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NAVIGATION AND VESSEL INSPECTION CIRCULAR NO. 01-05

Subj: INTERIM GUIDANCE FOR THE DEVELOPMENT AND REVIEW OF RESPONSE PLANS FOR NONTANK VESSELS

Ref: (a) Section 701 of Coast Guard and Marine Transportation Act of 2004 (Pub. L. 108-293)
(b) Title 33, Code of Federal Regulations, Part 155, Subpart D – Response Plans

1. PURPOSE. This circular provides guidance to owners and operators of nontank vessels for preparing and submitting plans for responding to a discharge or threat of a discharge of oil from their vessels. A nontank vessel is defined as a self-propelled vessel of 400 gross tons or greater, other than a tank vessel, that carries oil of any kind as fuel for main propulsion and that is a vessel of the United States or that operates on the navigable waters of the United States. For the purpose of this document, “navigable waters of the United States” is defined in 33 C.F.R. 2.36(b)(1).

2. ACTION.

a. Section 701(c) of the Coast Guard and Marine Transportation Act of 2004 (Pub. L. 108-293) (2004 Act) requires that nontank vessel response plans be prepared and submitted to the Coast Guard no later than one year after the date of enactment of the act (i.e., by August 8, 2005). Plans must be submitted to:

Commandant (G-MOR-2)
U.S. Coast Guard, Room 2100
2100 Second Street SW.,
Washington, DC 20593-0001
Attn: VRP Programs

b. This NVIC is available on the World Wide Web at www.uscg.mil/hq/g-m/nvic/. Within the Coast Guard, it will be distributed by electronic means only.

3. DIRECTIVES AFFECTED. None.

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4. BACKGROUND. On August 9, 2004, the President signed the 2004 Act. Sections 701(a) and (b) of the 2004 Act amend sections 311(a) and (j) of the Federal Water Pollution Control Act (FWPCA) ([33 U.S.C. 1321\(a\) and \(j\)](#)) to require the Coast Guard to issue regulations that require an owner or operator of a nontank vessel to prepare and submit to the Coast Guard a plan for responding, to the maximum extent practicable, to a worse case discharge, and to a substantial threat of such a discharge, of oil. Section 701(c) of the 2004 Act requires that these response plans be prepared and submitted to the Coast Guard no later than one year after the date of enactment of the 2004 Act (i.e., by August 8, 2005).
5. DISCUSSION.
 - a. The Coast Guard intends to issue regulations as required by the 2004 Act. However, given the statutory deadline of August 8, 2005, for submitting these plans, and the length of time necessary to develop and publish regulations, the Coast Guard is providing this interim guidance to help owners and operators begin the process of developing these plans. Until regulations are in effect, the Coast Guard may authorize a nontank vessel to operate without an approved response plan until two years after the date of submission to the Coast Guard of a plan under [33 U.S.C. 1321\(j\)\(5\)\(G\)](#) if the owner or operator certifies that the owner or operator has ensured by contract or other means approved by the Coast Guard the availability of private personnel and equipment necessary to respond, to the maximum extent practicable, to a worst case discharge or a substantial threat of such a discharge. Under [33 U.S.C. 1321\(j\)\(5\)\(D\)](#), a response plan must —
 - (1) Be consistent with the requirements of the National Contingency Plan and Area Contingency Plans;
 - (2) Identify the qualified individual having full authority to implement removal actions, and require immediate communications between that individual and the appropriate Federal official and the persons providing personnel and equipment pursuant to paragraph (3) below;
 - (3) Identify and ensure by contract or other means approved by the Coast Guard the availability of private personnel and equipment necessary to remove to the maximum extent practicable a worst case discharge (including a discharge resulting from fire or explosion), and to mitigate or prevent a substantial threat of such a discharge;
 - (4) Describe the training, equipment testing, periodic unannounced drills, and response actions of persons on the vessel, to be carried out under the plan to ensure the safety of the vessel and to mitigate or prevent the discharge, or the substantial threat of a discharge;
 - (5) Be updated periodically; and
 - (6) Be resubmitted for approval of each significant change.
 - b. In the event regulations are not in effect on August 9, 2005, the Coast Guard may issue a two year authorization letter authorizing a nontank vessel to operate without an approved response plan if the plan submitted meets the requirements of paragraph 5.a. above. Because the Coast Guard expects to receive a large number of response plans, it may be unable to review, by August 9, 2005, all of the plans in the detail sufficient for a two year

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authorization letter. In order to avoid a disruption in vessel operations, the Coast Guard may issue an interim authorization letter until its detailed review is complete. However, it may still take up to one month to issue an interim authorization letter. Therefore, to avoid a disruption of operation, the Coast Guard encourages vessel owners and operators to submit their response plans as soon as possible. Until superseded by regulations, nontank vessels must have a valid interim authorization letter or valid authorization letter in order to operate on or after August 9, 2005.

6. DISCLAIMER.

- a. Except as required by statute as discussed in paragraph 5.a. above, this document is intended only to provide guidance to industry for preparing response plans. While the guidance contained in this document may assist the industry, public, Coast Guard, and other Federal and State regulators in applying statutory and regulatory requirements, the guidance is not a substitute for applicable legal requirements nor is it a regulation itself. Thus, it is not intended to nor does it impose legally-binding requirements on any party, including the Coast Guard, other Federal agencies, the States, or the regulated community.
1. b. This document does not bind the Coast Guard in any way in developing regulations. A response plan that complies with this guidance may ultimately not comply with the regulations, once issued. In which case, the plan may require revision by the vessel owner or operator to comply with the regulations.

7. FORMS/REPORTS. None.



T. H. GILMOUR
Rear Admiral, U.S. Coast Guard
Assistant Commandant for Marine Safety, Security
and Environmental Protection

Enclosure: (1) Nontank Vessel Response Plan Preparation Guidance

Enclosure (1) to NVIC 01-05

INTERIM GUIDANCE FOR THE DEVELOPMENT AND REVIEW OF RESPONSE PLANS
FOR NONTANK VESSELS

NONTANK VESSEL RESPONSE PLAN PREPARATION GUIDANCE

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Enclosure (1) to NVIC 01-05

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NONTANK VESSEL RESPONSE PLAN PREPARATION GUIDANCE

Section 1 Summary.

This interim guidance for the development of Nontank Vessel Response Plans parallels existing regulations for Tank Vessel Response Plans found in [33 CFR 155](#).

For the purpose of this document, sections of [33 CFR 155](#) have been modified to apply to Nontank Vessel Response Plans. The sections predominantly modified are:

- (a) *§155.1015 Applicability*: The term “nontank vessels” was added to the applicability section while the exemptions regarding offshore supply vessels and fishing vessels 400 gross tons and greater were removed. Further, an exemption addressing nontank vessels not carrying oil of any kind was introduced.
- (b) *§155.1020 Definitions*: Definitions for “nontank vessel” and “fuel” were added, while the definitions for “average most probable discharge,” “maximum most probable discharge,” and “worst case discharge” were modified to include fuel capacity. A provision stating that “fuel and recovered oil” is excluded from the definition of cargo was inserted.
- (c) *§155.1025 Operating restrictions and interim operating authorization*: “Fuel” was included where “cargo” was used.
- (d) *§155.1030 General response plan requirements*: Nontank vessels 400 gross tons and greater were included, as well as “fuel” where the term “cargo” is used.
- (e) *§155.1035 Response plan requirements for manned vessels carrying oil as a primary cargo*: Nontank vessels 400 gross tons and greater were included, while the limitation to oil carried as cargo was removed so that oil carried as fuel is included.
- (f) *§155.1045 Response plan requirements for vessels carrying oil as a secondary cargo*: Applicability was limited to vessels less than 400 gross tons.
- (g) *§155.1050 Response plan development and evaluation criteria for vessels carrying groups I through IV petroleum oil as a primary cargo*: All nontank vessels carrying groups I through IV petroleum oil as fuel should identify in the response plan and ensure the availability of, through contract or other approved means:
 - (1) The response resources that would respond to a discharge up to the vessel's average most probable discharge, plus salvage resources;
 - (2) The response resources necessary to respond to a discharge up to the vessel's maximum most probable discharge volume, plus salvage and lightering resources, **for vessels with a capacity of 250 barrels or more**; and
 - (3) The response resources necessary to respond to discharges up to the Tier 1 worst case discharge volume of the oil to the maximum extent practicable, plus salvage, firefighting and lightering, **for vessels with a capacity of 2,500 barrels or more**.

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- (h) *§155.1052 Response plan development and evaluation criteria for vessels carrying group V petroleum oil as a primary cargo:* Nontank vessels carrying group V petroleum oil as fuel was added. Additionally, nontank vessels with a capacity of 2,500 barrels or more, carrying group V petroleum oil as fuel, should be required to provide information in their plan that identifies:
- (1) Procedures and strategies for responding to discharges up to a worst case discharge of group V petroleum oils to the maximum extent practicable; and
 - (2) Sources of the equipment and supplies necessary to locate, recover, and mitigate such a discharge.

These same vessels should also identify in the response plan and ensure, through contract or other approved means, the availability of required equipment, including:

- (1) Sonar, sampling equipment, or other methods for locating the oil on the bottom or suspended in the water column;
- (2) Containment boom, sorbent boom, silt curtains, or other methods for containing oil that may remain floating on the surface or to reduce spreading on the bottom;
- (3) Dredges, pumps, or other equipment necessary to recover oil from the bottom and shoreline; and
- (4) Other appropriate equipment necessary to respond to a discharge involving the type of oil carried.

Furthermore, nontank vessels with a capacity of 2,500 barrels or more, carrying group V petroleum oil as fuel, should identify in the response plan and ensure the availability of certain resources required by *Sec. 155.1035(c)(5)(ii)* and *155.1040(c)(5)(i)*, as applicable, through contract or other approved means. Resources should include:

- (1) Fendering equipment;
- (2) Transfer hoses and connection equipment; and
- (3) Portable pumps and ancillary equipment necessary to offload the vessel's largest cargo tank in 24 hours of continuous operation.

Resources should be capable of reaching the locations in which the vessel operates within the stated times following notification:

- (1) Inland, nearshore, and Great Lakes waters—12 hours.
- (2) Offshore waters and rivers and canals—18 hours.
- (3) Open ocean waters—36 hours.

Section 2 Purpose.

The purpose of this guidance is to recommend procedures for the development of oil spill response plans for nontank vessels. The planning criteria identified should be used in developing the plan and identifying the resources necessary for responding to various spills. The specific criteria for response resources and their arrival times should not be performance standards. They should be planning criteria based on a set of assumptions that may not exist during an actual oil spill incident. The owner or operator may deviate from the applicable response plan if the

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President or the Federal On-Scene Coordinator determines that deviation from the response plan would provide for a more expeditious or effective response to the spill or mitigation of its environmental effects.

The procedures in this guidance for developing oil spill response plans for nontank vessels parallel the procedures for the development of oil spill response plans for tank vessels found in title 33, Code of Federal Regulations, part 155 ([33 CFR part 155, subpart D](#)). The following sections should help point out the differences between the two.

Section 3 Applicability.

- (a) The guidance in this document applies to each self-propelled vessel of 400 gross tons as measured under [46 U.S.C. 14302](#) or greater, other than a tank vessel, that carries oil of any kind as fuel for main propulsion and that—
 - (1) Is a vessel of the United States; or
 - (2) Operates on the navigable waters of the United States.

- (b) Section 701(c) of the Coast Guard and Marine Transportation Act of 2004 (Pub. L. 108-293) does not exempt vessels that have not been issued an International Tonnage Certificate (ITC) under [46 U.S.C. 14302](#). Owners of vessels that have not been issued an ITC are advised that experience shows that a vessel's tonnage measurement under [46 U.S.C. 14502](#) is generally less than that of the same vessel's tonnage when measurements under [46 U.S.C. 14302](#). Therefore, vessels of or near 400 gross tons when measured under [46 U.S.C. 14502](#) may be subject to the response plan requirement. Disparities between the two measurement systems will be addressed during the rulemaking process.

- (c) This document does not apply to the following types of vessels:
 - (1) Public vessels and vessels deemed public vessels under [14 U.S.C. 827](#).
 - (2) Vessels of opportunity when conducting response operations in a response area.
 - (3) Foreign flag vessels engaged in innocent passage.
 - (4) Nontank vessels, which are constructed or operated in such a manner that no oil in any kind can be carried aboard as fuel for main propulsion.

- (d) Vessels of the United States covered by this document that are not operating within the navigable waters or the exclusive economic zone of the United States should meet all provisions of this document except for identifying and ensuring, through contract or other approved means, the availability of response resources and providing the geographic-specific appendices described in section 7, as appropriate.

Section 4 Definitions.

To help understand the meaning of terms used in this document, use definitions in [33 CFR 155.110](#) and [155.1020](#), except for the following terms:

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Average most probable discharge means a discharge of the lesser of 50 barrels of oil or 1 percent of the cargo and fuel from the vessel during oil transfer operations to or from the vessel.

Cargo means oil that is transported to and off-loaded at a destination by a vessel. It does not include—

- (1) Oil carried in integral tanks, marine portable tanks, or independent tanks for use by machinery, helicopters, and boats carried aboard the vessel, or for use by helicopters that are directly supporting the vessel's primary operations;
- (2) Oil transferred from a towing vessel to a vessel in its tow to operate installed machinery other than the propulsion plant;
- (3) Oil carried as fuel which may be used to supply power for the main propulsion system in the vessel in which it is carried; or
- (4) Oil recovered during spill response operation.

Fuel means oil of any kind, which may be used to supply power for the main propulsion system in the vessel in which it is carried.

Maximum most probable discharge means a discharge of—

- (1) 2,500 barrels of oil for vessels with an oil cargo and fuel capacity equal to or greater than 25,000 barrels; or
- (2) 10% of the vessel's oil cargo and fuel capacity for vessels with a capacity of less than 25,000 barrels.

Navigable waters of the United States means the navigable waters of the United States as defined in [33 CFR 2.36\(b\)\(1\)](#).

Nontank vessel means a self-propelled vessel of 400 gross tons as measured under section [14302 of title 46, United States Code](#), or greater, other than a tank vessel, that carries oil of any kind as fuel for main propulsion and that—

- (1) Is a vessel of the United States; or
- (2) Operates on the navigable waters of the United States.

Substantial threat of such a discharge means any incident involving a vessel that may create a significant risk of discharge of oil. Such incidents include, but are not limited to, groundings, strandings, collisions, hull damage, fire, explosion, loss of propulsion, flooding, on-deck spills, or other similar occurrences.

Worst case discharge means a discharge in adverse weather conditions of a vessel's entire oil cargo and fuel capacity.

Section 5 Contents of the plan: General provisions.

- (a) A response plan must, under [33 U.S.C. 1321\(j\)\(5\)\(D\)](#):
 - (1) Be consistent with the requirements of the National Contingency Plan and Area Contingency Plans;

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- (2) Identify the qualified individual having full authority to implement removal actions, and require immediate communications between that individual and the appropriate Federal official and the persons providing personnel and equipment pursuant to clause (3);
 - (3) Identify, and ensure by contract or other means approved by the President, the availability of private personnel and equipment necessary to remove to the maximum extent practicable a worst case discharge (including a discharge resulting from fire or explosion), and to mitigate or prevent a substantial threat of such a discharge;
 - (4) Describe the training, equipment testing, periodic unannounced drills, and response actions of persons on the vessel or at the facility, to be carried out under the plan to ensure the safety of the vessel or facility and to mitigate or prevent the discharge, or the substantial threat of a discharge;
 - (5) Be updated periodically; and
 - (6) Be resubmitted for approval of each significant change.
- (b) Additionally, the plan should follow the other general provisions in [33 CFR 1030](#), with the following exceptions:
- (1) The plan should cover all geographic areas of the United States in which the vessel would handle, store, or transport oil as fuel, including port areas and offshore transit areas.
 - (2) If the vessel owner or operator has more than one vessel, the plan may cover each class of vessel (i.e., manned vessels carrying oil as primary cargo and nontank vessels of 400 gross tons and greater, unmanned vessels carrying oil as primary cargo, and vessels carrying oil as secondary cargo), with a separate vessel-specific appendix for each vessel covered by the plan and a separate geographic-specific appendix for each Captain of the Port (COTP) zone in which the vessel(s) would operate.

Section 6 Contents of the plan: Specific Sections.

- (a) General information and introduction section. This section should include—
- (1) The vessel's name, country of registry, call sign, official number, and International Maritime Organization (IMO) international number (if applicable). If the plan covers multiple vessels, this information should be provided for each vessel;
 - (2) The name, address, and procedures for contacting the vessel's owner or operator on a 24-hour basis;
 - (3) A list of the COTP zones in which the vessel intends to handle, store, or transport oil;
 - (4) A table of contents or index of sufficient detail to permit personnel with responsibilities under the response plan to locate the specific sections of the plan; and
 - (5) A record of change(s) page to record information on plan reviews, updates or revisions.
- (b) Notification procedures section. This section should include the following information:
- (1) A checklist with all notifications, including telephone or other contact numbers, in order of priority to be made by shipboard or shore-based personnel and the information needed for those notifications. Notifications should include those required by—
 - (i) MARPOL 73/78 and [33 CFR part 153](#); and
 - (ii) Any applicable State.

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- (2) Identification of the person(s) to be notified of a discharge or substantial threat of a discharge of oil. If the notifications vary due to vessel location, the persons to be notified also should be identified in a geographic-specific appendix. This section should separately identify—
 - (i) The individual(s) or organization(s) to be notified by shipboard personnel; and
 - (ii) The individual(s) or organization(s) to be notified by shore-based personnel.
- (3) The procedures for notifying the qualified individual(s) designated by the vessel's owner or operator.
- (4) Descriptions of the primary and, if available, secondary communications methods by which the notifications would be made. These should be consistent with those in [33 CFR 155.1035\(b\) \(1\)](#).
- (5) The information that is to be provided in the initial and any follow up notifications under paragraph (b) (1) of this section.
 - (i) The initial notification may be submitted in accordance with IMO Resolution A648(16) "General Principles for Ship Reporting Systems and Ship Reporting Requirements" which is available through COMDT G-MSO-4, U.S. Coast Guard Headquarters, 2100 Second Street SW., Washington, DC 20593-0001. However the plan should specify that the notification include at least the following information:
 - (A) Vessel name, country of registry, call sign, and official number (if any);
 - (B) Date and time of the incident;
 - (C) Location of the incident;
 - (D) Course, speed, and intended track of vessel;
 - (E) Radio station(s) and frequencies guarded;
 - (F) Date and time of next report;
 - (G) Type and quantity of oil on board;
 - (H) Nature and detail of defects, deficiencies, and damage (e.g., grounding, collision, hull failure, etc.);
 - (I) Details of pollution, including estimate of oil discharged or threat of discharge;
 - (J) Weather and sea conditions on scene;
 - (K) Ship size and type;
 - (L) Actions taken or planned by persons on scene;
 - (M) Current conditions of the vessel; and
 - (N) Number of crew and details of injuries, if any.
 - (ii) The plan should state that after transmission of the initial notification as much information that is essential for the protection of the marine environment should be, as possible, reported to the appropriate on-scene coordinator in follow-up reports. This information should include—
 - (A) Additional details on the type of oil on board;
 - (B) Additional details on the condition of the vessel and ability to transfer cargo, ballast, and fuel;
 - (C) Additional details on the quantity, extent, and movement of the pollution and whether the discharge is continuing;
 - (D) Any changes in the on-scene weather or sea conditions; and
 - (E) Actions being taken with regard to the discharge and the movement of the ship.

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- (6) Identification of the person(s) to be notified of a vessel casualty potentially affecting the seaworthiness of a vessel and the information to be provided by the vessel's crew to shore-based personnel to facilitate the assessment of damage stability and stress.
- (c) Shipboard spill mitigation procedures section. This section of the plan should include—
- (1) Procedures for the crew to mitigate or prevent any discharge or a substantial threat of a discharge of oil resulting from shipboard operational activities associated with internal or external oil transfers. Responsibilities of vessel personnel should be identified by job title. These procedures should address personnel actions in the event of a—
 - (i) Transfer system leak;
 - (ii) Tank overflow; or
 - (iii) Suspected cargo tank, fuel tank, or hull leak;
 - (2) Procedures in the order of priority for the crew to mitigate or prevent any discharge or a substantial threat of a discharge in the event of the following casualties or emergencies:
 - (i) Grounding or stranding;
 - (ii) Collision;
 - (iii) Explosion or fire, or both;
 - (iv) Hull failure;
 - (v) Excessive list; and
 - (vi) Equipment failure (e.g., main propulsion, steering gear, etc.);
 - (3) Procedures for the crew to deploy discharge removal equipment contained in [33 CFR part 155, subpart B](#);
 - (4) The procedures for internal transfers of cargo and fuel in an emergency;
 - (5) The procedures for ship-to-ship transfers of cargo and fuel in an emergency:
 - (i) The format and content of the ship-to-ship transfer procedures should be consistent with the “Ship to Ship Transfer Guide (Petroleum)” published jointly by the International Chamber of Shipping and the Oil Companies International Marine Forum (OCIMF).
 - (ii) The procedures should identify the response resources necessary to carry out the transfers, including—
 - (A) Fendering equipment (ship-to-ship only);
 - (B) Transfer hoses and connection equipment;
 - (C) Portable pumps and ancillary equipment;
 - (D) Lightering or fuel removal and mooring masters (ship-to-ship only); and
 - (E) Vessel and barge brokers (ship-to-ship only).
 - (iii) Reference may be made to a separate oil transfer procedure and lightering plan carried aboard the vessel, if safety considerations are summarized in the plan.
 - (iv) The location of all equipment and fittings, if any, carried aboard the vessel to perform the transfers should be identified;
 - (6) The procedures and arrangements for emergency towing, including the rigging and operation of any emergency towing equipment, including that contained in [33 CFR 155, subpart B](#);
 - (7) The location, crew responsibilities, and procedures for use of shipboard equipment that might be carried to mitigate an oil discharge;

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- (8) The crew responsibilities, if any, for recordkeeping and sampling of spilled oil. Any provisions for sampling should address safety procedures to be followed by the crew;
 - (9) The crew's responsibilities, if any, to initiate a response and supervise shore-based response resources;
 - (10) Damage stability and hull stress considerations when performing shipboard mitigation measures. This section should identify and describe—
 - (i) Activities in which the crew is trained and qualified to execute absent shore-based support or advice; and
 - (ii) The information to be collected by the vessel's crew to facilitate shore-based assistance; and
 - (11)
 - (i) Location of vessel plans necessary to perform salvage, stability, and hull stress assessments. The owner or operator should ensure that a copy of these plans are maintained ashore by either the vessel owner or operator or the vessel's recognized classification society, unless the vessel has prearranged for a shore-based damage stability and residual strength calculation program with the vessel's baseline strength and stability characteristics pre-entered. The response plan should indicate the shore location and 24-hour access procedures of the calculation program or the following plans:
 - (A) General arrangement plan.
 - (B) Midship section plan.
 - (C) Lines plan or table of offsets.
 - (D) Tank tables.
 - (E) Load line assignment.
 - (F) Light ship characteristics.
 - (ii) The plan should identify the shore location and 24-hour access procedures for the computerized, shore-based damage stability and residual structural strength calculation programs contained in [33 CFR 155.240](#).
- (d) Shore-based response activities section. This section of the response plan should include the following information:
- (1) The qualified individual's responsibilities and authority, including immediate communication with the Federal on-scene coordinator and notification of the oil spill removal organization(s) identified in the plan.
 - (2) If applicable, procedures for transferring responsibility for direction of response activities from vessel personnel to the shore-based spill management team.
 - (3) The procedures for coordinating the actions of the vessel owner or operator or qualified individual with the predesignated Federal on-scene coordinator responsible for overseeing or directing those actions.
 - (4) The organizational structure that would be used to manage the response actions. This structure should include the following functional areas and information for key components within each functional area:
 - (i) Command and control;
 - (ii) Public information;
 - (iii) Safety;
 - (iv) Liaison with government agencies;
 - (v) Spill response operations;

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- (vi) Planning;
 - (vii) Logistics support; and
 - (viii) Finance.
- (5) The responsibilities of, duties of, and functional job descriptions for each oil spill management team position within the organizational structure identified in paragraph (d) (4) of this section.
- (e) List of contacts section. The name, location, and 24-hour contact information for the following key individuals and organizations should be included in this section of the response plan or, if more appropriate, in a geographic-specific appendix and referenced in this section of the response plan:
- (1) Vessel owner or operator.
 - (2) Qualified individual and alternate qualified individual for the vessel's area of operation.
 - (3) Applicable insurance representatives or surveyors for the vessel's area of operation.
 - (4) The vessel's local agent(s) for the vessel's area of operation.
 - (5) Person(s) within the oil spill removal organization to notify for activation of that oil spill removal organization for the three spill scenarios identified in paragraph (i) (5) of this section for the vessel's area of operation.
 - (6) Person(s) within the identified response organization to notify for activating that organization to provide:
 - (i) The emergency lightering and fuel offloading contained in [33 CFR 155.1050\(l\)](#); and
 - (ii) The salvage and firefighting contained in [33 CFR 155.1050\(k\)](#), and [155.1052\(e\)](#).
 - (7) Person(s) to notify for activation of the spill management team for the spill response scenarios identified in paragraph (i) (5) of this section for the vessel's area of operation.
- (f) Training procedures section. This section of the response plan should contain training procedures and programs meeting [33 CFR 155.1055](#).
- (g) Exercise procedures section. This section of the response plan should contain an exercise program meeting [33 CFR 155.1060](#).
- (h) Plan review, update, revision, amendment, and appeal procedure section. This section of the response plan should contain—
- (1) The procedures to be followed by the vessel owner or operator to meet [33 CFR 155.1070](#); and
 - (2) The procedures to be followed for any post-discharge review of the plan to evaluate and validate its effectiveness.
- (i) Geographic-specific appendices for each COTP zone in which a vessel operates. A geographic-specific appendix should be included for each COTP zone identified. The appendices should include the following information or identify the location of this information within the plan:
- (1) A list of the geographic areas (port areas, rivers and canals, Great Lakes, inland, nearshore, offshore, and open ocean areas) in which the vessel intends to handle, store, or transport oil within the applicable COTP zone.

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- (2) The volume and group of oil on which the required level of response resources is calculated.
 - (3) Required Federal or State notifications applicable to the geographic areas in which a vessel operates.
 - (4) Identification of the qualified individuals.
 - (5) Identification of the oil spill removal organization(s) that are identified and ensured available, through contract or other approved means, and the spill management team to respond to the following spill scenarios, as applicable:
 - (i) Average most probable discharge.
 - (ii) Maximum most probable discharge.
 - (iii) Worst case discharge.
 - (6) The organization(s) identified to meet paragraph (i)(5) of this section should be capable of providing the equipment and supplies necessary to meet [33 CFR 155.1050](#) and [155.1052](#), as appropriate, and sources of trained personnel to continue operation of the equipment and staff the oil spill removal organization(s) and spill management team identified for the first 7 days of the response.
 - (7) The appendix should list the response resources and related information contained in [33 CFR 155.1050](#) and [155.1052](#), and Appendix A of this enclosure, as appropriate.
 - (8) If an oil spill removal organization(s) has been evaluated by the Coast Guard and their capability has been determined to equal or exceed the response capability desirable by the vessel, the appendix may identify only the organization and their applicable classification and not the information required in paragraph (i)(7) of this section.
 - (9) The appendix should also separately list the companies identified to provide the salvage, vessel firefighting, lightering, and if applicable, dispersant capabilities required in this subpart.
- (j) Appendices for vessel-specific information. This section should include for each vessel covered by the plan the following information, as applicable:
- (1) List of the vessel's principal characteristics.
 - (2) Capacities of all cargo, fuel, lube oil, ballast, and fresh water tanks.
 - (3) The total volume and groups of oil that would be involved in the--
 - (i) Maximum most probable discharge; and
 - (ii) Worst case discharge.
 - (4) Diagrams showing location of all tanks.
 - (5) General arrangement plan (can be maintained separately aboard the vessel providing the response plan identifies the location).
 - (6) Midship section plan (can be maintained separately aboard the vessel providing the response plan identifies the location).
 - (7) Cargo and fuel piping diagrams and pumping plan, as applicable (can be maintained separately aboard the vessel providing the response plan identifies the location).
 - (8) Damage stability data (can be maintained separately providing the response plan identifies the location).
 - (9) Location of cargo and fuel stowage plan for vessel (normally maintained separately aboard the vessel).
 - (10) Location of information on the name, description, physical and chemical characteristics, health and safety hazards, and spill and firefighting procedures for the oil cargo and fuel

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aboard the vessel. A material safety data sheet meeting the requirements of [29 CFR 1910.120](#), cargo information required by [33 CFR 154.310](#), or equivalent would meet this item. This information can be maintained separately.

Section 7 Response plan development for nontank vessels carrying groups I through IV petroleum oil as fuel.

- (a) The following criteria should be used to evaluate the operability of response resources identified in the response plan for the specified operating environment:
 - (1) Table 1 of Appendix A of this enclosure.
 - (i) The criteria in Table 1 of Appendix A of this enclosure are to be used solely for identification of appropriate equipment in a response plan.
 - (ii) These criteria reflect conditions used for planning purposes to select mechanical response equipment and are not conditions that would limit response actions or affect normal vessel operations.
 - (2) Limitations that are identified in the Area Contingency Plans for the COTP zones in which the vessel operates, including--
 - (i) Ice conditions;
 - (ii) Debris;
 - (iii) Temperature ranges; and
 - (iv) Weather-related visibility.
- (b) The COTP may reclassify a specific body of water or location within the COTP zone. Any reclassifications would be identified in the applicable Area Contingency Plan. Reclassifications may be to--
 - (1) A more stringent operating environment if the prevailing wave conditions exceed the significant wave height criteria during more than 35 percent of the year; or
 - (2) A less stringent operating environment if the prevailing wave conditions do not exceed the significant wave height criteria for the less stringent operating environment during more than 35 percent of the year.
- (c) Response equipment should--
 - (1) Meet or exceed the criteria listed in Table 1 of Appendix A of this enclosure;
 - (2) Be capable of functioning in the applicable operating environment; and
 - (3) Be appropriate for the petroleum oil carried.
- (d) The owner or operator of a nontank vessel that carries groups I through IV petroleum oil as fuel should identify in the response plan and ensure the availability of, through contract or other approved means, the response resources that would respond to a discharge up to the vessel's average most probable discharge.
 - (1) For a nontank vessel that carries groups I through IV petroleum oil as fuel, the response resources should include--
 - (i) Containment boom in a quantity equal to twice the length of the largest vessel involved in the transfer and capable of being deployed at the site of oil transfer operations--

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- (A) Within 1 hour of detection of a spill, when the transfer is conducted between 0 and 12 miles from the nearest shoreline; or
 - (B) Within 1 hour plus travel time from the nearest shoreline, based on an on-water speed of 5 knots, when the transfer is conducted over 12 miles up to 200 miles from the nearest shoreline; and
 - (ii) Oil recovery devices and recovered oil storage capacity capable of being at the transfer site--
 - (A) Within 2 hours of the detection of a spill during transfer operations, when the transfer is conducted between 0 and 12 miles from the nearest shoreline; or
 - (B) Within 1 hour plus travel time from the nearest shoreline, based on an on-water speed of 5 knots, when the transfer is conducted over 12 miles up to 200 miles from the nearest shoreline.
 - (2) For locations of multiple vessel transfer operations, a vessel may identify the same equipment as identified by other vessels, provided that each vessel has ensured access to the equipment through contract or other approved means. Under these circumstances, prior approval by the Coast Guard is not needed for temporary changes in the contracted oil spill removal organization contained in [33 CFR 155.1070\(c\) \(5\)](#).
 - (3) The owner or operator of a vessel conducting transfer operations at a facility required to submit a response plan under [33 CFR 154.1017](#) should plan for and identify the response resources required in paragraph (d)(1) of this section. The owner or operator is not required to ensure by contract or other means the availability of such resources. However, such resources should not be listed in the plan unless the facility owner or operator has explicitly agreed to provide such services in writing.
- (e) The owner or operator of a nontank vessel with a capacity of 250 barrels or more carrying groups I through IV petroleum oil as fuel should identify in the response plan and ensure the availability of, through contract or other approved means, the response resources necessary to respond to a discharge up to the vessel's maximum most probable discharge volume.
- (1) These resources should be positioned such that they can arrive at the scene of a discharge within--
 - (i) 12 hours of the discovery of a discharge in higher volume port areas and the Great Lakes;
 - (ii) 24 hours of the discovery of a discharge in all rivers and canals, inland, nearshore and offshore areas; and
 - (iii) 24 hours of the discovery of a discharge plus travel time from shore for open ocean areas.
 - (2) The necessary response resources include sufficient containment boom, oil recovery devices, and storage capacity for any recovery of up to the maximum most probable discharge planning volume.
 - (3) The response plan should identify the storage location, make, model, and effective daily recovery capacity of each oil recovery device that is identified for plan credit.
 - (4) The response resources identified for responding to a maximum most probable discharge should be positioned to be capable of meeting the planned arrival times in this paragraph. The COTP with jurisdiction over the area in which the vessel is operating should be notified whenever the identified response resources are not capable of meeting the planned arrival times.

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- (f) The owner or operator of a nontank vessel with a capacity of 2,500 barrels or more carrying groups I through IV petroleum oil as fuel should identify in the response plan and ensure the availability of, through contract or other approved means, the response resources necessary to respond to discharges up to the worst case discharge volume of the oil cargo to the maximum extent practicable.
 - (1) The location of these resources should be suitable to meet the response times identified for the applicable geographic area(s) of operation and response tier. Nontank vessels need only plan for Tier 1 response resources.
 - (2) The response resources should be appropriate for--
 - (i) The capacity of the vessel;
 - (ii) Group(s) of petroleum oil carried; and
 - (iii) The geographic area(s) of vessel operation.
 - (3) The resources should include sufficient boom, oil recovery devices, and storage capacity to recover the planning volumes.
 - (4) The response plan should identify the storage location, make, model, and effective daily recovery capacity of each oil recovery device that is identified for plan credit.
 - (5) The guidelines in Appendix A of this enclosure should be used for calculating the quantity of response resources needed to respond at each tier to the worst case discharge to the maximum extent practicable.
 - (6) When determining response resources necessary to meet this paragraph, a portion of those resources should be capable of use in close-to-shore response activities in shallow water. The following percentages of the response equipment identified for the applicable geographic area should be capable of operating in waters of 6 feet or less depth:
 - (i) Open ocean--none.
 - (ii) Offshore--10 percent.
 - (iii) Nearshore, inland, Great Lakes, and rivers and canals--20 percent.
 - (7) Response resources identified to meet paragraph (f) (6) of this section should be exempted from the significant wave height planning specification in Table 1 of Appendix A of this enclosure.

- (g) Response equipment identified to respond to a worst case discharge should be capable of arriving on scene within the times specified in this paragraph for the applicable response tier in a higher volume port area, Great Lakes, and in other areas. Response times for this tier, from the time of discovery of a discharge, should be--

Tier 1	
Higher volume port area (except tankers in Prince William Sound covered by 33 CFR 155.1135).....	12 hrs
Great Lakes	18 hrs
All other rivers & canals, inland, nearshore, and offshore areas.	24 hrs
Open ocean (plus travel time from shore).....	24 hrs+

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For the purposes of arranging for response resources through contract or other approved means, response equipment identified for Tier 1 plan credit should be capable of being mobilized and enroute to the scene of a discharge within 2 hours of notification. The notification procedures identified in the plan should provide for notification and authorization for mobilization of identified Tier 1 response resources—

- (1) Either directly or through the qualified individual; and
- (2) Within 30 minutes of a discovery of a discharge or substantial threat of discharge.

- (h) The response plan for a vessel carrying group II or III persistent petroleum oils as a primary cargo or fuel that operates in areas with year-round pre-approval for dispersant use may request a credit against up to 25% of the on-water oil recovery capability for each worst case discharge tier necessary to meet this subpart. To receive this credit, the vessel owner or operator should identify in the response plan and ensure, through contract or other approved means, the availability of the dispersants and the necessary resources to apply those agents appropriate for the type of oil carried and to monitor the effectiveness of the dispersants. The extent of the credit should be based on the volumes of dispersant available to sustain operations at manufacturers' recommended dosage rates. Dispersant resources identified for plan credit should be capable of being on scene within 12 hours of discovery of a discharge.

Note: Identification of these resources does not imply that they would be authorized for use. Actual authorization for use during a spill response would be governed by the provisions of the National Oil and Hazardous Substances Pollution Contingency Plan ([40 CFR 300](#)) and the applicable Area Contingency Plan.

- (i) (1) The owner or operator of a nontank vessel with a capacity of 250 barrels or more carrying groups I through IV petroleum oil as fuel should identify in the response plan and ensure the availability of, through contract or other approved means, the following resources:
- (i) A salvage company with expertise and equipment.
 - (ii) A company with vessel firefighting capability that would respond to casualties in the area(s) in which the vessel would operate.
- (2) Vessel owners or operators should identify intended sources of the resources required under paragraph (i) (1) of this section capable of being deployed to the areas in which the vessel would operate. Provider(s) of these services should not be listed in the plan unless they have provided written consent to be listed in the plan as an available resource.
- (3) The identified resources should be capable of being deployed to the port nearest to the area in which the vessel operates within 24-hours of notification.
- (j) The owner or operator of a nontank vessel with a capacity of 2,500 barrels or more carrying groups I through IV petroleum oil as fuel should identify in the response plan and ensure the availability of, through contract or other approved means, certain response resources contained in [33 CFR 155.1035\(c\)\(5\)\(ii\)](#) or [1040\(c\)\(5\)\(i\)](#), as appropriate.
- (1) These resources should include--
- (i) Fendering equipment;
 - (ii) Transfer hoses and connection equipment; and
 - (iii) Portable pumps and ancillary equipment necessary to offload the vessel's largest cargo or fuel tank in 24 hours of continuous operation.

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- (2) These resources should be capable of reaching the locations in which the vessel operates within the stated times following notification:
 - (i) Inland (except tankers in Prince William Sound covered by [33 CFR 155.1130](#)), nearshore, and Great Lakes waters--12 hours.
 - (ii) Offshore waters and rivers and canals--18 hours.
 - (iii) Open ocean waters--36 hours.

- (k) The owner or operator of a nontank vessel with a capacity of 2,500 barrels or more carrying groups I through IV petroleum oil as fuel should identify in the response plan and ensure the availability of, through contract or other approved means, response resources necessary to perform shoreline protection operations.
 - (1) The response resources should include the quantities of boom listed in Table 2 of Appendix A of this enclosure, based on the areas in which the vessel operates.

- (l) The owner or operator of a nontank vessel with a capacity of 2,500 barrels or more carrying groups I through IV petroleum oil as fuel should identify in the response plan and ensure the availability of, through contract or other approved means, an oil spill removal organization capable of effecting a shoreline cleanup operation commensurate with the quantity of emulsified petroleum oil to be planned for in shoreline cleanup operations.
 - (1) The shoreline cleanup resources needed should be determined as described in Appendix A of this enclosure.

- (m) Appendix A of this enclosure sets out suggested caps that recognize the practical and technical limits of response capabilities for which an individual vessel owner or operator can contract in advance. Table 6 in Appendix A lists the contracting caps that are applicable, as of February 18, 1993. The owner or operator of a nontank vessel with a capacity of 2,500 barrels or more carrying groups I through IV petroleum oil as fuel, whose suggested daily recovery capacity exceeds the applicable contracting caps in Table 6, should identify commercial sources of additional equipment equal to twice the cap listed for Tier 1 or the amount necessary to reach the calculated planning volume, whichever is lower, to the extent that this equipment is available. The equipment so identified should be capable of arriving on scene no later than the applicable Tier 1 response times contained in [33 CFR 155.1050\(g\)](#) or as quickly as the nearest available resource permits. A response plan should identify the specific sources, locations, and quantities of this additional equipment. No contract is needed.

Section 8 Response plan development and evaluation criteria for nontank vessels carrying group V petroleum oil as fuel.

- (a) Owners and operators of nontank vessels that carry group V petroleum oil as fuel with a capacity of 2,500 barrels or more should provide information in their plan that identifies--
 - (1) Procedures and strategies for responding to discharges up to a worst case discharge of group V petroleum oils to the maximum extent practicable; and
 - (2) Sources of the equipment and supplies necessary to locate, recover, and mitigate such a discharge.

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- (b) Using the criteria in Table 1 of Appendix A of this enclosure, an owner or operator of a nontank vessel carrying group V petroleum oil as fuel should ensure that any equipment identified in a response plan is capable of operating in the conditions expected in the geographic area(s) in which the vessel operates. When evaluating the operability of equipment, the vessel owner or operator should consider limitations that are identified in the Area Contingency Plans for the COTP zones in which the vessel operates, including--
 - (1) Ice conditions;
 - (2) Debris;
 - (3) Temperature ranges; and
 - (4) Weather-related visibility.

- (c) The owner or operator of a nontank vessel with a capacity of 2,500 barrels or more carrying group V petroleum oil as fuel should identify in the response plan and ensure, through contract or other approved means, the availability of required equipment, including--
 - (1) Sonar, sampling equipment, or other methods for locating the oil on the bottom or suspended in the water column;
 - (2) Containment boom, sorbent boom, silt curtains, or other methods for containing oil that might remain floating on the surface or to reduce spreading on the bottom;
 - (3) Dredges, pumps, or other equipment necessary to recover oil from the bottom and shoreline; and
 - (4) Other appropriate equipment necessary to respond to a discharge involving the type of oil carried.

- (d) Response resources identified in a response plan under paragraph (c) of this section should be capable of being deployed within 24 hours of discovery of a discharge to the port nearest the area where the vessel is operating. An oil spill removal organization should not be listed in the plan unless the oil spill removal organization has provided written consent to be listed in the plan as an available resource.

- (e) The owner or operator of a nontank vessel with a capacity of 2,500 barrels or more carrying group V petroleum oil as fuel should identify in the response plan and ensure the availability of the following resources through contract or other approved means--
 - (1) A salvage company with appropriate expertise and equipment; and
 - (2) A company with vessel firefighting capability that would respond to casualties in the area(s) in which the vessel is operating.

- (f) The owner or operator of a nontank vessels with a capacity of 250 barrels or more carrying group V petroleum oil as fuel should identify in the response plan and ensure the availability through contract or other approved means, a salvage company with appropriate expertise and equipment that would respond to casualties in the area(s) in which the vessel is operating.

- (g) Vessel owners or operators should identify intended sources of the resources under paragraphs (e) and (f) of this section capable of being deployed to the areas in which the vessel would operate. A company should not be listed in the plan unless the company has provided written consent to be listed in the plan as an available resource. The vessel owner or operator should identify both the intended sources of this capability and demonstrate that

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the resources are capable of being deployed to the port nearest to the area where the vessel operates within 24 hours of discovery of a discharge.

- (h) The owner or operator of a nontank vessel with a capacity of 2,500 barrels or more carrying group V petroleum oil as fuel should identify in the response plan and ensure the availability of certain resources contained in [33 CFR 155.1035\(c\)\(5\)\(ii\)](#) and [155.1040\(c\)\(5\)\(i\)](#), as applicable, through contract or other approved means.
- (1) Resources should include--
- (i) Fendering equipment;
 - (i) Transfer hoses and connection equipment; and
 - (ii) Portable pumps and ancillary equipment necessary to offload the vessel's largest cargo tank in 24 hours of continuous operation.
- (2) Resources should be capable of reaching the locations in which the vessel operates within the stated times following notification:
- (i) Inland, nearshore, and Great Lakes waters--12 hours.
 - (ii) Offshore waters and rivers and canals--18 hours.
 - (iii) Open ocean waters--36 hours.

Section 9 Qualified individual and alternate qualified individual.

The specifications for a qualified individual should follow those in [33 CFR 155.1026](#).

Section 10 Training.

The specifications for training should be the same as those in [33 CFR 155.1055](#).

Section 11 Exercises.

The specifications for exercises should be the same as those in [33 CFR 155.1060](#).

Section 12 Procedures for plan submission, approval, requests for acceptance of alternative planning criteria, and appeal.

The procedures for plan submission, approval, requests for acceptance of alternative planning criteria, and appeal set forth in [33 CFR 155.1065](#) should be followed.

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Guidelines for Determining and Evaluating Response Resources for Vessel Response Plans

1. Purpose

1.1 The purpose of this appendix is to describe the procedures for identifying response resources to meet enclosure (1) of this guidance. These guidelines should be used by the vessel owner or operator in preparing the response.

2. Equipment Operability and Readiness

2.1 All equipment identified in a response plan should be capable of operating in the conditions expected in the geographic area in which a vessel operates. These conditions vary widely based on the location and season. Therefore, it is difficult to identify a single stockpile of response equipment that would function effectively in every geographic location.

2.2 Nontank vessels operating in more than one operating environment as indicated in Table 1 should identify equipment capable of successfully functioning in each operating environment. For example, vessels moving from the ocean to a river port should identify appropriate equipment designed to meet the criteria for transiting oceans, inland waterways, rivers, and canals. This equipment may be designed to operate in all of these environments or, more likely, different equipment may be designed for use in each area.

2.3 When identifying equipment for response plan credit, a vessel owner or operator should consider the inherent limitations in the operability of equipment components and response systems. The criteria in Table 1 of this appendix should be used for evaluating the operability in a given environment. These criteria reflect the general conditions in certain operating areas.

2.4 Table 1 of this appendix lists criteria for oil recovery devices and boom. All other equipment necessary to sustain or support response operations in a geographic area should be designed to function in the same conditions. For example, boats, which deploy or support skimmers or boom, should be capable of being safely operated in the significant wave heights listed for the applicable operating environment. The Coast Guard may recommend documentation that the boom identified in a response plan meets the criteria in Table 1 of this appendix. Absent acceptable documentation, the Coast Guard may recommend that the boom be tested to demonstrate that it meets the criteria in Table 1 of this appendix. Testing should be according to certain American Society for Testing Materials ASTM F 715, "Standard Methods of Testing Spill Control Barrier Membrane Materials," or other tests approved by the Coast Guard.

2.5 A vessel owner or operator should refer to the applicable Area Contingency Plan to determine if ice, debris, and weather-related visibility are significant factors in evaluating the operability of equipment. The Area Contingency Plan should also identify the average temperature ranges expected in a geographic area in which a vessel operates. All equipment identified in a response plan should be designed to operate within those conditions or ranges.

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2.6 Enclosure (1) of this guidance specifies response resource mobilization and response times. The location that the vessel operates farthest from the storage location of the response resources should be used to determine whether the resources are capable of arriving on scene within the time specified. A vessel owner or operator should include the time for notification, mobilization, and travel time of resources identified to meet the maximum most probable discharge and Tier 1 worst case discharge specifications.

2.7 In identifying equipment, the vessel owner or operator should list the storage location, quantity, and manufacturer's make and model, unless the oil spill removal organization(s) providing the necessary response resources have been evaluated by the Coast Guard, and their capability has been determined to equal or exceed the response capability needed by the vessel. For oil recovery devices, the effective daily recovery capacity, as determined using section 6 of this appendix, should be included. For boom, the overall boom height (draft plus freeboard) should be included. A vessel owner or operator should ensure that identified boom has compatible connectors.

3. Determining Response Resources for the Average Most Probable Discharge

3.1 A vessel owner or operator should identify and ensure, by contract or other approved means, that sufficient response resources are available to respond to the 50 barrel average most probable discharge at the point of an oil transfer involving a nontank vessel. The equipment should be designed to function in the operating environment at the point of oil transfer. These resources should include--

3.1.1 Containment boom in a quantity equal to twice the length of the largest vessel involved in the transfer capable of being deployed within 1 hour of the detection of a spill at the site of oil transfer operations. If the transfer operation is more than 12 miles from shore, the containment boom should be deployed within 1 hour plus the travel time from the nearest shoreline at a speed of 5 knots;

3.1.2 Oil recovery devices with an effective daily recovery capacity of 50 barrels or greater available at the transfer site within 2 hours of the detection of an oil discharge; and

3.1.3 Oil storage capacity for recovered oily material indicated in section 9.2 of this appendix.

4. Determining Response Resources Required for the Maximum Most Probable Discharge

4.1 A vessel owner or operator should identify and ensure, by contract or other approved means, that sufficient response resources are available to respond to discharges up to the maximum most probable discharge volume for that vessel. The resources should be capable of containing and collecting up to 2,500 barrels of oil. All equipment identified should be designed to operate in the applicable operating environment specified in Table 1 of this appendix.

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4.2 To determine the maximum most probable discharge volume to be used for planning, use the lesser of--

4.2.1 2,500 barrels; or

4.2.2 10 percent of the total oil capacity.

4.3 Oil recovery devices necessary to meet the applicable maximum most probable discharge volume planning criteria should be located such that they arrive on scene within 12 hours of the discovery of a discharge in higher volume port areas and the Great Lakes, 24 hours in all other rivers and canals, inland, nearshore, and offshore areas, and 24 hours plus travel time from shore in all open ocean areas.

4.3.1 Because rapid control, containment, and removal of oil is critical to reduce spill impact, the effective daily recovery capacity for oil recovery devices should equal 50% of the planning volume applicable for the vessel as determined in section 4.2 of this appendix. The effective daily recovery capacity for oil recovery devices identified in the plan should be determined using the criteria in section 6 of this appendix.

4.4 In addition to oil recovery capacity, the vessel owner or operator should identify in the response plan and ensure the availability of, through contract or other approved means, sufficient boom available within the response times for oil connection and containment, and for protection of shoreline areas. The owner or operator of a vessel should identify in a response plan and ensure, through contract or other approved means, the availability of the boom identified in the plan for this purpose.

4.5 The plan should indicate the availability of temporary storage capacity to meet paragraph 9.2 of this appendix. If available storage capacity is insufficient to meet this provision, the effective daily recovery capacity should be downgraded to the limits of the available storage capacity.

4.6 The following is an example of a maximum most probable discharge volume planning calculation for equipment identification in a higher volume port area:

The vessel's oil capacity is 10,000 barrels, thus the planning volume is 10 percent or 1,000 barrels. The effective daily recovery capacity should be 50 percent of the planning volume, for 500 barrels per day. The ability of oil recovery devices to meet this capacity should be calculated using the procedures in section 6 of this appendix. Temporary storage capacity available on scene should equal twice the daily recovery capacity as indicated in section 9 of this appendix, or 1000 barrels per day. This figure would represent the information the vessel owner or operator would use to identify and ensure the availability of, through contract or other approved means, the response resources. The vessel owner would also need to identify how much boom was available for use.

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5. Determining Response Resources for the Worst Case Discharge to the Maximum Extent Practicable

5.1 A vessel owner or operator should identify and ensure, by contract or other approved means, that sufficient response resources are available to respond to the worst case discharge of oil to the maximum extent practicable. Section 7 of this appendix describes the method to determine the response resources.

5.2 Oil spill recovery devices identified to meet the applicable worst case discharge planning volume should be located so that they can arrive at the scene of a discharge within the time specified for Tier 1, listed in enclosure (1), section 8 (g) of this guidance.

5.3 The effective daily recovery capacity for oil recovery devices identified in a response plan should be determined using the criteria in section 6 of this appendix. A vessel owner or operator should identify the storage locations of all equipment for each tier.

5.4 A vessel owner or operator should identify the availability of temporary storage capacity to meet 9.2 of this appendix. If available storage capacity is insufficient to meet this provision, then the effective daily recovery capacity should be downgraded to the limits of the available storage capacity.

5.5 When selecting response resources, the vessel owner or operator should ensure that a portion of those resources are capable of being used in close-to-shore response activities in shallow water. The following percentages of the on-water response equipment identified for the applicable geographic area should be capable of operating in waters of 6 feet or less depth:

- (i) Open ocean--none.
- (ii) Offshore--10 percent.
- (iii) Nearshore, inland, Great Lakes, and rivers and canals--20 percent.

5.6 In addition to oil spill recovery devices and temporary storage capacity, a vessel owner or operator should identify in the response plan and ensure the availability of, through contract or other approved means, sufficient boom that can arrive on scene within the response times for oil containment and collection. The specific quantity of boom for collection and containment would depend on the specific recovery equipment and strategies employed. Table 2 of this appendix lists the minimum quantities of additional boom for shoreline protection that a vessel owner or operator should identify in the response plan and ensure the availability of, through contract or other approved means.

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5.7 A vessel owner or operator should also identify in the response plan and ensure, by contract or other approved means, the availability of an oil spill removal organization capable of responding to a shoreline cleanup operation involving the calculated volume of emulsified oil that might impact the affected shoreline. The volume of oil for which a vessel owner or operator should plan should be calculated through the application of factors contained in Tables 3 and 4 of this appendix. The volume calculated from these tables is intended to assist the vessel owner or operator in identifying a contractor with sufficient resources. This planning volume should not be used explicitly to determine a required amount of equipment and personnel.

6. Determining Effective Daily Recovery Capacity for Oil Recovery Devices

6.1 Oil recovery devices identified by a vessel owner or operator should be identified by manufacturer, model, and effective daily recovery capacity. These capacities should be to meet the applicable planning criteria for the average most probable discharge; maximum most probable discharge; and worst case discharge to the maximum extent practicable.

6.2 For the purposes of determining the effective daily recovery capacity of oil recovery devices, the following method should be used. This method considers potential limitations due to available daylight, weather, sea state, and percentage of emulsified oil in the recovered material. The Coast Guard might assign a lower efficiency factor to equipment listed in a response plan if it determines that a reduction is warranted.

6.2.1 The following formula should be used to calculate the effective daily recovery capacity:

$$R = T \times 24 \times E$$

R--Effective daily recovery capacity

T--Throughput rate in barrels per hour (nameplate capacity)

E--20% efficiency factor (or lower factor as determined by the Coast Guard)

6.2.2 For those devices in which the pump limits the throughput of liquid, throughput rate should be calculated using the pump capacity.

6.2.3 For belt or mop type devices, the throughput rate should be calculated using data provided by the manufacturer on the nameplate rated capacity for the device.

6.2.4 Vessel owners or operators who include in the response plan oil recovery devices with a throughput that is not measurable using a pump capacity or belt or mop capacity may provide information to support an alternative method of calculation. This information should be submitted following the procedures in section 6.5 of this appendix.

6.3 As an alternative to section 6.2 of this appendix, a vessel owner or operator may submit adequate evidence that a different effective daily recovery capacity should be applied for a specific oil recovery device. Adequate evidence is actual verified performance data in spill conditions or test using ASTM F 631, Standard Method for Testing Full Scale Advancing Spill Removal Devices, or an equivalent test approved by the Coast Guard.

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6.3.1 The following formula should be used to calculate the effective daily recovery capacity under this alternative:

$$R=D \times U$$

R--Effective daily recovery capacity

D--Average Oil Recovery Rate in barrels per hour (Item 13.2.16 in ASTM F 631; or actual performance data)

U--Hours per day that a vessel owner or operator can document capability to operate equipment under spill conditions. Ten hours per day should be used unless a vessel owner or operator can demonstrate that the recovery operation can be sustained for longer periods.

6.4 A vessel owner or operator submitting a response plan should provide data that supports the effective daily recovery capacities for the oil recovery devices listed. The following is an example of these calculations:

A weir skimmer identified in a response plan has a manufacturer's rated throughput at the pump of 267 gallons per minute (gpm).

$$267 \text{ gpm} = 381 \text{ barrels per hour}$$
$$R = 381 \times 24 \times .2 = 1,829 \text{ barrels per day}$$

After testing using ASTM procedures, the skimmer's oil recovery rate is determined to be 220 gpm. The vessel owner or operator identifies sufficient resources available to support operations 12-hours per day.

$$220 \text{ gpm} = 314 \text{ barrels per hour}$$
$$R = 314 \times 12 = 3,768 \text{ barrels per day}$$

A vessel owner or operator might use the higher capacity if sufficient temporary oil storage capacity is available.

6.5 Determinations of alternative efficiency factors under section 6.2 or alternative effective daily recovery capacities under section 6.3 of this appendix should be made by Commandant (G-MOR), Coast Guard Headquarters, 2100 Second Street SW., Washington, DC 20593. Oil spill removal organizations or equipment manufacturers may submit information on behalf of multiple vessel owners or operators.

7. Calculating the Worst Case Discharge Planning Volumes

7.1 A vessel owner or operator should plan for a response to a vessel's worst case discharge volume of oil. The planning for on-water recovery should take into account a loss of some oil to the environment due to evaporations and natural dissipation, potential increases in volume due to emulsification, and the potential for deposit of some oil on the shoreline.

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7.2 The following procedures should be used to calculate the planning volume used by a vessel owner or operator for determining on-water recovery capacity:

7.2.1 The following should be determined: the total volume of oil carried; the appropriate group for the type of petroleum oil carried [persistent (groups II, III, and IV) or non-persistent (group I)]; and the geographic area(s) in which the vessel operates. For vessels carrying mixed cargoes from different petroleum oil groups, each group should be calculated separately. This information is to be used with Table 3 of this appendix to determine the percentages of the total volume to be used for removal capacity planning. This table divides the volume into three categories: oil lost to the environment; oil deposited on the shoreline; and oil available for on-water recovery.

7.2.2 The on-water oil recovery volume should be adjusted using the appropriate emulsification factor found in Table 4 of this appendix.

7.2.3 The adjusted volume is multiplied by the on-water oil recovery resource mobilization factor found in Table 5 of this appendix from the appropriate operating area and response tier to determine the total on-water oil recovery capacity in barrels per day that should be identified or contracted for to arrive on scene within the applicable time for each response tier. For nontank vessels, only Tier 1 is specified. For higher volume port areas, the contracted resources should be located such that they can arrive on scene within 12 hours of the discovery of an oil discharge. For the Great Lakes, Tier 1 is 18 hours. For rivers and canals, inland, nearshore, and offshore, Tier 1 is 24 hours. For the open ocean area, Tier 1 is 24 hours with an additional travel time allowance of 1 hour for every additional 5 nautical miles from shore.

7.2.4 The resulting on-water recovery capacity in barrels per day for each tier is used to identify response resources necessary to sustain operations in the applicable geographic area. The equipment should be capable of sustaining operations for the time period specified in Table 3 of this appendix. A vessel owner or operator should identify and ensure the availability of, through contract or other approved means, sufficient oil spill recovery devices to provide the effective daily oil recovery capacity. If the capacity exceeds the applicable cap described in Table 6 of this appendix, then a vessel owner or operator should contract only for the quantity of resources needed to meet the cap, but should identify sources of additional resources as indicated in enclosure (1) section 8 (o) of this guidance. For a vessel that carries multiple groups of oil, the effective daily recovery capacity for each group is calculated and summed before applying the cap.

7.3 The following procedures should be used to calculate the planning volume for identifying shoreline cleanup capacity:

7.3.1 The following should be determined: the total volume of oil carried; the appropriate group for the type of petroleum oil carried [persistent (groups II, III, and IV) or non-persistent (group I)]; and the geographic area(s) in which the vessel operates. For a vessel carrying different oil groups, each group should be calculated separately. Using this information, Table 3 of this appendix should be used to determine the percentages of the total cargo volume to be used for shoreline cleanup resource planning.

7.3.2 The shoreline cleanup planning volume should be adjusted to reflect an emulsification factor using the same procedure as described in section 7.2.2 of this appendix.

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7.3.3 The resulting volume should be used to identify an oil spill removal organization with the appropriate shoreline cleanup capability.

7.4 The following is an example of the procedure described above:

A vessel with a 100,000 barrel capacity for #6 oil (specific gravity .96) will move from a higher volume port area to another area. The vessel's route will be 70 miles from shore.

Oil carried: 100,000 bbls. Group IV oil

Emulsification factor (from Table 4 of this appendix): 1.4

Areas transited: Inland, Nearshore, Offshore, Open ocean

Planned % on-water recovery (from Table 3 of this appendix):

Inland 50%

Nearshore 50%

Offshore 40%

Open ocean 20%

Planned % oil onshore recovery (from Table 3 of this appendix):

Inland 70%

Nearshore 70%

Offshore 30%

Open ocean 30%

General formula to determine planning volume:

(planning volume) = (capacity) x (% from Table 3 of this appendix) x (emulsification factor from Table 4 of this appendix)

Planning volumes for on-water recovery:

Inland $100,000 \times .5 \times 1.4 = 70,000$ bbls

Nearshore $100,000 \times .5 \times 1.4 = 70,000$ bbls

Offshore $100,000 \times .4 \times 1.4 = 56,000$ bbls

Open ocean $100,000 \times .2 \times 1.4 = 28,000$ bbls

Planning volumes for on shore recovery:

Inland $100,000 \times .7 \times 1.4 = 98,000$ bbls

Nearshore $100,000 \times .7 \times 1.4 = 98,000$ bbls

Offshore $100,000 \times .3 \times 1.4 = 42,000$ bbls

The vessel owner or operator should contract with a response resource capable of managing a 98,000-barrel shoreline cleanup in those areas where the vessel comes closer than 50 miles to shore.

Determining resources for on-water recovery for each tier using mobilization factors:
(barrel per day on-water recovery) = (on-water planning volume as calculated above) x
(mobilization factor from Table 5 of this appendix).

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		Tier 1
Inland/Nearshore 70,000	X	0.15
Offshore 56,000	X	0.10
Open ocean 28,000	X	0.06
equals (barrels per day)		
Inland/Nearshore		10,500
Offshore		5,600
Open ocean		1,680

Because the specifications for Tier 1 for inland and nearshore exceed the caps, the vessel owner would only need to contract for 10,000 barrels per day for Tier 1.

10% of the on-water recovery capability for offshore and 20% of the capability for inland/nearshore, for Tier 1, should be capable of operating in water with a depth of 6 feet or less.

The vessel owner or operator would also be required to identify or contract for quantities of boom identified in Table 2 of this appendix for the areas in which the vessel operates.

8. Determining the Availability of High-Rate Response Methods

8.1 Response plans for a vessel carrying group II or III persistent oil as a primary cargo or fuel that operates in an area with year-round pre-approval for dispersant use might receive credit for up to 25 percent of their required on-water recovery capacity in that area if the availability of these resources are ensured by contract or other approved means. For response plan credit, these resources should be capable of being on scene within 12 hours of the discovery of a discharge.

8.2 To receive credit against any on-water recovery capacity, a response plan should identify the locations of dispersant stockpiles, methods of transporting to a shoreside staging area, and appropriate aircraft or vessels to apply the dispersant and monitor its effectiveness at the scene of an oil discharge.

8.2.1 Sufficient volumes of dispersants should be available to treat the oil at the dosage rate recommended by the dispersant manufacturer. Dispersants identified in a response plan should be on the National Contingency Plan Product Schedule maintained by the U.S. Environmental Protection Agency. (Some States have a list of approved dispersants and within State waters only they can be used.)

8.2.2 Dispersant application equipment identified in a response plan for credit should be located so that it can be mobilized to shoreside staging areas to meet the time specified in section 8.1 of this appendix. Sufficient equipment capacity and sources of appropriate dispersants should be identified to sustain dispersant operations for at least 3 days.

8.2.3 Credit against on-water recovery capacity in pre-approved areas should be based on the ability to treat oil at a rate equivalent to this credit. For example, a 2,500 barrels per day credit against the 10,000 barrels per day on-water Tier 1 cap would require the vessel owner or operator to demonstrate the ability to treat 2,500 barrels per day of oil at the manufacturer's recommended dosage rate. Assuming a dosage rate of 10:1, the plan would need to show

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stockpiles and sources of 750 barrels of dispersants that would be available on scene at a rate of 250 barrels per day and the ability to apply the dispersant at the daily rate for 3 days in the area in which the vessel operates.

8.3 In addition to the necessary equipment and supplies, a vessel owner or operator should identify a source of support to conduct the monitoring and post-use effectiveness evaluation required by applicable Local and Area Contingency Plans.

8.4 Identification of the resources for dispersant application does not imply that the use of this technique should be authorized. Actual authorization for use during a spill response should be governed by the provisions of the National Oil and Hazardous Substances Contingency Plan ([40 CFR part 300](#)) and the applicable Local or Area Contingency Plan.

9. Additional Equipment Necessary to Sustain Response Operations

9.1 A vessel owner or operator should ensure that sufficient numbers of trained personnel, boats, aerial spotting aircraft, sorbent materials, boom anchoring materials, and other resources would be available to sustain response operations to completion. All of this equipment should be suitable for use with the primary equipment identified in the response plan. A vessel owner or operator need not list these resources in the response plan but should certify their availability.

9.2 A vessel owner or operator should evaluate the availability of adequate temporary storage capacity to sustain the effective daily recovery capacities from equipment identified in the plan. Because of the inefficiencies of oil spill recovery devices, response plans should identify daily storage capacity equivalent to twice the effective daily recovery capacity required on scene. This temporary storage capacity might be reduced if a vessel owner or operator can demonstrate by waste stream analysis that the efficiencies of the oil recovery devices, ability to decant water, or the availability of alternative temporary storage or disposal locations in the area(s) the vessel would operate should reduce the overall volume of oily material storage requirements.

9.3 A vessel owner or operator should ensure that their planning includes the capability to arrange for disposal of recovered oil products. Specific disposal procedures should be addressed in the applicable Area Contingency Plan.

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Table 1--Response Resource Operating Criteria

[Oil Recovery Devices]

Operating Environment	Significant Wave Height ¹	Sea State
	(feet)	
Rivers & Canals.....	≤1	1
Inland.....	≤3	2
Great Lakes.....	≤4	2-3
Ocean.....	≤6	3-4

[Boom]

Boom Property	Use			
	Rivers & Canals	Inland	Great Lakes	Ocean
Significant Wave ^{1,2} Height (feet).....	≤1	≤3	≤4	≤6
Sea State.....	1	2	2-3	3-4
Boom height—in..... (draft plus freeboard)	6-18	18-42	18-42	≥42
Reserve Buoyancy to Weight Ratio.....	2:1	2:1	2:1	3:1 to 4:1
Total Tensile Strength—lbs.....	4,500	15-20,000	15-20,000	>20,000
Skirt Fabric Tensile Strength—lbs.....	200	300	300	500
Skirt Fabric Tear Strength—lbs.....	100	100	100	125

¹ Oil recovery devices and boom should be at least capable of operating in wave heights up to and including the values listed in Table 1 for each operating environment.

² Equipment identified as capable of operating in waters of 6 feet or less depth is exempt from the significant wave height planning provision.

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Table 2--Shoreline Protection Criteria

Location	Boom	Availability hours	
	Ensured by contract or other approved means (ft.)	Higher volume port area	Other areas
Persistent Oils			
Open Ocean.....
Offshore.....	15,000	24	48
Nearshore/Inland/Great Lakes.....	30,000	12	24
Rivers & Canals.....	25,000	12	24
Non-Persistent Oils			
Open Ocean.....
Offshore.....
Nearshore/Inland/Great Lakes.....	10,000	12	24
Rivers & Canals.....	15,000	12	24

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Table 3 Removal Capacity Planning Table

Spill Location	Nearshore/Inland/ Great Lakes			Rivers		
Sustainability of on-water oil recovery	4 days			3days		
Oil Group	% Natural Dissipation	% Recovered Floating oil	% Oil on shore	% Natural Dissipation	% Recovered Floating oil	% Oil on shore
I Non-Persistent oils	80	20	10	80	10	10
II Light crudes and fuels	50	50	30	40	15	45
III Medium crudes and fuels	30	50	50	20	15	65
IV Heavy crudes /residual fuels	10	50	70	5	20	75

Note: Percentage might not sum to 100; reflects enhanced on-water recovery capacity

Spill Location	Open oceans			Offshore		
Sustainability of on-water oil recovery	10 days			6 days		
Oil Group	% Natural Dissipation	% Recovered Floating oil	% Oil on shore	% Natural Dissipation	% Recovered Floating oil	% Oil on shore
I Non-Persistent oils	100	/	/	95	[5]*	/
II Light crudes and fuels	90	10	/	75	25	5
III Medium crudes and fuels	75	20	[5]*	60	40	20
IV Heavy crudes /residual fuels	50	20	[30]*	50	40	30

* Included in table for continuity; no planning needed.

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Table 4--Emulsification Factors for Petroleum Oil Cargo Groups

Non-persistent oil 72 G:	
Group I.....	1.0
Persistent oil:	
Group II.....	1.8
Group III.....	2.0
Group IV.....	1.4

Table 5--On-Water Oil Recovery Resource Mobilization Factors

Area	Tier 1
Rivers and Canals.....	0.30
Inland/Nearshore/Great Lakes.....	0.15
Offshore.....	0.10
Ocean.....	0.06

Note: These mobilization factors are for total resources mobilized not incremental resources.

Table 6--Response Capability Caps by Geographic Area

	Tier 1
<i>As of February 18, 1998:</i>	
All except rivers & canals & Great Lakes.....	12.5K bbls/day
Great Lakes.....	6.35K bbls/day
Rivers & canals.....	1,875 bbls/day
<i>February 18, 2003</i>	
All except rivers & canals & Great Lakes.....	TBD
Great Lakes.....	TBD
Rivers & canals.....	TBD

Note: The caps show cumulative overall effective daily recovery capacity, not incremental increases.

K = Thousand

bbls = Barrels

TBD = To be determined