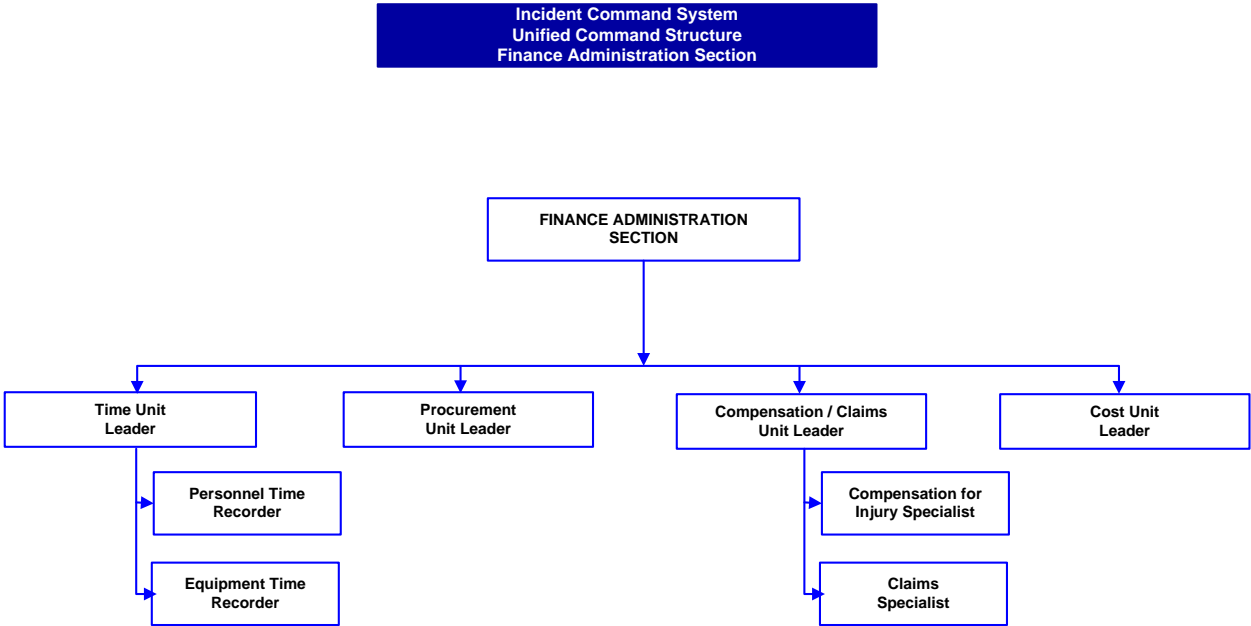


Figure B-7

FINANCE/ADMINISTRATION SECTION



INCIDENT COMMAND SYSTEM (cont'd)

FINANCE/ADMINISTRATION SECTION CHIEF (FSC) (USCG IHM Pg. 10-1)

The Finance/Administration Section Chief, a member of the General Staff, is responsible for all financial and cost analysis aspects of the incident and for supervising members of the Finance/Administration Section.

In addition to roles in the USCG IHM, PMPL Specific Responsibilities for the FSC are;

- ◆ Supervises the purchases made during emergency operations.
- ◆ Coordinates activities between PMPL and its insurers and interacts with other respondent parties and their insurers.
- ◆ Collects all cost data, performs cost effectiveness analyses, and develops cost estimates and cost saving recommendations.
- ◆ Arranges for claims handling and authorizes settlements with claimants in collaboration with the Regulatory/Legal Advisor.
- ◆ Prepares cost summaries for the Logistics Section Chief.
- ◆ Makes daily cost control analyses for each sector of activities associated with the emergency operations and gives a report to the Deputy Incident Commander.
- ◆ Prepares reports on injuries/deaths resulting from the incident or emergency response operations.
- ◆ Follows the status of hospitalized personnel and prepares administrative paperwork on all injuries or deaths.

TIME UNIT LEADER (TIME) (USCG IHM Pg. 10-3)

The Time Unit Leader is responsible for equipment and personnel time recording.

EQUIPMENT TIME RECORDER (EQTR) (USCG IHM Pg. 10-4)

Under Supervision of the Time Unit Leader, the Equipment Time Recorder is responsible for overseeing the recording of time for all equipment assigned to an incident.

PERSONNEL TIME RECORDER (PTRC) (USCG IHM Pg. 10-5)

The Personnel Time Recorder reports to the Time Unit Leader and records personnel information.

PROCUREMENT UNIT LEADER (PROC) (USCG IHM Pg. 10-5)

The Procurement Unit Leader is responsible for administering all financial matters pertaining to vendor contracts.

COMPENSATION/CLAIMS UNIT LEADER (COMP) (USCG IHM Pg. 10-6)

The Compensation/Claims Unit Leader is responsible for the overall management and direction of all Compensation for Injury Specialist and Claims Specialists assigned to the incident.

COST UNIT LEADER (COST) (USCG IHM Pg. 10-9)

The Cost Unit Leader is responsible for collecting all cost data, performing cost effectiveness analyses and for providing cost estimates and cost saving recommendations for the incident.

ORGANIZATIONAL GUIDES

MODULAR DEVELOPMENT

A series of examples of Modular Development are included to illustrate one method of expanding the Incident Organization at an oil spill incident. The examples shown are not meant to be restrictive, nor imply that these are the only ways to build an ICS organizational structure from an initial response to a multi-branch organization.

INITIAL RESPONSE

Initial Response resources are managed by the Incident Commander who will handle all Command and General Staff responsibilities. A Unified Command is established.

REINFORCED RESPONSE

The Unified Command has established a Protection Group and a Recovery Group to manage on water activities and a shoreline division to manage land based resources. A Safety Officer and Information Officer have been assigned.

MULTIDIVISION/GROUP ORGANIZATION

The Unified Command has assigned all command staff positions and established a number of divisions and groups as well as an Operations Section Chief and Planning Section Chief. Some Logistic Units are established.

MULTI-BRANCH ORGANIZATION

The Incident Commanders have established all Command and General Staff positions and have established four branches.

ROLES AND RESPONSIBILITIES OF EXTERNAL RESOURCES

General

Many external resources may be of assistance during emergency operations, in order to protect the employees, the surrounding community, the environment, and the Facility itself.

These major external resources are:

Municipal and Provincial/ State Police

Police Departments are responsible for the safety of all citizens; including evacuation as necessary.

Municipal Fire Departments

The firefighters of any municipality are the professional responders with the capability of extinguishing any type of fire.

The Fire Chief is responsible for the coordination of all fire related operations. He will make sure that (1) the fire is under control, and (2) that the population and the surrounding area are protected and safe. If needed, he may call for additional assistance (fire departments of neighbouring municipalities). In the event where the incident is not confined to the property, the emergency response plan of the Municipality where the incident is occurring will have priority over PMPL's Plan. On PMPL's property, the Operations Section Chief must work in close collaboration with the fire department and he will inform the Fire Chief, in collaboration with the Environmental Specialist, of the hazards associated with the products present at the Facility, possible hazards from the installation, etc.

Municipalities

Cities and municipalities are responsible for the safety of all citizens and for the protection of all municipal infrastructures on their territories (parks, roads, sewer systems, etc.). In case of an emergency, the Incident Commander will oversee, if necessary, that the Municipality's Chief of the Fire Department, the municipal authorities are being informed of the situation. For Quebec, the municipality usually through its Fire Department, will establish a command post in the area of the incident (could be the Town Hall) and they will ask representatives from the company to join together with other concerned agencies.

Specialized and General Contractors

Many companies are specialized in emergency operations. Their staff is trained for the use of containment and recovery equipment, and in the rehabilitation of contaminated sites. Other contractors may be of help during emergency operations for the repair of critical equipment and machinery or during excavation operations. Non-exhaustive lists of possible contractors are presented in Section 2.0.

During a response operation, the contractor's director of operations will report as directed by the Operations Section Chief so as to coordinate operations in line with priorities set by the Unified Command.

The hired clean-up contractor will be responsible for setting up temporary centres, in accordance with actual legislation, to store recovered residues and debris (including obtaining the necessary permits) until such time as they can be transported to a more long-term storage site or until permits involved for their recycling or disposal can be obtained.

ROLES AND RESPONSIBILITIES OF EXTERNAL RESOURCES cont'd

Canada Specific

Canada Energy Regulator (CER)

The CER's top priority in any emergency is to make sure that people are safe and secure, and that property and the environment are protected. Any time there is a serious incident, CER Inspectors may attend the site to oversee a company's immediate response. The CER will require that all reasonable actions are taken to protect employees, the public, and the environment. Further, the CER will verify that the regulated company conducts adequate and appropriate clean-up and remediation of any environmental effects caused by the incident.

As lead regulatory agency, the CER:

- Monitors, observes and assesses the overall effectiveness of the company's emergency response in terms of:
 - Emergency Management
 - Safety
 - Security
 - Environment
 - Integrity of operations and facilities: and
 - Energy Supply
- Investigates the event, either in cooperation with the Transportation Safety Board of Canada, under Canada Labor Code, or as per the *Canada Energy Regulator Act* or *Canada Oil & Gas Operations Act* (whichever is applicable).
- Inspects the pipeline or facility
- Examines the integrity of the pipeline or facility
- Requires appropriate repair methods are being used
- Requires appropriate environmental remediation of contaminated areas is conducted
- Coordinates stakeholder and Aboriginal community feedback regarding environment clean-up and remediation
- Confirms that a company is following its Emergency Procedures Manuals(s), commitments, plans, procedures, and CER regulations and identifies non-compliance
- Initiates enforcement actions as required
- Approves the restart of the pipeline

Quebec Civil Security

(b) (7)(F)



ECRC

ECRC, Eastern Canada Response Corporation Ltd., is a response organization certified for oil spills of up to 10,000 tonnes. It is certified according to the regulations for the R.O., Canadian Shipping Act. It can provide equipment, personnel and operational management for the containment, recovery and clean up of oil spilled on water, including preventative measures taken with respect there to.

ROLES AND RESPONSIBILITIES OF EXTERNAL RESOURCES

cont'd

Quebec Ministère de l'Environnement et de la Lutte contre les changements climatiques (MELCC)

From Article 21 of the *Loi sur la qualité de l'environnement* (L.R.Q., chapter Q-2, 1998), the company shall notify the Ministère de l'Environnement et de la Lutte contre les changements climatiques (MELCC). The Ministry may oversee the cleaning operations or make an order relative to the restoration of the natural environment. The representatives of the Ministry may be of assistance for the choice and application of appropriate mitigation measures.

Environment Canada

Environment Canada's mandate is to preserve and enhance the quality of the natural environment, including water, air and soil quality; conserve Canada's renewable resources, including migratory birds and other no-domestic flora and fauna; conserve and protect Canada's water resources; carry out meteorology; enforce the rules made by the Canada - United States International Joint Commission relating to boundary waters; and coordinate environmental policies and programs for the federal government.

The goal of the renewed Canadian Environmental Protection Act (CEPA, 2000) is to contribute to sustainable development through pollution prevention and to protect the environment, human life and health from the risks associated with toxic substances. CEPA also recognises the contribution of pollution prevention and the management and control of toxic substances and hazardous waste to reducing threats to Canada's ecosystems and biological diversity. During an emergency, Environment Canada may be of assistance for information gathering concerning sensible areas, response techniques, protection of fauna and flora, management of wastes, etc.

Transportation Safety Board

The TSB is an independent agency created by an Act of Parliament (the Canadian Transportation Accident Investigation and Safety Board), which came into force on March 29, 1990. Its role is to advance transportation safety through the investigation of transportation occurrences in the marine, pipeline, rail and aviation modes.

The Canadian Transportation Investigation and Safety Board Act provides the legal framework governing the TSB's activities. Basically, the TSB has a mandate to advance safety in the marine, pipeline, rail, and aviation modes of transportation by:

- conducting independent investigations, including, when necessary, public inquiries, into selected transportation occurrences in order to make findings as to their causes and contributing factors;
- identifying safety deficiencies as evidenced by transportation occurrences;
- making recommendations designed to eliminate or reduce any such safety deficiencies;
- reporting publicly on its investigations and on the findings in relation thereto.

Ministry of Fisheries and Oceans

From article 38(4) of the Fisheries Act, any person who deposits a deleterious substance, or owns a deleterious substance which goes in water frequented by fish, and where damage or a danger of damaging fish habitat exists, shall report such occurrence to an inspector or such other person or authority as is prescribed by the regulations.

Canadian Wildlife Service and the Ministère du ressources naturelles, et de la fauna

When oil spills occur in coastal habitats they can have devastating effects on seabirds. Along the St. Lawrence River, where many species have their nesting grounds, petroleum product pollution poses a constant threat to seabird populations. The CWS gathers data on the numbers and distribution of birds on the breeding grounds and at sea, and maps the most critical sites.

ROLES AND RESPONSIBILITIES OF EXTERNAL RESOURCES

cont'd

CANUTEC

The Canadian Transport Emergency Centre of the Department of Transport, CANUTEC, can provide immediate advice and recommend actions to be taken, and those to avoid, in dangerous goods emergencies. Their services include:

- chemical, physical and toxicological properties and incompatibilities of the dangerous goods;
- health hazards and first aid;
- fire, explosion, spill or leak hazards;
- remedial actions for the protection of life, property and the environment;
- evacuation distances;
- personal protective clothing and decontamination.

US Specific

MSRC

MSRC is an independent, non-profit, national spill response company dedicated to rapid response. MSRC's capabilities include a large inventory of vessels, equipment, and trained personnel, complemented by a large contractor workforce in numerous locations in the continental U.S., Hawaii, and the Caribbean. MSRC also provides dedicated access to alternative response technologies such as in situ burn kits and aerial and vessel dispersant spraying.

United States Coast Guard

The USCG is responsible for responding to all oil spills at sea, as well as creating regulations to prevent those spills. The Sector Northern New England Response Department's primary role is responding to and mitigating maritime incidents within Sector Northern New England's area of responsibility. The Response Department combines the traditional functions of a Group Operations Department with the Environmental Protection and Port Security functions of the

Marine Safety Program.

Response personnel liaise with other federal, state, and local agencies to ensure any oil spills or hazardous material releases are properly mitigated whenever an incident occurs, or threatens to occur.

Environmental Protection Agency

The EPA monitors, directs or conducts inland oil Spill response for EPA regulated facilities and Pipeline / Transportation Spills. EPA also supports the USCG during spills to the marine environment and can provide specialized support through the Environmental Response Team (SMT). EPA reviews and approves facility Response plans and conduct exercises. EPA convenes Area Committee meetings and exercises the Area Contingency Plans.

Pipeline and Hazardous Material Safety Administration

PHMSA oversees the safety, security, and environmental protection of pipelines through analysis of data, damage prevention, education and training, enforcement of regulations and standards, research and development, grants for states pipeline safety programs, and emergency planning and response to accidents. The pipeline safety program is responsible for a national regulatory program to protect the public against the risks to life and property in the transportation of natural gas, petroleum and other hazardous materials by pipeline. The enactment of the Oil Pollution Act of 1990 also expanded the role of the pipeline safety program

ROLES AND RESPONSIBILITIES OF EXTERNAL RESOURCES cont'd

in environmental protection and resulted in a new emphasis on spill prevention and containment of oil and hazardous substances from pipelines. Oil spill response activities are managed by the EPA as noted above and PHMSA would focus on the incident investigation and causations for improvement to pipeline safety.

State of Maine Department of Environmental Protection

In the event of an oil spill to coastal waters, the DEP will represent the governor in all direct abatement, clean-up and resource protection activities in coordination with federal, industry and other state's response teams. The State of Maine DEP is a State Trustee of natural resources under the Oil Pollution Act of 1990 for all natural resources other than those overseen by the Department of Marine Resources, the Department of Inland Fisheries and Wildlife and the Department of Conservation. The DEP will direct the other State Trustees of Natural Resources in the development of plans for the restoration, rehabilitation, or replacement of natural resources, and will oversee disbursements of any funds for clean-up.

State of New Hampshire Department of Environmental Services

Formed in January 1987 by state statute RSA 21-O, DES was legislatively created through the consolidation and reorganization of four previously separate agencies: the Air Resources Agency, the Office of Waste Management, the Water Supply and Pollution Control Commission, and the Water Resources Board. Each of these groups is now represented within the department's three divisions: Air Resources, Waste Management, and Water. Also, DES has units within the Office of the Commissioner whose roles are to coordinate such activities as agency-wide planning, enforcement, permitting, public information, laboratory services, geologic services, information resources, and financial and personnel management.

State of Vermont Department of Environmental Conservation

The Waste Management Division of the Vermont DEC oversees the use, treatment and handling of hazardous and solid wastes. The Division performs emergency response for hazardous materials spills, issues permits for federal and state programs regulating hazardous wastes, solid wastes, and underground storage tanks, and manages cleanup at hazardous sites under state and federal authorities, including the Resource Conservation and Recovery Act (RCRA) and the Comprehensive Environmental Response Compensation and Liability Act (CERCLA, also known as Superfund).

US Fish and Wildlife Service

The US Fish and Wildlife Service's Oil Spill program is to emphasize early planning and cooperation at the local, regional, and national level in an effort to minimize the injury to fish, wildlife and sensitive environments from oil spills. During a spill event US Fish and Wildlife assist State and other federal officials in spill response. Service personnel participate as members of an integrated response team, responding to chemical and oil spills in all six New England States. On major spills, Service personnel work in two primary areas; spill response and damage assessment. Response activities include identification of sensitive areas, recovery of oiled wildlife for cleaning and rehabilitation, shoreline assessments, and sample collections. During and after response, the Service, along with other agencies called trustees, will perform a damage assessment. They identify the natural resources injured, determine the extent of the injuries, and plan and carry out natural resource restoration activities.

GLOSSARY OF TERMS

This glossary contains definitions of terms frequently used in ICS documentation.

AGENCY REPRESENTATIVE - Individual assigned to an incident from an assisting or cooperating agency that has been delegated full authority to make decisions on all matters affecting their agency's participation at the incident. Agency Representatives report to the Liaison Officer.

AIR OPERATIONS BRANCH DIRECTOR - The person primarily responsible for preparing and implementing the air operations portion of the Incident Action Plan. Also responsible for providing logistical support to helicopters operating on the incident.

ALLOCATED RESOURCES - Resources dispatched to an incident.

ALTERNATIVE RESPONSE TECHNOLOGIES (ART) - Response methods or techniques other than mechanical containment or recovery. ART may include use of chemical dispersants, in-situ burning, bioremediation or other alternatives. Application of ART must be authorized and directed by the OSC.

ASSIGNED RESOURCES - Resources checked-in and assigned work tasks on an incident.

ASSIGNMENTS - Tasks given to resources to perform within a given operational period, based upon tactical objectives in the Incident Action Plan.

ASSISTANT - Title for subordinates of the Command Staff positions. The title indicates a level of technical capability, qualifications and responsibility subordinate to the primary positions. Assistants may also be used to supervise unit activities at camps.

ASSISTING AGENCY - An agency directly contributing tactical or service resources to another agency.

AVAILABLE RESOURCES - Incident-based resources which are immediately available for assignment.

BASE - That location at which the primary logistics functions are coordinated and administered. (Incident name or other designator will be added to the term "Base") The Incident Command Post may be co-located with the base. There is only one base per incident.

BRANCH - That organizational level having functional/geographic responsibility for major incident operations. The Branch level is organizationally between Section and Division/Group in the Operations Section, and between Section and Units in the Logistics Section.

CACHE - A pre-determined complement of tools, equipment and/or supplies stored in a designated location, and available for incident use.

CAMP - A geographical site, within the general incident area, separate from the base, equipped and staffed to provide sleeping areas, food, water and sanitary services to incident personnel.

CHECK-IN - The process whereby resources first report to an incident. Check-in locations include: Incident Command Post (Resources Unit), Incident Base, Camps, Staging Areas, Helibases, Helispots and Division Supervisors (for direct line assignments).

GLOSSARY OF TERMS (cont'd)

CHIEF - The ICS title for individuals responsible for command of functional sections: Operations, Planning, Logistics and Finance.

CLEAR TEXT - The use of plain English in radio communications transmissions. No Ten Codes or agency specific codes are used when using Clear Text.

COMMAND - The act of directing, ordering and/or controlling resources by virtue of explicit legal, agency or delegated authority. May also refer to the Incident Commander/Unified Command.

COMMAND POST - See Incident Command Post.

COMMAND STAFF - The Command Staff consists of the Information Officer, Safety Officer and Liaison Officer, who report directly to the Incident Commander. They may have an assistant or assistants, as needed.

COMMUNICATION UNIT - A vehicle (trailer or mobile van) used to provide the major part of an incident Communication Center.

COOPERATING AGENCY - An agency supplying assistance other than direct tactical or support functions or resources to the incident control effort (e.g., Red Cross, telephone company, etc.).

COST UNIT - Functional unit within the Finance Section responsible for tracking costs, analyzing cost data, making cost estimates and recommending cost-saving measures.

DEPUTY - A fully qualified individual who, in the absence of a superior, could be delegated the authority to manage a functional operation or perform a specific task. In some cases, a Deputy could act as relief for a superior and therefore must be fully qualified in the position. Deputies can be assigned to the Incident Commander, General Staff and Branch Directors.

DEMOBILIZATION UNIT - Functional unit within the Planning Section responsible for assuring orderly, safe and efficient demobilization of incident resources.

DIRECTOR - The ICS title for individuals responsible for supervision of a Branch.

DISPATCH - The implementation of a command decision to move resources from one place to another.

DISPATCH CENTER - A facility from which resources are directly assigned to an incident.

DIVISION - That organization level having responsibility for operation within a defined geographic area or with functional responsibility. The Division level is organizationally between the Task Force/Team and the Branch. (See also "Group")

DOCUMENTATION UNIT - Functional unit within the Planning Section responsible for collecting, recording and safeguarding all documents relevant to the incident.

EMERGENCY MEDICAL TECHNICIAN (EMT) - A health-care specialist with particular skills and knowledge in pre-hospital emergency medicine.

GLOSSARY OF TERMS (cont'd)

EMERGENCY OPERATIONS CENTER (EOC) - A pre-designated facility established by an agency or jurisdiction to coordinate the overall agency or jurisdictional response and support to an emergency.

FACILITIES UNIT - Functional unit within the Support Branch of the Logistics Section that provides fixed facilities for the incident. These facilities may include the Incident Base, feeding areas, sleeping areas, sanitary facilities, etc.

FIELD OPERATIONS GUIDE (FOG) - A pocket-size manual of instructions on the application of the Incident Command System.

FINANCE SECTION - The Section responsible for all incident costs and financial considerations. Includes the Time Unit, Procurement Unit, Compensation/Claims Unit and Cost Unit.

FOOD UNIT - Functional unit within the Service Branch of the Logistics Section responsible for providing meals for incident personnel.

FUNCTION - In ICS, function refers to the five major activities in the ICS, i.e., Command, Operations, Planning, Logistics and Finance. The term function is also used when describing the activity involved, e.g., "the planning function."

GENERAL STAFF - The group of incident management personnel comprised of: Incident Commander, Operations Section Chief, Planning Section Chief, Logistics Section Chief, and Finance Section Chief.

GEOGRAPHIC INFORMATION SYSTEM (GIS) - An electronic information system which provides a geo-referenced data base to support management decision making.

GROUND SUPPORT UNIT - Functional unit within the Support Branch of the Logistics Section responsible for fueling, maintaining and repairing vehicles, and the ground transportation of personnel and supplies.

GROUP - Groups are established to divide the incident into functional areas of operation. Groups are composed of resources assembled to perform a special function not necessarily within a single geographic division. (See Division.) Groups are located between Branches (when activated) and Resources in the Operations Section.

HEALTH AND SAFETY PLAN (HASP) - Site specific document required by State and Federal OSHA regulations and specified in the Area Contingency Plan. The HASP shall at minimum address, include or contain the following elements: 1) health and safety hazard analysis for each site task or operation, 2) comprehensive operations work plan, 3) personnel training requirements, 4) PPE selection criteria, 5) site specific occupational medical monitoring requirements, 6) air monitoring plan, 7) site control measures, 8) confined space entry procedures (if needed), 9) pre-entry briefings (tailgate meetings, initial and as needed), 10) pre-operations commencement, 11) health and safety conference for all incident participants and 12) quality assurance of HASP effectiveness.

GLOSSARY OF TERMS (cont'd)

HELIBASE - A location within the general incident area for parking, fueling, maintenance and loading of helicopters.

HELISPOT - A location where a helicopter can take off and land. Some helispots may be used for temporary loading.

INCIDENT ACTION PLAN (IAP) - The Incident Action Plan, which is initially prepared at the first meeting, contains general control objectives reflecting the overall incident strategy and specific action plans for the next operational period. When complete, the Incident Action Plans will have a number of attachments.

INCIDENT AREA - Legal geographical area of the incident to include affected area and traffic route to corresponding storage and disposal sites.

INCIDENT BASE - See BASE.

INCIDENT COMMANDER (IC) - The individual responsible for the management of all incident operations.

INCIDENT COMMAND POST (ICP) - That location at which the primary command functions are executed and are usually co-located with the incident base.

INCIDENT COMMAND SYSTEM (ICS) - A standardized on-scene emergency management concept specifically designed to allow its user(s) to adopt an integrated organizational structure equal to the complexity and demands of single or multiple incidents, without being hindered by jurisdictional boundaries.

INCIDENT COMMUNICATION CENTER - The location of the Communications Unit and the Message Center.

INCIDENT OBJECTIVES - Statements of guidance and direction necessary for the selection of appropriate strategies and the tactical direction of resources. Incident objectives are based on realistic expectations of what can be accomplished when all allocated resources have been effectively deployed. Incident objectives must be achievable and measurable, yet flexible enough to allow for strategic and tactical alternatives.

INCIDENT SITUATION DISPLAY - The Situation Unit is responsible for maintaining a display of status boards which communicate critical incident information vital to establishing an effective command and control environment.

INFORMATION OFFICER (IO) - A member of the Command Staff responsible for interfacing with the public and media or with other agencies requiring information on the incident. There is only one Information Officer per incident. The Information Officer may have assistants.

INITIAL ACTION - The actions taken by resources which are the first to arrive at an incident.

INITIAL RESPONSE - Resources initially committed to an incident.

GLOSSARY OF TERMS (cont'd)

JOINT INFORMATION CENTER (JIC) - A facility established within or near the Incident Command Post where the Information Officer and staff can coordinate and provide information on the incident to the public, media and other agencies. The JIC is normally staffed with representation from the FOSC, State IC and RP.

JURISDICTION - The range or sphere of authority. Public agencies have jurisdiction at an incident related to their legal responsibilities and authority for incident mitigation. Jurisdictional authority at an incident can be political/geographical (e.g., city, county, state or federal boundary lines), or functional (e.g., police department, health department, etc.). (See Multi-Jurisdiction).

JURISDICTIONAL AGENCY - The agency having jurisdiction and responsibility for a specific geographical area or a mandated function.

LANDING ZONE - See Helispot.

LEADER - The ICS title for an individual responsible for a Task Force/Strike Team or functional Unit.

LIAISON OFFICER (LO) - A member of the Command Staff responsible for coordinating with representatives from cooperating and assisting agencies.

LOGISTICS SECTION - The Section responsible for providing facilities, services and materials for the incident.

MANAGERS - Individuals within ICS organizational units that are assigned specific managerial responsibilities (e.g., Staging Area Manager or Camp Manager).

MEDICAL UNIT - Functional unit within the Service Branch of the Logistics Section responsible for the development of the Medical Emergency Plan, and for providing emergency medical treatment for personnel.

MESSAGE CENTER - The message center is part of the Communications Center and co-located with it. The Center receives, records and routes information about resources reporting to the incident, resource status and administration and tactical traffic.

MULTI-AGENCY COORDINATION GROUP (MAC) - Cohesive group of all affected agencies established to aid in the overall response, facilitate briefings and share issues during a response.

MULTI-AGENCY COORDINATION SYSTEM (MACS) - The combination of facilities, equipment, personnel, procedures and communications integrated into a common system with responsibility for coordination of assisting agency resources and support to agency emergency operations.

MULTI-AGENCY COORDINATION GROUP COORDINATOR - Serves as facilitator to organize and accomplish goals of the MAC Group.

MULTI-AGENCY INCIDENT - An incident where one or more agencies assist a jurisdictional agency or agencies. May be single or Unified Command.

GLOSSARY OF TERMS (cont'd)

MULTI-JURISDICTION INCIDENT - An incident requiring action from multiple agencies that have a statutory responsibility for incident mitigation. In ICS, these incidents will be managed under Unified Command.

NOAA WEATHER STATION - A mobile weather data collection and forecasting facility (including personnel) provided by the National Oceanic and Atmospheric Administration which can be utilized within the incident area.

NATURAL RESOURCE DAMAGE ASSESSMENT (NRDA) - The process of identifying and quantifying the resource impacts and evaluating the value of impacted resources for the purpose of restoration.

OFFICER - The ICS title for the personnel responsible for the Command Staff positions of Safety, Liaison and Information.

ON-SCENE COORDINATOR (OSC) - The predesignated Federal On-Scene Coordinator operating under the authority of the National Contingency Plan (NCP).

OPERATIONAL PERIOD - The period of time scheduled for execution of a given set of operation actions as specified in the Incident Action Plan. Operational Periods can be various lengths, usually not over 24 hours.

OPERATIONS SECTION - Responsible for all operations directly applicable to the primary mission. Directs the preparation of unit operational plans, requests or releases resources, makes expedient changes to the Incident Action Plan as necessary and reports such to the Incident Commander. Includes the Recovery and Protection Branch, Emergency Response Branch, Air Operations Branch and Wildlife Branch.

OUT-OF-SERVICE RESOURCES - Resources assigned to an incident but unable to respond for mechanical, rest or personnel reasons.

PLANNING MEETING - A meeting, held as needed throughout the duration of an incident, to select specific strategies and tactics for incident control operations and for service and support planning.

PLANNING SECTION - Responsible for the collection, evaluation and dissemination of tactical information related to the incident, and for the preparation and documentation of Action Plans. The section also maintains information on the current and forecasted situation, and on the status of resources assigned to the incident. Includes the Situation, Resource, Documentation and Demobilization Units, as well as Technical Specialists.

POLREP - Pollution report.

PROCUREMENT UNIT - Functional unit within the Finance Section responsible for financial matters involving vendor contracts.

QUALIFIED INDIVIDUAL (Q.I.) - The person authorized by the responsible party to act on their behalf, authorize expenditures and obligate organization's resources.

RADIO CACHE - A cache may consist of a number of portable radios, a base station and in some cases a repeater stored in a predetermined location for dispatch to incidents.

GLOSSARY OF TERMS (cont'd)

RECORDERS - Individuals within ICS organizational units who are responsible for recording information. Recorders may be found in Planning, Logistics and Finance Units.

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.

REPORTING LOCATION - Any one of six facilities/locations where incident assigned resources may check-in. The locations are: Incident Command Post-Resources Unit, Base, Camp, Staging Area, Helibase or Division Supervisor for direct line assignments. (Check-in at one location only)

RESOURCES - All personnel and major items of equipment available or potentially available, for assignment to incident tasks on which status is maintained.

RESOURCES UNIT - Functional unit within the Planning Section responsible for recording the status of resources committed to the incident. The Unit also evaluates resources currently committed to the incident, the impact that additional responding resources will have on the incident, and anticipated resource needs.

R.P. - Responsible Party

SAFETY OFFICER (SO) - A member of the Command Staff responsible for monitoring and assessing safety hazards or unsafe situations, and for developing measures for ensuring personnel safety. The Safety Officer may have assistants.

SECTION - That organization level having functional responsibility for primary segments of incident operation such as: Operations, Planning, Logistics, Finance. The Section level is organizationally between Branch and Incident Commander.

SERVICE BRANCH - A Branch within the Logistics Section responsible for service activities at the incident. Includes the Communications, Medical and Food Units.

SINGLE RESOURCE - An individual, a piece of equipment and its personnel complement, or a crew or team of individuals with an identified work supervisor that can be used on an incident.

SITE SAFETY PLAN - Legal document required by OSHA before entry into site, prepared by Safety Officer.

SITUATION UNIT - Functional unit within the Planning Section responsible for the collection, organization and analysis of incident status information, and for analysis of the situation as it progresses. Reports to the Planning Section Chief.

SPAN OF CONTROL - The supervisory ratio of from three-to-seven individuals, with five-to-one being established as optimum.

STAGING AREA - That location where incident personnel and equipment are assigned awaiting tactical assignment.

STATE I.C. - State Incident Commander.

GLOSSARY OF TERMS (cont'd)

STRATEGY - The general plan or direction selected to accomplish incident objectives.

SUPERVISOR - The ICS title for individuals responsible for command of a Division or Group.

SUPPLY UNIT - Functional unit within the Support Branch of the Logistics Section responsible for ordering equipment and supplies required for incident operations.

SUPPORT BRANCH - A Branch within the Logistics Section responsible for providing personnel, equipment and supplies to support incident operations. Includes the Supply, Facilities and Transportation Units.

SUPPORTING MATERIALS - Refers to the several attachments that may be included with an Incident Action Plan (e.g., communication plan, map, safety plan, traffic plan and medical plan).

TACTICAL DIRECTION - Direction given by the Operations Section Chief which includes the tactics appropriate for the selected strategy, the selection and assignment of resources, tactics implementation and performance monitoring for each operational period.

TASK FORCE - A group of resources with common communications and a leader assembled for a specific mission.

TECHNICAL SPECIALISTS - Personnel with special skills that can be used anywhere within the ICS organization.

TEAM - Specified combinations of the same kind and type of resources, with common communications and a leader.

TEMPORARY FLIGHT RESTRICTIONS (TFR)- Temporary airspace restrictions for non-emergency aircraft in the incident area. TFR's are established by the FAA to ensure aircraft safety and are normally limited to a five-nautical-mile radius and 2000 feet in altitude.

TIME UNIT - Functional unit within the Finance Section responsible for recording time for incident personnel and hired equipment.

UNIFIED COMMAND (UC) - In ICS, Unified Command is a unified team effort which allows all agencies with responsibility for the incident, either geographical or functional, to manage an incident by establishing a common set of incident objectives and strategies. This is accomplished without losing or abdicating agency authority, responsibility or accountability.

UNIT - That organizational element having functional responsibility for a specific incident planning, logistic or finance activity.

VESSEL SUPPORT UNIT - Functional unit within the Support Branch of the Logistics Section responsible for implementing the Vessel Routing Plan and coordinating transportation on the water and between shore resources.

VOLUNTEER - Any individual accepted to perform services by the Lead Agency which has the authority to accept volunteer services. A volunteer is subject to the provisions of the authorizing statute.

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APPENDIX C

RESPONSE RESOURCES

COMPANY OWNED SPILL / EMERGENCY RESPONSE EQUIPMENT

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U.S. - OIL SPILL RESPONSE CONTRACTORS

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Response Equipment Tests and Deployment

PMPL primarily relies on its contracted oil spill response and removal resources to satisfy response requirements. PMPL maintains boom and radios for response support in South Portland and the Montreal East terminal and also maintains response trailers and equipment at the mainline stations.

In the U.S., Qualified OSRO's maintain equipment checklists per regulatory requirements. In both the U.S. and Canada, PMPL inspects its response equipment annually. This includes starting and running engine driven equipment such as skimmers. Boom is inspected for condition. This is managed by work orders generated by the maintenance management software system (See the CMMS listing in Appendix C). The detailed inspections and tests are recorded on preventive work orders (See sample in Appendix C). The radios referenced in the equipment lists are used daily as part of the operations and their functionality is verified each day.

In the U.S., OSRO's conduct exercises and deploy equipment per regulatory requirements as evidenced in an annual written certification.. In both the U.S. and Canada, PMPL conducts scheduled, planned and documented response exercises for company owned response equipment and personnel at a minimum annual frequency (See PREP exercise program record chart in Appendix K for U.S. exercises). During the exercises, a representative sample of the equipment is tested, deployed and operated as part of the exercise. This is documented in the exercise reports generated from each exercise.

COMPANY OWNED RESPONSE EQUIPMENT			
SOUTH PORTLAND MARINE TERMINAL			
QUANTITY	TYPE	MAKE/MODEL/EQUIPT. DESIGN	LOCATION
3,358 ft.	Active Spill Boom	24-inch	Pier #2
2,200 ft.	Spill Globe Boom	24-inch	Pier #2
4	VHF Radios	Motorola Handheld –Op-Freq. 153.0900	Pier #2 Guardhouse

SOUTH PORTLAND PUMP STATION			
QUANTITY	TYPE	MAKE/MODEL/EQUIPT. DESIGN	LOCATION
1	Vacuum Truck (1973 GMC DOT Specification MC307)	60-bbl capacity (Thompson tank), heavy duty, diesel engine, 30 gpm recovery rate.	Tank Farm at Hill Street/Tank Farm use only - Warehouse
9	VHF Radios	Motorola Handheld –Op.Freq. 153.0900	Control Center
1	Boat	21' RW Tuff Boat w/135hp Honda and 9.9 hp Honda Engine	Fire Barn
1	20 gal HazMat Spill Kit	Oil-Dri (6)- HazMat socks; (5) HazMat pillows; (20) universal bonded pads; (1) light stick; (3) disposable bags; ERG Book; 20 gallon over pack drum	SP Lab

COMPANY OWNED RESPONSE EQUIPMENT			
RAYMOND PUMP STATION			
QUANTITY	TYPE	MAKE/MODEL/EQUIPT. DESIGN	LOCATION
1	Boat	16' Acme boat w/ 40 HP Yamaha and shoreline trailer	Garage
1	Boom	280' Uniroyal sealboom 17" wide	Garage

NORTH WATERFORD PUMP STATION (Shop)			
QUANTITY	TYPE	MAKE/MODEL/EQUIPMENT DESIGN	LOCATION
1	Boom	220' Uniroyal sealboom 17" wide	Shop
2	Boom Sea Serpent	Absorbent boom sea serpent, 50' lengths each	Shop

SHELBURNE PUMP STATION (Equipment Trailer)			
QUANTITY	TYPE	MAKE/MODEL/EQUIPMENT DESIGN	LOCATION
1	Boom	1,000' of 14 inch Globe Boom	Garage
1	Storage Tank	3,000 Gallon Portable Storage Tank	Garage
5	Tank Liners	Tank liners for portable tank	Garage
1	Trailer	Wells Cargo Emergency Response Trailer	Yard

LANCASTER PUMP STATION (Equipment Trailer)			
QUANTITY	TYPE	MAKE/MODEL/EQUIPMENT DESIGN	LOCATION
1	Boom	160' Slick Bar Boom (yellow type)	Warehouse
1	Boom	90' Slick Bar Boom	Warehouse
1	Skimmer	Vikoma disk skimmer with diesel driver and pump (543 bpd de-rated recovery rate)	Warehouse
1	Boat	Lund Boat 12' Flat Bottom w/ Johnson 9.9 HP outboard motor	Warehouse
LANCASTER PUMP STATION			
1	Boat	16' Acme Boat w/ 40 HP Yamaha	Warehouse
1	Boom	290' Uniroyal Boom	Warehouse

COMPANY OWNED RESPONSE EQUIPMENT			
SUTTON PUMP STATION			
QUANTITY	TYPE	MAKE/MODEL/EQUIPMENT DESIGN	LOCATION
1	Trailer	Pollution Trailer	Garage
1	Boat	Lund boat 12' Flat Bottom w/ Johnson 9.9 outboard motor	Garage
1	Skimmer & Pump	Kebab Model #T-12 FIT Vikoma Skimmer & Pump	Garage

HIGHWATER PUMP STATION (In Boat)			
QUANTITY	TYPE	MAKE/MODEL/EQUIPMENT DESIGN	LOCATION
1	Boat	Fiberglass boat w/outboard motor	Motor Room
1	Boom	100' Slickbar Boom	Motor Room
1	Boom	100' Fast water boom	Motor Room

ST. CESAIRE PUMP STATION			
QUANTITY	TYPE	MAKE/MODEL/EQUIPMENT DESIGN	LOCATION
1	Boat	Boat w/outboard motor	Garage
ST. CESAIRE PUMP STATION (Stored in the Fire Dept. Garage)			
QUANTITY	TYPE	MAKE/MODEL/EQUIPMENT DESIGN	LOCATION
1	Boat	Boat w/outboard motor	Garage
1	Boom	450' Bennett Boom	Trailer

MONTREAL TERMINAL (In Garage)			
QUANTITY	TYPE	MAKE/MODEL/EQUIPMENT DESIGN	LOCATION
1	Boat	Boat w/ outboard motor	Garage
1	Trailer	Small Equipment Trailer	Garage
MONTREAL PUMP STATION (In Trailer)			
1	Boom	500' Bennett Boom	Trailer
1	Skimmer	Disc Air Operated	Trailer
1	Storage Tank	3000 Gallon portable tank	Trailer
1	Wash down pump	Gas operated wash down pump	Trailer

MONTREAL PUMP STATION (In Boat)			
1	Boom	400' Bennett Boom	Trailer

COMPANY OWNED PIPELINE REPAIR EQUIPMENT

Dia.	Nomenclature			Montreal		Mainline		South Portland	
				Qty.	Loc.	Qty.	Loc.	Qty.	Loc.
	<u>Plidco Smith Clamps</u>								
10 in.	Pipe Size Plidco Smith/Clamps			1	Garage				
12 ¾ in.	Pipe Size Plidco Smith/Clamps)			1	Garage			1	Whse
16 in.	Pipe Size Plidco Smith/Clamps			1	Garage				
18 in.	Pipe Size Plidco Smith/Clamps (18")			1	Garage			1	Whse
22 in.	Pipe Size Plidco Smith/Clamps (22")			1	Garage	1	LS Whse		
24 in.	Pipe Size Plidco Smith/Clamps (24")			1	Garage	1	LS Whse	1	Whse
	<u>Plidco Split Sleeves</u>								
	Pipe Size	Overall Length	Inside Length Between Packing						
10 in.	10"	10"	5-1/2"	1	Garage				
12 in.	12"	10-1/2"	5-1/2"	1	Garage				
16 in.	16"	14"	8"	1	Garage				
18 in.	18"	14"	8"	1	Garage	1	LS Whse	2	Whse
18 in.	18"	13-3/4"	8"	1	Garage				
20 in.	20"	24"	18"	1	Garage				
22 in.	22"	14"	8"	1	Garage				
22 in.	22"	30 "	24"			1	LS Whse		
24 in.	24"	14"	8"	1	Garage				
24 in.	24"	24"	17-1/2"	1	Garage	1	LS Whse		
24 in	24"	14"	8"					2	Whse
24 in	24"	32"	24"					2	Whse
30 in	30"	26"	18"	1	Garage			1	Whse
34 in.	34"	24"	18"	1	Garage				
36 in	36"	26"	18"					1	Whse
42 in	42"	26"	18"					1	Whse

• PR = Pump Room

Figure C- 1

Emergency Response Equipment Inspection List & Work Orders

South Portland	SP - TANK FARM, 500' OF 18" BOOM	SP-TFBO001
South Portland	SP - TANK FARM, 500' OF 6" BOOM	SP-TFBO002
South Portland	SP - PIER 2 3,358' OF IN SERVICE 24" ABB BOOM	SP-P2BO001
South Portland	SP - PIER 2 2,200' OF 24" GLOBE BOOM (CONNEX BOX)	SP-P2BO002
South Portland	TRUCK GMC 9500 VACUUM TANK	SP-VHVVH001
South Portland	SP-135 HP HONDA OUTBOARD ENGINE-4 CYLINDER	SP-ERENG001
South Portland	SP- 9.9 h.p. HONDA OUTBOARD ENGINE-2 CYLINDER	SP-ERENG002
South Portland	SP-21' RW TUFF BOAT TRAILER-RESPONSE EQUIPMENT	SP-ERTR001
South Portland	SP-21' RW TUFF BOAT-RESPONSE EQUIPMENT	SP-VHVVH008
Raymond	RY - 280' Uniroyal sealboom 17" wide	RY-ERBM001
Raymond	RY - EMERGENCY RESPONSE BOAT ACME	RY-VHVVH001
North Waterford	NW - 220' Uniroyal sealboom 17" wide	NW-ERBM001
North Waterford	NW - (2) 50' lengths "SEA SERPENT" absorbent boom	NW-ERBM002
North Waterford	NW - EMERGENCY RESPONSE BOAT STEURY	NW-VHVVH002
Shelburne	SH - 1,000' of "GLOBE" boom	SH-ERBM003
Shelburne	SH - 3,000 gallon portable storage tank	SH-ERST001
Shelburne	SH - (5) Tank liners for 3,000 gallon portable storage tank	SH-ERST002
Shelburne	SH - EMERGENCY RESPONSE TRAILER (WELLS CARGO)	SH-ERTR001
Lancaster	LS - 290' Uniroyal Boom	LS-ERBM001
Lancaster	LS - 160' Slick Bar Boom (yellow)	LS-ERBM004
Lancaster	LS - 90' Slick Bar Boom	LS-ERBM004A
Lancaster	LS- VIKOMA DISK SKIMMER WITH DIESEL DRIVER AND PUMP	LS-ERSK001
Lancaster	LS - EMERGENCY RESPONSE BOAT ACME	LS-VHVVH005
Lancaster	LS - EMERGENCY RESPONSE BOAT CRESTLINER	LS-VHVVH006
Sutton	SU-90' Slick Bar Boom (previous # LS-ERBM004A)	SU-ERBM004
Sutton	SU - VIKOMA SKIMMER , KEBAB MODEL # T-12 FIT AND PUMP	SU-ERSK001
Sutton	SU - EMERGENCY RESPONSE BOAT	SU-VHVVH002
Sutton	SU - EMERGENCY RESPONSE TRAILER " HIGHLAND SHORELINE"	SU-VHVVH001
Highwater	HW- EMERGENCY RESPONSE BOAT	HWER001
Highwater	HW - EMERGENCY RESPONSE BOAT TRAILER	HWER002
Highwater	HW- GAS OPERATED FLUSHING , WASH DOWN PUMP	HWER003
Highwater	HW - GORMAN RUPP 3" DIAPHRAM PUMP	HWER004
St. Cesaire	SC- EMERGENCY RESPONSE BOAT	SCER001
St. Cesaire	SC- EMERGENCY RESPONSE (SINGLE AXLE) EQUIPMENT TRAILER	SCER004
St. Cesaire	SC- 200' SLICKER OIL RECOVERY BOOM	SCER005
St. Cesaire	SC- GAS OPERATED FLUSHING , WASH DOWN PUMP	SCER006
St. Cesaire	SC- SPATE PUMP - DIESEL OPERATED	SCER007
St. Cesaire	SC - GORMAN RUPP 3" DIAPHRAM PUMP	SCER008
St. Cesaire	SC - CHAIN SAW (GAS POWERED)	SCER009
St. Cesaire	SC - GENERATOR 120/240 V - 16.5 AMPS	SCER010
St. Cesaire	SC- EMERGENCY RESPONSE BOAT TRAILOR	SCER002
Montreal	MT - ROW BOAT 14'	MTER001
Montreal	MT - 14' BOAT TRAILER	MTER002
Montreal	MT- EMERGENCY RESPONSE (SINGLE AXLE) EQUIPMENT TRAILER	MTER003
Montreal	MT- 500' BENNET OIL RECOVERY BOOM	MTER004
Montreal	MT -2 / GORMAN RUPP 3" DIAPHRAM PUMP(S) 2	MTER005

Figure C- 1 (Cont'd)
Sample Preventive Work Order

Preventive work order				061737	
------------------------------	--	--	--	---------------	--

Shop	GM	GENERAL MAINTENANCE	Issued on	4/27/2006	
Trade	GMHELP	GENERAL MAINTENANCE HELP	Required date	6/2/2006	(2006 /22)
Assigned to			Priority		
Asked by			Scheduled date	(2006 /22)	
Authorized by	LOUANN				
Remark					

Others Shop / Trade	Assigned to
GM / GMHELP (GENERAL MAINTENANCE / GENERAL MAINTENANCE HELP)	
PS / HWPSCH (PUMP STATIONS AREA / high water pump station c)	
PS / PSCHF (PUMP STATIONS AREA / CHIEF PUMP STATION AREA)	

Equipment	HWR001	HW- EMERGENCY RESPONSE BAOT			
Site #	HW	HIGHWATER	Model		
Sub-Site #			Manufacturer	PIGEON MARINE	
Responsible			Serial number		
Owner			Group	ER	EMERGENCY
Chainage/Loc.			Sub-goup	EQUIP	EQUIPMENT
Order	0.0000		Last maintenance	2,006 / 21	
Account #					
Specification					

Task	MA2118	BOAT (SEMIANNUAL INSPECTION)			
----- SPRING INSPECTION -----					
PREPARATION					
[] REQUIRED TOOLS: -GREASE GUN: NLGI GRADE #2					
[] REQUIRED PARTS: -MOTOR OIL (RECOMMENDED BY MANUFACTURER)					
-AIR FILTER					
-SPARK PLUG					
[] REQUIRED MATERIAL: -OIL PAN					
[] REVIEW AND UPDATE EQUIPMENT DATA.					
INSPECTION					
BOAT					
[] CHECK INTEGRITY OF ALL COMPONENTS.					
[] GREASE FITTING AS NEEDED.					
[] CHECK ELECTRICAL PLUG WIRING AND LIGHTS.					
[] CHECK FRAME ASSEMBLY (PAINT, CORROSION, WELDED JOINTS, ETC.).					
MOTOR					
[] START MOTOR FOR A VERY SHORT TIME, CHECK FOR UNUSUAL NOISES OR VIBRATIONS.					
[] CHECK AIR FILTER, CLEAN OR CHANGE AS NEEDED.					
[] CHECK SPARK PLUG, CLEAN OR CHANGE AS NEEDED.					
[] INSPECT FUEL LINES AND TANK, DRAIN BOTTOM OF TANK.					
[] CHECK FRAME CONDITION AND ASSEMBLY OF PARTS (PAINT, CORROSION), CLEAN.					
OIL CHANGE (IF REQUIRED)					
[] DRAIN OIL INTO CLEAN PAN, CHECK APPEARANCE, ACCUMULATION OF METALLIC PARTICLES OR WATER.					
Note.. If there is excessive concentration of metallic particles or deposits, have a work order issued for an internal inspection or oil analysis.					
[] ADJUST OIL LEVEL: _____ GALS					
RETURN TO SERVICE					
[] MAKE SURE UNIT IS LEFT IN OPERATING CONDITION.					
----- FALL INSPECTION -----					

Figure C- 1 (Cont'd)
Sample Preventive Work Order

Preventive work order			061737	
INSPECTION/WINTERIZATION <input type="checkbox"/> CHECK INTEGRITY OF ALL COMPONENTS. <input type="checkbox"/> PREPARE BOAT FOR WINTER SEASON. ----- ACTIONS TO BE TAKEN <input type="checkbox"/> COMPLETE WORK ORDER, IDENTIFY ABNORMALITIES, RETURN TO SUPERVISOR.				
Details :				
Employee	Date	Time		Completed
		Reg	OT	
Cause		Action		Downtime

FIRE PROTECTION EQUIPMENT

PIER 1 and PIER 2

PIER NO. 2

- 10-in dry fire line with 2-1/2-in hose outlets adapted for introduction of liquid foam by two (2) Fire Departments pumpers simultaneously.
- Two (2) foam monitors on unloading platform with 1,100-gallon foam supply pressured by 7-stage, 1,000 GPM, 190 psi deep well salt water pump.
- Five (5) 30-lb. Dry powder extinguishers with B/C rating.
- Separate South Portland City Fire alarm pull box #1541.
- Five (5) lengths 2-1/2-in fire hose on unloading platform.

PIER NO. 1

- 6-in fresh water line with 2-1/2-in hose outlets adapted to allow introduction of liquid foam at pier head by Fire Department pumper.
- Six (6) 30-lb. Dry powder extinguishers with B/C rating.
- Separate South Portland City Fire alarm pullbox #194.

OUTSIDE EQUIPMENT AVAILABILITY

- The following are Mobile Units from the South Portland Fire Department:
1st Alarm – 3 Engines (2 Foam Units) and 1 Ladder.
2nd Alarm – 3 Engines (1 Foam Unit) and 1 Ladder.
3rd Alarm – 2 Engines.
- City of Portland Fire Boat.
- U.S. Coast Guard Craft.

TANK FARM

TYPE	QUANTITY	DESCRIPTION	LOCATION	INSPECTION FREQUENCY
Foam Trailer	1	1000 Gal. 3% AFFF	Fire Barn	Equipment inspection and foam tests annually
Foam Trailer	1	875 Gal. AFFF		
Foam Totes	3	330 Gal. AFFF		
SCBA	2	Scott Air Packs	Operations Building	Monthly
Fire Retardant Coveralls	2 Pair		Operations Building	Monthly
Fire Extinguishers	50	H ₂ O / Dry	Throughout facility	Monthly
Fire Hydrants	33	Static Pressure 70-90 psi	See PPLC drawing D-2998	Annual

OUTSIDE EQUIPMENT AVAILABILITY

- The following are Mobile Units from the South Portland Fire Department:
1st Alarm – 3 Engines (2 Foam Units) and 1 Ladder.
2nd Alarm – 3 Engines (1 Foam Unit) and 1 Ladder.
3rd Alarm – 2 Engines.
- City of Portland Fire Boat.
- U.S. Coast Guard Craft.

EQUIPMENT FOR FIRE FIGHTING

SOUTH PORTLAND PUMP STATION

<u>SERIAL NO.</u>	<u>CLASS</u>	<u>MANUFACTURER</u>	<u>LOCATION</u>
G628639	BC	ANSUL	18" Booster Bldg
J-15564	BC	AMEREX	18" Booster Bldg
J-15565	BC	AMEREX	18" Pumproom
J-15471	BC	AMEREX	18" Pumproom
J-15483	BC	AMEREX	24" Pumproom
J-15472	BC	AMEREX	24" Pumproom
ET956560	BC	GENERAL	Boiler House
ET956552	BC	GENERAL	Boiler House
ET956545	BC	GENERAL	Boiler House
J-15568	BC	AMEREX	Control Bldg
J-15496	BC	AMEREX	Control Bldg
J-15567	BC	AMEREX	Garage
Am442639	BC	ANSUL	Garage
AmJ-643858	ABC	AMEREX	Office North
W463047	BC	AMEREX	Operations Office
Am612110	ABC	SENTRY	Office South
Am442649	BC	ANSUL	Hallway
Am442657	BC	ANSUL	Vacuum Truck Room
J-15481	BC	AMEREX	Vacuum Truck Room
NW234020	BC	GENERAL	Vacuum Truck Room
G628899	BC	ANSUL	Weld Shop Bay Door
R858337	BC	ANSUL	Weld Shop
R858332	BC	ANSUL	Shop Area
J-15566	BC	AMEREX	Electrical Shop
S804248	BC	ANSUL	Warehouse
R858324	BC	ANSUL	Unit 7 Control

EQUIPMENT FOR FIRE FIGHTING

SOUTH PORTLAND PUMP STATION (Cont'd)

<u>SERIAL NO.</u>	<u>CLASS</u>	<u>MANUFACTURER</u>	<u>LOCATION</u>
R858350	BC	ANSUL	Corrosion Room
W672245	BC	GENERAL	Laboratory
AC-41381	BC	AMEREX	Laboratory
B-565415	BC	AMEREX	Yard Maintenance
W762239	BC	GENERAL	Gauger Office
W762246	BC	GENERAL	Controllers Office
W762243	BC	GENERAL	Computer Room
W762235	BC	GENERAL	Computer Room
ST-183018	ABC	AMEREX	Spare #3 High Perf.
SY-900491	ABC	AMEREX	Spare 2.5#
Y595738	BC	ANSUL	Spare 30# Ansul
s-207684	A	BADGER	Spare 2.5 gal h2o
ZS-878526	ABC	BUCKEYE	THawz All
W762252	BC	GENERAL	T-1 Control Bldg
K725382	BC	ANSUL	T-1 Control Bldg
W762238	BC	GENERAL	T-1 Control Bldg
W762249	BC	GENERAL	T-2 Control Bldg
K725564	BC	GENERAL	T-2 Control Bldg
W762240	BC	GENERAL	T-2 Control Bldg
XT-059815	BC	KIDDE	Boat
AP-513671	ABC	KIDDE	Gen. Trailer

EQUIPMENT FOR FIRE FIGHTING			
RAYMOND PUMP STATION			
SERIAL NO.	CLASS	MANUFACTURER	LOCATION
X831646	BC	Ansul	#5 & #6 Units
X 831587	BC	Ansul	#5 & #6 Units
X831599	BC	Ansul	#5 & #6 Units
A82583	BC	Ansul	Work Room
M23617	BC	Kiddie	Control Room
10545	BC	Ansul	Garage
A99653	BC	Ansul	Pumproom
600566	BC	Ansul	Boat
A-185916	BC	Ansul	Office

EQUIPMENT FOR FIRE FIGHTING			
NORTH WATERFORD PUMP STATION			
<u>SERIAL NO.</u>	<u>CLASS</u>	<u>MANUFACTURER</u>	<u>LOCATION</u>
HP973040	BC	Ansul	Office
HP973039	BC	Ansul	Workshop
HP973037	BC	Ansul	Workshop
M474244	BC	Ansul	Workshop
HP973043	BC	Kiddie	18" Pumproom
HP973044	BC	Ansul	18" Pumproom
AH636047	BC	Ansul	18" Pumproom
HP973042	BC	Ansul	#5 & #6 Units
HP973047	BC	Ansul	#5 & #6 Units
HP973049	BC	Ansul	24" Strainer
M474312	BC	Ansul	Control Room
277718	BC	C-O-Two	Control Room
P823353	BC	Norris	Control Room
CA731966	BC	Ansul	Steury Boat
CA731968	BC	Ansul	Company Vehicle

EQUIPMENT FOR FIRE FIGHTING

SHELBURNE PUMP STATION

<u>SERIAL NO.</u>	<u>CLASS</u>	<u>MANUFACTURER</u>	<u>LOCATION</u>
HP973045	BC	Ansul	Office
HP973048	BC	Ansul	SHOP
HP973038	BC	Ansul	#5 & #6 Units
HP973051	BC	Ansul	#5 & #6 Units
HP973041	BC	Kiddie	Pumproom
HP973046	BC	Ansul	Pumproom
M474299		Ansul	Pumproom
731940	BC	Ansul	Control Room
105455	BC	Ansul	Boat
F144013	BC	Ansul	Office
F144014	BC	Ansul	Pollution Trailer Office

EQUIPMENT FOR FIRE FIGHTING

LANCASTER PUMP STATION

<u>SERIAL NO.</u>	<u>CLASS</u>	<u>MANUFACTURER</u>	<u>LOCATION</u>
HP973022	BC	Ansul	Office Building
HP973023	BC	Ansul	Work Room
HP973024	BC	Ansul	Work Room
HP973025	BC	Ansul	18" Pumproom
HP973026	BC	Kiddie	18" Pumproom
HP973027	BC	Ansul	24" Units
HP973028	BC	Ansul	24" Units
HP973029	BC	Ansul	24" Units
F277635	BC	C-O-Two	Control Room
M474316	BC	C-O-Two	Control Room
CA731931	BC	Ansul	Boat
A2681	3A2015	Nitrogen BT	Garage
AH636068	BC	Ansul	Work Room
CA731944	BC	Ansul	Truck

EQUIPMENT FOR FIRE FIGHTING

SUTTON PUMP STATION

<u>SERIAL NO.</u>	<u>CLASS</u>	<u>MANUFACTURER</u>	<u>LOCATION</u>
HP973030	BC	Ansul	Office
HP973031	BC	Ansul	Workroom
HP973032	BC	Ansul	#5 & #6 Units
HP973033	BC	Ansul	#5 & #6 Units
HP973034	BC	Ansul	#5 & #6 Units
HP973035	BC	Ansul	Pumproom
HP973036	BC	Ansul	Pumproom
107281	BC	Ansul	Work Room
474249	BC	Ansul C-O-Two	Control Room
CA731946	BC	Ansul	Equipment Trailer
15337	3A2015	DDacco Nitrogen BT	Workroom
U500764*	BC	Buckeye	Soft Start Building

EQUIPMENT FOR FIRE FIGHTING

HIGHWATER PUMP STATION

<u>Serial No.</u>	<u>MAKE</u>	<u>TYPE</u>	<u>LOCATION</u>
34542	Ansul	BC 20lbs	Control Building
968829	Ansul Sentry	Co2 10lbs	Control Building
820500	Ansul	BC 30lbs	Storage Room
805235	Ansul	BC 30lbs	Storage Room
1510	Ansul	BC 30lbs	Motor Room
1507	Ansul	BC 30lbs	2 nd Floor Motor Room
970918	Ansul	BC 5lbs	Boat
805240	Ansul	BC 30lbs	Work Room
805239	Ansul	BC 30lbs	Work Room
805242	Ansul	BC 30lbs	Work Room
805139	Ansul	BC 30lbs	Pump Room
805138	Ansul	BC 30lbs	Pump Room
34553	Ansul	BC 20lbs	Pump Room
1502	Ansul	BC 30lbs	Pump 24
968855	Ansul Sentry	Co2 10lbs	24 Control Building
61648	Ansul Sentry	Co2 10lbs	24 Control Building

EQUIPMENT FOR FIRE FIGHTING			
ST. CESAIRE PUMP STATION			
EXTINGUISHERS			
Serial No.	MAKE	TYPE	LOCATION
8055133	Ansul	BC 30lbs	Work Room
252242	Ansul	ABC 20lbs	Spare
900074	Ansul Sentry	Co2 10lbs	Control Room
748209	Ansul	BC 20lbs	Office
748225	Ansul	BC 20lbs	Garage
2470	Ansul	BC 5lbs	Boat
34563	Ansul	BC 20lbs	Hydro Meter Building
788731	Ansul	BC 5lbs	Small Garage
805246	Ansul	BC 30lbs	Pump Room
805137	Ansul	BC 30lbs	Pump Room
344469	Ansul	BC 20lbs	Pump 24
126882	Flag	Co2	24 Control Building

EQUIPMENT FOR FIRE FIGHTING			
MONTREAL EAST AREA			
EXTINGUISHERS			
Serial No.	MAKE	TYPE	Location
106165	Ansul	BC 20lbs	Vehicle Unit – Terminal Supervisor
1840	Ansul	BC 20lbs	Vehicle Unit – Terminal Maintenance
853186	Ansul	BC 20lbs	Pump Room West Wall
359967	Ansul	BC 20lbs	Pump Room East Wall
202030	Ansul	BC 30lbs	Terminal Building South Wall
360047	Ansul	30lbs	Terminal Motor Room
444465	Ansul	BC 20lbs	Terminal Supervisor Office
202029	Ansul	BC 5lbs	Terminal Lunch Room
27062DL	Pyrene/RS	CO ₂	Control Room
202033	Ansul	30lbs	Manifold 2 West Fence
202034	Ansul	30lbs	Manifold 2 East Fence
6074	Kidde	CO ₂	Manifold 2 Building
430550	Ansul	BC	E&I Shop
27863	York	CO ₂ 15lbs	Terminal Electrical Sub room
202028	Ansul	BC 30lbs	Terminal Garage

Integrated Contingency Plan

42849	Ansul	20lbs	Storage / Inventory Building
970106	Ansul	BC 20lbs	Storage / Inventory Building
00840584	Ansul	BC 20lbs	Vehicle Unit Terminal Maintenance
16442	Ansul	BC 30lbs	Meter Building
164034	Ansul	BC 20lbs	Meter Building
989	Ansul	BC 20lbs	Meter Building
411055	Ansul	BC 20 lbs	Incoming Manifold
713090	Ansul	BC 20lbs	Incoming Manifold
A1815990	Ansul	BC 5lbs	Vehicle Unit Maintenance Technician
227700	Ansul	ABC 10lbs	Main Office
KB4823	Pyrene	CO ₂	Main Office Basement
251622	Ansul	BC 10lbs	Main Office Basement
853176	Ansul	BC	Terminal Laboratory
2649	Ansul	BC 20lbs	24" Sampling Building
68244675	Ansul	BC 20lbs	Manifold 1 Trap
68244676	Ansul	BC 20lbs	Manifold 1 Trap
187555	Ansul	30lbs	Office Garage

MONTREAL EAST AREA				
FIRE HYDRANTS				
N°	MAKE	LOCATION	INTEGRATED NOZZLE	HOSE
315	McAvity	Yard East Fence	No	No
316	McAvity	Yard South Fence	No	No
317	McAvity	Delivery Manifold	No	No
319	Darling	Terminal West Fence	No	No
321	Darling	Parking Lot	Yes	No
322	Darling	Incoming Manifold	Yes	No

NORTH TANK FIELD				
FIRE HYDRANTS AND EXTINGUISHERS				
NO.	MAKE	Type	Location	
2656	Ansul	BC 20lbs	Tk 660	
3859	Ansul	BC 20lbs	Tk 661	
2643	Ansul	BC 20lbs	Tk 662	
3869	Ansul	BC 20lbs	Tk 663	
2638	Ansul	BC 20lbs	Tk 664	
2845	Ansul	BC 20lbs	Tk 665	
68244673	Ansul	BC 20lbs	NTF Launching Traps	
68244674	Ansul	BC 20lbs	NTF Launching Traps	
678399	General	CO2	Sub 44	
410050	General	CO2	Sub 44	
27062	Pyrene	CO2	Sub 40	
868049	Ansul	CO2	Sub 40	
AV2328	Ansul	BC5lbs	Spare	
202032	Ansul	BC5lbs	Spare	
M251689	Ansul	ABC 10lbs	Spare	
23 (twenty-three) fire Hydrants		McAvity (6) Darling (16) Century(1)	North Tank Field	
FIRE PROTECTION EQUIPEMENT				
NORTH TANK FIELD				
TYPE	QUANTITY	DESCRIPTION	LOCATION	INSPECTION FREQUENCY
Foam Tank (Fixed installation)	2	Foam Concentration Tank (5200 US gallons), Minimum Requirement 4,317 US Gallons / Tank	See MPLL drawing D-4248	-
Foam		AER-O-LITE™ C6 1% AFFF Cold Foam 1.04 Specific Gravity @ 77OF(25OC), 00F (-18OC) To 1200F (49OC) Usable Temperature Range.	Foam Tank	Foam tests annually
Hose	24	Size 5’’x 50’ (flexible)	Container, See MPLL drawing D-4248	Annual
Adapter	16	Size 5’’ to 4’’ Storz For Fire Trucks	Container, See MPLL drawing D-4248	Annual
Hose	5	2’’x 100’ (rigid)	Container, See MPLL drawing D-4248	Annual
Hose	10	3’’x 100’ (flexible)	Container, See MPLL drawing D-4248	Annual
Eductor	8	MODEL: JP-1500 1% C/W Metering Valve	Container, See MPLL drawing D-4248	Annual
Pressure Regulating Valve (PRV)	5	Williams Fire Hazard & Control,set-up 30psi	Container, See MPLL drawing D-4248	Annual
Gate Valve Key	2	-	Container, See MPLL drawing D-4248	-

US – OIL SPILL RESPONSE CONTRACTORS

FIGURE C-2

USCG OSRO CLASSIFICATIONS

The USCG has classified OSROs according to their response capabilities, within each Captain of the Port (COTP) zone, for vessels and for facilities. Response capabilities are rated MM, W1, W2 or W3 as described below.

SPECIFIC CLASSIFICATION STANDARDS BY OPERATING AREAS

OPERATING AREAS		MM	W1	W2	W3
RIVER CANAL					
PROTECT BOOM (FEET)		4000	25000	25000	25000
EDRC (BBLS/DAY)		1200	1875	3750	7500
TSC (BBLS)		2400	3750	7500	15000
RESPONSE TIME (HRS)					
FAC	HVP	6	12	30	54
	OTHER	12	24	36	60
VESSEL	HVP	12	12	36	60
	OTHER	24	24	48	72
GREAT LAKES					
PROTECT BOOM (FEET)		6000	30000	30000	30000
EDRC (BBLS/DAY)		1200	6250	12500	25000
TSC (BBLS)		2400	12500	25000	50000
RESPONSE TIME (HRS)					
FAC	HVP	6	12	36	60
VESSEL	HVP	12	18	42	66
INLAND					
PROTECT BOOM (FEET)		6000	30000	30000	30000
EDRC (BBLS/DAY)		2400	12500	25000	50000
TSC (BBLS)		2400	25000	50000	100000
RESPONSE TIME (HRS)					
FAC	HVP	6	12	30	54
	OTHER	12	24	36	60
VESSEL	HVP	12	12	36	60
	OTHER	24	24	48	72

FIGURE C-2 (Cont'd.)

OPERATING AREAS		MM	W1	W2	W3
NEAR SHORE					
PROTECT BOOM (FEET)		8000	30000	30000	30000
EDRC (BBLS/DAY)		1200	12500	25000	50000
TSC (BBLS)		2400	25000	50000	100000
RESPONSE TIME (HRS)					
FAC	HVP	6	12	30	54
	OTHER	12	24	36	60
VESSEL	HVP	12	12	36	60
	OTHER	24	24	48	72
OFFSHORE					
PROTECT BOOM (FEET)		8000	15000	15000	15000
EDRC (BBLS/DAY)		1200	12500	25000	50000
TSC (BBLS)		2400	25000	25000	25000
RESPONSE TIME (HRS)					
FAC	HVP	6	12	30	54
	OTHER	12	24	36	60
VESSEL	HVP	12	12	36	60
	OTHER	24	24	48	72
OPEN OCEAN					
PROTECT BOOM (FEET)		0	0	0	0
EDRC (BBLS/DAY)		1250	12500	25000	50000
TSC (BBLS)		2400	25000	50000	100000
RESPONSE TIME (HRS)					
FAC	HVP	6	12	30	54
	OTHER	12	24	36	60
VESSEL	HVP	12	12	36	60
	OTHER	24	24	48	72
FAC = Facility		EDRC = Effective Daily Recovery Capacity			
VSL = Tank					
Vessel		TSC = Temporary Storage Capacity			
HVP = Facility high-volume ports		BBLS = Barrels			
M= Maximum Most Probable Discharge		HRS= Hours			
W1= Worst Case Discharge Tier 1					
W2= Worst Case Discharge Tier 2					
W3= Worst Case Discharge Tier 3					

FIGURE C-3
EXTERNAL RESPONSE RESOURCES

Portland Captain of the Port (COTP) Zone

USCG Classified Oil Spill Response Organization (OSRO)								
OSRO Name	Contract Number	Environment Type	Facility Classification Level					Shoreline Cleanup
			MM	W1	W2	W3	NFO	
Marine Spill Response Corporation	Service Agreement in place	Rivers/Canals	✓	✓	✓	✓	✓	yes
		Inland	✓	✓	✓	✓	✓	
Clean Harbors Environmental	Service Agreement in place	Rivers/Canals	✓	✓	✓	✓		yes
		Inland	✓	✓	✓	✓		

Note: USCG Classification letters are provided in Appendix C and telephone numbers are provided in Figure 2.8.



April 17, 1998

For More Information Contact:

Don Toenshoff, Jr.	(703)	326-5610
Doug O'Donovan	(703)	326-5611
Judith Roos	(703)	326-5617

MSRC Technical Information Bulletin 98-01

Dispersant Coverage for MPA Customers

Dear Customer:

MSRC has expanded its services and now offers dispersant coverage to MPA customers. MSRC has reached contractual agreement, through 1998, with Marine Industry Resources-Gulf (MIRG) to provide dispersant "hardware" services utilizing Airborne Support, Inc. (ASI). ASI owns and operates three fixed wing dispersant application aircraft, two DC-3's and one DC-4. The dispersant payload for the DC-3 is 1,000 gallons, the DC-4 is 2,000 gallons.

In addition to these aircraft and their support crews, MSRC has access to MIRG's dispersant stockpile, which currently is 16,000 gallons of Corexit 9527, based in Houma, LA and MSRC's 25,000 gallons of Corexit 9527, based in Edison, NJ, as well as access to an ADDS Pack jointly owned by MIRG and Clean Caribbean Cooperative (CCC). The dispersant payload for the ADDS Pack is 5,000 gallons. As with other MSRC services, customers can request this service through MSRC's Service Agreement.

To support MPA customers, ASI will cascade to both the East and West coasts, including the U.S. Caribbean and Hawaii. However, due to ASI's Houma, LA location, current coverage will be most effective in the Gulf of Mexico area. Through the use of C-130s of opportunity, ADDS Pack coverage will be made available throughout the Western hemisphere to the same extent it is made available to MIRG.

As noted above this contract is essentially for "hardware" services. At present, "software" services will remain the responsibility of the customer. Typical software requirements include:

- Preparation of a dispersant plan
- Obtaining government approvals
- Obtaining Surveillance Aircraft
- Obtaining Spotter Aircraft and Spotters. This is essential to timely, accurate and economical dispersant application.

MSRC will assist its customer or its customer's Spill Management Team with these and other "software" requirements as practicable.

To provide future one stop shopping for both dispersant hardware and software services, MIRG has conceptual plans to expand its dispersant program. MIRG will be actively seeking other subscribers to help support and expand this increased capability. Additional subscribers may provide the funding necessary to contract for additional dispersant application aircraft, including aircraft located in other areas of the country. MPA has authorized additional funding to support this expansion of services, but the funding is contingent upon MIRG obtaining matching funds from other sources.

If you have any questions about MSRC's new dispersant capabilities, please contact Doug O'Donovan at (703) 326-5611.



April 30, 1998

For More Information Contact:

Don Toenshoff, Jr.	(703)	326-5610
Doug O'Donovan	(703)	326-5611
Judith Roos	(703)	326-5617

MSRC Technical Information Bulletin 98-02

Response Equipment Airlift Contingency Transportation (REACT) Package

Dear Customer:

MSRC is offering a new equipment fly-away service to MPA customers. MSRC's Response Equipment Airlift Contingency Transportation (REACT) Package is designed to assist customers in their efforts to mobilize and deploy vessel of opportunity skimming systems (VOSS), boom, and towable storage bladders (TSB) to areas that have experienced a significant spill incident and require additional equipment. The combination of containment, skimming and temporary storage equipment offers a customer a response system designed to be quickly placed into service with the assistance of Vessels of Opportunity and other auxiliary equipment at the affected location. The REACT Package also contains a communications kit that can help support remote staging sites and other areas away from a main communication facility. Although primarily focused on supporting MSRC's customers in their international response operations and other operations remote from the continental United States, the REACT Package is an extension of MSRC's cascade concept and may be used by customers domestically as well.

Upon a customer's request for the REACT Package, the component equipment systems are trucked to the closest of the following major transportation hub airports: Newark, Miami, Houston, Los Angeles or San Francisco. Using MSRC's air service contractor, Kitty Hawk Inc. of Dallas, Texas, the individual components of the REACT Package are then airlifted from these five major transportation hubs and consolidated at a point of departure airport on the coast nearest the spill incident, e.g., Miami for a Caribbean incident, Los Angeles for an incident in the Pacific, etc. The standard REACT Package includes approximately 60,000 bbls of derated effective daily recovery capacity, 13,000 feet of boom and 7,000 bbls of temporary storage and has been designed to fill out the cubic capacity and weight restrictions of a Boeing 747 aircraft. If 747 aircraft are not available, or the destination airport cannot accommodate this large aircraft, multiple smaller aircraft may be sourced and used. Additionally, MSRC is also prepared to customize the package and assist the customer in arranging transportation for lesser or greater amounts of response equipment on other available aircraft, if so requested by the customer. Whether requesting a standard REACT Package or a customized package of equipment, MSRC's goal is to have the REACT Package airborne within 24 hours. Actual times will depend on availability of aircraft and trucking contractors, weather conditions, and other factors.

In identifying MSRC equipment for the REACT Package, MSRC selected equipment from multiple MSRC locations on all three coasts to reduce the overall local response impact in any single area and to maintain MSRC's OSRO classification throughout the MSRC Operational Area. MSRC will keep the Coast Guard's local Federal-On-Scene-Coordinator advised of the movement of local response assets, as required. Although MSRC's owned and dedicated equipment is identified in the REACT Package it is anticipated that the Package will be augmented with equipment owned by MSRC's STARs participants.

The REACT Package (including any requested personnel) is available as part of a customer's Service Agreement with MSRC. If the REACT Package is requested for use internationally, or in other areas outside MSRC's Operational Area, the customer may need to execute an Addendum to its Service Agreement to address the customer's responsibility for customs and other such matters.



August 20, 1999

MSRC Technical Information Bulletin 99-02

Infrared Imaging Services for MSRC Customers

Dear Customer:

MSRC has expanded its services and now offers infrared imaging coverage to its customers. MSRC has reached an arrangement with Infrared Testing, Inc. of Chicago, IL to provide this service. Infrared imaging has successfully been utilized to detect spilled oil at night and in reduced visibility, offering the possibility of round the clock emergency response operations.

ITI is based out of Chicago with representatives in Long Beach, CA; Washington, DC; Dallas, TX; Charlotte, NC and Monterrey, Mexico. ITI maintains a team of thermographers (infrared technicians) around the United States who may be mobilized to assist MSRC and its customers. These thermographers are estimated to arrive on-scene within 12-hours of notification. They are equipped with ITI 2000 Infrared Camera Systems. The ITI 2000 System is a portable, hand held unit capable of detecting temperature differentials within a range of -30 to +1375 degrees Centigrade. These systems are capable of being deployed off of MSRC's 16 dedicated oil spill response vessels or other marine platforms.

According to Terry Maglioli, President of ITI, "Our daily business of providing Infrared inspections of electrical & mechanical systems offers the ability to provide trained, experienced thermographers to MSRC in the event of a spill response. Additionally, we constantly update and upgrade our equipment as the field of thermography advances, providing MSRC and its customers access to the newest technology available."

Benefits associated with infrared imaging services under this contract for MSRC customers include: no capital costs or maintenance and repair costs associated with the equipment; no costs for personnel training; no costs associated with upgrading equipment due to rapid technological changes; and no initial charges.

If you have any questions about MSRC's new infrared imaging services, please contact Judith Roos at (703) 326-5617 or Doug O'Donovan at (703) 326-5611.

MSRC Spill Response Resources
Oil Spill Response Resources Cascade Planning Schedule



PORTLAND, ME

9/11/2007

EAST				MSRC RESOURCES										STAR RESOURCES										CUMULATIVE CAPACITY																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
Resource Area	Asset	Miles	Mob Factor	Water TS (tbls)	Land TS (tbls)	Vac Trucks	Small Boats < 18'	Large Boats > 18'	Ocean Boom (ft)	Inland Boom (ft)	R&C Boom (ft)	Total Boom (ft)	Skimmers	EDRC (ppd)	TSB	Water TS (tbls)	Vac Trucks	Small Boats < 18'	Large Boats > 18'	Ocean Boom (ft)	Inland Boom (ft)	R&C Boom (ft)	Total Boom (ft)	Skimmers	EDRC (ppd)	TSB	Water TS (tbls)	Vac Trucks	Small Boats < 18'	Large Boats > 18'	Ocean Boom (ft)	Inland Boom (ft)	R&C Boom (ft)	Total Boom (ft)																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
Portland, ME	Site	8.0	2.0	1	1,330	180	0	0	3,500	14,230	0	19,730	3	928	0	3	928	0	3	221	991	3	4	8	10	0	2,500	16,900	5,400	24,800	12	13,689	1	4	1,921	1,171	3	4	8	13	0	8,000	31,330	5,400	44,330	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0



MSRC Spill Response Resources
Oil Spill Response Resources Cascade Planning Schedule

PORTLAND, ME

9/11/2007

EAST			MSIC RESOURCES										STAR RESOURCES										CUMULATIVE CAPACITY																											
Resource Area	Asset	Miles	Mod. Factor	Time (hours)	Shimmers	EDRC (hp/d)	T&B	Water TS (cbs)	Land TS (cbs)	Vac Trucks	Frac Tanks	Small Boats < 18'	Large Boats > 18'	Ocean Boom (ft)	Inland Boom (ft)	RAC Boom (ft)	Total Boom (ft)	Shimmers	EDRC (hp/d)	T&B	Water TS (cbs)	Land TS (cbs)	Vac Trucks	Frac Tanks	Small Boats < 18'	Large Boats > 18'	Ocean Boom (ft)	Inland Boom (ft)	RAC Boom (ft)	Total Boom (ft)																				
Louisiana	Site	1056	2.0	33.2	0	0	0	0	0	0	0	0	0	0	0	0	12,200	8	3,324	1	0	400	5,971	55	4	16	0	0	11,440	800	12,240	8	3,324	1	0	400	5,971	55	4	16	0	0	11,440	800	12,240					
	Site	1071	2.0	33.0	1	0	400	0	0	0	0	0	0	0	0	0	11,400	800	12,200	8	3,324	1	0	400	5,971	55	4	16	0	0	11,440	800	12,240	8	3,324	1	0	400	5,971	55	4	16	0	0	11,440	800	12,240			
	Site	1083	2.0	33.0	0	0	0	0	0	0	0	0	0	0	0	0	8,700	1,400	10,100	10	4,401	1	2	524	7,281	63	4	26	13	0	20,160	2,200	22,360	10	4,401	1	2	524	7,281	63	4	26	13	0	20,160	2,200	22,360			
	Site	1119	2.0	34.4	0	9,800	65	0	0	0	0	0	0	0	0	0	15,800	0	15,800	18	14,641	3	19	13,657	7,887	67	4	38	18	0	8,140	39,020	2,200	49,060	18	14,641	3	19	13,657	7,887	67	4	38	18	0	8,140	39,020	2,200	49,060	
	Site	1138	2.0	35.2	0	0	0	0	0	0	0	0	0	0	0	2,000	130	2,130	19	15,171	3	19	13,657	7,887	67	4	42	19	0	8,140	41,020	2,310	51,490	19	15,171	3	19	13,657	7,887	67	4	42	19	0	8,140	41,020	2,310	51,490		
	Site	1173	2.0	36.4	0	0	0	0	0	0	0	0	0	0	0	0	400	0	400	21	18,981	3	19	13,657	8,824	72	4	42	26	0	8,140	41,920	2,310	52,290	21	18,981	3	19	13,657	8,824	72	4	42	26	0	8,140	41,920	2,310	52,290	
	Site	1204	2.0	38.1	0	0	0	0	0	0	0	0	0	0	0	1,400	0	1,400	1	1,400	0	1	14,057	8,561	72	4	44	28	0	8,140	43,820	2,310	54,290	1	1,400	0	1	14,057	8,561	72	4	44	28	0	8,140	43,820	2,310	54,290		
	Site	1206	2.0	39.1	1	1,317	1	0	400	0	0	0	0	0	0	0	0	0	22	17,400	4	19	14,057	8,561	72	4	44	21	0	8,140	43,820	2,310	54,290	22	17,400	4	19	14,057	8,561	72	4	44	21	0	8,140	43,820	2,310	54,290		
	Site	1222	2.0	39.4	2	685	0	0	0	0	0	0	0	0	0	7,000	0	7,000	0	7,000	27	18,974	4	19	14,057	8,561	72	4	60	27	0	8,140	57,880	2,310	68,350	27	18,974	4	19	14,057	8,561	72	4	60	27	0	8,140	57,880	2,310	68,350
	Site	1231	2.0	39.6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	28	19,214	4	19	14,057	10,586	89	4	61	21	0	8,140	57,880	2,310	68,350	28	19,214	4	19	14,057	10,586	89	4	61	21	0	8,140	57,880	2,310	68,350		
Mississippi	Site	1274	2.0	39.5	0	0	0	0	0	0	0	0	0	0	0	2,750	900	3,650	22	19,454	4	19	14,057	10,699	99	4	62	28	0	8,140	60,650	3,210	77,000	22	19,454	4	19	14,057	10,699	99	4	62	28	0	8,140	60,650	3,210	77,000		
	Site	1319	2.0	43.0	0	0	0	0	0	0	0	0	0	0	0	4,600	0	4,600	0	4,600	46	29,954	4	19	14,057	11,804	99	4	66	36	0	8,140	62,210	3,210	76,600	46	29,954	4	19	14,057	11,804	99	4	66	36	0	8,140	62,210	3,210	76,600
	Site	1419	2.0	43.1	1	920	1	0	400	0	0	0	0	0	0	1,300	0	1,300	36	21,799	5	21	14,576	12,224	101	1	74	34	0	8,140	69,200	4,310	81,960	36	21,799	5	21	14,576	12,224	101	1	74	34	0	8,140	69,200	4,310	81,960		
	Site	1512	2.0	46.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	37	24,973	5	21	14,576	12,398	102	0	0	0	8,140	76,990	4,310	87,760	37	24,973	5	21	14,576	12,398	102	0	0	0	8,140	76,990	4,310	87,760		
	Site	1522	2.0	46.1	0	0	0	0	0	0	0	0	0	0	0	1,000	0	1,000	0	1,000	0	10,950	32,276	5	21	24,576	17,775	116	0	0	9,140	84,950	4,310	98,260	0	10,950	32,276	5	21	24,576	17,775	116	0	0	9,140	84,950	4,310	98,260		
	Site	1540	2.0	46.3	0	0	0	0	0	0	0	0	0	0	0	2,700	0	2,700	0	2,700	46	23,923	5	21	24,576	18,065	114	0	0	9,140	91,790	4,310	105,460	46	23,923	5	21	24,576	18,065	114	0	0	9,140	91,790	4,310	105,460				
	Site	1511	3.0	46.1	0	0	0	0	0	0	0	0	0	0	0	1,000	300	1,300	43	23,923	5	21	24,576	19,174	117	1	89	44	0	9,140	93,790	4,310	106,760	43	23,923	5	21	24,576	19,174	117	1	89	44	0	9,140	93,790	4,310	106,760		
	Site	1535	2.0	47.5	0	0	0	0	0	0	0	0	0	0	0	0	500	0	500	0	500	43	24,423	5	21	24,576	19,244	118	0	0	9,140	94,790	4,310	108,260	43	24,423	5	21	24,576	19,244	118	0	0	9,140	94,790	4,310	108,260			
	Site	1602	2.0	48.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	43	24,576	5	21	24,576	19,299	119	1	91	44	0	9,140	94,890	4,310	109,160	43	24,576	5	21	24,576	19,299	119	1	91	44	0	9,140	94,890	4,310	109,160
	Site	1705	2.0	51.9	0	0	0	0	0	0	0	0	0	0	0	200	250	450	43	24,423	5	21	24,576	19,428	119	5	92	44	0	9,140	94,890	4,310	109,160	43	24,423	5	21	24,576	19,428	119	5	92	44	0	9,140	94,890	4,310	109,160		
Site	1706	2.0	54.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	43	24,423	5	21	24,576	19,448	119	4	92	44	0	9,140	95,390	4,310	110,110	43	24,423	5	21	24,576	19,448	119	4	92	44	0	9,140	95,390	4,310	110,110	
North Carolina	Site	1817	2.0	54.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	43	24,423	5	21	24,576	19,714	121	6	94	44	0	9,140	96,190	4,310	110,910	43	24,423	5	21	24,576	19,714	121	6	94	44	0	9,140	96,190	4,310	110,910	
	OS&W	2.0	28.1	10,547	0	14,000	0	0	1,1320	0	0	0	0	0	0	0	0	0	44	34,960	5	21	38,576	19,714	121	5	94	46	0	10,440	96,190	5,580	112,230	44	34,960	5	21	38,576	19,714	121	5	94	46	0	10,440	96,190	5,580	112,230		
	OS&W	3.20	28.1	10,547	0	14,000	0	0	1,1320	0	0	0	0	0	0	0	0	0	44	34,960	5	21	38,576	19,714	121	5	94	46	0	10,440	96,190	5,580	112,230	44	34,960	5	21	38,576	19,714	121	5	94	46	0	10,440	96,190	5,580	112,230		
	OS&W	4.15	41.4	10,547	0	14,000	0	0	1,1320	0	0	0	0	0	0	0	0	0	44	34,960	5	21	38,576	19,714	121	5	94	46	0	10,440	96,190	5,580	112,230	44	34,960	5	21	38,576	19,714	121	5	94	46	0	10,440	96,190	5,580	112,230		
	OS&W	5.20	46.3	10,547	0	14,000	0	0	1,1320	0	0	0	0	0	0	0	0	0	47	36,691	5	21	40,576	19,714	121	6	94	48	0	14,420	96,190	5,580	116,160	47	36,691	5	21	40,576	19,714	121	6	94	48	0	14,420	96,190	5,580	116,160		
	OS&B	5.28	48.1	15,840	0	68,000	0	0	0	0	0	0	0	0	0	0	0	0	0	47	68,531	5	21	148,576	19,714	121	6	94	48	0	14,420	96,190	5,580	116,160	47	68,531	5	21	148,576	19,714	121	6	94	48	0	14,420	96,190	5,580	116,160	
	OS&B	9.07	2.5	125.2	26,407	0	35,000	0	0	0	0	0	0	0	0	0	0	0	0	50	108,948	5	21	183,576	19,714	121	5	94	48	0	15,740	96,190	5,580	117,510	50	108,948	5	21	183,576	19,714	121	5	94	48	0	15,740	96,190	5,580	117,510	
	OS&B	3.25	2.1	15,840	0	67,000	0	0	0	0	0	0	0	0	0	0	0	0	0	51	124,413	5	21	248,576	19,714	121	5	94	48	0	15,740	96,190	5,580	117,510	51	124,413	5	21	248,576	19,714	121	5	94	48	0	15,740	96,190	5,580	117,510	
	OS&B	3.25	42.1	15,840	0	52,000	0	0	0	0	0	0	0	0	0	0	0	0	0	52	140,258	5	21	297,576	19,714	121	5	94	48	0	15,740	96,190	5,580	117,510	52	140,258	5	21	297,576	19,714	121	5	94	48	0	15,740	96,190	5,580	117,510	
	OS&B	4.75	2.0	41.5	15,840	0	40,000	0	0	0	0	0	0	0	0	0	0	0	0	53	154,098	5	21	337,576	19,714	121	5	94	48	0	15,740	96,190	5,580	117,510	53	154,098	5	21	337,576	19,714	121	5	94	48	0	15,740	96,190	5,580	117,510	
OS&B																																																		

Notes:

- (1) For internal, MISR, planning purposes only. INFORMATION SUBJECT TO CHANGE WITHOUT NOTICE.
- (2) Mobilization times and speed of advance assumptions are estimates only and may vary from Coast Guard planning assumptions. Actual mobilization times/speeds will vary from site to site and from resource to resource. e.g., mobilization in local conditions including availability of contractors, and also in inclement weather, such as roughness and other conditions permitting.
- (3) The Coast Guard assumes a 14,000 barrel of internal storage element (Crest) time to the vessels; only waste minimization systems.
- (4) The Coast Guard assumes the MISR, Response/Cost, QSOB with a 14,000 barrel of internal storage element (Crest) time to the vessels; only waste minimization systems.
- (5) The type of oil involved, etc.

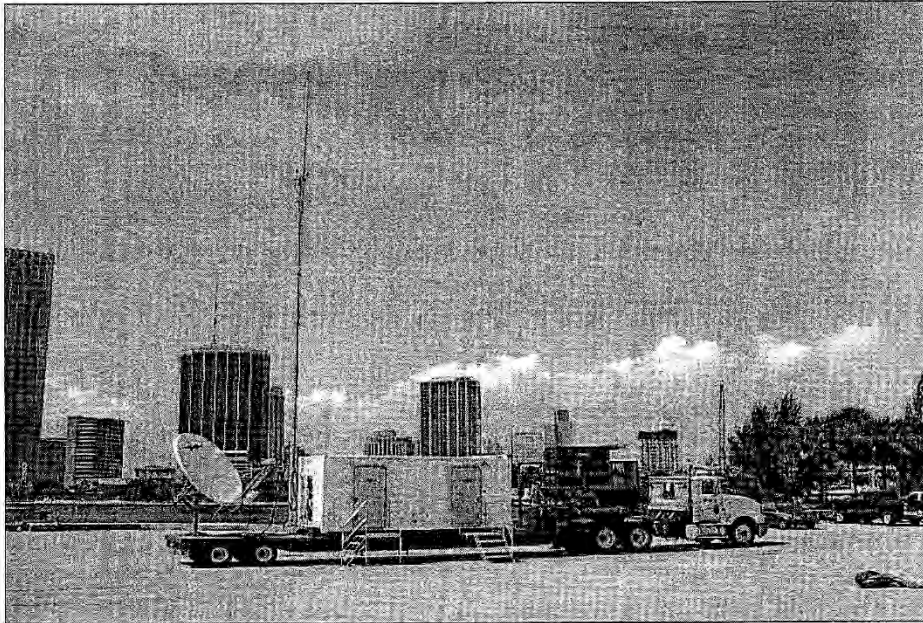
MOBILE COMMUNICATIONS SUITE

The Mobile Communications Suite (MCS) is designed to be a fully self-supporting communication system that can be towed to a location and setup for full operation within approximately 4-6 hours of arrival. The system is designed to provide emergency communications support until local resources can be obtained to provide telephone and radio support for extended emergencies. Long distance telephone trunks are provided by the satellite system for an added cost.

Components

1	Telephone System		
50	Telephones	1	UHF Business Band Base Station
1	Telephone/Radio Interface	2	UHF Business Band Repeaters
1	HF SSB Marine Base Station	40	Handheld Radios
2	VHF Marine Base Station	1	KuBand Satellite System
1	VHF Aviation Base Station	1	20' ISO Container
2	VHF Business Band Base Station	1	30KVA Generator
4	VHF Business Band Repeaters	1	48' Trailer

Number of Operators Required: 5-10 depending on operations



MSRC COMMUNICATIONS

WAREHOUSE

<u>Qty</u>	<u>UNIT</u>	<u>CHANNELS</u>	<u>COMMENTS</u>
6	Handheld Motorola PR1500	MSRC- 1-32	each w/ spare battery & charger
2	Marine VHF	All	1 in conferenc room, 1 in office
2	Motorola MaxTrac	MSRC-1-16	1 in conferenc room, 1 in office

ME Responder

On Bridge

1	Single Side Band Radio	all
1	Motorola Response Radio	MSRC-1-4
2	Marine VHF Radios	all
1	Aviation Radio	all

RHIBS

2	Marine VHF Radios	all	one on each RHIB
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COMM"S ROOM

1	Aviation Radio	all	
1	VHF	all	
1	Single Side Band Radio	all	
6	Handheld Motorola PR1500	MSRC-1-32	each w/ spare battery - 6 bank charger in comm's room
2	Motorola Response Radios	MSRC-1-4	
2	Satellite Phones(Irdium)Sat Voice	480-458-9555	011-88162211453431
	Fax	480-345-4340	
1	Fleet voice	011 870 761145214	
1	Sat Voice	888 872 1556	

Munson Support Boat 1-1

2	Marine VHF Radios	all
1	Motorola MaxTrax Radio	MSRC-1-16

MSRC-620

MSRC-1-16

1	Marine VHF Radio	all	} in galley
		MSRC-1-16	

CCB Heritage Vessels

Saddleback

1	Motorola M1225	All
		MSRC 1-4

Katahdin

1	Motorola M1225	All
		MSRC 1-4

Crocker

1	Motorola M1225	All
		MSRC 1-4

Cadillac

1	Motorola M1225	All
		MSRC 1-4

Agamenticus

1	Motorola M1225	All
		MSRC 1-4

MSRC Frequency Assignments

Channel ID	Ch #	RX	TX	RX TPL	TX TPL
SPILL RESPONSE	1	150.9800	150.9800	103.5	103.5
SPILL RESPONSE REPEATER	2	150.9800	154.5850	103.5	103.5
SPILL RESPONSE	3	159.4800	159.4800	103.5	103.5
SPILL RESPONSE REPEATER	4	159.4800	158.4450	103.5	103.5
MARINE CHANNEL 68	5	156.4250	156.4250	CS	CS
MARINE CHANNEL 6	6	156.3000	156.3000	CS	CS
MARINE CHANNEL 7	7	156.3500	156.3500	CS	CS
MARINE CHANNEL 8	8	156.4000	156.4000	CS	CS
MARINE CHANNEL 77	9	156.8750	156.8750	CS	CS
MARINE CHANNEL 10	10	156.5000	156.5000	CS	CS
MARINE CHANNEL 11	11	156.5500	156.5500	CS	CS
MARINE CHANNEL 12	12	156.6000	156.6000	CS	CS
MARINE CHANNEL 13	13	156.6500	156.6500	CS	CS
MARINE CHANNEL 14	14	156.7000	156.7000	CS	CS
MARINE CHANNEL 78	15	156.9250	156.9250	CS	CS
MARINE CHANNEL 16	16	156.8000	156.8000	CS	CS
SPILL RESPONSE	17	454.0000	454.0000	103.5	103.5
SPILL RESPONSE REPEATER	18	454.0000	459.0000	103.5	103.5
MARINE CHANNEL 19A	19	156.9500	156.9500	CS	CS
MARINE CHANNEL 65A	20	156.2750	156.2750	CS	CS
MARINE CHANNEL 68	21	156.4250	156.4250	CS	CS
MARINE CHANNEL 69	22	156.4750	156.4750	CS	CS
MARINE CHANNEL 71	23	156.5750	156.5750	CS	CS
MARINE CHANNEL 78A	24	156.9250	156.9250	CS	CS
MARINE CHANNEL 79A	25	156.9750	156.9750	CS	CS
MARINE CHANNEL 80A	26	157.0250	157.0250	CS	CS
MARINE CHANNEL 81A	27	157.0750	157.0750	CS	CS
MARINE CHANNEL 82A	28	157.1250	157.1250	CS	CS
MARINE CHANNEL 83A	29	157.1750	157.1750	CS	CS
MARINE CHANNEL 88A	30	157.4250	157.4250	CS	CS
SPILL RESPONSE (STA)	31	157.6800	157.6800	103.5	103.5
SPILL RESPONSE REPEATER (STA)	32	157.6800	152.2700	103.5	103.5

MSRC REGION 1 RESPONSE EQUIPMENT FACTSHEETS

The following equipment has been identified as part of the MSRC Region 1 response equipment inventory. This document contains an equipment factsheet for each piece of response equipment.

SKIMMERS

DESMI OCEAN
AARDVAC 800
WALOSEP W-4
GT-185
WP-1
TRANSREC 350
SEAWOOLF

PUMPS

DESMI DOP-250
EUREKA CCN-150

VESSELS

OSRV
32' SUPPORT BOAT

SPECIAL BOOMS

VIKOMA 3 WEIR BOOM
FIOCS 800 NORWEGIAN OIL TRAWL

BOOMS

ENGINEERED FABRICS 2344 SEA SENTRY II
MARK 7-24" SLICKBAR
TEXAS INTERTIDAL BOOM

HYDRAULIC POWER UNITS

TYPE I, TYPE II, TYPE III

STORAGE FACILITIES

SHUTTLE BARGE SYSTEM
TOWABLE STORAGE BLADDERS

Each piece of response equipment is identified and described in the following format:

LOGISTICAL CONCERNS

Description - Brief system description.

Quantity - Represents number of units for MSRC Region 1.

Location - Identifies response equipment locations within Region 1.

Specifications - Includes pump capacity, weight, draft and dimensions.

Packaging - Lists system containerization requirements, quantity needed, weight, and dimensions.

Total System Weight - Represents total weight of all system components and associated containers.

Total System Required Deck Space - Represents required square foot area to stow the equipment.

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OPERATIONAL CONCERNS

Handling - Describes system handling requirements, specifically addresses the needs for crane hoisting.

Operation - Summarizes operational characteristics and employment techniques for different systems.

****NOTE:** The data found in this report was compiled from numerous sources including manufacturers data, World Catalog of Oil Spill Response Products, and physically weighing and measuring the system components.

ACRONYMS:

OSRV - Oil Spill Response Vessel. MSRC's 210' long response vessels, similar in design to offshore supply ships. Specifications of the OSRV are located towards the end of this text.

VOSS - Vessel of Opportunity Skimming System. An independently functional unit of oil skimming machinery that can be loaded aboard any vessel that can support the equipment.

HPU - Hydraulic Power Unit (power pack). Details can be found in the following text.

FIOCS - Fully Integrated Oil Containment System (Norwegian Oil Trawl). A boom system used exclusively on board the OSRV. Details can be found in the following text.

SBS - Shuttle Barge System. The SBSs will support portable skimmers, boom handling equipment and pumps in shallow water areas.

TSB - Towable Storage Bladder. MSRC will have TSBs for use in receiving oil directly from skimmers, as well as temporary storage and transfer of recovered oil.

NE RESPONSE EQUIPMENT FACTSHEET

DESMI OCEAN SKIMMER

Description - The DESMI Ocean Skimmer is a weir lip, open sea skimmer. It is designed to cope with debris contaminated oil and emulsions of medium to high viscosities. The surface hopper leads directly into the suction of a Desmi DOP-250 pump. In operation, vertical adjustments of the weir lip to the oil/water interface are pneumatically controlled from a free-standing control station. An adapter may be attached to the hopper for light oil. The DOP-250 pump may be removed from the floatation frame for use in conventional pumping roles.

Quantity - 2 Systems

Location - Regional Response Center

Specifications - Rated BBLs/HR = 630
 Derated 80% BBLs/HR = 126
 Weight = approx. 420 lbs. (dry skimmer)
 Hydraulic Oil Type - Shell Tellus T46

Dimensions: Draft = 40 in.
 Length = 6.6 ft.
 Width = 7.4 ft.
 Height = 3.6 ft.
 Deck area = 48 sq. ft.

Packaging - Per system

Type	Qty	Weight	Dimensions	Deck Area
Aluminum Skimmer Pallet	1	550	7' x 7' 7" x 1'	54 sq. ft.
Hydraulic Power Pack Type II	1	4622	6' 5" x 3' x 6'	19.5 sq. ft.
Type III Control Stand	1	518	2' x 2.5' x 3.8'	5 sq. ft.
Job Box	1	750	2.6' x 5 x 3.2'	13 sq. ft.
Large Wire basket - Hydraulic Hose	1	1350	4' x 3.4' x 3.10'	13.6 sq. ft.
Large Wire Basket - Hose Floats/Line	1	470	4' x 3.4' x 3.10'	13.6 sq. ft.
Small Wire Basket - 6" Layflat	1	850	4' x 3.4' x 2.6'	13.6 sq. ft.

Total System Weight - 9530 lbs

Total System Required Deck Area - 132.3 sq. ft.

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Handling- Use of this skimmer as part of a VOSS system will require the vessel to have a deck crane to deploy and retrieve the unit.

Operation - The Desmi Ocean Skimmer is most effectively used in conjunction with a "J" or "V" boom configuration, but it can also be used from the shoreline at the collection point.

NE RESPONSE EQUIPMENT FACTSHEET

WP-1 SKIMMER

Description- The WP-1 is a rotating drum skimmer which separates water from oil as it operates. It skims oils of all viscosities and is most effective skimming very heavy oils which many conventional skimmers cannot handle. The skimmer components include the drum separator (skimming unit), the DOP-250 pump, the pontoons, and a baffle plate.

Quantity - 1 System

Location - Portland, Maine

Specifications- Rated BBLs/HR = 430
 Derated 80% BBLs/HR = 86
 Weight = approx. 1,300 lbs. (dry skimmer)
 Hydraulic Oil Type - Shell Tellus T46

Dimensions: Draft = 20 in.
 Length = 8.2 ft.
 Width = 9.6 ft.
 Height = 4.3 ft.
 Deck area = 79 sq ft.

Packaging - Per system

Type	Qty	Weight (lbs)	Dimensions	Deck Area
Aluminum Skimmer Pallet	1	650	10.10' x 8.6' x 1	86.86 sq. ft.
Hydraulic Power Pack Type I	1	5000	7.25' x 3' x 6'	21.75 sq. ft.
Type IV Control Stand	1	309	2' x 2.5' x 3.8'	5 sq. ft.
Job Box	1	750	2.6' x 5 x 3.2'	13 sq. ft.
Large Wire basket - Hydraulic Hose	1	1320	4' x 3.4' x 3.10'	13.6 sq. ft.
Large Wire Basket - Hose Floats/Line	1	470	4' x 3.4' x 3.10'	13.6 sq. ft.
Small Wire Basket - 6" Layflat	1	850	4' x 3.4' x 2.6'	13.6 sq. ft.

Total System Weight- 10,649 lbs

Total System Required Deck Area- 167.41 sq. ft.

Handling- The WP-1 is a relatively large skimmer which measures 8.2 ft long by 9.6 ft wide and weighs approximately 1,300 lbs. Because the skimmer requires two complete 1" hydraulic circuits (one for the rotating drum and one for the screw pump), this skimming unit will require the largest hydraulic power pack MSRC will carry. The deployment vessel for this system will require adequate deck space area and hoisting capabilities to safely handle this equipment.

Operation - This skimmer works very effectively with heavy oils and debris. It separates water from oil as it skims, which reduces the need for decanting and decreases the amount of excess water recovered with the oil.

GT-185 STATIONARY WEIR SKIMMER

Description - The GT-185 is a stationary weir skimmer that can be hauled by two people. A three pontoon floating system provides seaworthiness in open ocean conditions, but it is also capable of skimming in shallow water. This type of skimmer is very effective in the latter stages of clean-up where pockets of oil remain in shallow water areas that larger skimmers cannot effectively operate in.

The skimmer has a large suction opening that allows heavy oil to enter into the hopper. An Archimedean screw pump is fitted with multiple cutter heads for handling debris. A light/medium oil adapter can be used to increase skimming efficiency when working with light oils.

Quantity - 8 Systems

Location - Regional Response Center (2), Portland (1), Boston (2), Delaware Bay (1), Baltimore (1), Norfolk (1)

Specifications - Rated BBLs/HR = 285
 Derated 80% BBLs/HR = 57
 Weight = approx. 330 lbs. (dry skimmer)
 Hydraulic Oil Type - Shell Tellus T46

Dimensions: Draft = 18 in.
 Length = 7.5 ft.
 Width = 6.2 ft.
 Height = 2.8 ft.
 Deck area = 47 sq ft.

Packaging-Per system

Type	Qty	Weight	Dimensions	Deck Area
Aluminum Skimmer Pallet	1	500	6.4' x 8' x 1'	51.2 sq. ft.
Hydraulic Power Pack Type III	1	3900	5.6' x 3' x 6'	16.8 sq. ft.
Type I Control Stand	1	295	2' x 2.5' x 3.8'	5 sq. ft.
Job Box	1	750	2.6' x 5' x 3.2'	13 sq. ft.
Large Wire basket - Hydraulic Hose	1	1200	4' x 3.4' x 3.10'	13.6 sq. ft.
Large Wire Basket - Hose Floats/Line	1	470	4' x 3.4' x 3.10'	13.6 sq. ft.
Small Wire Basket - 6" Layflat	1	850	4' x 3.4' x 2.6'	13.6 sq. ft.

Total System Weight - 7795 lbs

Total System Required Deck Area - 126.8 sq ft.

Handling- This skimmer is well suited for use on smaller VOSS vessels because its relative low weight would not require heavy hoisting capabilities at sea. The heaviest portion of the VOSS skimming system would be the power pack which could be loaded on board with a shore side crane.

Operation - The GT-185 can be deployed from docks or vessels. It is a versatile skimmer because of its relative light weight, its capability to handle all types of oil, and its ability to operate off shore and in shallow water.

WALOSEP W-4 SKIMMER

Description - The Walosep W-4 Skimmer is primarily used for light to medium weight oils. It can operate off shore in 5-7 foot seas and in shallow water over three feet deep. The W-4 skimmer uses a centrifugal vortex principle created by turning rotor blades which draws the oil to the skimmer. The design of the skimmer reduces the amount of water recovered to a minimum even when the skimmer is encountering relatively thin layers of oil.

Quantity - 2 Systems

Location - Regional Response Center and Delaware Bay

Specifications - Rated BBLs/HR = 630
 Derated 80% BBLs/HR = 126
 Weight = approx. 2090 lbs. (dry skimmer)
 Hydraulic Oil Type - Shell Tellus T46

Dimensions: Draft = 35 in.
 Length = 8.9 ft.
 Width = 8.2 ft.
 Height = 8.0 ft.
 Deck Area = 73 sq. ft.

Packaging - Per system

Type	Qty	Weight (lbs)	Dimensions	Deck Area
Aluminum Skimmer Pallet	1	750	9.1' x 7.10' x 1	64.61 sq. ft.
Hydraulic Power Pack Type I	1	5000	7.25' x 3' x 6'	21.75 sq. ft.
Type II Control Stand	1	352	2' x 2.5' x 3.8'	5 sq. ft.
Job Box	1	750	2.6' x 5 x 3.2'	13 sq. ft.
Large Wire basket - Hydraulic Hose	1	1920	4' x 3.4' x 3.10'	13.6 sq. ft.
Large Wire Basket - Hose Floats/Line	1	470	4' x 3.4' x 3.10'	13.6 sq. ft.
Small Wire Basket - 6" Layflat	1	850	4' x 3.4' x 2.6'	13.6 sq. ft.

Total System Weight - 12,182 lbs

Total System Required Deck Area - 145.16 sq. ft.

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Handling-The W-4 requires 7 hydraulic hoses (2-1" hoses for the DOP-250 pump, 2- 1" hoses for the rotor, 2- 3/8" hoses for the stator, and 1-3/8" hose for the case drain). The VOSS vessel that this system is deployed on will need to have adequate hoisting capability and the capacity to safely stow all of the system components on board.

Operation -The W-4 skimmer is best suited for medium to light weight oils.

AARDVAC 800 VACUUM SKIMMER

Description- The AARDVAC 800 is a self-contained, high capacity suction skimming system for beach and shoreline areas. This skid mounted vacuum system can be loaded onto a flatbed truck for mobility, or located on a beach or pier. The suction manifold allows up to three skimmer heads to operate at the same time. These skimmer heads are interchangeable to accommodate the weight of oil being recovered. The unit can simultaneously skim oil from the water and transfer the recovered oil to a separate storage tank.

Quantity - 2 Systems

Location - Regional Response Center and Norfolk, Virginia

Specifications-

Rated	BBLS/HR = 800	Dimensions:	Draft = 4 in.
Derated 80%	BBLS/HR = 160		Length = 12.5 ft.
Weight = approx.	5,000 lbs. (complete skid mounted system)		Width = 7.5 ft.
Hydraulic Oil Type -	Shell Tellus T46		Height = 8.0 ft.
			Deck area = 94 sq ft.

Packaging-Per system

<u>Type</u>	<u>Qty</u>	<u>Weight (lbs)</u>	<u>Dimensions</u>	<u>Deck Area</u>
Job Box	1	750	2.6' x 5 x 3.2'	13 sq. ft.
Large Wire basket - Suction Hose	1	600	4' x 3.4' x 3.10'	13.6 sq. ft.
Large Wire Basket - Suction Hose	1	600	4' x 3.4' x 3.10'	13.6 sq. ft.
Small Wire Basket - 6" Layflat	1	850	4' x 3.4' x 2.6'	13.6 sq. ft.
Small Wire Basket - Heads/Floats	1	390	4' x 3.4' x 2.6'	13.6 sq. ft.

Total System Weight - 8,190 lbs

Total System Required Deck Area - 161.4 sq. ft.

Handling - The AARDVAC 800 skimmer is designed for beach or shoreline collection/recovery point operations. It is not likely to be used offshore as a VOSS, but the AARDVAC system could become a valuable tool in shallow water spills when it is worked off a barge type platform.

Operation - The AARDVAC skimming system will require the operator to be proficient in diesel engine operations in addition to having knowledge of vacuum skimming and transfer pump procedures.

SEAWOOLF SKIMMER

Description - The Seawoolf is a low capacity skimmer that is used primarily to recover debris laden oil. It is capable of skimming very heavy oil, including oil that is emulsified or "weathered." The unit draws surface floating oil, tar, and contaminated debris into a clamshell type bucket through two double vertical disk banks. A Desmi DOP-250 Pump with a weir lip inside the bucket provide normal skimming capability. When the debris inside the bucket builds up, the unit is hoisted from the water and the clamshell dumps the debris into an open barge along side the vessel or operating platform.

Quantity - 1 System

Location - Regional Response Center

Specifications - Rated BBLs/HR = 193
 Derated 80% BBLs/HR = 38.5
 Weight = approx. 2,464 lbs.
 Hydraulic Oil Type - Shell Tellus T46

Dimensions: Draft = 51 in.
 Length = 8.9 ft.
 Width = 10.2 ft.
 Height = 10.8 ft.
 Deck area = 91 sq. ft.

Packaging -Per system

Type	Qty	Weight	Dimensions	Deck Area
Aluminum Skimmer Pallet	1	900	10.8 x 8' x 1'	86.4 sq. ft.
Hydraulic Power Pack Type II	1	4622	6.5' x 3' x 6'	19.5 sq. ft.
Vikoma Control Stand	1	320	4.6' x 1.7' x 3'	7.82 sq. ft.
Job Box	1	750	2.6' x 5 x 3.2'	13 sq. ft.
Large Wire basket - Vendor Hose	1	600	4' x 3.4' x 3.10'	13.6 sq. ft.
Large Wire Basket - Hose Floats/Line	1	470	4' x 3.4' x 3.10'	13.6 sq. ft.
Small Wire Basket - 6" Layflat	1	850	4' x 3.4' x 2.6'	13.6 sq. ft.
Small Wire Basket - Hydraulic Hose	1	770	4' x 3.4' x 2.6'	13.6 sq. ft.

Total System Weight - 11,746 lbs

Total System Required Deck Area - 181.2 sq ft.

Handling - The Seawoolf is a relatively large, heavy skimmer that will require an on board crane capable of hoisting the skimmer full of oil laden debris, and spotting the unit over a collection barge along side to dump the clamshell.

Operation - The Sea Woolf skimmer is usually used late in the spill clean up when viscous, emulsified, and debris laden oil cannot be recovered with conventional skimming systems.

TRANSREC 350 OIL RECOVERY SYSTEM

Description - The Transrec 350 is a high capacity skimming system designed to handle most oils and recovery conditions. MSRC's Off Shore Response Vessels (OSRV's) were designed with the Transrec 350 positioned aft on the starboard quarter for maximum skimming efficiency when used in conjunction with the (FIOCS) 800 Norwegian Oil Trawl. The Transrec system consists of a skimming head, a telescoping crane, and a hose reel. The skimming head is connected to the hose reel through a hose trunk that contains both the hydraulic and discharge hoses. Three types of skimmer heads are available to be used with the Transrec 350, a weir lip, a disc, and a belt skimming head.

Quantity - 4 Systems

Location - Installed on board the New Jersey Responder, Maine Responder, Delaware Responder and Virginia Responder.

Specifications-	Rated	BBLS/HR = 2200	Dimensions:	Draft = 48 in.
	Derated 80%	BBLS/HR = 440		Length = 17.4 ft.
	Weight = approx.	30,800 lbs.		Width = 13.8 ft.
	Hydraulic Oil Type - Shell Tellus T46			Height = 17.4 ft.
				Deck area = 240 sq ft.

Total System Weight- 30,800 lbs

Total System Required Deck Area- 240 sq ft.

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Handling- Because the skimmer is permanently mounted on board the OSRV's, this skimmer will only be used in areas where the OSRV can operate. The skimmer's hydraulic power is supplied by the OSRV's central hydraulic system.

Operation - The Transrec 350 will require at least 2 men for skimming operations, one equipment operator and one tankerman to monitor tank levels and operate the oily water separator. Transfer operations may require a third man to be present.

During Transrec operations, the skimmer will discharge to the OSRV's storage tanks where the recovered oil and water mixture can be decanted and then purified by the on board oily water separators. The separated oil will then be discharged to a barge on station for transport to a shore side collection facility.

23-44 SEA SENTRY II OIL CONTAINMENT BOOM

Description - The 23-44 Sea Sentry II is a heavy duty offshore oil containment boom manufactured by Engineered Fabrics Corporation. It is deployed from a reel or pallet to provide offshore spill containment in heavy wind and wave conditions. The freeboard/inflation chamber above the water line has a height of 23 inches and the draft/skirt below the water line has a depth of 44 inches. A chain is attached to the bottom of the skirt for ballast and tensile strength.

Quantity - 30,360 Feet

Location - Regional Response Center (6600'), Portland (6600'), Boston (1320'), Narragansett (2640'), Delaware Bay (6600') and Norfolk (6600').

Specifications - Dimensions: Freeboard = 23 in.
Draft = 44 in.
Boom section length = 110 ft.
Individual Air chamber length = 15 ft.
Weight = 8.5 lbs/ft or 935 lbs. per 110' section w/o connection plate.

Packaging - Per Boom system (660 feet of boom per reel or pallet)

<u>OSRV System</u>		<u>Qty</u>	<u>Weight</u>	<u>Dimensions</u>	<u>Deck Area</u>
Hydraulic Boom Reel w/Boom		1	8,800	8' x 9.10' x 8'	72.8 sq ft.
Pallet w/ Boom		3	19,500	8.7' x 7.6' x 3.6	132.24 sq ft.
Large Wire Basket - Support		1	600	4' x 3.4' x 3.10'	13.6 sq ft.
Total System Weight - 32,800 lbs			Total System Required Deck Area - 235.44 sq. ft.		
<u>Reel System</u>		<u>Qty</u>	<u>Weight</u>	<u>Dimensions</u>	<u>Deck Area</u>
Hydraulic Boom Reel w/Boom		1	8,800	8' x 9.10' x 8'	72.8 sq ft.
Pallet w/ Boom		2	13,000	8.7' x 7.6' x 3.6	132.24 sq ft.
Hydraulic Power Pack Type III		1	3,900	5.6' x 3' x 6'	16.8 sq ft.
Large Wire Basket - Support		1	600	4' x 3.4' x 3.10'	13.6 sq ft.
Total System Weight - 26,300 lbs			Total System Required Deck Area - 235.44 sq. ft.		
<u>Non-Reel System</u>		<u>Qty</u>	<u>Weight</u>	<u>Dimensions</u>	<u>Deck Area</u>
Pallet w/ Boom		2	13,000	8.7' x 7.6' x 3.6	132.24 sq ft.
Large Wire Basket - Support		1	600	4' x 3.4' x 3.10'	13.6 sq ft.
Total System Weight - 19,000 lbs			Total System Required Deck Area - 145.84 sq. ft.		
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Handling - Precautions should be taken to not over-inflate the air chambers since they have a maximum pressure rating of 1.5 psig. This boom requires a tow vessel with at least a 5000 lb. bollard pull capability at a tow speed of 0.75 - 1 knots. Vessel deployment of this offshore boom will require that the working deck of the VOSS vessels meet two criterion: the vessel must have adequate deck space and deck load capacity to safely stow the equipment and it must also have enough deck space to inflate at least one air chamber (15 feet) before that chamber goes over the side.

Operation - The Sea Sentry 23-44 Boom is likely to be used with two vessels towing the boom in a "J" formation in conjunction with a skimmer in the boom's apex. In this scenario, the VOSS vessel will require substantial open deck space to stow the boom and skimmer equipment and still have enough deck space to deploy the gear.

SLICKBAR MARK 7 - 24" HEAVY DUTY BOOM

Description - The Mark 7 boom is a rigid floatation type boom which is very durable, stores compactly, and is easily deployed from a container. This boom contains oil by providing a barrier in shore line areas with moderate to heavy seas. The boom has an overall width of 24 inches: a freeboard of 8 inches and a draft of 16 inches.

Quantity - 12,000 Feet

Location - Regional Response Center (2000'), Portland (2000'), Boston (2000'), Narragansett (2000'), Delaware Bay (1000'), Baltimore (2000'), and Norfolk (1000')

Specifications - Dimensions: Freeboard = 8 in.
 Draft = 16 in.
 Boom section length = 100 ft.
 Individual Poly floatation length = 10.5 in x 24 in
 Weight = 6 lbs/ft or 600 lbs. per 100' section w/ connection plate
 Type connector plate = Mark 3 meets ASTM F-962 standards

Packaging - 1000 Feet of Slickbar MK-7 per system

Type	Qty	Weight	Dimensions	Deck Area
Open Top ISO Container	1	5,250	20' x 8' x 8.6'	160 sq. ft.
System Slickbar MK-7	1	6,000	1000 feet	N/A
Plastic Basket - Support Equipment	1	560	3.8' x 4.1' x 5'	15.58 sq. ft.

Total System Weight - 11,810 lbs

Total System Required Deck Area - 175.58 sq ft.

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Handling - This medium weight boom was selected by MSRC for deployment from storage containers by either VOSS vessels or from beach locations. The weight of the boom allows it to be stowed manually with two to three people minimum. The relatively compact size of the containers makes them transportable to the site by truck, boat or air.

Operation - The strength and flexibility of the Mark 7 gives it the ability to follow wave contours, making it the ideal boom to use in exposed shore line waters where its high freeboard and deep skirt are particularly effective against severe wave action.

The Mark 7 boom can be connected to other types of boom, such as the Intertidal boom. This configuration establishes a complete boom system to provide protective coverage around environmentally sensitive areas or marinas.

NE RESPONSE EQUIPMENT FACTSHEET

TEXAS BOOM / INTER-TIDAL STXB-26 (modified) BOOM

Description - The Inter-Tidal STXB-26 Boom is designed to provide spill containment in the most difficult and sensitive areas to protect: shallow tidal waters on sandy shorelines and coastal marsh lands. The inter-tidal boom is comprised of an air filled chamber on the top, coupled with large twin water chambers on the bottom. At high tide the boom floats like a standard containment boom. At low tide, the weight of the water in the bottom chambers forms a seal between the boom and the exposed tidal flat or beach contours. This dike effect prevents the spilled oil from spreading across the inter tidal zone.

Quantity - 8,000 Feet

Location - Regional Response Center (2000'), Portland (1000'), Boston (1000'), Narragansett (500'), Delaware Bay (1500') and Norfolk (1000')

Specifications - Dimensions: Freeboard = 10 in.
Draft = 16 in.
Boom section length = 100 ft.
Individual Air chamber size = 50 ft. x 10 in.
Individual Water chamber size = 50 ft. x 16 in.
Weight = 154 lbs. per 50 ft. bagged section/ 3,100 lbs per system
Type connector plate = ASTM F-962 Quick Clip w/pin

Packaging - Per Boom system (1,000 ft Boom per system, 50 ft Boom per bag = 20 bags)

Type	Qty	Weight	Dimensions	Deck Area
Closed Top ISO Container	1	5,560	20' x 8' x 8.6'	160 sq. ft.
System of Texas Boom	1	3,100	1,000'	N/A
Plastic Basket - Support	1	560	3.8' x 4.1' x 5'	15.58 sq. ft.

Total System Weight - 9,222 lbs

Total System Required Deck Area - 175.58 sq ft.

Handling - This light weight Inter-tidal boom is designed for repeated emergency operations. When not in use the boom rolls up and fits into a cylindrical bag with rope straps for easy handling. Extreme care must be taken when positioning the boom because heavy abrasions will cause failures of the air and water chambers.

Operation - Intertidal boom must be positioned with the air chamber inflated and the water chambers empty, because once the water chambers are filled, the boom cannot be moved unless it's floating. Water chambers are filled by cascading water through jumper hoses between adjacent water chambers on abutting sections of boom. It is recommended to cascade a maximum of 3 boom sections at a time, because the water pressure will build up and exceed the manufacturers safe limit of 4 psi in the lower chambers. The Intertidal boom is not a rapid deployment type boom and is best deployed at low tide to provide maximum protection. The deployment process is extremely time consuming; adequate preparation time is a must. In a complete shore barrier boom system, the intertidal boom might be used in conjunction with the Slickbar Mark-7 boom to cover tidal flats and open water areas.

VIKOMA 3-WEIR BOOM

Description - The Vikoma 3-Weir boom is a transportable skimming system with three (3) weir skimmers located in the boom. The boom is deployed in a "J or V" formation alongside of the OSRV or VOSS vessel. It concentrates and collects large quantities of oil in the boom's apex, and recovers the oil through the three (3) skimmers installed within the boom at the oil/water interface. The Vikoma 3-weir boom is capable of recovering up to 1,158 barrels per hour.

Quantity - 2 Systems

Location - Regional Response Center

Specifications - Rated BBLs/HR = 1,158
 Derated 80% BBLs/HR = 232
 Weight = approx. 13,700 lbs. (total system)
 Hydraulic Oil Type - Shell Tellus T46
 Hydraulic Hose Size = 1"
 Discharge Hose Size = 6" camlock

Dimensions: Draft = 1.4 ft.
 Length = 1320 ft.
 Width = 1.02 ft.

Packaging - Per system (Port or Starboard)

Type	Qty	Weight	Dimensions	Deck Area
Boom Reel	1	18,000	12.6' x 9' x 8.10'	113.4 sq. ft.
Boom Roller	1	660	Attaches to reel	N/A
Hydraulic Power Pack Type I	1	5000	7.25' x 3' x 6'	21.75 sq. ft.
Vikoma Control Stand	1	260	4.6' x 1.7' x 3'	7.82 sq. ft.
Transfer Pump	1	3,000	7' x 3.3' x 7'	23.1 sq. ft.
Water Pump/Buoy	1	500	Towed in water	N/A
Job Box	1	750	2.6' x 5' x 3.2'	13 sq. ft.
Large Wire basket - Hydraulic Hose	1	1480	4' x 3.4' x 3.10'	13.6 sq. ft.
Large Wire basket - Air Fan	1	560	4' x 3.4' x 3.10'	13.6 sq. ft.
Small Wire basket - 6" Layflat	1	850	4' x 3.4' x 3.10'	13.6 sq. ft.
Small Wire basket - Tube/St By fan	1	580	4' x 3.4' x 3.10'	13.6 sq. ft.

Total System Weight - 31,640 lbs

Total System Required Deck Area - 233.47 sq. ft.

Handling - The Three Weir boom system and support equipment will require considerable deck space and deck load capacity on board the VOSS Vessel. The equipment will most likely be loaded with a shore side crane. The 3-weir boom will be used on VOSS vessels or as a back-up system to the (FIOCS)- 800 Norwegian Oil Trawl and Transrec 350 on the OSRV.

Operation - Operation of the 3 Weir Boom over-the-side of the OSRV or a VOSS vessel will require the coordinated effort of 2 vessels. The mother ship holds the "J" formation and the support boat tows the leading edge of the sweep boom. In addition to the 2 vessels, the 3-weir boom will also require close attention on the deck of the mother ship to tend the blower for the boom and the hydraulic power pack. Loss of blower air pressure will sink this boom. Back-up systems include a battery powered air pump and a spare HPU.

(FIOCS) 800 NORWEGIAN OIL TRAWL

Description - The Fully Integrated Oil Containment Systems (FIOCS) 800 Norwegian Oil Trawl is a boom containment system with bottom netting across a "V" shaped apex. Oil layers can build up to a thickness of 1-2 feet to provide optimal skimming conditions for the Transrec 350 skimmer. This boom system will only be used aboard MSRC's Off Spill Response Vessels.

Quantity - 4 Systems

Location - New Jersey Responder, Maine Responder, Delaware Responder and Virginia Responder

Specifications - **Dimensions:** Draft = 5-8 ft. Weight = approx. 19,800 lbs. (total system)
 Length = 15 ft.
 Width = 8 ft.
 Height = 8.5 ft
 Deck area = 120 sq ft

Packaging - Per system

Type	Qty	Weight	Dimensions	Deck Area
Boom Reel	1	19,800	15' x 8' x 8.5"	120 sq. ft
Job Box	1	800	5' x 2.6' x 5'	13 sq. ft.

Total System Weight - 20,600 lbs

Total System Required Deck Area - 133 sq. ft

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Handling- The (FIOCS) - 800 Norwegian Oil Trawl on board the OSRV will work in conjunction with the Transrec 350 skimmer. The Oil Trawl has 3 integral components which make up the system: the 110m trawl with bottom nets, the 95m of guide boom with a tow bridle, and the cross bridle outrigger.

Operation - The Norwegian Oil Trawl, when used in conjunction with the Transrec 350, will provide MSRC with its maximum recovery production system. This evolution will require the OSRV's support boat to work in coordination with the OSRV for deployment and operation of this boom. Manning requirements for the 800 Norwegian Oil Trawl will include several equipment operators on board the OSRV to handle the boom deployment and two operators aboard the support boat.

EUREKA CCN-150 OFF LOADING PUMP

Description - The Eureka CCN-150 is a portable high capacity, light weight pump typically used for emergency off loading or lightering of cargo tanks. The capacity of the pump ranges from 1,500 to 3,500 barrels per hour depending on the viscosity of the product being pumped. The Eureka CCN-150 Pump is not recommended for the pumping of heavy or weathered oil. The pump is designed to be an extremely compact and narrow unit so that it may pass through the 12.5" Butterworth plates of tankers for transferring cargo.

Quantity - 5 Pumps

Location - Regional Response Center (2), Portland (1), Boston (1), Delaware Bay (1) and Virginia (1)

Specifications - Rated BBLs/HR = 1,500 - 3,500 **Dimensions:** Draft = 2 in.
 Weight = approx. 175 lbs. (dry pump) Length = 2.2 ft.
 Hydraulic Oil Type - Shell Tellus T46 Width = 1.02 ft.
 Hydraulic Hose Size = 1" Deck area = 2.2 sq ft.
 Discharge Hose Size = 6" camlock

Packaging - Per system

Type	Qty	Weight	Dimensions	Deck Area
Hydraulic Power Pack Type I	1	5000	7.25' x 3' x 6'	21.75 sq ft.
Large Wire basket - 6" Layflat	1	875	4' x 3.4' x 3.10'	13.6 sq. ft.
Large Wire basket - Hydraulic Hose	1	700	4' x 3.4' x 3.10'	13.6 sq. ft.

Total System Weight - 6,575 lbs

Total System Required Deck Area - 48.95 sq ft.

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Handling - Use of this pump will be dictated by conditions present at a given spill incident. Although MSRC at the present time does not plan on providing lightering services, these pumps may be necessary for emergency purposes. The Eureka CCN-150 can also be used in the discharge line to overcome head pressure when pumping up a steep embankment or over a distance in excess of 150 feet.

Operation - The operator of the CCN-150 pump must be thoroughly familiar with the hydraulic operating pressures and limits of this pump to prevent inadvertent damage to it. Extreme care must be taken to ensure that the pump is not operated in reverse, as this may result in damaged hydraulic seals.

DESMI DOP 250 PUMP

Description - The DESMI DOP 250 pump is a general purpose, positive displacement, Archimedes screw pump with a capacity of 400-1200 barrels per hour while pumping oils of viscosities up to 1,000,000 centistokes. The DOP 250 pump will be used in skimming systems and in transfer operations.

Quantity - 18 Pumps

Location - Regional Response Center (5), Portland (1), Boston (3), Delaware Bay (4) and Norfolk (5)

Specifications - Rated BBLs/HR = 400 - 1200
 Weight = approx. 160 lbs. (dry pump)
 Hydraulic Oil Type - Shell Tellus T46
 Hydraulic hose size = 1" & 3/8" drain line
 Discharge hose size = 6" camlock

Dimensions: Draft = 2 in.
 Length = 2 ft.
 Width = 1.2 ft.
 Deck area = 2.4 sq. ft.

Packaging - Per system

Type	Qty	Weight	Dimensions	Deck Area
Hydraulic Power Pack Type II	1	4622	6.5' x 3' x 6'	19.5 sq. ft.
Large Wire basket - 6" Layflat	1	875	4' x 3.4' x 3.10'	13.6 sq. ft.
Large Wire basket - Hydraulic Hose	1	700	4' x 3.4' x 3.10'	13.6 sq. ft.

Total System Weight- 6,197 lbs

Total System Required Deck Area - 46.7 sq ft.

Handling - The DOP 250 pump is relatively small and light weight, two men can easily carry and deploy it. This pump is used with several of the skimmers in the MSRC inventory, but it is also a versatile pump on its own. The minimum diameter opening required to lower this pump into a tank is 23 inches.

Operation - As with all hydraulic powered equipment, it is essential for the operator to know all the operating pressures and limits to prevent damage to the equipment. This pump also has a 3/8" hydraulic case drain line which must be used to prevent damage to the hydraulic seals. The DOP 250 pump is a component part of the following MSRC skimmers: the Desmi Ocean Skimmer, the Walosep W-4, and the WP-1 skimmer. A DOP-250 Pump on a Desmi Ocean Skimmer can be changed out in 15-30 minutes.

PORTABLE HYDRAULIC POWER UNITS TYPES I, II, III

Description - Virtually all of MSRC's oil recovery equipment uses hydraulic power for their deployment and operation. All HPU's are independent, self contained power sources consisting of the hydraulic pump and hydraulic system, the diesel engine, the hydraulic reservoir, the heat exchanger, the fuel tank, and the frame/weather enclosure. MSRC's portable hydraulic power units come in three sizes or types, but all have the same major components. All of MSRC's HPU diesel engines are manufactured by John Deere.

Quantity - Type I 15
 Type II 16
 Type III 11

Location - Regional Response Center (20), Portland (4), Boston (5), Delaware Bay (7), Baltimore (1) and Norfolk (7)

Specifications -	<u>Weight</u>	<u>Dimensions</u>	<u>Deck Area</u>
Type I	5000	7.25' x 3' x 6'	21.75 sq ft.
Type II	4622	6.5' x 3' x 6'	19.55 sq ft.
Type III	3900	5.75' x 3' x 5.75'	16.8 sq. ft.

=====
Handling - All three sizes of MSRC's HPU's are of similar design with common interchangeable parts. Three sizes have been purchased relative to the power required to drive the different systems or combinations of systems. All power units will have forklift slots and hoisting points built into the skid frames to facilitate handling and hoisting.

Operation - All responders will become thoroughly familiar with the operations of each type of hydraulic power unit and the various response equipment that they can power. As with all hydraulically powered equipment, pressure limits and manufacturers guidelines should be closely followed.

MSRC TOWABLE STORAGE BLADDERS

Description - MSRC's Towable Storage Bladders (TSB), are intended for use as storage and transportation containers for recovered oil during spill operations. The TSB is a cylindrical shaped rubberized fabric container. During skimming operations, skimmer system pumps transfer the recovered oil/water/debris mixture either directly or indirectly (via tanks or separator systems) to the TSB towed close astern of the support vessel. Recovered oil is offloaded from the Towable Storage Bladder by DOP 250 Pump.

Quantity - 4 Towable Storage Bladders

Location - Regional Response Center

Specifications - Dimensions: Flat
 Length - 65'
 Width - 14'
 Weight (dry) - 4400 LBS

Loaded
 Length - 65'
 Width - 10'
 Max Draft - 5' 9"
 Storage Capacity - 500 BBLs

Packaging

<u>Type</u>	<u>Qty</u>	<u>Weight</u>	<u>Dimensions</u>
TSB with Pallet	1	5000	8.7' x 7.5' x 4'
Support Basket	1	600	4' x 3.4' x 3.8'

Handling - The TSB can be deployed directly into the water by a vessel or from a platform by a crane. A crane with at least a 5 ton capacity may be necessary when recovering. When working with the TSB strict adherence to load and operating limits must be followed.

Operation - MSRC plans to use Towable Storage Bladders in conjunction with OSRV, VOSS, and OSRB operations. A TSB tender vessel will be needed to assist on TSB operations.

SHUTTLE BARGE SYSTEM

Description - The MSRC Shuttle Barge System (SBS) is intended to provide storage for recovered product in shallow water. Two pontoons locked together make up one shuttle barge. A Shuttle Barge System consists of 4 barges: 1 barge has Thrustmaster, power pack and crane aboard in order to deploy a skimmer. The other three barges are used for storage and each of these can hold 428 barrels of recovered product.

Quantity - 2 Shuttle Barge Systems

Location - Regional Response Center and Norfolk, Virginia.

Characteristics	<u>Propelled Unit</u>	<u>Non-Propelled</u>
Length	47'10"	47'10"
Beam	16'	16'
Depth (mld)	3'10"	3'10"
Draft, light	1'1" mean	0'11" mean
Draft, operational	2'8" mean	2'10" mean
Weight (dry)	18,000 lbs	18,000 lbs

Auxiliary Equipment

Thrustmaster	Power Plant	3208 Caterpillar
	Weight	11,000 pounds

Crane	Maximum Lift
	690 lbs with grapple
	2400 lbs with jib
	3125 lbs without jib

Packaging - Per System

<u>Type</u>	<u>Qty</u>	<u>Weight</u>	<u>Dimensions</u>
Two Pontoons per trailer	4	49,000	48' x 8.6' x 13.5'
Thrustmaster and support Equipment	1	30,000	48' x 8.5' x 13.2'

=====

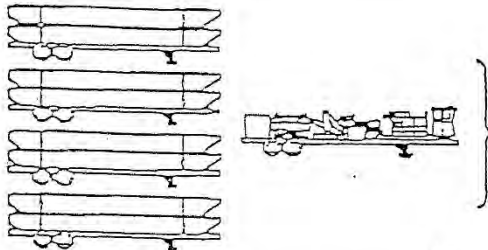
Handling - The shallow barges are to only be used within one mile of shore. Each shuttle barge is composed of two identical pontoon sections which are joined together by means of a locking mechanism. Pontoons may not operate independently

Operation - The Shuttle Barge System will be an integral part of MSRC's shallow water response.



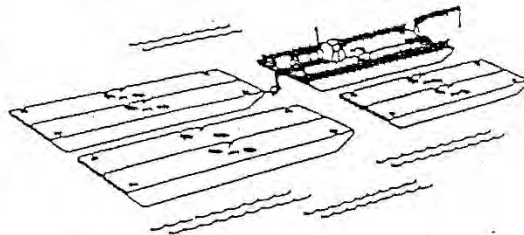
Shuttle Barge System (SBS) For Shallow Water Response

MSRC's Shuttle Barge System (SBS) is designed to provide a clean-up capability in shallow water. Each receptor barge has a 420 barrel capacity.

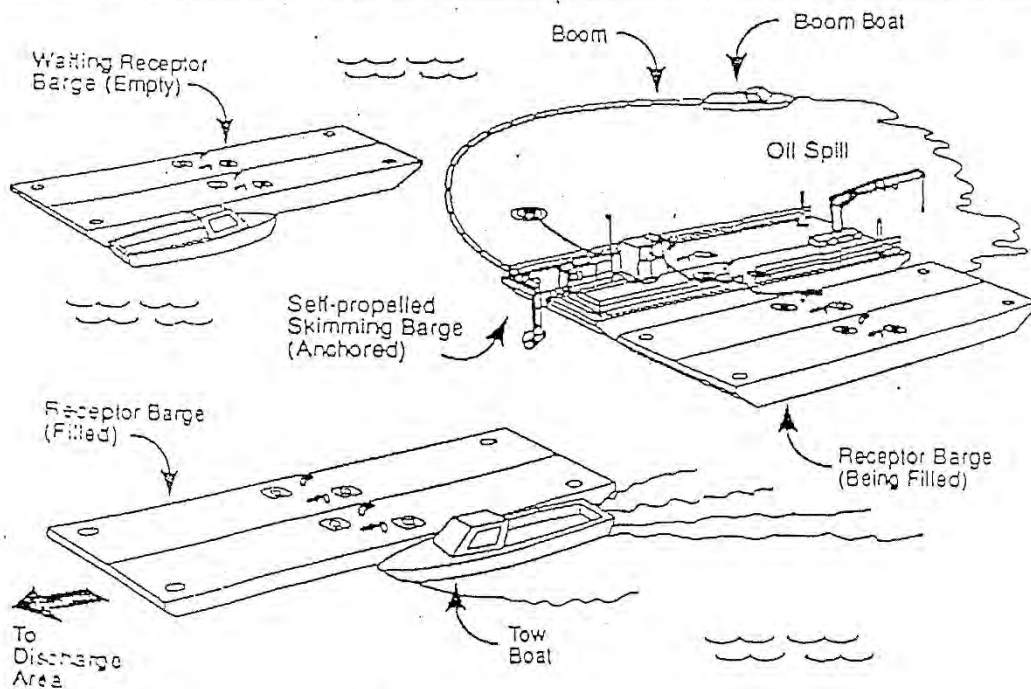


Pre-loaded flatbed trailers with a complete SBS can be moved unrestricted over highways to the spill site, then on-loaded.

MSRC will preposition 17 Shuttle Barge Systems along the coastal United States, as well as Hawaii and the Virgin Islands. Each site will have a complete SBS with barges, boats, booms and ancillary equipment.



Eight (8) pontoons are assembled in the water to form four (4) barges. (One skimming barge with equipment and propulsion motor; 3 empty receptor barges.)





MARINE SPILL RESPONSE CORPORATION
OFF SHORE RESPONSE VESSEL (OSRV)

CHARACTERISTICS

LENGTH OVER ALL (MLD)	208'-6"
BEAM (MLD)	44'-0"
DEPTH (MLD)	17'-0"
DESIGN DRAFT	13'-0"
FREEBOARD @ DESIGN DRAFT	4'-0"
QUARTERS	38 PERSONS
FUEL CAPACITY	83,000 GALS.
FRESH WATER CAPACITY	20,200 GALS.
RECOVERED OIL CAPACITY	4,000 BBLs.
POWER PLANT	MAINS: 2- CAT 3512 1500 BHP BOW THRUSTER: 1- CAT 3408 GENSETS: 3- CAT 3406
SUSTAINED SPEED	12 KNOTS

AUXILIARY EQUIPMENT:

- 2 - DECK CRANES, 100% AFT DECK COVERAGE CAPACITY: 20T @ 10' / 2.5T @ 60'
- 2 - 32' SUPPORT BOATS- STERN LAUNCHED
- 2 - 18' RHIBs* SEARCH AND RESCUE BOATS- DAVIT LAUNCHED
- 1 - HELICOPTER LANDING PAD
- 1 - TRANSREC 350 SKIMMER- STERN MOUNTED

* RHIB- RIGID HULL INFLATABLE BOAT

OSRV 32' SUPPORT BOAT

CHARACTERISTICS

LENGTH OVER ALL (MLD)	32'-0"
BEAM (MLD)	12'-0"
DEPTH (MLD)	6'-7"
DRAFT	5'-0"
CREW	2
FUEL CAPACITY	2 TANKS @ 200 GALS. 400 GALS.
POWER PLANT	MAINS: 2- CAT 3208 TA
BOLLARD PULL	10,000 LB. MINIMUM
ELECTRICAL	12 VDC
TOW GEAR	1- DOUBLE POST BIT AFT / 10,000 LB. WORKING LOAD (SAFETY FACTOR=4)

12 POWER PACK

Model	STULTZ 12K AD1
Type	Diesel/Hydraulic – Transfer pump
Hydraulic output	4.17 gpm @ 1000 psi
Transfer Pump output	77 gpm
Dimensions	41" L x 24" W x 32"H
Weight	435#
Quantity	1
Location	MSRC warehouse, 14 Union Wharf
Shipping	Mounted in steel frame on wheels

Description

The 12 K Power Pack supplies the hydraulic power to drive the Vikoma 12 K Skimmer. It also houses the suction pump for transferring recovered oil via a 3" discharge line.



30K POWER PACK

Model	STULTZ 30K LPA3
Type	Diesel/Hydraulic – Transfer pump
Hydraulic output	6.5 gpm @ 1000 psi
Transfer Pump output	333 gpm
Dimensions	60" L x 36" W x 34"H
Weight	1050#
Quantity	1
Location	MSRC warehouse, 14 Union Wharf
Shipping	Mounted in steel frame

Description

The 30 K Power Pack supplies the hydraulic power to drive the Vikoma 30 K Skimmer. It also houses the suction pump for transferring recovered oil via a 4" discharge line.



AGAMENTICUS/CADILLAC

Location	Dry stored on trailers at Portland Pipeline, S.Portland, ME		
Length	30'	Beam	10'4" Draft 31"
Displacement	9,000 lbs.		
Engine	Twin turbo-charged 200 H.P. Volvo diesel engines		
Operating Range	6 hours at cruising speed; 12 hours at idle		
Cruising speed	24 knots		
Fuel Capacity	85 gallons at 95%		

Description

The AGAMENTICUS and CADILLAC are 30' aluminum boats designed for rapid response. They each have 464 cu.ft. of open deck and a heated pilot house. They are currently stored on trailers, ready for over the road transport.

Deck Equipment & accessories

♦800# lifting davit; ♦4' bow door; ♦2'6" port side door; ♦6" towing bitt

Standard complement of marine electronics; including GPS, RADAR, depth sounder & marine radios



ALUMINUM STORAGE BARGES

ASB 1 & 2

Capacity	100 bbls each	
Dimension	32'L X 8'W X 8'H	
Weight	4,000#	
Location	Dry stored at 55 Union Wharf	
	Portland, Maine	
Quantity	Components	
4	4" fill/discharge removable vent	
1 each	Job Box with running lights, ratchet binders, tie up lines, tank vents, manifold with two 4" ball valves to use when filling the barges. Stage in the warehouse on the shelf.	
1	Lifting bridle	
	Description	
Each of these aluminum barges is designed for the temporary on-water storage of 100 barrels of recovered oil in 2 separate tanks. Each tank is fitted with 1 1/2" schedule 80 steam coils.		
	Handling/Operation	
Towing speed is 8 knots when empty, 5 knots fully loaded.		
ASB 3		
Capacity	200 bbls	
Dimension	36'L X 12'W X 4' depth	
Weight	8,000#	
Location	Made up to SADDLEBACK berthed at PPLC Pier 1	
	South Portland, Maine	
Quantity	Components	
4	4 " fill/discharge removable vent	
1	Job Box with running lights, ratchet binders, tie up lines, tank vents, manifold with two 4" ball valves to use when filling the barges. Stage on the Saddleback	
1	Lifting bridle	
This aluminum barge is designed for the temporary on-water storage of 200 barrels of recovered oil in 2 separate tanks.		
	Handling/Operation	
Towing speed is 7 knots when empty and 5 knots when fully loaded.		

ALUMINUM STORAGE BARGES, cont.



DESMI 250 SKIMMER

EDRC	2112 bbls/day
Pump	
Capacity	310 gpm
Dimension	6.5'L X 5.7'W X 2.5'H
Weight	375#
Container	Staged on board the SADDLEBACK, berthed at PPLC Pier 1, South Portland

Quantity	Component
1	Desmi 250 Skimmer
1	Integrated Desmi DS250 Archimedes screw pump
1	Hydraulic Power Pak – 26 gpm
100'	Layflat 4" Discharge hose
2	Hydraulic hose 50' x 3/8"
4	Hydraulic hose 50' x 1"
1	Tool kit

Description

The DESMI 250 Skimming system is a high volume weir skimmer for use in light oil as well as heavy oil and debris. The DESMI 250 can be deployed from a response vessel or from a pier or shore in relatively shallow water.

Handling/Operation

The vertical weir lip of the DESMI 250 is controlled pneumatically from the hydraulic/pneumatic power pack. The skimmer pump can be dismantled easily from the float system and used in a wide range of emergency and auxiliary pumping operations.

DESMI 250 SKIMMER, cont.

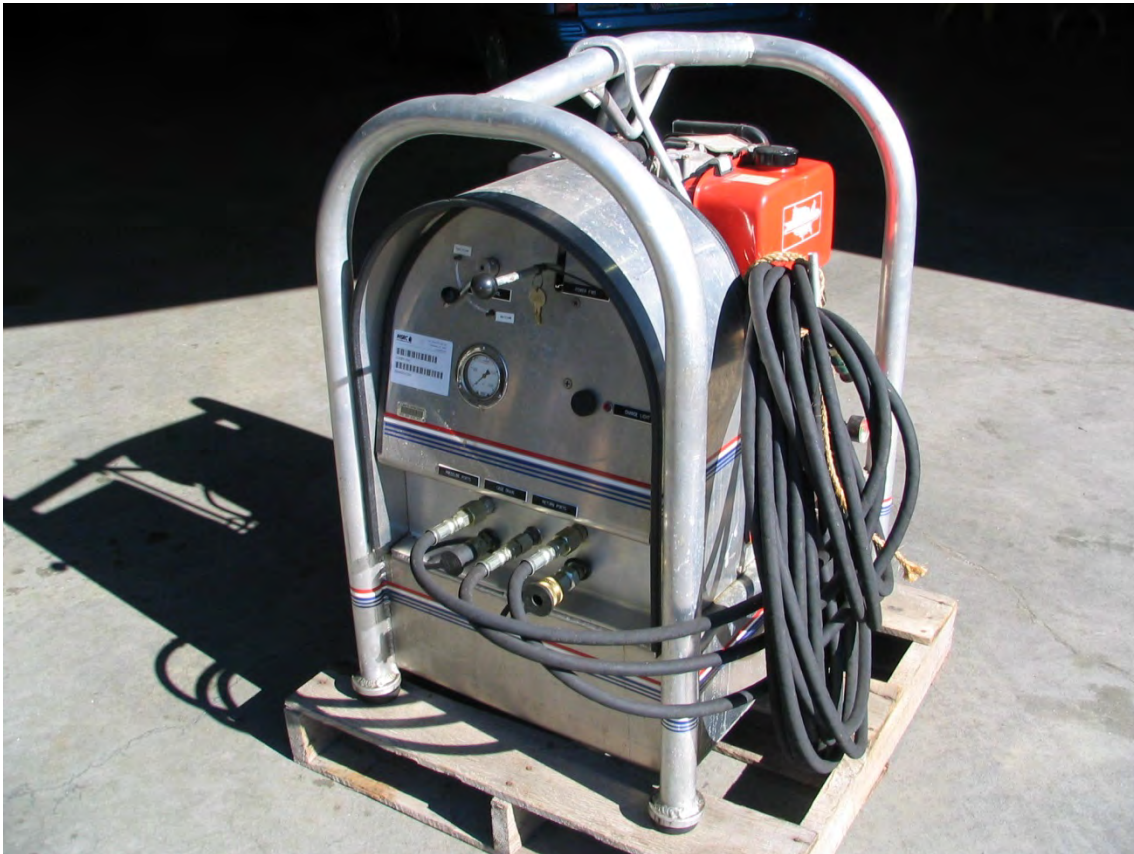


DIESEL AMERICA POWER PAK

Model	Diesel America
Type	Diesel/Hydraulic
	10 gpm @ 1500 psi
	36" L x 24" W x 34"H
Hydraulic output	350#
Dimensions	2
Weight	
Quantity	6 x 25' x 3/8" custom hydraulic hoses
Hoses	MSRC warehouse, 14 Union Wharf, Portland, ME
Location	Mounted in marine aluminum roll cage frame
Shipping	

Description

Two Diesel America Power Packs supply the hydraulic power to drive the LORI Skimmer brushes and Desmi DPO 250 offloading pump.



ELASTIC TDS 136 DRUM SKIMMER

EDRC

211.4 bbls/day-light oil
288 bbls/day-medium oil

Pump capacity 480 bbls/day-heavy oil
Dimension 100 gpm
Weight 3'1" L X 7'7" W X 1'6" H
Shipping 90#
Location Portable
Dry stored @ MSRC warehouse
14 Union Wharf, Portland, ME

Quantity

1	Component
1	Oleophilic drum
4	Diesel power pack w/ attached air compressor
1	50' x 2 1/2" suction/discharge hoses
	Job box

Operators

Required 1

Description

The ELASTEC TDS 136 self-bouyant drums rotate on the water surface collecting oil onto the drums. Wipers scrape oil into troughs housed in the aluminum frame. A suction hose transfers the recovered oil to a temporary storage device.

Handling/Operation

The ELASTEC TDS 136 is a highly efficient oleophilic drum which rotates in the oiled water. The ELASTEC skimmer is effective in a wide range of oils and can be deployed for a

ELASTIC TDS 136 DRUM SKIMMER, cont.



HERITAGE BOOM

STORED LOCATION	SIZE	LENGTH	Comments	TOTALS
PPLC Pier 2 Marine Terminal	27"	1600'	ISO box #1-202342	
S.Portland, ME	19"	3200'	ISO box #2 202326	
				4800'
Pre-loaded on 35' Response boats				
moored at Union Wharf, Portland, ME				
CROCKER	27"	950'	pallet #2 on foredeck	
KATAHDIN	27"	1000'	pallet #1 on foredeck	
				1950
MAINE RESPONDER parking area	27"	950'	Pallet #4 ISO #5/201744	
55 Union Wharf	27"	1000'	Pallet #3 MSRC Trailer # 31	
Portland, ME				
				1950
				8'700

KATAHDIN/CROCKER

Location	Moored on Union Wharf, Portland, ME		
Length	35'6"	Beam	12'6"
Displacement	9,900 lbs.		
Engine	Twin turbo-charged 200 H.P. Volvo diesel engines		
Operating Range	12 hours at cruising speed; 40 hours at idle		
Cruising speed	24 knots		
Fuel Capacity	237 gallons at 95%		

Description

The KATAHDIN and CROCKER are aluminum 35 foot Winninghoff OSRVs designed for rapid response. They each have 828 cu.ft. open deck space – currently outfitted with 2000' of 27" harbor boom on pallets and ready for immediate deployment.

Deck Equipment & accessories

- ♦ 1000# lifting davit; ♦ 6' bow door; ♦ 3'9" port side door; ♦ 6" towing bitt

Standard complement of marine electronics; including GPS, RADAR, depth sounder & marine radios



LSC LORI SIDE COLLECTOR

EDRC	1357 bbls/day-per side-Total 2,714
Pump capacity	440 gpm each DOP 250
Dimension	3'1""L X 7'7""W X 1'6""H
Weight	1100# total
Shipping	KATAHDIN
Location	Dry stored @ MSRC warehouse 14 Union Wharf, Portland, ME

Quantity	Component
2	Lori Side Collector w/DOP 250 pumps
2	boom arms
2	50' boom sections stowed on pallets
2	diesel/hydraulic power packs w/ custom hoses
2	50' x 4" lay flat discharge hose w/ reducers
1	job box

Operators Required	4
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Description

The LORI SIDE Collector System includes three bristle brush units, a side collector box, jib arm with float, collection boom and a Desmi DOP 250 off-loading pump. The side booms sweep oil into the collector boxes where recovered product is directed through a hydraulically operated Lori bristle aggregate which separates oil and debris from the water. Brush chains lift the recovered material to a receiving sump which feeds the collecting station by gravity.

Handling/Operation

The LORI LSC Side Collector system is a removable side mounted system specifically adapted to the KATAHDIN. When not in use the system is removed from the vessel and stored in the warehouse.

LSC LORI SIDE COLLECTOR, cont.



RO-CLEAN OIL MOP 260

EDRC	362 bbls/day
Pump capacity	53 gpm
Dimension	5'9"l x 2'8"w x 4' h
Weight	1022#
TSC	106 gallons
Shipping	Portable
Location	Dry stored @ MSRC warehouse 14 Union Wharf, Portland, ME

Quantity	Component
1	Oleophilic Rope Mop
1	diesel direct drive engine integrated in unit
2	floating rope guides

Operators Required	1
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Description

The OM 260 utilizes oleophilic rope mops in continuous loops which float on the surface, oil adheres to the mops and then is removed by passing through a wringer/drive roller system. The recovered oil drops into a holding sump for removal by transfer pump or vac truck. The OM 260 can work effectively in debris laden conditions, floating ice, shallow water and fast current.

Handling/Operation

The OM 260 Rope Mop, while useful when recovering lighter oils, is most effective recovering heavy oil. It can be deployed from a pier, the shore, or a response vessel.

RO-CLEAN OIL MOP 260, cont.



SADDLEBACK

Location	Berthed at Portland Pipeline Pier 1, S.Portland, ME		
Length	46 '	Beam	20' Draft 4'6"
Displacement	30 tons		
Engine	Single turbo-charged 325 Caterpillar diesel with dry exhaust		
Operating Range	12 hours at cruising speed; 60 hours at idle		
Cruising speed	7 knots		
Fuel Capacity	380 gallons at 95%		

Description

The SADDLEBACK is a highly versatile, self-propelled, steel work barge. It is currently fitted with the Desmi 250 Skimming system and A-TSB-3, ready for rapid response to a tland Harbor oil spill. The Saddleback has 2,500 cu.ft. of open deck space, 6,500 lbs of ard pull from a 4' towing bitt and a 10' x 12' pilot house.

Deck Equipment & accessories

- ♦ Boom arm attachment w/float, rigging & 50' x 27" boom
- ♦ Sea Crane—hydraulically operated; 5300# capacity at 10'extension
- ♦ Central hydraulic system with 28 gpm output @ 2,500 psi

Standard complement of marine electronics; including GPS, RADAR, depth sounder & marine radios



SKIM-PAK 1800 WEIR SKIMMER

Integrated Contingency Plan

EDRC	2,054 bbls/day
Pump capacity	328 gpm
Dimension	3'6"L X 2'1"W X 1'1"H
Weight	28#
Shipping	Portable
Location	Dry stored @ MSRC warehouse 14 Union Wharf, Portland, ME

Quantity	Component
1	Skimmer head
1	3" centrifugal diesel trash pump
50'	4" lay flat discharge hose
50'	3" non-flexible suction hose
1	control wand

Operators Required	1
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Description

The SKIM-PAK operates by allowing liquid to flow over a floating inlet gate. The gate performs as a weir and causes a flow of the surface liquids.

Handling/Operation

The SKIM-PAK 18000 is a high volume skimmer with limited wave tolerance for use in tanks, ponds, harbors, and vacuum trucks. The SKIM-PAK can be deployed from a response vessel, a dock or from shore.



UNIVERSAL POWER PAK

Model	STULTZ UNIVERSAL 4BT3, 9-P
Type	Diesel/Hydraulic/Compressed Air
Hydraulic output	42 gpm @ 2500 psi
Air Compressor	9.5 cfm
Dimensions	6' L x 4'6" W x 4'6"H
Weight	4430#
Quantity	2
Location	MSRC warehouse, 14 Union Wharf
Shipping	Mounted in a steel frame on wheeled dolly

Description

The Universal Power Pack supplies the hydraulic power to drive the Desmi and Sea Devil Skimmers. It also houses an air compressor for adjusting the weir. This power pack is designed for simultaneous operation of 4 pieces of response equipment.



VIKOMA KOMARA SKIMMERS

	30K	12K
EDRC	905 bbls/day	362 bbls/day
Pump capacity	396 gpm	77 gpm
Dimensions	4'6" diameter X 2'2"H	4' diameter X 1'6"H
Weight	220#	123#
Shipping	Portable	Portable
Location	Dry stored @ MSRC warehouse 14 Union Wharf, Portland, ME	
Quantity	Component	
1 each	Oleophilic disc skimmer	
1 each	Diesel/Hydraulic power pak w/diaphragm transfer pump	
1 each	Job box	
2 sets of 4	50' x 3/8" hydraulic hoses	
2 x 50'	4" suction hose	3" suction hose
2 x 50'	4" layflat discharge hose	3" layflat discharge hose
Operators Required	2	

Description

The VIKOMA Skimmers incorporate 36 pick-up discs rotating within a floating head. Hydraulic drive is supplied by a diesel power pack which houses the suction pump for transferring recovered oil. Oil adhering to the rotating discs is scraped off into the oil collection sump and pumped to a recovery tank. All fluid floating oil of any viscosity will adhere to the rotating discs.

Handling/Operation

The KOMARA 30K and 12K are portable oil skimmers which can be deployed from a response vessel, a dock or from shore.

VIKOMA KOMARA 12K & 30K SKIMMERS/ POWER PACKS



VIKOMA SEA DEVIL

EDRC	2,290 bbls/day
Pump capacity	334 gpm
Dimensions	7'4" L X 4.5' W X 2.9' H
Weight	734#
Location	Pre-staged on board MSRC 620 barge berthed at PPLC Pier 1, S,Portland, ME

Quantity	Components
1	Sea Devil disc/weir skimmer head
1	Diesel/Hydraulic power pak
1	Integrated Desmi DS250 Archimedes screw pump
1	Sea Devil Control Stand
5	50' x 3/8" hydraulic hoses
1	4" x 50' hard discharge hose

Operators Required	2
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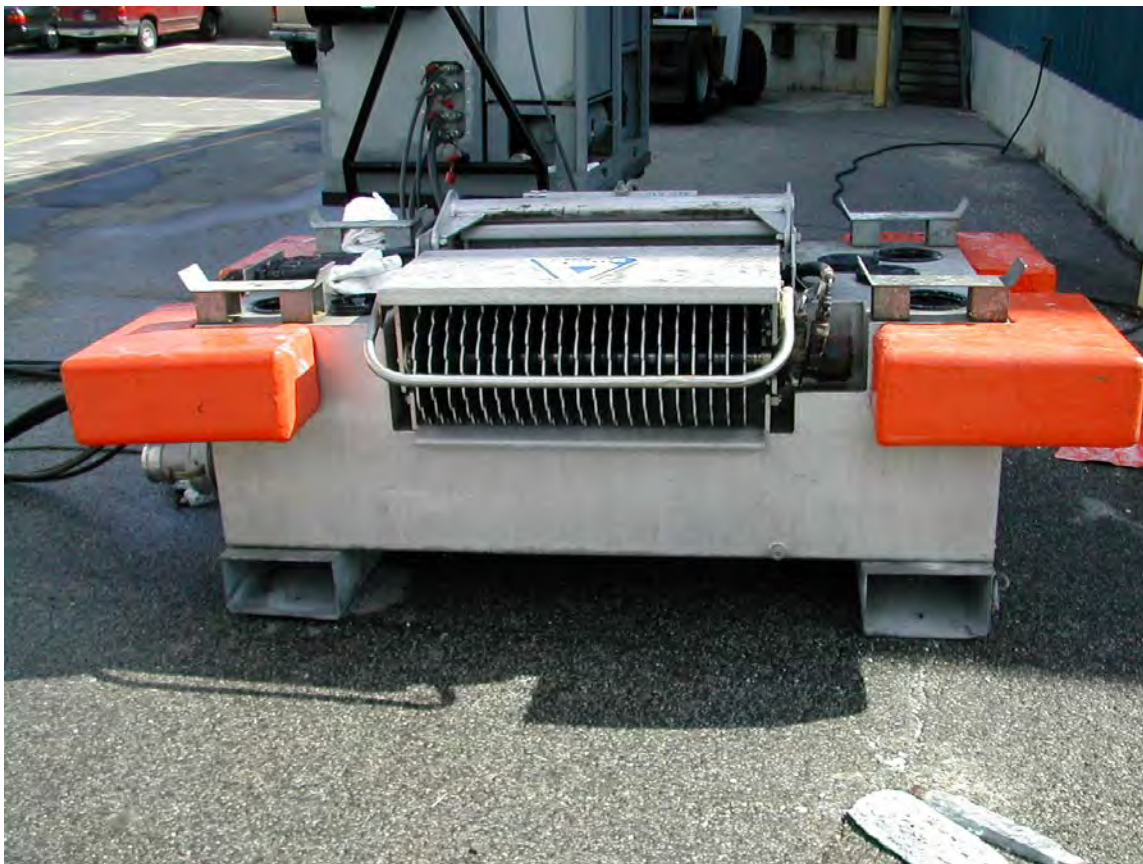
Description

The Sea Devil has two banks of 21 hydraulically driven, star shaped discs that claw heavy oil into the center of the skimmer. The recovered oil is transferred to temporary storage by a vertical Archimedes screw pump. The Sea Devil's disc banks are hinge-mounted to allow large floating debris to pass through the skimmer without impeding oil recovery.

Handling/Operation

The Sea Devil is a high volume skimmer designed for use in recovering debris laden heavy oil. It can be deployed from a response vessel into a boom configuration, or from a pier or shore in relatively shallow water.

VIKOMA SEA DEVIL, cont.



CLEAN HARBORS ENVIRONMENTAL SERVICES **Letter of Commitment to Respond** **Equipment and Resources**



17 Main Street
South Portland, ME 04106
207.799.8111
Fax 207.799.0349
www.cleanharbors.com

August 29, 2012

Nick Payeur
Portland Pipeline Corporation
30 Hill Street
P.O. Box 2590
South Portland, ME 04106

Dear Nick:

Pursuant to our conversation, I am writing this letter to inform you that Clean Harbors Environmental Services, Inc. will provide emergency response services. Clean Harbors is one of the Nation's leading environmental service companies, along with being recognized as New England's premier emergency response contractor.

Our Bangor and South Portland, Maine locations are staffed with expert emergency response personnel, including Health and Safety professionals, Field Chemists and Engineers. These two locations ensure an expeditious response time for incidents throughout the State of Maine. Both locations are thoroughly equipped for incidents requiring EPA Personal Protection Levels "D" through "B". Level "A" can be obtained through our Weymouth, MA. office.

Our local resources in South Portland, Maine can respond to an emergency in the Portland area within 2 hours. For other support we can have resources from our Bangor office in 3-4 hours as well as our Weymouth, MA and Bow, N.H. offices within 4 hours.

Emergency services will be provided at the request of, or under the direction of, an authorized representative, on a time and material basis in accordance with our prevailing rates.

Our 24-hour emergency response phone number is 207-799-8111 or 1-800-OIL-TANK. We appreciate your business and look forward to servicing you in the future. Should you have any further questions please feel free to call.

Sincerely,

A handwritten signature in black ink, appearing to read "Matthew A. Quinn", is written over a horizontal line.

Matthew A. Quinn
General Manager

 *"People and Technology Creating a Better Environment"*

SOUTH PORTLAND, ME SERVICE CENTER 17 Main Street South Portland, ME 04106	43.64 N 70.29 W	24-Hr. # 207.799.8111 24-Hr. # 800.645.8265 Fax # 207.799.0349
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Matt Quinn, General Manager

EPA / Federal ID #:

N/A

Personnel Authorized to release equipment / materials / manpower, etc:

Matt Quinn
Jack Vallely
Ken Burbank

40-Hour OSHA Trained Personnel:

Supervisor	6
Foreman	6
Field Technician	12
Equipment Operator	11
Site Safety Officer	1

Equipment List							
Item Description / Manufacturer	Location	Capacity / Size / Key Features	# of Units	A	T	P	D
(1) Vessels & Marine Support Equipment							
Power Workboat, Workskiff	South Portland	21', 115HP, V329	1	Y	Y	N	N
Power Workboat, Pointer	South Portland	21', 120 HP, ME 207SY, V120	1	Y	Y	N	N
Jon Boat w/ Motor, Alumaline	South Portland	12', 9.9 HP, ME 107CH, V201	1	Y	Y	N	N
Jon Boat w/ Motor	South Portland	12', 5 HP, SEAP7313M84G	1	Y	Y	N	N
Power Workboat, Trailboss	South Portland	20', 30 HP, ME10ZMM, V148	1	Y	Y	N	N
Power Workboat, Monarch	South Portland	22', 150 HP, ME 10ZML, V107	1	Y	Y	N	N
Power Workboat, Alumaline	South Portland	21', 130 HP, ME 2228Z, V201	1	Y	Y	N	N
(2) Motor Vehicles & Vacuum Equipment							
Vacuum Truck Straight	South Portland	3,000 gal.	2	Y	Y	N	N
Vacuum Split Trailers	South Portland	6,000 gal	1	Y	Y	N	N
Vacuum Trailer	South Portland	6,000 gal	3	Y	Y	N	N
High Powered Vacuum Loader, Cusco	South Portland	3,000 gal / 10 cu. yd.	1	Y	Y	N	N
Vacuum Skid	South Portland	3,000 gal	1	Y	Y	N	N
Vacuum Skid	South Portland	300 gal	1	Y	Y	N	N
Box Trailer	South Portland	40'	2	Y	Y	N	N
Box Truck	South Portland	10 wheel	1	Y	Y	N	N
Crew Cab Pickup	South Portland	F250	9	Y	Y	N	N
Frac Tanks	South Portland	20,000 gal	4	Y	Y	N	N
Drop Deck Trailer	South Portland	Roll Off Capable	1	Y	Y	N	N
Roll Off Trailer	South Portland	17 Yards	1	Y	Y	N	N
Tag along Trailer	South Portland		1	Y	Y	N	N
Spill Trailer	South Portland		1	Y	Y	N	N
10 Wheel Dump Truck	South Portland	10 yards	1	Y	Y	N	N
Roll Off Truck	South Portland	15 Yards	1	Y	Y	N	N
6 Wheel Dump Truck	South Portland	6 Yards	1	Y	Y	N	N

Equipment List Cont.					
Item Description / Manufacturer	Location	Capacity / Size / Key Features	# of Units	A	T P D
(3) Pumps and Pressure Equipment					
Wilden Diaphragm Pump	South Portland	2"	2	Y	Y N N
Wilden Diaphragm Pump	South Portland	2" Chemical	1	Y	Y N N
Wilden Diaphragm Pump	South Portland	3"	1	Y	Y N N
Adaps Hydraulic Pump	South Portland	4"	3	Y	Y N N
Bowie Pump (Hydraulic)	South Portland	3"	1	Y	Y N N
Hotsy on Trailer	South Portland	2,500 PSI	3	Y	Y N N
Lamor Hydraulic Pump	South Portland	3"	1	Y	Y N N
(4) Oil Spill Containment Booms					
Oil Containment Boom	South Portland	Global 14", In Water	2000	Y	Y N N
Oil Containment Boom	South Portland	American Marine 24", In Water at Sprague	2500	Y	Y N N
Oil Containment Boom	South Portland	Global 14", In Water	3400	Y	Y N N
Oil Containment Boom	South Portland	American Marine 18", In Van	19500	Y	Y N Y
Oil Containment Boom	South Portland	Global 24", In Water	1100	Y	Y N N
(5) Environmental Monitoring Equipment					
HNU Meter	South Portland	P101	1	Y	Y N N
MSA Gas Indicator	South Portland	Miniguard II	4	Y	Y N N
4-Gas/Passport Meter	South Portland	LEL, O2, Hyd. Sulf.	2	Y	Y N N
(6) Recovery Equipment					
Portable Tanks	South Portland	400 gallon Poly	2	Y	Y N N
Sea Slug Towable Fuel Bladder	South Portland	Model #FCB-43E, 4300 gallons	1	Y	Y N N
Disc Skimmer, Elastec	South Portland	ORD, 3", 50 GPM, 204195, S200	1	Y	Y N Y
Drum Skimmer, Crucial	South Portland	TDS118, 3", 35 GPM, TDS11899336, S214	1	Y	Y N Y
(7) Beach or Earth Cleaning and Excavating Equipment					
Excavator, CAT	South Portland	235 Track	1	Y	Y N N
Backhoe, CAT	South Portland	436	1	Y	Y N N
Bobcat	South Portland	843, Skidsteer	1	Y	Y N N
(8) Generators / Compressors / Light Towers					
Sullair Portable Compressor	South Portland	185 CFM; Diesel	3	Y	Y N N
Generator	South Portland	120 watt	3	Y	Y N N
(9) Health and Safety Equipment					
CSE Entry Gear	South Portland	Tripod, DBI	2	Y	Y N N
Coppus Blower	South Portland		2	Y	Y N N
Coppus Blower	South Portland	Electric	2	Y	Y N N
Supplied Air packs	South Portland	Scott	6	Y	Y N N
Breathing Air Tanks	South Portland		20	Y	Y N N

Equipment List Cont.				
Item Description / Manufacturer	Location	Capacity / Size / Key Features	# of Units	A T P D
(10) Communications				
Portable marine radios	South Portland		7	Y Y N N
Base Marine Radio	South Portland		1	Y Y N N
2-way Mobile Radios	South Portland	Nextel	27	Y Y N N
Company Base Radio	South Portland	Nextel	1	Y Y N N
(11) Miscellaneous				
Emergency Response Subcontractors				

Portland Tugboat & Ship Docking Co., Inc. Contact:

P.O. Box 15049

Portland, Maine 04112

(207) 774-2902

(207) 773-5659

Services Provided:

Tug Boat Services

Winslow Tugs

26 Andrews Avenue

Falmouth, Maine 04105

(207) 780-8847

Services Provided:

Tug Boat Services

General Marine Constructors

Deaks Wharf

Portland, ME 04101

(207) 772-5354

Services Provided:

Barge and tug boat

Industrial Welding & Machine, Inc.

430 Commercial Street - P.O. Box 1004

Portland, Maine 04104

(207) 773-8482

(207) 767-3561 Nights and Holidays

Services Provided:

Welding service

National Response Corp

P.O. Box 7210

Portland, Maine 04112

(207) 767-7112

Services Provided:

Barge skimmer Service

Marine Spill Response Corp.

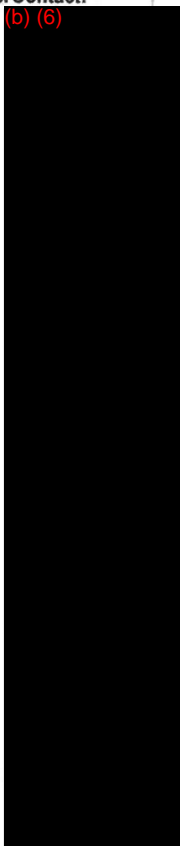
14 Union Wharf

Portland, Maine 04101

(207) 780-8801

Services Provided:

Large boat , skimmer service



BANGOR, ME SERVICE CENTER	44.78 N 68.81 W	24-Hr #	207.262.9504
40B Carey Circle		24-Hr #	800.645.8265
Hampden, ME 04444		Fax #	207.262.9560

Jeff Small, General Manager
Jason Babbidge, Field Specialist

EPA / Federal ID #: N/A

Personnel Authorized to release equipment / materials / manpower, etc:

(b) (6)

40-Hour OSHA Trained Personnel:

(b) (6)

2
5
5
7

Equipment List					
Item Description / Manufacturer	Location	Capacity / Size / Key Features	# of Units	A	T P D
(1) Vessels & Marine Support Equipment					
Utility Workboat, Pointer	Bangor	115 HP, 21', 8" Beam, 2' Draft, ME1408V, V124 (PVT20784D787)	1	Y	Y N N
Utility Workboat, Pointer	Searsport	175 HP V350	1	Y	Y N N
Jon Boats	Bangor	16 ft (3) 14 ft (1) V390, V372, V379, V391	4	Y	Y N N
(2) Motor Vehicles & Vacuum Equipment					
Stake Body / Utility Truck	Bangor	6 wheel 5253	1	Y	Y N N
Crew Cab Pickup	Bangor	4x4 8921, 8652, 8779	3	Y	Y N N
Dump truck 1 ton	Bangor	4x4 3yrd dump ch5412 5412	1	Y	Y N N
Crew Cab Pickup	Bangor	3/4 Ton 8771, 8644, 8903	3	Y	Y N N
Pressvac, High Power Vacuum Truck	Bangor	250 GPM, 3000 Gal Capacity 4185	1	Y	Y N N
Vacuum Trailer	Bangor	5,000 Gal Capacity 333	1	Y	Y N N
Tractor power unit	Bangor	Tandem 1497	1	Y	Y N N
Tractor power unit	Bangor	Tandem	1	Y	Y N N
Vacuum Truck	Bangor	3,000 Gal Capacity 4109	1	Y	Y N N
(3) Pumps and Pressure Equipment					
Hotsy Pressure Washer	Bangor	3,000 PSI - trailer mounted	1	Y	Y N N
Wilden Diaphragm Pump	Bangor	2" Oil	5	Y	Y N N
Wilden Diaphragm Pump	Bangor	3" Oil	1	Y	Y N N
Air Driven Drum Pump	Bangor	2" Air Driven	2	Y	Y N N
Hotsy Pressure Washer	Bangor	3000 psi	2	Y	Y N N
(4) Oil Spill Containment Booms					
Oil Containment Boom	Bangor	Langelman 18" (10ft trailer)	1000	Y	Y N Y
Oil Containment Boom	Bangor	14"	500	Y	Y N Y
(5) Environmental Monitoring Equipment					
Drager Pump	Bangor	with Miscellaneous Tubes	1	Y	Y N N
Passport 5 gas meter	Bangor		3	Y	Y N N
(6) Recovery Equipment					
Portable Tanks	Bangor	300 Gallons Stainless Steel	2	Y	Y N N
Portable Tanks	Bangor	275 Gallon Poly tote	2	Y	Y N N
Skid Mount Vacuum Unit	Bangor	1000 gallon CH213	1	Y	Y N N

Equipment List Cont.					
Item Description / Manufacturer	Location	Capacity / Size / Key Features	# of Units	A	T P D
(7) Beach or Earth Cleaning and Excavating Equipment					
(8) Generators / Compressors / Light Towers					
Sullair Compressor	Bangor	Diesel 185 cfm	1	Y	Y N N
Generator	Bangor	Honda 2500 watt	1	Y	Y N N
Light Towers	Bangor	Electric 4' high	1	Y	Y N N
(9) Health and Safety Equipment					
Portable Eye Wash Unit	Bangor		1	Y	Y N N
Scott Supplied Air System	Bangor		3	Y	Y N N
Scott Pak	Bangor		2	Y	Y N N
Rogiss & Tripod	Bangor		2	Y	Y N N
Safety Harness	Bangor		12	Y	Y N N
DBI & Tripod	Bangor		2	Y	Y N N
(10) Communications					
Cellular Phones	Bangor		11	Y	Y N N
Marine Base Station	Searsport		1	Y	Y N N
(11) Miscellaneous					
Emergency Response Subcontractors					

Subcontractor Name	Contact:	Services Provided:
Address 1		
Address 2		
Phone #		
Subcontractor Name	Contact:	Services Provided:
Address 1		
Address 2		
Phone #		
Subcontractor Name	Contact:	Services Provided:
Address 1		
Address 2		
Phone #		
Subcontractor Name	Contact:	Services Provided:
Address 1		
Address 2		
Phone #		

BOSTON, MA AREA SERVICE CENTER
609 Pleasant Street
Weymouth, MA 02189

42.19 N 70.93 W

24-Hr. # 781.803.4100
24-Hr. # 800.645.8265
Fax # 781.803.4168

(b) (6)

EPA / Federal ID #:

N/A

Personnel Authorized to release equipment / materials / manpower, etc:

(b) (6)

40-Hour OSHA Trained Personnel:

Supervisor	10
Foreman	20
Equipment Operator	23
Field Technician	25

Equipment List							
Item Description / Manufacturer	Location	Capacity / Size / Key Features	# of Units	A	T	P	D
(1) Vessels & Marine Support Equipment							
Power Workboat, Hanko	Weymouth	24', 150HP, RI 0303 CH, V303	1	Y	Y	N	N
Power Workboat, Carolina Skiff	Weymouth	21', 88HP, MS 2027 B, V158	1	Y	Y	N	N
Power Workboat, Minncraft	Weymouth	16', 25HP, MS 9181 KB, V156	1	Y	Y	N	N
Power Workboat, Sylvan	Weymouth	14', 9.9HP, MS 7121 AA, V206	2	Y	Y	N	N
Power Workboat, Seasquirt	Weymouth	18', 25HP, MS 5383 AC, V161	1	Y	Y	N	N
Workboat, Star Craft	Weymouth	14', No Motor, MS 6455 AP, V155	2	Y	Y	N	N
(2) Motor Vehicles & Vacuum Equipment							
Vacuum Tractor Trailers	Weymouth	4,000/5,000/6,000 gals	8	Y	Y	N	N
High Powered Vacuum Truck/Cusco	Weymouth		6	Y	Y	N	N
Cyclone Vactor/Guzzler	Weymouth		4	Y	Y	N	N
Vactor (Jet Rodder)	Weymouth		2	Y	Y	N	N
Vacuum Trucks S.S.	Weymouth	3,000 & 3,500 gals	5	Y	Y	N	N
Box Truck- Prime Mover	Weymouth	81 International	1	Y	Y	N	N
Straight Box Trucks	Weymouth	Ford	1	Y	Y	N	N
Frac Tanks	Weymouth	22,500 gallons	6	Y	Y	N	N
Rack Truck	Weymouth	5151, 5142, 552	3	Y	Y	N	N
10 Wheel Dump Truck	Weymouth	5252	1	Y	Y	N	N
6 Wheel Dump Truck	Weymouth	5403	1	Y	Y	N	N
Trailer (Lowboy)	Weymouth	50 TON	1	Y	Y	N	N
Crew Cab Pickup	Weymouth	Various Models	27	Y	Y	N	N
Roll-off frames	Weymouth	463, 4131	4	Y	Y	N	N