the presence of historic properties;
- identification of geographic areas or types of areas where historic properties are unlikely to be affected;
- identification of parties that are to be notified and consulted in the event of a spill in a non-excluded area;
- development of emergency response strategies to help protect historic properties;
- assessment of potential effects of the emergency response on the historic property;
- documentation, if applicable, of actions resulting in unavoidable injury to historic properties when the FOSC has determined that the requirements of the PA cannot be satisfied concurrently with the paramount requirement of protecting public health and the environment; and,
- identification of the Historic Properties Specialist responsible for providing expertise on historic properties to the FOSC during emergency response; e.g., through agreements between the involved Federal response agency and State or other Federal agencies having historic properties specialists on staff; contracts between the Federal response agency and expert(s) identified in the ACP; or historic properties specialist(s) on the Federal response agencies' staff. The PA specifies the professional qualifications and standards that an Historic Properties Specialist must meet.

The process to be implemented during emergency response activities is presented as a series of checklists in **Attachment 4**.

4.0 DETERMINING THE ENVIRONMENTAL EFFECTS OF RESPONSE AND COUNTERMEASURES

Sections 300.210 (c)(4)(ii) (b-d) of the NCP mandate that the Fish and Wildlife and Sensitive Environments Annex provide a mechanism for expeditious evaluation and appropriate consultations on the effects to fish and wildlife, their habitat, and other sensitive environments from response actions. Response strategies will vary, depending upon the material spilled, the type of terrestrial or aquatic environments that may be affected, weather, and season.

When deciding on an appropriate response method, the most important considerations are the efficient removal of the oil threat **and** the effective protection of fish and wildlife habitats and sensitive environments. The advantages and disadvantages of various removal or countermeasure techniques should be carefully evaluated to maximize net environmental benefit.

During the response, the OSC and/or responsible party **must** consult with the appropriate Federal and State natural resource trustees and land management agencies in regard to response activities related to the following concerns:

a) physical disturbance of wildlife, their habitat, and other sensitive areas;

b) illegal or inadvertent “taking” of live fish and wildlife or disturbance of carcasses by response personnel (**Taking** is defined as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct");

c) the use of cleaning or bioremediation agents in fish and wildlife habitat and environmentally sensitive areas;

d) the movement of oiled debris and other material in fish and wildlife habitat and other sensitive environments.

4.1 Impacts of Response Methods on Sensitive Environments and Habitats

The following is a brief description of adverse effects of various physical response methods associated with oil spill cleanup:

Countermeasure/Response	Potential Adverse Effects
1) No removal	a) increased physical oiling of habitat b) oil could remain in habitat indefinitely c) oil may be naturally weathered, but may remain toxic to biota and would cause habitat degradation
2) Protective/sorbent boom deployment	a) physical disturbance to habitat b) residual oil could remain in habitat indefinitely c) residual oil may be naturally weathered, but may be toxic to biota and would cause habitat degradation
3) Protective/sorbent boom deployment + mechanical pumping/skimming	a) physical disturbance to habitat b) resuspension/dispersion of oiled sediments c) physical disturbance to biota in the area
4) In-situ burning	a) smoke plume air quality concerns; b) riparian wildlife nesting, denning and feeding

	habitat may be permanently or temporarily damaged c) substrate contamination
5) Mechanical pumping/ skimming	a) physical disturbance of habitat/biota; b) resuspension/dispersion of oiled sediments c) disturbance to biota
6) Dispersants	a) chemical impacts to the water column b) disturbance to rafting birds or marine life

Despite the potential adverse effects, the following countermeasures may minimize potential effects based on environmental tradeoffs:

Countermeasure	Potential Adverse Effect(s) Minimized
1) No removal	a) response induced disturbance to fish and wildlife b) response induced disturbance to habitat c) oil may be naturally weathered, and not be toxic to biota or cause habitat degradation
2) Booms	a) physical disturbance of sensitive areas/habitats b) disturbance, illegal taking of fish and wildlife c) limited wildlife contact with cleaning/bioremediation agents
3) Mechanical pumping	a) physical disturbance of sensitive areas/habitats b) limited wildlife contact with cleaning/bioremediation agents
4) Mechanical skimming	a) limited wildlife contact with cleaning/ bioremediation agents
5) In-situ burning	a) physical disturbance of sensitive areas/habitats b) limited wildlife contact with cleaning/bioremediation agents
6) Dispersants	a) dissipate oil from surface water and speed dissolution b) reduce shoreline impacts from oil slick

Movement/transport of oiled debris to the following habitats may pose a substantial threat to fish and wildlife and sensitive environments. To reduce risk to sensitive resources, oiled debris should not be placed in the following habitats:

1) tidal creeks and riverine backwaters
2) wetlands, tidal flats, and marshes
3) fish/shellfish spawning/nursery areas

4) waterfowl/migratory bird foraging/breeding areas.

4.2 Appropriate Response for Specific Sensitive Environments and Habitats

The OSC should consult with trustee and natural resources managers when evaluating oil response methods to consider their relative impacts on given environments and habitats. Physical, chemical and biological response methods and response impacts on the environment should be classified as low, moderate, or high impact, and ineffective or inapplicable to aid in the decision process.

4.3 Monitoring Response Effectiveness - Monitoring Plans

A spill is dynamic, and cleanup efforts must adjust to changes in conditions. Over time, the spilled product will typically spread, move downstream or downwind, and become weathered. Climatic and geographic conditions may also change. Efforts to control, contain and clean up the release can involve any of a number of containment and recovery methods, including booms, barriers, skimmers, sorbents, chemical agents, burning, and manual recovery. A continuous monitoring program to ensure the maximum removal of spilled product and protection of the environment throughout the duration of the cleanup is essential. For some response methods such as dispersant application, monitoring protocols have been developed. Special Monitoring of Applied Response Technology (SMART), recommends monitoring methods, equipment, personnel training and command and control procedures. See **Appendix 14, ACP** or http://response.restoration.noaa.gov/book_shelf/648_SMART.pdf

4.3.1 Monitoring Response Effectiveness

The OSC, in consultation with the natural resource trustee contacts, managers, and the responsible party, will monitor the effectiveness of response activities in protecting sensitive habitats and removing discharges of oil. The OSC should consult with natural resource trustees and natural resource agency managers regarding the need for, and methods to be employed in, an incident-specific long-term monitoring plan. As each of these methods has limitations associated with them, continued monitoring is necessary to ensure a successful cleanup. Monitoring will also be necessary to ensure that the selected response actions do not cause more harm than good. Monitoring activities may include visual observation, sampling, data collection and evaluation, and replacement of saturated or defective materials.

The assessment of aquatic biota health and abundance will, in some instances, be done by the state environmental agency or state fish and wildlife agency. Evaluation of spill effects on fish and wildlife, during and after cleanup, is the responsibility of both the trustees and the state fish and wildlife agency. The effects of specific removal actions or countermeasures, with regard to wildlife, will be judged on the basis of the status of fish and wildlife populations remaining in the affected area after cleanup. When no new animals are becoming fouled with oil or otherwise being injured by the spill or countermeasures, the cleanup will be judged to have been successfully completed as it pertains to fish and wildlife.

4.3.2 Monitoring Plan Design

Monitoring spill response activity provides the OSC with useful information on the effectiveness of response actions and will assist trustees and natural resources managers in identifying and documenting potential impacts to the environment. **Specific plans for each response should be developed in consultation with natural resource trustees and natural resource agency managers and include the following points:**

(a) **Monitoring Intensity Levels -** Field activities consisting of reconnaissance, environmental parameters assessment, sampling and documentation efforts, and laboratory activities should be conducted on a scale appropriate to the response.

(b) **Selection of Treated and Unaffected Sites -** Treated and unaffected (or reference) sites are useful for the purposes of gauging the degree of cleanup achieved and for establishing background conditions for the NRDA preassessment phase. Such sites should exhibit similar chemical and physical characteristics to support their comparability. The following criteria should be considered: (1) environmental parameters, (2) physical habitat and geological morphology, and (3) degree of contamination by the released product and probability of further contamination.

(c) **Monitoring Parameters and Collection Frequency -** Sampling at each site, water depth (as appropriate), and time should be performed in triplicate. The size of samples collected should be based on the requirements of the analytical methods to be used for their analysis.

(d) **Data Quality Requirements and Assessments -** Follow applicable EPA and State guidelines.

(e) **Sample Custody Procedures -** Follow applicable EPA and State guidelines.

(f) **Sampling and Analytical Methods -** All media to be sampled, sampling methods, and laboratory analyses to be performed should be determined following consultation with natural resource trustees and natural resource managers and should follow EPA or other approved methods unless otherwise stipulated or requested by the OSC. Any variations from EPA or other approved methods should be documented and noted as such.

(g) **Revising Plans and Procedures -** Monitoring plans should include provisions for modifications, including additional consultation with natural resource trustees and natural resource managers as necessary.

Note: The use of the Special Monitoring of Applied Response Technologies (SMART) protocol for rapid collection and reporting of real time scientific based information should be considered. See **Appendix 14 in the ACP** or http://response.restoration.noaa.gov/book_shelf/648_SMART.pdf

5.0 FISH AND WILDLIFE RESPONSE CAPABILITIES AND SERVICES

Consultation with natural resource trustees and other natural resource management agencies during spill events having the potential for trust resource injuries is essential. Fish and wildlife response capabilities and services include:

5.1 Technical Expertise and Assistance

During a response, natural resource trustee contacts and managers will provide technical assistance and expertise on potential effects of oil on fish and wildlife, their habitats and/or other sensitive environments that can be found in the impacted and potentially impacted zone. They are usually familiar with the area or habitats affected and are able to provide recommendations on the best locations for equipment staging areas, boat access points, or boom anchor locations, and can identify, recommend, and prioritize sensitive environments where specific oil exclusion measures should be taken. They can also assist in the development of a monitoring plan and subsequent collection of data. Finally, the USFWS and the State wildlife agency can participate in, direct, or provide oversight for the protection, rescue, and rehabilitation of fisheries and wildlife. Prior OSC approval is required for accessing the Oil Spill Liability Trust Fund (OSLTF) to reimburse trustee support activities**.** Further information regarding the OSLTF can be found at http://www.uscg.mil/npfc/About%20Us/osltf.htm

5.2 Fish and Wildlife Protection

Measures to protect wildlife may include all the following:

- **preventing** the spill from reaching areas where wildlife are located by either containing, deflecting or recovering the material, or

- **deterring** wildlife from entering areas already affected by contamination.

Primary Response

The primary response strategy for fish and wildlife protection emphasizes controlling the release and spread of spilled oil at the source to prevent or reduce contamination of potentially affected species, their habitats, and sensitive environments. Specific primary response options include: mechanical or physical means; chemical or biological treatment; in-situ burning; and natural recovery. Oiled carcass collection is also considered a primary response effort.

Mechanical or physical methods are used to control spills through containment and recovery. Containment booms are used to control the spread of oil to reduce the possibility of polluting shorelines and other resources, as well as to concentrate oil in thicker surface layers, making recovery easier. Boom can also be deployed to keep oil that has been stranded on the shoreline from floating to another location. Recovery of contained or stranded oil can occur using various equipment and means including skimming, scraping, absorption, etc. Physical

response methods may also include barrier/berm, physical herding, manual removal/cleaning, mechanical removal, sorbents, vacuum, debris removal, vegetation removal, and flushing.

Chemical treatment employs the use of dispersing agents, also called dispersants, that contain surfactants, or compounds that act to break liquid substances such as oil into small droplets. In an oil spill, these droplets disperse into the water column, where they are subjected to natural process—such as wind, waves, and currents—that help to break them down further. Chemical dispersants should only be used when the associated impacts of dispersed oil are less harmful than non-dispersed oil. All wildlife in the dispersant target zone should be identified prior to approving the use of dispersants. Birds within the dispersant target zone should be hazed or captured if they become contaminated. Dispersants should not be applied over large concentrations of birds.

Others types of chemicals may also be employed to assist with recovery such as elasticity modifiers, emulsion treating agents, shoreline pre-treating agents, solidifiers, surface collecting agents and surface washing agents. Like dispersants, all of these chemicals require RRT approval prior to use.

Biological treatment uses biological agents such as nutrients, enzymes, or microorganisms that increase the rate at which natural biodegradation occurs. Biodegradation of oil is a natural process that slowly removes oil from the environment.

In-situ burning of oil involves the ignition and controlled combustion of oil. It can be used when oil is spilled on a water body or on land. Use of this technique also requires RRT approval.

Natural recovery, leaving the oil alone, allows natural processes to remove the oil from the environment. Natural processes include evaporation, oxidation, and biodegradation. Generally, natural recovery is not recommended for areas supporting wildlife concentrations.

Oiled carcass and debris retrieval operations are established in conjunction with primary response activities to remove short term sources of contamination and reduce food chain "contamination". Oiled carcasses, vegetation, and debris are collected and removed to prevent secondary oiling or additional contamination of wildlife as a result of predation and grazing. USFWS responders can assist with the collection of oiled wildlife and are responsible for cataloging and maintaining chain-of-custody for oiled migratory birds. In some cases, the USFWS may recommend that the OSC seek the assistance of USDA 's Animal & Plant Health Inspection Service (APHIS) Wildlife Services to help with carcass collection. USFWS Law Enforcement and/or a State Conservation Officer will supervise all wildlife morgue operations.

Secondary Response

Secondary response methods to protect fish and wildlife from an oil spill involve maneuvering healthy and uncontaminated fish and wildlife away from contaminated sites by

use of deterrents, hazing, and preemptive capture.

Following an oil spill, it may be necessary to initiate a *deterrence or hazing* program that disperses and excludes unoiled or oiled/injured wildlife from contaminated areas to reduce mortality. If warranted, deterrence activities are initiated as soon as possible following an oil spill to prevent animals from establishing or continuing regular use patterns within a contaminated area. Deterrent devices used to disperse wildlife include both visual and auditory techniques, using both simple and sophisticated devices in order to respond to the unique habits of different species, surrounding environments, and the spill situations. The types of equipment used and sources for their acquisition can be found in **Attachment 5.** Fish deterrence techniques may include use of light, sound, smell, bubble curtains of air and herding nets to herd fish away from hazard areas. In an emergency, the USFWS, State wildlife agency, or local USDA Wildlife Services office may be able to locate and provide limited amounts of this equipment. Careful consideration should be given in the selection and placement of deterrence devices to prevent driving unoiled wildlife into oiled areas. In some cases, the USFWS may recommend that the FOSC seek the assistance of USDA APHIS Wildlife Services to help haze wildlife away from areas contaminated with oil and away from oiled wildlife / carcasses. More information can be found in ***Best Practices for Migratory Birds During Oil Spill Response***, http://www.fws.gov/contaminants/OtherDocuments/best_practices.pdf

Pre-emptive capture includes the capture, handling, transportation, short-term holding and release of healthy, uncontaminated wildlife. Prior to initiating a pre-emptive capture effort, it is essential to establish a release site or a holding facility and a release plan. Pre-emptive capture is recommended when there is a high potential for oiling sensitive wildlife species that are not easily hazed. However, this secondary response option has limited application based on species-specific criteria. The primary concerns when conducting pre-emptive capture are human and animal safety and minimizing transportation and holding times. Safety of the animal should focus on stress reduction as follows:

- Have equipment necessary to handle and transport animals as quickly and efficiently is possible;
- Minimize the number of vessels, aircraft, all-terrain vehicles, etc. to herd and capture animals in a given area;
- Avoid unnecessary noise and disturbance during capture efforts;
- Never pursue the animals to the point of exhaustion; and,
- Minimize human contact with the animals except to provide veterinary care.

Nets, electrofishing and anesthetizing agents (e.g.,Tricaine Methanesulfonate) may be used to capture and remove fish to non-hazardous waters of similar temperature and chemistry.

Tertiary Response

Tertiary response is the capture and treatment or rehabilitation of wildlife contaminated by oil. It is implemented as the last resort for protecting wildlife. Oiled wildlife rehabilitation includes all elements related to capture, handling, transportation, stabilization, cleaning, care, holding, and release. The goal of a capture and treatment effort is the release of healthy

wildlife back into their natural environment. The decision to initiate such an effort must consider incident-specific criteria. The criteria must be based on the best available science and focus on the protection and maintenance of healthy wild populations of the species affected by the spill. Considerations for initiating an oiled wildlife capture and treatment program include: condition of the animal, weather, oil toxicity, time, species of animal, extent of oiling, care in captivity, location of treatment, available care, facility, release, zoonotic diseases, permits and euthanasia. There is no protocol available for capture, cleaning and treatment of oiled fish.

Wildlife (Bird) Recovery Operations/Procedures

Capture of birds will only be attempted by qualified personnel with USFWS oversight. Oiled wildlife are highly unpredictable and can inflict serious injuries to a responder; accordingly, proper personal protective equipment shall be used when capturing or handling oiled wildlife. In some cases, The USFWS may recommend that the FOSC seek the assistance of the USDA APHIS - Wildlife Services to help with wildlife recovery operations. Safety must be accorded the highest priority throughout the capture and transport process. Migratory birds are susceptible to stress; handling, noise and visual stress should be minimized.

Teamwork is essential in capture operations. As they lose their waterproofing, oiled birds move to shore, first preening on open beaches and river banks and later hiding under cover. Birds in this condition can be retrieved in teams of two or three people on foot with radio communication approaching quietly from water's edge and blocking access to water. This technique is most effective before dawn. Birds can then be captured using long-handled dip nets, towels, or picked up by hand. Birds should never be chased to exhaustion.

Certain birds may be baited in close by "chumming" with fish or squid and captured with a long-handled net. Several species may also be effectively captured from a boat with a netgun within 10-15 meter range. Cannon, rocket and drop nets may be effective, when used with baiting techniques. Swim or walk-in traps may also prove effective, but must be regularly monitored.

Recovery Processing

Once birds are captured they should be removed from the netting and placed in towels, sheets or netting over the entire bird. Wings must be folded normally against the body. Care must be taken to avoid the bills and talons of large birds such as herons and raptors. A reverse body hold is recommended for large birds. Always hold the bird below waist level and away from the face. Always carefully handle the birds to minimize damage to feathers.

Each captured bird should be accompanied by a form with the following information: capture boat and personnel; date, time and location of capture; technique used to capture the animal; amount of oil in the area and whether the bird was observed or captured in the oil; behavior at capture, e.g., aggressive, lethargic, comatose; and, description of the bird, i.e., sex, age, distinguishing marks.

After transport, birds should be immediately examined by an attending veterinarian or other qualified personnel. If a treatment center is not in close proximity, it may be necessary to perform initial treatment at the collection site, such as clearing mouth and nostrils of oil; rehydrating the bird; checking for signs of oil toxicity, pining a cloth around the birds body to prevent hypothermia; and placing the bird into a transport container and avoiding disturbance, except to hydrate.

Carcass Retrieval and Processing

For all spills, a primary response goal is to prevent continued or additional contamination of wildlife as a result of predation. All bird carcasses should be retrieved and delivered to collection or morgue sites directed by the USFWS personnel to prevent oil from entering the food chain. Each carcass should be accompanied by a form containing the date and place of collection, the name of the collector, and if known, the species collected. Forms accompanying the carcass should be kept in a plastic storage bag for protection. An indelible pen or pencil should be used for labeling. If the carcass is not collected, a form should still be filled out and submitted to the USFWS collection or morgue site including a brief explanation for not collecting the specimen. Place retrieved carcasses in a plastic bag, *one carcass per bag only*. Place the completed retrieval information form in a zip-lock bag, place it in the bag with the carcass, and tie the plastic bag shut for delivery to the Wildlife Recovery Area / morgue. Carcasses should be kept cool, but not frozen during transport to the morgue.

5.2.1 Acquisition and Utilization of Fish and Wildlife Response Capabilities and Services

The USFWS and State natural resource agency are responsible for overseeing spill response activities relative to their effects on fish and wildlife resources. These oversight responsibilities are carried out under the overall direction of the OSC. In some instances, the Federal and State agencies will participate in activities such as hazing, capture, transport, relocation, and release of wildlife. **Those natural resource agencies typically do not conduct treatment or rehabilitation of injured trust resources**. **However, all wildlife rescue and rehabilitation efforts will be directed by the USFWS and/or the State wildlife agency, including the approval of a qualified wildlife rehabilitator (QWR).** The USFWS and State natural resource agencies will usually recommend that the responsible party or OSC (in the case of an unknown or uncooperative responsible party) enter into a contract with a QWR. In all cases where a QWR is utilized, the USFWS and State natural resource agencies will remain in an oversight role. Oversight responsibilities include, but are not limited to, the identification and certification of a QWR; the supervision/oversight of injured wildlife collection, handling, cleaning and associated veterinary care; the release of successfully rehabilitated wildlife to the wild; and/or the disposition of carcasses to labs and evidence storage. For more information, see: ***Best Practices for Migratory Birds During Oil Spill Response***.
http://www.fws.gov/contaminants/OtherDocuments/best_practices.pdf

5.2.2 Federal Permit Requirements

Federal and state permits generally allow the permit holder to collect, transport, possess,

rehabilitate, euthanize, release, or band migratory birds. Some permit holders also have authority to handle threatened and endangered species under separate federal permits. Each of these permits may encompass more than one species. If a bird were considered to be migratory, but also threatened or endangered, it must be covered under a threatened and endangered species permit. If rescue and rehabilitation efforts are deemed to be necessary and worthwhile, the following Federal permits may apply:

Migratory Birds

Banding or Marking*:* 50 CFR 21.22. A permit is required before any migratory bird is captured for the purpose of banding or marking. Official bands are issued by the U.S. Geological Survey, Biological Resources Division, Bird Banding Laboratory for this purpose. http://www.pwrc.usgs.gov/bbl/default.htm

Special Purpose Permit:: 50 CFR 21.27. A permit may be issued for special purpose activities related to migratory birds, their parts, nests, or eggs. During oil spills and discharges, it is expected that the initial cleaning, emergency care, and triage of animals will be done by contracted experts under a Special Purpose Permit. Unless authorized by the USFWS, no individual rehabilitator or rehabilitation group will be designated as "in charge" of rehabilitation efforts, but will work with the cleanup team under Regional guidelines. Off site rehabilitation of any migratory bird will be done only by federally licensed rehabilitators. The licensed rehabilitator must notify the USFWS within 48 hours of acquiring an injured bird. The USFWS provides disposition guidance at that time. A Special Purpose permit does not authorize the use of recovering sick or injured migratory birds for display or educational purposes.

Eagle Permits: 50 CFR 22. These permits authorize the taking, possession, or transportation of bald eagles or golden eagles, or their parts, nests, or eggs for scientific or exhibition purposes. They may be required for the possession of such birds during rehabilitation. The USFWS must be notified within 48 hours of acquisition of any Bald and/or Golden Eagles. Directions will be given at that time regarding disposition and/or continued treatment.

Endangered Species

50 CFR 17.22 and 17.32. Permits are issued for scientific purposes, enhancement of propagation or survival, or for incidental take. There is normally a 30-day comment period for this type of permit, which may be waived by the USFWS Director during emergency conditions where the life and health of a specimen is threatened and there is no alternative available. Rehabilitators participating in wildlife responses that include endangered species must be authorized to handle endangered species. In the case of endangered migratory birds, the rehabilitator must have a valid Special Purpose Permit that includes endangered species.

It is important to note that the Federal Regulations for the Endangered Species Act include provisions that allow for handling of sick, injured and orphaned wildlife specimens by certain individuals. 50 CFR 17.21(c)(3) & (4) describe this authority for endangered wildlife and 50 CFR 17.31(b) describes the authority available for threatened wildlife. In this section of the

regulations, certain employees of the USFWS, other Federal land management agencies, NMFS and state conservation agencies are given the authority to aid wildlife species and are given specific steps that must subsequently be followed regarding disposition of these specimens.

Sources of Federal Permits

Inquiries regarding **Federal Migratory Bird permits** and criteria for qualified wildlife rehabilitators are to be directed to the following:

Migratory Bird Permit Office
U.S. Fish and Wildlife Service
P.O. Box 779
Hadley, MA 01035-0779
Phone: (413) 253-8643 Fax (413) 253-8424
http://www.fws.gov/permits/mbpermits/birdbasics.html
Email: permitsR5MB@fws.gov

Inquiries regarding **Federal Endangered Species permits** may be directed to:

Endangered Species Permit Office
U.S. Fish and Wildlife Service
300 Westgate Center Drive
Hadley, MA 01035
Phone: (413) 253-8628 Fax: (413) 253-8482
http://northeast.fws.gov/ecologicalservices/
Email: permitsR5ES@fws.gov

In a spill situation, response and rehabilitation permit needs for endangered species will be determined by the USFWS on an emergency case-by-case basis administered under 50 CFR 17.21, 22, 31, and 32. Specific information with regard to obtaining a Federal permit for endangered species rehabilitation can be obtained through the USFWS Region 5 Ecological Services Operations Office listed above.

USFWS personnel will handle all Federal permit activities through the Ecological Services Field Office responsible for the area where the spill occurs. The Field Office will coordinate Migratory Bird and Endangered Species permit needs with appropriate Regional Office staff.

5.2.3 State Permits

State wildlife permits may be obtained through the applicable State agency office listed below:

Connecticut Department of Environmental Protection
Bureau of Natural Resources, Wildlife Division
79 Elm Street

Hartford, CT 06106
Phone: (860) 424-3000 Fax: (860) 424-4078
http://www.ct.gov/dep/cwp/view.asp?a=2709&q=324224&depNav_GID=1643&depNav=|

Maine Department of Inland Fisheries and Wildlife
284 State Street
41 State House Station
Augusta, ME 04333
(207) 287-8000
http://www.maine.gov/ifw/index.html

Massachusetts Division of Fisheries and Wildlife
1 Rabbit Hill Rd.
Westborough, MA 01581
(508) 389-6300 Fax (508) 389-7890
http://www.mass.gov/dfwele/dfw/recreation/licensing/permits/other_permits.htm

New Hampshire Fish and Game Department
Wildlife Division, Nongame & Endangered Wildlife
11 Hazen Drive
Concord, NH 03301
(603) 271-2461
http://www.wildlife.state.nh.us/Wildlife/nongame_and_endangered_wildlife.htm

Rhode Island Department of Environmental Management
Division of Fish & Wildlife
Stedman Government Center
4808 Tower Hill Road
Wakefield, RI 02879
(401) 789-3094 Fax (401) 783-4460
http://www.dem.ri.gov/programs/bnatres/fishwild/index.htm

Vermont Fish and Wildlife
Nongame & Natural Heritage Program
103 South Main Street
Waterbury, VT 05671
(802) 241-3700 Fax (802) 241-3295
http://www.vtfishandwildlife.com/wildlife_nongame.cfm

5.3 Wildlife Deterrence, Capture, and Treatment

If exposure of birds and other wildlife to oil occurs, an immediate decision must be made concerning the capture and rehabilitation of oiled birds and other wildlife. That decision must be made in consultation with the appropriate State and Federal natural resource trustees, because state and federal permits are usually required for such activities. The Department of

the Interior (DOI) has statutory responsibilities (delegated to the USFWS) for the protection of migratory birds and federally listed threatened and endangered species. If wildlife other than migratory birds or federally listed species are found injured, the responsible agency would typically be the appropriate state wildlife agency.

5.3.1 Selection of a Qualified Wildlife Rehabilitator (QWR)

If the decision is made, in consultation with the applicable natural resource trustees, to go forward with wildlife rehabilitation, the following criteria will be used by the USFWS and State wildlife agencies in selecting or recommending a QWR:

- **must have, or be qualified to obtain, the appropriate Federal and State permits** and licenses to collect, possess, treat, and band migratory birds, resident wildlife or threatened and endangered species;

- must demonstrate high standards of practice, treatment, conduct, and ethics as reflected by organizations such as the National Wildlife Rehabilitator Association, the American Veterinarian Association and the American Society for Prevention of Cruelty to Animals;

- must have adequate liability insurance to protect both staff and volunteers;

- should have a proven record and experience in rescue and rehabilitation of oiled wildlife;

- must comply with all applicable Federal (Occupational Safety and Health Administration, etc.) and state safety regulations to protect staff and volunteers.

5.3.2. Recognized Professional Rehabilitators

Two organizations, ***Tri-State Bird Rescue and Research, Inc***. and ***International Bird Rescue***, are permitted and nationally recognized experts in oiled bird rehabilitation:

Tri-State Bird Rescue and Research, Inc.
110 Possum Hollow Road
Newark, Delaware 19711
Phone: (302) 737-7241 Fax: (302) 737-9562
24-hour: 800-710-0695 or 0696
http://www.tristatebird.org/index.htm oilprograms@tristatebird.org

International Bird Rescue Research Center
4369 Cordelia Road
Fairfield, CA 94534
Phone: (707) 207-0380
Fax: (707) 207-0395 http://www.ibrrc.org/
James Lewis, Administrative Manager, jlewis@ibrrc.org

For information concerning regional or local bird rehabilitation organizations with similar capabilities, contact the USFWS Migratory Bird Permit office identified above.

5.3.3 Volunteers

While most wildlife rehabilitators and veterinarians cannot make the commitment of time needed to develop the resources to respond to major spills, many rehabilitators, veterinarians, and staff and volunteers from environmental organizations may be able to make significant contributions to spill-related wildlife rehabilitation efforts. The QWR should be able to identify each person's or organization's strengths and incorporate them into the rehabilitation effort. Volunteers must be appropriately trained, precisely scheduled for suitable tasks, and must be supervised at all times. States within Region I periodically sponsor training for wildlife rehabilitators, veterinarians, and biologists. These one-day workshops provide participants an introduction to rehabilitation procedures, allowing them to offer their future services (as volunteers or part-time staff) to a QWR during a spill involving wildlife.

5.4 Other Roles and Responsibilities of Natural Resource Trustees

5.4.1 Law Enforcement

The U.S. Fish and Wildlife Service's Division of Law Enforcement (DLE) is responsible for investigating suspected and alleged violations of Federal wildlife laws including the Migratory Bird Treaty Act, 16 USC 703 *et seq.*, the Endangered Species Act, 16 USC 1538 *et seq.*, the Eagle Protection Act, 16 USC 668a *et seq.*, the National Wildlife Refuge Act, 16 USC 668dd *et seq.*, and several others.

Wildlife injuries, mortalities, and habitat impacts resulting from spills can constitute violations of Division of Law Enforcement-enforced laws. Special Agents of the DLE or Refuge Officers of the Division of Refuges (when Service lands are involved) may be required to initiate investigations during the spill response phase in order to document violations and collect evidence in a timely manner. These law enforcement officers will normally coordinate their activities with the On Scene Coordinator (OSC) or other on scene law enforcement personnel. Additionally, the Special Agents will insure that responders possess the necessary federal permits (Section 5.2.2) and that wildlife-related response activities are accomplished in accordance with applicable law and permit provisions.

Special Agents and Refuge Officers often have detailed knowledge of the local terrain and can provide timely, site specific information to response personnel. In many cases, the Division of Law Enforcement and the Service's Natural Resource Damage Assessment and Restoration (NRDA) personnel (Section 5.4.2) have shared and similar interests and will work cooperatively on collecting or sampling, recording, storage, transportation, and laboratory analysis of injured or dead wildlife. When necessary, additional personnel operating under the guidance and direction of the Division of Law Enforcement may be brought on scene to assist with wildlife handling or collection.

The FWS Division of Law Enforcement's Environmental Investigations Coordinator (DLE/EIC) receives copies of National Response Center spill reports from the Department of the Interior, Office of Environmental Policy and Compliance. The DLE/EIC reviews these reports and may initiate contact with the responsible party and/or responders in order to ascertain the magnitude and impacts of the spill and determine whether a DLE response is warranted.

5.4.2 Natural Resource Damage Assessment (NRDA)

Natural Resource Damage Assessment (NRDA) is the process by which the Trustees of Natural Resources (see Section 6 and 40 CFR 600) identify and quantify the resource injuries and evaluate the monetary value ("damages") of impacted resources for the purpose of restoration. Successful pursuit of NRDA actions, either by the trustees alone or in cooperation with the RP(s), is a complex process comprising numerous tasks involving the interaction of scientists, economists, lawyers, and administrators. The DOI and NOAA NRDA rules (43 CFR 11, and 15 CFR 990, respectively), establish the procedures for determining the merits of going forth with the assessment of injury to natural resources and quantifying natural resources damages, and developing a claim for the natural resource damages resulting from the incident or the response actions for the incident based on the following three elements:

1. The cost or value of restoration to baseline conditions (i.e. the natural resources or services before the incident);
2. The cost or value of making up for interim injury or losses (i.e., the loss of natural resources or services provided by those resources from the time of the incident impact until the resources or services are returned to baseline); and,
3. The reasonable cost of assessment including restoration planning and development, agencies' indirect costs, and the legal costs.

It is important to recognize that while response and NRDA efforts are administratively separate from response to the spill, close coordination with response activities, especially in the collection of ephemeral data, will greatly reduce the potential for redundant or potentially conflicting field activities. See item c. and d., below.

Lead Administrative Trustee (LAT)

The LAT is responsible for facilitating the coordination of NRDA needs and activities of Trustee NRDA Teams with the ICS spill response operations. This includes close coordination with the planning Section for obtaining timely information on the spill and injury to natural resources. The LAT will coordinate with the Scientific Support Coordinator, OSC, the RP, and legal specialist as necessary for possible coordination of NRDA or injury determination activities. Coordination and NRDA can also include the following:

a) Attend appropriate planning meetings to facilitate communication between NRDA team and ICS elements.

b) Identify site access, transportation support, logistics requirements and staffing needs to the proper ICS elements.

c) Interact with ICS elements to collect information essential to NRDA.

d) Coordinate sampling requirements with the Planning and Operations sections.

e) Coordinate with the Liaison Officer and the SSC to identify other organizations available to support NRDA activities.

f) Ensure that NRDA activities do not interfere or conflict with response objectives.

5.4.3 Natural Resource Trustees - NRDA Roles and Responsibilities

DOI is a Federal trustee for migratory birds, anadromous fish, threatened and endangered species, and DOI-managed lands such as National Parks, Recreation Areas and National Wildlife Refuges. The DOI Office of Environmental Policy and Compliance (OEPC) is the initial contact for notification and overall coordination of Departmental activities. The USFWS, the DOI bureau with program management responsibility for migratory birds, threatened and endangered species, anadromous fish, lands, and waters in the National Wildlife Refuge System, will likely be among those involved in spill-related pre-assessments. In instances where other federal agency lands or resources are involved, those agencies (e.g., DOD, DOE, DOA, DOC/NOAA) may serve as trustees. At the time of a spill, the applicable Federal trustees will agree upon one agency to act as Federal Lead Administrative Trustee (LAT), and will convene a trustee group in cooperation with other Federal, State, Tribal, and foreign trustees, as appropriate, to ensure the best possible coordination of natural resource trustee activities.

5.5 Health and Safety Concerns in Wildlife Rescue and Rehabilitation

The NCP at 300.210 (4) (ii) (h) requires the fish and wildlife annex to identify and secure the means of providing, if needed, the minimum required OSHA and EPA training for volunteers, including those who assist with injured wildlife. The OSHA Hazard Communication Standard (also referred to as HazCom) should be used as a standard for communicating the potential hazards to individuals involved in assisting injured wildlife. HazCom applies to wildlife rehabilitation organizations because petroleum and hazardous chemicals are considered a human health hazard. The OSC incident specific site safety plan should include wildlife worker related concerns as well. Besides chemical hazards, other hazards such as mechanical, physical and biological hazards are also present during rescue and rehabilitation activities. Workers must be aware of and trained on dealing with these hazards as well. Such training elements should include field and facility concerns on the behavior of impacted birds, proper animal restraint, and personal protective equipment and clothing to protect workers from blood-borne pathogens and zoonoses. Personnel health and safety concerns relating to wildlife rescue and rehabilitation should be considered in all plans and actions when dealing with contaminated wildlife. Additional information on safety, training and the potential risks associated with wildlife rescue and rehabilitation can be found in ***Best Practices for***

Migratory Bird Care During Oil Spill Response:
http://www.fws.gov/contaminants/OtherDocuments/best_practices.pdf

Two Occupational Safety and Health Administration (OSHA) regulations cover the majority of occupational health and safety issues encountered during wildlife rescue and rehabilitation: The Hazardous Wastes Operations and Emergency Response rule (29 CFR 1910.120) and the OSHA Hazard Communication Standard (29 CFR 1910.1200).

The Hazardous Wastes Operations and Emergency Response rule (also referred to as HAZWOPER) regulates organizations or individuals involved in wildlife retrieval and rehabilitation efforts. Because each state may also have its own worker safety requirements; coordination with the appropriate state agency should also be conducted to ensure those requirements are met. Rehabilitation organizations are legally required to educate and protect all employees, including volunteers. Individuals working with animals need information concerning all potential hazards associated with the handling of those animals. The following minimum requirements should be applied to wildlife rescue and rehabilitation personnel, including volunteers:

- Wildlife rescue and rehabilitation management personnel - this is the core team of certified rehabilitators who will direct operations. These people must have 24 hours of classroom training in hazardous waste operations and emergency response.

- Rehabilitation facility volunteers - these volunteers work at the rehabilitation facility (typically located well away from the spill site) under the direction of the facility management team. They are not allowed **on-scene** (within the response center and staging areas), nor in the **"hot zone"** (impacted area) unless additional training is provided. Volunteers working in this category must receive a minimum of four hours of training in the Hazard Communication Program before they can begin work.

- Retrieval volunteers - these volunteers work under the direction of the search and rescue management team and may be allowed on-scene, but not in the "hot zone". Volunteers working in this category must receive 4 to 8 hours of training in the Hazard Communication Program before they can begin work.

- "Hot zone" wildlife retrieval and capture activities must be performed by personnel having a minimum of 40 hours of classroom safety training meeting OSHA guidelines for hazardous waste workers, including eight hour annual refresher training.

The OSC, in consultation with OSHA's representative to the Regional Response Team, has responsibility for making assessments when training requirements are in question.

6.0 EVALUATING THE INTERFACE OF THE FWSEA WITH NON-FEDERAL RESPONSE PLANS

Section 300.210(c)(4)(i) of the NCP mandates that the Fish and Wildlife Annex to each Area Contingency Plan define the requirements for evaluating its compatibility with non-Federal

response plans on issues affecting fish and wildlife, their habitat, and sensitive environments. The final rule on Oil Pollution Prevention for Non-Transportation-Related Onshore Facilities, 40 CFR Part 112, requires facilities with a total oil storage capacity greater than or equal to one million gallons to submit response plans if located at a distance such that a discharge of oil could cause injury (as defined at 40 CFR 112.2) to fish, wildlife, sensitive environments and public water intakes. Facility owners or operators must determine the maximum distance at which a worst case oil spill from their facility could cause injury to fish and wildlife and sensitive environments and develop a plan for mitigating that discharge's potential adverse effects. Facility plans must be consistent with this Annex. EPA and the USCG review and approve Facility Response Plans for compatibility with this Annex. Joint exercises will be conducted to test facility plans and their interface with this Annex.

Disclaimer - Mention of trade names, contractors, commercial products or vendors does not constitute endorsement or recommendation by the U. S. Department of the Interior or the U.S. Environmental Protection Agency.

ATTACHMENT 1

CONTACTS FOR NATURAL RESOURCES TRUSTEES AND/OR NATURAL RESOURCES MANAGERS

Federal Natural Resources Trustee and/or Manager Contacts:

U.S. Department of the Interior (Designated Federal Trustee)

Office of Environmental Policy and Compliance (OEPC)
Andrew L. Raddant - Regional Environmental Officer (Trustee Contact)
408 Atlantic Avenue, Room 142
Boston, MA 02210-3334
Office hours: **(617) 223-8565** Emergency**: (617) 592-5444**
Email: Andrew_Raddant@ios.doi.gov Fax: (617) 223-8569

Alternate:
Office of Environmental Policy and Compliance (OEPC)
Michael Chezik - Regional Environmental Officer
Custom House, Room 244
200 Chestnut Street
Philadelphia, PA 19106
Office hours: **(215) 597-5378** Emergency: **(215) 266-5155**
Email: Michael_Chezik@ios.doi.gov Fax: (215) 597-5012

DOI Bureaus with land management responsibilities:

U.S. Fish and Wildlife Service
Regional Office - Region 5
Timothy E. Fannin - Regional Spill Response Coordinator
300 Westgate Center Drive
Hadley, MA 01035
Office hours: **(413) 253-8646** Emergency: **(413) 539-3194**
Email: Tim_Fannin@fws.gov Fax: (413) 253-8482

National Park Service
Dave L. Anderson
1201 Eye Street, NW
Washington, DC 20005
Office hours: (202) 513-7186 Emergency: (240) 205-3203
Email: D_L_Anderson@nps.gov Fax: (202) 371-1900

Daniel Hamson
1201 Eye Street, NW
Washington, DC 20005
Office hours: **(202) 513-7194** Fax: (202) 371-1710

Email: Daniel_Hamson@nps.gov

Bureau of Indian Affairs
Chet McGhee
Eastern Regional Office
545 Marriott Drive, Suite 700
Nashville, TN 37124
Office Hours: **(615) 564-6834** Emergency: **(615) 289-7906**
Fax: (615) 564-6701

Bureau of Indian Affairs
Kurt Chandler
Eastern Regional Office
545 Marriott Drive, Suite 700
Nashville, TN 37124
Office Hours: **(615) 564-6832** Emergency: **(615) 289-3292**
Fax: (615) 564-6701

Bureau of Land Management
Eastern Area Office
Singh Ahuja
310 Wisconsin Ave., Suite 450
Milwaukee, WI 53203
Office Hours: **(414) 297-4429** Fax: (414) 297-4409

U.S. Department of Commerce
National Oceanic and Atmospheric Administration (Designated Federal Trustee)
Steve Lehmann
Office hours: **(617) 223-8061** Emergency: **(617) 877-2806**
Email: Steve.Lehmann@noaa.gov Fax: (617) 223-8013

U.S. Department of Agriculture
U.S. Forest Service, RRT Representative (Trustee Contact)

U.S. Department of Defense
RRT Representative (Trustee Contact)

U.S. Department of Energy
RRT Representative (Trustee Contact)

State Natural Resources Trustees and/or Manager Contacts:

Connecticut
State of Connecticut Department of Environmental Protection
Gina McCarthy, Commissioner
79 Elm Street

Hartford, CT 06106-5127
Phone: (860) 424-3001 Fax: (860) 424-4051
http://www.ct.gov/dep/site/default.asp
Email: gina.mccarthy@po.state.ct.us

Maine
State of Maine Department of Environmental Protection
David Littell, Commissioner

Massachusetts
Executive Office of Energy and Environmental Affairs
Ian A. Bowles, Secretary
100 Cambridge, 9th Floor
Boston, Massachusetts 02114
Phone: (617) 626-1000 Fax: (617) 626-1181
http://www.mass.gov/envir/eoea.htm
Email: env.int@state.ma.us

New Hampshire
Department of Environmental Services
Thomas S. Burack, Commissioner
29 Hazen Drive
P.O. Box 95
Concord, NH 03302-0095
Phone: (603) 271-4974 Fax: (603) 271-2867
http://www.des.state.nh.us/
Email: tburack@des.state.nh.us

Rhode Island
Department of Environmental Management
W. Michael Sullivan, Director
235 Promenade Street
Providence, RI 02908
Phone: (401) 222-4700 Fax: (401) 222-6802
http://www.dem.ri.gov/index.htm
Email: michael.sullivan@dem.ri.gov

Vermont
Department of Environmental Conservation
Jeffrey Wennberg, Commissioner

103 South Main Street, 1 South Building
Waterbury, VT 05671Phone: (802) 241-3808 Fax: (802)244-5141
http://www.anr.state.vt.us/dec/dec.htm
Email: jeff.wennberg@state.vt.us

ATTACHMENT 2

FEDERALLY LISTED ENDANGERED (E) AND THREATENED (T) SPECIES IN REGION I BY STATE

Animals **Status**	**Name**	**Scientific Name**
E	Beetle, American burying	*Nicrophorus americanus*
E	Curlew, Eskimo	*Numenius borealis*
T	Plover, piping except Great Lakes	*Charadrius melodus*
E	Puma (=cougar), eastern	*Puma(=Felis) concolor couguar*
T	Sea turtle, green except where endangered	*Chelonia mydas*
E	Sea turtle, hawksbill	*Eretmochelys imbricata*
E	Sea turtle, Kemp's ridley	*Lepidochelys kempii*
E	Sea turtle, leatherback	*Dermochelys coriacea*
T	Sea turtle, loggerhead	*Caretta caretta*
E	Sturgeon, shortnose	*Acipenser brevirostrum*
E	Tern, roseate northeast U.S. nesting pop.	*Sterna dougallii dougallii*
T	Tiger beetle, northeastern beach	*Cicindela dorsalis dorsalis*
T	Tiger beetle, Puritan	*Cicindela puritana*
T	Turtle, bog (=Muhlenberg) northern	*Clemmys muhlenbergii*
E	Wedgemussel, dwarf	*Alasmidonta heterodon*
E	Whale, finback	*Balaenoptera physalus*
E	Whale, right	*Balaena glacialis (incl. australis*)
E	Wolf, gray lower 48 States, except MN and where XN; Mexico	*Canis lupus*

Plants

E	Chaffseed, American	*Schwalbea americana*
E	Gerardia, sandplain	*Agalinis acuta*
T	Pogonia, small whorled	*Isotria medeoloides*

Animals		
Status	**Name**	**Scientific Name**
E	Beetle, American burying	*Nicrophorus americanus*
E	Curlew, Eskimo	*Numenius borealis*
T	Lynx, Canada, lower 48 states	*Lynx canadensis*
T	Plover, piping except Great Lakes	*Charadrius melodus*
E	Puma (=cougar), eastern	*Puma (=Felis) concolor couguar*
E	Salmon, Atlantic Gulf of Maine Atlantic Salmon DPS	*Salmo salari*
E	Sea turtle, leatherback	*Dermochelys coriacea*
E	Sturgeon, shortnose	*Acipenser brevirostrum*
E	Tern, roseate northeast U.S. nesting pop.	*Sterna dougallii dougallii*
E	Whale, finback	*Balaenoptera physalus*
E	Whale, right	*Balaena glacialis (incl. australis*)
E	Whale, humpback	*Balaena novaeangliae*
E	Wolf, gray lower 48 States, except MN and where XN; Mexico	*Canis lupus*
Plants		
E	Lousewort, Furbish	*Pedicularis furbishiae*
T	Orchid, eastern prairie fringed	*Platanthera leucophaea*
T	Pogonia, small whorled	*Isotria medeoloides*

Massachusetts		
Animals		
Status	**Name**	**Scientific Name**
E	Beetle, American burying	*Nicrophorus americanus*
E	Butterfly, Karner blue	*Lycaeides melissa samuelis*
E	Curlew, Eskimo	*Numenius borealis*
T	Plover, piping except Great Lakes	*Charadrius melodus*
E	Plymouth Re-Bellied Turtle	*Pseudemys rubriventris bangsi*
E	Puma (=cougar), eastern	*Puma (=Felis) concolor couguar*
E	Sea turtle, hawksbill	*Eretmochelys imbricata*
E	Sea turtle, Kemp's ridley	*Lepidochelys kempii*
E	Sea turtle, leatherback	*Dermochelys coriacea*
T	Sea turtle, loggerhead	*Caretta caretta*
E	Sturgeon, shortnose	*Acipenser brevirostrum*
E	Tern, roseate northeast U.S. nesting pop.	*Sterna dougallii dougallii*
T	Tiger beetle, northeastern beach	*Cicindela dorsalis dorsalis*
T	Tiger beetle, Puritan	*Cicindela puritana*
T	Turtle, bog (=Muhlenberg northern)	*Clemmys muhlenbergii*
E	Wedgemussel, dwarf	*Alasmidonta heterodon*
E	Whale, blue	*Balaenoptera musculus*
E	Whale, finback	*Balaenoptera physalus*
E	Whale, humpback	*Megaptera novaeangliae*
E	Whale, right	*Balaena glacialis incl. australis*
E	Whale, Sei	*Balaenoptera borealis*
E	Wolf, gray lower 48 States, except MN and where XN; Mexico	*Canis lupus*

Plants		
T	Amaranth, seabeach	*Amaranthus pumilus*
E	Bulrush, Northeastern	*Scirpus ancistrochaetus*
E	Chaffseed, American	*Schwalbea americana*
E	Gerardia, sandplain	*Agalinis acuta*
T	Pogonia, small whorled	*Isotria medeoloides*

Animals		
Status	**Name**	**Scientific Name**
E	Beetle, American burying	*Nicrophorus americanus*
E	Butterfly, Karner blue	*Lycaeides melissa samuelis*
E	Curlew, Eskimo	*Numenius borealis*
T	Lynx, Canada, lower 48 states	*Lynx canadensis*
T	Plover, piping except Great Lakes	*Charadrius melodus*
E	Puma (=cougar, eastern)	*Puma =Felis concolor couguar*
E	Sea turtle, leatherback	*Dermochelys coriacea*
T	Tiger beetle, Puritan	*Cicindela puritana*
E	Wedgemussel, dwarf	*Alasmidonta heterodon*
E	Whale, finback	*Balaenoptera physalus*
E	Wolf, gray lower 48 States, except MN and where XN; Mexico	*Canis lupus*
Plants		
E	Bulrush, Northeastern	*Scirpus ancistrochaetus*
E	Milk-vetch, Jesup's	*Astragalus robbinsii var. jesupi*
T	Pogonia, small whorled	*Isotria medeoloides*

Rhode Island		
Animals		
Status	**Name**	**Scientific Name**
E	Beetle, American burying	*Nicrophorus americanus*
E	Curlew, Eskimo	*Numenius borealis*
T	Plover, piping except Great Lakes	*Charadrius melodus*
E	Puma (=cougar, eastern)	*Puma =Felis concolor couguar*
E	Sea turtle, hawksbill	*Eretmochelys imbricata*
E	Sea turtle, Kemp's ridley	*Lepidochelys kempii*
E	Sea turtle, leatherback	*Dermochelys coriacea*
T	Sea turtle, loggerhead	*Caretta caretta*
E	Sturgeon, shortnose	*Acipenser brevirostrum*
E	Tern, roseate northeast U.S. nesting pop.	*Sterna dougallii dougallii*
T	Tiger beetle, northeastern beach	*Cicindela dorsalis dorsalis*
E	Whale, finback	*Balaenoptera physalus*
E	Whale, humpback	*Megaptera novaeangliae*
E	Whale, right	*Balaena glacialis incl. australis*
E	Wolf, gray lower 48 States, except MN and where XN; Mexico	*Canis lupus*
Plants		
T	Amaranth, seabeach	*Amaranthus pumilus*
E	Gerardia, sandplain	*Agalinis acuta*
T	Pogonia, small whorled	*Isotria medeoloides*

Vermont		
Animals		
Status	**Name**	**Scientific Name**
E	Bat, Indiana	*Myotis sodalis*
E	Beetle, American burying	*Nicrophorus americanus*
E	Butterfly, Karner blue	*Lycaeides melissa samuelis*
E	Curlew, Eskimo	*Numenius borealis*
T	Lynx, Canada, lower 48 states	*Lynx canadensis*
T	Plover, piping except Great Lakes	*Charadrius melodus*
E	Puma (=cougar), eastern	*Puma(=Felis) concolor couguar*
E	Sea turtle, leatherback	*Dermochelys coriacea*
T	Tiger beetle, Puritan	*Cicindela puritana*
E	Wedgemussel, dwarf	*Alasmidonta heterodon*
E	Wolf, gray lower 48 States, except MN and where XN; Mexico	*Canis lupus*
Plants		
E	Bulrush, Northeastern	*Scirpus ancistrochaetus*
E	Milk-vetch, Jesup's	*Astragalus robbinsii var. jesupi*
T	Pogonia, small whorled	*Isotria medeoloides*

ATTACHMENT 3

MOA CHECKLISTS FOR ENDANGERED SPECIES

ESA Pre-Spill Planning

	FOSCs involve the following representatives in obtaining assistance with knowledge of, or access to information on listed species and critical habitat: • NOAA's representative to the Regional Response Team (RRT), the Scientific Support Coordinator (SSC), & NMFS' Regional Field Office; • Department of the Interior's (DOI) Office of Environmental Policy and Compliance (OEPC), U.S. Fish and Wildlife Service (USFWS) Regional Response Coordinator (RRC), and local USFWS field office(s) in the areas covered in the plan; and, • State & local emergency response representatives. FOSCs may also submit a written request for listed endangered species and critical habitats present in the area covered by their ACP. Include the specific geographical area of concern and a description of the response measures under consideration for that area.
	If listed species and/or critical habitat present, USFWS, NMFS and FOSC jointly complete the Planning Template in Appendix C of the MOA, which constitutes *informal consultation*. This shall include identification of: • The potential for oil spill response activities to adversely affect listed species and critical habitat; • Information on sensitive areas; and, • Emergency response notification contacts.
	Develop and incorporate into the ACP response methods to minimize identified adverse effects. • Jointly with USFWS and NMFS, the FOSC should consider pre-approved response methods as part of the Area Committee planning process. • Consider tradeoffs and sensitive area priorities and incorporate in ACP.
	If no potential adverse effects are identified or if specific sources of potential adverse effects are identified and removed, FOSCs must seek a concurrence letter from USFWS or NMFS for documentation. Once USFWS or NMFS provides a concurrence letter, ESA Section 7(a)(2) requirements will be deemed to have been met.

	If it cannot be determined that adverse effects will not occur, the FOSC must submit an initiation package, including:
	• Written request for formal consultation;
	• Biological Assessment, based on information gathered to complete the Planning Template in Appendix C to the MOA, including descriptions of:
	  o Proposed action;
	  o Specific area that may be affected by the action;
	  o Listed species or critical habitat that may be affected;
	  o How the action may affect listed species or critical habitat and an

	analysis of cumulative effects; o Relevant reports; and o Other relevant information on the action, listed species, or critical habitat.
	FOSC should expect to receive a Biological Opinion from USFWS and NMFS within 135 days after receipt of the initiation package. • *No jeopardy or adverse modification opinion*: If the Biological Opinion includes an incidental take statement, the FOSC (with Area Committee) shall decide how to incorporate the required terms and conditions to implement reasonable & prudent measures to reduce incidental takes of listed species or designated habitat. • *Jeopardy or adverse modification opinion*: If opinion includes an alternative to the proposed action, the FOSC (with Area Committee) shall decide whether to incorporate the alternative and advise USFWS and NMFS of the decision.
	Incorporate information and correspondence developed from completion of the planning template (MOA) into the ACPs directly or by reference, as appropriate. USFWS, NMFS and the FOSC maintain copies of all documents. • The planning work should emphasize the time-sensitive nature of spill response, and recognize the tradeoffs that result from any action or inaction. • Provide guidance on early determination of informal versus formal consultation, possibly in matrix form. A matrix for each (coastal) species should provide countermeasures on one axis, and the potential effects on the other (no effect, not likely to adversely affect, may adversely affect), which would guide the amount of required consultation during a spill event. The ACP should reflect the countermeasures that were developed during consultation.

ESA Emergency Response

	FOSC notifies appropriate representatives of NOAA, USFWS, State Natural Resource Trustees and/or other agencies and stakeholders once an oil spill has occurred with the potential for impacting environmentally sensitive areas, endangered species and/or critical habitats.
	FOSC gathers information about areas impacted, sensitive areas, species and critical habitats: • Determine data needs and who will be providing or collecting the data. • Use or develop data collection forms to facilitate consistent and precise data compilation.

	If listed species or critical habitats are impacted or could be present in the area affected by response activities, initiate emergency consultation by contacting the USFWS and NMFS through agreed-upon procedures.
	After the ICS is established, an Endangered Species expert is appointed and will serve in the ICS command structure to help ensure that the necessary information is gathered at the Incident Command Post (ICP) daily.

	• If appropriate, the SSC and/or the USFWS RRC may coordinate endangered species expertise for the FOSC. • If there is no USFWS or NMFS representative in the ICS, the FOSC must ensure that the SSC and/or DOI are apprised of the situation. • Information gathered will be used in the consultation. *Note*: As necessary, the FOSC can make funding available to USFWS and/or NMFS for costs incurred in providing any agreed upon assistance such as preparing the Biological Assessment for formal consultation. However, the USFWS and/or NMFS are not reimbursed for completing a Biological Opinion.

	Develop Incident Action Plan with strategies based on the specifics of the spill situation. This plan will serve as formal documentation of actions directed to minimize the impacts of response actions.
	Emergency consultation continues until the FOSC determines that the spill response is complete.
	USFWS and/or NMFS provide the FOSC with timely recommendations to avoid and/or minimize impacts to listed species and critical habitat. If an incidental take is anticipated, USFWS and/or NMFS would advise FOSC of ways to minimize this, or, if this is not possible, document the actual take of listed species.
	The FOSC requests USFWS and/or NMFS representatives on-scene (or someone else mutually agreed upon) to gather and document the information necessary for post-emergency Formal Consultation, including: • Description of the emergency (the oil spill response) • Evaluation of the emergency response actions and their impacts on listed species and their habitats, including documentation of how USFWS and/or NMFS recommendations were implemented, and the results of implementation in minimizing take. • Comparison of the emergency response actions with the pre-planned countermeasures and information in the ACP.
	Notify/alert Service representatives, SSC and/or DOI representative of any changes in response operations due to weather, extended operations or some other circumstance.
	Obtain information from the USFWS or NMFS of seasonal variances (e.g. bird migration), or other natural occurrences affecting the resource.
	FOSC or a representative designated by the FOSC should maintain a record of all written and oral communications during the response (See Appendix B of the ESA MOA for a means for tracking this information), to include recommended response procedures and incidental take.

ESA Post-Response

	FOSC determines when removal operations are complete and closes the case ensuring that: • Lessons learned are recorded; • Documentation is filed; and, • Area Committee is advised of any necessary changes to the ACP (See pg. 51,

	ESA MOA Guidebook). *Note:* The Emergency Consultation Checklist from the MOA Guidebook should be compiled BEFORE the FOSC determines that the response operations are completed and the case is closed. Oil Spill Liability Trust Fund (OSLTF) funding is not available AFTER the case is closed.
	FOSC, USFWS and NMFS jointly evaluate the impacts of response activities on listed species and critical habitat. This is to be based on information gathered during the response, not on any new studies.
	If joint evaluation concludes that listed species and/or critical habitat were not adversely affected by response activities, the consultation process is complete. The FOSC must send a letter to USFWS and/or NMFS including: • Report of this agreement; and, • Request a letter of concurrence from USFWS and/or NMFS.
	If joint evaluation results in a disagreement between USFWS, NMFS, and the FOSC, USFWS and/or NMFS will send the FOSC a letter stating why they believe there were adverse effects on listed species or critical habitat. The FOSC may act on the USFWS/NMFS reply or simply document the response.
	If impacts have occurred, the FOSC sends a letter to USFWS and/or NMFS to initiate *Formal Consultation*. Enclose the information gathered during the response with any modifications that may have been made during the post-response joint evaluation. • This can be done by finalizing the Emergency Consultation Checklist from Appendix B of the MOA and submitting it with a cover letter and a request for formal consultation from Appendix E as an initiation package to the Service(s). • Also see, Documenting the Risk Assessment, pg. 65 of the Guidebook. *Note:* If a USFWS representative assists in preparing the initiation package, the same representative will NOT be responsible for reviewing it.
	The USFWS and/or NMFS have 30 days from receipt of the initiation package to determine if the package is complete. When complete, they issue a Biological Opinion within 135 days.

ATTACHMENT 4

HISTORIC PROPERTIES CHECKLIST

The process outlined below will be implemented by FOSCs during *emergency response* activities in order to carry out the PA.

STEP 1: Receive notification of oil discharge or hazardous substance release

STEP 2: Determine if Historic Properties need to be considered

Does the spill or release fall into one of the following categories listed in the following table of exclusions?

☐ Yes
☐ No

If the answer is "YES," no other actions regarding historic protection are required unless any of the following characteristics apply:

- Previously unidentified historic properties are discovered during the response;
- The State Historic Preservation Officer or appropriate Federal, Indian, or Native Hawaiian organizations notifies the FOSC that a categorically excluded release or spill may have the potential to affect a historic property;
- The FOSC is not sure whether a release or spill fits into one of the categories listed in the exclusion table;
- At any time, the specifics of a release or spill change so it no longer fits into one of the categories listed above;
- The spill or release is greater than 100,000 gallons.

If the answer is "NO" proceed to Step 3.

Spills/Releases Categorically Excluded From Additional NHPA Section 106 Compliance.

Spills/releases onto (which stay on):

- Gravel pads
- Roads (gravel or paved, not including the undeveloped right-of-way)
- Parking areas (graded or paved)
- Dock staging areas less than 50 years old
- Gravel causeways
- Artificial gravel islands
- Drilling mats, pads, and/or berms
- Airport runways (improved gravel strips and/or paved runways)

Spills/releases into (that stay in):

- Lined pits; e.g., drilling mud pits and reserve pits;
- Water bodies where the release/spill: 1) will not reach land or submerged land; and, 2) will not include emergency response activities with land or submerged land-disturbing components;
- Borrow pits;
- Concrete containment areas.

Spills/releases of: Gases (e.g., chlorine gas).

STEP 3: To continue in accordance with the National Programmatic Agreement, Activate Federal On-Scene Coordinator's Historic Properties Specialist

Information provided to the Historic Properties Specialist upon activation includes but is not necessarily limited to the following:

Name of Incident:
Date/time of incident:

Spill/release location: land_____; water_____;

land/water_____

If on land, estimate number of acres contaminated_____

Spill/release coordinates: _____latitude; _____longitude.

If on land, _____township; _____range; _____section

Distance to nearest water body, if on land: _____km/mi

Distance to nearest land, if in water: _____km/mi

Product released: _____

Estimated volume of product released: _____gals/bbls

Release status: Stopped_____; Continuing_____; Unknown_____

Is spill/release: Contained_____; Spreading_____; Unknown_____

Estimated volume of product potentially released: _____gals/bbls/other measure

Have Regional Response Strategies been approved for the area affected or potentially-affected by the spill/release (see Step 5)? Yes_____; No_____

Describe any response actions proposed or taken that include ground-disturbing activities

STEP 4: Consultation and Coordination

The Historic Properties Specialist will notify and consult with the parties as appropriate and provide them with incident information as outlined in Step 3. Consultation will continue as the Historic Properties Specialist assesses potential effects of emergency response strategies on historic properties.

STEP 5: Potential Emergency Response Strategies for Historic Properties Protection

The Historic Property Specialist recommends to the FOSC response actions and policies developed through the assessment and consultation process to help minimize potential impacts to historic properties. Potential response strategies are included in the following table:

RESPONSE STRATEGY
Mechanical Recovery (e.g. use of skimmers, booms, sorbents)
In Situ Burning
Dispersant Use
Protective or diversionary booming
Covering site with Protective Material
Construction of Berms or Trenches to Divert Product Away from Sites/Areas
On-scene Inspections by the Federal OSC Historic Properties Specialist or Individual(s) Authorized by the Federal OSC Historic Properties Specialist
Participation in Shoreline Cleanup Assessment Teams by the Federal OSC Historic Properties Specialist or individual(s) authorized by the Federal OSC Historic Properties Specialist
Participation in Shoreline Cleanup Teams by the Federal OSC Historic Properties Specialist or individual(s) authorized by the Federal OSC Historic Properties Specialist
Provision of Information on Historic Properties Protection to Response Personnel
Provision of Information to the Federal OSC on Historic Properties Protection for Areas/Locations Proposed for emergency-response related support activities (e.g. helipads and staging areas)

*** Note: These response strategies are not listed in order of precedence. In addition, other response strategies for the protection of historic properties may be identified and recommended to the FOSC for use during an incident response.**

STEP 6: Documentation of Actions Taken That Resulted in Unavoidable Injury To

Historic Properties.

The following form should be completed and submitted, along with any additional supporting documentation, in a reasonable and timely manner to the appropriate entities listed below:

Name of incident:

Date/time of incident:

Location of incident:

Brief description of response action approved (including the date) by the Federal On-Scene Coordinator (OSC) where protecting public health and safety was in conflict with protecting historic properties:

Brief description of why protecting public health and safety could not be accomplished while also protecting historic properties:

Federal OSC Name and Title:
Federal OSC Signature:
Date of Signature:

Faxed to:

- ☐ SHPO
- ☐ (Name and fax number of potentially-affected resource managers/trustees):
- ☐ (Name and fax number of potentially-affected resource managers/trustees):
- ☐ (Name and fax number of potentially-affected resource managers/trustees):

ATTACHMENT 5

WILDLIFE DAMAGE MANAGEMENT EQUIPMENT SUPPLIERS

Repellents

Electronic Alarm and Recorded Bird Repellents

Bird-X, Inc.
300 N. Elizabeth St.
Chicago, IL 60607
Tel: (800) 662-5021
Fax: (312) 226-2480
http://www.bird-x.com/index.html

Falcon Safety Products Inc.
25 Imclone Drive
Branchburg, NJ 08876
Tel: 908-707-4900
Fax: 908-707-8855
http://www.falconsafety.com
(air horn)

Margo Supplies Ltd.
P.O.Box 5400
High River, Alberta, Canada
T1V 1M5
Tel: (403) 652-1932
Fax: (403) 652-3511
http://www.margosupplies.com
(microwave motion detector)

Reed-Joseph International Co.
P.O. Box 894
Greenville, MS 38702
Tel: (800) 647-5554
http://www.reedjoseph.com

Propane Exploders

C. Frensch, Ltd.,
4774 Hinan Drive
Beamsville,
Ontario, Canada L0R 1B1
Tel: (905) 563-4774
Fax: (905) 563-5063

(propane cannon)

B. M. Lawrence & Co.
601 Montgomery Street
San Francisco, CA 94111
(415) 981-3560

Spring Ledge Farms Inc
5438 State Route 14
Dundee, NY 14837
(607) 243-8123
http://www.springledgefarm.com/index.htm

Reed-Joseph International Co.
P.O. Box 894
Greenville, MS 38702
Tel: (800) 647-5554
http://www.reedjoseph.com

Pyrotechnic Devices

Reed-Joseph International Co.
P.O. Box 894
Greenville, MS 38702
Tel: (800) 647-5554
http://www.reedjoseph.com

Western Wildlife Control
P.O. Box 932
Canby, OR 97013
(503) 656-1999

Visual Bird Repellents

Bird-X, Inc.
300 N. Elizabeth St.
Chicago, IL 60607
Tel: (800) 662-5021
Fax: (312) 226-2480
http://www.bird-x.com/index.html

Edmund Scientific
60 Pearce Ave.
Tonawanda, NY 14150
Tel: (800) 728-6999
http://www.scientificsonline.com

(3’ balloons)

Kites at Old City
1201 Front Street
Sacramento, CA 95814
Tel: (916) 446-7565
http://www.kitesatoldcity.com
(hawk kite)

Mellinger's
2310 West South Range Road
North Lima, OH 44452
Tel: (800) 321-7444
Fax: (330) 549-3716\
(scarecrow)

Nishizawa (USA) Limited
19301 Pacific Gateway Drive
Torrance, CA 90502
Tel: (310) 532-7407
Fax: (310) 532-7408
(Mylar balloons, flash tape)

Orchard Equipment & Supply Co.
P.O. Box 540, Route 116
Conway, MA 01341
Tel: (800) 634-5557 or 413-369-4335
Fax: 413-369-4431
http://www.oescoinc.com
(balloons, tape)

Raven Industries, Inc.
PO Box 5107,
Sioux Falls, SD 57117
Tel: (605) 336-2750
http://www.ravenind.com/RavenCorporate/index.htm
(balloons)

Reed-Joseph International Co.
P.O. Box 894
Greenville, MS 38702
Tel: (800) 647-5554
http://www.reedjoseph.com

APPENDIX 1

ENVIRONMENTAL PROTECTION AGENCY & U.S. COAST GUARD JURISDICTIONAL BOUNDARY

APPENDIX 2

FEDERALLY-RECOGNIZED NATIVE AMERICAN TRIBES WITHIN REGION I AND NATIVE AMERICAN TRIBES CURRENTLY PETITIONING FOR FEDERAL RECOGNITION

FEDERALLY RECOGNIZED NATIVE AMERICAN TRIBES
WITHIN REGION I

The most recent information related to Federally Recognized Native American Tribes within Region I, and links to the tribal websites, can be found on the World Wide Web at http://www.epa.gov/NE/govt/tribes/.

CONNECTICUT					
Mashantucket Pequot Tribal Nation	EPA Mashantucket Pequot Tribal Nation Coordinator	Vacant			
	Mashantucket Pequot Tribal Nation Natural Resources Protection PO box 3202 Mashantucket, CT 06339-3060	Michael Boland	860-396-6740	860-396-6745	MBoland@MPTN.org
Mohegan Tribal Nation	EPA Mohegan Tribal Nation Coordinator	George Frantz	617-918-1883	617-918-1809	Frantz.George@epa.gov
	Mohegan Tribal Nation 5 Crowhill Road Uncasville, CT 06382	Dr. Norman Richards	860-862-6112	860-862-6129	Nrichards@moheganmail.com
	Mohegan Tribal Nation 5 Crowhill Road Uncasville, CT 06382	Dorrie Mongomery	860-862-6108		

FEDERALLY RECOGNIZED NATIVE AMERICAN TRIBES
WITHIN REGION I

MAINE					
Aroostook Band of Micmacs	EPA Aroostook Band of Micmacs Coordinator	Michael O'Brien	617-918-1649	617-918-1505	OBrian.Mike@epa.gov
	Aroostook Band of Micmacs 8 Northern Avenue Presque Isle, ME 04769	Fred Corey Environmental Director	207-764-7765	207-764-7667	fcorey@micmachealth.org
	Aroostook Band of Micmacs 8 Northern Avenue Presque Isle, ME 04769	David Macek Environmental Specialist	207-764-1972	207-764-7667	dmacek@micmachealth.org
	Aroostook Band of Micmacs 8 Northern Avenue Presque Isle, ME 04769	Sue Peterson Chemist	207-764-1972	207-764-7667	speterson@micmachealth.org
Houlton Band of Maliseet Indians	EPA Houlton Band of Maliseet Indians Coordinator	Jean Crocker	617-918-1498	617-918-2064	Crocker.Jean@epa.gov
	Houlton Band of Maliseet Indians 88 Bell Road Littleton, ME 04730	Sharri Venno Director of Environmental Planning	207-532-4273 x215	207-532-2660	envplanner@maliseets.com

FEDERALLY RECOGNIZED NATIVE AMERICAN TRIBES
WITHIN REGION I

Passamaquoddy Tribe Indian Township Reservation	EPA Passamaquoddy Tribe Indian Township Reservation Coordinator	Sarah White	617-918-1026	617-918-1291	White.Sarah@epa.gov
	Passamaquoddy Tribe Indian Township Reservation PO Box 301 Princeton, ME 04668	Trevor White Environmental Planner	207-796-2301 x232	207-796-5256	trevorwhite@passamaquoddy.com
Passamaquoddy Tribe Pleasant Point	EPA Passamaquoddy Tribe Pleasant Point Reservation Coordinator	Margaret McDonough	617-918-1276	617-918-1505	McDonough.Margaret@epa.gov
	Passamaquoddy Tribe Pleasant Point Reservation PO Box 343 Perry, ME 04667	Steve Crawford Environmental Planner	207-853-2600 x238	207-853-6039	stevecrawford@wabanaki.com

FEDERALLY RECOGNIZED NATIVE AMERICAN TRIBES
WITHIN REGION I

Penobscot Indian Nation	EPA Penobscot Indian Nation Indian Island Reservation Coordinator	Valerie Bataille-Ferry	617-918-1674	617-918-1505	Bataille.Valerie@epa.gov
	Penobscot Indian Nation Indian Island Reservation 12 Wabanaki Way Indian Island, ME 04468	John Banks Director of Natural Resources	207-827-7776 x7330	207-827-1137	jbanks@Penobscotnation.org
	Penobscot Indian Nation Indian Island Reservation 12 Wabanaki Way Indian Island, ME 04468	Daniel Kusnierz Water Resources Manager	207-827-7776 x7361	207-827-1137	pinwater@penobscotnation.org

FEDERALLY RECOGNIZED NATIVE AMERICAN TRIBES WITHIN REGION I

MASSACHUSETTS					
Wampanoag Tribe of Gay Head, Aquinnah	EPA Wampanoag Tribe of Gay Head, Aquinnah Coordinator	William Nuzzo	617-918-1682	617-918-1505	Nuzzo.William@epa.gov
	Wampanoag Tribe of Gay Head, Aquinnah 20 Black Brook Road Aquinnah, MA 02535	Brett Stearns Director of Natural Resources	508-645-9265 x170		bstearns@wampanoagtribe.net
	Wampanoag Tribe of Gay Head, Aquinnah 20 Blackbrook Road Aquinnah, MA 02535	Kerry Horman Environmental Program Coordinator	508-645-9265 x134	508-645-3790	khorman@wampanoagtribe.net
Mashpee Wampanoag Indian Tribal Council, Inc.	Mashpee Wampanoag Indian Tribal Council, Inc. 483 Great Neck Road, South Mashpee,Massachusetts 02649	Chairman Glenn Marshall	(508)477-0208	(508)477-1218	glennm@mashpeewampanoagtribe.com

FEDERALLY RECOGNIZED NATIVE AMERICAN TRIBES
WITHIN REGION I

RHODE ISLAND					
Narragansett Indian Tribe	EPA Narragansett Indian Tribe Coordinator	Ellie Kwong	617-918-1592	617-918-1505	kwong.ellie@epa.gov
	Narragansett Indian Tribe PO Box 268 Charlestown, RI 02813	Dinalyn Spears Director of Natural Resources	401-364-1100 X 210	401-364-6432	dspears@netsense.net
	Narragansett Indian Tribe PO Box 268 Charlestown, RI 02813	Greg Soder Environmental Specialist	401-364-1100 X 226	401-364-6432	gregsoder@hotmail.com

NATIVE AMERICAN TRIBES
CURRENTLY PETITIONING FOR FEDERAL RECOGNITION

CONNECTICUT					
Eastern Pequot Indians of Connecticut	391 Norwich Westerly Road PO Box 208 North Stonington,Connecticut 06359	Ms. Mary E. Sebastian	(860)535-1868	(860)535-8026	
Schaghticoke Indian Tribe http://www.schaghticoke.com/index.html	Schaghticoke Tribal Nation 33 Elizabeth Street 4th Floor Derby, Connecticut 06418	Chief Richard L Velky	(203)736-0782	(203)736-0875	office@schaghticoke.com
Golden Hill Paugeesukg Tribe http://paugussett.itgo.com/	Golden Hill Indian Reservation 95 Stanavage Rd Trumbull, Connecticut 06415	Mr. Aurelius H. Piper	(203)377-4410	(203)738-2051	

NATIVE AMERICAN TRIBES
CURRENTLY PETITIONING FOR FEDERAL RECOGNITION

MASSACHUSETTS					
Nipmuc Nation (Hassanamisco Band) http://www.nipmucnation.org/	Nipmuc Nation Tribal Office 156 Worcester Providence Rd. Sutton Square Mall Suite 28 Sutton, Massachusetts 01590	Chief Natachaman Walter Vickers	(508)865-9800	(508)865-9988	KGentzler@Nipmucnation.org

APPENDIX 3

EMERGENCY RESPONSE INFORMATION FOR STATES WITHIN REGION I

Federal Region I - Regional Response Team

Agency Representation

*** Indicates Alternate, \ Indicates nonmember resource person**

U.S. Dept. of Agriculture Supervisors Office White Mountains National Forest 719 Main Street Laconia, NH 03246	**Tom Brady**		**603-528-8746**	**603-528-8783**	tbrady@fs.fed.us
District Office White Mountains National Forest 660 Trudeau Road Bethleham, NH 03574	*****Mr. David Govatski Forest Haz Mat Coord	N/A	603-869-2626	603-869-5844	dgovatski@fs.fed.us
U.S. Dept of Commerce NOAA, G-MOR 2100 2nd Street SW, Room 2100 Washington, D.C. 20593-0001	**CDR John Steger**	*206-526-4911	**202-267-1321** (Contact using cell phone first)	**202-267-4085**	John.Steger@noaa.gov
NOAA Office of Response and Restoration USCG Reserve Training Center t-mer Yorktown , VA 23690	Gary Ott	*206-526-4911	757-856-2755	757-856-2394	Gary.Ott@noaa.gov
If RRT member or alternate cannot be reached, call the 24 hour number for the NOAA Hazmat Duty Offiicer at 206-526-4911.					
Scientific Support Coordinator for First Coast Guard District NOAA First Coast Guard District 408 Atlantic Avenue Boston, MA 02210	**Stephen M. Lehmann**	**206-526-6317**	**617-223-8016** **mobile phone: 617-877-2806**	**617-439-8013**	steve.lehmann@noaa.gov
If RRT member or alternate cannot be reached, call the 24 hour number for the NOAA Hazmat Duty Offiicer at 206-526-4911.					
* Region II (covers CT) COTP Long Island Sound NOAA\SSC Battery Park Building, Room 301 New York, NY 10004-1466	Mr. Edwin Levine	206-526-6317	212-668-6428	212-668-6370	ed.levine@noaa.gov

Federal Region I - Regional Response Team

Agency Representation

*** Indicates Alternate, \ Indicates nonmember resource person**

Agency/Address	Contact/Title	24hour No.	Office	Fax	e-mail address
U.S. Army Corps of Engineers Natural Disasters Manager U.S. Army Corps of Engineers 696 Virginia Road Concord, Massachusetts 01742-2751	**David Schafer New England except Lake Champlain**	**978-318-8321**	**978-318-8274**	**978-318-8378**	David.W.Schafer@naecz.usace.army.mil
695 Virginia Road Concord, MA 01742-2750	Rachel Fisher		978-318-8271	978-318-8378	
Natural Disasters Mngr U.S. Army Corps of Engineers 696 Virginia Road Concord, Massachusetts 01742-2751	* Richard Carlson New England except Lake Champlain		617-318-8321	617-318-8378	
Albany Field Office U.S. Army Corps of Engineers P.O. Box 209 Troy, N.Y. 12182	William Petronis, Chief **Lake Champlain Only**	518-272-6442	518-273-0870		william.f.petronis@nan02.usacy.army.mil
	Richard Campbell **Lake Champlain Only**	518-272-6442	518-273-0870		Richard.j.campbell@nan02.usacy.army.mil
U.S. Nuclear Regulatory Commission Program U.S. Nuclear Regulatory Comm - Region I 475 Allendale Road King of Prussia, PA 19406	**Hubert J. Miller, Regional administrator**	**301-816-5100**	**610-337-5299 Operator 610-337-5000**		Hjm1@nrc.gov
Division of Reactor Projects Projects Branch 4 475 Allendale Road King of Prussia, PA 19406	*Curtis Cowgill, Chief **Primary contact during response**		610-337-5233		cjc1@nrc.gov
Allendale Road King of Prussia, PA 19406	*A. Randolph Blough Director		610-337-5229		arb@nrc.gov

Federal Region I - Regional Response Team

Agency Representation

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Agency/Address	Contact/Title	24hour No.	Office	Fax	e-mail address
Emergency Response Specialist 475 Allendale Road King of Prussia, PA 19406	* Felicia Hinson		610-337-5391		fml@nrc.gov
U.S. Department of Energy U.S. Dept. of Energy JFK Federal Building One Congress Street, Room 675 Boston, MA 02203	**Hugh Saussy Director * Steve Lentore**		**617-565-9710 (Office hrs. only) 631-344-7309**	**617-565-9723**	
Department of Homeland Security 99 High Street, 5th Floor Boston, Ma 02110	**Dan McElhinney Division Director**	**978-461-5501**	**617-956-7567**	**617-956-7538**	dan.mcelhinney@dhs.gov
Department of Homeland Security 99 High Street, 5th Floor Boston, Ma 02110	* Michael Brazel Tech Hazard Program Specialist		617-956-7561	617-956-7538	michael.brazel@dhs.gov
Preparedness Division	* Robert Waters Tech Hazard Program Specialist		617-956-7551		robert.waters@dhs.gov
US Department of Homeland Security FEMA National Disaster Medical System (NDMS) JFK Federal Building, Room 2126 Boston, MA 02203	Mark Libby, RN, EMT-P Emergency Coordinator - Region I	24/7 EOC: 800-USA-NDMS ext. 2	617-565-2183	617-565-4265	mlibby@osophs.dhhs.gov
Department of Homeland Security 99 High Street, 5th Floor Boston, Ma 02110	Gary Kleinman, EMT-P Emergency Coordinator - Region I	24/7 EOC: 800-USA-NDMS ext. 2	617-956-4792	617-956-7538	gary.kleinman@dhs.gov
US Department of Health and Human Services USPHS - Region I JFK Fderal Building, Room 2100 Boston, MA 02203	**Betsy Rosenfeld, JD**	**617-594-7973**	**617-565-1505**	**617-565-1491**	brosenfeld@osophs.dhhs.gov

Federal Region I - Regional Response Team

Agency Representation

*** Indicates Alternate, \ Indicates nonmember resource person**

Agency/Address	Contact/Title	24hour No.	Office	Fax	e-mail address
US Department of Health and Human Services USPHS - Region I JFK Fderal Building, Room 2126 Boston, MA 02203	*Mark Libby	800-872-6367 ext. 2	617-565-2183	617-565-4265	mlibby@osophs.dhhs.gov
Regional Health Administrator JFK Federal Building Room 2100 Boston, MA 02203	CAPT Michael Milner		617-565-4999	617-565-1491	mmilner@osophs.dhhs.gov
Regional Emergency Coordinator Region I - New England US Dpt of Health and Human Services JFK Federal Bldg, Room 2100 Boston, MA 02203	Gregory T. Banner, M.S., C.E.M.		617-565-1485	617-565-1491	gregory.banner@hhs.gov
USPHS - Region II 26 Federal Plaza, Room 3835 New York, NY 12078	*****Thomas Mignone PHS Emergency Coordinator - Region II	800-872-6367 ext. 2	212-264-4494	212-264-1324	tmignone@hrsa.gov
Regional Liaison Officer to U.S. EPA New England Region Agency For Toxic Substances and Disease Registry (ATSDR), DHHS ATSDR, U.S. EPA Region I One Congress St, Suite 1100 (HBT) Boston, MA 02114-2023	**Bill Sweet, PhD, DABT Env. Health Scientist Senior Regional Representative**	**Cell: 617-842-1535 Blackberry PIN: 23C67FFC**	**617-918-1490**	**617-918-1494**	sweet.william@epa.gov
ATSDR, U.S. NE One Congress St, Suite 1100 (HBT) Boston, MA 02114-2023	Louise House, RN Environmental Health Scientist		Voicemail: 617-918-1491 Otis AFB Office: 508-968-4362	508-968-4365	lah3@cdc.gov
ATSDR, U.S. EPA NE One Congress St, Suite 1100 (HBT) Boston, MA 02114-2023	Gary Perlman, MPH, RS, EMT-B	Cell: 617-842-1560	617-918-1492	617-918-1494	gperlman@cdc.gov

Federal Region I - Regional Response Team

Agency Representation

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Agency/Address	Contact/Title	24hour No.	Office	Fax	e-mail address
ATSDR, U.S. NE One Congress St, Suite 1100 (HBT) Boston, MA 02114-2023	Kate Robbins	Cell: 617-827-3828	617-918-1493	617-918-1494	robbins.katherine@epa.gov
U.S. Department of the Interior Office of the Secretary Office of Environmental Policy & Compliance Room 142 408 Atlantic Ave Boston, MA 02210-3334	**Andrew L. Raddant Regional Environmental Officer**	**617-592-5444**	**617-223-8565**	**617-223-8569**	andrew_raddant@ios. doi.gov
U.S. Department of the Interior, Office of Environmental Policy & Compliance Custom House, Room 244 200 Chestnut Street Philadelphia, PA 19106	***** Michael Chezik, Regional Environmental Officer	215-266-5155	215-597-5378	215-597-9845	michael_chezik@ios.doi.gov
U.S. Department of Justice Environment & Natural Resources Div Environmental Enforcement Section U.S. Dept of Justice Room 11067 P.O. Box 7611 1425 NY Ave NW Benjamin Franklin Station Washington, DC 20044-7611	**Peter Flynn**		**202-514-4352**	**202-616-2427**	peter.flynn@usdoj.gov
Civil Division Suite 10100 P.O. Box 14271 1425 NY Ave NW Washington, DC 20005	***** Michelle Delemarre		202-616-4037	202-616-4159	michelle.Delemarre@usdoj.gov
U.S. Department of Labor U.S. DOL-OSHA JFK Federal Building Room E340 Boston, MA 02203	**Robert Hooper Asst Reg Admin for Technical Support**		**617-565-9860/ 9850**	**617-565-9827**	hooper_robert@dol.gov
DOL-OSHA JFK Federal Building Room E340 Boston, MA 02203	***** Fred Malaby		617-565-9855	617-565-9827	malaby_fred@dol.gov

Federal Region I - Regional Response Team

Agency Representation

*** Indicates Alternate, \ Indicates nonmember resource person**

Agency/Address	Contact/Title	24hour No.	Office	Fax	e-mail address
Department of State Office of Oceans Affairs Room 5801 OES/OA U.S. Department of State Washington, D.C. 20520					
Division of Ocean Law and Policy Room 5801 OES/OA U.S. Department of State Washington, D.C. 20520					
U.S. Dept. of Transportation USCG Chief, Marine Safety Division First Coast Guard District 408 Atlantic Avenue Boston, MA 02210-2209	**CAPT Mark Landry RRT CO-CHAIR**	**617-223-8555**	**617-223-8547**	**617-223-8074**	mhlandry@D1.USCG.mil
U.S. Dept. of Transportation USCG Chief, Marine Safety Division First Coast Guard District 408 Atlantic Avenue Boston, MA 02210-2209	*Scott Lundgren Alt. RRT CO-CHAIR	617-223-8555	617-223-8434	617-223-8094	slundgren@D1.USCG.mil
U.S. Dept. of Transportation USCG Chief, Marine Safety Division First Coast Guard District 408 Atlantic Avenue Boston, MA 02210-2209	LTJG Barry Breslin RRT Coordinator	617-223-8555	617-223-8587	617-223-8094	bbreslin@D1.USCG.mil
U.S. Environmental Protection Agency Emergency Planning & Response Branch One Congress St, Suite 1100 (HBR), Boston, MA 02114-2023	**Art Johnson Branch Chief RRT CO-CHAIR**	**617-723-8928**	**617-918-1251**	**617-918-1269**	johnson.arthur@epa.gov
Emergency Response & Removal I One Congress St, Suite 1100 (HBR), Boston, MA 02114-2023	David McIntyre Section Chief		617-918-1281	617-918-0281	mcintyre.dave@epa.gov

Federal Region I - Regional Response Team

Agency Representation

*** Indicates Alternate, \ Indicates nonmember resource person**

Agency/Address	Contact/Title	24hour No.	Office	Fax	e-mail address
Emergency Response & Removal II One Congress St, Suite 1100 (HBR), Boston, MA 02114-2023	Melanie Morash RRT Coordinator Emergency Response		617-918-1298	617-918-0298	morash.melanie@epa.gov
Office Site Remediation & Restoration One Congress St, Suite 1100 (HBR), Boston, MA 02114-2023	Susan Studlien Director		617-918-1502		studlien.susan@epa.gov
General Services Administration-Administrative Services General Services Administration Rm 985 O'Neil Federal Building Boston, MA 02222	**Michael Stec**		**617-565-7142**	**617-565-7648**	michael.stec@gsa.gov
General Services Administration Rm 985 O'Neil Federal Building Boston, MA 02222	Donna Madigan	617-233-9765	617-565-5768		donna.madigan@gsa.gov
U.S. Department of Defense U.S. Army Bldg 101, Fort Gillem Forest Park, GA 30050-7000	**LT COL Ron Kellis Commander, First U.S. Army**	**404-469-3820**	**404-469-3443**	**404-469-7761**	ronald.kellis@us.army.mil
U.S. Navy NOSC Reg I & II Commander Navy Region Northeast Attn: Code XDE Bldg 439, Room 107, Box 100 Groton, CT 06349-5100	**Andy Stackpole**	**860-694-3676**	**860-694-3976**	**860-694-3699**	andrew.stackpole@navy.mil
Commander Navy Region Northeast Naval Submarine Base New London Box 101, Bldg. 439, Room 105 Route 12 Groton, Connecticut 06349	*Dick Conant NE Regional Envir Compliance Officer	860-460-1632 Fire Chief: 860-694-3466	860-694-5649	860-694-5320	richard.conant@navy.mil

Federal Region I - Regional Response Team

Agency Representation

*** Indicates Alternate, \ Indicates nonmember resource person**

Agency/Address	Contact/Title	24hour No.	Office	Fax	e-mail address
* CO, Naval Computer and Telecommunications Station Cutler Cutler, ME 04626	*CDR J. Mikell, FIC	207-259-8911	207-259-8211		
* CO, Naval Computer and Telecommunications Station Cutler Cutler, ME 04626	* LT. Schroader		207-259-8274		
***** CO, Portsmouth Naval Shipyard Portsmouth, NH 03804-5000 Environmental Dept Code 120	*CAPT Williams, FIC Alt: Liz Cummings	207-438-2333	207-438-2700 207-438-4602		williamsvt@mail.ports.navy.mil/cummingslk@mail.ports.navy.mil
***** CO, Naval Education and Training Ctr Building One. Public Works Dept Newport, RI 02840-5001	*CAPT Ruth Cooper, FIC	401-763-3715	Daytime Duty 401-841-3715		cooperr@nsnpt.navy.mil
Environmental Equipment Deployment & On Scene Operations Team	**Tom Guillory**		**207-438-3577**		guillorythomasj@pns. port
*****CO, Naval Undersea Warfare Center Newport, RI 02841-5062	Joanne Spangenberg		401-832-1968	401-832-4745	spangenbergjf@npt.nuwc.navy.mil
***** CO, Naval Security Group Activity Winter Harbor ME 04693	CDR M. Rogers, FIC	207-963-7396	207-963-7396 x200		
***** CO, Naval Air Station Brunswick ME 04011	Greg Aprahand Fire Chief	207-921-3333	207-921-2445 207-921-2666		
U.S. Air Force AFNSEP Air Force National Security Emergency Preparedness 1283 Anderson Way S.W. Fort McPherson, GA 30330-1094	**Dayle Derr**	**404-464-4342**			

Federal Region I - Regional Response Team

Agency Representation

*** Indicates Alternate, \ Indicates nonmember resource person**

Agency/Address	Contact/Title	24hour No.	Office	Fax	e-mail address
AFNSEP Air Force National Security Emergency Preparedness 1283 Anderson Way S.W. Fort McPherson, GA 30330-1094	* Mike Studdard	404-464-4342			mike.studdard@afmsep.af.mil
U.S. Air Force 66th Air Base Wing 45 Arnold Street Hanscom AFB Bedford, MA 01731-2133	**Colonel Commander Danny K. Gardner**	**781-377-5144**	**781-377-2301 Public Affairs: 781-377-5191**		Danny.Garnder@Hanscom.af.mil
120 Grenier St Bedford MA 01731-2133	* Don Morris Chief Environment Flight		781-377-4667	781-377-8545	
439 Support Group 100 Lloyd Street Westover Air Force Base Chicopee, MA 01022-1825	Commander (Open) Colonel James Joyce		413-557-3044 Public Affairs: 413-557-3500 Base Operator: 413-557-1110		James.Joyce@westover.af.mil
439 Support Group 100 Lloyd Street Westover Air Force Base Chicopee, MA 01022-1825	* Freeman Wiley Executive Officer		413-557-3044		freeman.wiley@westover.af.mil
Army National Guard, Building #2816 Camp Edwards, MA 02542-5028	Brigadier General William Labrie Alt:(Open)	508-968-4386 Command Post	508-968-5830 Operator: 508-968-1000 Public Affairs: 508-968-4090		
Connecticut Dept of Environ. Protection Oil & Chemical Spill Response Div 79 Elm St 4th Floor Hartford, CT 06106-5127	**Marc DeCaprio Dir. Emerg. Response**	**860-424-3338, 3333**	**860-424-3361**	**860-424-4062**	marc.decaprio@po.state.ct.us

Federal Region I - Regional Response Team

Agency Representation

*** Indicates Alternate, \ Indicates nonmember resource person**

Agency/Address	Contact/Title	24hour No.	Office	Fax	e-mail address
Ct. Dept of Environ. Protection Oil & Chemical Spill Response Div 79 Elm St 4th Floor Hartford, CT 06106-5127	***** Ron Wofford		860-424-3377		
Ct. Dept of Public Health 79 Elm St 4th Floor Hartford, CT 06106-5127	Dr. Gerald Iwan		860-509-7333 860-509-7740		
Maine Dept of Environ. Protection Division of Response Services 17 State House Station Augusta, ME 04333-0017	**Barbara Parker, Director**		**207-287-2651 207-287-7190**	**207-287-7826**	barbara.t.parker@maine.gov
ME. Dept of Environ. Protection Division of Response Services 17 State House Station Augusta, ME 04333-0017	*		207-287-7752	207-287-7826	@maine.gov
Massachusetts Sec of Environmental Affairs 251 Causeway St. 9th Floor Boston, MA 02114	**Ellen Roy-Herzfelder**		**617-626-1000**	**617-626-1181**	
Dept. of Environ. Protection One Winter St, 3rd Floor Boston, MA 02108	* Edward Kunce, Acting Commissioner		617-292-5915	617-574-6880	edward.kunce@state.ma.us
Bureau of Waste Site Clean Up One Winter Street, 7th Floor Boston, MA 02108	John Fitzgerald Dep. Asst. Commission **1st contact**	888-556-1133	617-292-5767	617-292-5530	john.j.fitzgerald@state.ma.us
Bureau of Waste Site Cleanup One Winter Street, 7th Floor Boston, MA 02108	Albe Simenas **2nd contact**	888-556-1133	617-292-5507	617-292-5530	albe.simenas@state.ma.us
New Hampshire Office of Emergency Management State Office Park South 107 Pleasant Street Concord, NH 03301	**Donald P. Bliss, Acting Director**		**603-271-2231**	**603-225-7341**	

Federal Region I - Regional Response Team

Agency Representation

*** Indicates Alternate, \ Indicates nonmember resource person**

Agency/Address	Contact/Title	24hour No.	Office	Fax	e-mail address
NH Public Health Laboratories 29 Hazen Drive Concord, NH 03301	Christine L. Bean *Mary Ann Cooney	603-271-4567	603-271-4567 603-271-4501		
Rhode Island Dept. of Environmental Management 235 Promenade Street, Room 433 Providence, RI 02908	**Mike Mulhare**	**401-222-3070**	**401-222-4700 ext. 7124**	**401-222-6802**	**mmulhare@dem.state.ri.us**
RI Emergency Mgt Agency 645 New London Ave Cranston, RI 02902-3003	* John Aucott	401-946-9996	401-462-7127	401-944-1891	John.aucott@ri.ngb.army.mil
Vermont Dept. of Environ. Conservation Hazardous Materials Mgmt Division 103 S. Main Street, West of Bldg.Waterbury, VT 05671-0404	**Marc Roy**	**800-641-5005**	**802-241-3874**	**802-241-5141**	marcr@dec.anr.state.vt.us
Dept. of Environ. Conservation Hazardous Materials Mgmt Division 103 S. Main Street, West of Bldg., Waterbury, VT 05671-0404	*Richard Spiese		802-241-3888	802-241-3296	richards@dec.anr.state.vt.us

FEDERAL REGION I - REGIONAL RESPONSE TEAM
Transboundary Response Key Contacts

The purpose of this list is to make key agency contacts immediately available to support and assist the OSC's and RRT's in addressing issues that arise during a response.					
OERR Duty Officer	Duty Officer (Rotational)		703-976-5012 (Cell)		
EPA-CEPPO	Kim Jennings		202-564-7889		jennings.kim@epa.gov
DOS	Robert Blumberg		202-647-4971		
INS	Robert Neighbors		202-514-0599		robert.w.neighbors@usdoj.gov
USCS (Customs)	Ed Clawson		202-927-0028		
*USCG, Commander	Ray Perry		202-267-6716	202-267-4065	rperry@comdt.uscg.mil
DOD	Jorge Gracia		202-684-2060		
During non-office hours, please contact the NRC and request assistance from the EPA-ERD Duty Officer. *Contact regional office of the Coast Guard first about all non-legal issues. Contact this office for legal matters.					

APPENDIX 4

NOTIFICATION PROCEDURES

Notification Requirements

Due to the implementation of the One-Call@ system (A), EPA Region I now receives most notifications from the National Response Center (NRC) via call and follow up facsimile. All notifications need to be addressed as soon as they are received. If a notification comes to the Region from another source than the NRC, the notification must be called in to the NRC for record keeping purposes. The following procedures are to be followed to ensure that all reports are addressed promptly and appropriately.

A. **Calls from the NRC**

A.a Note the case number, pertinent information, provide your last name, and wait for the fax to arrive (no more than 15-20 minutes).
A.b Determine if incident is in EPA or Coast Guard zone, or involving tribal lands.
A.c Once received, call the reporting party and confirm the information recorded on the notification form. Collect and document any other pertinent information.
A.d Notify the appropriate state(s) and make all other appropriate notifications as documented in Attachment A.
A.e Document all conversations concerning the case in an Action Report on WebEOC, including the names and telephone numbers of all contacts and any other incident-related information. Print out the Action Report, maps, and any other pertinent information, attach to the NRC report and file.

B. **Other Calls**

B.a If notification comes from another source, document the notification on the Regional spill form or conference in the NRC.
B.b Determine if incident is in EPA or Coast Guard zone, or involving tribal lands.
B.c Notify the appropriate state(s) and make all other notifications as documented in Attachment A.
B.d Contact NRC and report the notification to them, and request a fax of the report.
B.e If not an OSC, the duty officer must make sure an OSC reviews the information and signs the notification form.

C. **HBR Case Number**

1. Each notification received by the Region is marked using the following system:

Spill Report Codes

123456A

Blocks 1 & 2	Indicate the last two digits of the fiscal year
Blocks 3 through 6	Indicates the incident number (consecutively from 0001 to 9999, starting over each fiscal year)
Block 7	Coded as described below

O = Oil Spill for potential enforcement case (DEP may/may not have responded)
L = Oil Spill Responded to by EPA
D = Oil Spill for Dead File (i.e. USCG zone or not to water, etc.)
H = Hazardous Substance Release
S = Hazardous Substance Release Responded to by EPA
R = Hazardous Substance Release forwarded to Regional Council
P = Pollution Related Report
I = Site Investigation
X = Exercise or Drill
C = Continuous Release
W = WMD Incident
T = Security Incident or Violation
Z = other

For example, an event coded 060126H indicates the 126th event in fiscal year 2006, a hazardous substance release.
.

C.b An ERNS number is assigned by the data entry person.

3. It is the responsibility of the person taking the call to log the spill report into the green log book.

4. It is the phone duty OSC=s responsibility to log the after hours reports into the green log book. If the phone duty OSC=s is not in the office the next work day, it is their responsibility to contact the response duty OSC to have them log in the reports and document the follow-up actions.

D. In the event that multiple notifications are received for an incident, each call is assigned its own case number with a reference to the original report number.

E. At the end of the day, the phone duty OSC and the response OSC should discuss any unfinished follow-ups or on-going situations.

F. **These are the NEW instructions for sending a voice mail to the call down list. This is used for emergency response notification only. Only the managers have the code to edit or modify this list.**

Do not use the old list (#11)!

ER Voice Mail Distribution List Procedures

SYSTEM: Octel 350 Voice Messaging System
SUBJECT: User Guide - Emergency Response Voice Mail Distribution Lists
DATE: 29-Dec-04
AUTHOR: Pete Major

Sending a Voice Mail Message through the ER Distribution List:

PROCEDURE:

Step 1: Enter your personal voice mailbox.
Step 2: Press **2 -** send messages.
Step 3: Record your message and enter # .
Step 4: Review your message by pressing **1**
Step 5: If satisfied press #, to re-record press *****.
Step 6: Enter ER Distribution List Number **30928** .
Step 7: Press **0** to hear more options
Step 8: Press 2 to mark urgent
Step 9: Press # to send message.

The names currently on the list are in Appendix 6 of the **Dual Phone and Response On-Call SOPs** from 12/14/2004

Attachment A
EPA Notification List

State(s) of Concern *(Always notify or verify notification)*

	Day	After Hours
Connecticut	860-424-3024	860-424-3338
Maine	207-287-7800(A) 207-941-4570(B) 207-764-0477(PI) 207-822-6300(P)	207-657-3030
Massachusetts	617-556-1133	617-556-1133
This is the statewide 24-hour number to report spills.		888-304-1133 (from outside 617 area code)
New Hampshire	603-271-2942 (Chem.) 603-271-3644 (Oil)	603-271-3636
Rhode Island	401-222-1360	401-222-3070
Vermont	802-241-3888	802-244-8721

Trustees *(Notify if response or trust resources may be affected)*

Department of the Interior	617-223-8565	617-592-5444 (Andrew Raddant - cell)

National Oceanographic &Atmospheric Administration
Notify NOAA for all spills or potential spills over 1000 gallons that could affect navigable waters.
Contacts: (if room, include addresses. If not, only include phone #s, fax #, email, in that order of preference).
24-hour telephone number for all NOAA trustee notifications: (206) 526-4911

Primary Representative: Steve Lehmann
Scientific Support Coordinator
(New England & Great Lakes)
National Oceanic & Atmospheric Administration
Office of Response & Restoration /
Emergency Response Division
408 Atlantic Avenue
Boston, MA 02110-3350
24Hour: (206) 526-4911
Office: (617) 223-8016
Fax: (617) 223-8013
Mobile: (617) 877-2806
Email: steve.lehmann@noaa.gov

Alternate: Ed Levine, Scientific Support Coordinator
USCG Battery Park Bldg.
1 South Street, Rm 321
New York, NY 10004
Office (212) 668-6428
24 Hr: (206) 526-4911
Cell: (206) 849-9941
Fax: (212) 668-6370
E-mail: Ed.Levine@noaa.gov

State Historic Preservation Officers *(Notify if response)*

	Office	***Fax***	***Cell***
Connecticut			
Dave Poirier (dave.poirier@po.state.ct.us)	860-566-3005	860-566-5078	(Attn. Dave Poirier)
Maine			
Dr. Arthur E. Speiss (arthur.spiess@maine.gov)	207-287-2132	207-287-2335	
Massachusetts			
Brona Simon (brona.simon@state.ma.us)	617-727-8470	617-727-5128	
New Hampshire			
James McConaha (james.mccanaha@dcr.nh.gov)	603-271-6435	603-271-3433	603-520-0388
Linda Wilson (linda.wilson@dcr.nh.gov)	603-271-6436		
Rhode Island			
Richard Greenwood	401-222-4134	401-222-2968	
Vermont			
Judith Williams Ehrlich (Judith.erlich@state.vt.us)	802-828-3049	802-828-3206	

Call and say that you are sending a fax for an EPA response. Send a fax of the EPA internal LAN notification to the appropriate SHPO office. For border issues, send to both SHPOs.

Tribes *(Notify if actual or potential impact to Tribal land or resources. See attached maps.)*

Houlton Band of Maliseet Indians	207-532-4273	Sharri Venno, Cara Ellis,
Passamaquoddy Tribe of Indians Indian Township	207-796-2301	Trevor White, Martin Dana

Pleasant Point	207-853-2600	Steve Crawford, Dale Mitchell
Penobscot Indian Nation	207-827-7776	John Banks, Daniel Kusnierz
Aroostook Band of Micmacs	207-764-1972	Fred Corey, David Macek
Wampanoag Tribe of Gay Head	508-645-9265	Bret Stearns, Kerry Horman
Mohegan Tribe	860-862-6112	Mark Brown, Christine Murtha
Mashantucket Pequot Tribal Nation	860-396-6740	Michael Thomas, Richard Hayward
Narragansett Indian Tribe	401-364-1100	Greg Soder, Dinalyn Spears
Eastern Pequot Tribal Nation	860-535-1868	Marcia Jones Flowers
Pawcatuck Eastern Pequot Tribe	860-572-9899	James A. Cunha, Jr.

Department of Transportation

Make this notification if an emergency situation is, or potentially will impact any transportation route, including road, rail, bridge, air, or water.

	Day	After hours
Terry Sheehan	617-223-8451	617-494-3370

United States Coast Guard *(Notify if potential impact to coastal zone)*

Sector Northern New England	
Portland	207-767-0303
Field Office Belfast, ME	207-338-2019
Field Office New Castle, NH	603-433-7324 x260
Sector Boston	617-223-3000
Sector Southern New England	
Providence	401-435-2300
Sector Long Island Sound	203-468-4444
Sector New York	212-668-7000
Lake Champlain Field Office Burlington, VT	802-864-6791

Public Health Issues *(Notify for actual or potential impacts to human health.)*

Organization	Work Hours Contacts	After Work Hours Contacts
Dept Of Health and Human Service/US Public Health Svc Region I - Boston	Gregory T. Banner, Regional Emergency Coordinator, Region I JFK Federal Bldg, Rm 2100. Boston, MA 02203. 617-565-1485 (O) 617-777-6404 (C)	Same. National Secretary's Operations Center (SOC) (24x7) 202-619-7800 1-866-447-7362
U.S. Department of Homeland Security Federal Emergency Management Agency National Disaster Medical System 99 High Street, 5th Floor Boston, Massachusetts 02110-2320 Region I - Boston	Gary J. Kleinman, EMT-P Emergency Coordinator, Region I (New England) Phone: 617 832-4792 Fax: 617 956-7538 E-Mail: Gary.Kleinman@dhs.gov Cell: 617 293-8655 Pager: 800 759-8888, PIN 130-3285 Mark C. N. Libby, R.N., EMT-P Regional Emergency Coordinator, Region I (New England) Phone:: 617-832-4793 Fax: 617-956-7507 E-mail: Mark.Libby@dhs.gov Mobile: 617-438-8986 [Nextel 180*84*132] Pager: 800-759-8888 PIN 106-2421	Same.

Organization	Work Hours Contacts	After Work Hours Contacts
Boston Public Health Commission (BPHC)	Executive Director John Auerbach, MBA. 617-534-5264 Public Information Officer - Kristin O'Connor 617-534-7148 Director, Communicable Disease Control - Anita Barry, MD, MPH 617-534-5611 Emergency Preparedness Coordinator - Suzanne Strickland 617-534-2333 Office of Homeland SecurityRoom 6031 City Hall PlazaBoston, MA 02201 Telephone: 617.635.3351 Contact info for the Boston Emergency Management Agency Bob Calobrisi85 Bragdon StreetBoston , MA, 02119617-343-2067 Boston EMA (main EOC number) 617-343-2400 Boston EMS (Dispatch) 617-343-1400 HQ Boston Fire Emergency Management Division (617) 343-3550	BPHC On Call Manager Pager 781-669-5672 Contact info for the Boston Emergency Management Agency Day. Off hours. Fire dispatch. 24x7 617-343-2880
CT Dept of Health	Incident Commander and Chief of Staff - Warren Wollschlager 860-509-7101 Office of Public Health Preparedness - Mario Garcia Md, MPH 860-637-2665 State Epidemiologist - James Hadler, MD 860-509-7995 Public Information Officer - William Gerrish 860-509-8000 Communications Center 860-509-8000	Answering Service 860-509-8000
Maine Dept of Health	Director: 207-287-8016 Public Health Preparedness Coordinator - Kristine Perkins 207-287-8104 Public Information Officer Interim Director, OPHEP Kay Dutram 207-287-4077 State Epidemiologist - Kathleen F. Gensheimer, MD 207-287-5183	DOH After hours: 207-287-2983
Mass. Dept of Public Health	Commissioner # 617-624-5200 Public Information Officer Roseanne Pawelec 617-624-5200 State Epidemiologist - Al DeMaria, MD 617-983-6800 Suzanne Condon Associate Commissioner Center for Environmental Health Massachusetts Department of Public Health 617-624-5757 (office) 617-560-8471 (pager) 617-828-8367 (cell) 617-770-4952 (home) 617-529-4952 (personal cell)	MDPH Center for Emergency Preparedness/Mass. Emergency Management Agency 508-820-2000. EPI On-Call 617-983-6200

Organization	Work Hours Contacts	After Work Hours Contacts
NH Dept of Health	Director: 603-271-8560 Public Information Officer - Kathleen Desmaris - 603 271-4795 State Epidemiologist - Jesse Greenblatt MD, MPH - 603 271-4477 Office of Community & Public Health 603- 271-4501/4612	After Hours Answering Service 603- 271-5300
RI Dept of Health	Director Dr. Nolan 401-222-2231. Public Information Officer - Bob Marshall 401-222-1017 401-623-0405 (cell) State Epidemiologist - Dr. Bandy 401-222-2432 401-623-0298 (cell) BT Grant PI/Coordinator - Walt Combs 401-222-7790 401-623-0459 (cell) Emergency Planner - Greg Banner 401-222-6868 401-623-0473 (cell)	Dept of Health Answering Service. 401-272-5952. Emergency Planner. Greg Banner. 401-623-0473. (cell) RI Emergency Management Agency 401-946-9996
VT Dept of Health	Director: 802-863-7280 Commissioner Paul Jarris Public Information Officer Nancy Erickson 802-863-7285 State Epidemiologist Dr. Cortland Lohff 802-863-7225 Bioterrorism Preparedness Executive Director: David Cote 802-951-5181 Bioterrorism Preparedness Coordinator/HAN Coordinator: Lynne Dapice 802-657-4237	Answering Service. 802-863-7200. On Call Epidemiologist. 802-863-7200. HAN Coordinator Pager: 802-240-5076 or 2405076@epage.rinkers.com

National Disaster Medical System (NDMS)	Office	Pager	Cell
Mark Libby	617-832-4793	877-545-7932	617-438-8986 180*84*132 (Nextel)
NDMS Operations Center (24 hr.)	800-872-6367	808-659-9999 pin8816-763-70198	808-659-8846

ATSDR

Bill Sweet	617-918-1490	N/A	617-842-1535
Gary Perlman	617-918-1492	N/A	617-842-1560
Kate Robbins	617-918-1493	N/A	617-827-3828
Atlanta Emergency Number	404-498-0120 (If no response, 770-488-7100)		

Department of Homeland Security

Gary Kleinman	617-832-4792	877-544-2723	617-293-8655 180*84*132 (Nextel)

Internal Notification *(Notify for all EPA responses.)*

Public Affairs	Office
Public Affairs Duty Officer	617-918-2270

EPRB Manager

For all EPA responses or significant spill reports an EPRB manager must be notified immediately.

Name	Office	Cell Phone	Home	Pager
David McIntyre (primary)	617-918-1281	617-694-7057	508-788-0518	877-251-7752
Arthur Johnson	617-918-1251	617-413-5052	978-762-6670	877-251-7751
Steve Novick	617-918-1271	617-694-7058	508-285-4586	877-251-7753

Make this notification if an emergency has resulted in the closure of an air or water route, a road, rail line or bridge. Call one of these people in addition to sending the internal LAN message. The after hours duty cell phone number is 617-431-4919. Check the Duty Roster to determine who the appropriate person is to contact after hours. Use the cell phone number before trying the home phone number.

Headquarters EOC

OEPPR Duty Officer (work hours)	703-967-5012
ERT Duty Officer (after hours)	202-564-3850 (24 Hour)

HQ Regional Coordinator

Sheila Kelly (*kelly.sheila@epa.gov)*	202-564 -8027	202-494-6935
Tim Grier *(grier.tim@epa.gov)*	703-603-8734	

Call Sheila in addition to sending the internal LAN message. Sheila is the primary contact. If Sheila cannot be contacted call her backup, Tim Grier, then call the OEPPR duty officer.

Regional & Headquarters Personnel

The following personnel should be notified via LAN of the response. Periodic updates should be sent along with a final report.

Toni Bandrowicz	Tom Condon	Allen Jarrell	Mike Nalipinski	Cris Schenna
Michael Barry	Dave Deegan	Arthur Johnson	Steve Novick	Alex Sherrin
Ted Bazenas	Jane Downing	Hilary Kelley	Michael Ochs	Leslie Sims
Lisa Boynton	Frank Gardner	Ira Leighton	Mia Pasquerella	Mary Ellen Stanton
Rudy Brown	Nancy Grantham	Gary Lipson	Gary Perlman	William Sweet
John Carlson	Doug Gutro	Christine Lombard	Randy Rice	Janis Tsang
Cosmo Caterino	Athanasios Hatzopoulos	AmyJean Lussier	Jodie Rizzuto	Robert Varney
Rich Cavagnero	Rich Haworth	Dave McIntyre	Kate Robbins	Daniel Wainberg
Wing Chau	Anthony Honnellio	Amy R. Miller	Jennifer Saccone	Catherine Young
Stan Chin	Elise Jakabhazy	Melanie Morash	Mary Sanderson	

Program Notification
Send a copy of all notification reports received that involve the following programs.

Air Enforcement	Christine Sansevero (SEA)	918-1699		
Asbestos	Wayne Toland (SEA)	918-1852		
Criminal	Duty Officer (CID)	918-2300		
Drinking Water	Jane Downing	918-1571	781-925-3992 (home)	857-829-8196 (cell)
	Maureen McClelland	918-1517		617-270-4028 (cell)
Mercury	Ken Rota (SER)	918-1751		
NPDES Permits	Dave Webster, Manager	918-1741		
	Steve Rapp (OEP)	918-1551		
	Victor Alvarez	918-1572		
PCBs	Kim Tisa (CPT)	918-1527		
RCRA	Ken Rota (SER)	918-1751		
Remediation General Permits	Victor Alvarez	918-1572		
	George Papadopoulos	918-1579		
Title III	Ray DiNardo (SEA)	918-1804		
Water Enforcement – Permit Violations	Denny Dart	918-1850		

International Boundary Canada *(Always notify for potential or actual boundary issues.)*
Environment Canada

Atlantic Region	Duty Officer	902-426-6200 (24 hr.)
Quebec Region	Duty Officer	866-283-2333 (24 hr.)

See Section N for other contact numbers.

Weapons of Mass Destruction/Terrorist Events
In addition to the above notifications, these contacts are also necessary.

EPA Notification List (Cont.)

FBI		
Connecticut	203-777-6311 (24 hr)	Brian Donolly
	203-503-5037	Robert Martineau
Vermont	518-465-7551	Eric Washburn
Maine		
Massachusetts		
New Hampshire		
Rhode Island	617-742-5533	Brooks Broadus
ATF	617-557-2000	
FEMA Mobile Emergency Response Support, Maynard, MA		800-213-8965 (24-hour no.)
George Callahan		617-832-4799

National Disaster Medical System (NDMS)	Office	Cell	
Mark Libby	617-832-4793	617-438-8986	
		180*84*132 (Nextel)	FEMA

WMD-Civil Support Teams		Day	Night/Weekends
1st Civil Support Detachment(MA)	MAJ Eric Furey	508-233-7576	508-294-2689
2nd Civil Support Detachment (NY)	MAJ Kaarlo Hiatala	518-786-3434/3433	518-378-2432/2446
11th Civil Support Detachment (ME)	LTC Jeff Squires	207-441-4109	207-441-4109

Radiation Events *(Notify Tony Honnellio for all radiation incidents. Tony Honnellio is the primary radiation contact for Region I. If he is not available, then contact one of the other personnel in the order listed.)*

EPA	Office	Cell
Tony Honnellio	617-918-1456	617-947-4414
Stan Rydell	617-918-1637	781-749-5917
Charles M. Blue	202-564-9488	800-skytelz pin 212786
William C. Conklin	202-564-9222	703-430-3917
Ritchey C. Lyman	202-564-9363	703-972-0082
Sam Poppell (RERT)	334-270-3414	334-546-7214

Air Transport and Over flights (National Air Force Base – Montgomery, AL)
Civil Air Patrol B Auxiliary Air Force Duty Officer: 888-211-1812

Activation of Federal Resources - Radiological Incidents *(Decision to activate made with RRT Co-chair, HQ, and Tony Honnellio and/or Stan Rydell)*
Refer to the National Response Plan for additional information and guidance.

Nuclear Facility	
Licensed by the Nuclear Regulatory Commission or Agreement State	NRC 301-816-5100
Owned or Operated by DOD or DOE	DOD 860-694-3676
	DOE 202-586-8100
Not licensed, owned, or operated by a Federal agency or Agreement State	EPA 617-947-4414 (Tony Honnellio)
Transportation of Radioactive Materials	
Shipment licensed by NRC or Agreement State	NRC 301-816-5100
Material shipped by or for DOD or DOE	DOD 860-694-3676
	DOE 202-586-8100
Shipment not licensed or owned by a Federal agency or Agreement State	EPA 617-947-4414 (Tony Honnellio)
Satellites Containing Radioactive Materials	
	NASA 800-424-8802
	DOD 860-694-3676
Impact From Foreign or Unknown Source	
	EPA 617-947-4414 (Tony Honnellio)
Agreement States	

	Day	After Hours
Maine		
Jay Hyland	207-287-5676	207-624-7000

EPA Notification List (Concl.)

Massachusetts		
Robert Walker	617-727-6214	617-727-9710 508-820-2000 (MEMA)
New Hampshire		
Dennis O'Dowd	603-271-4588	603-271-3636
Rhode Island		
Marie Stoechel	401-277-2438	401-946-9996

Non-Agreement States

Connecticut		
Denny Galloway	860-424-3029	860-424-3333
Vermont		
William Irwin	802-863-7238	802-244-8727

Requests for EPA Chemical Countermeasures/In-Situ Burn Concurrence

This procedure provides instructions when a request is made for EPA concurrence on the use of chemical countermeasures or in-situ burning (ISB) for an oil spill. This request is usually made by a USCG On Scene Coordinator (OSC) for incidents in the coastal zone, by an EPA OSC for incidents in the inland zone, or by adjacent Region for incidents that impact Region II.

Background:

Under Subpart J of the NCP, if a Federal OSC wants to use a chemical or biological agent or utilize ISB on an oil discharge, concurrence must be obtained from the EPA representative to the RRT, as well as from the RRT representative(s) from the State(s) with jurisdiction over the waters threatened by the oil discharge. In addition, the DOC and DOI natural resource trustees must be consulted prior to use. Only chemical and biological agents that are listed in the EPA NCP Product Schedule may be utilized. The NCP Product Schedule is located at G:\user\share\oil\prodschd.

Subpart J also authorizes agreements for the advanced approval of the use of chemical and biological countermeasures listed in the NCP Product Schedule under specific circumstances.

Notification Procedures: Upon receiving a request via the hotline for EPA concurrence on the use of chemical countermeasures on an oil spill, the Standby Duty Officer should obtain, at a minimum, the following information:

F. Date, time and location of the incident
G. Type and amount of oil discharged
H. Area affected
I. Projected area of impact of the oil if not dispersed or burned
J. Reasons why a chemical agent has been selected, or why ISB has been selected as a mitigation technique
K. Type of chemical agent to be used or method of ignition
L. Application rate and method of application or proposed burn strategy
M. On-scene weather and sea conditions

The Standby Officer does NOT make the decision to provide EPA concurrence on the use of chemical countermeasures. The Standby Officer should inform the caller that this information will be provided to EPA=s RRT representative, obtain contact information for the requesting USCG OSC, and inform the caller that a response to the request for concurrence will come from the EPA RRT representative. In general, the normal time frame for a reply back to the USCG OSC is within four (4) hours.

The Standby Officer will then notify, an EPA RRT representative, prioritized as follows, until the first person is reached:

Art Johnson

Cosmo Caterino

Melanie Morash

In the event that the USCG has already made the decision to utilize chemical countermeasures in a pre-approval zone, the Standby Duty Officer should follow the notification procedures above to notify appropriate branch personnel of that decision, for follow-up

monitoring of the situation.

CAMEO/ALOHA Air Modeling Contacts

	Cell Phone Numbers
Deborah Brown	857-829-8161
Ray DiNardo	857-829-8158
Jim Gaffey	857-829-8157
Kan Tham	857-829-8155
Len Wallace	857-829-8159
Dwight Peavey	857-829-8160

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APPENDIX 5

RESPONSE OPERATIONS RESOURCES AVAILABLE FOR REGION I

NATURE OF SUPPORT	COMPANY	WEBSITE	ADDRESS & PHONE
Federal Government	United States Environmental Protection Agency Region I	http://www.epa.gov/region1	1 Congress Street, Suite 1100 Boston MA 02114 (888) 372-7341
Federal Government	United States Coast Guard New England	http://www.uscgnewengland.com	U.S. Coast Guard 2100 Second Street, SW Washington, DC 20593
Containment Supplies	ASA Environmental Products, Inc	http://www.asa-environmental.com	22 Bayview Avenue, PO Box 789 Stonington, CT 06378 800-783-5272
Containment Supplies	Basic Concepts, Inc	http://www.basicconcepts.com	26 Barrell Run Road Fremont, NH 03044 (800) 249-5261
Containment Supplies	Brockton Equipment	http://www.spilldam.com	P.O. Box 960 Brockton, MA 02303 (508) 583-7850
Containment Supplies	Chemtex	http://www.chemtexinc.com	110 King Phillip Rd. East Providence, RI 02916 877-431-0200
Containment Supplies	Slick Bar	http://www.slickbar.com	
Cleanup Contractor	American Pollution Control	http://www.ampol.net	3808 Commercial Drive New Iberia, LA 70560 318-365-7847
Cleanup Contractor	Clean Harbors Environmental Services, Inc	http://www.cleanharbors.com	1501 Washington Street P.O. Box 850327 Braintree, MA 02185-0327 781-849-1800
Cleanup Contractor	Cyn Environmental Services	http://www.cynenv.com/	900 East First Street South Boston, MA 02127 617-464-6370

NATURE OF SUPPORT	COMPANY	WEBSITE	ADDRESS & PHONE
Cleanup Contractor	ENPRO Services, Inc	http://www.enpro.com	12 Mulliken Way Newburyport, MA 01950 978-465-1595 800-966-1102
Cleanup Contractor	Environmental Products & Services, Inc	http://www.eps-inc.com	Worcester Branch 8 West Industrial Park Rd. Oxford Mass 01540 Phone # (508) 987-6812
Cleanup Contractor	Fleet Environmental Services, Inc	http://www.fleetenvironmental.com/	Lakeport Industrial Park 8 Harding Building 2 Lakeview, MA 02347 508-946-6900
Cleanup Contractor	Frank Corporation	http://www.frankcorp.com	615 Tarkiln Hill Road, New Bedford, MA 02745 508-995-9997
Cleanup Contractor	HMHTTC Response Incorporated	http://www.hmhttc.com	333 Littleton Ave Parsipany, NJ 07054 201-335-6696 ext 14
Cleanup Contractor	Ken's Marine Services, Inc	http://kensmarine.net	116-20 East 22nd Street P.O. Box 4001 Bayonne, NJ 07002 201-339-0673
Cleanup Contractor	Miller Environmental Group, Inc	http://www.millerenv.com	538 Edwards Avenue P.O. Box 610 Calverton, NY 11933 516-369-4900
Cleanup Contractor	Moran Environmental Recovery	http://www.moranenvironmental.com	251 Levy Road P.O. Box 330569 Atlantic Beach, FL 32233-0569 904-241-2200
Cleanup Contractor	The Shaw Group	http://www.shawgrp.com	88C Elm Street Hopkinton, MA 01748 508-435-9561

NATURE OF SUPPORT	COMPANY	WEBSITE	ADDRESS & PHONE
Cleanup Contractor	TMC Services, Inc	www.hazmatt.com	One William Way Bellingham, MA 02019
Dispersant – Air Drop	Airborne Support, Inc	http://www.airbornesupport.com	3626 Thunderbird Road Houma, LA 70363 504-851-6391
Dispersant & Surfactant Supplies	The Westford Chemical Corporation	http://www.biosolve.com	PO Box 798, Westford, MA 01886 800-225-3909
Marine Response	Crowley Marine Services, Inc	http://www.crowley.com	1102 SW Massachusetts St, Pier 17 Seattle, WA 98134-1030 (206) 443-8100
Marine Response	Marine Pollution Control Corporation (MPC Corporation)	http://www.marinepollutioncontrol.com	8631 West Jefferson Detroit, MI 48209 313-849-2333
Marine Salvage	Donjon Marine Company, Inc	http://www.donjon.com/	1250 Liberty Avenue Hilside, NJ 07205 908-694-8812

APPENDIX 6

UNITED STATES FISH AND WILDLIFE SERVICE OFFICES WITHIN REGION I

APPENDIX 7

ENVIRONMENTALLY AND ECONOMICALLY SENSITIVE AREAS WITHIN REGION I

ENVIRONMENTALLY AND ECONOMICALLY SENSITIVE AREAS WITHIN REGION I

The environmentally sensitive areas in all six New England States are available on the internet at http://www.epa.gov/region1/er/iacp/index.html.

The maps show human and natural resources that may be at risk or potentially impacted by the oil spill and/or the response itself. These environmentally sensitive areas in all six New England States are presented on scalable maps that can be downloaded (http://www.epa.gov/region1/er/iacp/maps.html). Maps show locations specifically designated as environmentally sensitive areas or points, water bodies, dams, tribal lands, roads, railroads, schools, airports, and National Pollution Discharge Elimination System (NPDES) facilities within New England (Appendix 1 of the ACP). Also shown is the jurisdictional boundary between EPA and the U.S. Coast Guard.

APPENDIX 8

HISTORIC PRESERVATION OFFICES WITHIN REGION I

HISTORIC PRESERVATION OFFICES
WITHIN REGION I

STATE

Connecticut

Karen Senich, Director and Deputy SHPO
Historic Preservation & Museum Division
The Amos Bull House
59 South Prospect Street
Hartford 06106
860-256-2727 Main
860-256-2811 Fax
e-Mail: Karen.senich@ct.gov
Website: www.cultureandtourism.org

Maine

Mr. Earle G. Shettleworth, Jr., SHPO
Maine Historic Preservation Commission
55 Capitol Street, State House Station 65
Augusta, Maine 04333-0065
Telephone: 207. 287. 2132
Fax: 207.287.2335
e-Mail: Historic.Preservation@Maine.gov
Website: http://www.state.me.us/mhpc/

Massachusetts

Mr. William Francis Galvin, SHPO
Secretary of the Commonwealth
Massachusetts Historical Commission
220 Morrissey Boulevard
Boston, MA 02125-3314
Telephone**:** 617-727-8470
Fax**:** 617-727-5128
Email**:** mhc@sec.state.ma.us
Website: http://www.sec.state.ma.us/mhc/mhcidx.htm

New Hampshire

Mr. James McConaha, SHPO
NH Division of Historic Resources
19 Pillsbury Street
Concord, NH 03301-3570
Phone: 603-271-3483

HISTORIC PRESERVATION OFFICES
WITHIN REGION I

Phone: 603-271-3558
TDD: 1-800-735-2964
e-Mail: preservation@dcr.nh.gov
Website: http://www.nh.gov/nhdhr/
Deputy: Ms. Linda Ray Wilson

Rhode Island

Mr. Edward F. Sanderson, Director/SHPO
Rhode Island Historical Preservation & Heritage Commission
Old State House
150 Benefit Street
Providence, RI, 02903
Phone: (401)222-2678
Fax: (401)222-2968
TTY: (800)745-5555
e-Mail: info@preservation.ri.gov
Website: http://www.rihphc.state.ri.us/
Deputy Director: Pamela Kennedy

Vermont

Ms. Jane Lendway, SHPO
Vermont Division for Historic Preservation
National Life Building, Drawer 20
Montpelier, VT 05620-0501
Phone: (802) 828- 3211
e-Mail: jane.lendway@state.vt.us
Website: http://www.historicvermont.org/

HISTORIC PRESERVATION OFFICES
WITHIN REGION I

TRIBAL

The National Association of Tribal Historic Preservation Officers maintains a website at http://www.nathpo.org

Connecticut

None

Maine

Passamaquoddy Tribe
Mr. Donald Soctomah, THPO
PO Box 102
Princeton, ME 04668
Phone: 207-796-0822
Fax: 207-796-5256
Email: soctomah@ainop.com

Penobscot Nation
Ms. Bonnie Newsom, THPO
Cultural and Historic Preservation Program
12 Wabanaki Way
Indian Island, ME 04468
Phone: 207-817-7471
Fax: 207-817-7450
Email: bnewsom@penobscotnation.org

Massachusetts

Wampanoag Tribe of Gay Head-Aquinnah
Ms. Cheryl Andrews-Maltais, THPO
20 Black Brook Road
Aquinnah, MA 02535-9701
Phone: 508-645-9265 ext. 112
Fax: 508-645-3790
Email: cmaltais@wampanoagtribe.net

HISTORIC PRESERVATION OFFICES
WITHIN REGION I

New Hampshire

None

Rhode Island

Narragansett Indian Tribe
Mr. John Brown, THPO
PO Box 700
Wyoming, RI 02898
Phone: 401-315-0090
Fax: 401-742-5048
Email brwnjbb123@aol.com

Vermont

None

HISTORIC PRESERVATION OFFICES
WITHIN REGION I

STATE

Connecticut

Karen Senich, Director and Deputy SHPO
Historic Preservation & Museum Division
The Amos Bull House
59 South Prospect Street
Hartford 06106
860-256-2727 Main
860-256-2811 Fax
e-Mail: Karen.senich@ct.gov
Website: www.cultureandtourism.org

Maine

Mr. Earle G. Shettleworth, Jr., SHPO
Maine Historic Preservation Commission
55 Capitol Street, State House Station 65
Augusta, Maine 04333-0065
Telephone: 207. 287. 2132
Fax: 207.287.2335
e-Mail: Historic.Preservation@Maine.gov
Website: http://www.state.me.us/mhpc/

Massachusetts

Mr. William Francis Galvin, SHPO
Secretary of the Commonwealth
Massachusetts Historical Commission
220 Morrissey Boulevard
Boston, MA 02125-3314
Telephone**:** 617-727-8470
Fax**:** 617-727-5128
Email**:** mhc@sec.state.ma.us
Website: http://www.sec.state.ma.us/mhc/mhcidx.htm

New Hampshire

Mr. James McConaha, SHPO
NH Division of Historic Resources
19 Pillsbury Street
Concord, NH 03301-3570
Phone: 603-271-3483

HISTORIC PRESERVATION OFFICES
WITHIN REGION I

Phone: 603-271-3558
TDD: 1-800-735-2964
e-Mail: preservation@dcr.nh.gov
Website: http://www.nh.gov/nhdhr/
Deputy: Ms. Linda Ray Wilson

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Mr. Edward F. Sanderson, Director/SHPO
Rhode Island Historical Preservation & Heritage Commission
Old State House
150 Benefit Street
Providence, RI, 02903
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Fax: (401)222-2968
TTY: (800)745-5555
e-Mail: info@preservation.ri.gov
Website: http://www.rihphc.state.ri.us/
Deputy Director: Pamela Kennedy

Vermont

Ms. Jane Lendway, SHPO
Vermont Division for Historic Preservation
National Life Building, Drawer 20
Montpelier, VT 05620-0501
Phone: (802) 828- 3211
e-Mail: jane.lendway@state.vt.us
Website: http://www.historicvermont.org/

HISTORIC PRESERVATION OFFICES
WITHIN REGION I

TRIBAL

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Connecticut

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Maine

Passamaquoddy Tribe
Mr. Donald Soctomah, THPO
PO Box 102
Princeton, ME 04668
Phone: 207-796-0822
Fax: 207-796-5256
Email: soctomah@ainop.com

Penobscot Nation
Ms. Bonnie Newsom, THPO
Cultural and Historic Preservation Program
12 Wabanaki Way
Indian Island, ME 04468
Phone: 207-817-7471
Fax: 207-817-7450
Email: bnewsom@penobscotnation.org

Massachusetts

Wampanoag Tribe of Gay Head-Aquinnah
Ms. Cheryl Andrews-Maltais, THPO
20 Black Brook Road
Aquinnah, MA 02535-9701
Phone: 508-645-9265 ext. 112
Fax: 508-645-3790
Email: cmaltais@wampanoagtribe.net

HISTORIC PRESERVATION OFFICES
WITHIN REGION I

New Hampshire

None

Rhode Island

Narragansett Indian Tribe
Mr. John Brown, THPO
PO Box 700
Wyoming, RI 02898
Phone: 401-315-0090
Fax: 401-742-5048
Email brwnjbb123@aol.com

Vermont

None

APPENDIX 9

REGION I IN-SITU BURNING MEMORANDUM OF UNDERSTANDING

Memorandum Of Understanding

Among
U.S. Coast Guard District 1 (USCG)
and
U.S. Environmental Protection Agency Region I (EPA)
and
U.S. Department of the Interior (DOI)
and
U.S. Department of Commerce /
National Oceanic and Atmospheric Administration (DOC/NOAA)
and
State of Maine (ME) Department of Environmental Protection
and
Commonwealth of Massachusetts (MA)
Executive Office of Environmental Affairs
and
State of New Hampshire (NH) Department of Environmental Services
and
State of Rhode Island and Providence Plantations (RI)
Department of Environmental Management
and
State of Vermont (VT) Agency of Natural Resources

PURPOSE

The USCG, EPA, DOI, DOC/NOAA and the States of ME, MA, NH, RI, and VT recognize that the effectiveness of physical removal of spilled oil may be limited by the dynamic nature of the environment in which the oil is spilled. In such circumstances, timely and effective containment, collection, and mechanical removal of the oil may not provide an adequate response. The burning of oil in place as a removal technique (*in-situ* burning), alone or in conjunction with mechanical removal methods and/or chemical countermeasures, may be considered as a means to enhance removal and reduce harm to public health and welfare, or the environment.

This Memorandum of Understanding (memorandum) is designed to implement sections of the National Oil and Hazardous Substances Pollution Contingency Plan (National Contingency Plan) [40 CFR §300.210 (c)(4)(ii)(D) and §300.115 (a)] and the requirements of 33 USC 1321 (j)(4)(B)(ii), the Federal Water Pollution Control Act, as amended by the Oil Pollution Act of 1990. This memorandum provides the primary decision makers in oil spill response (the Federal On-Scene Coordinator (OSC) and the State On-Scene Coordinator (SOSC)) with the authority to use *in-situ* burning in certain zones under the jurisdiction of the Region I Regional Response Team without additional consultation or concurrence. The Responsible Party, another key player in spill response, will also be a part of the decisionmaking process.

Because the jurisdictional boundary between Regions I and II divides Long Island Sound, the State of Connecticut will pursue a separate agreement on the use of this technique. When developed, this agreement will be included in Appendix III, Boundary Area Guidance and Agreements. References to Region I throughout this document apply to all Region I states except Connecticut.

This memorandum constitutes consultation under the National Contingency Plan with DOC/NOAA and DOI for the use of *in-situ* burning as an oil spill removal technique in the "B" Zone and consultation with DOC/NOAA and DOI, and concurrence of the States of ME, MA, NH, and RI in the "A" Zone (both zones defined under **Scope** below). It is anticipated an ignition source will be sufficient to light oil that is inherently combustible, provided a spill receives timely response action. This memorandum applies to *in-situ* burns that are lit using ignition sources (e.g., small quantities of burning gelled gasoline or kerosene released from a helotorch or a hand-held ignition pack). This memorandum does not apply to *in-situ* burns where the combustibility of the oil must be enhanced using a burning agent (e.g., through the direct addition of a flammable hydrocarbon prior to ignition or the addition of a wicking agent to enhance combustibility). Use of burning agents to enhance the combustibility of oil is subject to the approval requirements described in Subpart J of the National Contingency Plan (§300.910(c)).

This memorandum applies only to response operations within Region I where federal assistance is required. This agreement does not expand or otherwise modify the jurisdiction of any of the signatories to this agreement in matters that are the subject of this agreement.

This memorandum will be incorporated into the Region I Regional Contingency Plan and Area Contingency Plans within Region I.

AUTHORITY

Subpart C of the National Contingency Plan directs the Regional Response Teams to conduct regional planning and coordination of preparedness and response actions in conjunction with Area Committees in the case of oil discharges. Area Contingency Plans, written by Area Committees, should provide pre-approval of specific countermeasures or removal actions that, if expeditiously applied, will minimize adverse spill-induced impacts to fish and wildlife resources, their habitat, and other sensitive environments. (40 CFR §300.210 (c) (4) (ii) (D)).

Commandant, USCG, has designated the USCG Captains Of The Port (as defined in 33 CFR Part 3) as the OSCs for coastal oil discharges (subject to joint response boundary agreements with EPA), and has delegated to these OSCs the authority and responsibility for compliance with the Federal Water Pollution Control Act and its amendments (33 USC 1221, et seq., as amended).

The U.S. EPA Administrator has designated EPA Regional Administrators as OSCs for inland oil discharges (subject to joint response boundary agreements with USCG), and has delegated to these OSCs the authority and responsibility for compliance with the Federal Water Pollution Control Act and its amendments (33 USC 1221, et seq., as amended). EPA Regional Administrators have further delegated the duties of OSC to members of their Regional staffs.

The DOI and DOC/NOAA are designated federal trustees of certain natural resources under Subpart G of the National Contingency Plan and are to be consulted regarding appropriate removal actions in an oil spill, including the determination to burn oil *in-situ* in United States waters, and must concur with pre-approval plans for the application of specific countermeasures or removal actions (Subpart C of the National Contingency Plan).

In the State of Maine, the State Oil Spill Coordinator from the Department of Environmental Protection has the authority to approve the use of *in-situ* burning for the control of oil spills.

In the Commonwealth of Massachusetts, the Department of Environmental Protection has the authority to approve the use of *in-situ* burning for the control of oil spills.

In the State of New Hampshire, the Commissioner of the Department of Environmental Services has the authority to approve the use of *in-situ* burning for the control of oil spills.

In the State of Rhode Island and Providence Plantations, the Commissioner of the Department of Environmental Management has the authority to approve the use of *in-situ* burning for the control of oil spills.

In the State of Vermont, the Secretary of the Department of Environmental Conservation has the authority to approve the use of *in-situ* burning for the control of oil spills.

SCOPE

This memorandum establishes decision authority for use of *in-situ* burning (absent the use of burning agents) within zones within Region I. The geographic zones and conditions are described below, and a map of the zones is attached as Appendix II.

1) "A" Zones — OSC decision to burn

Geographic Scope:
Zone "A" is defined as all waters subject to the jurisdiction of the United States located seaward of a line measured six miles from the mean low waterline along the coasts and islands of ME, MA, NH, and RI, that are not specifically defined as "Special Consideration Areas" (see paragraph 4 below).

Approval for *in-situ* burning in Zone "A":
Within Zone "A," the decision to use *in-situ* burning rests solely with the OSC. No further concurrence or consultation on the part of the OSC is required with EPA, DOC/NOAA, DOI, or the states of ME, MA, NH, and RI *(please refer to Special Consideration Areas that modify the "A" zone).* However, if threatened or endangered species are present in the immediate burn area, the trustee agency for that species must be consulted prior to initiating burning operations.

The OSC will immediately notify EPA, DOC/NOAA, DOI, and the applicable state(s) of a decision to conduct burning within the "A" zone via each agency's Regional Response Team representative.

2) "B" Zones — Unified Command decision to burn

Geographic Scope:
Zone "B" is defined as all waters subject to the jurisdiction of the United States located seaward of a line measured one mile and terminating six miles from the mean low water line along the coasts and islands of ME, MA, NH, and RI, that are not specifically defined as Special Consideration Areas (see paragraph 4 below).

Approval for *in-situ* burning in Zone "B":
Within Zone "B," the decision to use *in-situ* burning rests with the OSC and SOSC(s) within the Unified Command. Cases may arise where a state potentially affected by a smoke plume is not represented in the Unified Command because it may not be affected by the unburned oil. Therefore, the SOSC(s) from the state(s) within 6 miles of the burn source must also concur with the decision to burn (unless a Special Consideration Area has been established to reduce this distance). In Zone "B" no further concurrence or consultation on the part of the OSC is required with EPA, DOC/NOAA, DOI, or other states not within 6 miles of the burn source. If threatened or endangered species are present in the immediate burn area, the trustee agency for that species must be consulted prior to initiating burning operations. The SOSC is responsible for any additional concurrence/consultation requirements that apply at the state level.

The OSC will immediately notify EPA, DOC/NOAA, DOI, and applicable state(s) of a decision to conduct burning within the "B" zone via each agency's Regional Response Team representative.

3) "C" Zones — Unified Command decision to burn following additional consultations/concurrence

Geographic Scope:
Zone "C" is defined as waters and lands subject to the jurisdiction of the United States and within the geographic responsibility of Regional Response Team I that are shoreward

of a line measured 1 mile seaward of the mean low water mark along the coasts and islands of ME, MA, NH, and RI, that are not specifically defined as Special Consideration Areas (see paragraph 4 below).

Approval for *in-situ* burning in Zone "C":

Within Zone "C," the decision to use *in-situ* burning rests with the OSC (USCG or EPA) and SOSC(s) within the Unified Command. The OSC must consult with DOC/NOAA and DOI on the appropriateness of *in-situ* burning as a removal action, and gain concurrence of states with land within 6 miles of the burn source (unless this distance has been reduced in a Special Consideration Area). The SOSC is responsible for any additional concurrence/consultation requirements that apply at the state level.

The OSC will immediately notify EPA, DOC/NOAA, DOI, and applicable state(s) of a decision to initiate a burn within the "C" zone via each agency's Regional Response Team representative.

4) "Special Consideration Areas"

Geographic Scope:

Special Consideration Areas are specific geographic areas where the level of approval/concurrence granted in Zones "A," "B," and "C" is modified by the any of the following agencies/entities within their authority, jurisdiction, and areas of responsibility: Area Committees, pre-designated OSCs, DOC/NOAA, DOI, and the states of ME, MA, NH, RI, and VT. These areas will be identified in writing to the Regional Response Team co-chairs and listed in Appendix I. Upon receipt of a Special Consideration Area, the Regional Response Team co-chairs shall solicit comments from signatories to this memorandum with jurisdiction over the area and any areas within 6 miles of the Special Consideration Area. Absent objection, Special Consideration Areas are effective 30 days from their receipt by the Regional Response Team co-chairs.

Approval for *in-situ* burning in Special Consideration Areas

Each defined Special Consideration Area shall contain specific restrictions or permissions that alter pre-approval or pre-consultation otherwise defined by this memorandum in Zones "A," "B," or "C". The restriction placed or authority granted by a Special Consideration Area may be defined to apply only under certain conditions, such as certain wind directions or in certain seasons. Special Consideration Areas shall specify what additional or lesser action, consultation, or concurrence is necessary to

proceed with *in-situ* burning in that area. Means of contacting primary or alternate points-of-contact for Special Consideration Areas should be identified for work and non-working hours.

5) Boundary Areas - Region I Boundary

In areas where burning will have an impact across a Region I border into Canada or Region II (e.g., within 6 miles of the border), the concurrence of the applicable parties on the opposite side of the border must be obtained prior to use of *in-situ* burning. Specific cross-border guidance documents and agreements regarding near-border *in-situ* burning, when developed, will be included in Appendix III.

PROTOCOLS

The signatories to this memorandum agree that the decision to use *in-situ* burning lies with either the OSC or the OSC and the SOSC, based on the location of the burn as detailed in **Scope**. The SOSC is responsible for any additional concurrence/consultation requirements that apply at the state level. The decision to use *in-situ* burning should be made with guidance from the Region I *In-situ* Burning Policy (Information Section) and applicable Area Contingency Plans and is subject to the following conditions:

1. The OSC may authorize the use of *in-situ* burning on a discharge of oil to prevent or substantially reduce the hazard to human life without obtaining concurrence from EPA, DOI, DOC/NOAA, or the affected states, without following protocols established in this memorandum, and without following the guidelines in the Regional Contingency Plan and Area Contingency Plan. If *in-situ* burning is used in this manner, notification of EPA, USCG, DOC/NOAA, DOI and the affected state(s) via Regional Response Team representatives shall be made as soon as practicable. Once the risk to human life has subsided, this exception no longer applies.

2. The decision to use *in-situ* burning shall rest solely with the pre-designated OSC or jointly with the SOSC in certain zones as described under the **Scope** of this memorandum. This responsibility of the OSC may not be delegated.

3. If a decision has been made to use *in-situ* burning under the provisions of this memorandum, the OSC will immediately notify EPA, DOI, DOC/NOAA and the applicable state(s) of that decision via Regional Response Team representatives. This

initial notification should include, but is not limited to, the following information to the extent available:

Type and amount of oil discharged
Area affected
The projected area of impact of the oil if not burned
Reasons why *in-situ* burning has been selected as a mitigation technique
On-scene weather

4. *In-situ* burning will be conducted by trained professionals using recognized techniques and technology. Burning will be conducted in a way that allows for safe and effective control of the burn to the maximum extent feasible, including the ability to stop the burn if necessary. Containment and control using fire-resistant boom is recognized as the preferred method of *in-situ* burning in open-water situations. In this situation, all practical efforts to limit the potential for igniting the source or adjacent, uncontained, or uncontrollable slicks will be made.

5. *In-situ* burning is advised only when the meteorological and sea conditions are operationally favorable for a successful burn. The OSC will give due consideration to the direction of the wind and the possibility of the wind blowing the smoke plume over population centers or sensitive resources onshore.

6. Health and Safety Concerns

(a) OPERATORS: Worker health and safety is of paramount concern. Each employer and OSC must comply with all applicable Occupational Health and Safety Administration regulations. Prior to any *in-situ* burn operations, a site safety plan must be prepared.

(b) GENERAL PUBLIC: Burning should be stopped if it becomes an unacceptable health risk to the general public. If at any time during burning operations exposure limits are observed to exceed National Ambient Air Quality Standards in nearby populated areas as a result of the burn, the OSC shall modify or suspend the burn operation as appropriate. Additionally, the OSC and the Unified Command should consider the potential effects of short term exposure of the public to high levels of particulates which may still meet National Ambient Air Quality Standards. Specifically, the OSC should consider the current short term *in-situ* burning exposure guideline recommended by the

National Response Team (at the time of signature, the NRT guideline for short term particulate exposure from *in-situ* burning is 150 $\mu g/m^3$ of particulates less than 10 µm diameter (PM-10) averaged over one hour; the current National Ambient Air Quality Standard for particulates is the same concentration averaged over 24 hours. The NRT guideline will be revised when more stringent particulate standards are adopted). OSCs in Region I shall factor this guideline on public exposure to *in-situ* burn emissions into burn initiation and continuation decisions. Public notification is advisable prior to initiating a burn.

7. The OSC shall ensure *in-situ* burning is conducted in accordance with any biological opinions rendered under Section 7 of the Endangered Species Act. Seasonal, spacial, or other similar restrictions identified in biological opinions shall be listed as Special Consideration Areas and placed in Appendix I. If threatened or endangered species are present in the immediate burn area, the trustee agency for that species must be consulted prior to initiating burning operations.

8. The OSC will make every reasonable effort to continuously evaluate the decision to burn, and allow Regional Response Team agencies and affected states the opportunity for comment. The OSC shall provide a mechanism to receive information from authorized representatives of the following entities that may necessitate termination of an *in-situ* burn: EPA, affected states, natural resource trustee agencies, and cognizant health agencies. Any verbal recommendations to terminate an *in-situ* burn must be followed up immediately in writing.

9. Representatives of the OSC shall monitor *in-situ* burning operations. The trustee agencies, the affected states, the Occupational Safety and Health Administration, and the responsible party may monitor *in-situ* burning operations, when feasible.

(a) Monitoring to establish "continue / modify / discontinue" information for input to the OSC shall accompany a burn. Visual monitoring may be sufficient provided the smoke plume is not predicted to affect human populations or highly sensitive areas. If smoke plumes are predicted to or may cross over populated areas, real-time PM-10 monitoring (a protocol is identified in Regional Response Team I *In-situ* Burning Policy — Information Section) is advisable and, when practicable, should be in place prior to the start of burn operations to gather baseline data.

(b) All burns must incorporate observations (typically visual) to monitor smoke plume behavior. A trial burn may be conducted to better estimate plume behavior prior to operational burning. Conditions under which the burn should be stopped, such as a threat of plume contact with the ground in populated or environmentally sensitive areas, shall be clearly identified to the maximum extent practicable to those conducting burn operations prior to starting the burn.

12. Mechanical recovery equipment shall be mobilized on-scene when feasible for backup and complimentary response capability. Provisions should be made for collection of burn residue following the burn(s).

13. If *in-situ* burning is used, a post incident debriefing will take place within 45 days to gather information concerning its effectiveness and to determine whether any changes to this memorandum are necessary. The debriefing will be chaired by the OSC, who will also arrange the time, place, and date of the debrief.

AMENDMENTS

This Memorandum of Understanding may be amended in writing in whole or in part as is mutually agreeable to all signatories.

Special Consideration Areas submitted to the Regional Response Team as outlined in paragraph 4 of the **Scope** of this memorandum will be promptly distributed to signatories and included in Appendix I.

CANCELLATION

Each signatory to this Memorandum of Understanding may withdraw their agreement to the memorandum in whole or in part by submitting a letter of withdrawal to the Regional Response Team co-chairs; withdrawal from this memorandum will take effect no earlier than 30 days after receipt of this letter. The Regional Response Team co-chairs shall promptly notify other document signatories. Withdrawal by signatories shall not have any effect on this agreement with respect to remaining signatories.

SIGNATURES

Captain Thomas M. Daley
First Coast Guard District (m)
Acting Regional Response Team Co-Chair

May 19, 1998
Date

Ms. Dennisses Valdés
US EPA Region I
Regional Response Team Co-Chair

5/19/98
Date

Commander Burton Russell, USCG
Captain of the Port Portland
Federal On-Scene Coordinator

5/19/98
Date

Captain John Grenier, USCG
Captain of the Port Boston
Federal On-Scene Coordinator

MAY 20 1998
Date

Captain Peter A. Popko, USCG
Captain of the Port Providence
Federal On-Scene Coordinator

5/19/98
Date

Mr. Andrew Raddant
Regional Environmental Officer/Northeast
U.S. Department of Interior
Regional Response Team Representative

1/26/99
Date

Gerald E. Wheaton

Commander Gerald Wheaton
NOAA/Hazmat
U.S. Department of Commerce
Regional Response Team Representative

5/19/98
Date

David C. Sait

Mr. David C. Sait
State of Maine
State Oil Spill Coordinator

5/19/98
Date

Trudy Coxe

Ms. Trudy Coxe
Commonwealth of Massachusetts
Secretary of Environmental Affairs

10·6·98
Date

Robert W. Varney

Mr. Robert W. Varney
State of New Hampshire
Commissioner, Department of Environmental Services

1-25-99
Date

Andrew H. McLeod

Mr. Andrew H. McLeod
State of Rhode Island and Providence Plantations
Director, Department of Environmental Management

7/9/98
Date

MOU applies outside of Vermont – see attached letter

Ms. Barbara Ripley
State of Vermont
Secretary, Agency of Natural Resources

Date

State of Vermont

Department of Fish and Wildlife
Department of Forests, Parks and Recreation
Department of Environmental Conservation
State Geologist
RELAY SERVICE FOR THE HEARING IMPAIRED
1-800-253-0191 TDD>Voice
1-800-253-0195 Voice>TDD

AGENCY OF NATURAL RESOURCES
Department of Environmental Conservation
Office of the Secretary
103 South Main Street
Waterbury, Vermont 05671-0404
(802) 241-3600
FAX (802) 244-1102

March 4, 1999

Captain Thomas Daley
Ms Dennisses Valdes
Region I Regional Response Team
C/O Scott Lundgren
First Coast Guard District
408 Atlantic Ave
Boston MA 02110-3350

RE: IN SITU BURNING MEMORANDUM OF UNDERSTANDING (MOU)

Dear Captain Daley and Ms. Valdes:

After careful consideration, I have decided not to sign the In Situ Burning MOU developed by the Region I Regional Response Team at this time.

The MOU mainly addresses issues related to open water burns. It is certainly in the best interest of the other New England states to sign the MOU, as the other states have seaports that handle large, petroleum carrying vessels, in areas close to the borders of other states. Vermont does not share these characteristics; indeed, since the cessation of petroleum transporting barge traffic on Lake Champlain, the likelihood of a spill warranting open water in situ burning is negligible.

As members of the In Situ Burning Working Group, we certainly appreciate the hard work put into this project, and appreciate the opportunity to sign the MOU. However, without the benefit of expedited decisions established by the MOU in marine coastal states, we feel that any protocols developed regarding this countermeasure would be best if designed for our risks and location. We understand that all other participants have signed the MOU, and we have no objection to its use in the Region. Do not take our abstention as finding fault with the MOU; it is simply felt that the MOU is not a vital tool for oil spill response in our state.

We look forward to further participation in Regional Response Team endeavors. If you have any questions regarding this letter, please contact me at 802.241.3600.

Sincerely,

John Kassel, Secretary
Vermont Agency of Natural Resources

cc: David C. Sait, ME Oil Spill Coordinator
Ms. Trudy Coxe, MA Secretary of Environmental Affairs
Robert Varney, NH Commissioner of Environmental Services
Timothy Keeney, RI Commissioner of Environmental Management
Canute Dalmasse, VT Commissioner of Environmental Conservation
P.H. Flanders, VT Director of Waste Management Division
Marc Roy, VT Regional Response Team Designee

mr/spills/cdisb.ltr

Appendix I: Special Consideration Areas

State of Maine Special Consideration Area **Year-round**

The OSC shall gain concurrence of the Maine State On-Scene Coordinator for *in-situ* burns within 12 miles of the Maine coast.

State of Vermont Special Consideration Area **Year-round**

The State of Vermont elected not to sign the Memorandum of Understanding, but agree to use elsewhere in Region under the MOU as described in 4 March 1999 letter. Absent other agreements, normal National Contingency Plan procedures apply in Vermont.

20 foot water depth Special Consideration Area **Year-round**

The OSC must consult with DOI and NOAA Regional Response Team representatives when using *in-situ* burning in waters where the depth is less than 20 feet at mean low water. (Such consultation is already required in Zone C, which is inside 1 mile, so this only applies to any areas that may be less than 20 feet deep that are beyond 1 mile from shore.)

National Marine Fisheries Service Special Consideration Area Summary

Details of boundaries and conditions detailed in NMFS Northeast Section 7 consultation letter to First Coast Guard District dated November 18, 1997.

Case-by-case consultation with NMFS Northeast Region required for *in-situ* burning in:

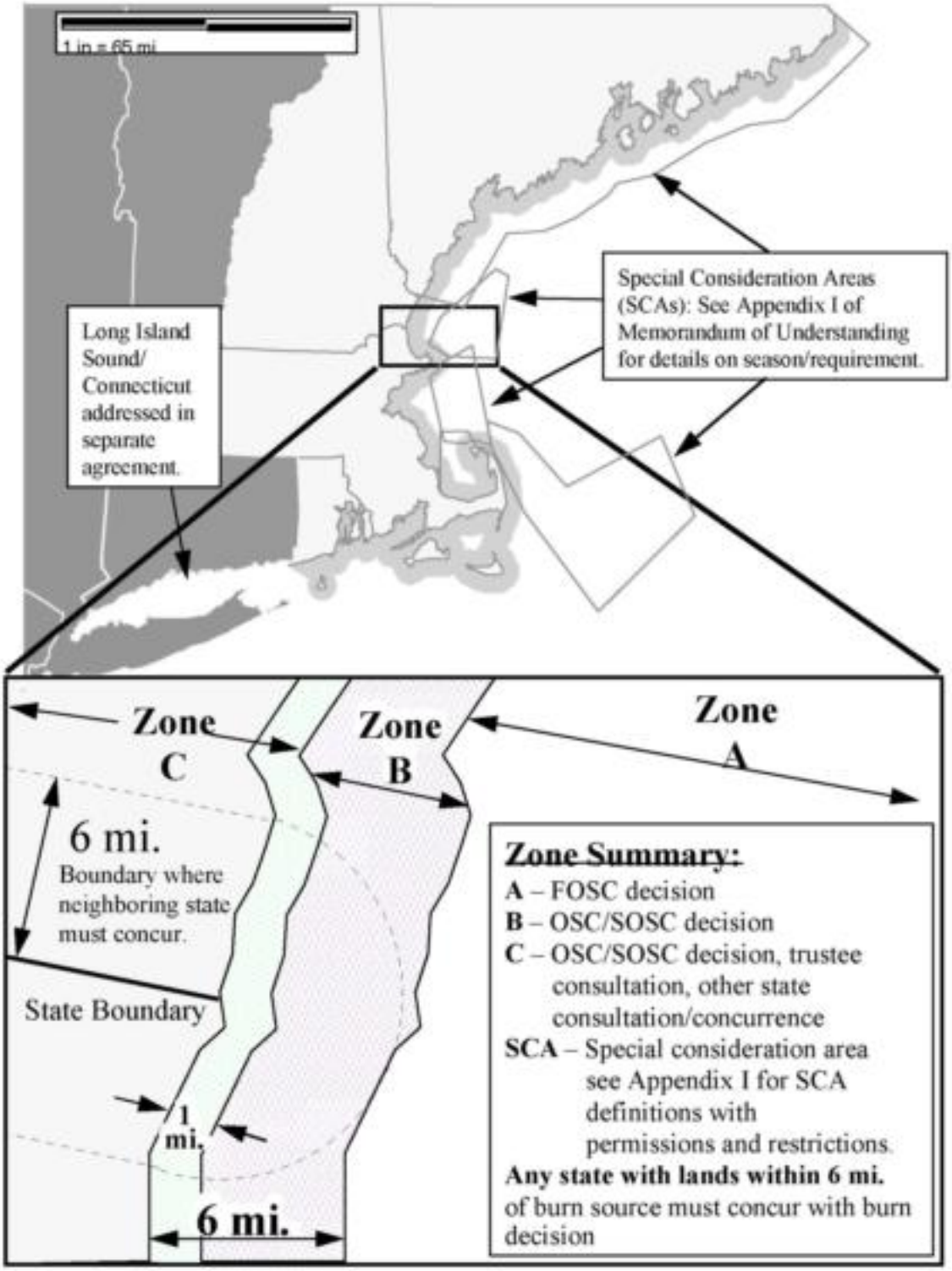
Jeffreys Ledge	*April 1 September 30*
Great South Channel	*April 1 June 30, October 1 November 15*
Cape Cod Bay	*February 1 May 15*

National Ocean Service Special Consideration Area

Case-by-case consultation with sanctuary manager required for *in-situ* burning in:

Stellwagen Bank National Marine Sanctuary	*Year-round*

Appendix II: Zone Boundary map and diagram



Appendix III: Boundary Area Guidance and Agreements

Boundary agreements or guidance developed (i.e. with Canadians, for Region II, Long Island Sound, etc.) may be attached here.

APPENDIX 10

IN-SITU BURN UNIFIED COMMAND DECISION VERIFICATION CHECKLIST

Purpose: *In-Situ* Burn Unified Command Decision Verification Checklist

The following checklist, created with input from the Region I RRT, provides a summary of important information to be considered by the Unified Command (consisting of the Federal On-Scene Coordinator (OSC), State On-Scene Coordinator (SOSC), and responsible party representative (RP)) when planning for the use of *in-situ* burning to respond to an oil spill in Region I that requires federal assistance. This checklist is intended to serve as Unified Command's verification and documentation of an *in-situ* burning decision, rather than as an information distribution sheet or an approval form.

Each section of the checklist provides a series of "limiting factors" questions for each of the decision points on the Region I *In-Situ* Burning Decision Flowchart. Some sections also contain a "worksheet" for important information that may be necessary to answer limiting factor questions; the user is encouraged to attach forms that contain this information, if available. The final section of the plan should be completed (in addition to the rest of the checklist) only for burns at the shoreline, in marshes, or on land.

Questions in the limiting factors section that are answered with a "Yes/Optimal" support the decision to conduct an *in-situ* burn. However, spill response involves numerous tradeoffs, and any less-than-ideal conditions that are represented by a "No/Sub-Optimal" answer may be balanced by other benefits of *in-situ* burning in a given situation. Not every question of the worksheet must be answered. It is acceptable for the Unified Command to make a decision based on incomplete information, provided the information gaps are understood and considered.

In-situ Burn Decision:

Federal On-Scene Coordinator Decision:	__ Approve	Signature: _____
State On-Scene Coordinator Decision:	__ Concur	Signature: _____
Responsible Party Decision:	__ Concur	Signature: _____
Fire Official Decision: *	__ Concur	Signature: _____

* In Zone C and where elsewhere applicable. Under Region I MOU, additional consultation or concurrence is required in Zone C and in SCAs. Note additional concurrence/consultation per state matrices and SCAs.

Agency/Contact	Concurrence/consultation	Time/Date	Method(verbal, written)

Recommendation by checklist preparers:

Points of Contact for checklist:	**Name**	**Position**	**Telephone**
Federal _____	_____	_____	
State:	_____	_____	_____
Responsible Party:	_____	_____	_____
Scientific team:	_____	_____	_____
Other: _____	_____	_____	_____
Other: _____	_____	_____	_____

Fields may be left blank, limiting factors do not preclude burning. Please refer to checklist purpose.

Common Section (All Burns)

Incident information

Incident Name	
Current date/time	
Anticipated burn date/time	
Location of spill (descriptive)	
Location of burn (descriptive)	

Spill Location/Trajectory *(Resource for section: Scientific Support Team)*

Trajectory (Graphic Attached)	__Yes __ No
-or- Text:	
Overflight Map (Graphic Attached)	__Yes __ No
-or- Text:	

Resource for section: Scientific Support Team:

Oil Burnability	Optimal Condition Yes or Probable	Sub-Optimal Condition No or Unlikely	Comments
Anticipate oil to remain ignitable (fresh, not highly emulsified)?			
Attachments/Additional Information:			

Resource for section: Scientific Support Team:

Weather/Sea Conditions	Optimal Condition Yes or Probable	Sub-Optimal Condition No or Unlikely	Comments
Weather forecast precipitation-free (affects ignition)?			
Winds/forecast winds less than 25 knots?			
Visibility sufficient for burn operations/observations (greater than 500 feet vertical, 1/2 mile horizontal)?			
Wave heights/predicted wave heights less than 2-3 feet?			
Attachments/Additional Information:			

Fields may be left blank, limiting factors do not preclude burning. Please refer to checklist purpose.

Resource for section: Requesting Party:	Optimal Condition	Sub-Optimal Condition	
Operational feasibility	Yes or Probable	No or Unlikely	Comments
Is an operational plan written or in process? (if available, attach)			
Is needed air support available?			
Are personnel properly trained, equipped with safety gear, and covered by a site safety plan?			
Are all necessary communications possible (i.e. between aircraft, vessels, and control base in an open water burn)?			
Can all necessary equipment be mobilized during window of opportunity?			
If present, are ice and debris factored into plan?			
Can undesirable secondary fires be avoided?			
Can burn be safely extinguished or controlled?			
Can aircraft pilots/mariners be adequately notified, as necessary?			
Is equipment and personnel available for residue recovery?			
If ignition from a helicopter, FAA approved equipment?			
Attachments/Additional Information:			

Operational worksheet:

Product Type: _____ Volume to be burned: _____

Easily emulsified? _____ Estimated burn duration: _____

Volume of product released: _____

Burn method (at source, containment and towing to safe distance, onshore ignition): _____

Resource for section: OSC/SOSC staff in consultation with meteorologists/modelers as appropriate:	Optimal Condition	Sub-Optimal Condition	
Human and Environmental Impacts	Yes or Probable	No or Unlikely	Comments
Public exposure to PM-10 (particulates <10μm) not expected to exceed 150 $\mu g/m^3$ averaged over 1 hour as a result of burn? (current NRT planning **guideline)**			
Can burning be conduced at a safe distance from other response operations, and public, recreational, and commercial activities?			
Is particulate (hour-averaged PM-10) monitoring available if plume may cross over populated areas?			
Can public be adequately notified of burn?			
Is burn outside of identified Special Consideration Areas? (if no, additional restriction or permission exists inside area)			
Trustees consulted if endangered species in immediate burn area?			
Attachments/Additional Information:			

Fields may be left blank, limiting factors do not preclude burning. Please refer to checklist purpose.

Public Health/Plume Worksheet:

Distance/direction to nearest population relative to burn: _____ miles to the ____ (direction)
Distance/direction to nearest downwind population: _____ miles to the ____ (direction)
Forecast wind direction/speed (24 hour): _____ mph from the _____ (direction)
Forecast wind direction/speed (48 hour): _____ mph from the _____ (direction)
Estimated plume trajectory (text or attached graphic):

Visibility comments and forecast: _____
Other comments/issues: _____

_____
_____
_____
_____

Resource for section: OSC representative:

Decision to Initiate ISB (Consultations/Concurrence)	Yes	No	Comments
Have MOU Zones been reviewed and zone of burn location determined (A, B, C, Special Consideration Area)?			
Are consultations/concurrence called for by zone complete or in process ? (Zone A=OSC, B=OSC/SOSC, C=OSC/SOSC/ Trustee consultation and others required by state (i.e. fire official), Special Consideration Areas=specific requirement)			
Has SOSC received concurrence from or consulted/notified any additional agencies, if required by the state for *in-situ* burning?			
Have adjacent state(s) SOSC(s) concurred (land within 6 miles of burn) or been consulted (no land within 6 miles, but interested in decision)?			
If applicable, are other boundary concerns pre-planned/resolved by consultation/concurrence (Canadian, Region II, tribal)?			
Is oil to be lit only with ignition source (i.e. helotorch), without the use of a burning agent to improve combustibility of oil?			
Only if no: Concurrence of State RRT representative?			
Concurrence of EPA RRT representative?			
Consultation with natural resource trustees?			
Notifications planned as described in MOU (EPA, DOI, NOAA, State(s))?			
Attachments/Additional Information:			

Fields may be left blank, limiting factors do not preclude burning. Please refer to checklist purpose.

Inshore Burn Section (Complete this section only for inshore burns):

Resource for section: Scientific Support Team:

	Optimal Condition	Sub-Optimal Condition	
Environmental Impacts	Yes or Probable	No or Unlikely	Comments
Does season or water/ice level minimize damage to oiled area (i.e. dormant plants and/or flooded root systems)?			
Does information in worksheet below and additional information available indicate that proposed inshore burn will result in net environmental benefits when compared to other alternative response countermeasures or no action?			

Resource for section: SOSC representative:

Decision to Initiate ISB (Consultations/Concurrence)	Yes	No	Comments
Does fire official concur with decision to burn (per state requirements)			
Local Air Quality Personnel consulted/concur on decision to burn? (Consult SOSC for particular state requirements)			
Landowner consulted on decision to burn?			

In-shore Environmental Worksheet:

Oil Thickness: _____

Habitat/Substrate Type (e.g. salt marsh) and dominant Plant Species: _____

Description and size of Area to be Burned (include location of proposed burn with respect to spill source, an attached sketch, survey or picture of area is helpful): _____

Environmental Concerns and Recommendations, (include environmental trade-offs, water depth, past management practices, weather factors, presence of wildlife, alternate or additional clean-up methods): _____

Environmental Review Personnel (names and numbers): _____

Description of Operations (include how the fire will be contained, controlled and ignited): _____

Method to Recover Burn Residue, if expected: _____

Monitoring to be Performed: _____

Fields may be left blank, limiting factors do not preclude burning. Please refer to checklist purpose.

APPENDIX 11

MAINE AND NEW HAMPSHIRE ACP, SECTIONS 4720 THROUGH 4728: CHEMICAL COUNTERMEASURES

MASSACHUSETTS/RHODE ISLAND
DISPERSANT PRE-AUTHORIZATION POLICY

PURPOSE

Sec. 1, This policy addresses the pre-authorization of the use of chemical dispersants for the purpose of responding to oil spills in the coastal waters of the Commonwealth of Massachusetts, the State of Rhode Island, and the United States, as a means of reducing the overall impact of such spills on coastal habitats and marine fauna.

SCOPE

Sec. 2, This policy covers the marine waters off the coasts of the Commonwealth of Massachusetts and the State of Rhode Island, extending seaward of the high water line to the outermost extent of the Exclusive Economic Zone.

ZONES

Sec. 3, The waters addressed in this policy, as defined above, will be delineated into two zones.

Conditional Approval Zone

(a) The use of any chemical agent in response to an oil spill in the coastal waters of the Commonwealth of Massachusetts and the State of Rhode Island within two nautical miles of the mainland or of designated islands (designation is addressed in Sec. 3, Special

Consideration Areas) or has a mean low water depth of less than forty (40) feet will require approval under the methods and restrictions set forth in the latest National Oil and Hazardous Substances Pollution Contingency Plan (40 CFR Part 300, Subpart J), unless otherwise pre-authorized.

Pre-Authorized Zone

(b) The use of chemical dispersants as listed in the most recent version of the National Oil and Hazardous Substances Pollution Contingency Plan Product Schedule in response to an oil spill in the coastal waters of the Commonwealth of Massachusetts, and/or the State of Rhode Island, and/or the waters subject to the authority of the U.S. Coast Guard Captains of the Port, Boston, Massachusetts and Providence, Rhode Island, which are seaward of two nautical miles of the mainland or of designated islands and have a mean low water depth of greater than forty (40) feet is pre-authorized under the supervision of the Pre-designated Federal On-Scene Coordinator with restrictions set forth below.

Special Consideration Areas

(1) Special Consideration Areas (SCA's) may be designated and described in writing by the Natural Resources Trustee (or his/her designated representative) for the Commonwealth of Massachusetts, the State of Rhode Island, the National Oceanic and Atmospheric Administration, or the Department of the

Interior; or the manager of the Stellwagen Bank National Marine Sanctuary.

(2) Special Consideration Areas will consist of restrictions imposed on the use of chemical dispersants for a specific geographic area to be described in this policy (Annex A). These restrictions may range from outright prohibition to a requirement for consultation prior to deployment of the chemicals. They may be spatial, seasonal or species-specific in nature. Each Special Consideration Area submitted by the above mentioned individuals shall describe the specific restrictions to be applied on the use of chemical dispersants, including, as applicable, primary and alternate point-of-contact telephone numbers.

(3) Changes to any aspect of the Special Consideration Areas will be submitted, in writing, to the Chairperson of the appropriate Area Committee and will take effect thirty (30) days following receipt by the Chairperson. Upon receipt, the Chairperson shall forward copies of these changes, as soon as practical, to the membership of that Area Committee and to the Co-Chairpersons of the Region One Regional Response Team.

POLICY REVIEW

Sec. 4, This plan, along with the Special Consideration Areas in Annex A will be reviewed by the affected Area Committees annually at the first meeting of the full Area Committee following January 1.

DETERMINATION OF EFFECTIVENESS

Sec. 5 (a) The Pre-Designated Federal On-Scene Coordinator (FOSC) with authority over the oil spill in question will determine the effectiveness of the dispersant during the time of application. This effectiveness test will be conducted visually and qualitatively by the use of qualified and trained oil spill observers. Qualified observers will be individuals with oil observation experience from the FOSC's staff, the USCG National Strike Force, the NOAA Scientific Support Team or those identified by the FOSC at the time of the response. These individuals will conduct overflights to determine if the oil is being effectively dispersed. If it is determined by the FOSC, based on the report of the observers mentioned above, that the chemical dispersant is having minimal effect, application of that chemical dispersant will cease.

(b) If an authorized chemical dispersant application has been halted and conditions change which contribute positively to the effectiveness of re-application (for example, if a new release event occurs or weather conditions change), the FOSC, following consultation with his or her scientific support team, may attempt a

new application of the chemical dispersant. This new application will be subject to the same effectiveness monitoring as described above.

DISPERSANT MONITORING PROTOCOL

Sec. 6 (a), As agreed upon by the Region One Regional Response Team, the FOSC will follow the Dispersant Monitoring Protocol, as outlined in Annex B. An inability to implement this plan in a timely manner will not revoke the FOSC's pre-authorization to apply chemical dispersants. However, the FOSC should make every attempt to implement this plan as soon as practical.

(b) As soon as practical, a post-application biological monitoring plan will be developed as a section of Annex B and will be implemented routinely following the use of dispersants. An inability to implement this plan in a timely manner will not revoke the FOSC pre-authorization to apply chemical dispersants. However, the FOSC should make every attempt to implement this plan as soon as practical.

NOTIFICATION

Sec. 7 (a) If a decision has been made by the FOSC to use chemical dispersants under the provisions of this policy, the FOSC, as soon as practical, will notify the Region One Concurrence Network, as set forth in the most recent version of the Federal Region One Oil & Hazardous Substances Pollution Emergency Contingency Plan, of that decision.

(b) If chemical dispersants are used as described in this policy or for the protection of human life, the FOSC will hold a post incident debriefing within forty-five (45) days after dispersant application to gather information concerning the effectiveness of the chemical agent used and to determine whether any changes to this agreement are necessary. This debriefing should include, but is not limited to, the Region One Concurrence Network, the Scientific Support Coordinator, and the State On-Scene Coordinator (SOSC), or their representatives. The results of the debrief will be included in the FOSC report.

Annex A
Special Consideration Areas
for MA/RI Dispersant Pre-authorization Policy

Summary: (see original letters for details)

Area/Situation:	Additional Condition:	Submitted by:
Dispersant types other than Corexit 9527 or 9500	Not pre-authorized (Other stockpiled dispersants must receive specific Section 7 approval from USF&WS and NMFS before they may be pre-authorized).	NMFS Section 7 conducted on 9527 and 9500, F&WS Section 7 conducted only on "Corexit formulations"
All pre-approval areas	Implementation of the 6-point Dispersant Monitoring Protocol, USF&WS Region 5 Bioassay protocol, and physiochemical data collection (temp, salinity, conductivity, pH) at each sampling location. (AST with EPA ERT may be able to provide such monitoring)	USF&WS Service Section 7 (see 8/22/96 memo) was conducted on an internal F&WS pre-approval policy (see 5/18/96 memo) that requires the mentioned conditions.
Areas where **baleen whales are present and feeding**	Suspend dispersant application	NMFS (See 8/2/96 Section 7 letter)
Jeffreys Ledge between 5/1—9/30	Consultation with NMFS	NMFS (See 8/2/96 Section 7 letter)
Stellwagen Bank between 5/1—11/15	Consultation with NMFS and SBNMS Manager	NMFS. (See 8/2/96 Section 7 letter)
Great South Channel between 5/1—6/30 and 10/1—11/15	Consultation with NMFS	NMFS (See 8/2/96 Section 7 letter)
Cape Cod Bay between 2/1—5/15	Consultation with NMFS	NMFS (See 8/2/96 Section 7 letter)

Massachusetts/Rhode Island Dispersant Pre-Authorization Policy

Special Consideration Areas for Dispersant Approval

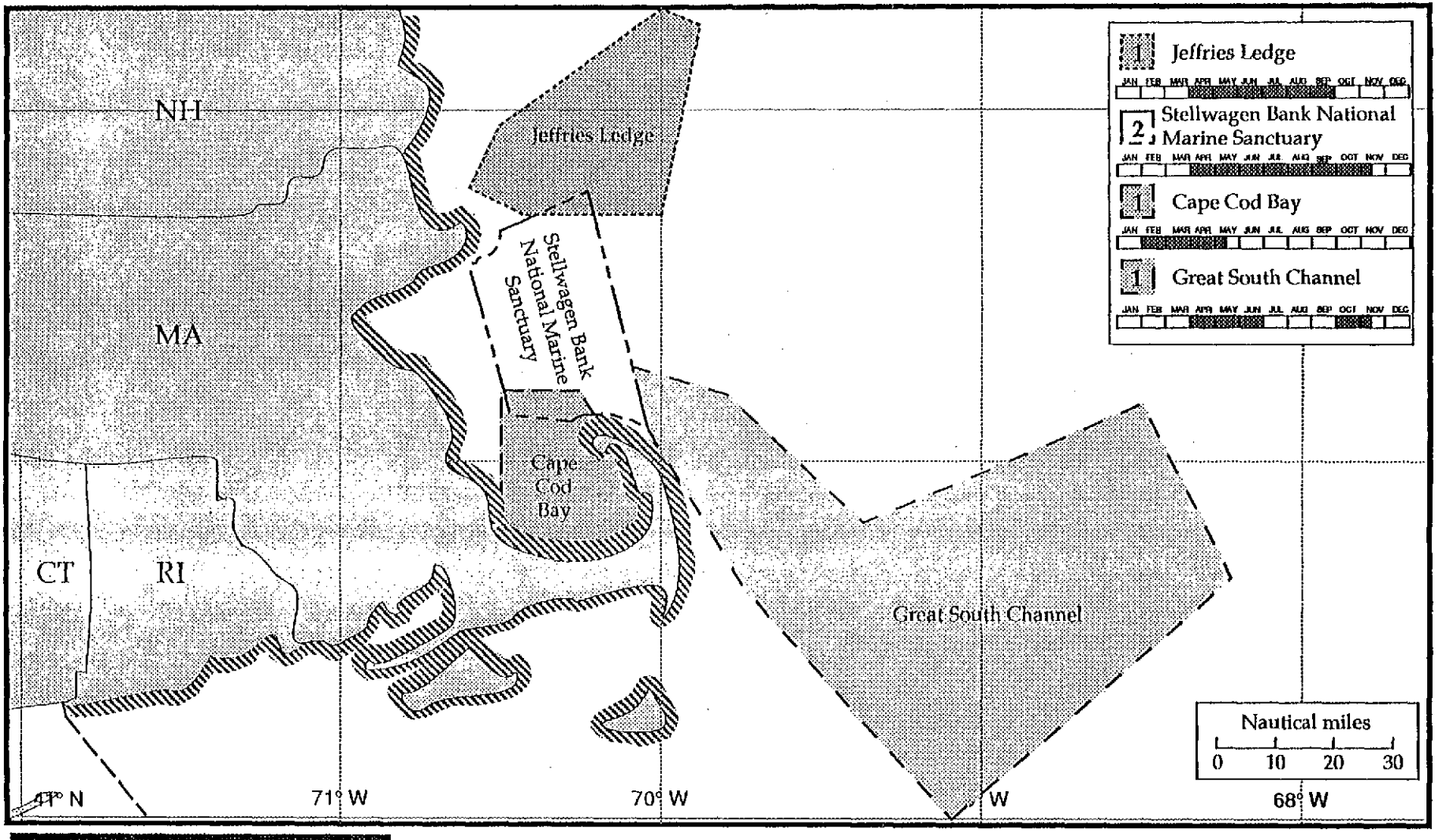
prepared by NOAA/Hazardous Materials Response & Assessment Division
Scientific Support Coordination Branch

USE ONLY AS A GENERAL REFERENCE

2 Mile Boundary: Requires Concurrence Network

Special Consideration Area Restrictions

1. Concurrence with NOAA Trustee & NMFS
2. Concurrence with Stellwagen Bank NMS



RAH

Annex B

Dispersant Monitoring Protocol

* To Be Developed *

(Interim protocol attached)

DISPERSANT MONITORING PROTOCOL
REGIONAL RESPONSE TEAM III
(This protocol accepted by RRT I on 12/8/1993 as the minimal interim dispersant monitoring protocol)

OBJECTIVES:

The Regional Response Team (RRT) has developed this protocol to monitor the deployment of chemical dispersant during oil spill response actions in marine and estuarine waters. The monitoring protocol is designed to assess movement of dispersed oil from the water surface into the water column and bottom sediments, and to provide data for analysis of potential biological effects.

Adoption of this protocol does not constitute a decision to use dispersant. Such decisions are the result of separate RRT agreements (pre-approval) or incident specific discussions.

This protocol eliminates the need to develop incident specific monitoring requirements during an ongoing spill and in addition to satisfying the stated objectives, is intended to expedite chemical dispersant response actions.

BACKGROUND:

The RRT has developed the following monitoring protocol to enable rapid response to oil spills. Eliminating the need to develop incident specific monitoring requirements and providing the On Scene Coordinators (OSC's) with the information necessary to plan for dispersant use should expedite responses.

OSC's must always be prepared to respond to an oil spill with all available equipment, personnel and technology to reduce the impact from accidents. The Oil Pollution Act of 1990 provides for the formation of Area Committees that shall, under the direction of the federal On Scene Coordinator, enhance State and local oil contingency planning by developing appropriate procedures for use of dispersants. Dispersant technology has been recognized as a potential method of reducing the impact to the shoreline environment from accidental oil spills. In order to effectively utilize this technology, a protocol must be in place before a spill to identify the requirements for monitoring the dispersant application.

This dispersant monitoring protocol will:

1. Provide scientific background information regarding the spill, dispersant utilization and effects. This will provide natural resource trustees with information crucial to their impact trade-off decisions. The data gained will assist with subsequent damage assessment responsibilities.

2. Provide the OSC with the requirements of a monitoring pr ogram so that advance planning and coordination may occur. The

data will also assist officials with support regarding post incident challenges.

3. Establish an education program for future learning regar ding dispersant application. This will assist in reviewing dispersants as a permanent response tool.

The RRT established the requirement to monitor all dispersant applications. The requirement is not to delay the effective application of the product but will enhance the scientific and educational values for the future. This protocol is presently established to gain knowledge in dispersant usage and will require review and updating as better information and data are gathered. As most oils must be dispersed within an approximate 48 hour period, rapid response is a necessity. Rapid response can not be insured unless a monitoring protocol is in place which accurately assesses movement of dispersed oil and potential biological effects. This monitoring protocol does not establish limits by which dispersant are applied or not applied, but identifies samples to be collected for laboratory scientific analysis.

The monitoring protocol established here will be impacted by incident specific variables. Spill size, spill dimensions, weather, direction of trajectory and depth of water all provide variables to the planned monitoring. Incident specific directions will be required from the OSC, in consultation with state and federal agencies, regarding monitoring. The plan should be initiated promptly whenever the OSC authorizes the use of dispersants on an oil spill. Implementation of the plan shall not interfere with the spill cleanup. Should unforeseen circumstances make it not possible to implement this monitoring plan in whole or in part during or subsequent to authorized dispersant application, the OSC shall advise the incident specific RRT as soon as possible.

Equipment required for monitoring:

The following equipment will be necessary to conduct the monitoring protocol. The equipment listed will only provide one monitoring platform. In the instance of larger spills where extensive monitoring is required, the OSC may need to consider additional platforms. It is not envisioned in this program that each and every dispersant application pass is individually monitored. For planning purposes, it takes 1.5 hours to perform the six point sampling protocol. Collection of sediment grab samples and benthic invertebrate samples will take additional time but are not time sensitive.

a. Aircraft for air surveillance of the dispersant application and for initial guidance and direction of vessels conducting the monitoring program. There are no specifics on the type of aircraft. Rotary or fixed wing aircraft are suitable for the job. The aircraft used must be able to communicate with

vessels in the area. Portable radios are often sufficient to meet this requirement.

b. A boat large enough to conduct required sampling. Large vessels with on board scientific equipment may be employed however are not required. Immediate analysis of the water samples is not a requirement. Boats approximately 23' in length, radar and electronic navigation system equipped, provide sufficient capacity. Any work from boats should take into account the existing and predicted weather conditions and location when determining a suitable platform. Often times offshore spills have several large vessels attending much smaller vessels conducting actual work. Vessels are likely to require aircraft to lead them to the dispersant application site.

c. A flourometer with the appropriate filter and capability to take samples at 1, 3 and 10 meters depth. The supply line should be fitted with a valve at the unit so that immediate water samples can be drawn with positive fluorescent readings.

d. Water sample bottles, one liter, teflon lined screw caps and amber in color. A minimum of 120 bottles should be readily available.

e. Ice chest with ice for keeping samples cool during transit to laboratory.

f. 35mm camera with film

g. Video camera with one cassette

h. Radios for various monitoring platforms. One radio per platform should be sufficient.

i. Drift buoy for estimating the dispersed oil plume movement. This buoy should be equipped to allow tracking by the monitoring vessel with a radar reflector. The six point monitoring protocol requires sampling in relative positions to the deployed buoy. Should long term sampling of the same plume be desired a radio beacon buoy will be required.

j. Supply of Hydrochloric acid (HCL) for sample preservation.

k. Safety equipment should be carefully reviewed. Initial oil spills will possibly contain levels of benzene, however by the time the dispersant program and this monitoring program are in place exposure should not be a problem. Consultation with appropriate safety personnel should solve this problem. All sampling should be done wearing PFD work vests, neoprene or latex gloves, steel toed shoes and eye protection. Monitors using aircraft and vessels should conform to established safety procedures of the craft. Due to the cooler climates and cold water in the northeast corridor, mustang suits or dry suits may be appropriate. In the case of products which contain higher amounts of Benzene, initial air monitoring may be required.

l. A 20 liter sample container for the collection of clean sea water at location number 1.

This monitoring program is designed to require a minimum of scientific personnel offshore and to conduct the analysis in a shoreside laboratory. Personnel going offshore should be able to navigate accurately, utilize the flourometer correctly and take proper water and sediment samples. Scientific personnel will be

required Nearshore and Inland Zones when conducting benthic invertebrate sampling. Other sampling may be desired for scientific purposes, but are not part of the required monitoring program.

ESTABLISHMENT OF DISPERSANT MONITORING ZONES:

The monitoring program is divided into three geographic zones including Offshore, Nearshore and Inland. The Offshore Zone is considered all waters 3 nautical miles and greater from the shoreline. This is essentially all waters beyond the state water dividing line. The Nearshore Zone is considered all waters from three miles to the shoreline essentially the same as is presently considered state waters. The Inland Zone is all waters within the headlands including bays, estuaries, rivers and harbors.

DISPERSANT MONITORING TECHNIQUES

Visual observation (either aerial or by vessel) of the dispersant application shall be conducted during dispersant use. This observation will determine if the application is on target, whether initial dispersing is occurring and identify any shortfalls. The visual observation should be immediately after application. Most often the use of aircraft is the most practical due to height of eye. Vessels used for this purpose would have to provide a considerable height to allow appropriate observation. Timing of the aircraft is important to insure sufficient airtime is available for both the observation and direction of boats for the monitoring program. Use of both still and video cameras is necessary to document the application and its results. Video film should be immediately taken back to the OSC and other officials for review. The OSC may use the film as a basis for further decisions regarding dispersant application. The OSC shall assign one of his staff and a federal representative in offshore areas and a state representative in nearshore and inland areas at a minimum for observation. Each individual should be trained or posses experience in aerial observation of spilled oil. Very limited space will be available in aircraft and documentation using the video will allow others in the command center to observe the application.

Field expedient tube testing may supplement or augment the immediate visual observation to determine the dispersibility of the oil. Using the test protocol established in enclosure (1), OSC's may approve use. The tube test will use a sample of the spilled oil and the dispersant to be applied.

This procedure establishes a 6 point sample collection protocol. The 6 point program will be utilized right after dispersant application and continue as deemed necessary by the OSC. Enclosure (2) shows the layout to be used in collecting samples using the 6 point collection pattern. At each monitor point data will be gathered at 1 meter, 3 meter and at 10 meter

depths. Additionally, a 20 liter clean water sample will be taken at position number 1 for analysis purposes. Information to be gathered includes a position, fluorometer reading and water samples at maximum meter deflection. Water samples are collected for further scientific analysis. Flourometers must be properly calibrated using the manufacturers instructions. Water samples should be collected in the one liter bottles and kept cool using the ice chest until analysis is completed. Flexibility in implementing this protocol will be required due to the restricted ability and safety of on scene personnel. In certain areas freezing of the water may occur and protection of the sample jars may be necessary.

Flourometers will be utilized to observe and measure emulsified and dissolved oil in the water column. It will provide a baseline using surrounding water as the normal background. Flourometers and ancillary equipment should be designed and calibrated for working with oils.

Sediment grab samples, when required, will be taken and placed in 1 liter clean sample jars. The samples will be kept cool until analysis can take place. Enclosure 3 outlines the procedures for sediment sampling.

Benthic invertebrate sampling, when required, will be conducted with personnel suitably qualified and using sample containers that are clean and oil free. All means necessary to eliminate contamination by other than spilled oil must be taken. Enclosure 4 outlines the procedures for benthic sampling.

NOTE: Caution should be utilized in gathering sediment and benthic invertebrate samples to avoid cross contamination with oil in the water. Sediment or benthic invertebrate samples will normally be taken after floating and dispersed oil passes the collection point. Oil from the spill impacting sediments and invertebrates will remain for extended periods and rapid collection is not necessary. It is expected that this sampling will be conducted within weeks of the actual dispersant application.

REQUIRED MONITORING:

OFFSHORE:

(1) Visual monitoring initially and after every load of dispersant taken offshore.
(2) Video tape of the initial results of application
(3) Flourometer readings and water sampling using the 6 point protocol. Continued monitoring or the extent of monitoring will be determined by the spill size and the amount of dispersant to be applied.

Quantitative monitoring offshore is less than nearshore or inland due to the greater water depth, larger mixing zone and generally fewer sensitive resources in the area of impact.

NEARSHORE:

(1) Visual monitoring initially and after every application.

(2) Video tape and stills for the initial results of application.

(3) Flourometer readings and water sampling using the 6 point protocol. Continued monitoring or the extent of monitoring will be determined by the spill size, amount of dispersant to be applied, location of the spill and trajectory of the spill. The OSC should develop these in consultation with federal and state representatives. Continued monitoring at 6 hour intervals would allow sufficient information gathering to perform the required analysis. Due to the possibility of encountering shallow water impacting the 3 and 10 meter water samples, the program should continue by taking water column samples at maximum water depth.

(4) Sediment grab samples should be taken in non oiled and oiled or potentially oiled water areas for comparative analysis. The only samples required are those to give a representative indication of sediment impact from the dispersed oil. Beach sampling of oiled beaches is not part of this program. When flourometer readings are high in near bottom waters, sediment sampling is not necessary due to known impact.

(5) Benthic invertebrate sampling should occur in non oiled and oiled or potentially oiled water areas for comparative analysis. The only samples required are those to give a representative indication of benthic invertebrate contamination from the dispersed oil.

INLAND:

(1) Visual monitoring continually during application and until the expected trajectory reaches the shoreline.

(2) Video tape and stills of the oil being dispersed and results of the initial dispersal.

(3) Flourometer readings and water sampling using the 6 point protocol. Continued monitoring or the extent of monitoring will be determined by the spill size, amount of dispersant to be applied, resources at risk, location of the spill and trajectory of the spill. The OSC should develop these in consultation with federal, state and local representatives specifically for the area to be governed. Continued monitoring at 4 hour intervals or until the dispersed oil trajectory reaches the shore would allow sufficient information gathering to perform the required analysis. Due to the possibility of encountering shallow water impacting the 3 and 10 meter water samples, the program should continue by taking samples at maximum water depth.

(4) Sediment grab samples should be taken in non oiled and oiled or potentially oiled water areas for comparative analysis. The only samples required are those to give a representative indication of sediment impact from the dispersed oil. Beach sampling of oiled beaches is not part of this program.

(5) Benthic invertebrate sampling should occur in non oiled and oiled or potentially oiled water areas for comparative

analysis. The only samples required are those to give a representative indication of benthic invertebrate contamination from the dispersed oil.

SAMPLE CUSTODY

All samples collected will be handled in accordance with U. S. Coast Guard, Marine Safety Laboratories, Oil Spill Sample Handling and Transmittal Guide, second edition, dated 15 Nov 1988, enclosure 5. This will allow for proper handling, storage, chain of custody and marking of sample containers.

LABORATORY ANALYSIS

Laboratory analysis procedures for water samples should follow EPA Method 418.1 (Spectrophotometric, Infared), PETROLEUM HYDROCARBONS, TOTAL RECOVERABLE, Storet No. 45501, enclosure 6. Laboratory analysis procedures for sediment and benthic invertabrate samples should follow EPA Method 9071, OIL AND GREASE EXTRACTION METHOD FOR SLUDGE SAMPLES, enclosure 7. These procedures should be utilized unless otherwise stipulated or requested by the OSC.

FUNDING

Funding dispersant application and monitoring should remain with the responsible party. This monitoring program is provided to OSC's and Area Committees for their use in reviewing the adequacy of facility or vessel response plans and for potentially responsible parties in determining the needs should dispersant application be determined feasible. These plans should indicate funding source for application and monitoring. In the absence of a responsible party, the OSC needs to be prepared to take action necessary and may plan on using this protocol.

REPORTS

Reports are required during the dispersant application and monitoring program. The OSC's command center should be the focal point for reporting. Close coordination is necessary to insure all activities and constituents are kept abreast of activities and the decisions required. The OSC's representative on scene at the application site should provide immediate verbal feedback regarding the application and results. The observer should maintain a logbook and document each action taken by the dispersant contractor and the monitoring platform. The OSC observer aboard the monitoring platform should provide operations normal reports hourly and provide updates regarding monitoring status. The OSC Command Center should maintain all reports regarding the monitoring program and its results. A copy of all data should be forwarded to the OSC, with copies to other agencies, within 24 hours. Problems or difficulties should be immediately reported to the command center. Long term monitoring programs should develop a reporting procedure suitable for the specific incident.

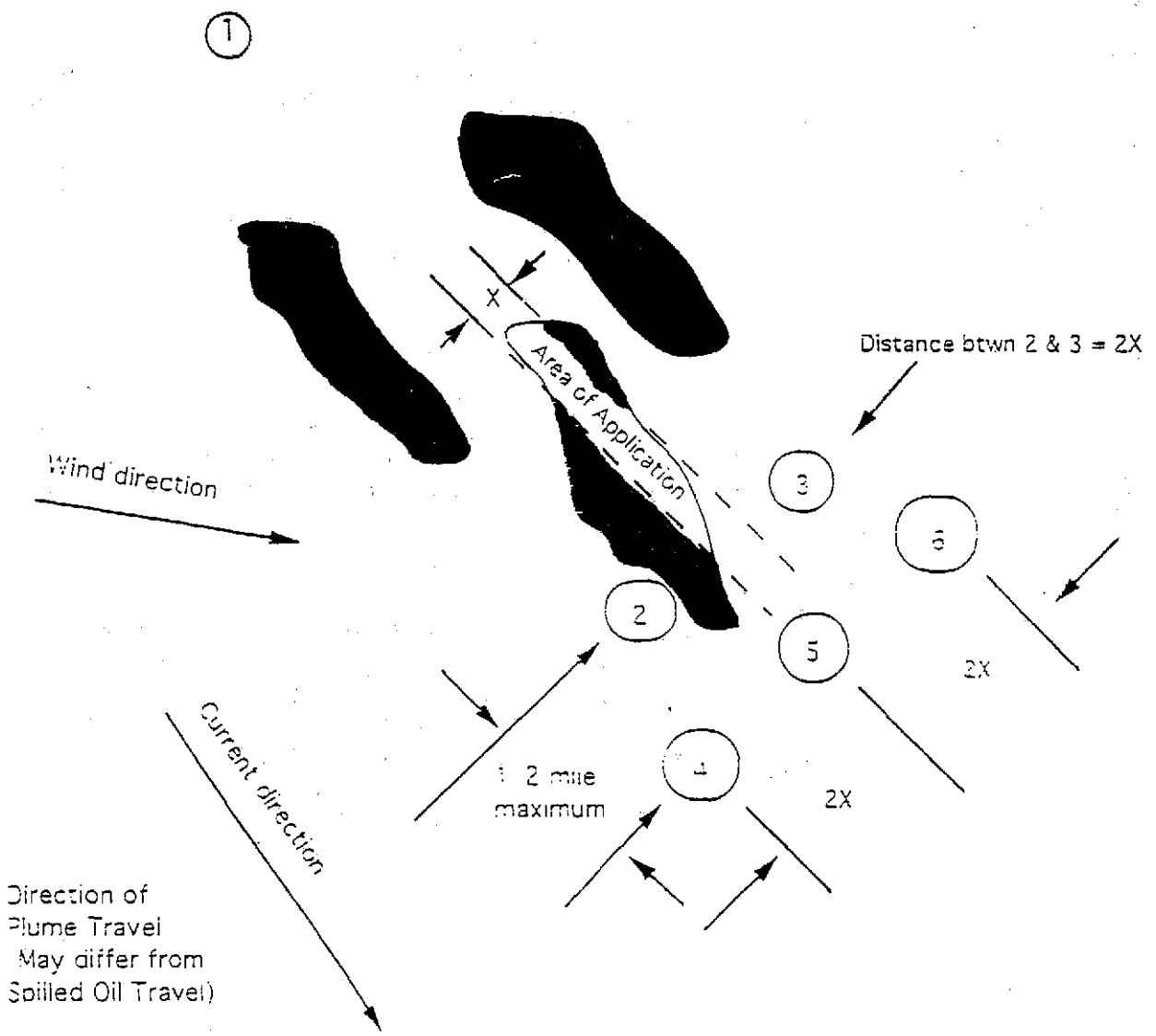
A written report is required regarding dispersant application within 45 days of the application. Copies of the draft report should be provided to the OSC prior to issuance of the final report. Using all the information gathered during the program, the report should review the information and develop specifics regarding dispersant application, it's impact and a cost benefit analysis. Responsible parties should be prepared to compile the report for submission to the OSC, with copies to other agencies and the National Response Team. All technical data and analysis information should be included with the report.

PROGRAM REVIEW

This plan should be reviewed based on exercises and actual field applications of dispersants. Suggested revisions should be prepared by or submitted to the Regional Response Team Three, Chemical Countermeasures Subcommittee for future incorporation into the plan.

Enclosures
(1) FIELD DISPERSANT EFFECTIVENESS TEST
(2) SIX POINT DISPERSANT WATER MONITORING PROTOCOL
(3) EPA SEDIMENT SAMPLING PROCEDURE NUMBER 2016
(4) EPA BENTHIC SAMPLING PROCEDURE NUMBER 2032
(5) OIL SPILL HANDLING AND TRANSMITTAL GUIDE, USCG
(6) PETROLEUM HYDROCARBONS, TOTAL RECOVERABLE, Method 418.1 (Spectrophotometric, Infared)
(7) OIL AND GREASE EXTRACTION METHOD FOR SLUDGE SAMPLES, Method 9071, dated September 1988

SIX POINT DISPERSANT MONITORING PROTOCOL



Sample 1 is uncontaminated control
Sample 2-6 are representative samples
of oil in the water column

On scene sea and weather conditions may require the use of drogue to follow plume direction of travel.

REGIONAL RESPONSE TEAM III
24 FEBRUARY, 1994

Concurrence Network Letters of Approval
Massachusetts and Rhode Island Dispersant Pre-Approval Policy

Agency	Approval of MA/RI Policy (dated Aug 14, 1995)
EPA	August 28, 1996
Massachusetts	December 8, 1995
Rhode Island	November 13, 1996
Interior	January 24, 1997
USF&WS Section 7	August 22, 1996[1]
NOAA	November 14, 1995
NMFS Section 7	August 2, 1996

[1] NMFS and USF&WS Section 7 letters contain Special Consideration Areas, restrictions to specific chemicals (those commonly available in quantity), and certain monitoring requirements. These conditions are summarized in the Annex A, the Special Consideration Areas table, and are listed in detail in the respective Section 7 documents, available upon request from the First Coast Guard District or the Coast Guard Marine Safety Office in Boston or Providence.

United States Department of the Interior

OFFICE OF THE SECRETARY
Office of Environmental Policy and Compliance
408 Atlantic Avenue - Room 142
Boston, Massachusetts 02210-3334

January 24, 1997

Captain Eric Williams, Chief
Marine Safety Division
U.S. Coast Guard
First Coast Guard District
408 Atlantic Avenue
Boston, MA 02210-3350

Dear Captain Williams:

The Department has reviewed and approves of, with the following conditions, the final Preauthorization Plan for dispersant use prepared by the Massachusetts and Rhode Island Area Committee.

First, I recommend that the Wampanoag Tribe of Gay Head (Aquinnah) be invited by the Area Committee to participate in Area Committee activities, and, in the event of an oil spill having the potential to impact Martha's Vineyard and the trust resources of the Wampanoag Tribe, that the Tribe be included in the incident specific Unified Command. As you may be aware, the Wampanoag Tribe of Gay Head (Aquinnah) owns lands in trust, such as the Cliffs of Gay Head and a herring run, which the Tribe may wish to have identified in the Area Plan as a sensitive area. The Tribe may also wish to be included in any concurrence network for decisions regarding "2 mile boundary" area. Please contact Matthew Vanderhoop at the following address for more information: Matthew Vanderhoop, Director of Natural Resources, Wampanoag Tribe of Gay Head (Aquinnah), 20 Black Brook Road, Gay Head (Aquinnah), MA 02535. Mr. Vanderhoop can also be reached at (508) 645-9265, ext. 33.

Please call me if I can be of further assistance (617/223-8565).

Sincerely,

Andrew L. Raddant
Regional Environmental Officer

Attachment

U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Admin.
National Ocean Service
Office of Ocean Resource Conservation and Assessment
Hazardous Materials Response and Assessment Division
c/o EPA Waste Management Division (HEE-6)
J.F. Kennedy Federal Building
Boston, MA 02203
14 November 1995

Captain Eric Williams
U.S. Coast Guard 1st District Office
408 Atlantic Avenue
Boston, MA 02110-3350

Dear Captain Williams:

I am in receipt of the revised Massachusetts/Rhode Island Dispersant Preauthorization Policy dated 16 August 1995. The additions/deletions provided in this version improve the document when compared with the 9 February 1995 draft. As the DOC/NOAA representative with concurrence responsibilities for decisions regarding dispersant use, I approve the policy. This policy is the result of the hard work of those individuals representing the Area Committees of MSO Boston and MSO Providence. I look forward to further developing the protective Special Consideration Areas.

Sincerely,

Kenneth Finkelstein, Ph.D.

cc: Mr. Edward Conley (EPA)
Mr. Stephen Lehmann (NOAA - SSC)
Mr. Scott Lundgren (USCG)

STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS

Department of Environmental Management
OFFICE OF THE COMMISSIONER
235 Promenade Street, 4th Floor
Providence, R.I. 02908

13 November 1996

Capt. Eric J. Williams
First Coast Guard District
408 Atlantic Ave.
Boston, MA 02210-3350

Dear Captain Williams:

I am by this letter approving the updated Dispersant Pre-authorization Policy.
I would like to thank your staff and the members of the Area Committee and the Regional Response Team who worked so hard to craft this agreement. As you know the original policy was implemented during the North Cape Spill but not put into action because of the nature of the spill. However the fact that all of the groundwork had been laid in advance meant that we had that tool available if it had been necessary. It is nice to see that all of our planning has a positive payout.

Sincerely,

Timothy R. E. Keeney
Commissioner

cc Capt. Turlo USCG
J. Fester
D. Borden
S. Morin

encl. 1

The Commonwealth of Massachusetts
Executive Office of Environmental Affairs
100 Cambridge Street, Boston, 02202

WILLIAM F. WELD
GOVERNOR
ARGEO PAUL CELLUCCI
LIEUTENANT GOVERNOR
TRUDY COXE
SECRETARY

Tel: (617) 727-9800
Fax: (617) 727-2754

December 8, 1995

Commander (m)
First Coast Guard District
408 Atlantic Ave.
Boston, MA 02110-3350

Dear Captain Williams:

This letter constitutes my approval of the Dispersant Pre-Authorization Policy dated August 14, 1995 presented by the Regional Response Team for acceptance by the Commonwealth of Massachusetts. At my direction, Massachusetts Coastal Zone Management reviewed the policy to ascertain its consistency with state policies. That review has been completed with a favorable finding.

Your staff, the members of the Area Committee and the Regional Response Team who worked long and hard to develop the policy are to be commended. It represents a major step forward in the region's emergency response capability. The policy makes a valuable tool available to responders while setting acceptable limits to insure its responsible use. I truly hope we never have to use it!

I look forward to our staffs working cooperatively to develop a meaningful Monitoring Protocol as quickly as possible to complement the Dispersant Pre-authorization Policy in the unfortunate event it becomes necessary to resort to its use.

Cordially,

Trudy Coxe

cc Capt. D. McGuire, USCG, FOSC, MSO Boston
Capt. B. Turlo, USCG, FOSC, MSO Providence
Peg Brady, Director, MCZM
Mr. Robert Donovan, MA DEP
Mr. David Struhs, Commissioner, DEP
Mr. Edward Conley, EPA Co-Chair, RRT
Dr. Ken Finkelstein, NOAA Trustee, RRT
Mr. Andrew Raddant, DOI Trustee, RRT

TC/PCS DISPRSNT.POL

100% RECYCLED PAPER

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION I
JOHN F. KENNEDY FEDERAL BUILDING
BOSTON, MASSACHUSETTS 02203-0001

August 28, 1996

Capt. Eric J. Williams
U.S. Coast Guard, First District
408 Atlantic Avenue
Boston, MA 02210-3350

Dear Captain Williams:

EPA has reviewed the most recent draft of the proposed Dispersant Pre-Authorization Policy for Massachusetts/ Rhode Island developed by the Marine Safety Office - Boston and Marine Safety Office - Providence Area Planning Committees dated July 18, 1995. This draft takes into consideration the two provisions mentioned in the initial concurrence to the policy. Therefore, I am concurring with this Dispersant Pre-Authorization Policy with implementation of the monitoring protocol.

Even with pre- authorization plans in place, the RRT concurrence agencies should be notified immediately should there be a significant or potentially significant oil spill or any incident where the uses of dispersant(s) is contemplated.

I would like to recommend that the dispersant monitoring protocol be tested at the regional level to determine its appropriateness and revised if needed. If you have any question or comments, please contact Dennisses Valdés at (617) 573-5715.

Sincerely,

Donald F. Berger, Chief
Emergency Planning and Response Branch
Office of Site Remediation and Restoration
RRT I - Co-Chair

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APPENDIX 12

MASSACHUSETTS AND RHODE ISLAND DISPERSANT PRE-AUTHORIZATION POLICY

4700 Technical Planning & Support

4710 Protection, Containment, and Recovery Strategies

Environmentally sensitive areas are identified in the four Geographic Response Plans (GRPs) listed in Section 4600. GRPs represent the collective input of natural resource trustee agencies and spill response organizations regarding environmental protection strategies for a given area. The objective of these plans is to reduce decision-making time during the initial hours of response to a major spill so that protection strategies can be implemented immediately. GRPs contain maps and descriptions of sensitive public and natural and cultural resources, identify strategies to protect those resources, and set priorities.

GRPs do not address Private Resources, such as commercial marinas. These resources are assigned the lowest priority for protection. Development of any protection strategies for private resources therefore falls under the duties of the responsible party.

In general, GRPs include the following types of response strategies:

- No action – appropriate when weather, sea, or other conditions make other options unsafe and/or infeasible. Also appropriate when response actions or site access will cause further environmental damage (e.g., wetlands).
- On-water recovery – mechanical removal of floating oil by sorbent materials, vacuum trucks, and skimming devices.
- Subtidal recovery – mechanical removal of sunken oil by dredges, pumps, or submersible equipment.
- Exclusion Booming – deploying various types of boom to keep oil out of a sensitive area.
- Deflection Booming – deploying various types of boom to divert oil away from a sensitive area and/or divert oil toward a collection point.

4720 Chemical Countermeasures

References:
(a) 40 C.F.R. Part 300, National Contingency Plan
(b) Federal Region I Oil and Hazardous Substance Pollution Emergency Contingency Plan
(c) EPA National Contingency Plan Product Schedule

The Maine and New Hampshire Area Committee agree that the primary method of cleaning up oil shall be the mechanical removal of oil from the environment. The Committee recognizes that in certain circumstances timely effective mechanical containment, collection, and removal of the oil may not be possible, and the utilization of chemical countermeasures, alone or in conjunction with other removal methods, may be considered as a means to minimize a substantial threat to public health or welfare, or minimize serious environmental damages.

The Maine and New Hampshire Area Committee recommends that dispersants be considered as a potential first response option to oil spills, along with other response actions. Implementation of this recommendation must consider logistical requirements, contingency planning, equipment and dispersant training.

Sensitive inshore habitats such as salt marshes, reefs, sea grasses, and other sensitive areas, are best protected by preventing oil from reaching them. Dispersion of oil at sea, before a slick reaches a sensitive habitat, generally will reduce the overall, and particularly the chronic, impact of oil on many habitats.

Because the principal biological benefit of dispersant use is prevention of oil stranding on sensitive shorelines, and because dispersability of oil decreases rapidly with weathering, prompt response is essential. Therefore, regulations and contingency planning should make rapid response a priority. In view of the need for a rapid response involving dispersants the Area Committee has developed a preauthorization plan (section 4628) which describes the procedures to be followed for obtaining an expedited decision for the use of dispersants in waters covered under this plan.

To be successful at responding to oil spills, particularly large oil spills, responders must be able to combat the spill with as many "tools" as possible. Dispersants, in-situ burning, and bioremediation agents are all tools that have demonstrated usefulness in past oil spills. Thoughtful consideration must be given to all oil spill response options in order to maximize the response effort.

4721 Dispersants

Dispersion may be defined as the act or state of being broken apart and scattered. Oil floating on water will ultimately disperse naturally in response to currents and waves. As the degree of surface energy increases, the rate of natural dispersion increases. Typically, however, this process is slow and may allow an oil slick to move considerable distances and threaten large areas. Additionally, natural dispersion commonly results in the formation of persistent and difficult to treat water-in-oil emulsions (tar balls, mousse).

With the proper use of chemical treating agents (or dispersants), the rates of dispersion can be greatly increased, reducing the potential damage associated with floating slicks. Once dispersed under appropriate conditions, the oil is diluted and degraded rapidly to concentrations not believed dangerous to the environment. Dispersants also restrict or prevent the formation of water-in-oil emulsions.

Dispersant formulations contain varying amounts of surface-active agents (or surfactants). Technically, surfactants act to modify (reduce) the oils surface tension. Each surfactant molecule may be thought of as polar in nature, one end having an affinity for oil, and the other an affinity for water. When applied to floating oil, the surfactant diffuses through the oil and individual molecules orient themselves (water-attracting ends out) at the oil-water boundary. (It is critical that the dispersant be applied to the oil and not the surrounding water.) As the slick is broken apart by natural or manmade energy, treated particles of oil are repelled, preventing slick deformation. Eventually treated oil particles are broken into small enough drops that they remain suspended and dispersed in the water column. This suspension of oil droplets should not be confused with sinking. Dispersant treatment does not, in itself, result in the sinking of oil. Further, as only surface tension properties are modified, dispersants do not change the chemistry of the oil or render it more toxic.

4722 Habitat Considerations

The following are habitats in which:

- Dispersant usage is an option for oil spill cleanup if slick dispersion is desirable.
  - ⇒ Open water (waters deeper than 5 fathoms)
- Dispersant usage is a viable option for oil spill cleanup, although other methods may be preferred.
  - ⇒ Enclosed bays and harbors, providing the area is adequately flushed by tidal or current action and has adequate volume of dissolved oxygen.
- Dispersant usage is not advisable but may be considered under some circumstances, e.g., if long-term impact can be avoided. Should probably be authorized only if there is adequate flushing by tidal or current action.
  - ⇒ Intertidal sea grass beds
  - ⇒ Wade zone sea grass beds
  - ⇒ Shallow subtidal sea grass beds
  - ⇒ Kelp beds
- Dispersant usage should be avoided. (Note: There may be exceptions to this e.g., if oil threatens long-term impacts on one or more sensitive areas).
  - ⇒ Bird and marine mammal habitats
  - ⇒ Salt marshes
  - ⇒ Tidal flats
  - ⇒ Soft bottom subtidal

4723 Dispersant Types

There are three basic types of modern dispersants:

- water base;
- solvent base; and
- concentrate.

They differ mainly in the nature of their carrier medium and the ease with which dispersions are formed.

- Dispersion using water-base formulations typically require more time and energy. Because they use water as a solvent, their products can be diluted on-site with sea water, thus lending themselves to vessel application.
- Solvent-base formulations tend to disperse easier, but are generally more toxic and require higher dosage rates. Their intended use is for heavy and weathered oils. They are ineffective when diluted with water.
- Concentrates contain high percentages of surface-active agents. Depending on the product, they may be used full strength, diluted with sea water, and/or diluted with hydrocarbon solvents. The "self-mixing" type of concentrate requires extremely low levels of mixing energy. By virtue of their versatility, dispersant concentrates lend themselves to most methods of application they are particularly suitable for aerial use.

4724 Dispersant Selection

The effectiveness of any dispersant is dependent on its formulation, characteristics of the oil to be dispersed, method of application, and certain environmental conditions. Product selection should be based on maximizing effectiveness and minimizing potential environmental effects.

The initial step in dispersant selection is identification of types compatible with the oil in question. Dispersants suitable for marine use can be divided into three generic types: water base, hydrocarbon solvent base, and concentrate. Water-base dispersants are miscible with water and can be applied both full strength and diluted with sea water. Generally, an external source of mixing (breaker boards, propwash, etc.) is required for optimum effectiveness. Hydrocarbon solvent-base dispersants are not miscible with water and cannot be applied by eduction or injection into sea water. As a result of their solvent properties, they are more effective with viscous, waxy, or emulsified oil than are other types. External mixing is generally required.

Concentrates contain high percentages of surface-active ingredients (greater than 50 percent by volume) and may be applied at lower dosages than other types. They may be applied full strength or diluted with sea water or hydrocarbon, depending on their inherent solvent system.

Each dispersant type is most appropriate for specific ranges of oil type. It should be noted that the properties affecting an oil's dispersibility typically change as weathering proceeds. Accordingly, dispersant requirements may change with time.

Numerous products may be available under each dispersant type. Under provisions of the National Oil and Hazardous Material Spills Contingency Plan, chemical agents shall not be considered for use as dispersing agents unless they have been accepted by the Environmental Protection Agency (EPA), and listed in the National Contingency Plan Product Schedule (available by calling the NCP Hotline at 202-2602342). To be useful, dispersants must be on-scene in sufficient quantity and in a timely fashion. Product selection should also consider effectiveness and toxicity. Desirable products should combine maximum effectiveness and minimum toxicity.

Measures of effectiveness and toxicity are typically based on laboratory evaluations, and as such, are difficult to apply directly to field situations. Data of this type should be used only in the most general sense, such as in rough product screening. Accurate evaluation of field effectiveness may require trial application.

4725 Application Method Selection

Selection of the proper application method is as important as selection of an appropriate dispersant. Application methods are determined by the characteristics of the dispersant to be applied, the nature and location of the spill, and limiting environmental conditions.

The basic types of dispersant application systems include spray booms attached to vessels, portable and integral vessel fire systems, and aerial spray systems using a variety of helicopters and fixed wing aircraft. For small spills, use of a single application method may be acceptable. For such spills, vessel, helicopter, or light aircraft systems are most practical. For larger spills, rapid treatment of extensive areas may be desirable. Under such circumstances, large aerial application systems or use of several types of systems may be required.

4726 Making The Dispersant Use Decision

An on-scene coordinator has a range of options available for combating oil spills. The OSC must examine conventional response alternatives such as source containment and shoreline protection and cleanup for comparison to dispersant application.

At times when physical control and recovery are not feasible and important resources or shoreline areas are threatened, dispersant may be the best method to protect sensitive areas. The dispersant use guidelines in Section 4627 are designed to define the scope of the dispersant approval problem, organize information required to reach a decision, and specify a range of answers beyond a simple approval or disapproval.

Four areas of information are identified in the guidelines below:

- data about the spill source, oil, and physical conditions on scene,
- delineation of the requirements for dispersant response and physical control options,
- identification of potential environmental and economic costs of possible response options, and
- evaluation of the consequences of dispersant application and recommendations on a course of action.

STEP ONE: The first priority in any spill is to identify the spill source, cause, rate of release, and type of oil. Once the oil type is known it properties, specific gravity, viscosity, pour point, etc. can be determined. Data are also gathered on the physical conditions on scene, including temperature, wind speed and speed direction, water temperature, salinity, and depth.

The OSC uses this information to make a preliminary assessment of whether or not dispersants would be effective or desirable. For example, a very viscous oil near its pour point in cold water would most likely not be dispersible. Conversely, a light fuel, with heavy seas, might disperse naturally before chemicals could be mobilized.

STEP TWO: If it is decided that dispersants could be of use, the next step is to evaluate the movement of the oil, both dispersed and undispersed. Accurate oil trajectory forecast modeling may be a critical element in the decision process, providing predictions of travel time to land, slick surface area, and length of expected shoreline impact. Each aspect of the forecast is used to evaluate the logistics of dispersant application and the potential environmental impact.

The OSC can now assemble information on the available dispersants and application equipment for the spill at hand. The OSC must ensure that the dispersant type is effective on the oil spilled and compatible with the proposed application method and that enough dispersant is available to combat the forecasted slick surface area. It is important not to initiate dispersant application without sufficient supplied or logistical support; such an effort could fail, compounding the environmental effects. The OSC uses logistical information to plan a schedule of application, determine the location and area of slick to be treated, not set a dose rate of dispersant to oil. The OSC can get assistance on this matter from the USCG Strike Team, EPA Environmental Response Team, and industry representatives for assistance.

STEP THREE: To hasten a decision, the involved natural resource trustees/Scientific Support Coordinator (SSC) examine the resources at risk for both a dispersant-treated spill and an

untreated spill, while the OSC is examining the logistics of dispersant use. The SSC distinguishes threatened resources by studying oil travel paths identified by trajectory forecasts.

Shoreline habitat types, including critical habitats for endangered species are identified within the area of expected impact. The relative threat posed by oil to a particular area can be rapidly evaluated if ranking of shoreline areas (such as an Environmental Sensitivity index) has been completed for a region. Specific categories of wildlife present in the threatened areas are also identified. These categories include endangered and threatened species, marine mammals, waterfowl, fish, mollusks, and crustaceans and their respective seasonal variation and sensitive life stages. Commercial and public use areas such as aquaculture sites, parks, and marinas are also considered. The SSC will rely on state and federal resource agencies for guidance in developing resources protection priorities.

Although there have been attempts at quantitatively ranking environmental impacts associated with oil and dispersants in the environment and there are hundreds of publications on the toxicity of dispersants, it is difficult to predict the response of a particular population or system to oil and dispersants in a specific geographic area. Post experience can provide guidance on areas not appropriate for dispersants. If the time of travel of oil to shore is short, dispersion may not be completed before landfall, and therefore shoreline impacts may not be mitigated. Oil penetration and persistence in sediments may be increased when dispersants are used in inshore areas. Areas of low natural water exchange where dilution is slow might experience greater environmental harm from dispersant and oil mixtures than from oil alone.

STEP FOUR: Having gathered the information required by the guidelines, the OSC may decide for dispersant use. Experience has shown that in most cases it takes hours to gather the information. There are four determinations an OSC can make:

- Do not use dispersants.
- Use dispersants on a trial basis (to ensure effectiveness).
- Disperse in limited or selected areas
- Disperse to the maximum extent possible with accepted methods.

4727 Guidelines for Dispersant Use Decision Making

These guidelines are intended as an aid to the OSC in deciding whether or not to use dispersants in response to an oil spill. A decision relative to the use of dispersants will be in accordance with the Preauthorization Plan (section 4628).

The following outline illustrates the information that must be considered for a dispersant use decision to be made.

I. DISPERSANT USE OUTLINE.
   A. SPILL DATA
      (1) Circumstances:
      (2) Time/Date:
      (3) Location:
      (4) Type of Oil:
      (5) Volume Released:
      (6) Total Potential of Release:
      (7) Type of Release (Instantaneous, Continuous, Intermittent):
   B. CHARACTERISTICS OF THE SPILLED OIL

(1) Specific Gravity:
(2) Viscosity:
(3) Pour Point:
(4) Flash Point:
(5) Relative Toxicity:

C. WEAX/WATER CONDITIONS
(1) Air Temp:
(2) Wind Speed/Direction:
(3) Tide/Current Info:
(4) Sea Conditions:
(5) Water Temp/Salinity:
(6) Water Depth at Spill Location:

D. OIL TRAJECTORY INFORMATION
(1) 48-Hour Surface Oil Trajectory Forecast:
(a) Surface area of slick
(b) Expected areas of landfall
(2) 48-Hour Dispersed Oil Trajectory Forecast:
(a) Oil movement in water column
(b) Surface oil movement
(c) Expected landfall

E. CHARACTERISTICS OF AVAILABLE DISPERSANTS & APPLICATION EQUIPMENT
(1) Characteristics of the Dispersant(s)
(a) Name:
(b) Manufacturer:
(c) When available:
(d) Location(s):
(e) Amount available:
(f) Type of containers:
(g) Toxicity:
(h) Application methods:
(i) Miscellaneous:
(2) Type of Transportation & Dispersing Equipment
(a) Name:
(b) Location:
(c) Time to arrive:
(d) Equipment available:
(e) Other:

F. INFORMATION ABOUT AVAILABLE DISPERSANT AND DIPSERSING EQUIPMENT
(1) Name on EPA & State Acceptance List
(2) Type (Self-Mix, Concentrate, Solvent, Other)
(3) Proposed Application Method(s) & Rates
(4) Efficiency (% Dispersed & Volume Dispersed)
(5) Schedule of Operation
(6) Location of Area to be Treated
(7) Surface Area of the Slick Which can be Treated in the Schedule Time Period

G. CONSIDERATIONS FOR CONVENTIONAL METHODS OF CONTAINMENT AND CLEANUP (COULD DIPERSION AID IN REDUCING IMPACT)
(1) Containment at source

(2) Shoreline Protection Strategies
(3) Shoreline Cleanup Strategies
(4) Time Necessary to Execute Response

H. HABITATS AND RESOURCES AT RISK
(1) Habitat
(2) Resources

I. ECONOMIC CONSIDERATIONS
(1) Cost of Dispersant Operation
(2) Cost of Conventional Containment & protection
(a) With dispersant use
(b) Without dispersant use
(3) Cost of Shoreline Cleanup (Cost per Barrel X # of Barrels Reaching Shoreline)
(a) With dispersant use
(b) Without dispersant use

4728 Preauthorization For Dispersant Use

4728.11 Purpose

This Preauthorization Plan is designed to implement sections of Subpart J of the National Oil and Hazardous Substances Pollution Contingency Plan (NCP) and implement the requirements of Title 33 United States Code 1321(j)(4)(v) of the Federal Water Pollution Control Act, as amended, (FWPCA) that the Area Contingency Plan (ACP) shall "describe the procedures to be followed for obtaining an expedited decision regarding the use of dispersants." This Plan provides preauthorization for the use of dispersants by the Coast Guard On Scene Coordinator (FOSC). This preauthorization applies only in designated zones in the Coast Guard Captain of the Port Portland, Maine geographic area of responsibility.

This Plan also implements Subpart J (Use of Dispersants and Other Chemicals) and Appendices 300.945 and 30C.950 of Region I New England Regional Contingency Plan (RCP).

4728.12 Authority

Section 311(d)(2)(G) of the FWPCA requires the NCP include a schedule for identifying "dispersants, other chemicals, and other spill mitigating devices and substances, if any, may be used in carrying out" the NCP. These are referred to as "chemical countermeasures" and are listed on the NCP Product Schedule. The responsibility to maintain the NCP Product Schedule was delegated to the Administrator, Environmental Protection Agency, by Executive Order 12777, and is carried out under Subpart J of the NCP.

Subpart J of the NCP authorizes the Regional Response Team (RRT) representatives from EPA and the States with jurisdiction over the waters of the area to which a Preauthorization plan applies, and the DOC and DOI natural resource trustees, to approve in advance the use of certain products under specified circumstances as described in the preauthorization plan. The FOSC may authorize the use of the products without obtaining the specific concurrences described above under Subpart J of the NCP.

Subpart J further provides that for spill situations that are not addressed by the preauthorization plans described previously, the FOSC, with the concurrence of the EPA representative to the RRT and the States with jurisdiction over the navigable waters threatened by the oil discharge, and in consultation with DOC and DOI natural resource trustees, may authorize the use of chemical and biological countermeasures on oil discharges; provided that such chemical and countermeasures are the NCP Product Schedule.

Commandant, United States Coast Guard, has pre-designated the Coast Guard Captain of the Port Portland, Maine as the FOSC for oil discharges in COTP Portland Zone (as defined in 33 CFR Part 3, and subject to joint response boundary agreements with the EPA) and has delegated to the COTP the authority and responsibility for compliance with the FWPCA.

The Legislature of the State of Maine has authorized the Commissioner of the Department of Environmental Protection (MEDEP) to designate an Oil Soil Coordinator, with the authority to approve the use of chemical countermeasures for the control of oil spills.

The Waste Management Division of the New Hampshire Department of Environmental Services (NHDES), under the authority of state law RSA 146A:4, assumes primary jurisdiction for response to oil spills in the state. Accordingly, the authority and responsibility for providing approval for the use of chemical countermeasures for control of oil spills rests with the Division Director or his designee.

The US DOI and DOC/NOAA are designated Federal trustees of certain natural resources under Subpart G of the NCP and are to be consulted regarding the determination to apply dispersants to oil discharges in U.S. waters.

The Region I RRT representative from EPA and the DOC/NOAA and DOI natural resource trustees approve in advance the use oil certain dispersants under specified circumstances as described in this Plan. As specified in this Plan, the FOSC, in consultation with MEDEP and NHDES, may authorize the use of these products without obtaining the specific concurrences from EPA, DOC/NOAA and DOI.

4728.13 Scope

This preauthorization Plan is applicable to the marine waters of the COTP Portland Zone (defined in 33 CFR Part 3). These waters, for the purpose of this plan, are divided into four zones geographic areas and conditions under which dispersant use is Preauthorized are as follows:

Zone 1 - Preauthorization Zone

Geographic scope:
Zone 1 is defined as waters that lie 0.5 nm from the Territorial Sea Baseline (as defined in 33 CFR 2.05-10) alone the coast of Maine and New Hampshire to the outermost extent of the Exclusive Economic Zone.

Advance approval for Zone 1:
The FOSC, in consultation with MEDEP and NHDES, may authorize the use of dispersants in Zone 1 in accordance with the protocols listed in section 4628.4 of this Plan with the exception of Special Consideration Areas listed below.

Zone 2 - Concurrence Zone

Geographic scope:
Zone 2 is defined as waters that lie within 0.5 nm of the Territorial Sea Baseline along the coast of Maine and New Hampshire, including all bays and coves.

Advance approval for Zone 2:
No preauthorization is given for Zone 2. The use of dispersants in this Zone will require concurrence and consultation with the specified agencies in accordance with Subpart J of the NCP and Subpart J of the Region I Regional Response Plan.

Special Consideration Areas

Special Consideration Areas (SCA's) will be designated and described in writing by the natural resource trustee (or his/her designated representative) for the State of Maine, the State of New Hampshire, the National Oceanic and Atmospheric Administration, and the Department of the Interior.

Special Consideration Areas will consist of restrictions imposed on the use of dispersants for specific geographic areas to be described in this Plan. These restrictions may range from outright prohibition to a requirement for consultation prior to deployment of the chemicals. They may be special, seasonal or species-specific in nature. Each Special Consideration area submitted by the above mentioned representatives shall describe the specific conditions to be applied on the use of chemical dispersants, include primary and alternate point of contact telephone numbers.

Changes to any aspect the Special Consideration Areas will be submitted, in writing, to the Chairperson of the Area Committee and will take effect thirty (30) days following receipt by the Chairperson. Upon receipt, the Chairperson will provide copies of these changes, as soon as practical, to the membership of that Area Committee and to the Co-Chairpersons of the Region One Regional Response Team.

Special Consideration Area 1

Geographic Scope:
SCA 1 is defined as the waters that lie from 0.5 nm the Territorial Sea Baseline to 2.0 nm from the Territorial Sea Baseline

Approval for SCA 1:
The use of dispersant this SCA requires concurrence and consultation with the DOI. Once the appropriate contact person for the DOI is notified, the DOI will reach a decision within one (1) hour as to whether the use of a dispersant will be detrimental to trust resources. The appropriate contact person for the DOI must be contacted directly. Voice mail messages do net constitute "contacts." No response by the DOI would constitute approval of the use of dispersant in this SCA.

Special Consideration Area 2

Geographic Scope:
SCA 2 is defined as the waters that lie within 2.0 nm from the boundaries of any offshore islands owned or managed by the DOI that are beyond 0.5 nm from the Territorial Sea Baseline.

Approval for SCA 2:
The use of dispersants in this SCA is approved to the 0.5 limit (with the further restriction of SCA 1 above within the 0.5 to 2.0 nm) except in the following windows of time:

- From May 15 to August 15 dispersant use in this SCA requires concurrence and consultation with the DOI.
- From January 1 to March 31 it is recommended that concurrence with the DOI be obtained prior to dispersant use.

4728.14 Protocols

As attested by the approval of this Preauthorization Plan, the RRT I representatives from EPA, MEDEP, and NHDES, and the DOI and DOC/NOAA natural resource trustees, agree that the predesignated FOSC has the authority and may order the use of dispersant on oil discharges using the guides found in Subpart J of the NCP, Appendix 300.945 and 300.950 of the Region I RCP and this section of the Maine and New Hampshire ACP and subject to the following conditions:

The decision to use dispersants within these Guidelines rests with the pre-designated FOSC, in consultation with MEDEP and NHDES.

The FOSC may authorize the use of dispersants on a release or discharge to prevent or substantially reduce a hazard to human life without obtaining concurrence from EPA, affected States, DOT, and DOC/NOAA, without following protocols established in this Plan, and without following the guides in the RCP and ACP. If dispersants are used in this manner, notification to EPA, affected States, DOI, and DOC/NOAA shall be made as soon as practical. Once risk to human life has subsided, these exceptions no longer apply.

The dispersants listed in the NCP Product Schedule and as further pre-approved by Federal natural resource trustees may be authorized for use in Zone 1 by the FOSC, in consultation with MEDEP and NHDES, without further specific concurrence from EPA, DOT and DOC/NOAA.

If a decision has been made by the FOSC, in consultation with MEDEP and NH-DES, to use dispersants under the provisions of this Plan, the FOSC will immediately notify the EPA, DOI, and DOC/NOAA of that decision. This initial notification will include, but is not limited to, the following information to the extent available:

- Type and amount of oil discharged.
- Areas effected.
- The projected area of impact of the oil if not dispersed.
- Type of chemical agent to be used.
- Application rate and method.
- On scene weather.

If dispersants are used as described in this Plan or for the protection of human life, a post incident debriefing will take place within 45 days to gather information concerning the

effectiveness of the chemical accents used and whether any chances to this Plan are necessary. The results of the debrief will be included in the FOSC report.

Monitoring for dispersants application and effectiveness will be conducted. An inability to implement a Monitoring Plan in a timely manner will not revoke the FOSC's authorization to use dispersants under this Plan. However, the FOSC should make all attempts to implement a Monitoring Plan as soon as practical.

4728.15 Amendments

This Preauthorization Plan shall be reviewed annually by the Maine and New Hampshire Area Committee at the first meeting of the full Area Committee in the calendar year.

The following Table is a list of dispersant resources.

APPENDIX 13

UNIFIED COMMAND DECISION WORKSHEET FOR THE USE OF DISPERSANTS

Unified Command Dispersant Worksheet

To be cooordinated by the FOSC Staff, Planning Section or R.P. (as practical).
This form should be completed to the degree that information is available, reliable and timely.

Federal On-Scene Coordinator:				
State On-Scene Coordinator:				
Responsible Party (R.P.):				
Points of Contact:	**FOSC Representative**			
	SOSC Representative			
	R. P. Representative			
	Planning Section Chief			
	NOAA SSC			
Information requested:	Date:		Time:	
Recommendations delivered:	Date:		Time:	

•••• Recommendations to the Unified Command •••• (see Data Appendix for details)

MA/RI Area Committee
FOSC Pre-Authorizations
Approved: January 1997
FOSC
>2 N.Miles + 40 Ft Depth

Special Consideration Areas
Jeffreys Ledge (4/1-9/30)
Stellwagen Bank (4/1-11/15)
Great South Channel
(4/1-6/30) & (10/1-11/15)
Cape Cod Bay (2/1-5/15)

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Data Appendix

SPILL DATA

Spill Name	Date	Time	Oil Type	**Additional Oil Info:**	
				Attached:	
Location of Spill: LAT:			LONG:		
Location of area to be treated (general)					

Pre-Approved		**YES**		**NO**	
Is the spill threatening a Special Consideration Area?			NO	YES	
Spill Volume:		barrels	tonnes	meters 3	gallons
			(circle one)		
Is the source expected to continue to discharge?		Yes	No	Unknown	
Rate of Discharge:		per minute	per hour	per day	
			(circle one)		
Surface Trajectory Prediction	Graphic Attached:		YES	NO	

(CONSULT WITH THE NOAA SCIENCE SUPPORT TEAM)

Dispersion Plume Prediction	Graphic Attached:	YES	NO

(CONSULT WITH THE NOAA SCIENCE SUPPORT TEAM)

CHARACTERISTICS OF THE SPILLED OIL (FRESH)				
Susceptibility to mousse formation	High	Medium	Low	None
Susceptibility to naturally disperse	High	Medium	Low	None

Specific Gravity			API Grav.	
Viscosity		cSt at		degrees F
Pour Point		degrees F		

Trustees/States Potentially Impacted by Un-Treated Oil* (check appropriate box)

	DoD	TRIBAL	MAINE	NEW HAMP.	MASS.
	NOAA	DOI	RH. ISL.	CONN.	NEW YORK
Are Canadian Waters Potentially Impacted by Un-Treated Oil?				NO	YES

Trustees/States Potentially Impacted by Treated Oil* (check appropriate box)

	DoD	TRIBAL	MAINE	NEW HAMP.	MASS.
	NOAA	DOI	RH. ISL.	CONN.	NEW YORK
Are Canadian Waters Potentially Impacted by Treated Oil?				NO	YES

State		State On-Scene Coordinator

WEATHER and WATER CONSIDERATIONS

(at the time of anticipated treatment)

Weather (air)	Air Temp.:				
(Present Conditions On-Scene)	Wind:	Speed		Direction	
Weather (air)	Air Temp.:				
(Forecast Changes -- 12 Hours)	Wind:	Speed		Direction	
Tidal and Current Conditions:	Direction	MaxVelocity			
(FLOODING) Average			Seas in feet (Present)		
(EBBING) Average			Seas in feet (+12 hrs)		

Tides	High	Low	High	Low	Range:
Date:					
Time:					

Tidal Excursion (distance moved in one tidal cycle)			Oceanic
			Estuarine
Water	Depth	Temp.	Freshwater

* As determined by the Scientific Support Team

CHARACTERISTICS OF THE AVAILABLE DISPERSANT AND DISPERSING EQUIPMENT

Name of proposed and/or available dispersant	

NCP National Product Schedule Information

Technical Product Bulletin #		
Revised Listing Date:		
Technical Bulletin Attached:	YES	NO

[www.epa.gov/oerrpage/oilspill/proover.htm]

CONSULT THE AREA PLAN FOR CHEMICAL & EQUIPMENT INFORMATION

Dispersant Availability

Arriving From:	E.T.A. (hrs)	Gallons Available
		Total Gallons Available:

Application Equipment Availabilty

Arriving From:	E.T.A. (hrs)	Equipment Available

Area of the spill that can be treated with total available dispersants	percent

Monitoring

Is SMART monitoring available?	YES	NO	ETA:	
SMART Team	AST	GST	PST	Other
Team Leader:				

HABITAT AND RESOURCE CONSIDERATIONS SECTION

Comments:

Geomorphology of Impacted Beaches (for COASTAL applications or "beach cleaners")

Shoreline Type				
Energy of Beaches (waves)	High	Medium	Low	
Substrate Type				
Land Use				

Vulnerable Resources:

observed or known to be in the treatment impact area

Endangered/Threatened Species	NO	YES	**Was an Overflight Conducted?**	
Name of Lead Observer:				
Name of Resource Reference:			NO	YES
Resource(s) of Concern:			Date:	
			Time Out:	
			Time In:	

Observer or Resource Reference Notes: (include overflight information, if applicable)

Critical Species	NO	YES	Reference:
(marine mammals, sea turtles, potentially impacted terrestrial mammals and birds)			
Description/Notes:			
Recommendation/Restrictions:			

Waterfowl Considerations	NO	YES	Reference:
Description/Notes:			
Recommendation/Restrictions:			

Aquiculture Facilities	NO	YES	Reference:
Description/Notes:			
Recommendation/Restrictions:			

Shellfish Beds	NO	YES	Reference:
Description/Notes:			
Recommendation/Restrictions:			

Marine or Estaurine Sanctuaries	NO	YES	Reference:
Description/Notes:			
Recommendation/Restrictions:			

Industrial/Commercial	NO	YES	Reference:
Description/Notes:			
Recommendation/Restrictions:			

Cultural/Historic	NO	YES	Reference:
Description/Notes:			
Recommendation/Restrictions:			

Tribe:	NO	YES	Reference:
Description/Notes:			
Recommendation/Restrictions:			

Tribe:	NO	YES	Reference:
Description/Notes:			
Recommendation/Restrictions:			

Tribe:	NO	YES	Reference:
Description/Notes:			
Recommendation/Restrictions:			

Participants in preparing this worksheet:

Name	Title	Org.	Telephone

APPENDIX 14

SPECIAL MONITORING OF APPLIED RESPONSE TECHNOLOGIES

v. 4/2001

SPECIAL MONITORING of APPLIED RESPONSE TECHNOLOGIES

Developed by:

U.S. Coast Guard
National Oceanic and Atmospheric Administration
U.S. Environmental Protection Agency
Centers for Disease Control and Prevention
Minerals Management Service

Smoke rising from the *New Carissa*, February 1999. Photo by USCG

SMART is a living document

SMART is a living document. We expect that changing technologies, accumulated experience, and operational improvements will bring about changes to the SMART program and to the document. We would welcome any comment or suggestion you may have to improve the SMART program.

Please send your comments to:

SMART Mail
NOAA OR&R
7600 Sand Point Way N.E.
Seattle, WA 98115
USA

Fax: (206) 526-6329

Or email to:
smart.mail@noaa.gov

SMART approval status

As of January, 2001 EPA Regions II, III, and VI adopted SMART. It was reviewed and approved by the National Response Team (NRT).

Acknowledgments

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SMART is a Guidance Document Only

Purpose and Use of this Guidance:
This manual and any internal procedures adopted for its implementation are intended solely as guidance. They do not constitute rulemaking by any agency and may not be relied upon to create right or benefit, substantive or procedural, enforceable by law or in equity, by any person. Any agency or person may take action at variance with this manual or its internal implementing procedures. Mention of trade names or commercial products does not constitute endorsement or recommendation for their use by the USCG, NOAA, EPA, CDC, or the Government of the United States of America.

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INTRODUCTION

The need for protocols to monitor response technologies during oil spills has been recognized since the early 1980s. Technological advances in dispersant applications and in situ burning (referred to as *applied response technologies*) have resulted in their increased acceptance in several regions in the U.S. Many regions have set up pre-approval zones for dispersant and in-situ burn operations, and established pre-approval conditions, including the requirement for monitoring protocols. This reaffirms the need for developing national protocols to standardize monitoring, especially when the Federal Government assumes full responsibility for the response under the National Oil and Hazardous Substances Pollution Contingency Plan. Protocols are also needed to serve as guidelines for assisting or overseeing industry's monitoring efforts during spills.

In November 1997, a workgroup consisting of Federal oil spill scientists and responders from the U.S. Coast Guard, the National Oceanic and Atmospheric Administration, the U.S. Environmental Protection Agency, and the Centers for Disease Control and Prevention, convened in Mobile, Alabama to draft guidelines for generating this protocol. The workgroup built upon currently available programs and procedures, mainly the Special Response Operations Monitoring Program (SROMP), developed in 1994, and lessons learned during spill responses and drills. The result of this collaboration is the Special Monitoring of Applied Response Technologies (SMART) program.

SMART establishes a monitoring system for rapid collection and reporting of real-time, scientifically based information, in order to assist the Unified Command with decision-making during in situ burning or dispersant operations. SMART recommends monitoring methods, equipment, personnel training, and command and control procedures that strike a balance between the operational demand for rapid response and the Unified Command's need for feedback from the field in order to make informed decisions.

SMART is not limited to oil spills. It can be adapted to hazardous substance responses where particulates air emission should be monitored, and to hydrocarbon-based chemical spills into fresh or marine water.

General Information on SMART Modules

A. General Considerations and Assumptions

Several considerations guided the workgroup in developing the SMART guidelines:

1. SMART is designed for use at oil spills both inland and in coastal zones, as described in the National Oil and Hazardous Substances Pollution Contingency Plan (40 CFR Part 300).

2. SMART does not directly address the health and safety of spill responders or monitoring personnel, since this is covered by the general site safety plan for the incident (as required by 29 CFR 1910.120).

3. SMART does not provide complete training on monitoring for a specific technology. Rather, the program assumes that monitoring personnel are fully trained and qualified to use the equipment and techniques mentioned and to follow the SMART guidelines.

4. SMART attempts to balance feasible and operationally efficient monitoring with solid scientific principles.

5. In general, SMART guidelines are based on the roles and capabilities of available Federal, state, and local teams, and NOAA's Scientific Support Coordinators (SSC). The SSC is often referred to in the document as Technical Specialist. Users may adopt and modify the modules to address specific needs.

6. SMART uses the best available technology that is operationally feasible. The SMART modules represent a living document and will be revised and improved based on lessons learned from the field, advances in technology, and developments in techniques.

7. SMART **should not** be construed as a regulatory requirement. It is an option available for the Unified Command to assist in decision-making. While every effort should be made to implement SMART or parts of it in a timely manner, **in situ burning or dispersant application should not be delayed** to allow the deployment of the SMART teams.

8. SMART is not intended to supplant private efforts in monitoring response technologies, but is written for adoption and adaptation by any private or public agency. Furthermore, users may choose to tailor the modules to specific regional needs. While currently addressing monitoring for in-situ burning and dispersant operations, SMART will be expanded to include monitoring guidelines for other response technologies.

9. It is important that the Unified Command agree on the monitoring objectives and goals early on in an incident. This decision, like all others, should be documented.

B. Organization

The SMART document is arranged in modules. Each module is self-sustaining and addresses monitoring of a single response technology. The modules are divided into three sections:

Section 1: Background Information provides a brief overview of the response technology being monitored, defines the primary purpose for monitoring, and discusses monitoring assumptions.

Section 2: Monitoring Procedures provide general guidelines on what, where, when, and how to monitor; information on organization; information flow; team members; and reporting of data.

Section 3: Attachments provide detailed information to support and expand sections 1 and 2.

MONITORING DISPERSANT OPERATIONS

1. BACKGROUND

1.1 Mission Statement

To provide a monitoring protocol for rapid collection of real-time, scientifically based information, to assist the Unified Command with decision-making during dispersant applications.

1.2 Overview of Dispersants

Chemical dispersants combine with oil and break a surface slick into small droplets that are mixed into the water column by wind, waves, and currents. The key components of a chemical dispersant are one or more surface-active agents, or surfactants. The surfactants reduce the oil-water interfacial tension, thus requiring only a small amount of mixing energy to increase the surface area and break the slick into droplets.

Several actions must occur for a surface oil slick to be chemically dispersed:

- The surfactant must be applied to the oil in an appropriate ratio;
- The surfactant must mix with the oil or move to the oil/water interface;
- The molecules must orient properly to reduce interfacial tension;
- Energy (such as waves) must be applied to form oil droplets; and
- The droplets must not recoalesce significantly.

Dispersants can be applied by air from airplanes and helicopters, by land using pumping/spray systems, or by boat. They are usually applied in small droplets and in lower volumes than the oil being treated.

1.3 Monitoring Dispersant Application

When dispersants are used during spill response, the Unified Command needs to know whether the operation is effective in dispersing the oil. The SMART dispersant monitoring module is designed to provide the Unified Command with real-time feedback on the efficacy of dispersant application. Data collected in Tier III of the SMART dispersant protocol may be useful for evaluating the dilution and transport of the dispersed oil. **SMART does not monitor the fate, effects, or impacts of dispersed oil.**

Dispersant operations and the need to monitor them vary greatly. Therefore, SMART recommends three levels (or tiers) of monitoring.

1. Tier I employs the simplest operation, visual monitoring.

2. Tier II combines visual monitoring with on-site water column monitoring teams that use fluorometry at a single depth with water-sample collection for later analysis.

3. Tier III expands fluorometry monitoring to several water depths, may use a portable water laboratory, and calls for additional water samples for lab analysis

2. MONITORING PROCEDURES

2.1 Tier I: Visual Observations

Tier I recommends visual observation by a trained observer. A trained observer, using visual aids, can provide a general, qualitative assessment of dispersant effectiveness. Use of guides such as the NOAA *Dispersant Application Observer Job Aid* is recommended for consistency. Observations should be photographed and videotaped to help communicate them to the Unified Command, and to better document the data for future use.

When available, visual monitoring may be enhanced by advanced sensing instruments such as infrared thermal imaging. These and other devices can provide a higher degree of sensitivity in determining dispersant effectiveness.

Visual monitoring is relatively simple and readily done. However, visual observations do not always provide confirmation that the oil is dispersed. Tier II provides a near real-time method using fluorometry and water sampling.

2.2 Tier II: Fluorometry for Efficacy

Sometimes dispersant operations effectiveness is difficult to determine by visual observation alone. To confirm the visual observations, a monitoring team may be deployed to the dispersant application area to confirm the visual observations by using real-time monitoring and water sampling. This is called Tier II monitoring.

Tier II monitoring uses a continuous flow fluorometer (Turner Designs™ or equivalent) at an approximately 1-meter sampling depth. The fluorometer measures the concentrations of hydrocarbons in the water column. It measures all hydrocarbons and is therefore not oil-specific. It can be used, however, to show the relative increase of hydrocarbons over background concentrations. This can be a good indication of oil dispersion. Tier II requires water samples to be taken for later analysis, which will help confirm that the increases observed were due to dispersed oil.

A water-column monitoring team composed of at least one trained technician and a support person is deployed on a suitable platform. Under ideal circumstances, the team collects data in three primary target locations: (1) background water (no oil); (2) oiled surface slicks prior to dispersant application, and (3) post-application, after the oil has been treated with dispersants. Data are collected in real-time by both a built-in data-logging device and by the technician who monitors the readings from the instrument's digital readout and records them in a sampling log. The sampling log not only provides a backup to the data logger, but allows the results to be communicated, near real-time, to the appropriate technical specialist in the Unified Command. Data logged by the instrument are used for documentation and scientific evaluation.

The field team should record the time, instrument readings, and any relevant observations at selected time intervals. Global Positioning System (GPS) instruments are used to ascertain the exact position of each reading.

Water samples are collected in bottles to validate and quantify the fluorometry monitoring. Samples are collected at the outlet port of the flow-through water hose, past the fluorometer cell. Exact time and position are noted for each sample, for correlation with fluorometer readings. The number of water samples taken reflects the monitoring effort. Generally, five samples collected for each fluorometer data run is considered adequate in addition to background samples. The water samples are stored in a cooler and sent to a laboratory for future analysis.

2.3 Tier III: Additional Monitoring

Tiers I and II provide feedback to the Unified Command on the effectiveness of dispersant application. If dispersants are effective and additional information on the movement of the dispersed oil plume is desired, SMART Tier III procedures can address this need.

Tier III follows Tier II procedures, but collects information on the transport and dispersion of the oil in the water column. It helps to verify that the dispersed oil is diluting toward background levels.

Tier III monitoring may be conducted as follows:

1. Multiple depths with one fluorometer: This monitoring technique provides a cross-section of relative concentrations of dispersed oil at different depths, measuring the dilution of dispersed oil down to background levels. When transecting the dispersant-treated slick (as outlined for Tier II) the team stops the vessel at location(s) where elevated fluorometry readings are detected at 1 meter and, while holding position, the team lowers the fluorometry sampling hose at several increments down to a maximum depth of 10 meters. Readings are taken at each water depth, and the data recorded both automatically in the instrument data logger and manually by the monitors. Manual readings should be taken at discreet time intervals of 2 minutes, 5 minutes, etc. as specified by the Monitoring Group Supervisor or as indicated in a written sampling plan developed by the Dispersant Technical Specialist.

2. Transect at two different depths: This technique also looks at changes in concentration trends, but uses two fluorometers monitoring at different depths as the monitoring vessel transects the dispersed oil slick while making continuous observations. It is done as follows:

   Monitoring is conducted at two different depths, 1 and 5 meters, or any two water depths agreed upon by the Incident Commander or the Unified Command. Two sampling setups (outriggers, hoses, etc.) and two different fluorometers are used, all on a single vessel. The vessel transects the dispersant-treated slick as outlined in Tier II, except that now data are collected simultaneously for two water depths. While the data logger in each instrument automatically records the data separately, the monitoring team manually records the data from both instrument simultaneously at discrete time intervals of 2 minutes, 5 minutes, etc, as specified by the Monitoring Group Supervisor or the sampling plan developed by the Dispersant Technical Specialist. Comparison of the readings at the two water depths may provide information on the dilution trend of the dispersed oil.

3. Water parameters: In addition to fluorometry data, the Unified Command may request that water physical and chemical parameters be measured. This can be done by using a portable lab such as the Hydrolab or similar instrument, connected in-line with the fluorometer to measure water temperature, conductivity, dissolved oxygen content, pH, and turbidity. These data can help explain the behavior of the dispersed oil. The turbidity data may provide additional information on increased concentrations of dispersed oil if turbidity is elevated. The other physical and chemical parameters measure the characteristics of the water column that could possibly affect the rate of dispersion.

4. As in Tier II, water samples are collected, but in greater numbers to help validate the fluorometer readings.

Calibration and documentation used for Tier II are valid for Tier III as well, including the use of a check standard to verify instrument response. Because of the increased complexity of Tier III, a dispersant technical specialist (e.g., member of the scientific support team) should be on location to assist the monitoring efforts.

A critical point to keep in mind is that in the hectic and rapidly changing conditions of spill response, flexibility and adaptability are essential for success. The sampling plan is dictated by many factors such as the availability of equipment and personnel, on-scene conditions, and the window of opportunity for dispersant application. The need for flexibility in sampling design, effort, and rapid deployment (possibly using a vessel of opportunity), may dictate the nature and extent of the monitoring. To assist the monitoring efforts, it is important that the unified command agrees on the goals and objectives of monitoring and chooses the Tier or combination thereof to meet the needs of the response.

2.4 Mobilizing Monitoring Resources

Dispersant application has a narrow window of opportunity. Time is of the essence and timely notification is critical. It is imperative that the monitoring teams and technical advisors are notified of possible dispersant application and SMART monitoring deployment as soon as they are considered, even if there is uncertainty about carrying out this response option. Prompt notification increases the likelihood of timely and orderly monitoring.

The characteristics of the spill and the use of dispersants determine the extent of the monitoring effort and, consequently, the number of teams needed for monitoring. For small-scale dispersant applications, a single visual monitoring team may suffice. For large dispersant applications several visual and water-column monitoring teams may be needed.

2.5 Using and Interpreting Monitoring Results

Providing the Unified Command with objective information on dispersant efficacy is the goal of Tier I and II dispersant monitoring. When visual observations and on-site water column monitoring confirm that the dispersant operation is not effective, the Unified Command may consider evaluating further use. If, on the other hand, visual observations and/or fluorometry monitoring suggest that the dispersant operation is effective, dispersant use may be continued.

When using fluorometry, the readings will not stay steady at a constant level but will vary widely, reflecting the patchiness and inconsistency of the dispersed oil plume. Persons reviewing the data should look for trends and patterns providing good indications of increased hydrocarbon concentrations above background. As a general guideline only, a fluorometer signal increase in the dispersed oil plume of five times or greater over the difference between the readings at the untreated oil slick and background (no oil) is a strong positive indication. This should not be used as an action level for turning on or off dispersant operations. The final recommendation for turning a dispersant operation on or off is best left to the judgment of the Technical Specialist charged with interpreting the fluorometry data. The Unified Command, in consultation with the Technical Specialist, should agree early on as to the trend or pattern that they would consider indicative or non-indicative of a successful dispersant operation. This decision should be documented.

2.6 SMART as Part of the ICS Organization

SMART activities are directed by the Operations Section Chief in the Incident Command System (ICS). A "group" should be formed in the Operations Section to direct the monitoring effort. The head of this group is the Monitoring Group Supervisor. Under each group there are teams: Visual Monitoring Teams and Water Column Monitoring teams. At a minimum, each monitoring team consists of two trained members: a monitor and an assistant monitor. An additional team member could be used to assist with sampling and

recording. The monitor serves as the team leader. The teams report to the Monitoring Group Supervisor, who directs and coordinates team operations, under the control of the Operations Section Chief.

Dispersant monitoring operations are very detailed. They are linked with the dispersant application, but from an ICS management perspective, they should be separated. Resources for monitoring should be dedicated and not perform other operational functions.

2.7 Information Flow and Data Handling

Communication of monitoring results should flow from the field (Monitoring Group Supervisor) to those persons in the Unified Command who can interpret the results and use the data. Typically this falls under the responsibility of a Technical Specialist on dispersants in the Planning Section of the command structure. For the U.S. Coast Guard, the technical specialist is the Scientific Support Coordinator. Note that the operational control of the monitoring groups remains with the Operations Section Chief, but the reporting of information is to the Technical Specialist in the Planning Section.

The observation and monitoring data will flow from the Monitoring Teams to the Monitoring Group Supervisor. The Group Supervisor forwards the data to the Technical Specialist. The Technical Specialist or his/her representative reviews the data and, most importantly, formulates recommendations based on the data. The Technical Specialist communicates these recommendations to the Unified Command.

Quality assurance and control should be applied to the data at all levels. The Technical Specialist in the Planning section is the custodian of the data during the operation. The data belong to the Unified Command. The Unified Command should ensure that the data are properly stored, archived, and accessible for the benefit of future monitoring operations.

3. ATTACHMENTS

The following attachments are designed to assist response personnel in implementing the SMART protocol. A short description of each attachment is provided below.

Number	Title	Description
3.1	Roles and Responsibilities	Detailed roles and responsibilities for responders filling monitoring positions
3.2	Command, Control, and Data Flow	An ICS structure for controlling monitoring units and transferring monitoring results
3.3	Dispersant Observation General Guidelines	General guidelines for Tier I monitoring
3.4	Dispersant Observation Training Outline	Outline of what should be covered for Tier I observation training
3.5	Dispersant Observation Checklist	Equipment and procedure checklist for Tier I monitoring
3.6	Dispersant Observation Pre-Flight List	A checklist for getting air resources coordinated and ready for Tier I monitoring
3.7	Dispersant Observation Reporting Form	A form for recording Tier I observations
3.8	Dispersant Monitoring Training Outline	A training outline for water column monitoring done in Tiers II and III
3.9	Dispersant Monitoring Job Aid Checklist	A list of the tasks to accomplish before, during, and after the monitoring operations
3.10	Dispersant Monitoring Equipment List	A detailed equipment list for performing Tier II and III monitoring
3.11	Fluorometer Setup	A summary checklist for operating the Turner Design fluorometer
3.12	Dispersant Monitoring Field Guidelines	Field procedures for using Tier II and III monitoring protocols
3.13	Dispersant Monitoring Water Sampling	Procedures for collecting water samples for Tiers II and III
3.14	Dispersant Monitoring Recorder Sheet	A form for recording fluorometer readings for Tiers II and III

3.1 Roles and Responsibilities

3.1.1 Visual Monitoring Team

The Visual Monitoring Team is ideally composed of two persons: a Monitor and an Assistant Monitor.

The Monitor:
- Functions as the team leader
- Qualitatively measures dispersant effectiveness from visual observation
- Communicates results to the Group Supervisor.

The Assistant Monitor:
- Provides photo and visual documentation of dispersant effectiveness
- Assists the Monitor as directed.

3.1.2 Water-Column Monitoring Team

The Water-Column Monitoring Team is composed of a minimum of two persons: a Monitor and Assistant Monitor. They shall perform their duties in accordance with the Tier II and Tier III monitoring procedures.

The Monitor:
- Functions as the team leader
- Operates water-column monitoring equipment
- Collects water samples for lab analysis
- Communicates results to the Group Supervisor.

The Assistant Monitor:
- Provides photo and visual documentation of dispersant effectiveness
- Assists Monitor as directed
- Completes all logs, forms, and labels for recording water column measurements, water quality measurements, interferences, and environmental parameters.

3.1.3 Monitoring Group Supervisor

The Monitoring Group Supervisor:
- Directs Visual Monitoring and Water Column Monitoring teams to accomplish their responsibilities
- Follows directions provided by the Operations Section in the ICS
- Communicates monitoring results to the Technical Specialist in the Planning Section
- The Monitoring Group Supervisor may not be needed for a Tier I deployment. In these cases, the Visual Monitoring Team monitor may perform the duties of the Monitoring Group Supervisor.

3.1.4 Dispersant Monitoring Technical Specialist (Federal: NOAA SSC)

The Technical Specialist or his/her representative:
- Establishes communication with the Monitoring Group Supervisor
- Advises the Group Supervisor on team placement and data collection procedures
- Receives the data from the Group Supervisor
- Ensures QA/QC of the data, and analyzes the data in the context of other available information and incident-specific conditions
- Formulates recommendations and forwards them to the Unified Command
- Makes the recommendations and data available to other entities in the ICS
- Archives the data for later use, prepares report as needed.

3.2 Command, Control, and Data Flow

In general, dispersant monitoring operations take place as an integral part of the Incident Command System (see Figures 1 and 2).

Dispersant monitoring operations are tactically deployed by the Operations Section Chief or designate, in cooperation with the Technical Specialist (SSC) in the Planning Section regarding the specifics of the monitoring operations, especially if they affect the data collected. The Monitoring Group Supervisor provides specific on-scene directions to the monitoring teams during field deployment and operations.

The observation and monitoring data flow from the Monitoring Teams to the Monitoring Group Supervisor. After initial QA/QC the Group Supervisor passes the data to the Technical Specialist to review, apply QA/QC if needed, and, most importantly, formulate recommendations based on the data. The Technical Specialist forwards these recommendations to the Unified Command.

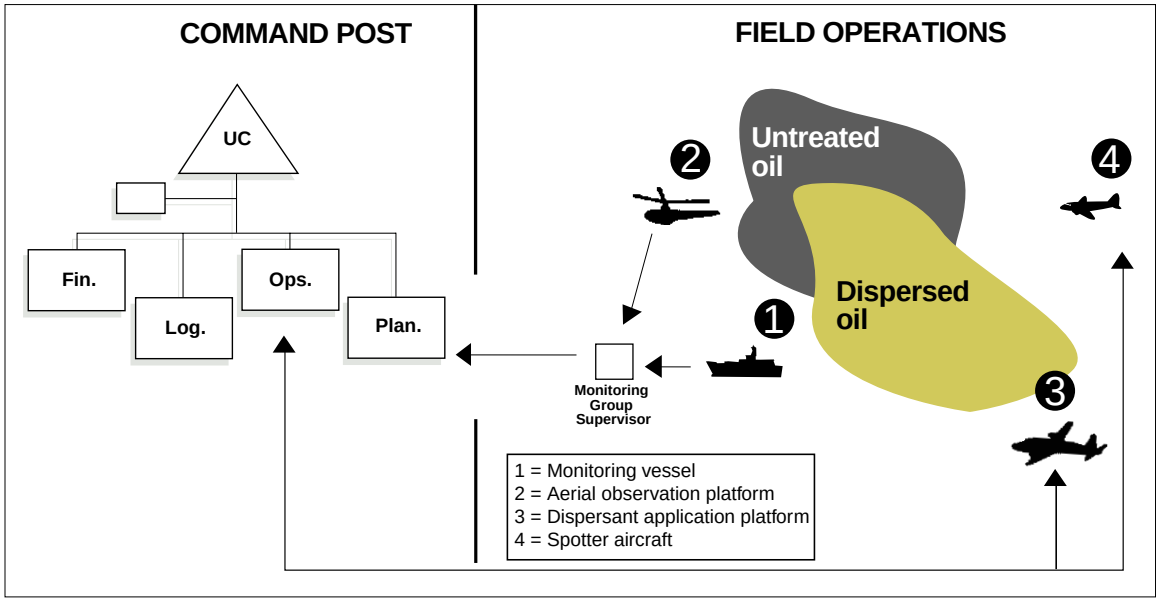

Figure 1. Command, control, and data flow during dispersant monitoring operations.

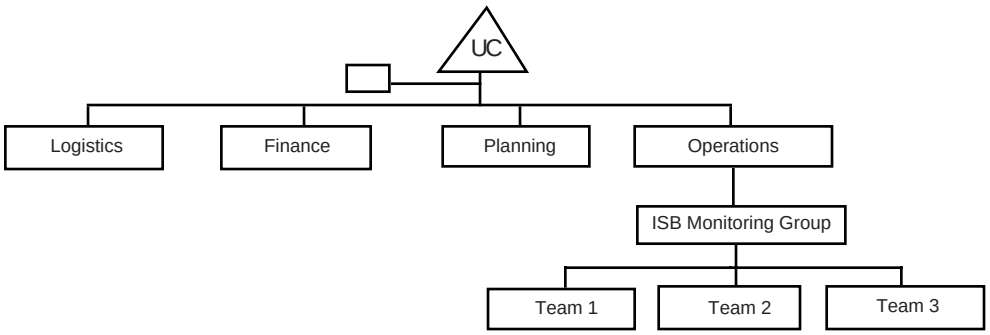

Figure 2. The Dispersant Monitoring Group in the ICS structure.

3.3 Dispersant Observation General Guidelines

3.3.1 Goal

The goal of Tier I monitoring is to identify oil, visually assess efficacy of dispersants applied to oil, and report the observations to the Unified Command with recommendations. The recommendations may be to continue, to modify, or to evaluate further monitoring or use because dispersants were not observed to be effective.

3.3.2 Guidelines and Pointers

3.3.2.1 Reporting Observations

- The observer does not make operational decisions, e.g., how much dispersant to apply, or when and where to apply it. These decisions are made at the command level, and the observer makes observations based on those decisions.

- Different observers at the same site may reach different conclusions about how much of the slick has been dispersed. This is why comprehensive standard reporting criteria and use of a common set of guidelines is important. Use of the NOAA *Dispersant Application Observer Job Aid* is highly encouraged.

3.3.2.2 Oil on the Water

- Oil surface slicks and plumes can appear different for many reasons including oil or product characteristics, time of day (different sun angles), weather, sea state, rate at which oil disperses. The use of the NOAA *Open Water Oil Identification Job Aid for Aerial Observation* is highly recommended.

- Low-contrast conditions (e.g., overcast, twilight, and haze) make observations difficult.

- For best viewing, the sun should be behind the observer and with the aircraft at an altitude of about 200 - 300 feet flying at a 30-degree angle to the slick.

3.3.2.3 Dispersant Applications

- During dispersant application, it may be impossible to determine the actual area of thickest oil concentrations, resulting in variable oil/dispersant application rates. This could lead to variations in the effectiveness of application. The observer should report these conditions.

- Initial applications may have a herding effect on the oil. This would cause the slick to appear to be shrinking when, in fact, it is the dispersant “pushing” the oil together. Due to this effect, in some cases, the oil slick may even disappear from the sea surface for a short time.

- After dispersant application, there may be color changes in the emulsified slick due to reduction in water content and viscosity, and changes in the shape of the slick, due to the de-emulsification action of the dispersant.

- Many trials have indicated that dispersants apparently modify the spreading rates of oils, and within a few hours treated slicks cover much larger areas than control slicks.

3.3.2.4 Effective/Ineffective Applications

- Dispersed oil plume formation may not be instantaneous after dispersant application. In some cases, such as when the oil is emulsified, it can take several hours. A dispersed oil plume may not form at all.

- The appearance of the dispersed plume can range from brown to white (cloudy) to no visible underwater plume (this is why Tier II may be necessary).
- Sometimes other things such as suspended solids may resemble dispersed oil.
- The visibility of the dispersed plume will vary according to water clarity. In some cases, remaining surface oil and sheen may mask oil dispersing under the slick and thus interfere with observations of the dispersed oil plume.
- Dispersed oil plumes are often highly irregular in shape and non-uniform in concentration. This may lead to errors in estimating dispersant efficiency.
- If a visible cloud in the water column is observed, the dispersant is working. If a visible cloud in the water column is not observed, it is difficult to determine whether the dispersant is working.
- If there are differences in the appearance between the treated slick and an untreated slick, the dispersant may be working.
- Boat wakes through oil may appear as a successful dispersion of oil; however, this may be just the vessel wake breaking a path through the oil (physically parting the oil), not dispersing it.

3.4 Dispersant Observation Training Outline

Below is a suggested outline for dispersant observation training.

Topics and sub-topics	**Duration**
Observation Platforms	30 min.
• Helo or fixed-wing, separate from application platform • Safety considerations: daylight; safe flying conditions • Logistical considerations: personnel; equipment; communication • Planning an overflight	
Oil on water	1 hour
• Physical properties • Different types of oil • Chemistry, crude vs. refined product • Appearance and behavior • Effects of wind, waves, and weather	
How dispersants work	45 min.
• Method of action • Compatible/incompatible products • Appropriate environmental conditions (wave energy, temperature, salinity, etc.) • Oil weathering • Oil slick thickness • Beaching, sinking, etc.	
Dispersant application systems	45 min.
• Platform: boat, helo, plan • Encounter rate • Importance of droplet size • Dispersant-to-oil ratio (dosage)	
• **Effective application**	45 min.
• Hitting the target • Dispersal into water column • Color changes • Herding effect	
• **Ineffective application**	30 min.
• Missing the target • Oil remaining on surface • Coalescence and resurfacing	
• **Wildlife concerns**	30 min.
• Identifying marine mammals and turtles • Rafting birds	
• **Documenting observations**	30 min.
• Estimating surface coverage • Photographs: sun reflection effects, use of polarizing filter, videotaping • Written notes and sketches	
• **Reporting observations**	30 min.
• Calibrating eyeballs • Recommended format • Information to include • Who to report to • Coordination with water-column monitoring	

3.5 Dispersant Observation Checklist

Below is a dispersant observation checklist. Check √ the items/tasks accomplished.

Check √	Item
	Observation Aids
	Basemaps / charts of the area
	Clipboard and notebook
	Pens / pencils
	Checklists and reporting forms
	Handheld GPS with extra set of batteries
	Observation job aids (*Oil on Water & Dispersant Observation*)
	Still camera
	Extra film
	Video camera
	Binoculars
	Safety Equipment
	Personal flotation device
	Emergency locator beacon
	Survival equipment
	NOMEX coveralls (if available)
	Coldwater flotation suit (if water temperature requires)
	Intercom
	Safety Brief
	Preflight safety brief with pilot
	Safety features of aircraft (fire extinguishers, communications devices, emergency locator beacon, flotation release, raft, first aid kit, etc.)
	Emergency exit procedures
	Purpose of mission
	Area orientation / copy of previous overflight
	Route / flight plan
	Duration of flight
	Preferred altitude
	Landing sites
	Number of people on mission
	Estimated weight of people and gear
	Gear deployment (if needed, i.e., dye marker, current drogue)
	Frequency to communicate back to command post

3.6 Dispersant Observation Pre-Flight List

Spill Information	
Incident Name:	
Source Name:	
Date / Time Spill Occurred	
Location of Spill: Latitude	Longitude
Type of Oil Spilled:	Amount of Oil Spilled:

Weather On Scene	
Wind Speed and Direction	
Visibility:	Ceiling:
Precipitation:	Sea State:

Aircraft Assignments

Title	**Name**	**Call Sign**	**ETD**	**ETA**
Spotter (s)				
Sprayer (s)				
Observer (s)				
Monitor (s)				
Supervisor				

Safety Check

Check all safety equipment. Pilot conducts safety brief

Entry/Exit Points

	Airport	**Tactical Call Sign**
Entry:		
Exit:		

Communications (complete only as needed; primary/secondary)

Observer to Spotter (air to air)	VHF	UHF	Other
Observer to Monitor (air to vessel)	VHF	UHF	Other
Observer to Supervisor (air to ground)	VHF	UHF	Other
Supervisor to Monitor (ground to vessel)	VHF	UHF	Other
Monitor to Monitor (vessel to vessel)	VHF	UHF	Other

3.7 Dispersant Observation Reporting Form

Names of observers/Agency: _____

Phone/pager: _____Platform: _____

Date of application: _____ Location: Lat.: _____ Long.: _____

Distance from shore: _____

Time dispersant application started: _____ Completed: _____

Air temperature: _____ Wind direction _____ Wind speed: _____

Water temperature: _____ Water depth: _____ Sea state: _____

Visibility: _____

Altitude (observation and application platforms): _____

Type of application method (aerial/vessel): _____

Type of oil: _____

Oil properties: specific gravity _____ viscosity _____ pour point _____

Name of dispersant: _____

Surface area of slick: _____

Operational constraints imposed by agencies: _____

Percent slick treated: _____ Estimated efficacy: _____

Visual appearance of application: _____

Submerged cloud observed?_____

Recoalescence (reappearance of oil): _____

Efficacy of application in achieving goal (reduce shoreline impact, etc.): _____

_____

Presence of wildlife (any observed effects, e.g., fish kill): _____

Photographic documentation: _____

Lessons learned: _____

_____

3.8 Fluorometry Monitoring Training Outline

3.8.1 General

Training for Tier II and III monitoring consists of an initial training for personnel involved in monitoring operations, Group Supervisor training, and refresher training sessions every six months. Emphasis is placed on field exercise and practice.

3.8.2 Basic Training

Monitor Level Training includes monitoring concepts, instrument operation, work procedures, and a field exercise.

Topic	Duration
Brief overview of dispersant monitoring. Review of SMART: What is it, why do it, what is it good for.	1 hour
Monitoring strategy: who, where, when. Reporting	1 hour
Basic instrument operation (hands-on): how the fluorometer works, how to operate: brief description of mechanism, setup and calibration, reading the data, what the data mean, troubleshooting; using Global Positioning Systems; downloading data; taking water samples	3 hours
Field exercise: Set up instruments within available boat platforms, measure background water readings at various locations. Using fluoroscein dye or other specified fluorescent source monitor for levels above background. Practice recording, reporting, and downloading data.	3-4 hours

3.8.3 Group Supervisor Training

Group Supervisor training may include:

- Independent training with the monitoring teams; or
- An additional structured day of training as suggested below

Topic	Duration
Review of ICS and role of monitoring group in it, roles of Monitoring Group Supervisor, what the data mean, QA/QC of data, command and control of teams, communication, and reporting the data.	1 hour
Field exercise. Practice deploying instruments in the field with emphasis on reporting, QA/QC of data, communication between teams and the Group Supervisor, and communication with the Technical Specialist.	3-6 hours
Back to the base, practice downloading the data.	30 min.
Lessons learned.	30 min.

3.8.4 Refresher Training

Topic	Duration
Review of SMART: What is it, why do it, what is its purpose.	15 min.
Monitoring and reporting: Who, where, and when; level of concern; what the data mean; communication; and reporting the data	30-45 min.
Basic instrument operation (hands-on): how the fluorometer works and how to operate it; brief description of the mechanism, setup, calibration, reading data, and troubleshooting; using GPS.	2 hours
Downloading data	30 min.
Field exercise: Outside the classroom, set up instrument on a platform, and measure background readings. Using fluoroscein or other common input sources, monitor fluorescence levels. Practice recording, reporting, and downloading data.	1-3 hours
Lessons learned	30–45 min.

3.9 Dispersant Monitoring Job Aid Checklist

This checklist is designed to assist SMART dispersant monitoring by listing some of the tasks to accomplish before, during, and after the monitoring operations.

Check √	Item	Do
	Preparations	
	Activate personnel	• Contact and mobilize the monitoring teams and Technical Specialist (SSC where applicable)
	Check equipment	• Check equipment (use checklists provided) • Verify that the fluorometer is operational • Include safety equipment
	Obtain deployment platforms	Coordinate with incident Operations and Planning Section regarding deployment platforms (air, sea, land)
	Amend site safety plan	Amend the general site safety plan for monitoring operations.
	Monitoring Operations	
	Coordinate plan	• Coordinate with the Operations Section Chief • Coordinate with Technical Specialist
	Conduct briefing	• Monitoring: what, where, who, how • Safety and emergency procedures
	Deploy to location	Coordinate with Operations Section.
	Setup instrumentation	• Unpack and set up the fluorometer per user manual and/or SMART attachment • Record fluorometer response using the check standards
	Evaluate monitoring site	• Verify that the site is safe • Coordinate with spotter aircraft (if available)
	Conduct monitoring (See attachment 11 for details)	• Background, no oil present • Background, not treated with dispersants • Treated area
	Conduct data logging (see attachment 12)	• Date and time • Location (from GPS) • Verify that the instrument dataloger is recording the data • Manually record fluorometer readings every five minutes • Record relevant observations
	Conduct water sampling (see attachment)	• Collect water samples post-fluorometer in certified, clean, amber bottles for lab analysis
	Conduct photo and video documentation	• Document relevant images (e.g., monitoring procedures, slick appearance, evidence of dispersed oil)
	Conduct quality assurance and control	• Instrument response acceptable? • Check standards current? • Control sampling done at oil-free and at untreated locations? • Water samples in bottles taken for lab analysis? • Date and time corrected and verified? • Any interfering factors?

	Report (by Teams)	Report to Group Supervisor: • General observation (e.g., dispersed oil visually apparent) • Background readings • Untreated oil readings • Treated oil readings
	Report (by Group Supervisor)	Report to Technical Specialist: • General observation • Background readings • Untreated oil readings • Treated oil readings
	Report by Technical Specialist (SSC)	Report to Unified Command: • Dispersant effectiveness • Recommendation to continue or re-evaluate use of dispersant.
	Post monitoring	
	Conduct debrief	• What went right, what went wrong • Problems and possible solutions • Capture comments and suggestions
	Preserve data	• Send water samples to the lab • Download logged data from fluorometer to computer • Collect and review Recorder data logs • Correlate water samples to fluorometer readings • Generate report
	Prepare for next spill	Clean, recharge, restock equipment

3.10 Dispersant Monitoring Equipment List

(For each team, unless otherwise noted)

Check √	Item	Qty	Remarks
	Turner Designs™ Fluorometer	1	
	Carrying case	1	
	Shipping case	1	
	Sample injector assemblies, 3-mm on-line systems	1	
	Long wavelength oil optical kit 2	1	
	Internal dataloging package with electronic chart recording	1	
	Power and signal cable, 12 volts DC	1	
	Sampling pump	1	
	Extension arm, rigged for fluorometer hose	1	
	Davis drifters	2	
	Boat batteries, 12 volts DC, for accessory equipment	1	
	Ice chest (48-quarts) for samples, with ice packs	1	
	Amber bottles, 1 liter	6	
	Packing material for bottles		
	Fittings, extra hose, repair kit		
	Compass	1	
	Chart of the area	1	
	Computer and cables	1/group	Should include downloading software
	Printer	1/group	
	Recorder data sheets	10	
	Rite-in-the-rain notebooks, pens	3	
	Fluorometer user manual	1	
	Job aid check list	1	
	GPS	1	
	Extra batteries for GPS	1 set	
	Radio	1	
	Cell phone	1	
	Binoculars	1	
	Stop watch	1	
	Camera	1	Digital camera or camcorder optional
	Film	3	
	Thermometer	1	
	Tape measure	1	

3.11 Fluorometer Setup

This is an initial operational guidance, subject to change through continued use, instrument improvements, local requirements, OSC needs, and scientific re-evaluation.

The Turner Designs™ Fluorometer should be maintained in an operationally ready state for the SMART Tier II or Tier III. The following pages are step-by-step instructions to ensure the instrument is working in an acceptable manner prior to deployment. Comments and noted changes on the instrument's status should be documented in a maintenance log.

3.11.1. Instrument initialization

Turn on by pushing red button. Opening screen with readings is called “Home” (on keypad press “HOME”).

Verify clock time and date to GPS parameters	acceptable	not
Verify data reading “RAW”	acceptable	not
Verify concentration readings in “HIGH (MAN)”	acceptable	not
Verify time constant at “2 (Sec)”	acceptable	not

<u>If not acceptable, reset instrument to defaults and complete setup</u>.

<u>3.11,1.1 Set calibration defaults</u>

At “Home” screen press: <ENT> , <2> for calibration screen, <6> for defaults. Follow instructions and press “9” five times. Return to “Home” by either pressing <Home> or <ESC> back through the menu until the Home screen appears.

<u>3.11.1.2 Set date and time to GPS parameters</u>

(Note: “logging” must not appear on the screen. If “logging” appears press: <ENT>,<5>, <3>, <ENT>. “Stop” should appear on the screen. Return to “Home.”) Once logged off from the “Home” screen press: <ENT>, <4> , and follow instructions. Press <1> to set hour, <ENT>, then <ESC>. Press <2> to set AM/PM <ENT>, then <ESC>. Press <3> to set minutes <ENT>, then <ESC>. Press <4> to set Month <ENT>, then <ESC>. Press <5> to set Date <ENT >, then <ESC>. Press <6> to set Year <ENT>, then <ESC>. Return to the Home screen.

<u>3.11.1.3 Set data reading to “RAW”</u>

From “Home” screen press:
<ENT>, <1>, <2>, <1>. Press <ENT> until “Raw Fluorescence Data” appears on the screen. Once found press <ESC> to save. Return to the Home screen.

<u>3.11.1.4 Set concentration readings to “High (MAN)”</u>

From “Home” screen press: <ENT>, <2>, <4>, <3>. To change reading to “Auto,” press “<ENT> until “MAN” appears on the screen. PRESS <ESC> to save. Then press <2> for setting range and toggle the <ENT> key until “HIGH” appears on the screen. Press <ESC> to continue and return to the Home screen.

<u>3.11.1.5 Set time constant to “2 (Sec)”</u>

From the “Home” screen press:
<ENT>, <2>, <5>, <2>. Press <ENT> to set option to two seconds. Press <ESC> to save. Return to the Home screen.

3.11.2. Instrument Sensitivity Check

THE INSTRUMENT MUST WARM UP 10 to 15 MINUTES (FROM POWER UP) PRIOR TO CHECK!

- Verify SPAN level % at 48. acceptable____ not_____

3.11.2.1 SPAN level

From the "Home" screen press: <ENT>, <3>, <ENT>. In the lower portion of the screen will be the SPAN level %. If the SPAN level is not 48%, return to the "Home" screen and follow directions 1.1 to reset to the defaults, then return to 2.1 to read SPAN level again. Return to the Home screen. Record readings on page 6.

3.11.2.2 Fluorescein reading

Using the syringe port on the fluorometer system, drain all of the water in the cell and close the drain. Inject 60 ml of 90 ppb fluorescein into the cell three times to flush and fill the cell. Leave the last sample in cell. Allow instrument readings to stabilize. From the "Home" screen, press: <ENT>, <3>, <ENT>. The same screen as the SPAN level should appear. The full scale (FS) readout should be as close as possible to 75% of 900 and must be between 65 and 85% of 900.

If the full scale readout is not between 65 - 85%, adjust the fluorometer reading by loosening the front panel Allen screw to the left of keypad (sensitivity locking screw) with an Allen wrench. Adjust the sensitivity screw (on left panel edge, by the On/Off switch) to read as close as possible to 75% of 900. The screw setting is very sensitive, so allow time for the instrument to stabilize. Carefully tighten the front Allen screw and recheck the reading, repeating if necessary. Record the final reading on page 6. Drain the sample.

3.11.3 Instrument Calibration and Check

3.11.3.1 Setting Standard Concentration to 300 RAW

From the "Home" screen, press: <ENT>, <2> for calibration screen, <2> for standard concentration. Enter 300, <ENT>, then press <ESC>. Return to the Home screen.

3.11.3.2 Setting Zero

At the "Home" screen, inject 180 ml of de-ionized water by syringe into the cell, drain, then refill and record readings. From "Home" press <ENT>, <2>, <1>, <1>. If the "blank %" is less than 200%, wait for the lower left LCD readout "TC: # (s)" to reach "8," then press <0> and wait 15 seconds, then press <ESC> to save the changes. Note: If any key other than <ESC> is pressed first, the reading will be aborted. *If "blank %" is greater than 200%, drain water, flush the cell with an unopened bottle of de-ionized water and recheck. If the value still remains above 200%, the cell must be cleaned.* (See section 7 for cleaning.) Drain all of the water from the cell. Return to the Home screen.

3.11.3.3 Fluorometer One Point Calibration

After the instrument is zeroed, inject 180 ml, the fluorescein standard (at 90 ppb), into the cell to flush and fill it. At the Home screen, allow the reading to stabilize, then press <ENT>, <2>, <3>. The screen should appear as:

RANGE	HIGH	MEDIUM	LOW
FS (RAW)	1000*	100*	10*
TC: 8 (s) Range: High Span: 48%			
Press <*> after reading is stable			

Figure 3. Screen depiction of the 1 point calibration and reading range.
Note, * represents approximate values. The high scale should be around 1000 raw. The medium and low scales are variable and will adjust to the high value.

Adjust the "span" using the up and down arrows until the FS reading for the "High" range is near 1000 (RAW) or slightly greater. Allow the instrument to stabilize. The lower left "TC:" value will read "8" when stable. Press <*> and wait 15 seconds. The instrument will indicate when complete. Then press <ESC> to save changes.

*Note, <ESC> must be pressed first to save, otherwise values will be aborted. Return to the Home screen. The reading should be 300 RAW. Drain all liquid.

3.11.3.4 Checking Blank

Using the syringe port, fill the cell with 180 ml de-ionized water, drain and refill. Readings should be near "0 RAW" on the fluorometer screen. If the reading is greater than 1 RAW, see section 7 for cleaning procedures. Recheck with de-ionized water. Record final readings.

3.11.4. Field Operations

3.11.4.1 Purge old data

From the "Home" screen, press <ENT>, <5>, <5> and follow the instructions by pressing "9" five times. The instrument will indicate data erased.

*Note, data logger must be set to "STOP" prior to erasing.

3.11.4.2 Check logging parameters

From the "Home" screen, press: <ENT>,<5>, <2>. The screen should read:

Interval	5(sec)
Method	Average
Strategy	<One Way>

If the parameter is different, press the appropriate number and follow the directions by toggling settings with <ENT>.
Example: Interval 3(sec)
Press <1> followed be <ENT> until "5(sec)" appears on the screen.
Then press <ESC>. Once parameters are correct, return Home.

3.11.4.3 Visually check Home screen

1. Date and time corresponding to GPS readout
2. "Raw" in upper right corner of screen
3. Concentration range at "High (Man)"
4. Time constant to "2(sec)"

If any readout is not correct, go to section 1.

3.11.4.4 Ready to begin logging data

By pressing <ENT>, <5>, <5> , the screen should indicate “logging.” Return to the Home screen and verify that the parameters in section 4.3 plus “Logging Data” appear on the upper, right-hand part of the screen.

Begin Tier II or Tier III monitoring procedures and manually record data every five minutes plus observations.

3.11.5. Operational Parameters

From the “Home” screen display, press <ENT>, <1>, then follow instructions on the screen to change the instrument settings.

Operational Parameters	Instrument Settings
1. Alarm:	
• Monitor alarm	No
2. Home Display Options	
• Readout	Raw Fluorescence Data
• Units of measurement	None
3. Bar Graph	
• Display bar graph	Yes
• Zero point	0
• Full scale	999
• Scale control	Auto
4. Output	
• Full scale	2(v)
5. Serial Output	
• RS-232 baud rate ++	9600
6. Miscellaneous	
• Beeper status	On

* Note: Any parameter not listed here does not affect data when using the “dispersant monitoring” procedure.

3.11.6. Cleaning and Desiccant Procedures

3.11.6.1 Cleaning

Drain the water or sample from the cuvette. Take a screwdriver and remove the top metal screw from the cuvette cell (make sure the inlet valve is closed), then fill the cell with isopropanol. Take the cuvette brush and gently clean the cell, drain the isopropanol from the cell, and reinstall the metal screw. Using the syringe port, flush the cell three to four times using de-ionized water. If the display reads near 0 or less, your system is clean; if not, repeat the cleaning procedure until the instrument display reads “0 Raw” or less.

3.11.6.2 Desiccant

Replace desiccant once every two to three months.
- Unscrew the front panel (eight Allen screws on the left side of front panel).
- Replace the desiccant bag just beneath the panel

3.11.7. Fluorescein Standard Preparation

3.11.7.1 Preparation of standard and stock

The 90-ppb standard was prepared from fluorescein sodium salt (70%) CAS#518-47-8. A 10,000-ppm working stock solution was prepared by weighing out 143 mg of fluorescein into 10 ml of de-ionized water in a 10-ml volumetric flask. Nine (9) microliters (µl) of the

working stock solution was added to one liter of de-ionized water in a one-liter volumetric flask to obtain the 90-ppb fluorescent standard. The 90-ppb standard should be transferred to an amber bottle so it will not photodegrade.

3.11.7.2 Alternative option

An alternative option for preparing the 90-ppb fluorescein sodium salt standard is the addition of 486 mg of fluorescein into a 1-liter amber bottle (measured accurately) of de-ionized water. This is a 340-ppm stock standard. Agitate the 1-liter solution thoroughly to ensure complete mixing, then remove 1.0 ml from the bottle into one gallon of de-ionized water (measured accurately). The result should be a 90-ppb fluorescent green solution. As described above, the solution should be stored in amber glass and labeled with the preparation date and concentration.

* Note: Weigh out the fluorescein sodium salt very quickly and tightly reseal the original container because the compound is hygroscopic (absorbs moisture). If using pre-weighed packets, ensure that ALL material goes into the standard solution. Rinsing the container with de-ionized water into the bottle is strongly recommended. Standard solutions should be stored in amber bottles to reduce photo-degradation of the compound. Fresh standards should be made every 90 days to ensure consistent results.

3.11.8 Downloading the Data

Access screen 5.4 and download the data. (From the main menu press <5>, then <4>. When the IBM-compatible computer is ready to receive data - press <8> five times. See Appendix 11, section F from the instrument manual. An IBM compatible computer with the manufacturer's software program is necessary to download data from the fluorometer.

When using a PC, access the c:\ prompt, then access the Turner IDL file. Enter CD\Turner\IDL, then enter IDL_1B1. This will bring up the main menu for downloading data from the fluorometer. Choose steps 4 and 5 for downloading. The computer is now ready to receive data. After downloading data, choose steps 8 and 9 to review data and exit the program.

To erase the data, access screen 5.5 and erase the data. (From the main menu press <5>, then <5>, and press <9> five times.

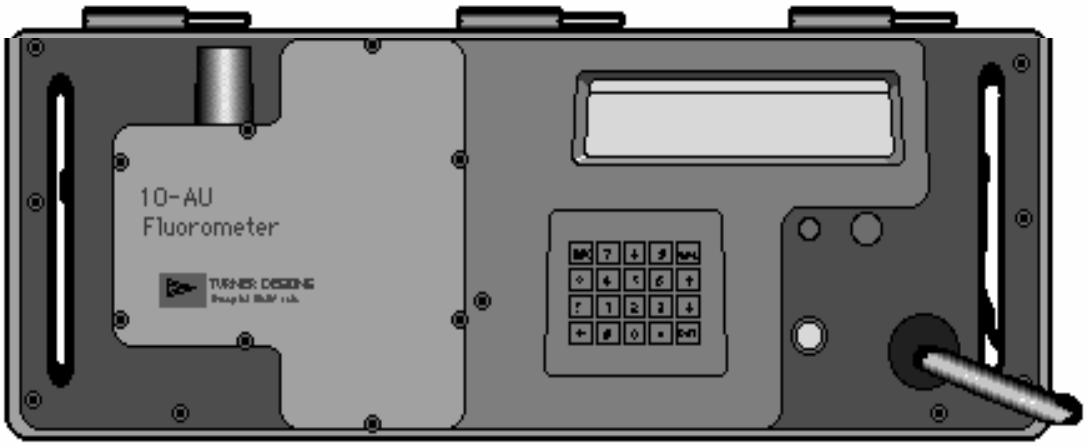

Figure 1. Turner Designs continuous-flow fluorometer.

3.11.9 Fluorometer Maintenance Log Template

Fluorometer #:_____ Date :_____
Operator:_____ Time:_____
Span FS%:_____
DI Water Reading:_____
Fluorescein Reading:_____
Desiccant Changed:_____

Comments:_____
_____
_____
_____
_____
_____

****

Fluorometer #:_____ Date :_____
Operator:_____ Time:_____
Span FS%:_____
DI Water Reading:_____
Fluorescein Reading:_____
Desiccant Changed:_____

Comments:_____
_____
_____
_____
_____
_____

****

Fluorometer #:_____ Date :_____
Operator:_____ Time:_____
Span FS%:_____
DI Water Reading:_____
Fluorescein Reading:_____
Desiccant Changed:_____

Comments:_____
_____
_____
_____
_____

****

3.11.10 Fluorometer Operational Parameters Prior to Data Logging

Date/Time:_____ Fluorometer #:_____
Operators:_____ Weather:_____
Project:_____ Vessel:_____
Comments:_____

1. Instrument initialization

*Verify clock time and date with GPS readout acceptable____ not_____
*Verify data reading "RAW" acceptable____ not_____
*Verify concentration readings in "HIGH (MAN)" acceptable____ not_____
*Verify time constant at "2 (Sec)" acceptable____ not_____

2. Instrument Calibration Readings

Span level % (from section 2.2): _____
FS% (from section 2.2): _____
Fluorescein 90 ppb reading (section 3.3) _____
De-ionized Water reading (section 3.2,3.4) _____

Comments:_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____

3.12 Dispersant Monitoring Field Guidelines

3.12.1 Overview

Dispersant monitoring with fluorometers employs a continuous flow fluorometer (Turner Design™ or equivalent) at adjustable water depths. Using a portable outrigger, the sampling hose is deployed off the side of the boat and rigged so that the motion of the boat's propeller or the wake of the sampling boat does not disrupt the sampling line. The fluorometer is calibrated with a check standard immediately prior to use in accordance with the operator's manual. In addition, water samples are collected for confirmation by conventional laboratory analysis.

3.12.2 Tier II Monitoring Operations

3.12.2.1 Monitoring Procedures

Monitoring the water column for dispersant efficacy includes three parts:
1. Water sampling for background reading, away from the oil slick;
2. Sampling for naturally dispersed oil, under the oil slick but before dispersants are applied; and
3. Monitoring for dispersed oil under the slick area treated with dispersants.

3.12.2.2 Background sampling, no oil

En route to the sampling area and close to it, the sampling boat performs a fluorometry sampling run where there is no surface slick. This sampling run at 1-meter depth will establish background levels before further sampling.

3.12.2.3 Background sampling, naturally dispersed oil

When reaching the sampling area, the sampling boat makes the sampling transects at 1-meter depths across the surface oil slick(s) to determine the level of natural dispersion before monitoring the chemical dispersion of the oil slick(s).

3.12.2.4 Fluorometry sampling of dispersed oil

After establishing background levels outside the treated area, the sampling boat intercepts the dispersed subsurface plume. The sampling boat may have to temporarily suspend continuous sampling after collecting baseline values in order to move fast enough to intercept the plume. The sampling boat moves across the path of the dispersed oil plume to a point where the center of the dispersed plume can be predicted based on the size of the treatment area and the locations of new coordinates, or on the movement of the Davis Drifters, as shown in Figures 2, 4, 5, and 6.

When conducting the monitoring, the transects consist of one or more "legs," each leg being as close as possible to a constant course and speed. The recommended speed is 1-2 knots. The monitoring team records the vessel position at the beginning and end of each leg.

The fluorescence data may be reviewed in real time to assess the relative enhanced dispersion of the water-soluble fraction of the oil. Figure 1 shows an example of how the continuous flow data may be presented.

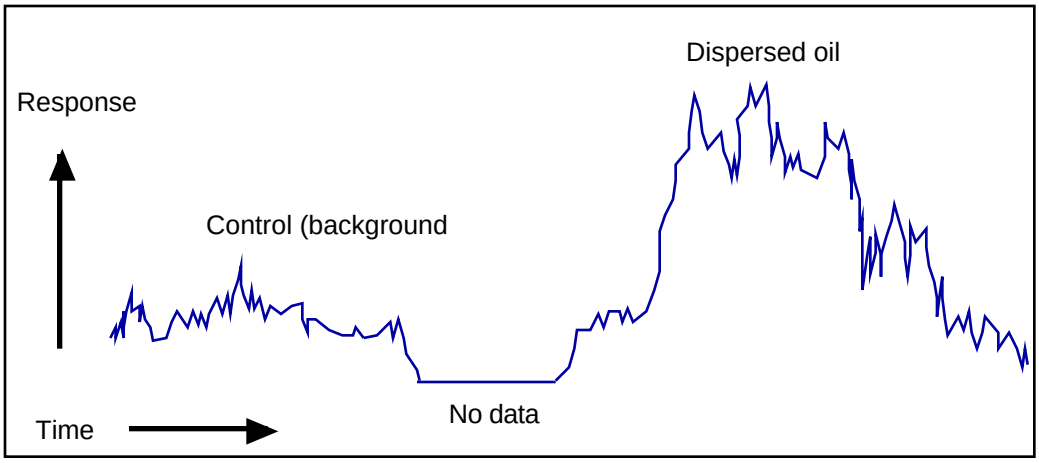

Figure 1. Example of a graphical presentation of fluorometer data.

3.12.3 Tier II Monitoring Locations

Two methods are described for designating the area to be monitored.

3.12.3.1 The Box Coordinates Method

The observation aircraft identifies the target slick or target zone for the sampling vessel by a four-corner box (Figure 2). Each corner of the box is a specific latitude/longitude, and the target zone is plotted on a chart or map for easy reference. The sampling vessel positions near the slick and configures the fluorometer sampling array. The pre-application sampling transect crosses the narrow width of the box. After completing the sampling transect, the sampling vessel waits at a safe distance during dispersant application. Data logging may continue during this period. Fifteen to twenty minutes after dispersants have been applied, the observation aircraft generates a second box by providing the latitude and longitude coordinates of the four corners corresponding to any observed dispersed oil plume. The post-application transect is identical to the pre-application transect. If no plume is observed, the sampling vessel samples the same transect used for pre-application.

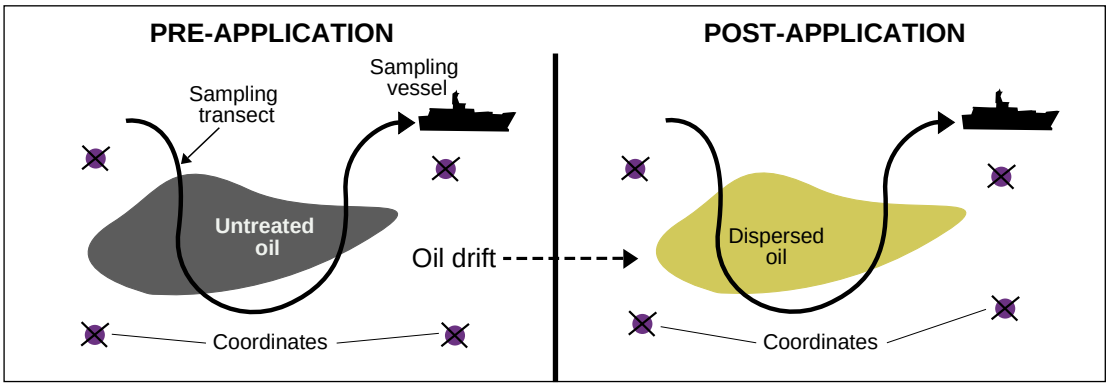

Figure 2. The box coordinates Method.

3.12.3.2 Davis Drifter Method

Two Davis type drifters (Figure 3) set to one meter are consecutively deployed over time by the sampling boat at the same location to estimate the speed and direction of dispersed oil

movement. For this portion of the operation, the sampling boat must have LORAN or GPS navigation capability.

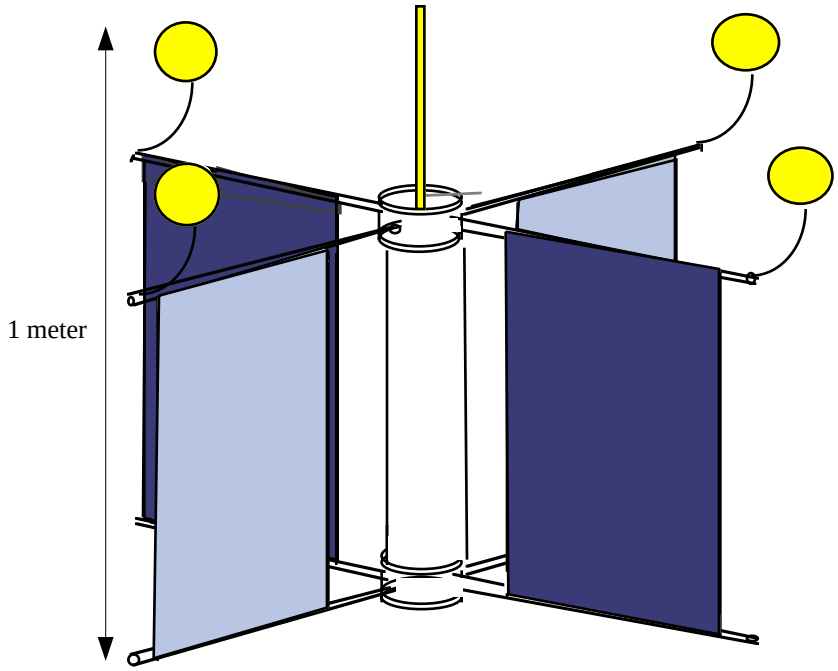

Figure 3. Davis Type Drifter set for one-meter depth.

Before dispersant application, the sampling boat is stationed upwind of the test application area and the spotter aircraft deploys a smoke marker to mark the beginning of the area to be treated with dispersant. This position is recorded by GPS or LORAN instruments. (Figure 4).

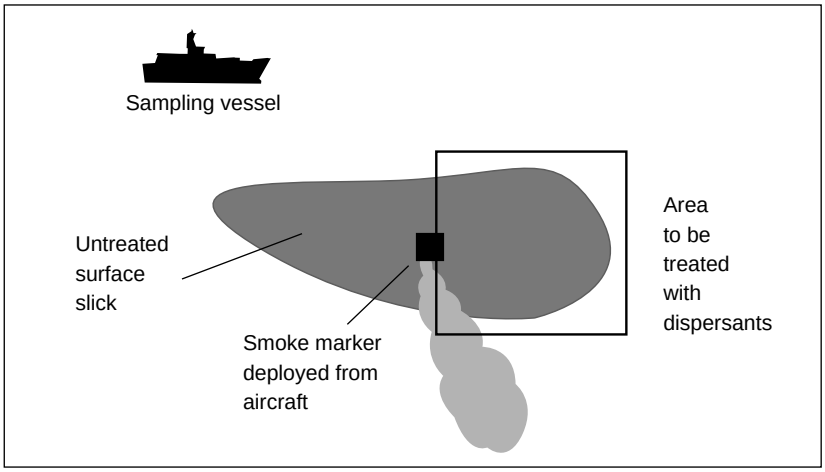

Figure 4. Position of sampling boat before dispersant application

After dispersant applications are completed, the Monitoring Group Supervisor directs the sampling boat to deploy the first Davis Drifter, set to one meter, at the position previously marked as the upper application boundary. (Figure 5). After approximately ten minutes, the second Davis Drifter, also set for a one-meter depth, is deployed as closely as LORAN or

GPS will allow to the exact location of the first Davis Drifter. The direction and speed of the dispersed oil plume can be estimated by observing the line established by these Davis Drifters and the distance between them (Figure 6).

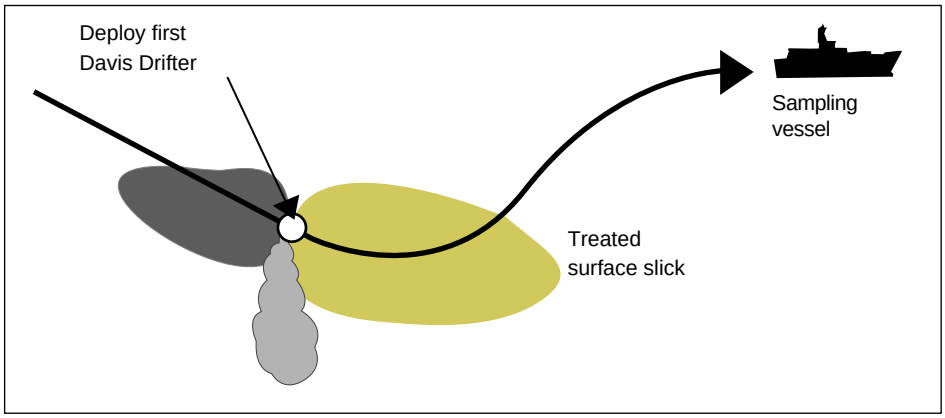

Figure 5. Deploying the first Davis Drifter following dispersant application.

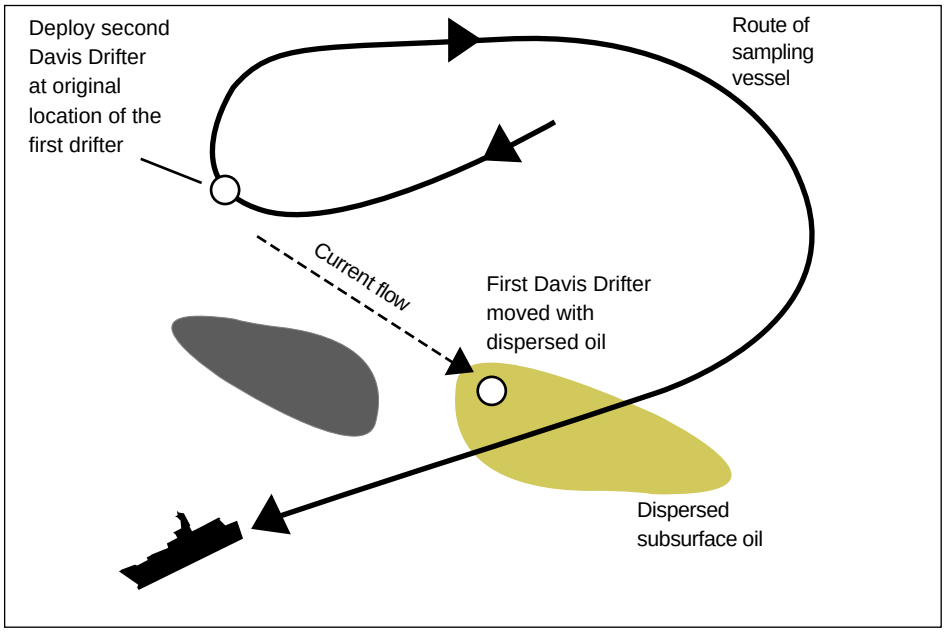

Figure 6. Deploying the second Davis Drifter.

3.12.4 Tier III Monitoring Operations

If monitoring indicates that dispersant application is effective, the Unified Command may request that additional monitoring be done to collect information on the transport and dilution trends of the dispersed oil. Tier III may be conducted to address this information need.

3.12.4.1 Multiple Depths with One Fluorometer

This monitoring technique provides a cross section of relative concentrations of dispersed oil at different depths. To conduct this operation, the team stops the vessel while transecting the dispersant-treated slick at a location where the fluorometry monitoring at the one-meter depth indicated elevated readings. While holding steady at this location, the team

lowers the fluorometer sampling hose at several increments down to approximately ten meters (Figure 7). Monitoring is done for several minutes (2-3 minutes) for each water depth, and the readings recorded both automatically by the instrument's data logger and manually by the monitoring team, in the data logging form. This monitoring mode, like Tier II, requires one vessel and one fluorometer with a team to operate it.

3.12.4.2 Simultaneous Monitoring at Two Different Depths.

If two fluorometers and monitoring setups are available, the transect outlined for Tier II may be expanded to provide fluorometry data for two water depths (one and five meters are commonly used). Two sampling set-ups (outriggers, hoses, etc.) and two different fluorometers are used, all on a single vessel, with enough monitoring personnel to operate both instruments. The team transects the dispersant-treated slick as outlined in Tier II, but simultaneously collect data for two water depths (Figure 7).

While the data logger in each instrument is automatically recording the data separately, the monitoring teams manually record the data from both instruments at the same time. Comparison of the readings at the two water depths may provide information on the dilution trend of the dispersed oil.

If requested by the Unified Command, water chemical and physical parameters may be collected by using a portable water quality lab such as Hydrolab, in-line with the fluorometer to measure water temperature, conductivity, dissolved oxygen content, pH, and turbidity. These data can help explain the behavior of the dispersed oil.

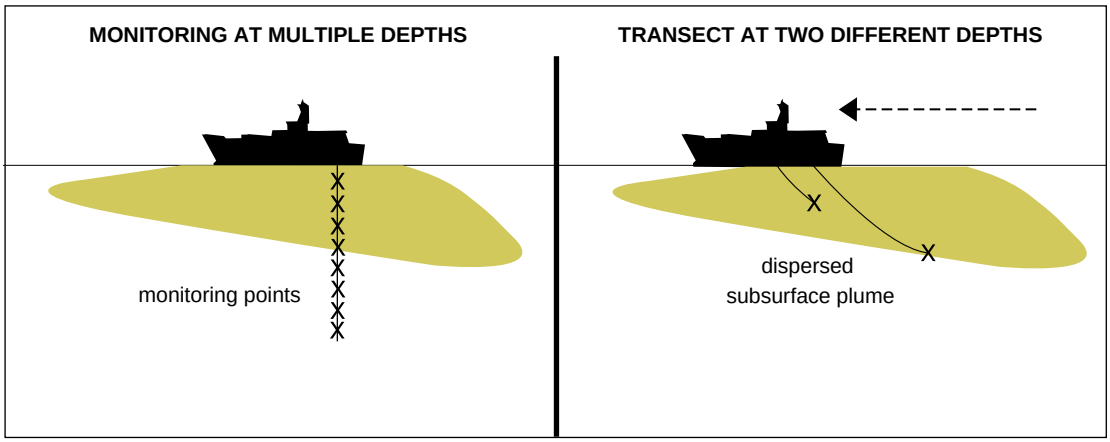

Figure 7: Monitoring options for Tier III.

3.13 Dispersant Monitoring Water Sampling

3.13.1. Purpose

Collection of water samples during Tier II and III monitoring should assist in correlating fluorometer readings in the field to actual dispersed oil concentrations in the water column. The water samples, collected post-fluorometer (i.e., at the outlet port of the water conduit, after it passes through the fluorometer cell) into a one-liter bottle, are analyzed at a laboratory at the end of the field operation to ascertain actual oil concentrations in the water.

The guidelines provided below are general, and should serve as an initial starting point for water sample collection. The number of samples collected may vary, depending on the operation and the need for verification.

3.13.2. Guidelines

3.13.2.1 Equipment

1. Certified pre-cleaned amber 500-ml bottles with Teflon™-lined caps.
   - For Tier II, a minimum of six bottles is required.
   - For Tier III, a minimum of thirteen bottles is required.

2. Labels for bottles documenting time and location of collection.

3. Observation notes corresponding fluorometer readings to water sample collection, and any other observations.

3.13.2.2 Procedure

1. Open valve for water sample collection and allow water to run for ten seconds before opening and filling the bottle.

2. Fill the bottle to the top and allow no headspace in bottles after sealing.

3. Label bottle with exact time of initial filling from the fluorometer clock as well as sampling depth, transect, and the distance of water hose from the outflow port of the fluorometer to the actual collection point of the water sample (to account for residence time of water in the hose)

4. Store filled bottles in a cooler with ice while on the monitoring vessel. Keep refrigerated (do not freeze) after returning to shore and send to the laboratory as soon as possible.

5. Measure and record the length of the hose between the fluorometer outlet and the bottle end, hose diameter, and flow rate (by filling a bucket). This will assist in accurately linking water sample results to fluorometer readings.

3.13.2.3 Number of Samples

1. Collect one water sample per monitoring depth during the background (no oil) transect. The fluorometer readings prior to collection should be relatively constant.

2. Collect two samples per monitoring depth during the pre-dispersant monitoring (under untreated oil slick). Try to collect water samples correlating with representative fluorometer values obtained.

3. Collect approximately three samples per monitoring depth during the post-dispersant transects. These samples should represent the range of high, middle, and low values obtained from the fluorometer screen.

4. Label the bottles and store them in a cooler with ice. Do not freeze. Enter water sample number, time, and correlated fluorometer reading in the Recorder Log for future data processing

3.14 Dispersant Monitoring Recorder Form

Date:_____ Fluorometer #:_____
Project: _____ Platform: _____
Monitoring Start/End Time: _____
Team members: _____
On-scene weather (log all possible entries) Wind direction from: _____ Wind speed: _____
Sea state: _____ Cloud cover: _____ Visibility: _____
Air temp. :_____ Sea temp.: _____

Comments should include: Presence or lack of surface oil or dispersed oil plume, whether conducting background run, transect in relation to slick, instrument or gear problem, or any other noteworthy event. Positions should always be recorded when a sample is taken. Otherwise, a log entry every five minutes is sufficient.

Time	Water depth	Fluorometer reading	GPS reading	Sample taken?	Comments & observations
			lat:_____ long:		
			lat:_____ long:		
			lat:_____ long:		
			lat:_____ long:		
			lat:_____ long:		
			lat:_____ long:		
			lat:_____ long:		
			lat:_____ long:		
			lat:_____ long:		
			lat:_____ long:		
			lat:_____ long:		
			lat:_____ long:		
			lat:_____ long:		
			lat:_____ long:		
			lat:_____ long:		

MONITORING IN SITU BURNING OPERATIONS

1. BACKGROUND

1.1 Mission Statement

To provide a monitoring protocol for rapid collection of real-time, scientifically based information to assist the Unified Command with decision-making during in situ burning operations.

1.2 Overview of In situ Burning

In situ burning of oil may offer a logistically simple, rapid, and relatively safe means for reducing the net environmental impact of an oil spill. Because a large portion of the oil is converted to gaseous combustion products, in situ burning can substantially reduce the need for collection, storage, transport, and disposal of recovered material. In situ burning, however, has several disadvantages: burning can take place only when the oil is not significantly emulsified, when wind and sea conditions are calm, and when dedicated equipment is available. In addition, in situ burning emits a plume of black smoke, composed primarily (80-85%) of carbon dioxide and water; the remainder of the plume is gases and particulates, mostly black carbon particulates, known as soot. These soot particulates give the smoke its dark color. Downwind of the fire, the gases dissipate to acceptable levels relatively quickly. The main public health concern is the particulates in the smoke plume.

With the acceptance of in situ burning as a spill response option, concerns have been raised regarding the possible effects of the particulates in the smoke plume on the general public downwind. SMART is designed to address these concerns and better aid the Unified Command in decisions related to initiating, continuing, or terminating in situ burning.

2. MONITORING PROCEDURES

2.1 General Considerations

In general, SMART is conducted when there is a concern that the general public may be exposed to smoke from the burning oil. It follows that monitoring should be conducted when the predicted trajectory of the smoke plume indicates that the smoke may reach population centers, and the concentrations of smoke particulates at ground level may exceed safe levels. Monitoring is not required, however, when impacts are not anticipated.

Execution of in situ burning has a narrow window of opportunity. It is imperative that the monitoring teams are alerted of possible in situ burning and SMART operations as soon as burning is being considered, even if implementation is not certain. This increases the likelihood of timely and orderly SMART operations.

2.2 Sampling and Reporting

Monitoring operations deploy one or more monitoring teams. SMART recommends at least three monitoring teams for large-scale burning operations. Each team uses a real-time particulate monitor (such as the DataRAM) capable of detecting the small particulates emitted by the burn (ten microns in diameter or smaller), a global positioning system, and other equipment required for collecting and documenting the data. Each monitoring instrument provides an instantaneous particulate concentration as well as the time-weighted average over the duration of the data collection. The readings are displayed on the instrument’s screen and stored in its data logger. In addition, particulate concentrations are logged manually every few minutes by the monitoring team in the recorder data log.

The monitoring teams are deployed at designated areas of concern to determine ambient concentrations of particulates before the burn starts. During the burn sampling continues and readings are recorded both in the data logger of the instrument and manually in the recorder data log. After the burn has ended and the smoke plume has dissipated, the teams remain in place for some time (15-30 minutes) and again sample for and record ambient particulate concentrations.

During the course of the sampling, it is expected that the instantaneous readings will vary widely. However, the calculated time-weighted average readings are less variable, since they represent the average of the readings collected over the sampling duration, and hence are a better indicator of particulate concentration trend. When the time-weighted average readings approach or exceed the Level of Concern (LOC), the team leader conveys this information to the Burn Coordinator who passes it on to the Technical Specialist in the Planning Section (Scientific Support Coordinator, where applicable), which reviews and interprets the data and passes them, with appropriate recommendations, to the Unified Command.

2.3 Monitoring Locations

Monitoring locations are dictated by the potential for smoke exposure to human and environmentally sensitive areas. Taking into account the prevailing winds and atmospheric conditions, the location and magnitude of the burn, modeling output (if available), the location of population centers, and input from state and local health officials, the monitoring teams are deployed where the potential exposure to the smoke may be most substantial. Precise monitoring locations should be flexible and determined on a case-by-case basis. In general, one team is deployed at the upwind edge of a sensitive location. A second team is deployed at the downwind end of this location. Both teams remain at their designated locations, moving only to improve sampling capabilities. A third team is more mobile and is deployed at the discretion of the burn coordinator.

It should be emphasized that, while visual monitoring is conducted continuously as long as the burn takes place, air sampling using SMART is not needed if there is no potential for human exposure to the smoke.

2.4 Level of Concern

The Level of Concern for SMART operations follows the National Response Team (NRT) guidelines. As of March 1999, NRT recommends a conservative upper limit of 150 micrograms of PM-10 per cubic meter of air, averaged over one hour. Furthermore, NRT emphasizes that this LOC does not constitute a fine line between safe and unsafe conditions, but should instead be used as an action level: If it is exceeded substantially, human exposure to particulates may be elevated to a degree that justifies action. However, if particulate levels remain generally below the recommended limit with few or no transitory excursions above it, there is no reason to believe that the population is being exposed to particulate concentrations above the EPA's National Ambient Air Quality Standard (NAAQS).

It is important to keep in mind that real-time particulate monitoring is one factor among several, including smoke modeling and trajectory analysis, visual observations, and behavior of the smoke plume. <u>The Unified Command must determine early on in the response what conditions, in addition to the LOC, justify termination of a burn or other action to protect public health.</u>

When addressing particulate monitoring for in situ burning, NRT emphasizes that concentration trend, rather than individual readings, should be used to decide whether to continue or terminate the burn. For SMART operations, the time-weighted average (TWA)

generated by the particulate monitors should be used to ascertain the trend. The NRT recommends that burning not take place if the air quality in the region already exceeds the NAAQS and if burning the oil will add to the particulate exposure concentration. SMART can be used to take background readings to indicate whether the region is within the NAAQS, before the burn operation takes place. The monitoring teams should report ambient readings to the Unified Command, especially if these readings approach or exceed the NAAQS.

2.5 SMART as Part of the ICS Organization

SMART activities are directed by the Operations Section Chief in the Incident Command System (ICS). It is recommended that a "group" be formed in the Operations Section that directs the monitoring effort. The head of this group is the Monitoring Group Supervisor. Under each group there are monitoring teams. At a minimum, each monitoring team consists of two trained members: a monitor and assistant monitor. An additional team member could be used to assist with sampling and recording. The monitor serves as the team leader. The teams report to the Monitoring Group Supervisor who directs and coordinates team operations, under the control of the Operations Section Chief.

2.6 Information Flow and Data Handling

Communication of monitoring results should flow from the field (Monitoring Group Supervisor) to those persons in the Unified Command who can interpret the results and use the data. Typically, this falls under the responsibility of a Technical Specialist on in-situ burning in the Planning Section of the command structure.

The observation and monitoring data will flow from the Monitoring Teams to the Monitoring Group Supervisor. The Group Supervisor forwards the data to the Technical Specialist. The Technical Specialist or his/her representative reviews the data and, most importantly, formulates recommendations based on the data. The Technical Specialist communicates these recommendations to the Unified Command.

Quality assurance and control should be applied to the data at all levels. The Technical Specialist is the custodian of the data during the operation, but ultimately the data belongs to the Unified Command. The Unified Command should ensure that the data are properly archived, presentable, and accessible for the benefit of future monitoring operations.

3. ATTACHMENTS

The following attachments are designed to assist response personnel in implementing the SMART protocol. A short description of each attachment is provided below.

Number	Title	Description
3.1	Roles and Responsibilities	Provides detailed roles and responsibilities for responders filling monitoring positions
3.2	Command, Control, and Data Flow	A suggested ICS structure for controlling monitoring units and transferring monitoring results
3.3	ISB Monitoring Training Outline	General training guidelines for ISB monitoring
3.4	ISB Monitoring Job Aid Checklist	A checklist to assist in assembling and deploying SMART ISB monitoring teams
3.5	ISB Monitoring Equipment List	A list of equipment needed to perform SMART operations
3.6	ISB Monitoring DataRAM Setup	Abbreviated instructions for the rapid setup of a DataRAM particulate monitor
3.7	ISB Monitoring Recorder Sheet	A template for manual recording of burn data
3.8	ISB Monitoring Possible Locations	An example of monitoring locations for offshore ISB operations
3.9	ISB Monitoring Data Sample: Graph	An example of real ISB data

3.1 Roles and Responsibilities

3.1.1 Team Leader

The Team Leader

- Selects specific team location
- Conducts monitoring
- Ensures health and safety of team
- Ensures monitoring QA/QC
- Establishes communication with the group supervisor
- Conveys to him/her monitoring data as needed

3.1.2 Monitoring Group Supervisor

The Group Supervisor

- Oversees the deployment of the teams in the group
- Ensures safe operation of the teams
- Ensures QA/QC of monitoring and data
- Establishes communication with the field teams and the command post
- Conveys to the command post particulate level trends as needed
- Addresses monitoring technical and operational problems, if encountered

3.1.3 In-Situ Burn Technical Specialist

The Technical Specialist or his/her representative

- Establishes communication with the Monitoring Group Supervisor
- Receives the data from the Group Supervisor
- Ensures QA/QC of the data
- Analyzes the data in the context of other available information and incident-specific conditions, formulates recommendations to the Unified Command
- Forwards the recommendations to the Unified Command
- Makes the recommendations and data available to other entities in the ICS, as needed
- Archives the data for later use

Role and function	Training	Number
Monitoring Team Leader Leads the monitoring team	HAZWOPER. SMART Monitor Training	3
Monitor Assistant Assists with data collection.	HAZWOPER	3
Group Supervisor Coordinates and directs teams; field QA/QC of data; links with UC.	SMART Monitor training. Group Supervisor training	1 per group
Technical Specialist Overall QA/QC of data; reads and interprets data; provides recommendations to the Unified Command	SMART Monitor training. Scientific aspects of ISB	1 per response

3.2 Command, Control, and Data Flow

In general, in situ burn monitoring operations take place as an integral part of the Unified Command System (Figures 1 and 2).

ISB monitoring operations are directed by the Operations Section Chief or designate. The Operations Section Chief provides the Monitoring Group Supervisor with tactical directions and support regarding deployment, resources, communications, and general mission as adapted to the specific incident. The Operations Section consults with the ISB monitoring Technical Specialist about the specifics of the monitoring operations, especially if they affect the data collected. The Monitoring Group Supervisor provides specific direction to the monitoring teams during field deployment and operations.

The observation and monitoring data flow from the Monitoring Teams to the Monitoring Group Supervisor. After initial QA/QC the Group Supervisor passes the data to the Technical Specialist. The Technical Specialist or his/her representative reviews the data, applies QA/QC if needed, and, most importantly, formulates recommendations based on the data. The Technical Specialist forwards these recommendations to the Unified Command.

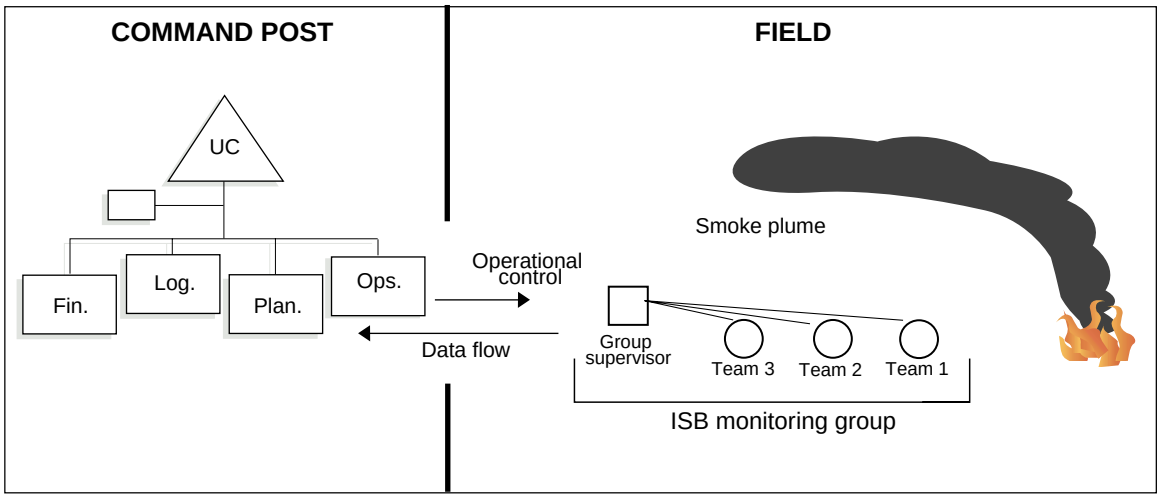

Figure 1. Command, control, and data flow during in-situ burning monitoring operations.

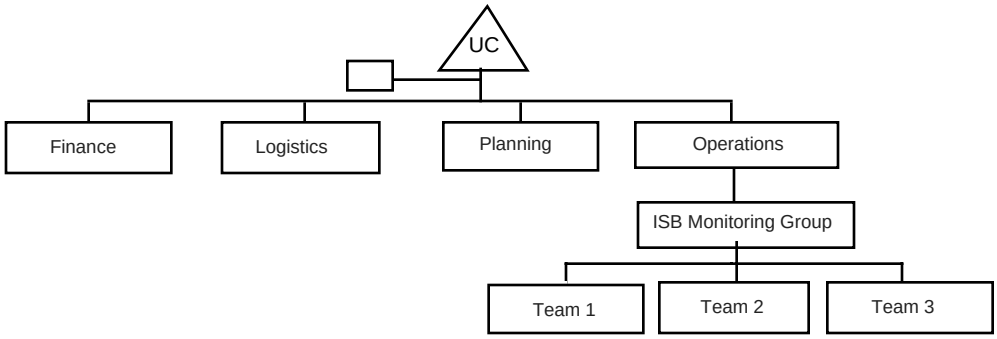

Figure 2. ISB Monitoring Group in the ICS organization.

3.3 ISB Monitoring Training Outline

3.3.1 General

Training for in-situ burning monitoring operations consists of an initial Monitor Level Training for all, Group Supervisor Training for supervisors, and refresher training sessions every six months for all.

3.3.2 Monitor Level Training

The Monitor Level Training includes monitoring concepts, instrument operation, work procedures, and a field exercise.

Topic	Duration
• Brief review of in-situ burning. • Review of SMART: What is it, why do it, what is it good for.	1 hour
• Monitoring strategy: Who, where, when. • Open water, inland. • Reporting: What and to whom • LOC: What is the LOC, how to report it. • Instantaneous reading vs. TWA, use of recorder data sheet	1 hour
• Basic instrument operation (hands-on): How the DataRAM works, how to operate it: brief description of mechanism, setup, and calibration, reading the data, what do the data mean; trouble shooting. • Using GPS • Downloading data	2 hours
Field exercise: Set up the instrument outdoors and measure background readings. Using a smoke source monitor for particulate levels, practice recording the data and reporting it. When done, practice downloading the data.	4 hours

3.3.3 Group Supervisor Training

Group Supervisor training may include two options:
• Independent training at each unit; or
• An additional structured day of training as suggested below

Topic	Duration
• Review of ICS and the role of the Monitoring Group in it • Roles of Monitoring Group Supervisor • What the data mean • QA/QC of data • Command and control of teams • Communication with the Technical Specialist	1 hour
Field exercise: Practice deploying instruments in the field with emphasis on reporting, QA/QC of data, communication between teams and the group supervisor, and group supervisor to the Technical Specialist.	3-6 hours
Back to the base, practice downloading the data	30 min.
Lessons learned	30 min.

3.3.4 Refresher Training

Topic	Duration
Review of SMART: What is it, why do it, what is it good for.	15 min.
• Monitoring and reporting: Who, where, and when • Level of concern • What do the data mean • Reporting the data • Work with the Technical Specialist (SSC).	30-45 min.
• Basic instrument operation (hands-on): How the DataRAM works, how to operate it; brief description of mechanism, setup, and calibration; • Reading the data, trouble-shooting. • Using GPS.	2 hours
Downloading data	30 min.
• Field exercise: Outside the classroom, set up the instrument and measure background readings. Using a smoke source, monitor particulate levels. • Practice recording the data and reporting it. • Back to the base, download data.	1-2 hours

3.4 ISB Monitoring Job Aid Checklist

This checklist is designed to assist SMART in situ burning monitoring by listing some of the tasks to accomplish before, during, and after the monitoring operations.

Check √	Item	Do
	Preparations	
	Activate personnel	Notify monitoring personnel and the Technical Specialist (SSC where applicable)
	Conduct equipment check	• Check equipment using equipment checkup list. • Verify that the DataRAMs are operational and fully charged • Include safety equipment
	Coordinate logistics	Coordinate logistics (e.g., deployment platform) with ICS Operations
	Amend Site Safety Plan	Amend site safety plan to include monitoring operations
	Monitoring Operations	
	Monitoring Group setup	• Coordinate with Operations Section Chief • Coordinate with Technical Specialist
	Conduct Briefing	• Monitoring: what, where, who, how • Safety and emergency procedures
	Deploy to location	Coordinate with Operations Section Chief
	Select site	• Safe • Consistent with monitoring plan • As little interference as possible • Communication with Group Supervisor and UC possible
	Set up instrumentation	Unpack DataRAM, set it up using instrument setup sheet. Verify calibration
	Mark position	• Use GPS to mark position in recorder sheet • Re-enter position if changing location
	Collect background data	Start monitoring. If possible, record background data before the burn begins
	Collect burn data	• Continue monitoring as long as burn is on • Monitor for background readings for 15-30 minutes after the smoke clears
	Record data	Enter: • Instantaneous and TWA readings every 3-5 minutes, or other fixed intervals • Initial position from GPS, new position if moving • Initial wind speed and direction, air temperature, relative humidity, re-enter if conditions change

	Conduct quality assurance and control	• Verify that instrument is logging the data • Record data, location, relative humidity, temp, wind, interferences in the recorder data sheet • Note and record interference from other sources of particulates such as industry, vehicles, vessels
	Report by team	Report to Group Supervisor: • Initial background readings • TWA readings (every 15 min.) • TWA readings when exceeding 150 µg/m^3, (every 5 min.) • Interferences • Safety problems • QA/QC and monitoring problems
	Report by Group Supervisor	Report to the Technical Specialist (SSC): • Initial background readings • TWA, when exceeding 150 µg/m^3 • Data QA/QC and monitoring problems
	Report by Technical Specialist (SSC)	Report to the Unified Command: • TWA consistently exceeding 150 µg/m^3 • Recommend go/no-go
	Post Monitoring	
	Debrief and lessons learned	• What went right, what went wrong • Problems and possible solutions • Capture comments and suggestions
	Preserve data	• Download logged data from DataRAM to computer • Collect and review Recorder data logs • Generate report
	Prepare for next burn	Clean, recharge, restock equipment

3.5 ISB Monitoring Equipment List

(For each team, unless otherwise noted)

Check √	Item	Qty	Remarks
	DataRAM	1	
	Accessories for each DataRAM:		
	• Charger	1	
	• Omni directional inlet	1	
	• PM-10 inlet head	1	
	• PM-2.5 accessory	1	
	• Carrying/shipping cases	1	
	• Water-resistant cover	1	
	Other instrument: PDR and accessories		
	Computer and cables	1/group	Should include downloading software
	Printer	1/group	
	Recorder data sheets	10	
	Write-in-the-rain notebooks, pens	3	
	DataRAM setup sheet	1	
	Job aid check list	1	
	GPS	1	
	Extra batteries for GPS	1 set	
	Radio	1	
	Cell phone	1	
	Binoculars	1	
	Stop watch	1	
	Camera	1	digital camera or camcorder optional
	Film	3	
	Thermometer	1	
	Humidity meter	1	
	Anemometer	1	

3.6 ISB Monitoring DataRAM Setup

The following is a setup procedure to assist in field operations of the DataRAM. Words in quotation marks (e.g., “SPAN CHECK”) indicate statements on the instrument screen. See Figure 1 for a diagram of the DataRAM interface. *Note: Instruments should be set up side by side, turned on and calibrated simultaneously. Instruments should be synchronized with Global Positioning System time settings.*

OPERATION	**PROCEDURE**
POWER ON	Adjust 3-position locking switch on back to INT.BAT./CHARGER position. Remove metal cap from top sampler and press the "ON" button.
CHECK BATT.	Press <SYSTEM DIAGNOS> All items should read “NORMAL.” Main concern is "BATCHRG." Fully charged: 12345. Numbers drop as battery charge decreases. Press <EXIT> <NEXT SCREEN>.
CHECK TIME	See “SET DATE TIME.” If correct, press <EXIT>. If incorrect, press <SET DATE TIME>, use the arrow keys to move through and adjust the time and date as needed. Press <EXIT>, then <EXIT> again to start the clock.
PURGE	Press <PURGE>; when done purging, press <EXIT>.
ZERO	See "ZERO." Press <ZERO>.
SPAN	See "SPAN CHECK." Press <SPAN CHECK>. See "INSERT CALIBRATOR." Insert calibrator to In position by turning Span Check knob in rear until it stops. See "WAIT.” Wait until the span check is completed. **Note:** Notice "CALBR DIFF" during Span Check. If the percentage is 0-10%, go to ADJUST PARAMS step. If > 10%, go to the next step.See "RETRACT CALIBRATOR." Turn the knob to out position until you hear a click.
Adjusting CALBR DIFF	Press <EXIT> <EXIT> <EXIT>, then <MENU>. Turn the calibrator key to the In position. Wait for the RS number to settle between 150 and 250. Press <EXIT>, then <SYSTEM FAULT> . See "RETRACT CALIBRATOR." Turn calibrator knob to Out position. Press <EXIT>. Repeat SPAN step.
ADJUST PARAMS	See "PARAMETER" Press <PARAMETER>, to "PARAMETRS 1" screen
	See "AVE TIME." Press. Scroll through options. 10 seconds is OK.
	See "CLEAR DATA." Press <CLEAR DATA>, <CLEAR DATA>.
	See "LOG DATA". Press <LOG DATA> to "ON" option.
	Adjust "EVERY." Use the arrow keys to adjust to 10 seconds. If you adjust, press <EXIT>, then <NEXT SCREEN>. If "EVERY" not adjusted, press <NEXT SCREEN> to "PARAMETER 2" screen
	See "AUTO ZERO." Adjust to "ON".
	See "ALARM." Toggle to "INST." If no alarm needed, toggle to "OFF". If alarm selected see "CONC"
	See "CONC.” Use the arrow key to adjust the concentration to 150 $\mu g/m^3$ for SMART. If adjusted, see "CAL FACTOR”
	See "CAL FACTOR," Press. Use the arrow keys to adjust the numbers to 100%.If calibration factor is adjusted, see “FLOWRATE”
	"FLOWRATE" 2.0 lpm is OK. Toggle to adjust. <EXIT> <EXIT>

START LOGGING	"RUN DATA". Press <RUN > to start logging data. The letter "L" will appear by "MEMORY FREE" key to indicate that instrument is logging data.
ADDITIONAL DATA OPTIONS	Press the menu button. "RUN MENU" screen is on. Press <Scroll Data Log>. "SCROLL DATA LOG" screen is on
	Press <Summary 1 Displ>. "Data Summary 1" screen is on
	Press <Next Display>. "Data Summary 2" screen is on with Tag #, STEL, and TWA information.
	Press <Next Display>. "Data Summary 3" screen is on
DISPLAY	Press <NEXT > back to "SCROLL DATA LOG". Press <EXIT> <EXIT> "RUN DATA screen is on, but run on hold. Press again <EXIT>. "To continue RUN key 'EXIT'
	Press <EXIT>, run will continue
TERMINATE DATA RUN	From run mode, press <EXIT> then <Terminate RUN">

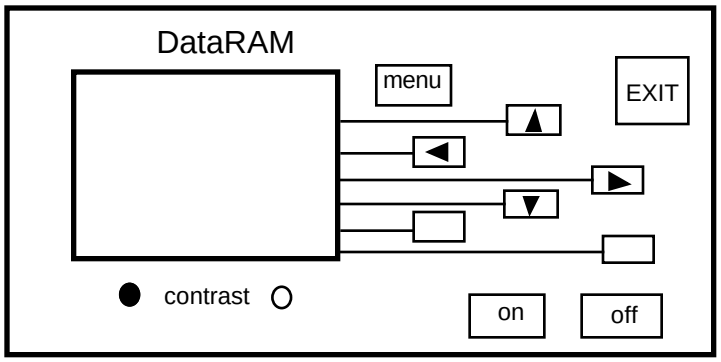

Figure 1. A schematic diagram of the DataRAM interface.

3.7 ISB Monitoring Possible Locations

Monitoring locations are dictated by the potential for smoke exposure to human populations. In general, the monitoring teams deploy where the potential for human exposure to smoke is most probable. Precise monitoring locations should be flexible and determined on a case-by-case basis. In the figure below, one team is deployed at the upwind edge of a sensitive location (e.g., a town). A second team deploys at the downwind end of this location. Both teams stay at the sensitive location, moving only to improve sampling capabilities. A third team is more mobile, and deploys at the discretion of the Group Supervisor.

It should be emphasized that, while visual observation is conducted continuously as long as the burn takes place, air sampling using SMART is not required if there is no potential for human exposure to the smoke.

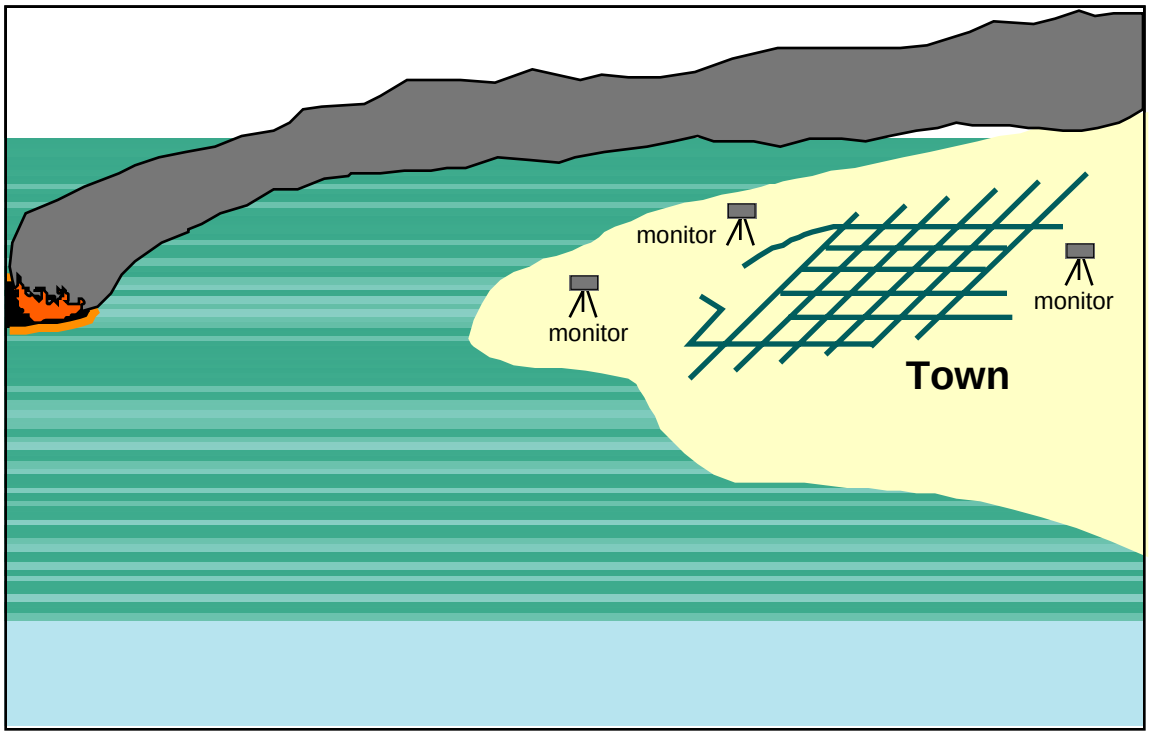

Figure 1. Possible locations of monitors (not to scale).

3.8 ISB Monitoring Recorder Sheet

Date: _____ General Location: _____

General information	Weather information
Recorder name	Temperature
Operator name	Wind direction
Vehicle/vessel #	Wind speed
DataRam #	Relative humidity
Burn #	Cloud cover
Calibration factors:	

Comments should include: location of the smoke plume relative to the instrument, interfering particulate sources, any malfunction of the instrument

Time	GPS reading	Particulates concentration	Comments & observations
	lat:_____ long:	Inst: _____ TWA:	
	lat:_____ long:	Inst: _____ TWA:	
	lat:_____ long:	Inst: _____ TWA:	
	lat:_____ long:	Inst: _____ TWA:	
	lat:_____ long:	Inst: _____ TWA:	
	lat:_____ long:	Inst: _____ TWA:	
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	lat:_____ long:	Inst: _____ TWA:	
	lat:_____ long:	Inst: _____ TWA:	
	lat:_____ long:	Inst: _____ TWA:	

3.9 ISB Monitoring Data Sample: Graph

The graph below represents field monitoring data from a test burn smoke plume near Mobile, Alabama, on September 25, 1997, after the data were downloaded from the instrument. The graph (Figure 1) portrays the differences between the transient instantaneous readings (Conc.) and the time weighted average readings (TWA). Note that while instantaneous readings varied widely, the TWA remained relatively constant throughout the burn. The TWA provides an indication of the concentration trends, which is a more stable and reliable indicator of exposure to particulates.

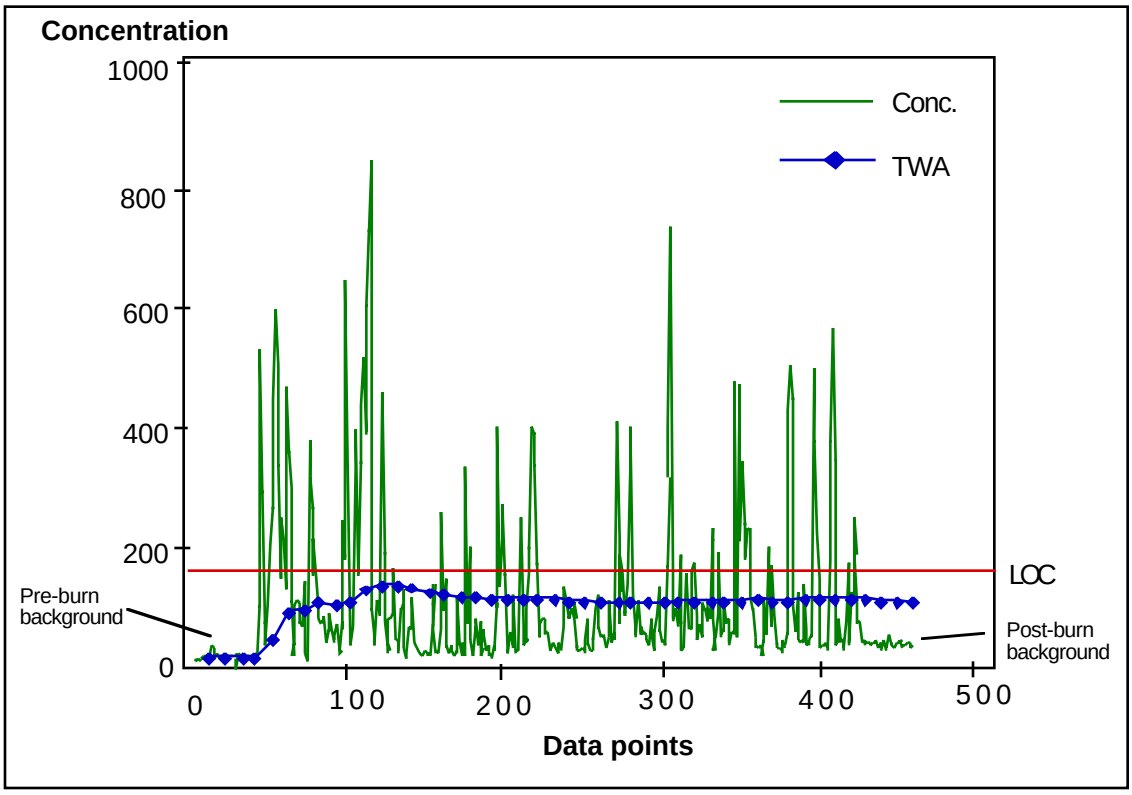

Figure 1. Graph of instantaneous and TWA particulate concentrations

SMART RESOURCES

Comments and suggestions on the SMART program and document
Fax: (206) 526-6329; Email: smart.mail@noaa.gov

SMART Web Sites
http://response.restoration.noaa.gov/oilaids/SMART/SMART.html, and
http://www.uscg.mil/hq/g-m/mor/gmor-3.htm

In-situ Burning Page
http://response.restoration.noaa.gov/oilaids/ISB/ISB.html

Dispersant Guided Tour
http://response.restoration.noaa.gov/photos/dispers/dispers.html

Dispersant Application Observer Job Aid
http://response.restoration.noaa.gov/disp_aid/disp_aid.htm

US Coast Guard
http://www.uscg.mil/

USCG National Strike Force
http://www.uscg.mil/hq/nsfcc/nsfweb/

NOAA OR&R
http://response.restoration.noaa.gov/index.html

EPA ERT
http://www.epa.gov/superfund/programs/ert/

CDC
http://www.cdc.gov/

MMS Oil Spill Research Program
http://www.mms.gov/taroilspills/

OHMSETT Facility
http://www.ohmsett.com/