federal register

Wednesday
February 17, 1993

Part II
Environmental Protection Agency

40 CFR Part 112
Oil Pollution Prevention; Non-Transportation-Related Onshore Facilities; Proposed Rule

Friday
April 9, 1993

Part VII
Environmental Protection Agency

40 CFR Part 112
Oil Pollution Prevention; CORRECTION; Proposed Rule

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ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 112

[SW H–FRL 4556–2]

RIN 2050–AD 30

Oil Pollution Prevention; Non-Transportation-Related Onshore Facilities

AGENCY: U.S. Environmental Protection Agency (EPA).

ACTION: Proposed rule.

SUMMARY: This proposed rule would revise the Oil Pollution Prevention regulation, originally promulgated under the Clean Water Act (CWA). The proposed revision would incorporate new requirements added by the Oil Pollution Act of 1990 that direct facility owners and operators to prepare plans for responding to a worst case discharge of oil and to a substantial threat of such a discharge. Other regulatory changes to strengthen the existing regulation also are proposed.

DATES: Comments must be submitted on or before April 19, 1993.

ADDRESSES: *Comments*: Comments should be submitted in triplicate to: Emergency Response Division, Attention: Superfund Docket Clerk, Docket Number SPCC–2P, Superfund Docket, room M2427 (mail code OS–24S), U.S. Environmental Protection Agency, 401 M Street, SW., Washington, DC 20460.

Docket: Copies of materials relevant to this rulemaking are contained in the Superfund Docket, room M2427 at the U.S. Environmental Protection Agency, 401 M Street, SW., Washington, DC 20460 [Docket Number SPCC–2P]. The docket is available for inspection between 9 a.m. and 4 p.m., Monday through Friday, excluding Federal holidays. Appointments to review the docket can be made by calling 202–260–3046. The public may copy a maximum of 266 pages from any regulatory docket at no cost. If the number of pages copied exceeds 266, however, a charge of 15 cents will be incurred for each page copied after 100 pages, plus a $25.00 administrative fee.

FOR FURTHER INFORMATION CONTACT: Bobbie Lively-Diebold, Response Standards and Criteria Branch, Emergency Response Division (OS–210), U.S. Environmental Protection Agency, 401 M Street, SW., Washington, DC 20460 at 703–356–8774; the ERNS/SPCC Information line at 202–260–2342; or the RCRA/Superfund Hotline at 800–424–9346 (in the Washington, DC metropolitan area, 703–920–9810). The Telecommunications Device for the Deaf (TDD) Hotline number is 800–553–7672 (in the Washington, DC metropolitan area, 703–486–3323).

SUPPLEMENTARY INFORMATION: The contents of this preamble are listed in the following outline:

I. Introduction

A. Statutory Authority

Section 4202(a)(6) of the Oil Pollution Act of 1990 (OPA), Public Law 101–380, amends section 311(j) of the Federal Water Pollution Control Act, also known as the Clean Water Act (CWA), and requires the President to issue regulations that require owners or operators of tank vessels or offshore facilities or certain onshore facilities to prepare and submit to the President plans for, among other things, responding, to the maximum extent practicable, to a worst case discharge of oil and to a substantial threat of such a discharge.

Section 311(j)(1)(C) of the CWA, authorizes the President to issue regulations establishing procedures, methods, equipment, and other requirements to prevent discharges of oil from vessels and facilities and to contain such discharges. See 33 U.S.C. 1321(j)(1)(C). The President has delegated the authority to regulate non-transportation-related onshore facilities under section 311(j)(1)(C) of the CWA to the U.S. Environmental Protection Agency (EPA of the Agency). See Executive Order 12777, section 2(b)(1), 56 FR 54757 (October 22, 1991), superseding Executive Order 11735, 38 FR 21243. By this same Executive Order, the President has delegated similar authority over transportation-related onshore facilities, deepwater ports, and vessels to the U.S. Department of Transportation (DOT) and authority over other offshore facilities, including associated pipelines, to the U.S. Department of the Interior (DOI). A Memorandum of Understanding (MOU) between the Secretary of Transportation and the EPA Administrator, dated November 24, 1971 (36 FR 24080), establishes the definitions of non-transportation-related facilities and transportation-related facilities. The definitions from the MOU are included in appendix A to 40 CFR part 112.

B. The Oil Pollution Act of 1990

The OPA was enacted to expand prevention and preparedness activities, improve response capabilities, ensure that shippers and oil companies pay the costs of spills that do occur, and establish an expanded research and development program. The Act establishes a new Oil Spill Liability Trust Fund, administered by the United States Coast Guard (USCG). As provided in sections 2002(b), 2003, and 2004 of the OPA, the new Fund replaces the fund established under section 311(k) of the CWA and other oil pollution funds.

Section 4202(a) of the OPA amends CWA section 311(j) to require regulations that provide that owners or operators of facilities prepare and submit "a plan for responding, to the maximum extent practicable, to a worst case discharge, and to a substantial threat of such a discharge, of oil or a hazardous substance." This requirement applies to any onshore facility that, "because of its location, could reasonably be expected to cause "substantial harm" to the environment by discharging into or on the navigable waters, adjoining shorelines, or the exclusive economic zone." Today's proposed revisions address only plans for responding to discharges of oil. Implementation of the OPA provisions addressing hazardous substance

response plans will be addressed in a subsequent rule.

CWA section 311(j)(5)(C) sets forth certain minimum requirements for facility response plans. The plans must:

- Be consistent with the requirements of the National Oil and Hazardous Substances Pollution Contingency Plan (NCP) and Area Contingency Plans (ACPs);
- 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 removal personnel and equipment;
- Identify and ensure by contract or other approved means 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;
- Describe the training, equipment testing, periodic unannounced drills, and response actions of persons at the facility to be carried out under the plan to ensure the safety of the facility and to mitigate or prevent a discharge or the substantial threat of a discharge; and
- Be updated periodically.

Under section 311(j)(5)(D), additional review and approval provisions apply to response plans prepared for onshore facilities that, because of their location, "could reasonably be expected to cause "*significant and* substantial harm" to the environment by discharging into or on the navigable waters or adjoining shorelines or the exclusive economic zone." (emphasis added) Pursuant to authority delegated in Executive Order 12777, EPA is responsible for the following activities for each of these response plans at non-transportation-related onshore facilities:

- Promptly review the response plan;
- Require amendments to any plan that does not meet the section 311(j)(5) requirements;
- Approve any plan that meets these requirements; and
- Review each plan periodically thereafter.

The OPA requires that owners or operators of facilities that could cause "substantial harm" to the environment by discharging oil must submit their response plans to EPA (as delegated by the President in Executive Order 12777) by February 18, 1993, or stop handling, storing, or transporting oil. In addition, under CWA section 311(j)(5) and OPA section 4202(b)(4), a facility required to prepare and submit a response plan under the OPA may not handle, store, or transport oil after August 18, 1993 unless: (1) In the case of a facility for which a plan is reviewed by EPA, the plan has been approved by EPA; and (2) the facility is operating in compliance with the plan. The statute provides that a facility may be allowed to operate without an approved response plan for up to two years after the facility submits a plan that is to be reviewed, if the owner or operator certifies that he or she has ensured by contract or other approved means 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 the OPA, facility owners or operators who fail to comply with section 311(j) requirements are subject to new administrative penalties and more stringent judicial penalties than those imposed previously under the CWA. Section 4301(b) of the OPA amends CWA section 311(b) to authorize a civil judicial penalty of $25,000 per day of violation for failure to comply with regulations under CWA section 311(j). In addition to these civil penalties, OPA section 4301(b) amends CWA section 311(b) to authorize administrative penalties for failure to comply with section 311(j) regulations of up to $10,000 per violation, not to exceed $25,000 for Class I penalties, and up to $10,000 per day per violation, not to exceed $125,000 for Class II penalties. Revisions to the penalty provisions are applicable to violations occurring after the August 18, 1990, enactment of the OPA. Violations occurring before enactment of the OPA remain subject to penalty provisions originally set forth in CWA section 311.

C. This Rulemaking

As discussed in section I.A of this Preamble, the Agency proposes revisions to the Oil Pollution Prevention regulation to implement OPA response plan requirements as well as several other technical requirements. After consideration of comments received in response to this proposed rule, a final rule will be promulgated. If comments received indicate sufficient need, the Agency will consider holding a public hearing on the proposed revisions to permit further expression of views prior to the final rulemaking. EPA will publish a notice of its intent to hold any public hearing in the **Federal Register**. Any statements made at such a hearing would be included in the public record of the rulemaking. Until the Agency promulgates a final rule that implements the provisions of CWA section 311(j)(5), owners and operators of onshore, non-transportation-related facilities that handle oil may use this proposed rule as guidance to meet the CWA's requirements for facility response plans.

II. Alternative Approaches for Identifying Facilities Subject to Response Plan Requirements

The Agency investigated two approaches to identifying facilities subject to facility response plan requirements (facilities that could cause "substantial harm" to the environment) under this proposed rulemaking. The major differences between the approaches are: (1) The extent of the regulated community affected by the response plan requirements, and (2) the process to determine which facilities could cause "substantial harm" to the environment, including the selection method and criteria. The two alternatives are outlined briefly below followed by a more detailed discussion of each option. EPA proposes the first option but requests comment on the relative merits of both options.

Under Option 1, EPA would propose to implement the OPA response plan requirements as follows:

- Facilities that could cause "substantial harm" to the environment by discharging oil into navigable waters or adjoining shorelines must prepare and submit a facility response plan to EPA; and
- The Agency will review for approval, all plans submitted by facilities identified as having the potential to cause "significant and substantial harm" to the environment from such discharges.

This option in part would use a process by which owners or operators would determine whether their facility could cause "substantial harm" to the environment. To complete the self-selection process, owners or operators would be required to evaluate their facility against a set of published criteria arranged in a flowchart. The criteria include: Storage capacity, proximity to sensitive environments and drinking water supplies, marine transfer operations, adequacy of secondary containment, and spill history. EPA is considering several alternative threshold levels for the storage capacity criterion. Facilities meeting one or a combination of the above criteria would be determined to have the potential to cause "substantial harm" and would have to prepare and submit a response plan to the appropriate Regional Administrator (RA). In addition, the RA would have the authority to determine that any regulated facility, regardless of the results of the self-selection screening

process, has the potential to cause "substantial harm" based on similar criteria and taking into account other site-specific characteristics and environmental factors. To determine whether a facility could cause "significant and substantial harm" to the environment, the RA would consider other criteria in addition to the factors used in the "substantial harm" determination.

Under Option 2, EPA would propose to require that:

- All regulated facilities would have to prepare a response plan;
- Facilities that could cause "substantial harm" to the environment by discharging into water bodies or adjoining shorelines would have to submit their plans to EPA;
- The Agency would review for approval plans submitted by facilities that could cause "significant and substantial harm" to the environment from such discharges; and
- Certain small, low-risk facilities with secondary containment structures would be allowed to prepare an abridged version of a response plan.

EPA would select "substantial harm" and "significant and substantial harm" facilities using risk-based screening criteria and Regional knowledge.

A. Option One

Under Option 1, EPA would propose to implement the CWA section 311(j)(5) requirements that: (1) The owner or operator of a facility that could cause "substantial harm" prepare and submit a response plan, and (2) facilities that could cause "significant and substantial harm" to the environment have their plans promptly reviewed for approval by EPA. This approach is consistent with the OPA legislative history, which supports the Agency's position that only a subset of all submitted onshore facility response plans would be reviewed and approved. See H.R. Rep. No. 101–653, 101st Cong. 2d Sess. 1991 at p. 150.

"Substantial Harm" Facility Selection Process and Criteria

Under this option, several processes would be used to identify those facilities required to prepare and submit response plans. Facility owners and operators would be required to evaluate their facilities for the potential to cause "substantial harm" to the environment using criteria published in the proposed rule. Owners and operators would be aided in this evaluation by a flowchart designed to determine whether a facility meets the criteria and has the potential to cause "substantial harm." Instructions for the use of the flowchart would be provided to help owners and operators apply the criteria. Under this option, owners or operators of facilities determined not to have the potential to cause "substantial harm" would be required to certify that their facility did not meet the criteria as contained in the flowchart.

The criteria that would be used to help identify the universe of "substantial harm" facilities would include facility storage capacity, proximity to sensitive environments and drinking water supplies, the existence of secondary containment, spill history, and the nature of the facility's marine transfer operations. As described in section III.B of this preamble, in addition to oil storage capacity and the proximity to potable water supplies and environmentally sensitive areas (which are elements specifically referenced in the OPA Conference Report, see H.R. Rep. No. 101–653, 101st Cong. 2d Sess. 1991 at p. 150), EPA has determined that the remaining criteria are elements that are closely related to the potential for a facility to cause "substantial harm" to the environment as a result of a discharge of oil. EPA has arranged the criteria in a flowchart (see appendix C) that shows the decision tree by which owners and operators would determine whether their facility could pose "substantial harm" to the environment.

As presented in the flowchart, a facility would be determined to have the potential to cause "substantial harm" to the environment if either of the following two screening criteria are met:

(1) The facility's total oil storage capacity is greater than or equal to 1 million gallons, and one of the following is true:

- The facility is located at a distance (as calculated using the appropriate formula in appendix C or an alternative formula considered acceptable by the Regional Administrator) such that a discharge from the facility would shut down operations at a public drinking water intake;
- The facility is located at a distance (as calculated using the appropriate formula in appendix C or an alternative formula considered acceptable by the Regional Administrator) such that a discharge from the facility could cause injury to an environmentally sensitive area;
- The facility does not have secondary containment for each aboveground storage area sufficiently large to contain the capacity of the largest aboveground storage tank within each storage area; or
- The facility has had a reportable spill greater than or equal to 10,000 gallons within the last 5 years.

(2) The facility transfers oil of any kind over water to or from vessels and has a storage capacity greater than or equal to 42,000 gallons.

EPA recognizes that large-capacity facilities have a greater potential for causing spills and subsequent environmental damage. EPA also considered an alternative storage capacity cut-off of 200,000 gallons under the first screen for Option 1. EPA requests comment on the appropriateness of the use of the 1 million gallon or 200,000 gallon size cut-off in the determination of "substantial harm" and information on any data relevant to this factor.

Under this option, the RA would have the authority to screen facilities using the same criteria that facility owners or operators would use under the self-selection process. This step will serve to verify that owners or operators are applying the screening criteria correctly. To determine substantial harm, the RA could also evaluate the risk posed by a facility using, among other things, general risk factors (i.e., proximity to sensitive environments and drinking water intakes) similar to the specific criteria discussed above. Moreover, because of the potential variation in site-specific characteristics and environmental factors, as well as the possible relevance of factors not specified in the criteria provided for owners and operators to screen their facilities, the RA would maintain the ability to consider other risk-based factors in making his or her determination. Regional knowledge about the compliance history of a particular facility, as well as other site-specific circumstances that affect the risk of harm from a discharge, are examples of such factors. EPA solicits comment on the appropriateness of these criteria for use by the facility owner or operator and the RA to determine whether a facility could cause "substantial harm" to the environment.

"Significant and Substantial Harm" Facility Selection Process and Criteria

Under Option 1, the RA would further assess the risks posed by an individual facility in order to identify the subset of "substantial harm" facilities that could cause both "significant and substantial" harm to the environment. In making this determination, the RA would use the "substantial harm" factors as well as other information, including: information from submitted plans, facility compliance history, age of tanks, proximity of discharge sources to navigable waters and additional areas of environmental concern, Regional site

characteristics, and local impacts on public health. Although based on a set of national criteria, this prioritization may differ from Region to Region depending on the relative importance of certain factors within a particular area. In addition to those facilities identified to meet the OPA's August 18, 1993, deadline, EPA also may in the future identify additional facilities as having the potential to cause "significant and substantial harm." As stated above, those facilities identified as having the potential to cause "significant and substantial harm" to the environment would be required to have their response plans reviewed for approval.

EPA solicits comment on the appropriateness and relative importance of the selection criteria in the RA's determination of "significant and substantial harm." Also, the Agency requests comment on whether the RA should consider additional facility characteristics, such as the complexity and throughput of a facility's operations and type of product stored in the determination of "significant and substantial harm."

B. Option Two

EPA also is considering a second approach to the implementation of response plan requirements, based on the authority contained in CWA subsections 311(j) (1) and (5). Under this option, all regulated facilities would be required to prepare facility response plans; certain small, low-risk facilities with secondary containment structures would be allowed to prepare an abridged version of a response plan.

Under this approach, only "substantial harm" facilities would be required to submit plans to EPA and "significant and substantial harm" facilities would have their plans reviewed and approved. All other owners and operators subject to the regulation would only have to prepare a facility response plan that would be kept at the facility.

Facility Selection Process and Criteria

The responsibility to determine "substantial harm" and "significant and substantial harm" facilities under this approach would rest entirely with the Agency. The RA would determine which facilities fall within each category using the risk-based screening criteria discussed under Option 1. The remaining aspects of Option 2 are essentially similar to those presented under Option 1.

III. Proposed Approach for the Implementation of Facility Response Plan Requirements

EPA proposes Option 1 for identifying facilities subject to response planning requirements. Only owners or operators of facilities that could cause "substantial harm" to the environment would be required to prepare and submit plans. EPA would then review and approve only those plans submitted by facilities that could cause "significant and substantial harm" to the environment. Risk-based criteria for evaluating the potential to cause "substantial harm" and "significant and substantial harm" are published in § 112.20(f) of today's proposed rule. The "substantial harm" determination would be accomplished, in large part, through a facility self-determination process which uses the criteria in proposed § 112.20(f)(1) in conjunction with the flowchart proposed in appendix C to the rule. In addition, each RA would have the authority to determine that other facilities could cause "substantial harm" to the environment based on the specific criteria in proposed § 112.20(f)(1) or the general factors in proposed § 112.20(f)(2), including other site-specific characteristics and environmental factors that may be relevant. The "substantial harm" criteria are discussed in detail in Section III.B of this preamble. In applying these factors, the RA may seek input on specific facilities from other agencies such as the USCG. The RA also may consider petitions from the public to determine whether a facility could cause "substantial harm" to the environment. Those facilities submitting plans would be required to include a response plan cover sheet (as provided in appendix G), which indicates that the information contained in the plan is accurate and which provides a basic summary of facility information including the results of the self-selection for the "substantial harm" determination. Under proposed § 112.20(e), facilities not required to submit plans would be required to maintain on-site a certification form indicating that the facility was determined not to pose the threat of "substantial harm" to the environment. EPA's formulas for distance were designed to be simple to use. However, facilities may calculate planning distances using more sophisticated formulas, which take into account broader scientific or engineering principles, or local conditions. Such alternative formulas may result in different planning distances than those distances calculated using EPA's proposed formulas in appendix C. If an owner or operator chooses to use an alternative formula and determines that the facility could not cause substantial harm, the owner or operator must attach to the certification form a brief explanation of the formula and its reliability, and demonstrate how calculations were made. In addition, the owner or operator would be required to notify the RA in writing that an alternate formula was used to determine that the facility does not pose a threat of substantial harm. More information concerning the use of alternative formulas is provided in section III.B of this Preamble and in appendix C of the proposed rule.

To determine whether a facility could cause "significant and substantial harm" to the environment, the RA would consider the "substantial harm" criteria in proposed § 112.20(f)(2) as well as additional factors in proposed § 112.20(f)(3), including site-specific information relating to such things as local impacts on public health. Section III.B of this preamble discusses the criteria to be used by RAs in their determination of a facility's potential to cause "significant and substantial harm" to the environment.

A. Procedures and Deadlines—§§ 112.20 (a) through (e)

1. Preparing, Submitting, and Reviewing Plans

As discussed above, the Agency proposed two ways a facility can be screened as having the potential to cause "substantial harm"; one involving a self-effectuating process and the other involving an Agency determination. EPA may identify some facilities as having the potential to cause "substantial harm" that may not have been identified in the self-selection process.

Self-Selection—§ 112.20(a). The owner or operator of an existing facility that meets the criteria proposed in § 112.20(f)(1) would be required to prepare and submit a facility response plan to the appropriate RA by February 18, 1993, in order to meet the OPA deadline for plan submission. EPA proposes in § 112.20(a)(2) that owners or operators of all regulated facilities must determine whether a response plan is required for their facility based on the "substantial harm" criteria. Proposed § 112.20(f)(1) would require that an owner or operator use the flowchart in appendix C to apply these criteria. Appendix C provides information that is necessary for the owner or operator to

correctly apply certain of the criteria proposed in § 112.20(f)(1).

The Agency recognizes that self-selection may occur after February 18, 1993, because of new facilities coming on-line and existing facilities subsequently meeting the criteria for "substantial harm" as a result of a change in operations or site characteristics. To ensure consistency with the overall requirement to prepare and implement a Spill Prevention, Control, and Countermeasure (SPCC) Plan as proposed in the Phase One Notice of Proposed Rulemaking (NPRM) (56 FR 54630; October 22, 1991), EPA proposes in § 112.20(a)(2) that: (1) Newly constructed facilities be required to prepare and submit a response plan prior to the start of operations (adjustments to the response plan can be made and submitted to the Agency after an operational trial period of 60 days); and (2) existing facilities that become subject to the response plan requirements as the result of a planned change in operations be required to prepare and submit a response plan prior to the implementation of changes at the facility. For example, a facility located near an environmentally sensitive area that plans to increase its maximum oil storage capacity to one million gallons subsequently would be determined (according to the flowchart in appendix C) to have the potential to cause "substantial harm." A facility planning such a change would be required to prepare and submit a response plan prior to commencing the new operation. An existing facility, however, may become subject to the response plan requirements through one or a combination of unplanned events, such as experiencing a reportable spill or the identification of a sensitive environment adjacent to the site during the ACP development process as described in section III.C of this preamble. These factors would cause the facility to meet the criteria for "substantial harm" as described in the flowchart. For example, a facility with a total storage capacity greater than one million gallons that experiences a reportable spill exceeding 10,000 gallons would meet the proposed "substantial harm" criteria as indicated in the flowchart in appendix C. In the event of such an unplanned change in a facility's risk classification, the owner or operator would be required to prepare and submit a response plan to the RA within six months of when the change occurs (see proposed § 112.20(a)(2)(iv)).

Agency Determination/Notification for Substantial Harm—§ 112.20(b). As proposed in § 112.20(b), in the event the Agency determines that a facility may pose a threat of "substantial harm" based on the factors in proposed § 112.20(f)(2), the RA would notify in writing the owner or operator of the facility that he or she is required to prepare and submit a facility response plan. To make such a determination, the RA could apply the factors as specified in the flowchart for facility self-selection. Non-notification by the RA would not exempt facilities from the requirement to prepare and submit response plans by February 18, 1993, if they meet the self-selection criteria in the proposed flowchart in appendix C. Under this approach, facilities identified by the RA as having the potential to cause "substantial harm," including new facilities and facilities undergoing a change in operations or facility-specific characteristics, would have six months after notification to prepare and submit a response plan to the appropriate RA. In addition to those facilities identified to meet the OPA's February 18, 1993, deadline, EPA also may in the future identify additional facilities as having the potential to cause "substantial harm" to the environment. Plans submitted by those facilities identified by the RA as having the potential to cause "substantial harm" to the environment will be reviewed by the RA to determine if the facility has the potential to cause "significant and substantial harm" to the environment.

EPA proposes in § 112.20(f)(2)(ii) to allow interested members of the public or Federal, State, or local agencies an opportunity to petition the RA to determine whether a specific facility could cause "substantial harm" to the environment. Under this process, the petitioner would have the opportunity to submit in writing a discussion of how the "substantial harm" criteria proposed in § 112.20(f)(2)(i) apply to the facility in question. The RA would evaluate such petitions in making a determination of whether the facility could cause "substantial harm" to the environment. The factors the RA would consider to determine whether a facility could cause "substantial harm" are discussed in section IV.B of this preamble.

Agency Determination/Notification for Significant and Substantial Harm—§ 112.20(c). As proposed in § 112.20(c)(1), the RA would notify in writing the owner or operator of a facility determined to have the potential, based on the criteria in proposed § 112.20(f)(3), to cause "significant and substantial harm" that his or her response plan will be reviewed for approval. This process would allow facility owners or operators the opportunity to seek, if necessary, authorization from the RA to operate temporarily without an approved response plan. In addition to those facilities identified to meet the OPA's August 18, 1993, deadline, EPA in the future also may identify additional facilities as having the potential to cause "significant and substantial harm." As proposed in § 112.20(c)(1), RAs would be required to periodically review approved response plans from facilities determined to have the potential to cause "significant and substantial harm" to the environment, in addition to reviewing plans submitted to meet the OPA deadline. EPA solicits comment how frequently the RA should review approved facility response plans, and, in particular, whether three years is an appropriate period between plan review. The following section discusses additional revisions proposed in § 112.20(c).

OPA Deadlines for "Substantial Harm" and "Significant and Substantial Harm" Facilities. The OPA sets forth specific timing requirements for when facility owners or operators must prepare and submit response plans to the RA, and the consequences of not submitting a plan when required. If the owner or operator of a facility required to prepare and submit a plan to the RA has not done so by February 18, 1993, that facility must stop handling, storing, or transporting oil. Further, a facility not operating in compliance with the response plan after August 18, 1993, must stop handling, storing, or transporting oil.

The OPA does not specifically address events occurring after the statutory deadlines and leaves implementation of the facility response plan requirement with regard to facilities identified after the statutory deadline to the discretion of the Agency. The Agency interprets the statute as not requiring that a facility determined to have the potential to cause "substantial harm" to the environment that has not submitted a facility response plan by February 18, 1993, must stop handling, storing, or transporting oil until such a plan is submitted, if the determination is made after February 18, 1993. The Agency believes its interpretation of the OPA, which allows six months from the time of discovery or notification that a facility could cause "substantial harm" to prepare and submit a plan, is reasonable and consistent with the objectives of the OPA. EPA requests comment on the choice of a six-month time frame versus a shorter period for development of a plan.

According to the OPA, a facility required to have its response plan

reviewed and approved must stop handling, storing, or transporting oil unless the plan has been approved by August 18, 1993. However, as indicated in the OPA Conference Report (H.R. Rep. No. 101–653, 101st Cong., 2d Sess. 1991 at p. 151), the number of plans requiring review may prevent the RAs from reviewing all response plans by the statutory deadline. Thus, CWA section 311(j)(5)(F) allows the owner or operator of a facility to seek Federal authorization to operate for up to two years after the plan has been submitted for approval if the owner or operator has certified that he or she has ensured by contract or other federally-approved means the availability of private personnel and equipment necessary to respond, to the maximum extent practicable, to a worst case discharge or substantial threat of such a discharge.

As discussed in section I.B of this preamble, a related OPA requirement is that response plans shall identify, and ensure by contract or other federally-approved means the availability of private personnel and equipment necessary to remove a worst case discharge. Although the response plan would already identify such resources, the requirement to certify their availability is necessary only when plan approval is required and cannot take place before the statutory deadline. Such a situation could arise if a large number of plans require approval. The Agency proposes in § 112.20(c)(2) that if notified by EPA that a submitted response plan requires approval and that approval will not be forthcoming prior to the August 18, 1993, deadline, the owner or operator of the facility has 30 days to certify and provide a copy of a signed contract or other approved means demonstrating the availability of adequate resources. The RA would determine whether the response resources identified in the facility's response plan were adequate. Guidelines for the determination and demonstration of adequate response capability are discussed in detail in Section III.F of this preamble.

2. Owner or Operator Participation in RA Determination

EPA considered several options for allowing the owner or operator to participate in the RA's determination process. Under one option, the Agency would allow an owner or operator to appeal the RA's determination that a facility poses a threat of "substantial harm" or "significant and substantial harm." Under this option, the Agency would use the procedures described in § 112.4(f) of the existing regulation. The appeal would have to be made to the EPA Administrator in writing within 30 days of notification by the RA that the facility could cause "substantial harm" or "significant and substantial harm" to the environment. The appeal would have to contain a clear and concise statement of why the facility does not pose a threat of "substantial harm" or "significant and substantial harm" and could contain other information the owner or operator believes to be relevant to the determination. The EPA Administrator or his or her designee would then render a decision on the appeal and would notify the owner or operator of the decision.

Under a second option, EPA would allow no formal Agency appeals process for determinations of "substantial harm" or "significant and substantial harm." As a third option, EPA would select an intermediate approach that would allow the facility owner or operator to provide information and data and to consult with the RA about the determination. Following this consultation, the RA would make a final determination on whether the facility could cause "substantial harm" or "significant and substantial harm" to the environment. The Agency solicits comment on an appeals process for determinations of "substantial harm" and "significant and substantial harm" by the RA. Also, the Agency requests comment on a process to allow an owner or operator of a facility that could cause "significant and substantial harm" to appeal a decision by the RA not to approve a facility response plan.

3. Plan Resubmittal—Section 112.20(d)

As discussed above, the RA would periodically review approved facility response plans from facilities determined to have the potential to cause "significant and substantial harm" to the environment. Proposed § 112.20(d)(1) would require the owner or operator to resubmit the plan for approval within 60 days of each material change in the plan. A material change is one that could affect the adequacy of a facility's response capabilities, such as the ability to respond to a worst case discharge.

Examples of material changes include: a significant change in facility capacity, configuration, or type of oil handled; changes in the capability or availability of response contractors; and changes in spill prevention equipment or response procedures which may affect the potential for a discharge to cause "significant and substantial harm" to the environment. In addition, CWA section 311(j)(5)(C) requires that a facility response plan be consistent with the ACP. Therefore, a review of the ACP (when it is made available and annually thereafter) might prompt changes to the facility response plan that could trigger plan resubmittal (e.g., identification of sensitive environments that could be affected by a discharge from the facility). Plan revisions that affect only names or phone numbers (e.g., changes to the emergency notification list) would not require resubmission for approval under proposed § 112.20(d)(2). EPA proposes in § 112.20(d)(2), however, that owners or operators submit changes to the notification list to the appropriate RA, as the revisions occur. The Agency requests comment on the proposed requirement to submit changes in the call-down list to the RA.

4. Facilities Not Posing "Substantial Harm" to the Environment—Section 112.20(e)

Facilities that are determined not to have the potential to cause "substantial harm" would not be required to prepare and submit a response plan as described in proposed § 112.20. Such facilities, however, that have determined that the installation of structures or equipment listed in § 112.7(c)(1) is not practicable are required under the existing regulation to prepare but not submit "a strong oil spill contingency plan." As discussed in section V of this preamble, EPA proposes to clarify the existing requirement to provide "a strong oil spill contingency plan" by referencing the proposed response plan requirements contained in § 112.20.

EPA proposes in § 112.20(e) to require that owners or operators of those regulated facilities not submitting response plans complete and maintain at the facility with the SPCC Plan a certification form (see appendix C) that indicates that the facility is determined not to have the potential to cause "substantial harm" to the environment as indicated by the "substantial harm" flowchart published in appendix C.

B. Selection Criteria—§ 112.20(f) and Appendix C

The following paragraphs present a discussion of the criteria that would be used to select "substantial harm" and "significant and substantial harm" facilities. The criteria proposed in § 112.20(f) to determine facilities that could cause "substantial harm" to the environment include: Type of marine transfer operation; oil storage capacity; lack of secondary containment; proximity to environmentally sensitive areas; proximity to public drinking water intakes; and spill history. For self-selection purposes under § 112.20(a), the "substantial harm" criteria in proposed § 112.20(f)(1) have been

arranged in a flowchart (see appendix C to the rule) to be used by owners and operators in determining if they must submit a response plan to the Agency for their facility. The proposed flowchart is a decision tree that indicates the combinations of these criteria that would lead to the determination that a facility could cause "substantial harm" to the environment. Appendix C also provides additional information in Attachment C–III (i.e., distance calculations) that is used to apply the criteria in the flowchart. EPA recognizes that the owner or operator of a regulated facility may determine that a facility has the potential to cause substantial harm to the environment without having to assess every criterion in the flowchart.

RAs would apply general "substantial harm" factors in § 112.20(f)(2), which are broader than the specific criteria set forth for owners or operators in making their determination of a facility's potential to cause "substantial harm" to the environment. In addition to the "substantial harm" factors, RAs would be able to consider additional factors in making their determination of a facility's potential to cause "significant and substantial harm" to the environment, including: The age of a facility's tanks; proximity to navigable waters and environmental areas of concern; spill frequency; as well as other facility-specific and Regional-specific information (e.g., local impacts on public health). The Agency requests comment on the appropriateness and relative importance of the following factors in the determination of "substantial harm" through self-selection or RA determination.

"Substantial Harm" Criteria

Type of Transfer Operation. Because of the complex nature of their operations, marine transfer facilities are more likely to experience spill events into navigable waters and adjoining shorelines than other facilities. Such facilities are immediately adjacent to navigable waters and transfer oil on a regular basis. Moreover, transfers to or from vessels (e.g., barges) at these facilities often involve large quantities of oil. As such, spills that do occur often enter directly into navigable waters and may involve significant quantities of oil. Therefore, EPA proposes in § 112.20(f)(1)(i) that any regulated facility that transfers oil products over water to or from vessels, and that has a total oil storage capacity greater than or equal to 42,000 gallons, has the potential to cause "substantial harm" to the environment and must submit a facility response plan.

Many sites at which oil is transferred in bulk to or from a vessel are likely to include both transportation-related transfer facilities regulated by the USCG and non-transportation-related oil storage facilities regulated by EPA. This combination of transportation-related and non-transportation-related facilities will be considered a complex and will be subject to multi-agency jurisdiction. EPA and the USCG have coordinated to ensure that "substantial harm" selection criteria are similar in nature for both agencies. This cooperation will lead to consistency between the agencies in the determination of "substantial harm" for facilities that transfer oil products to or from vessels over water. EPA and the USCG would use similar criteria, including transfers over water of oil to or from a vessel to determine "substantial harm." Thus certain facilities regulated by EPA (oil storage facilities) and the USCG (marine transfer facilities) would be determined to have the potential to cause "substantial harm" to the environment under both EPA and USCG regulations. EPA requests comment on the appropriateness of this substantial harm criterion as it may apply to facilities that fuel vessels.

Oil Storage Capacity. The oil storage capacity of the facility is another factor that would be considered in evaluating the potential for "substantial harm" posed by facilities. The larger the quantity of oil present, the larger the potential spill and the resulting environmental impact. Large discharges are also more likely to escape secondary containment and may damage nearby tanks, as occurred during the Ashland Oil spill. Weakened tank integrity is of greater concern for tanks with large storage capacities where the resulting forces on the tank (created by large fluid volumes) are greater. The Agency proposes in § 112.20(f)(1)(ii) that any facility with a total oil storage capacity greater than or equal to one million gallons in combination with one of the following four "substantial harm" criteria would be determined under the self-selection process to have the potential to cause "substantial harm" to the environment: lack of secondary containment, proximity to environmentally sensitive areas, proximity to public drinking water intakes, or spill history.

Lack of Secondary Containment. The importance of secondary containment as a means of preventing spills from reaching navigable waters is well documented. In a 1989 incident in Port Arthur, Texas, nearly 6 million gallons of crude oil were released from a storage tank, but none of the oil reached nearby navigable waters because of the presence of adequate secondary containment. Such incidents, where the entire amount of oil released from the tank remains within a secondary containment structure, are not reportable spills under 40 CFR part 110. Secondary containment structures, which meet the standard of good engineering practice for purposes of 40 CFR part 112, can take many forms including berms, dikes, retaining walls, curbing, culverting, gutters, or other drainage systems. As described in § 112.7(e)(2)(ii), secondary containment at bulk storage facilities must be able to hold the entire contents of the largest single tank plus have sufficient freeboard to allow for precipitation.

The central role of secondary containment as a preventive mechanism is underscored by the existing provision in § 112.7(d) that requires a facility owner or operator to provide a strong oil spill contingency plan when it is determined that the installation of structures or equipment to prevent discharged oil from reaching navigable waters is not practicable. Given the importance of secondary containment, the Agency proposes in § 112.20(f)(1)(ii)(A) that any facility with an oil storage capacity greater than or equal to one million gallons, which lacks secondary containment for all storage tanks, would be determined to have the potential to cause "substantial harm" to the environment.

Proximity to Environmentally Sensitive Areas. A facility's proximity to environmentally sensitive areas increases the potential for a spill to reach and damage these areas, in the event secondary containment measures fail.

Therefore, such proximity is an important consideration in the assessment of the existence of a threat of "substantial harm." The Agency proposes in § 112.20(f)(1)(ii)(B) that any facility with an oil storage capacity greater than or equal to one million gallons that is located at a distance such that a discharge could cause injury to (e.g., damage or negatively affect productivity or ability to propagate) an environmentally sensitive area would be determined to have the potential to cause " substantial harm" to the environment.

EPA proposes in § 112.2 to define "injury" as a measurable adverse change, either long- or short-term, in the chemical or physical quality or the viability of a natural resource resulting either directly or indirectly from exposure to a discharge of oil, or exposure to a product of reactions resulting from a discharge of oil. This

definition is derived from the definition of "injury" in the Natural Resources Damage Assessments Final Rule at 43 CFR part 11 (51 FR 27727. August 1, 1986), which encompasses the phrases "injury," "destruction," and "loss." The language proposed at 40 CFR 112.2 differs only in that hazardous substances are not included in the definition because today's response plan rulemaking does not address hazardous substances. The definition of "injury" is applied by natural resource trustees to assess the damage to natural resources from oil spills. Because natural resource trustees have extensive experience in evaluating the impacts of oil spills on natural resources based on this definition, the Agency believes that the definition is an appropriate gauge to assess the potential to cause substantial harm to the environment. EPA requests comment on the appropriateness of defining "injury" in such a manner.

Appendix D identifies areas that may be considered environmentally sensitive. As discussed in section III.A of this preamble, the owner or operator would be required to apply the "substantial harm" criteria in conjunction with the flowchart contained in appendix C. For purposes of self-selection, Attachment C–III to appendix C provides formulas that owners or operators could use to determine appropriate distances from the facility for environmentally sensitive areas. Owners or operators may use an alternative formula(s) as long as it achieves results consistent with the purposes of this requirement and is considered acceptable to the RA. EPA considers an acceptable alternative formula to be one that is equivalent in terms of reliability and analytical soundness. As proposed at § 112.20(a)(3), owners or operators that use an alternative formula would be required to provide documentation with the response plan cover sheet on the reliability and analytical soundness of the formula. EPA does not anticipate that extensive documentation will be necessary to assess the appropriateness of alternative formulas. Accordingly, owners or operators need only provide basic information on the origin and nature of the formula as well as an example of how it was used to determine the appropriate distance for a particular facility. Owners or operators that use an alternative formula should consider the formula acceptable unless notified otherwise by the appropriate RA.

Appendix C to this part contains several different distance calculations based on oil transport on different types of media (i.e., fast-moving waters, still lakes and ponds, and land). EPA expects that the distance calculation for a fast-moving water body will apply to most of the facilities that complete the substantial harm screen. This calculation is based on the velocity of the water body and the time intervals for the arrival of response resources. The flow velocity of the water body has a direct effect on how far the oil will travel before response actions can be employed to contain the release. For moving water bodies, velocity is determined through the use of an equation that models the flow of water in open channels. To calculate the velocity, owners or operators would need to obtain information on river characteristics from the sources listed in Table 2 of appendix C. Similarly, the more time it takes for emergency response personnel and equipment to arrive on-scene and deploy containment measures, the farther downstream the released oil will travel from the origin of the spill. In highly populated areas, where a significant volume of marine traffic is present, response resources will be able to arrive on-scene more quickly than in remote areas. The response times provided in Attachment C–III of appendix C are consistent with the response times guidelines of the USCG for spill response contractors to arrive on-scene. A three-hour time period has been added to factor in the deployment of equipment. Facilities with oil storage capacities of greater than or equal to 1 million gallons are believed to have the potential to discharge oil in quantities that could cause injury to a sensitive environment located within the downstream distance calculated by the formula. For owners or operators of facilities that could discharge into a still water body, EPA has provided an alternative formula to determine the relevant distance. In addition, appendix C provides information on how owners or operators should consider overland flow in the distance calculations. EPA requests data and comment on the appropriateness of the distance calculations in appendix C for inland areas. In addition, the Agency requests comment on the appropriateness of using specified distances from the facility (e.g., 40 miles downstream) in the determination of proximity to these areas.

Proximity to Public Drinking Water Intakes. A facility's proximity to drinking water intakes increases the potential for a spill to reach and contaminate or render inoperable these intakes. The OPA Conference Report states that the criteria developed to determine "substantial harm" and "significant and substantial harm" facilities should include location of potable water supplies (see H.R. Rep. No. 101–653, 101st Cong. 2d Sess. 1991 at p. 150). Therefore, EPA has included proximity to drinking water intakes as a factor to consider in the determination of the potential to cause "substantial harm" to the environment.

An example of a discharge that affected potable water supplies is the January 1988 spill in Floreffe, Pennsylvania, when the rupture of an aboveground storage tank allowed 750,000 gallons of diesel oil to escape containment, flow into a storm drain located in an adjacent parking lot, and subsequently reach the nearby Monongahela River. As a result of the spill, more than 70 communities in three States stopped drawing water from the river. Such an interruption of public drinking water supplies can threaten the health and safety of affected communities.

The Agency proposes in § 112.20(f)(1)(ii)(C) that any facility with an oil storage capacity greater than or equal to one million gallons that is located such that a discharge would shut down a public drinking water intake would be determined to have the potential to cause "substantial harm" to the environment. EPA would define public drinking water intakes as those covered by the Safe Drinking Water Act. The Agency solicits comment on whether private drinking water supplies should be included in the criteria for the determination of "substantial harm." As previously discussed for environmentally sensitive areas, Attachment C–III to appendix C provides formulas that owners or operators could use in calculating appropriate distances from the facility for purposes of the assessment of the risk of affecting public drinking water intakes. EPA proposes that an alternative distance formula(s) acceptable to the RA could also be used in this determination. As discussed above for environmentally sensitive areas, owners or operators that use an alternative formula would be required to provide documentation on the reliability and analytical soundness of the formula.

Spill History. Spill history is an important factor to consider in the assessment of risk to the environment posed by a particular facility. Because larger spills can cause greater damage to the environment, the size of past spills may be an indication of the potential for a facility to cause "substantial harm" to the environment. EPA proposes in § 112.20(f)(1)(ii)(D) that any facility that has a total oil storage capacity greater

than or equal to one million gallons and that in the past five years has had a reportable spill greater than or equal to 10,000 gallons would be determined to have the potential to cause "substantial harm" to the environment. The Agency requests comments as well as data on the appropriateness of the use of a spill size of 10,000 gallons for this criterion, as well as information on alternate spill sizes.

Additional Criteria for Use by the Regional Administrator in the Determination of "Significant and Substantial Harm"

Discussed below are factors proposed in § 112.20(f)(3) that may be used by the RA, in addition to those contained in § 112.20(f)(2), to determine whether a facility could cause "significant and substantial harm" to the environment. For purposes of determining "substantial harm," the RA would consider whether a facility meets one of the factors in § 112.20(f)(2). Facilities that meet one or more of the "substantial harm" criteria, in combination with any of the additional factors discussed below, can present a greater risk of harm to the environment. For purposes of making the "significant and substantial harm" determination, therefore, the RA would consider whether a facility meets one or more of the "substantial harm" factors in combination with the following factors. EPA solicits comment on the appropriateness of the RA's use of the following factors for the determination of "significant and substantial harm."

Frequency of Past Spills. In addition to the size of previous spills (as discussed under the section on "substantial harm" criteria), the frequency of spill events is another important factor in assessing the potential for causing harm to the environment. A facility that has experienced multiple spills in the last five years may pose a greater risk of experiencing a spill event in the future than those facilities that have not had a spill. Multiple spills in a relatively short time period may have a cumulative effect on the impacted environment. Moreover, frequency of spills may be an indication of poor operating practices or a lack of training or prevention measures. Examples of facilities that have had several spills in a single year include a facility in Baltimore, Maryland that reported 44 separate spill incidents from 1989 to 1990 and a facility in Tupman, California that reported 14 spills in 1990 ranging in volume from 504 gallons to 3,780 gallons.

Proximity to Environmental Areas of Concern. To assist owners or operators, appendix D identifies areas that may be environmentally sensitive for purposes of the substantial harm determination. Appendix D also identifies additional areas of concern that the RA may consider to identify "significant and substantial harm" facilities.

Proximity to Navigable Waters. The proximity of a facility to navigable waters often directly influences the probability that a discharge, which escapes secondary containment, will reach such waters. Often, the most environmentally damaging spills, such as the Ashland Oil spill, occur at facilities whose boundaries border navigable waters. For example, all 20 worst case spills documented in the Technical Background Document which supports the Phase Two rulemaking occurred at facilities whose closest opportunity for discharge was located within one-half mile of navigable waters.

Tank Age. EPA has identified tank age as an additional factor that may be related to the potential for a facility to cause "significant and substantial harm" to the environment. Older tanks tend to have weakened structural integrity, depending on the maintenance history of the tank, increasing the risk of a spill. American Petroleum Institute (API) Standard 653 requires that the internal inspection intervals of tanks must not exceed 20 years. This limit on the inspection interval reflects the age at which structurally related failures are more likely to occur.

Criteria EPA Considered but is not Proposing. Natural hazards and high-risk environments may be other important factors in the assessment of the risk of a facility posing "substantial harm" to the environment. Facilities that are located in areas prone to natural hazards (i.e., floods, hurricanes, and earthquakes) may pose a greater threat to the environment. Case studies from the Technical Background Document which support this proposed rulemaking indicate that facilities susceptible to such events are more likely to have multiple tank failures and may have greater spill volumes than comparable facilities located outside these areas. For example, in November 1990, heavy rains and flooding washed away two aboveground storage tanks at a facility in Alaska and caused a 16,000 gallon spill into Diomede Harbor. Examples of large spills that involve facilities located in hurricane zones are well documented. Most recently, on September 17, 1989, Hurricane Hugo destroyed five 4.2 million gallon oil storage tanks on the south coast of St. Croix, U.S. Virgin Islands. Over 420,000 gallons of crude and No. 6 oil were discharged from the damaged tanks, with 42,000 gallons of oil reaching the waters of Limetree Bay.

In addition to risks posed by natural hazards, proximity to high-risk environments may be another important factor to consider in assessing the potential for a facility to cause harm to the environment. Karst and unstable terrains and areas with ground water concerns (e.g., recharge zones) are examples of such high-risk environments that may deserve consideration. For example, a tank located on unstable terrain, such as a sink hole could fail, releasing its contents to the ground water, if the substrate providing a foundation for the tank were to shift suddenly by a significant amount. For tanks located near certain ground water zones that have a direct connection to surface waters, discharges that enter the ground water have the potential to reach surface waters.

EPA does not have sufficient data available in a form that will substantiate including natural hazards and high-risk environments among the criteria for "substantial harm" determination and is therefore not proposing them in today's rulemaking. The Agency requests comment and supporting data on natural hazard factors and high-risk environments as indicators for "substantial harm" determination.

The Agency also considered proximity to cooling water intakes for electric utilities (including nuclear power plants), as a risk factor for use in the determination of the threat of "substantial harm." Utilities need substantial lead time in the event of a spill to shut down operations or implement alternative cooling mechanisms. Failure to shut down operations prior to contamination could lead to significant public health risks. EPA requests comments and supporting data on whether cooling water intakes or other intakes, such as those for commercial process water or irrigation water should be considered in the assessment of the potential for a facility to cause "substantial harm" to the environment. In addition, EPA solicits comment on other criteria, such as the type of product stored, throughput, and number and size of transfer operations, that should be included in the self-selection process or that the RA should consider in making determinations of "substantial harm" and "significant and substantial harm" for specific facilities. The Agency requests comment on whether more specific criteria should be used by the RA to identify those

facilities that could cause significant and substantial harm to the environment.

C. Environmentally Sensitive Areas—Appendix D

The proposed rule provides that facilities and RAs must consider proximity to environmentally sensitive areas to determine the potential for a facility to cause "substantial harm" to the environment. These areas may include: wetlands, National and State parks, critical habitat for endangered/threatened species, wilderness and natural areas, marine sanctuaries, conservation areas, preserves, wildlife areas, scenic and wild rivers, seashore and lakeshore recreational areas, and critical biological resources areas. An interagency "Sensitive Environments Technical Workgroup" provided input to ensure that consistent criteria were applied in identifying areas that may be of concern for facility-specific plans and ACPs.

As ACP development proceeds, Area Committees will identify and prioritize specific locations within the boundaries of their areas. These newly-identified environmentally sensitive areas will eventually be incorporated into the ACPs. Many ACPs may not be established prior to the OPA deadline for response plan submission. Thus, EPA proposes in § 112.20(g)(2) that, upon completion of the ACP (for the Area in which the facility is located), facility owners or operators must review and, as necessary, revise their facility response plan to incorporate information, such as additions to the list of sensitive areas and the designation of priority areas for protection as reflected in the ACP.

In addition, the RA would have the authority to determine, on a case-by-case basis, additional areas that possess ecological value (e.g., unique local areas or habitats). The Agency requests comment on whether additional areas should be considered, such as shallow aquifers used as drinking water supplies or critical habitats closely hydrological linked to surface water that are subject to contamination by discharges of oil. EPA is particularly interested in receiving comment on whether the list should include wellhead protection areas as defined in section 1428 of the Safe Drinking Water Act.

The Agency believes that in some areas of the country there is anecdotal information indicating problems in ground water caused by oil spills from onshore facilities. This could be especially true for areas with high water tables. EPA requests that commenters provide us examples of this type of ground water contamination. In addition, EPA would like commenters to provide comments on what action, if any, the Agency should take to address such oil spills.

EPA has compiled information in appendix D (Attachments D–I, D–II, and D–III) to help owners and operators identify specific geographical areas which may be among sensitive environments. Attachment D–I provides a list of the Federal agencies responsible for management of the environmentally sensitive areas. For more information on the various types of areas listed (including maps), owners or operators can contact the responsible agency. Attachments D–II and D–III would help owners and operators identify sensitive environments by providing information on designated critical habitats for National Marine Fisheries Service species and marine sanctuary and estuarine reserves and also may be useful to owners and operators in preparing response plans if they are required.

In addition, EPA has included in appendix D other reference information on sensitive environments that may be useful to facility owners or operators during plan preparation. Specifically, attachments D–IV and D–V are intended to help owners and operators prioritize sensitive areas according to their vulnerability to damage from oil spills for purposes of planning the deployment of response resources.

EPA recognizes that those areas defined as environmentally sensitive will change as the various Federal and State agencies responsible for designating the areas periodically update their lists. Owners and operators are expected to ensure that facility response plans reflect the listings of sensitive environments published to a point in time 6 months prior to plan submission. For example, plans submitted to meet the February 18, 1993, deadline would need to consider sensitive environments designated by the responsible agencies (see Attachment D–I of appendix D) as of August 18, 1992. A 6-month cutoff point for considering environmentally sensitive areas would also apply in situations where plans are periodically updated or resubmitted for approval of a material change. Six months is believed to be a reasonable period to incorporate new information on sensitive environments and is consistent with other time frames related to the submission of materials to EPA under the Oil Pollution Prevention regulation. The Agency requests comments on the appropriateness of a 6-month cutoff point for the consideration of sensitive environments.

D. Definition of Worst Case Discharge—Appendix E

OPA section 4202(a) requires that the President issue regulations providing that owners and operators of tank vessels, offshore facilities, and certain onshore facilities prepare and submit response plans for responding, to the maximum extend practicable, to a worst case discharge of oil or a hazardous substance. Today's proposal would identify the onshore, nontransportation-related facilities that would be subject to this requirement, as described in section I.B of this preamble.

OPA section 4201(b) defines "worst case discharge" as: (1) In the case of a vessel, a discharge in adverse weather conditions of its entire cargo, and (2) in the case of an onshore or offshore facility, the largest foreseeable discharge in adverse weather conditions. The OPA Conference Report (H.R. Rep. No. 101–653, 101st Cong., 2d Sess. 1991) states that, in the case of facilities, a more general definition of worst case is used because it is difficult to describe the entire capacity of some fixed facilities, such as pipelines. According to the Conference Report, Congress intends facility owners or operators to prepare plans for responding to discharges that are worse than either the largest spill to date at the facility or the maximum probable spill for that facility type.

Options for Regulatory Definition

In § 112.2, EPA proposes a regulatory definition of worst case discharge for onshore facilities. Specifying the definition is important because to prepare a response plan for a worst case discharge, a facility owner or operator must determine a planning quantity that corresponds to the amount of oil that could be discharged under worst case circumstances. The facility's worst case discharge volume will significantly affect the resources necessary to implement the plan.

EPA considered three options for defining worst case discharge: (1) A discharge equal in amount to the aboveground storage capacity of the entire site or installation; (2) a discharge equal in amount to the capacity of the largest single tank within a secondary containment area or the combined capacity of a group of aboveground tanks permanently manifolded together within a common secondary containment area lacking internal

subdivisions,[1] whichever is greater; and (3) a discharge equal in amount to the capacity of the largest single tank within a secondary containment area or the combined capacity of a group of aboveground tanks permanently manifolded together within a common secondary containment area lacking internal subdivisions, whichever is greater, plus an additional quantity based on several parameters, including the adequacy of secondary containment and proximity to navigable waters.

EPA proposes Option 3 to determine a facility's worst case discharge for response planning. Option 3 would allow the definition of worst case discharge to reflect differences among facilities based on location and the presence of secondary containment. The Agency concludes that these factors best reflect the flexibility represented by the definition of a worst case discharge for a facility (i.e., the largest foreseeable discharge in adverse weather conditions), and best reconcile the differences between worst case discharges for vessels and facilities. The definition reflects the fact that a facility with adequate secondary containment, as defined in existing § 112.7(e)(2)(ii), is not likely to discharge its entire capacity in adverse weather conditions, as opposed to a vessel which may lose its entire cargo since there is little to prevent all of the released oil from a vessel from directly entering the water. Finally, this option is consistent with the intent of the OPA. The legislative history of the OPA states that the worst case discharge for a facility should describe a discharge "that is worse than either the largest spill to date or the maximum probable spill for that facility type." See H.R. Rep. No. 101–653, 101st Cong. 2d Sess. 1991 at p. 147).

The Agency proposes in § 112.2 to define "adverse weather" as the weather conditions that make it difficult for response equipment and personnel to cleanup or remove spilled oil. These conditions include significant wave height, ice, extreme temperatures, weather-related reduced visibility, and fast currents. EPA has included guidelines in appendix F (see Table 1 of appendix F) to the rule to assist owners or operators in evaluating the operability of response equipment (i.e., oil recovery devices and boom) for various sea states and wave heights. ACPs also may contain information concerning other conditions in the area that are significant factors in evaluating the operability of equipment.

Although Option 1, which defines a worst case discharge as a discharge equal to the total aboveground storage capacity at the site, is comparable to the definition of worst case specified in the OPA for vessels (i.e., the entire cargo), there are no documented spills of the entire capacity of a multi-tank facility with secondary containment into navigable waters.

For purposes of this determination, Option 2 would define the worst case discharge as an amount equal to the capacity of the largest single tank within a secondary containment area or the combined capacity of a group of aboveground tanks permanently manifolded together within a common secondary containment area lacking internal subdivisions, whichever is greater. For many regulated facilities (those with only one tank), the option is identical to Options 1 and 3. Evidence from case studies, however, suggests that spills caused by flooding, hurricanes, and earthquakes at multi-tank sites may involve discharges of oil greater than the capacity of the single largest tank; spills caused by natural disasters often involve releases of oil from more than one tank. Although the planning quantity for worst case discharge could be described by the combined capacity of a group of aboveground tanks permanently manifolded together within a common secondary containment area lacking internal subdivisions, EPA recognizes that a multiple tank failure may involve tanks from distinct secondary containment systems, and the definition described above is merely a planning quantity.

Worst Case Discharge Calculation Worksheets

Under proposed Option 3, facility owners or operators would calculate the worst case discharge volume for their facilities, using worksheets developed by EPA. This approach is consistent with the concept in the OPA Conference Report that planning for a worst case discharge involves a facility-specific determination. These proposed worksheets are provided in appendix E of 40 CFR part 112. Part A of appendix E contains the worst case discharge calculation for storage facilities. A separate worksheet has been developed for production facilities (part B of appendix E), because of the added concerns associated with production volumes at such facilities. Unlike storage facilities, which handle a set amount of oil, production facilities must consider throughput and the potential for oil contained in the underground natural reservoir to escape containment during extraction operations. EPA proposes in § 112.20(h)(5)(i)(A) that if the RA determines that the worst case discharge volume calculated by a facility is not appropriate or that the parameters in the worksheet are not appropriate for a particular type of facility, the RA may specify the worst case discharge amount to be used for response planning at that facility. The RA could make such a case-by-case determination during the review of response plans prepared by facilities.

In the event the RA finds it necessary to determine the worst case discharge volume, the RA will consider the same factors addressed by the worksheet (i.e., secondary containment and proximity to navigable waters), in the specific context of the facility in question as well as other facility-specific circumstances that may be relevant to the calculation. An example of how the RA might tailor the criteria to the specific circumstances at a facility involves a regulated facility with underground storage tanks. Completely buried storage tanks, such as those at service stations, may have the potential to cause spills to surface waters when tanks are overfilled. The RA would consider the quantity of product stored, as well as the proximity to surface waters in arriving at a worst case discharge volume.

For owners and operators of storage facilities with a single aboveground tank, the worst case discharge volume would be the entire storage capacity of the tank. To assist owners and operators of other onshore storage facilities and production facilities in calculating a worst case discharge volume, the worksheets integrate the use of secondary containment and proximity to navigable waters. For production facilities, the presence of storage tanks and the production volume for exploratory wells and production wells must also be considered in the calculation. The worst case scenario is influenced by the extent of spill prevention and containment measures in place. A spill at a facility with secondary containment structures may have negligible environmental impact, while a comparable spill at a facility without such structures may result in the entire capacity of the facility reaching navigable waters. The presence of secondary containment at a facility, therefore, influences the final calculated worst case discharge volume. Proximity

[1] Tanks that are permanently manifolded together are defined as tanks that are designed, installed, and/or operated in such a manner that the multiple tanks function as one storage unit. As such failure of a single tank in the system could lead to the release of the capacity of more than a single interconnected tank. Tanks permanently manifolded togehter within a common secondary containment area are considered to be single tanks for purposes of this calculation, if each tank is separated by internal dividing structures.

to navigable waters is also an important factor in the assessment of the worst case discharge volume. Based on the goals of the OPA and the Oil Pollution Prevention regulation, the definition of what constitutes a worst case spill is directly influenced by the potential for the spill to reach navigable waters.

To complete the worksheets in appendix E for production facilities and multiple tank storage facilities, owners or operators would first determine whether secondary containment, as described in § 112.7 of the existing regulation, is present for each storage tank or group of tanks at the facility. If such secondary containment is not present, a final worst case discharge volume is calculated based in part on the total aboveground storage capacity without secondary containment (for storage facilities) or total aboveground storage capacity without secondary containment plus the production volume of the well with the highest output at the facility[2] (for production facilities). If secondary containment is present for some tanks, the owner or operator calculates a potential worst case volume based on whether the facility is adjacent to navigable waters. If the facility is not adjacent to navigable waters, the worst case discharge amount is the capacity of the largest single tank within a secondary containment area or the combined capacity of a group of aboveground tanks permanently manifolded together within a common secondary containment area lacking internal subdivisions, whichever is greater, plus an additional quantity for any tanks without secondary containment. For purposes of this calculation, tanks within a common secondary containment area that have adequate internal subdivisions are considered single tanks whose capacity would not be combined. If the facility is adjacent to navigable waters the worst case discharge amount is adjusted upwards by a factor of 10 percent of the capacity of tanks with secondary containment. EPA solicits comment on the overall approach and specific factors in the proposed worksheets in appendix E.

As discussed above, tanks that are permanently manifolded together are tanks with common piping that are designed, installed, and/or operated as a single storage unit. Because the potential discharge amount is greater for a system of tanks permanently manifolded together, EPA proposes that the worst case discharge planning amount be increased to reflect the combined capacity of all tanks in the system. EPA recognizes that certain tank systems where tanks are connected by piping may not be operated as a single unit. Owners or operators of facilities with tanks that are connected by common piping or piping systems that can demonstrate to EPA that the system does not operate as a single unit would not have to plan for the combined capacity of all tanks in the system but the capacity of the single largest tank. EPA proposes to require that such evidence be provided to the RA in the model response plan under the discussion of worst case discharge in the discharge scenarios section.

EPA requests comment on allowing a reduction in the worst case discharge planning amount from 100 percent (110 percent for facilities adjacent to navigable waters) of the capacity of the largest single tank or group of tanks down to 50 percent for facilities with adequate secondary containment in place for oil storage containers.[3] The Agency also requests comment on the appropriateness of further reductions in the worst case discharge volume (i.e., up to 100 percent) for facilities with adequate secondary containment for all storage containers. Under this approach, the presence of secondary containment would allow the owner or operator to reduce the worst case discharge planning amount and the corresponding amount of response resources. EPA specifically solicits comment on the implication for response capability of a reduction in the worst case discharge planning amount and data on the potential cost savings associated with any such reductions in planning quantity.

As proposed in appendix E, the production volume for each production well (producing by pumping) would be determined from the pumping rate of the well multiplied by 1.5 times the number of days the facility is unattended. For each exploratory well (and production well producing under pressure) 10,000 feet deep or less, the production volume refers to the maximum 30-day forecasted well rate. For each exploratory well (and production well producing under pressure) deeper than 10,000 feet, the production volume refers to the maximum 45-day forecasted well rate. EPA specifically requests comment and data on the appropriateness of using a 30-day forecasted well rate (for wells less than or equal to 10,000 feet deep) or 45-day forecasted well rate (for wells greater than 10,000 feet deep) as production volumes in the calculation of the worst case discharge amount at facilities with exploratory wells and production wells producing under pressure.

EPA realizes that under the proposed self-selection process, smaller facilities, including many small production facilities are unlikely to screen as having the potential to cause "substantial harm" to the environment. RAs, however, may determine that any regulated facility, regardless of its storage capacity could cause substantial harm to the environment. Thus, the worksheets for production facilities may be necessary under circumstances in which the RA selects, for example, a production facility storing relatively small amounts of oil, a marine transfer facility with less than 42,000 gallons, or a facility with a storage capacity of less than 1 million gallons.

Worst Case Discharge Calculation for Complexes

As discussed in section III.B of this preamble, a complex is a facility that has both transportation-related and non-transportation-related components and is therefore subject to the response plan requirements of more than one authority. Each component of a complex would have an associated worst case discharge amount. The Agency expects, however, that the likelihood of each component experiencing a worst case discharge simultaneously is small. EPA proposes in § 112.20(h)(5)(i)(C) that a worst case discharge volume at a complex be the larger of the amounts calculated pursuant to the respective regulations that apply for each component of the facility. The Agency requests comment on the appropriateness of this method in the determination of a worst case discharge for a complex.

E. Tiered Response Planning

The Agency proposes in § 112.20(h)(5) that facility owners and operators prepare plans for responding to lesser discharges, as appropriate, in addition to a worst case discharge as required by the OPA. This tiered response planning by facilities that are determined to have the potential to cause "substantial harm" to the environment will help ensure protection of public health and welfare and the environment by facilitating effective response to discharges to navigable waters or adjoining shorelines. Proposal of a

[2] As defined, onshore oil production facilities may include all wells, flowlines, separation equipment, storage facilities, gathering lines, and auxiliary non-transportation-related equipment and facilities in a single geographical oil or gas operated by a single operator.

[3] Only tanks with secondary containment would be eligible for this reduction; for tanks without secondary containment, the entire capacity of the tanks would be included in the worst case discharge amount.

tiered planning approach is consistent with other agencies' (such as the USCG's) implementation of OPA response planning requirements.

EPA considered proposing that owners or operators prepare response plans for responding to worst case discharges only. The Agency concluded that a plan only for a response to a worst case discharge would not necessarily be effective in a response to a lesser discharge and that lesser discharges may pose a serious threat to navigable waters, especially from the cumulative effects of several discharges. Over 70 percent of all spills reported to the Federal government in 1989 and 1990 (approximately 48,000 incident reports were received by the National Response Center during that time) were less than 100 gallons and over 90 percent were less than 1,000 gallons. Preparing for an appropriate response to such smaller spills could lead to better overall protection of the nation's navigable waters. In addition, various sizes of discharges could require different types and amounts of equipment, products, and personnel. Planning for various levels of spills would allow facility owners or operators to begin to respond to any size discharge prior to the arrival of personnel and resources under contract with the facility and would provide insight into the most likely spill situations and should reveal many potential problems that could surface during actual discharges. Planning for these problems would enable facility or contractor response personnel to respond quickly and appropriately to a range of spill events.

The Agency recognizes that this tiered planning approach may not be appropriate for all facilities, including those where the range of possible spill scenarios is small. For example, responding to a worst case discharge at a small, one-tank facility (release of entire capacity of the tank) may be similar in approach to responding to a lesser spill (release of a portion of the capacity of the tank) at that facility. These responses would not require a significantly different response strategy or level of response resources. Owners and operators of large, multi-tank storage and production facilities, however, are among those who would be required to plan for spill events of different sizes, because the range of spill scenarios could vary greatly at such facilities. For example, although small spills could be handled by company response personnel, large spills may require the resources of outside parties.

The Agency examined several options for the determination of these additional planning quantities. One approach would be to use facility-specific planning quantities by basing the amount on actual operations and spill history at a facility. Although this option would account for the tremendous diversity of regulated facilities, it cannot be applied in a simple manner by owners and operators. A second option would be to establish standard amounts for the entire regulated community. A third option, which EPA proposes today in § 112.20(h)(5), would establish limited ranges for alternate discharge amounts. Although large facilities would still need to plan for three discharge amounts under this method, a small facility may only need to plan for two scenarios or a single scenario if its worst case discharge falls within one of the ranges.

In addition to planning for a worst case discharge, under proposed § 112.20, facility owners and operators would be required to plan for (1) a small spill, defined as any spill volume less than or equal to 2,100 gallons, but not to exceed the calculated worst case discharge; and (2) a medium spill, defined as any spill volume greater than 2,100 gallons, and less than or equal to 36,000 gallons or 10 percent of the capacity of the largest tank at the facility, whichever is less, but not to exceed the worst case discharge. For facilities whose worst case discharge is a medium spill, the owner or operator would plan for two amounts, a worst case spill and a small spill. Similarly, for facilities whose worst case discharge is a small spill, the owner or operator would plan only for a worst case discharge.

EPA realizes that under the proposed self-selection process, smaller facilities are unlikely to qualify as having the potential to cause "substantial harm" to the environment. RAs, however, may determine that any regulated facility, regardless of its storage capacity and number of tanks, could cause "substantial harm" to the environment. Thus, the collapsing nature of the proposed tiered planning approach may be relevant under circumstances in which the RA selects a facility storing relatively small amounts of oil (i.e., less than 36,000 gallons).

For complexes (i.e., facilities regulated by both EPA and USCG), the owner or operator would first determine a medium planning quantity for the transportation-related and non-transportation-related components at the facility. The owner or operator would then compare the medium planning amounts for each component of the facility. Following this comparison, the owner or operator would select the larger of the quantities as the medium tiered planning amount for the overall facility.

The ranges for these alternate planning quantities were determined through a statistical analysis of spills reported to the Emergency Response Notification System (ERNS) data base. A discharge of 1,300 gallons is the average reported discharge in ERNS. For a small spill, an amount up to 2,100 gallons is believed to represent a realistic planning quantity that will allow owners or operators to prepare for operational-type spills that occur relatively frequently. Selection of 36,000 gallons was based on the 99.5th quantile. This means that 99.5 percent of future spills are expected to be less than approximately 36,000 gallons. To provide greater flexibility in establishing a medium planning amount, EPA proposes in § 112.20(h)(5)(i) to allow owners or operators to plan for 36,000 gallons or 10 percent of the capacity of the largest tank at the facility, whichever is less. Planning for a spill of this size represents a practical and realistic intermediary planning level. The Agency solicits comment on the selection of these standard planning amounts, including information on other methods to identify standard amounts, such as being planning quantities on the definition of minor, medium, and major discharges in 40 CFR part 300. Under the NCP a minor oil discharge means a discharge to the inland waters of less than 1,000 gallons or a discharge to coastal waters of less than 10,000 gallons; a medium oil discharge means a discharge to the inland waters of 1,000 to 10,000 gallons or a discharge to coastal waters of 10,000 to 100,000 gallons; and a major oil discharge means a discharge to the inland waters of 10,000 to 100,000 gallons or a discharge to coastal waters of more than 100,000 gallons. To the extent that response resources are currently geared to spills of these sizes, such ranges may be appropriate for establishing tiered planning amounts. Also, EPA requests comments on the option of using facility-specific planning quantities as well as information from other options in the determination of these alternate amounts.

F. The Determination and Demonstration of Adequate Response Capability

1. The Determination of Response Resources—Appendix F

To ensure the availability of private personnel and equipment necessary to

respond, to the maximum extent practicable, to a worst case discharge, contracts or other approved means (as proposed in § 112.2 of today's proposed rule) may include:

- A written contractual agreement with a response contractor. The agreement must identify and ensure the availability of the necessary personnel or equipment within appropriate response times;
- Certification that the necessary personnel and equipment resources, owned and operated by the facility owner or operator, are available to respond to a discharge within appropriate response times;
- Active membership[4] in a local or regional oil spill removal organization, which has identified and ensures adequate access through membership to necessary personnel and equipment within appropriate response times in the specified geographic areas; or
- Other specific arrangements approved by the RA upon request of the owner or operator.

In appendix F to the rule, EPA provides guidelines for the types and amounts of equipment and response times that are needed to respond to spill of a given size. Similar guidelines were originally developed by the USCG for vessel response plans and facility response plans for marine transportation-related onshore facilities. EPA has adapted the USCG's proposed guidelines for use by non-transportation-related onshore facilities (i.e., facilities regulated by 40 CFR part 112) in complying with the OPA requirement to identify and ensure adequate resources. The guidelines describe procedures for determining the "maximum extent practicable" quantity of resources and response times for responding to a worst case discharge and other discharges, as appropriate. These procedures identify practical and technical limits on response capabilities that an individual facility owner or operator can contract for in advance and on response times for resources to arrive on scene. The guidelines are intended to assist owners or operators of facilities in preparing response plans and EPA in reviewing plans. The Agency requests comment on the procedures contained in appendix F of the rule for the determination and evaluation of required response resources. In addition, EPA solicits comment on whether the guidelines are appropriate for planning for inland spills by facilities regulated by the Oil Pollution Prevention regulation.

EPA proposes at § 112.2 a definition of "maximum extent practicable" to mean the limitations used to determine oil spill planning resources and response times for on-water recovery and shoreline protection and cleanup for worst case discharges from onshore non-transportation-related facilities in adverse weather. EPA interprets the phrase "to the maximum extent practicable" to include considerations such as the technological limitations associated with oil discharge removal (e.g., boom effectiveness and equipment recovery rates in adverse weather), and the practical and technical limits of response capabilities of individual owners or operators. This interpretation is consistent with the OPA Conference Report (H.R. Rep. No. 101–653, 101st Cong., 2d Sess. 1991 at p. 150). To address these limitations, the guidelines in appendix F establish operability criteria for oil recovery devices and boom as well as caps on response resources that facility owners or operators should identify and ensure as being available, through contract or other approved means. The caps reflect an estimate of the response capability at a given facility that is considered a practical nationwide target to be met by 1993. Recognizing that the OPA Conference Report suggests a significant increase in commercial removal resources may be needed in most areas of the country to comply with the national planning and response system, EPA is soliciting comment on the anticipated effects this provision may have on the oil spill response industry.

2. Verification of Response Capability

As previously discussed, plan drafters would need to identify and verify response resources when preparing plans. EPA would evaluate such arrangements during the plan review stage, to ensure the contractual availability of equipment and personnel from contractors identified in response plans to provide response resources. This process would require that evidence of contracts or agreements with response contractors be included in the response plan so that the availability of resources can be verified during plan review. Agency reviewing officials may need to take additional steps to determine that contractors or cooperatives do possess, and maintain in a ready condition, the necessary response inventory to handle the size of spills for which they contract.

One option to provide review officials with more information would be to establish a contractor certification or approval program. The State of Washington has instituted a contractor certification program and the USCG is considering the development of contractor approval procedures for spill response contractors under a separate rulemaking. Among the relevant factors in the assessment of contractor arrangements might be proximity to the facility as it affects response times, the adequacy of equipment and personnel resources, the contractor's past performance and safety record, and the number of additional facilities the contractor has agreed to support. The Agency requests comment on the criteria for evaluating contractor agreements, a mechanism for approving response contractors, and the advisability of establishing a response contractor approval process.

G. Response Plan Elements—§§ 112.20(g) and (h), and Appendix G

The elements for response planning proposed in § 112.20 of this rule are designed to guide a facility owner or operator in gathering the information needed to write a response plan for the facility's worst case discharge and, as described in section III.E of this preamble, for discharges smaller than a worst case discharge. The proposed response plan elements address requirements under CWA section 311(j)(5) (as amended by the OPA), as well as additional elements that EPA has determined are necessary to ensure the integrity of the response plan. The OPA Conference Report suggests that facility response plans should be consistent with but not duplicative of plans prepared under other Federal programs, and EPA encourages owners or operators to incorporate into the response plan information required by other Federal programs. Some of these programs are discussed in Section IV of this preamble. Owners or operators need not prepare a separate plan to comply with the Oil Pollution Prevention regulation if they have already prepared a plan for the State in which the facility is located, provided that the State plan addresses the requirements and includes all the elements described in § 112.20(h) and is cross-referenced appropriately. Proposed § 112.20(h) would require that response plans contain an emergency response action plan to be kept at the front of the response plan binder or under a separate cover that accompanies the overall plan.

EPA considered a requirement for certification by a Registered Professional Engineer for certain portions of the response plan, such as determination of worst case discharge, and solicits

[4] Membership in a spill response cooperation must ensure ready access to the organization's response resources for the arrangement to be acceptable to the RA for the purposes of this regulation.

comment on this option. The contents of a response plan would be subject to review during routine inspections by On-Scene Coordinators (OSCs) or during State inspections. In addition, the RA would review the contents of response plans from facilities identified as posing a threat of "significant and substantial harm," before granting approval. EPA solicits comment on which professions may be suitable for evaluating and certifying the contents of the response plan if EPA determines a certification requirement is appropriate. In particular, the Agency requests comment on the suitability of Certified Hazardous Materials Managers to perform the plan certification function.

In accordance with CWA section 311(j)(5), proposed § 112.20(g) would require that a facility response plan be consistent with the NCP and with ACPs described in section IV of this preamble. For example, the OPA requires amendments to the NCP that establish procedures and standards for removing a worst case discharge of oil and for mitigating or preventing a substantial threat of such a discharge. Also, the OPA requires the preparation of ACPs designed to augment the capabilities for responding to worst case discharges when implemented in conjunction with the NCP. The discussion of worst case discharge in a facility response plan should be consistent with the procedures and standards laid out under these broader plans. To ensure such consistency, EPA proposes in § 112.20(g)(2) to require that owners or operators, review on an annual basis appropriate parts of the NCP (e.g., subparts A through D) and, when available, the applicable ACP and revise the response plan as necessary. As discussed in section III.C of this preamble, ACPs may not be available in time for owners or operators to review them before initial response plan preparation. Owners or operators are encouraged to obtain from local or Regional sources (e.g., Regional Response Teams (RRTs) or OSCs) the details of the ACP for the area in which their facility is located, and develop their facility response plans accordingly. Proposed § 112.20(g) also states that facility owners or operators should coordinate with the local emergency planning committee (LEPC) and State emergency response commission (SERC) when developing their facility response plans to ensure consistency with the local emergency response plan required under section 303 of title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA Title III).

Model Response Plans

Today, EPA includes in appendix G to the rule a model response plan to assist owners and operators in addressing the required elements outlined in proposed § 112.20(h). The organization of the model plan and the information to be contained in it are representative of the format and level of detail needed to address the required response plan elements in an acceptable manner. A response plan, as shown in appendix G, would be required for facilities that are determined to have the potential to cause "substantial harm" to the environment. EPA recognizes that, in certain cases, information required in the model response plan is similar to information currently maintained in the facility's SPCC Plan. In these cases, owners or operators can simply reproduce the information and include a copy in the response plan.

As discussed in section III.A of this preamble, EPA proposes in § 112.20(a)(2)(i)–(iv) to require that all facilities submitting a response plan must complete and return to EPA a Response Plan Cover Sheet with the response plan. The cover sheet is intended to provide the Agency with basic information concerning the facility and would be used by Regions to check the "substantial harm" self-determination process. A copy of the cover sheet is included as Attachment G–II of appendix G along with instructions for completion of the form. The cover sheet provides space for: Basic facility information, responses to the "substantial harm" flowchart contained in appendix C, worst case discharge amount, additional facility characteristics (i.e., latitude and longitude, and proximity to navigable waters), and certification.

A blank copy of a model response plan is included as appendix G of 40 CFR part 112. Affected facilities (those that could cause "substantial harm") would prepare (1) a response plan that meets the requirements of §§ 112.20(g) and (h) as reflected in the model response plan provided in appendix G; or (2) a comparable State or other Federal agency response plan that is appropriately cross-referenced and meets the requirements of §§ 112.20(g) and (h). A facility response plan would include a discussion of the following elements:

Emergency Response Action Plan—§ 112.20(h)(1). In order to facilitate response actions, EPA proposes that facility owners or operators be required to compile key sections of the overall response plan into an emergency response action plan that is maintained in an accessible location. The sections of the action plan may be photocopies or condensed versions of the forms included in the associated sections of the overall response plan. EPA proposes that the following information be included in the action plan in format specified in proposed § 112.20(h)(1):

- Emergency Response Coordinator Information—from the Facility Information Section;
- Emergency Notification Phone List—from the Emergency Response Section;
- Spill Response Notification Form—from the Emergency Response Section;
- Equipment List and Location—from the Emergency Response Section;
- Facility Response Team—from the Emergency Response Section;
- Evacuation Plan—from the Emergency Response Section;
- Immediate Action—from the Plan Implementation Section; and
- Facility Diagram—from the Diagrams Section.

The action plan is designed to provide the facility owner or operator with information on critical steps to stabilize the source of the spill, notify the appropriate people, and prevent the spread of spilled oil. The action plan would be kept in the front of the overall facility response plan or in a separate binder that accompanies the overall plan.

Facility Information—§ 112.20(h)(2). The requirement in CWA section 311(j)(5) to designate a facility emergency response coordinator is addressed in proposed § 112.20(h)(2). The facility information section of the model response plan provides space to identify a qualified individual having full authority, including contracting authority, to implement removal actions. The Agency requests comment on whether facility owners and operators should be required to designate an alternate emergency response coordinator. This section also provides space to include additional facility information, much of which may be obtained from the facility's existing SPCC Plan. Other items include general facility information such as the facility name, address, telephone number, owner and operator, and longitude and latitude in minutes and degrees.

Emergency Response—§ 112.20(h)(3). The model plan contains space in the emergency response section to address the CWA section 311(j)(5) requirement that the emergency response coordinator be able to immediately communicate with the appropriate Federal official and the persons providing personnel and equipment (e.g., a spill response contractor). To facilitate compliance

with this requirement, the section contains space for a telephone list of people or organizations to contact in the event of a discharge, including the National Response Center, the facility's own and/or contracted response teams, local response teams, local hospitals, and local radio stations (if evacuation is necessary). Notification of the National Response Center is required under regulations implementing CWA section 311(b). (See 33 CFR part 153, 40 CFR part 300, and 40 CFR 117.21.) The contact list should be accessible to all facility employees to ensure that, in case of a discharge, any employee on site could immediately notify the appropriate parties. A notification checklist also is included in this section of the model plan. The checklist outlines the information to relay to response officials, such as information on the spill amount, material, impact of the spill, and response actions.

The CWA requires that a facility response plan describe the response actions of persons at the facility. This requirement is addressed in the emergency response section of the model plan, which provides space to include a detailed description of the duties of the emergency response coordinator and other response personnel during a response to a discharge.

Pursuant to CWA section 311(j)(5), owners or operators must identify and ensure by contract or other means acceptable to EPA (e.g., participation in a spill response cooperative in lieu of an individual contract) the availability of private personnel and equipment necessary to respond, to the maximum extent practicable, to a worst case discharge. The OPA Conference Report indicates Congress contemplated creating a system in which private parties supply the bulk of equipment and personnel needed for response to large oil spills. See OPA Conference Report, H.R. Rep. No. 101–653, 101st Cong., 2d Sess. 1991 at p. 148. The model response plan provides space to identify companies that will provide such personnel and equipment. Evidence of contracts or agreements with response contractors must be included in this section so that the availability of resources can be identified. As discussed in Section III.F of this preamble, the contract or response agreement will be subject to review by the appropriate EPA Regional office to ensure that the agreement provides adequately for response, mitigation, and prevention.

Response capability may also be provided through the use of internal response personnel and equipment resources. The model plan provides space for a list of the facility's response personnel and response equipment, including its location and operational status and the date the equipment was last tested.

Also included in the emergency response section of the model plan are guidelines for preparing evacuation plans for the facility and surrounding community. Additional information on the guidelines that may be helpful in the preparation of an evacuation plan can be obtained from the Handbook of Chemical Hazard Analysis Procedures prepared by EPA, DOT, and the Federal Emergency Management Agency (FEMA). Evacuation routes must be shown on a diagram of the facility.

Hazard Evaluation—§ 112.20(h)(4). A hazard evaluation section is included in the model response plan. Hazard evaluation is a widely used industry practice that allows owners or operators to develop a complete understanding of potential hazards and the response actions necessary to address these hazards. The Handbook of Chemical Hazard Analysis Procedures, prepared by EPA, DOT, and FEMA and the Hazardous Materials Emergency Planning Guide (NRT–1), prepared by the National Response Team are good references for conducting a hazard analysis. The hazard evaluation will provide information for developing discharge scenarios for a worst case discharge and medium and small discharges. This section of the response plan provides space for a hazard identification, a vulnerability analysis, and an analysis of the potential for a discharge. This information allows the facility owner or operator to evaluate day-to-day operations for potential discharges and to change standard operating procedures if a potential for a discharge is discovered.

As part of the hazard evaluation, EPA proposes that owners or operators identify what the potential effects of the discharges would be on the affected environment. To assess the range of areas potentially affected, owners or operators shall consider the distances calculated in the substantial harm determination process discussed in section III.B of this preamble. Those owners or operators that have made a substantial harm determination without performing the distance calculation should use the appropriate formula in appendix C or an alternative method to quantitatively evaluate the appropriate range of potentially affected areas.

Also in the hazard evaluation section of the model response plan, the owner or operator would provide information on the facility's discharge history (if any have occurred) including dates, causes, amounts discharged, and response actions. Information collected for purposes of meeting the existing § 112.4(a) requirements may be used to document spill history in the response plan.

Discussion of Tiered Planning Scenarios—§ 112.20(h)(5). The discharge scenario section provides for discussions of specific discharge scenarios. As discussed in section III.E of this preamble, EPA proposes a tiered approach to response planning that considers smaller, more probable discharge quantities in addition to the worst case discharge specified in the OPA. Therefore, in addition to the development of a scenario which uses the "worst case discharge" amount calculated from the worksheet in Appendix E, the owner or operator of a facility must plan and prepare for small and medium discharge quantities, as appropriate. When describing each discharge scenario, the owner or operator would consider facility operations and factors that effect the response effort, such as the potential direction of the discharge and impact on the surrounding area.

As discussed in section III.E of this preamble, owners or operators of complexes would determine planning quantities for the transportation-related and non-transportation-related components of the facility. The owner or operator would then compare the corresponding worst case discharge and medium planning amounts, as appropriate, for each component of the facility. In each case, the owner or operator would select the larger of the two amounts as the appropriate planning quantity.

Discharge Detection—§ 112.20(h)(6). The prompt discovery of a discharge and the initiation of effective response actions are critical to minimize the damage caused by a discharge. The discharge detection section provides space for describing the discharge detection systems, human or automated, in use at the facility. Often, the choice of a human or automated system depends on the size and complexity of facility operations.

Plan Implementation—§ 112.20(h)(7). The CWA requirement that facility owners or operators describe response actions to ensure the safety of the facility and to mitigate or prevent discharges, or substantial threats of discharges, is proposed in § 112.20(h)(7). The plan implementation section of the model response plan contains space for describing such response actions, including the steps facility personnel would follow to

mitigate and respond to each discharge described in § 112.20(h)(5); the amount of personnel and equipment that will be needed to respond to the specific discharge under consideration; plans to dispose of contaminated materials, debris, and recovered product; required Federal or State permits (e.g., Resource Conservation and Recovery Act (RCRA) permits for disposal of contaminated materials); and measures to provide for containment and drainage.

As discussed in section III.F of this preamble, EPA has provided guidelines in appendix F of the rule to establish appropriate personnel and equipment levels and response times for given spill sizes. Owners and operators are encouraged to use these guidelines to determine the quantity of resources that must be identified and available, through contract or other approved means, for responding to a worst case discharge and other discharges.

Facility Self-Inspection, Training, and Meeting Logs—§ 112.20(h)(8). In the model plan, the facility self-inspection, training, and meeting logs section provides space to include inspection checklists for tanks, secondary containment, and response equipment and logs for discharge prevention meetings. Much of the recordkeeping information contained in this section is required by the existing Oil Pollution Prevention regulation. Therefore, portions of the self-inspection, training, and meeting logs section may be completed by compiling information from other parts of existing SPCC Plan. Moreover, information collected for purposes of meeting § 112.4(a) requirements may be used to document spill history in the response plan.

The CWA also requires owners or operators to describe training and periodic unannounced drills to be carried out under the response plan. In the model plan, the training section provides space to include a series of logs for recording unannounced or "mock alert" drills and staff training related to emergency response. The model response plan in appendix G provides recommendations for planning mock alert drills. The Agency requests comment on how frequently such unannounced drills should be conducted.

Diagrams—§ 112.20(h)(9). This section of the model response plan describes diagrams for the site plan and the drainage plan. Such diagrams help facility personnel identify the nearest opportunity for a discharge to reach navigable waters and help responders visualize location and layout information so they can act promptly during time critical situations.

Security—§ 112.20(h)(10). A security section is included in the model response plan and provides space to address existing Oil Pollution Prevention provisions contained in 40 CFR 112.7, as well as several additional items being proposed in the Phase One rule. This section provides for a description of the facility's security and should, as appropriate, include items such as emergency cut off locations, fencing, guards, lighting, valve and pump locks, and pipeline connection caps.

The Agency requests public comment on the appropriateness and level of detail of the information required in the model response plan as well as other information that may be necessary for an effective response plan. For more information on the organization of the model response plan and specific information to be included in the plan, see the "Technical Background Document to Support the Phase Two Oil Pollution Prevention Rulemaking," available for inspection in room M2427 at the U.S. Environmental Protection Agency, 401 M Street, SW., Washington, DC 20460 [Docket Number SPCC–2P].

IV. Relationship of Facility Response Plan Requirements to Other Programs

1. USCG, Minerals Management Service (MMS), and Other Federal Agencies

In developing this proposed rule, EPA has coordinated with the DOT (including the USCG) and the Minerals Management Service (MMS) throughout this rulemaking process to ensure that the response plans for transportation-related facilities and non-transportation-related offshore facilities are consistent, to the degree possible, with the plans for non-transportation-related onshore facilities required under this regulation. This coordination should help avoid any duplication of effort on the part of the regulated community in complying with these regulations. For example, a complex described in section III.B of this preamble as an onshore site or installation that has both transportation-related and non-transportation-related components (e.g., a marine transfer facility with above ground storage tanks), need prepare only one response plan with separate sections addressing each component. Separate sections may be needed in the plan to address different regulatory provisions or various definitions that may apply to the different components.

EPA would allow USCG OSCs the opportunity to review response plans of non-transportation-related onshore facilities subject to 40 CFR part 112. Specifically, a USCG OSC would be given an opportunity to review and comment on any submitted facility response plan (whether transportation-related or non-transportation-related) for a facility geographically located within the USCG's area of responsibility, as the predesignated OSC. For response purposes, the NCP divides the United States into inland and coastal zones. The USCG and EPA are assigned responsibility for predesignating OSCs for the coastal and inland zones, respectively. Final approval of the response plan would remain with EPA for facilities subject to 40 CFR part 112. Any objection to the response plan raised by a USCG OSC would be considered by the RA for final approval of the plan and any issues would be quickly resolved through interagency discussions.

The Agency also has worked with members of DOI, NOAA, the Fish and Wildlife Service, and the National Park Service to define sensitive environments. Coordination with other departments and agencies in this area is critical given the anticipated changes to the NCP and the relationship of those proposed changes to facility response planning requirements.

2. The NCP and ACPs

Section 311(j)(5)(C) of the CWA requires that facility response plans be consistent with the requirements of the NCP and ACPs. The NCP provides the general organizational structure and procedures for addressing discharges of oil and hazardous substances under the CWA, as well as releases of hazardous substances, pollutants, and contaminants under CERCLA. Among other things, the NCP specifies responsibilities among Federal, State, and local governments; describes resources available for response; summarizes State and local emergency planning requirements under the Emergency Planning and Community Right-to-Know Act (EPCRA or SARA Title III); and establishes procedures for undertaking removal actions under the CWA. Until a revised NCP is published, as mandated under OPA section 4201(c), facility response plans should be consistent with the current NCP.

ACPs, mandated under CWA section 311(j)(4) and prepared by Area Committees comprised of qualified personnel of Federal, State, and local agencies, are required to ensure, when implemented in conjunction with other elements of the NCP, the removal of a worst case discharge from a facility operating in or near the area covered by the plan. ACPs will cover discharges affecting all U.S. waters and adjoining shorelines. EPA and the USCG are

responsible for developing ACPs for the inland and coastal zones, respectively. Until ACPs have been developed, facility response plans should be consistent with existing OSC contingency plans in the coastal zone and Federal RCPs in the inland zone.

3. RCRA

EPA regulations in 40 CFR part 264 (Subpart D) promulgated under RCRA establish requirements for owners and operators of hazardous waste facilities to use in developing facility-specific contingency plans. The plans must include response procedures; a list of all persons qualified to act as a facility emergency coordinator; a list of all emergency equipment and, when required, decontamination equipment at the facility; evacuation plans, when evacuation could be necessary; and arrangements agreed to by local police departments, fire departments, hospitals, contractors, and State and local emergency response teams to coordinate emergency services. In addition, newly promulgated 40 CFR part 279 establishes facility-specific contingency planning and emergency procedure requirements for used oil at re-processing and refining facilities. To avoid duplication of effort, owners or operators of facilities subject to the regulations in 40 CFR parts 264 and 279 may incorporate these RCRA provisions and the response-planning requirements of other applicable Federal regulations, into their facility-response plans.

4. EPCRA or SARA Title III

EPCRA requires LEPCs to develop local emergency response plans for their community and review them at least annually. Under EPCRA, facilities are required to notify the SERC and LEPC if they have "extremely hazardous substances" present above threshold planning quantities. In addition, upon request of the SERC or LEPC, the facility is required to provide the LEPC with any information necessary to develop and implement the LEPC plan. Because of this requirement that certain facilities participate in emergency planning under EPCRA, it is likely that some overlap may exist with response plan requirements outlined in today's proposal.

The OPA Conference report stated that owners or operators of facilities subject to this regulation should ensure that facility response plans are consistent with plans required by other programs. See OPA Conference Report, H.R. Rep. No. 101–653, 101st Cong., 2d Sess. 1991 at p. 151. Therefore, a facility response plan should be consistent with the LEPC plan for the community in which the facility is located. To ensure such coordination, facility owners or operators should review the appropriate LEPC plan. In addition, upon request of the LEPC or SERC, the facility should provide a copy of the response plan to the LEPC.

5. Clean Air Act

Under section 112(r) of the Clean Air Act (CAA), as amended, owners and operators of facilities with "regulated substances" above a specified threshold quantities will be required to prepare risk management plans (RMPs), which must include a hazard assessment (including, among other things, an evaluation of worst-case accidental releases), a prevention program, and a response program. Owners and operators are to provide a copy of the RMPs to the State, local planning and response authorities, and the Chemical Safety and Hazard Investigation Board.

Section 112(r)(7) of the CAA requires that the hazard assessment evaluate worst case accidental releases, estimate potential release quantities, and determine downwind effects including potential exposures to affected populations. Owners or operators must also develop an emergency response program that includes specific actions to be taken in response to a release including procedures for notifying the public and response agencies, emergency health care, and employee training measures. EPA is currently developing regulations to implement the new CAA requirements, including a list of regulated substances and threshold quantities.

EPA anticipates that facilities affected by both regulations can prepare one response plan that meets the Oil Pollution Prevention regulation requirements for oil and the Clean Air Act requirements for chemicals. EPA plans to develop guidance to assist facilities in this respect and requests comment from facilities affected by both regulations on whether the planning requirements can be met in a single plan.

V. Proposed Revisions to Existing 40 CFR Part 112 Plan Requirements

EPA proposes to clarify the requirement at § 112.7(d) for a facility owner or operator to provide a strong oil spill contingency plan when the installation of appropriate containment or diversionary structures or equipment to prevent discharged oil from reaching U.S. waters is determined to be impracticable. As proposed in § 112.7(d)(1), reference to a strong oil spill contingency plan is replaced with reference to the facility response plan as described in proposed § 112.20. A response plan prepared under such circumstances need not be submitted to the RA unless otherwise required by the rest of today's proposed rule, but, would be maintained at the facility with the SPCC Plan. No change is proposed to the circumstances that trigger the requirement to provide such a plan.

The Agency proposes several additional regulatory changes recommended in the May 13, 1988, report by the interagency SPCC Task Force formed in response to the Ashland Oil spill and a subsequent report by the General Accounting Office (GAO) entitled "Inland Oil Spills" (GAO/RCED–89–65). These proposed changes include requiring the SPCC Plan to address training and methods of ensuring against brittle fracture. In addition, the Agency proposes revisions to: (1) Give RAs authority to require amendment, modification, and submission of a Plan when it does not meet the requirements of 40 CFR part 112; (2) give RAs authority to require preparation of Plans by owners or operators of previously exempted facilities when necessary to achieve the goals of the CWA; and (3) require submission of the Plan when an owner or operator invokes a waiver to certain technical requirements of this regulation. The proposed revisions would apply to all regulated facilities unless otherwise noted, not just those facilities that are subject to the proposed response plan requirements under new CWA section 311(j)(5) (i.e., "substantial harm" facilities).

For more information on the basis for the proposed regulatory changes discussed below, see the "Technical Background Document to Support the Phase Two Oil Pollution Prevention Rulemaking," available for inspection in room M2427 at the U.S. Environmental Protection Agency, 401 M Street, SW., Washington, DC 20460 [Docket Number SPCC–2P].

A. Prevention Training

Data from ERNS indicate that a significant number of oil discharges are caused by operator error. In 1989, ERNS spill report data show that human error was the cause of 12.3 percent of all spills at fixed facilities. Operator error can take many forms. One of the most common operating errors is failure to close valves, which can lead to large spills when oil products are subsequently transferred in bulk. For example, in 1988, over 336,000 gallons of oil were released as a result of a valve that was left open by a facility worker at an Ashland Chemical Company facility in Arkansas Pass, Texas.

Overfilling due to operator error during transfers is another common cause of spills. The overfilling of a tank at the Colonial Pipeline facility in Greensboro, GA in 1989 resulted in an oil release of 210,000 gallons.

EPA believes that operator error is more likely to be a factor in causing spills where operations regularly involve transfers of oil products (e.g., filling of tanks and related equipment, and loading and unloading of vehicles, tank cars, and vessels to or from tanks). Incidents that involve operator error where large quantities of oil products are transferred can lead to greater amounts of oil being released to navigable waters.

Proper training of employees involved with transfer operations at oil storage and handling facilities can reduce the occurrence of operator-related spills and reduce the severity of impacts from spills that do occur. Training, therefore, is important for the safe and proper functioning of a facility and encourages up-to-date planning for spill control and response. Training courses help sharpen operating and response sills, introduce the latest ideas and techniques, and promote interaction with the emergency response organization and familiarity with the SPCC Plan. Furthermore, sections 311(f)(5) and 311(j)(7) of the CWA, added by the OPA, reinforce the importance of training. EPA recognizes that the amount of facility-specific training should vary depending on the complexity of operations (e.g., number of tanks and transfer points, throughput, presence of sophisticated pumping or switching equipment, etc.) at regulated facilities. For certain types of regulated facilities, characterized by small-scale, relatively simple operations involving aboveground storage tanks, the need for extensive facility-specific training is less critical.

The current Oil Pollution Prevention regulation provides that owners or operators are responsible for properly instructing their personnel in the operation and maintenance of equipment to prevent discharges of oil and in applicable pollution control laws and regulations. The Phase One NPRM proposes requiring all personnel to participate in yearly training exercises. It also proposes to require that training be administered to new personnel within one week of beginning work. Additionally, the Occupational Safety and Health Administration (OSHA) requires that personnel who are expected to respond to and control hazardous materials discharges undergo formal worker health and safety training before starting work and receive refresher training at regular intervals. OSHA considers petroleum products and gases to be hazardous materials.

EPA proposes in § 112.7(f) to require that owners or operators of facilities that transfer or receive greater than or equal to 10,000 gallons of oil in a single operation more than twice per month on average or greater than or equal to 50,000 gallons in a single operation more than once per month on average would be required to initiate a training program as follows:

- All employees who are involved in oil-handling activities, such as the operation or maintenance of oil storage tanks or the operation of equipment related to storage tanks, would be required to receive 8 hours of facility-specific training within one year of the effective date of this regulation or the date that the facility becomes subject to this requirement.
- In subsequent years, employees would be required to undergo 4 hours of refresher training.
- Employees hired after the training program has been initiated, however, would be required to receive 8 hours of facility-specific training within one week of starting work and 4 hours each subsequent year.

The proposed facility-specific training includes, but is not limited to, the following areas: training in correct equipment operation and maintenance, general facility operations, discharge prevention laws and regulations, and the contents of the facility's SPCC Plan. Such facility training would be documented in the facility response plan.

These proposed training requirements are in addition to any health and safety training requirements that regulated facilities may be subject to under OSHA regulations at 29 CFR 1910.120 and under identical worker protection standards at 40 CFR part 311 that apply to employees in States without OSHA-approved State plans.

EPA regards 8 hours of facility-specific training as a minimum training requirement for facilities characterized by complex operations involving the transfer and storage of oil. For these facilities, additional facility-specific training may be necessary to ensure that employees are adequately prepared to respond to spills.

EPA recognizes that many facilities already have spill prevention training programs that meet or exceed the levels proposed in § 112.7(f). Such facilities would not be required to implement additional training measures.

As proposed, the training requirements would apply only to facilities that transfer large quantities of oil on a regular basis and not to smaller or less active transfer facilities, where the risk of the discharge of significant quantities of oil to navigable waters may be less. EPA requests comment on the appropriateness of the transfer frequency and amount criteria for a facility to be subject to the proposed training requirements. EPA also requests comment on the appropriateness of restricting the training requirements to those facilities determined to have the potential to cause "substantial harm" to the environment as discussed in Section III.A of this preamble. The Agency solicits information on the current practices at various types of regulated facilities and comment about the amount of facility-specific training that is appropriate for personnel at different types and sizes of facilities. In addition, EPA requests comment on whether the 8-hour minimum requirement for new employees is too high for certain types of facilities, such as service stations. Also, EPA requests comment on the appropriate level of annual refresher training at small facilities that experience little or no employee turnover from year to year.

EPA considered allowing facilities to maintain current training practices, with no mandatory minimum training hour requirements. However, this option may not be sufficient to alleviate the problem of spills related to human error.

In addition, employees are required to participate in unannounced drills, which tests the facility response plan, on an annual basis. Drill organizers should limit the number of people who know about the exercise. Drills should be carefully planned out and response teams notified in advance of sounding appropriate alarms. The actions taken by the response team during the drill should be noted and addressed in a debriefing session to follow the exercise. EPA proposes that such unannounced drills shall be recorded in the facility response plan.

B. Ensuring Against Brittle Fracture

The failure of Ashland Oil Company's four million gallon aboveground storage tank in January 1988 was the result of brittle fracture. As illustrated by the collapse of this tank, brittle fracture may cause sudden and catastrophic tank failure, resulting in potentially serious damage to the environment and loss of oil. In the aftermath of the Ashland Oil spill, EPA and industry representatives identified a basic set of conditions that seek to identify risk of brittle fracture, including shell temperature, the level of tank contents, and the presence of existing surface flaw. Reported cases of tank failure due to brittle fracture have occurred after tank erection, during the

performance of a hydrostatic test (such as the failure of a storage tank at ESSO's refinery in Fawley, U.K., in 1952), during the first filling in cold weather, after a change to lower temperature service, such as was the case in the Ashland Oil spill, or after a repair or alteration. (see p. 5–28 the "Technical Background Document to Support the Phase Two Oil Pollution Prevention Rulemaking," available for inspection in room M2427 at the U.S. Environmental Protection Agency, 401 M Street, SW., Washington, DC 20460 [Docket Number SPCC–2P].

Consequently, EPA proposes in § 112.7(i) to require facility owners or operators to evaluate their field-constructed tanks for the risk of failure due to brittle fracture, by adhering to appropriate industry standards contained in API Standard 653 entitled Tank Inspection, Repair, Alteration, and Reconstruction. Section 112.7(i) incorporates by reference section 3 (Brittle Fracture Consideration) of API Standard 653. This incorporation by reference will be submitted for approval to the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies of API Standard 653 may be inspected at the Superfund Docket, U.S. Environmental Protection Agency, 401 M Street, SW., room M2427, Washington, DC. Also, EPA proposes in § 112.7(j) a conforming change to reflect the addition of the proposed brittle fracture requirements in § 112.7(i).

The evaluation for the risk of failure due to brittle fracture would be triggered by a repair or alteration to the tank, or a change in service. As defined in § 112.2 of the proposed rule, "repair" means any work necessary to maintain or restore a tank or related equipment to a condition suitable for safe operation. Typical examples include the removal and replacement of material (such as roof, shell, or bottom material, including weld metal) to maintain tank integrity; the re-leveling or jacking of a tank shell, bottom, or roof; the addition of reinforcing plates to existing shell penetrations; and the repair of flaws, such as tears or gouges, by grinding or gouging followed by welding. As defined in § 112.2 of the proposed rule, "alteration" means any work on a tank or related equipment involving cutting, burning, welding, or heating operations that changes the physical dimensions or configuration of a tank. Typical examples include the addition of manways and nozzles greater than 12-inch nominal pipe size and an increase or decrease in tank shell height.

Under API standard 653, evaluation of the potential hazard for brittle fracture involves a review of a tank's construction materials, operational history, repairs, material stored, and other factors identified as useful in predicting a tank's performance. The evaluation also could result in more extensive testing (such as a hydrostatic test). A flowchart of brittle fracture considerations contained in API Standard 653 is shown in Appendix H to the rule. In accordance with API Standard 653 and good engineering practice, if the evaluation indicates that the tank is at risk of failure due to brittle fracture, the owner or operator would be required to rerate the tank or modify the tank's operation to prevent failure. The Agency proposes the approach described above because it is consistent with current industry standards and will apply to a greater range of industry tanks at risk.

EPA does not propose to require that shop-fabricated tanks be evaluated for brittle fracture. Such tanks are generally not as susceptible to brittle fracture failure after a change in service because design criteria are tailored to meet the needs of many operating conditions including variances in pressures, material stored, and temperature. In addition, shop-fabricated tanks are generally much smaller ranging in capacity from 3,000 to 31,500 gallons, and therefore are less prone to suffer catastrophic failure due to brittle fracture. Field-constructed tanks are usually designed and built to meet a specific type of operating condition and can be much larger in size. Shop-fabricated tanks may present a lower risk of causing substantial harm to the environment as a result of discharges to U.S. waters or adjoining shorelines than larger, field-constructed tanks. The Agency requests comments and data on the proposed requirement to evaluate field-constructed tanks for the risk of failure due to brittle fracture under certain circumstances.

As an alternative, the Agency considered requiring all tanks to undergo a full hydrostatic test to determine their potential for brittle fracture. Under this option, a hydrostatic test would have to be performed even on tanks that are not considered prone to brittle fracture by industry standards. Moreover, existing tanks would have to be taken out of service during testing, causing potential disruption to facility operations. Also, EPA considered not requiring facilities to perform any additional evaluations or tests beyond those required for other regulations. No other regulations were identified, however, that require tests to specifically evaluate the potential for brittle fracture.

C. SPCC Plan Amendment

Section 112.4 of the current Oil Pollution Prevention regulation requires the owner or operator of a facility to submit the facility's SPCC Plan to the RA when the facility has experienced either a discharge of more than 1,000 gallons or two reportable spill events within a twelve month period. The RA can then review the Plan and may require that the Plan be amended. Under current § 112.3(e), a facility owner or operator must make the Plan available to the Agency for on-site review, but the rule does not provide explicit authority for the RA to require Plan amendment except under the circumstances described in § 112.4. Because Plan amendment may be necessary to protect navigable waters and adjoining shorelines even before spill events occur, EPA proposes to give the RA specific authority to require Plan submission and amendment at any time. Proposed § 112.4(d) amends the existing language to incorporate this provision and states that the RA may require Plan amendment whenever the Plan does not meet the requirements of 40 CFR part 112 or when Plan amendment is necessary to prevent and control discharges. This broader authority would include the right of the RA to require amendment following plan review; the rule would clarify the RA's authority to require amendments in other situations not specified under the existing regulation.

D. Authority To Require Preparation of Plans

Although the CWA provides EPA broad authority to regulate non-transportation-related onshore facilities, current § 112.1(d) exempts certain facilities. Under the proposed Phase One rule, the § 112.1(d) exemptions would be broadened to include totally buried underground storage tanks subject to the requirements of EPA's underground storage tank regulation at 40 CFR part 280. Under today's proposal, § 112.1(g) would be added to allow the RA to require otherwise exempted facilities, on a case-by-case basis, to prepare and implement SPCC Plans where needed to protect navigable waters and adjoining shorelines. Thus, a facility that would be exempted from the Oil Pollution Prevention regulation on the basis of its underground storage tanks being subject to 40 CFR part 280 may nevertheless have to comply with the requirements of the Oil Pollution Prevention regulation at the discretion of the RA. The RA would exercise this discretionary authority when necessary to carry out the purposes of the CWA.

The determination would be based on the presence of environmental concerns not adequately addressed under the UST regulation.

Based on the requirements in the UST regulation, EPA expects that it will be necessary for the RA to exercise this authority in very few cases. Moreover, some of the SPCC Plan requirements that apply to aboveground tank systems would not represent good engineering practice for certain underground tanks. For example, the requirement for secondary containment as described in current § 112.7(c) is not considered good engineering practice for completely buried underground tanks.

Following a preliminary determination, the RA will provide a written notice to the facility owner or operator stating the reasons why the facility needs to prepare a SPCC Plan. The owner or operator would have the opportunity to provide information and data and to consult with the Agency about the need to prepare and submit a plan. Following this consultation, the RA will make a final determination on whether the facility is required to prepare and implement a SPCC Plan. If the RA makes a final determination that a SPCC Plan is necessary to carry out the purposes of the CWA, the owner or operator must prepare the plan within six months of the RA's decision and implement the Plan as soon as possible, but not later than one year after the final determination has been made.

E. Submission of Plans That Contain a Waiver of Technical Requirements

Under the proposed Phase One regulation, a facility's SPCC Plan need not conform to certain technical requirements of 40 CFR part 112 if equivalent protection is provided. No provision was made in the Phase One proposal, however, for notification to EPA when a facility owner or operator invokes this waiver. Proposed § 112.7(a)(2) of today's proposed rule would require the owner or operator to submit the Plan to the RA in this circumstance. Thus, EPA staff will have the opportunity to review the Plan and determine whether the measures described in the Plan do indeed provide equivalent protection. The Agency solicits comment on whether submission of the entire plan for the RA to make this determination is necessary.

VI. Other Technical Considerations Not Proposed

EPA is examining several additional recommendations made in the SPCC Task Force Report and the GAO report on inland oil spills, including provisions relating to: Plant security; corrosion protection; lightning strike protection; leak detection; and certification of tank installation plans. EPA is not proposing regulatory changes at this time but is soliciting comment and cost information on these considerations.

Improvement of plant security can reduce the number of discharges that occur as a result of vandalism. Section 112.7(e)(9) of the current Oil Pollution Prevention regulation contains a number of requirements concerning plant security, including provisions on fencing and lighting. The Agency requests comment on the need for additional measures to mitigate potential environmental harm posed by discharges from different types of facilities, and whether certain provisions should be discretionary for any or all facilities.

Metallic aboveground storage tanks are susceptible to corrosion, which may lead to leakage or the discharge of a tank's entire contents. For metallic aboveground tanks, the primary corrosive concern involves tank bottoms and the types of foundations constructed for them. The UST regulation at 40 CFR 280.20 requires owners or operators of underground storage tanks to ensure that releases due to corrosion are prevented for as long as the tank system is used to store regulated substances, such as petroleum products. Cathodic protection is a common method used to protect USTs from corrosion (40 CFR 280.31). The Agency solicits comment and cost data on the use of cathodic protection to prevent corrosion on aboveground storage tanks. EPA also requests comment and cost effectiveness data on other methods of preventing leaks due to corrosion.

Lightning strikes on aboveground storage tanks and fires resulting from the strikes can contribute to discharges of oil. Although various industry groups have published recommended practices and precautionary measures for owners or operators to follow to avoid lighting strikes, there are currently no Federal regulations in effect concerning lightning strike protection for aboveground storage tanks. EPA requests comment on the costs and benefits of installing lightning protection systems, such as an air terminal system, overhead ground wire system, the Faraday Cage system, or combinations of these systems on aboveground storage tanks.

Early detection of small oil leaks from above ground storage tanks may alert owners or operators to needed repairs or other spill prevention or mitigation measures and thus prevent substantial environmental damage and save the expense of cleaning up larger quantities of oil that may subsequently leak from the tanks. Section 112.7(e)(2)(vi) of the current Oil Pollution Prevention regulation requires operating personnel to frequently observe the outside of a tank for signs of deterioration, leaks, or accumulation of oil inside diked areas. Small leaks near the bottom of a tank, however, often are hard to detect visually. The Agency is therefore requesting comment and cost effectiveness information on other leak detection methods for aboveground tanks, such as ultrasonic testing and inventory reconciliation. Also, the Agency requests comment on the appropriateness of testing underground piping for leaks and data on methodologies.

The current Oil Pollution Prevention regulation requires facility owners or operators to have a Professional Engineer review and certify that their SPCC Plans have been prepared in accordance with good engineering practices. This requirement, however, does not address specific facility procedures such as tank installation. UST regulations at 40 CFR 280.20(e), on the other hand, require certification of compliance with proper installation practices and of the qualifications of tank installers. The Agency requests comment on appropriate methods to ensure that aboveground tanks are properly installed, such as certification of installation plans and/or installation monitoring by a professional engineer or other qualified individual.

VII. Regulatory Analyses

A. Executive Order 12291

Executive Order (E.O.) 12291 requires that regulations be classified as major or non-major for purposes of review by the Office of Management and Budget (OMB). According to E.O. 12291, major rules are regulations that are likely to result in:

(1) An annual effect on the economy of $100 million or more; or

(2) A major increase in costs or prices for consumers, individual industries, Federal, State, or local government agencies, or geographic regions; or

(3) Significant adverse effects on competition, employment, investment, productivity, innovation, or on the ability of United States-based enterprises to compete with foreign-based enterprises in domestic or export markets.

An economic analysis performed by the Agency, available for inspection in room M2427 at the U.S. Environmental Protection Agency, 401 M Street, SW.,

Washington, DC 20460, shows that this proposed rule is major because it would result in estimated costs to affected facilities of approximately $140.6 million during the first year that the rule is in effect and approximately $60.9 million in each subsequent year. At a 10-percent interest rate over 10 years, the annualized costs are $73.2 million. Of the total estimated costs, $93.7 million of the first-year costs and $54.0 million of the subsequent-year costs result from the facility response plan requirements proposed in § 112.20. Approximately $12.6 million of the first-year costs and $6.3 million of the subsequent-year cost are attributable to the other technical requirements. The proposed revisions pertaining to enforcement of the Oil Pollution Prevention regulation (i.e., amendments to the SPCC Plan, notification of a waiver of technical requirements, and preparation of SPCC Plans by previously exempted facilities) are estimated to result in costs of $2.3 million in the first year and $0.5 million in subsequent years. In addition, it is estimated that facilities will expend $32.0 million in the first year to read and understand the proposed revisions. This economic analysis estimates costs and benefits for facilities currently subject to the Oil Pollution Prevention regulation. The first-year, subsequent-year, and annualized costs of the proposed revisions to affected facilities are presented in Table 1. The estimates presented assume that facility response plans reduce the costs and damages caused by oil spills by 30 percent, which is one of the key assumptions in the analysis.

TABLE 1.—TOTAL COST TO AFFECTED FACILITIES OF THE PROPOSED RULEMAKING

Proposed revision	First-year costs	Subsequent-year costs	Annualized value of total costs
Rule familiarization	$32.0 million	$0	$5.2 million.
Facility response plan	$93.7 million	$54.0 million	$59.9 million.
Training	$11.0 million	$4.7 million	$5.7 million.
Brittle fracture	$1.6 million	$1.6 million	$1.6 million.
Amendments to SPCC plan	$12,900	$12,900	$12,900.
Notification of waiver of technical requirements	$1.5 million	$147,250	$0.3 million.
Preparation of SPCC plans by previously exempted facilities.	$0.8 million	$0.3 million	$0.4 million.
Total	$140.6 million	$60.9 million	$73.2 million.

EPA also is estimated to incur costs to process, review, and approve facility response plans and to process and review SPCC Plans and other information submitted as a result of the three proposed revisions related to enforcing the regulation. EPA estimates that it will process approximately 6,500 response plans and review and approve approximately 2,000 response plans in the first two years after the revisions take effect at a cost of $1.2 million in the first year and $1.1 million in the second year. EPA also will incur costs of $3.1 million in the first year and $0.5 million each year thereafter to implement the other proposed revisions. At a 10-percent interest rate over 10 years, the annualized costs to EPA are $1.2 million.

The Regulatory Impact Analysis (RIA) prepared in support of this rule also includes an assessment of the environmental benefits associated with the proposed revisions. This benefit estimate includes only the benefits of avoided clean-up costs, value of lost product, and avoided natural resource damages as a result of the prevention of oil spills or the mitigation of the severity of spills that do occur. Other damages caused by oil spills, such as damage to private property, lost profit by business, public health risks, and foregone existence/option value have not been quantified. EPA recognizes that the methodologies to value certain benefits of avoiding oil spills or mitigating their effects are contentious and new or revised methodologies currently are under study by other government agencies. For illustrative purposes, the Agency has presented monetary estimates of these benefits of the proposed rule in the Regulatory Impact Analysis based on currently available data. The cost effectiveness of the proposed revisions also are presented in terms of the total estimated cost to society per unit volume of spilled oil addressed by the proposed revisions. This measure of cost effectiveness is calculated by dividing the total estimated costs to affected facilities and the government by the total number of barrels (or gallons) of oil that is estimated not to be spilled as a result of the proposed revisions or, if spilled, is addressed more effectively as a result of the proposed revisions. Table 2 presents the cost effectiveness of the proposed revisions based on the assumption that facility response plans reduce the costs and damages caused by oil spills by 30 percent.

TABLE 2.—COMPARISON OF ESTIMATED TOTAL ANNUALIZED COSTS AND BENEFITS

Proposed revision	Estimated costs per avoided volume of spilled oil at 30 percent level of effectiveness for response plans	Estimated costs per avoided barrel of spilled oil at 57 percent level of effectiveness for response plans
Rule familiarization	Not Estimated	Not Estimated.
Facility response plan	$30/gallon	$16/gallon.
	$1,271/barrel	$669/barrel.
Training $81/gallon	$81/gallon	
$3,401/barrel	$3,415/barrel	
Brittle fracture[6]	$31/gallon	$31/gallon.
	$1,297/barrel	$1,303/barrel.
Amendments of SPCC plan	Not Estimated	Not Estimated.

TABLE 2.—COMPARISON OF ESTIMATED TOTAL ANNUALIZED COSTS AND BENEFITS—Continued

Proposed revision	Estimated costs per avoided volume of spilled oil at 30 percent level of effectiveness for response plans	Estimated costs per avoided barrel of spilled oil at 57 percent level of effectiveness for response plans
Notification of waiver of technical requirements	Not Estimated	Not Estimated.
Preparation of SPCC plans by previously exempted facilities	Not Estimated	Not Estimated.

Alternative assumptions about the effectiveness of facility response plans yield different estimates of the net benefits. For example, estimated costs of facility response plans equal estimated benefits at a 57 percent effectiveness level. At levels of effectiveness less than 57 percent, estimated costs of the response plan requirement exceed estimated benefits. Conversely, at effectiveness levels greater than 57 percent, estimated benefits of the response plan requirement exceed the estimated costs. The cost effectiveness of the proposed revisions also is presented in Table 2 at an assumed effectiveness level of 57 percent. This proposed rule has been submitted to OMB for review as required by E.O. 12291.

B. Regulatory Flexibility Act

The Regulatory Flexibility Act of 1980 requires that a Regulatory Flexibility Analysis be performed for all rules that are likely to have a "significant impact on a substantial number of small entities." To determine whether a Regulatory Flexibility Analysis was necessary for this proposed rule, a preliminary analysis was conducted. The results of the preliminary analysis indicate that this proposed rule will not have significant adverse impacts on small businesses because small businesses are unlikely to be affected by the facility response planning, training, or brittle fracture requirements, which account for the majority of the total costs of the proposed rulemaking (see the "Regulatory Impact Analysis of the Proposed Phase Two Revisions of the Oil Pollution Prevention Regulation," Chapter 8, September 1992, available for inspection in room M2427 at the U.S. Environmental Protection Agency, 401 M Street, SW., Washington, DC 20460). Therefore, EPA certifies that this proposed rule is not expected to have a significant impact on small entities, and therefore that no Regulatory Flexibility Analysis is necessary.

C. Paperwork Reduction Act

The information collection requirements in this proposed rule have been submitted for approval to OMB under the Paperwork Reduction Act, 44 U.S.C. 3501 et seq. An Information Collection Request (ICR) has been prepared by EPA (ICR No. 1630.01) and a copy may be obtained from Sandy Farmer, Information Policy Branch (PM–223Y); U.S. Environmental Protection Agency, 401 M Street, SW., Washington, DC 20460, or by calling (202) 260–2740.

The collection of information required to prepare facility response plans is estimated to have a public reporting burden varying from 1 to 256 hours per response in the first year, with an average of 5 hours per response, and to require an average of 0.65 hours per recordkeeper annually. This includes time to review instructions and guidance, search existing data sources, gather and maintain the data needed, and complete and review the collection of information. In subsequent years, the facility response plan requirement is estimated to have a public reporting burden that varies from 0–99 hours per response, with an average of 1 hour per response, and to require an average of 0.6 hours per recordkeeper annually.

Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Chief, Information Policy Branch (PM–223Y), U.S. Environmental Protection Agency; 401 M Street SW., Washington, DC 20460, and to the Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, DC 20503, marked "Attention: Desk Officer for EPA." The final rule will respond to any OMB or public comments on the information collection requirements contained in this proposal.

List of Subjects in 40 CFR Part 112

Fire prevention, Flammable materials, Materials handling and storage, Oil pollution, Oil spill response, Petroleum, Reporting and recordkeeping requirements, Tanks, Water pollution control, Water resources.

Dated: January 19, 1993.

William K. Reilly,

Administrator.

For the reasons set out in the preamble, part 112, title 40, chapter I of the Code of Federal Regulations, as proposed to be revised at 56 FR 54630, October 22, 1991, is proposed to be amended as follows:

PART 112—OIL POLLUTION PREVENTION

1. The authority citation for part 112 is revised to read as follows:

Authority: 33 U.S.C. 1321 and 1361; E.O. 12777 (3 CFR, 1991 Comp., p. 351).

2. Section 112.1, as proposed at 56 FR 54630, is amended by revising paragraphs (d) introductory text and (d)(4), and by adding paragraph (g) to read as follows:

§ 112.1 General applicability and notification.

* * * * *

(d) Except as provided in paragraphs (e) and (g) of this section and the first sentence of § 112.7(a)(3), this part does not apply to:

* * * * *

(4) Underground storage tanks, as defined in § 112.2(v), at any facility, where such tanks are subject to the technical requirements of 40 CFR part 280, except that such tanks shall be marked on the facility diagram as provided in § 112.7(a)(3).

* * * * *

(g) Notwithstanding paragraph (d) of this section, the Regional Administrator may require any facility subject to the jurisdiction of EPA under section 311(j) of the CWA to prepare and implement an SPCC Plan or applicable parts thereof.

(1) Following a preliminary determination, the Regional Administrator will provide a written notice to the facility owner or operator stating the reasons why the facility owner or operator needs to prepare an SPCC Plan.

(2) The owner or operator may provide information and data and may consult with the Agency about the need to prepare and submit a Plan.

(3) Following this consultation, the Regional Administrator will make a final determination regarding whether the facility is required to prepare and implement an SPCC Plan.

(4) If the Regional Administrator makes a final determination that an SPCC Plan is necessary to carry out the purposes of the CWA, the owner or operator must prepare the Plan within six months of that determination and implement the Plan as soon as possible, but not later than one year after the final determination has been made.

3. Section 112.2, as proposed at 56 FR 54630, is amended by removing the paragraph designations (a) through (y), and inserting the following new definitions in alphabetical order, to read as follows:

§ 112.2 Definitions.

* * * * *

Adverse weather means the weather conditions that make it difficult for response equipment and personnel to cleanup or remove spilled oil.

Alteration means any work on a tank or related equipment involving cutting, burning, welding, or heating operations that changes the physical dimensions or configuration of a tank.

* * * * *

Complex means a facility possessing a combination of transportation-related and non-transportation-related components that is subject to the jurisdiction of more than one Federal agency under section 311(j) of the CWA.

* * * * *

Contracts or other approved means include:

(1) A written contractual agreement with a response contractor that identifies and ensures the availability of the necessary personnel or equipment within appropriate response times;

(2) A written certification by the owner or operator that the necessary personnel and equipment resources, owned or operated by the facility owner or operator, are available to respond to a discharge within appropriate response times;

(3) Active membership in a local or regional oil spill removal organization that has identified and ensures adequate access through such membership to necessary personnel and equipment to respond to a discharge within appropriate response times in the specified geographic areas; or

(4) Other specific arrangements approved by the Regional Administrator upon request of the owner or operator.

* * * * *

Injury means a measurable adverse change, either long- or short-term, in the chemical or physical quality or the viability of a natural resource resulting either directly or indirectly from exposure to a discharge of oil, or exposure to a product of reactions resulting from a discharge of oil.

Maximum extent practicable means the limitations used to determine oil spill planning resources and response times for on-water recovery, shoreline protection, and cleanup for worst case discharges from onshore non-transportation-related facilities in adverse weather. The appropriate limitations for such planning are available technology and the practical and technical limits on an individual facility owner or operator.

* * * * *

Repair means any work necessary to maintain or restore a tank or related equipment to a condition suitable for safe operation.

* * * * *

Worst case discharge for an onshore non-transportation-related facility means the largest foreseeable discharge in adverse weather conditions, based on the factors described in appendix E to this part.

4. Section 112.4, as proposed at 56 *FR* 54633, is amended by redesignating paragraph (d) as paragraph (d)(1), by revising newly designated paragraph (d)(1), and by adding a new paragraph (d)(2) to read as follows:

§ 112.4 Amendment of Spill Prevention, Control and Countermeasures Plan by Regional Administrator.

* * * * *

(d) (1) The Regional Administrator may require the owner or operator of any facility subject to this part to submit the information listed in paragraphs (a)(1) through (a)(8) of this section and such other information as the Regional Administrator may request. After review of the information submitted, or after on-site review of a facility's Plan, the Regional Administrator may require the owner or operator of such facility to amend the Plan if the Plan does not meet the requirements of this part or if amendment of the Plan is necessary to prevent or control discharges of oil from such facility into or upon the waters described in § 112.1(a) of this part.

(2) After review of the materials submitted by the owner or operator of a facility as required in § 112.7(d) of this part, the Regional Administrator may approve the Plan or require amendment of the Plan.

* * * * *

5. Section 112.7, as proposed at 56 FR 54634, is amended by revising paragraphs (a)(2), the introductory text of paragraph (d), and paragraphs (d)(1), (f)(1), and (i) and by adding a new paragraph (j) to read as follows:

§ 112.7 Spill Prevention, Control, and Countermeasures Plan general requirements.

(a) * * *

(2) The Plan may deviate from the requirements in paragraph (c) of this section and §§ 112.8, 112.9, 112.10, and 112.11, where applicable to a specific facility, provided equivalent protection is provided by some other means of spill prevention, control, or countermeasures. Where the Plan does not conform to the applicable requirements of paragraph (c) of this section or §§ 112.8, 112.9, 112.10, and 112.11, the Plan shall state the reasons for nonconformance and describe in detail alternate methods and how equivalent protection will be achieved. The owner or operator of the facility shall submit the Plan to the Regional Administrator together with a transmittal letter describing how the Plan contains equivalent protection measures in lieu of certain requirements in 40 CFR part 112. If the Regional Administrator determines that the measures described in the Plan do not provide equivalent protection, the Regional Administrator may require amendment of the Plan, following the procedures in § 112.4 (e) and (f).

* * * * *

(d) When it is determined that the installation of structures or equipment listed in § 112.7(c) to prevent discharged oil from reaching the navigable waters is not practicable from any facility, the owner or operator shall clearly demonstrate such impracticability; conduct integrity testing of tanks every five years at a minimum; conduct integrity and leak testing of the valves and piping every year at a minimum; and providing the following:

(1) The facility response plan described in § 112.20.

* * * * *

(f) *Personnel, training, and spill prevention procedures.* (1) Owners or operators of facilities, which transfer or receive greater than or equal to 10,000 gallons of oil in a single operation more than twice per month on average, or greater than or equal to 50,000 gallons in a single operation more than once per month on average, shall be responsible for the proper instruction of their personnel in the operation and maintenance of equipment to prevent discharges of oil and in applicable pollution control laws, rules, and regulations.

(i) All personnel who are involved in oil-handling activities shall receive at least 8 hours of training by [insert date one year after the effective date of the final rule], and at least 4 hours in subsequent years. Such training

includes, but is not limited to, subjects such as correct equipment operation and maintenance, general facility operations, discharge prevention laws and regulations, and the contents of the facility's SPCC Plan.

(ii) In the case of new employees, 8 hours of training shall be given to such personnel within the first week of their employment.

(iii) All such personnel shall also participate in unannounced drills, to be conducted at least annually.

* * * * *

(i) If a field-constructed aboveground tank undergoes a repair, alteration, or a change in service, the facility owner or operator shall evaluate the tank for risk of failure due to brittle fracture, and, as necessary, take appropriate action in accordance with Section 3 of Tank Inspection, Repair, Alteration, and Reconstruction, January 1991, American Petroleum Institute, API Standard 653. This incorporation by reference will be submitted for approval to the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies may be obtained from the American Petroleum Institute, 1220 L Street NW., Washington DC 20005. Copies may be inspected at the Superfund Docket, U.S. Environmental Protection Agency, 401 M Street, SW., room M2427, Washington, DC. A flowchart of brittle fracture considerations contained in API Standard 653 is contained in appendix H to this part.

(j) In addition to the minimal prevention standards listed under § 112.7 (c), (e), (f), (g), (h), and (i), sections of the Plan shall include a complete discussion of conformance with the applicable requirements and other effective spill prevention and containment procedures listed in §§ 112.8, 112.9, 112.10, and 112.11 (or, if more stringent, with State rules, regulations, and guidelines).

6. Section 112.20 is added to read as follows:

§ 112.20 Facility response plans.

(a) (1) The owner or operator of any non-transportation-related onshore facility that, because of its location, could reasonably be expected to cause substantial harm to the environment by discharging oil into or on the navigable waters or adjoining shorelines shall prepare a facility response plan and shall submit a response plan that satisfies the requirements of this section to the Regional Administrator.

(2) A facility shall be subject to the requirements of paragraph (a)(1) of this section if it satisfies the criteria in paragraph (f)(1) of this section or if the Regional Administrator makes a determination pursuant to paragraph (b) of this section.

(i) For a facility that is in operation on or before February 18, 1993, and is required to prepare and submit a response plan based on the criteria in paragraph (f)(1) of this section, the owner or operator shall submit the response plan, along with a completed version of the response plan cover sheet contained in appendix G to this part, to the Regional Administrator on or before February 18, 1993.

(ii) For a newly constructed facility that commences operation after February 18, 1993, and is required to prepare and submit a response plan based on the criteria in paragraph (f)(1) of this section, the owner or operator shall submit the response plan, along with a completed version of the response plan cover sheet contained in appendix G to this part, to the Regional Administrator prior to the start of operations.

(iii) For a facility required to prepare and submit a response plan after February 18, 1993, as a result of a planned change in design, construction, operation, or maintenance that renders the facility subject to the criteria in paragraph (f)(1) of this section, the owner or operator shall submit the response plan, along with a completed version of the response plan cover sheet contained in appendix G to this part, to the Regional Administrator before the portion of the facility undergoing change commences operations.

(iv) For a facility required to prepare and submit a response plan after February 18, 1993, as a result of an unplanned event or change in facility characteristics that renders the facility subject to the criteria in paragraph (f)(1) of this section, the owner or operator shall submit the response plan, along with a completed version of the response plan cover sheet contained in appendix G to this part, to the Regional Administrator within six months of the unplanned event or change.

(3) In the event the owner or operator of a facility that is required to prepare and submit a response plan uses an alternative formula to one contained in appendix C to this part to evaluate the criterion in paragraph (f)(1)(ii)(B) or (f)(1)(ii)(C) of this section, the owner or operator shall attach documentation to the response plan cover sheet contained in appendix G to this part that demonstrates the reliability and analytical soundness of the alternative formula.

(b)(1) The Regional Administrator may at any time require the owner or operator of any non-transportation-related onshore facility to prepare and submit a facility response plan under this section based on the factors in paragraph (f)(2) of this section. If the Regional Administrator notifies in writing the owner or operator of the requirement to prepare and submit a response plan under this section, the owner or operator of the facility shall submit the response plan to the Regional Administrator within six months after such written notification.

(2) The Regional Administrator shall review plans submitted by such facilities to determine whether the facility could cause significant and substantial harm to the environment by the discharge of oil.

(c)(1) The Regional Administrator shall determine whether a facility, because of its location, could reasonably be expected to cause significant and substantial harm to the environment by discharging into or on the navigable waters or adjoining shorelines, based on the factors in paragraph (f)(3) of this section. If a facility is determined to have the potential to cause significant and substantial harm to the environment, the Regional Administrator shall notify in writing the owner or operator of the facility and:

(i) Promptly review the facility response plan;

(ii) Require amendments to any response plan that does not meet the requirements of this section;

(iii) Approve any response plan that meets the requirements of this section; and

(iv) Review each response plan periodically thereafter.

(2) A facility owner or operator who is notified in writing that the facility's response plan will require review and approval by the Regional Administrator and that such approval will not be forthcoming by August 18, 1993, may operate the facility without an approved response plan for up to two years from the date of plan submission in compliance with statutory requirements, provided that:

(i) The facility owner or operator certifies in writing within 30 days of such notification to the Regional Administrator that the owner or operator has ensured by contract or other approved means the availability of private personnel and equipment necessary to respond, to the maximum extent practicable, to a worst case discharge or the substantial threat of such a discharge from the facility; and

(ii) The contracts or agreements cited in the facility's certification are valid and enforceable by the parties.

(d)(1) The owner or operator of a facility determined to have the potential

to cause significant and substantial harm to the environment pursuant to paragraph (f)(3) of this section shall revise and resubmit the response plan for approval within 60 days of each facility change that materially may affect the potential for a discharge to cause significant and substantial harm to the environment, including:

(i) A change in the facility's configuration that materially alters the information included in the response plan;

(ii) A change in the type of oil handled, stored, or transferred that materially alters the required response resources;

(iii) A change in the oil spill removal organizations that provide equipment and personnel to respond to spills described in paragraph (h)(5) of this section and/or a material change in their capabilities;

(iv) A material change in the facility's spill prevention and response equipment or emergency response procedures;

(v) Any other changes that materially affect the implementation of the response plan.

(2) Except as provided in paragraph (d)(1) of this section, amendments to personnel and telephone number lists included in the response plan do not require prior approval by the Regional Administrator. Facility owners or operators shall provide a copy of such changes to the appropriate Regional Administrator as the revisions occur.

(e) If the owner or operator of a facility determines pursuant to paragraph (a)(2) of this section that its facility does not have the potential to cause substantial harm to the environment, the owner or operator shall complete and maintain at the facility the certification form contained in appendix C to this part and, in the event an alternative formula to one contained in appendix C to this part is used to evaluate the criterion in paragraph (f)(1)(ii)(B) or (f)(1)(ii)(C) of this section, the owner or operator shall attach documentation to the certification form that demonstrates the reliability and analytical soundness of the alternative formula and shall notify the Regional Administrator in writing that an alternative formula was used.

(f) (1) A facility shall be deemed to have the potential to cause substantial harm to the environment pursuant to paragraph (a) of this section, if it meets any of the following criteria applied in accordance with the flowchart contained in appendix C to this part:

(i) The facility transfers oil over water to or from vessels and has a total storage capacity greater than or equal to 42,000 gallons; or

(ii) The facility's total oil storage capacity is greater than or equal to 1 million gallons, and one of the following is true:

(A) The facility does not have secondary containment for each aboveground storage area sufficiently large to contain the capacity of the largest aboveground storage tank within each storage area;

(B) The facility is located at a distance (as calculated using the appropriate formula in appendix C to this part or an alternative formula considered acceptable by the Regional Administrator) such that a discharge from the facility could cause injury to an environmentally sensitive area as described in appendix D to this part;

(C) The facility is located at a distance (as calculated using the appropriate formula in appendix C to this part or an alternative formula considered acceptable by the Regional Administrator) such that a discharge from the facility would shut down a public drinking water intake; or

(D) The facility has had a reportable spill in an amount greater than or equal to 10,000 gallons within the last 5 years.

(2)(i) To determine whether a facility could cause substantial harm to the environment pursuant to paragraph (b) of this section, the Regional Administrator may consider the following:

(A) Type of transfer operation;

(B) Oil storage capacity;

(C) Lack of secondary containment;

(D) Proximity to "environmentally sensitive areas" defined in Appendix D to this part and other areas determined by the Regional Administrator to possess ecological value;

(E) Proximity to drinking water intakes;

(F) Spill history; and

(G) Other site-specific characteristics and environmental factors that the Regional Administrator determines to be relevant to protecting the environment from harm by discharges of oil into navigable waters or adjoining shorelines.

(ii) Any person who believes a facility subject to this section may cause substantial harm to the environment from a discharge of oil may petition the Regional Administrator to determine whether the facility meets the criteria in paragraph (f)(2)(i) of this section. Such petition shall include a discussion of how the criteria in paragraph (f)(2)(i) of this section apply to the facility in question.

(3) To determine whether a facility could cause significant and substantial harm to the environment, the Regional Administrator may consider the factors in paragraph (f)(2) of this section as well as the following:

(i) Proximity to environmental areas of concern defined in Appendix D to this part;

(ii) Frequency of past spills;

(iii) Proximity to navigable waters;

(iv) Age of oil storage tanks; and

(v) Other facility-specific and Region-specific information, including local impacts on public health.

(g)(1) All facility response plans shall be consistent with the requirements of the National Oil and Hazardous Substance Pollution Contingency Plan (40 CFR part 300) and applicable Area Contingency Plans, and shall be updated periodically. The facility response plan should be coordinated with the local emergency response plan developed by the local emergency planning committee under section 303 of Title III of the Superfund Amendments and Reauthorization Act of 1986. Upon request, the owner or operator should provide a copy of the facility response plan to the local emergency planning committee or State emergency response commission.

(2) The owner or operator shall review relevant portions of the National Oil and Hazardous Substance Pollution Contingency Plan and applicable Area Contingency Plan annually and revise the facility response plan to ensure consistency with these plans.

(h) A response plan shall follow the format of the model facility-specific response plan included in appendix G to this part, unless an equivalent response plan has been prepared to meet State or other Federal requirements. A response plan that does not follow the specific format in appendix G to this part shall have an emergency response action plan as specified in paragraph (h)(1) to this part and be supplemented with a cross-reference section to identify the location of the elements listed in paragraphs (h)(2) through (h)(10) of this section. In order to meet the requirements of this part, a response plan shall address the following elements, as reflected in appendix G to this part:

(1) *Emergency Response Action Plan.* The response plan shall include an emergency response action plan in the format specified below that is maintained in the front of the response plan, or as a separate document accompanying the response plan, and that includes the following information:

(i) The identity and telephone number of an emergency response coordinator who is the qualified individual having full authority, including contracting

authority, to implement removal actions;

(ii) The identity of individuals or organizations to be contacted in the event of a discharge so that immediate communications between the emergency response coordinator and the appropriate Federal official and the persons providing response personnel and equipment can be ensured;

(iii) A description of information to pass to response personnel in the event of a reportable spill;

(iv) A description of the facility's response equipment and its location;

(v) A description of response personnel capabilities, including the duties of persons at the facility during a response action and their response times and qualifications;

(vi) Plans for evacuation of the facility and surrounding communities;

(vii) A description of immediate measures to provide adequate containment and drainage of spilled oil; and

(viii) A diagram of the facility.

(2) *Facility information.* The response plan shall identify and discuss the location of the facility, the identity and tenure of the present owner and operator, and the identity of an emergency response coordinator.

(3) *Information about emergency response.* The response plan shall include:

(i) The identity of private personnel and equipment necessary to remove to the maximum extent practicable a worst case discharge and other discharges of oil described in paragraph (h)(5) of this section, and to mitigate or prevent a substantial threat of a worst case discharge;

(ii) Evidence of contracts or other approved means for ensuring the availability of such personnel and equipment;

(iii) The identity and the telephone number of individuals or organizations to be contacted in the event of a discharge so that immediate communications between the emergency response coordinator and the appropriate Federal official and the persons providing response personnel and equipment can be ensured;

(iv) A description of information to pass to response personnel in the event of a reportable spill;

(v) A description of response personnel capabilities, including the duties of persons at the facility during a response action and their response times and qualifications;

(vi) A description of the facility's response equipment, the location of the equipment, and equipment testing;

(vii) Plans for evacuation of the facility and surrounding communities;

(viii) A diagram of evacuation routes; and

(ix) A description of the duties of the emergency response coordinator identified in paragraph (h)(1) of this section, that include:

(A) Activate internal alarms and hazard communication systems to notify all facility personnel;

(B) Notify all response personnel, as needed;

(C) Identify the character, exact source, amount, and extent of the release, as well as the other items needed for notification;

(D) Notify and provide necessary information to the appropriate Federal, State, and local authorities with designated response roles, including the National Response Center, State Emergency Response Commission, and Local Emergency Planning Committee;

(E) Assess the interaction of the spilled substance with water and/or other substances stored at the facility and notify response personnel at the scene of that assessment;

(F) Assess the possible hazards to human health and the environment due to the release. This assessment must consider both the direct and indirect effects of the release (i.e., the effects of any toxic, irritating, or asphyxiating gases that may be generated, or the effects of any hazardous surface water runoffs from water or chemical agents used to control fire and heat-induced explosion);

(G) Assess and implement prompt removal actions to contain and remove the substance released;

(H) Coordinate rescue and response actions as previously arranged with all response personnel;

(I) Obtain authority to immediately access company funding to initiate cleanup activities; and

(J) Direct cleanup activities until properly relieved of this responsibility;

(x) Guidelines that describe procedures to identify response resources to meet the facility response plan requirements of this section are provided in appendix F to this part.

(4) *Hazard evaluation.* The response plan shall discuss the facility's known or reasonably identifiable history of discharges reportable under 40 CFR part 110 for the entire life of the facility and shall identify areas within the facility where discharges could occur and what the potential effects of the discharges would be on the affected environment. To assess the range of areas potentially affected, owners or operators shall, where appropriate, consider the distance calculated in paragraph (f)(1)(ii) of this section to determine whether a facility is located such that a discharge could cause substantial harm to the environment.

(5) *Tiered planning scenarios.* The response plan shall include discussion of specific scenarios for:

(i) A worst case discharge, as calculated using the appropriate worksheet in appendix E to this part. In cases where the Regional Administrator determines that the worst case discharge volume calculated by the facility is not appropriate, the Regional Administrator may specify the worst case discharge amount to be used for response planning at the facility. For complexes, the worst case planning quantity shall be the larger of the amounts calculated for each component of the facility;

(ii) A discharge of 2,100 gallons or less, provided that this amount is less than the worst case discharge amount; and

(iii) A discharge greater than 2,100 gallons and less than or equal to 36,000 gallons or 10 percent of the capacity of the largest tank at the facility, whichever is less, provided that this amount is less than the worst case discharge amount. For complexes, this planning quantity shall be the larger of the amounts calculated for each component of the facility.

(6) *Discharge detection systems.* The response plan shall describe the procedures and equipment used to detect discharges.

(7) *Plan implementation.* The response plan shall describe:

(i) Response actions to be carried out by facility personnel or contracted personnel under the response plan to ensure the safety of the facility and to mitigate or prevent discharges described in paragraph (h)(5) of this section or the substantial threat of such discharges;

(ii) A description of the equipment to be used for each scenario;

(iii) Plans to dispose of contaminated cleanup materials; and

(iv) Measures to provide adequate containment and drainage of spilled oil.

(8) *Self-inspection, training, and meeting logs.* The response plan shall include:

(i) A checklist and record of inspection for tanks, secondary containment, and response equipment;

(ii) A description and record of training exercises and periodic unannounced drills to be carried out under the response plan; and

(iii) Logs of discharge prevention meetings.

(9) *Diagrams.* The response plan shall include site plan and drainage plan diagrams.

(10) *Security systems.* The response plan shall include a description of facility security systems.

7. Part 112, as proposed to be revised at 56 FR 54630, is amended by adding Appendices C through G to read as follows:

Appendix C to Part 112—Determination of Substantial Harm

1.0 Introduction

The flowchart provided in Attachment C–I shows the decision tree by which owners and operators will decide whether their facility "could reasonably be expected to cause substantial harm to the environment by discharging into or on the navigable waters, adjoining shorelines, or the exclusive economic zone." In addition, the Regional Administrator (RA) has the discretion to identify facilities that must prepare and submit facility-specific response plans to EPA regardless of the self-determination results. The owner or operator or a regulated facility may determine that a facility has the potential to cause substantial harm to the environment without having to assess every criteria in the flowchart.

2.0 Flowchart for the Determination of Substantial Harm

Facilities that meet one or both of the following two criteria are identified as posing a potential risk of substantial harm to the environment in the event of a discharge and must prepare and submit a facility-specific response plan to EPA in accordance with appendix G of this part:

(1) The facility transfers oil over water to or from vessels and has a total storage capacity greater than or equal to 42,000 gallons.

(2) The facility's total oil storage capacity is greater than or equal to one million gallons, and one of the following is true:

- The facility does not have secondary containment for each aboveground storage area sufficiently large to contain the capacity of the largest aboveground storage tank within each storage area;
- The facility is located at a distance (as calculated using the appropriate formula in Attachment C–III or an alternative formula considered acceptable by the RA) such that a discharge from the facility could cause injury to an environmentally sensitive area, as defined in appendix D of this part;
- The facility is located at a distance (as calculated using the appropriate formula in Attachment C–III or an alternative formula considered accpetable by the RA) such that a discharge from the facility would shut down a public drinking water intake; or,
- The facility has had a reportable spill in an amount greater than or equal to 10,000 gallons within the last five years.

2.1 Description of Screening Criteria for the Substantial Harm Flowchart

(1) *Transportation-Related Facilities Greater Than or Equal to 42,000 Gallons Where Operations Include Over-Water Transfer of Oil*—A transportation-related facility with a total storage capacity greater than 42,000 gallons that transfers oil over water to or from vessels must submit a response plan to EPA. Daily oil transfer operations at these types of facilities occur between barges and vessels and onshore bulk storage tanks over open water.

(2) *Lack of Secondary Containment at Facilities With a Total Storage Capacity Greater Than or Equal to One Million Gallons*—Any facility with a total storage capacity greater than or equal to one million gallons without secondary containment sufficiently large to contain the capacity of the largest tank within each storage tank area must submit a response plan to EPA. A secondary containment area that is "sufficiently large" must contain the maximum capacity of the largest tank within a single containment area plus an allowance for precipitation. Secondary containment structures, which meet the standard of good engineering practice for the purposes of this part, include berms, dikes, retaining walls, curbing, culverting, gutters, or other drainage systems.

(3) *Proximity to Environmentally Sensitive Areas at Facilities With a Total Storage Capacity Greater Than or Equal to One Million Gallons*—A facility with a total storage capacity greater than or equal to one million gallons must submit its response plan if it is located at a distance such that a discharge from the facility could cause injury to an environmentally sensitive area, as defined in appendix D of this part. "Injury" is defined in § 112.2 of this part. This definition of "injury" is derived from the Natural Resource Damage Assessments rule at 43 CFR part 11.

Owners or operators may determine the distance at which an oil spill could cause injury to an environmentally sensitive area using the appropriate formula presented in Attachment C–III of this appendix or an alternative formula considered acceptable by the RA.

(4) *Proximity to Public Drinking Water Intakes at Facilities With a Total Storage Capacity Greater Than or Equal to One Million Gallons*—A facility with a total storage capacity greater than or equal to one million gallons must submit its response plan if it is located at a distance such that a discharge from the facility would shut down a drinking water intake. The distance at which an oil spill from an SPCC-regulated facility would shut down a drinking water intake may also be calculated using the appropriate formula presented in Attachment C–III or an alternative formula considered acceptable by the RA.

(5) *Facilities That Have Experienced Reportable Spills in an Amount Greater Than or Equal to 10,000 Gallons Within the Past Five Years and That Have a Total Storage Capacity Greater Than or Equal to One Million Gallons*—A facility's spill history within the past five years shall be considered in the evaluation for substantial harm. Any facility with a total storage capacity greater than or equal to one million gallons that has experienced a reportable spill in an amount greater than or equal to 10,000 gallons within the past five years must submit a response plan to EPA.

3.0 Certification Form for Facilities That Do Not Pose Substantial Harm

Facilities that do not meet the substantial harm criteria listed in Attachment C–I must complete a certification of substantial harm determination form and maintain the form as part of their SPCC Plan. The certification of substantial harm determination form is provided in Attachment C–II. The owner or operator is required to notify the RA in writing that an alternative formula was used to determine that the facility does not pose a threat of substantial harm. The documentation that demonstrates the reliability and analytical soundness of the alternative formula must be maintained at the facility.

Attachment C–I

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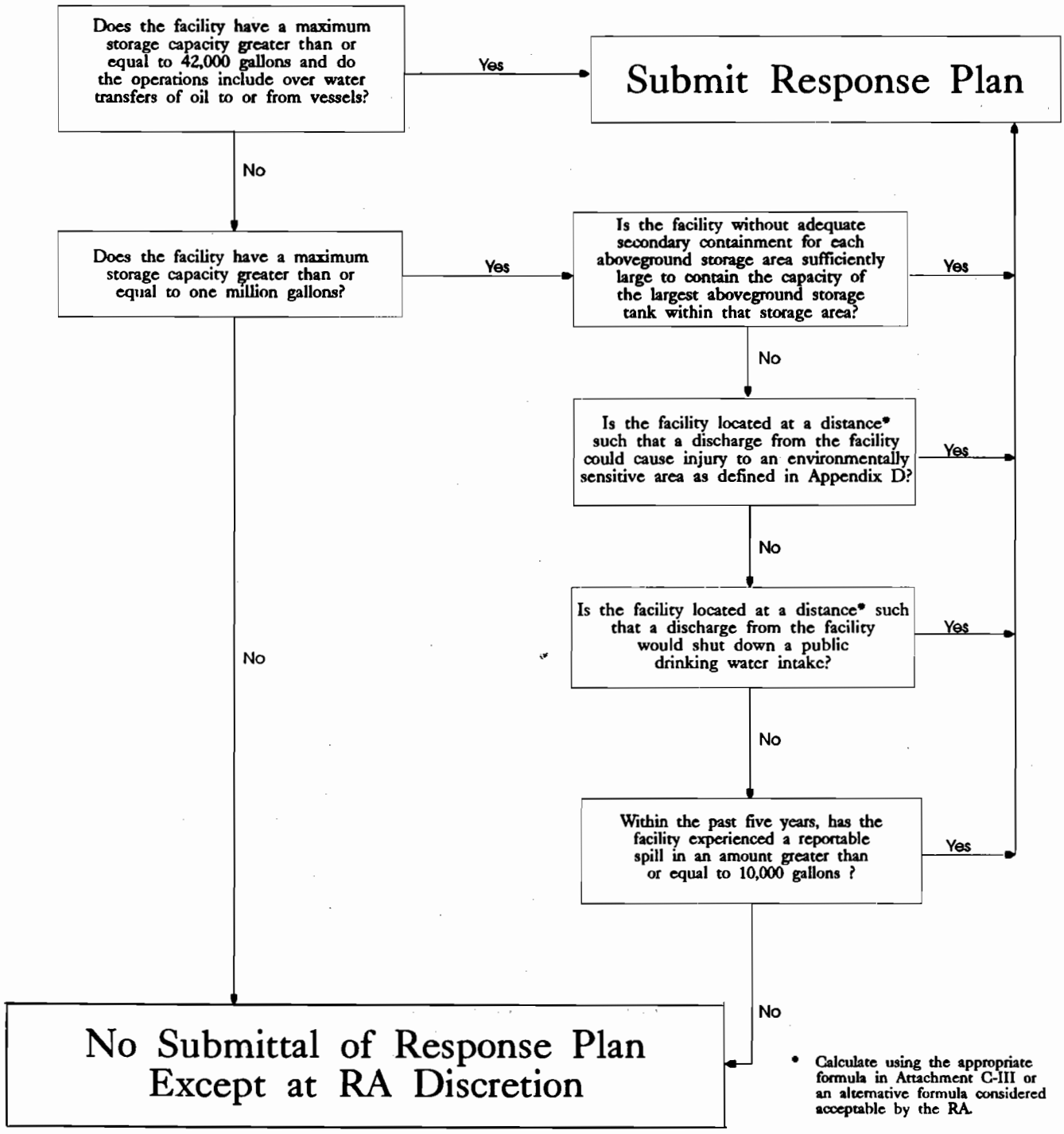
See corrections to this page

Flowchart for the Determination of Substantial Harm



* Calculate using the appropriate formula in Attachment C-III or an alternative formula considered acceptable by the RA.

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see corrections to this page

Attachment C–II.—Certification of Substantial Harm Determination Form

Facility name: _____

Facility address: _____

1. Does the facility have a maximum storage capacity greater than or equal to 42,000 gallons *and* do the operations include over water transfers of oil to or from vessels?
   Yes_____ No_____
2. Does the facility have a maximum storage capacity greater than or equal to one million (1,000,000) gallons *and* is the facility without secondary containment for each aboveground storage area sufficiently large to contain the capacity of the largest aboveground storage tank within the storage area?
   Yes_____ No_____
3. Does the facility have a maximum storage capacity greater than or equal to one million (1,000,000) gallons *and* is the facility located at a distance (as calculated using the appropriate formula in Attachment C–III or an alternative formula[1] considered acceptable by the RA) such that a discharge from the facility could cause injury to an environmentally sensitive area as defined in Appendix D?
   Yes_____ No_____
4. Does the facility have a maximum storage capacity greater than or equal to one million (1,000,000) gallons *and* is the facility located at a distance (as calculated using the appropriate formula in Attachment C–III or an alternative formula[1] considered acceptable by the RA) such that a discharge from the facility would shut down a public drinking water intake?
   Yes_____ No_____
5. Does the facility have a maximum storage capacity greater than or equal to one million (1,000,000) gallons *and* within the past 5 years, has the facility experienced a reportable spill in an amount greater than or equal to 10,000 gallons?
   Yes_____ No_____

CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document, and that based on my inquiry of those individuals responsible for obtaining this information, I believe that the submitted information is true, accurate, and complete.

Signature

Name (please type or print)

Title

Date

[1]If an alternative formula is used, documentation of the reliability and analytical soundness of the alternative formula must be attached to this form.

Attachment C–III.—Calculation of the Planning Distance

As part of the substantial harm determination, the facility owner or operator must evaluate whether the facility is located at a distance which could cause injury to an environmentally sensitive area or disrupt operations at a drinking water intake. To quantify that distance, EPA considered oil transport mechanisms over land and on still and moving navigable waters. After assessing oil transport over land, the primary concern for calculation of a planning distance is the transport of oil in navigable waters. Therefore, two formulas have been developed to determine distances for planning purposes from the point of discharge at the facility to the potential site of impact on moving and still waters, respectively. The formula for oil transport on moving navigable water is based on the velocity of the water body and the time interval for arrival of response resources. The still water formula accounts for the spread of discharged oil over the surface of the water.

EPA's formulas were designed to be simple to use. However, facilities may calculate planning distances using more sophisticated formulas, which take into account broader scientific or engineering principles, or local conditions. Such alternative formulas may result in different planning distances than EPA's formulas. If an alternative formula is used to establish the appropriate distance to sensitive environments or drinking water intakes and it is determined that the facility does not pose substantial harm, the owner or operator is required to notify the RA in writing. Documentation must be maintained at the facility to demonstrate the reliability and analytical soundness of the alternative formula. Those facilities that meet the substantial harm criteria and use an alternative formula to determine the planning distance must attach the documentation that demonstrates the reliability and analytical soundness of the alternative formula to the response plan cover sheet in appendix G of this part. The owner or operator of a regulated facility may determine that a facility has the potential to cause substantial harm to the environment without having to perform a planning distance calculation. For facilities that meet the substantial harm determination because of inadequate secondary containment or spill history, as listed in the flowchart in Attachment C–I, calculation of the planning distance is unnecessary. For facilities that do not meet the substantial harm criteria for secondary containment and spill history listed in the flowchart, calculation of a planning distance for proximity to sensitive environments and drinking water intakes is required, unless it is clear that these areas would be impacted without performing the calculation.

Alternative formulas are subject to review by the RA. However, such formulas shall be deemed adequate unless the RA notifies the owner or operator in writing of specific technical objections.

The planning distance formula for transport on moving waterways contains three variables: The velocity of the navigable water (v), the response time interval (t) and a conversion factor (c). The velocity, v, is determined by using the Chezy-Manning equation, which models the flow of water in open channels. The Chezy-Manning equation contains three variables which must be determined by facility owners and operators. Manning's Roughness Coefficient, n, can be determined from Table 1. The hydraulic radius, r, can be evaluated using the average mid-channel depth from charts provided by the sources listed in Table 2. The average slope of the river, s, can be determined using topographic maps that can be ordered from the U.S. Geological Survey, as listed in Table 2. For further information on fluid flow, refer to Open Channel Hydraulics by V.T. Chow, published by McGraw Hill in 1959.

Table 3 contains specified time intervals for arrival of response resources at the scene of a discharge. The response times listed in Table 3 are consistent with the U.S. Coast Guard's (USCG) proposed rulemaking for response plans. Response resources should be prepositioned to arrive at the discharge site within 12 hours of the discovery of an oil discharge in Higher Volume Port Areas and Great Lakes; and 24 hours in all other river, inland and nearshore areas as defined in this attachment. The specified time intervals have been adjusted upward to include a three hour time period for deployment of booms and other response equipment. The designated Higher Volume Port Areas listed in the definitions section are example areas covered in the proposed USCG tank vessel response plan regulation. The RA may identify additional areas as appropriate.

Oil Transport on Moving Navigable Waters

The facility owner or operator should use the following formula to calculate the planning distance:

$d=vxtxc$; where

d: the distance downstream from a facility within which an environmentally sensitive area could be injured or drinking water intake would be shut down in the event of an oil discharge (in miles);

v: the velocity of the river/navigable water of concern (in ft/sec) as determined by Chezy-Manning's equation (see below and Tables 1 and 2);

t: the time interval specified in Table 3 based upon the type of water body and location (in hours); and

c: constant conversion factor 0.68 sec•mile/hr•ft (3600 sec/hr÷5280 ft/mile).

Chezy-Manning's equation is used to determine velocity:

$v=1.5/n x r^{2/3} x s^{1/2}$

where:

v=the velocity of the river of concern (in ft/sec);

n=Manning's Roughness Coefficient from Table 1

r=the hydraulic radius; the hydraulic radius can be approximated for parabolic channels by multiplying the average mid-channel depth of the river (in feet) by .667 (sources for obtaining the mid-channel depth are listed in Table 2)

See corrections

s=the average slope of the river (unitless) obtained from topographic maps supplied by the U.S. Geological Survey listed in Table 2

TABLE 1.—MANNING'S ROUGHNESS COEFFICIENT FOR NATURAL STREAMS

Stream description	Roughness coefficient (n)
Minor streams (Top Width <100 ft.)	
Clean:	
Straight	0.03
Winding	0.04
Sluggish (Weedy, deep pools):	
No trees or brush	0.06
Trees and/or brush	0.10
Major streams (Top Width >100 ft.)	
Regular Section (no boulders/brush)	0.035
Irregular Section (brush)	0.05

Note: Coefficients are presented for high flow rates at or near flood stage.

TABLE 2.—SOURCES OF R AND S FOR THE CHEZY-MANNING EQUATION

All of the charts and related publications for navigational waters may be ordered from:
Distribution Branch
(N/CG33)
National Ocean Service
Riverdale, Maryland 20737–1199
Phone: (301) 436–6990
There will be a charge for materials ordered and a VISA or Mastercard will be accepted.

The mid-channel depth to be used in the calculation of the hydraulic radius (r) can be obtained directly from the following sources:

Charts of Canadian Coastal and Great Lakes Waters:
Canadian Hydrographic Service
Department of Fisheries and Oceans Institute
P.O. Box 8080
1675 Russell Road
Ottawa, Ontario KIG 3H6
Canada
Phone: (613) 998–4931

Charts and Maps of Lower Mississippi River
(Gulf of Mexico to Ohio River and St. Francis, White, Big Sunflower, Atchafalaya, and other rivers):
U.S. Army Corps of Engineers
Vicksburg District
P.O. Box 60
Vicksburg, Mississippi 39180
Phone: (601) 634–5000

Charts of Upper Mississippi River and Illinois Waterway to Lake Michigan:
U.S. Army Corps of Engineers
Rock Island District
P.O. Box 2004
Rock Island, Illinois 61204
Phone: (309) 788–6412

Charts of Missouri River:
U.S. Army Corps of Engineers
Omaha District
6014 U.S. Post Office and Courthouse
Omaha, Nebraska 68102
Phone: (402) 221–3900

Charts of Ohio River:
U.S. Army Corps of Engineers
Ohio River Division
P.O. Box 1159
Cincinnati, Ohio 45201
Phone: (513) 684–3002

Charts of Tennessee Valley Authority Reservoirs, Tennessee River and Tributaries:
Tennessee Valley Authority
Maps and Engineering Section
416 Union Avenue
Knoxville, Tennessee 37902
Phone: (615) 632–2921

Charts of Black Warrior River, Alabama River, Tombigbee River, Apalachicola River and Pearl River:
U.S. Army Corps of Engineers
Mobile District
P.O. Box 2288
Mobile, Alabama 36628–0001
Phone: (205) 690–2511

The average slope of the river (s) may be obtained from topographic maps:
U.S. Geological Survey
Map Distribution
Federal Center
Bldg. 41
Box 25286
Denver, Colorado 80225

Additional information can be obtained from the following sources:
(1) The State Department of Naval Resources (DNR) or the State Aids to Navigation office;
(2) A knowledgeable local marina operator; or
(3) A knowledgeable local water authority (i.e., State water commission)

The average slope of the river(s) can be determined from the topographic maps using the following steps:

- Locate the facility on the map.
- Find the Normal Pool Elevation at the point of release from the facility into the water (A).
- Find the Normal Pool Elevation of the drinking water intake or environmentally sensitive area located downstream (B) (**Note:** The owner or operator should use a minimum of 20 miles downstream as a cutoff to obtain the average slope if the location of a specific drinking water intake or environmentally sensitive area is unknown).
- If the Normal Pool Elevation is not available, the elevation contours can be used to find the slope. Determine elevation of the water at the point of release from the facility (A). Determine the elevation of the water at the appropriate distance downstream (B). The formula presented below can be used to calculate the slope.
- Determine the distance (in miles) between the facility and the drinking water intake or environmentally sensitive area (C).
- Use the following formula to find the slope, which will be a unitless value:

Average Slope=[(A − B) (ft)/C (miles)]× [1 mile/5280 feet]

If it is not feasible to determine the slope and mid-channel depth as required by the Chezy-Manning equation, the river velocity can be approximated on-site. A specific length, such as 100 feet, can be marked off along the shoreline. A float can be dropped into the stream above the mark, and the time required for the float to travel the distance can be used to determine the velocity in feet per second. However, this method will not yield an average velocity for the length of the stream, but a velocity only for the specific location of measurement. In addition, the flow rate will vary depending on weather conditions such as wind and rainfall. It is recommended that owners and operators repeat the measurement under a variety of conditions to obtain the most accurate estimate of the surface water velocity.

The planning distance calculations for moving and still navigable waters are based on discharges of persistent oils released in worst case discharge volumes. Persistent oils are of concern because they can remain in the water for significant periods of time and can potentially exist in large quantities downstream. Owners and operators of facilities that store persistent as well as non-persistent oils may use an alternative formula provided it is acceptable to the RA. The volume of oil discharged is not included as part of the planning distance calculation for moving navigable waters. Facility owners and operators that will complete this part of the substantial harm determination are those with facility capacities greater than or equal to one million gallons. It is assumed that these facilities are capable of having an oil discharge of sufficient quantity to cause injury to a sensitive environment or shut down a drinking water intake. While owners and operators of transfer facilities that store greater than or equal to 42,000 gallons are not required to use a planning distance formula for purposes of the substantial harm determination, they should use a planning distance calculation in the development of facility-specific response plans.

see corrections

TABLE 3.—SPECIFIED TIME INTERVAL

	Higher volume port areas and Great Lakes	Other areas
Shoreline and Inland	12 hour arrival + 3 hour deployment = 15 hours	24 hours + 3 hour deployment = 27 hours.
Rivers	12 hours + 3 hour deployment = 15 hours.	24 hours + 3 hour deployment = 27 hours.

Definitions

Great Lakes: includes the Great Lakes (Superior, Michigan, Huron, Erie and Ontario) plus their connecting and tributary waters including the Calumet River as far as Thomas J. O'Brien Lock and Controlling Works (between mile 326 and 327), the Chicago River as far as the east side of the Ashland Avenue Bridge (between mile 321 and 322), and the Saint Lawrence River as far east as the lower exit of the Saint Lambert Lock.

Higher Volume Port Area: includes

(1) Boston, MA
(2) New York, NY
(3) Delware Bay and River, PA
(4) St. Croix, VI
(5) Pascagoula, MS
(6) Mississippi River from Southwest Pass, LA to Baton Rouge, LA
(7) Louisiana Offshore Oil Port (LOOP)
(8) Lake Charles, LA
(9) Sabine-Neches River, TX
(10) Galveston Bay and Houston Ship Channel, TX
(11) Corpus Christi, TX
(12) Los Angeles/Long Beach Harbor, CA
(13) San Francisco Bay and Sacramento River, CA
(14) Straits of Juan de Fuca and Puget Sound, WA
(15) Prince William Sound, AK
(16) others as specified by RA

Inland Area: the area shoreward of the boundary lines defined in 46 CFR Part 7, except in the Gulf of Mexico. In the Gulf of Mexico, inland areas include the area shoreward of the lines of demarcation (COLREG lines as defined in 33 CFR sections 80.740–80.850). The inland area does not include the Great Lakes or rivers and canals.

River and Canals: bodies of water confined within the inland area that have a controlled navigable depth of 12 feet or less, including the Intracoastal Waterway.

Example of the Planning Distance Calculation

The following example provides a sample calculation using the planning distance formula for a facility discharging into the Monongahela River:

(1) Solve for v by evaluating n, r, and s for the Chezy-Manning equation:

n=0.035 From Table 1 for a regular section of a major stream with a top width greater than 100 feet. The top width of the river can be found from the topographic map.

$s=1.3 \times 10^{-4}$ where A = 727 feet, B = 710 feet, and C = 25 miles.

Solving:

$[(727 \text{ ft}-710 \text{ ft})/25 \text{ miles}]\times[1 \text{ mile}/5280 \text{ feet}]=1.3\times10^{-4}$

r=13.33 feet. The average mid-channel depth is found by averaging the mid-channel depth for each mile along the length of the river between the facility and the drinking water intake or the environmentally sensitive area (or 20 miles downstream if applicable). This value is multiplied by 0.667 to obtain the hydraulic radius. The mid-channel depth is found on the chart of the Monongahela River.

Solving:

$r=0.667\times20 \text{ feet}=13.33 \text{ feet}$

Solve for v using

$v=1.5/n\times r^{2/3}\times s^{1/2}$:

$v=[1.5/0.035]\times(13.33)^{2/3}\times(1.3\times10^{-4})^{1/2}$

$v=2.73$ feet/second

(2) Find t from Table 3. For the Monongahela River, the resource response time is 27 hours.

(3) Solve for planning distance, d:

$d=v\times t\times c$

$d=(2.73 \text{ ft/sec})\times(27 \text{ hours})\times(0.68 \text{ sec}\cdot\text{mile}/\text{hr}\cdot\text{ft})$

d=50 miles

Therefore, 50 miles downstream is the appropriate planning distance for this facility.

Oil Transport on Still Water

For bodies of water including lakes or ponds which do not have a measurable velocity, the spreading of the oil over the surface must be considered. Owners and operators of facilities located next to still water bodies may use an alternative means of calculating the planning distance if it is acceptable to the RA. If an alternative formula is used, documentation of the reliability and analytical soundness of the alternative calculation must be attached to the response plan cover sheet. To assist those facilities which could potentially discharge into a still body of water, the following analysis was performed to provide an example of the type of formula that may be used to calculate the planning distance. For this example, a worst case discharge of 2,000,000 gallons is used.

The surface area covered by a spill on still water, A_1, can be determined by the following formula[1], where V is the volume of the spill in gallons:

$A_1=10^5V^{3/4}$

$V=2{,}000{,}000 \text{ gallons}\times0.13368 \text{ ft}^3/\text{gallon}=267{,}360 \text{ ft}^3$

$A_1=10^5\times(267{,}360)^{3/4}$

$A_1=1.18\times10^9 \text{ ft}^2$

The spreading formula is based on the theoretical condition that the oil will spread uniformly in all directions forming a circle. In reality, the outfall of the discharge will direct the oil to the surface of the water where it intersects the shoreline. Although the oil will not spread uniformly in all directions, it is assumed that the discharge will spread from the shoreline into a semi-circle (this assumption does not account for winds or wave action).

The area of a circle=πr^2

To account for the assumption that oil will spread in a semi-circular shape, the area of a circle is divided by 2 and is designated as A_2.

$A_2=(\pi r^2)/2$

Solving for the radius, r, using the relationship $A_1=A_2$:

$1.18\times10^9=(\pi r^2)/2$

$\therefore$ r=27,404 ft

27,404 ft+5,270 ft/mile=5.2 miles

Assuming a 20 knot wind under storm conditions:

1 knot=1.15 miles/hour

20 knots×1.15 miles/hour/knot=23 m/hr

Assuming that the oil slick moves at 3% of the wind's speed[2]:

23 miles/hour×0.03=.69 miles/hour

To estimate the distance that the oil will travel, the time required for response resources to arrive at different geographic locations according to Table 3 is used:

For Higher Volume Port Areas and Great Lakes: 15 hrs×0.69 m/hr=10.4 miles

For other areas: 27 hrs×0.69 m/hr=18.6 miles

The total distance that the oil will travel from the point of release:

Higher Volume Port Areas and Great Lakes: 10.4+5.2 miles or approximately 16 miles

Other areas: 18.6+5.2 miles or approximately 24 miles

Oil Transport Over Land

Facility owners or operators must evaluate the potential for oil to be transported over land to waters of the United States. The owner or operator should evaluate the likelihood that portions of a worst case discharge would reach navigable waters via open channel flow or from sheet flow across the land, or be prevented from reaching navigable waters when trapped in natural or man-made depressions.

As discharged oil travels over land, it may enter a storm drain or open concrete channel intended for drainage. An evaluation of the flow of oil in concrete pipes and channels

[1] Huang, J.C. and Monastero, F.C., 1982. Review of the State-of-the-the Art of Oil Pollution Models. Final report submitted to the American Petroleum Institute by Raytheon Ocean Systems, Co., East Providence, Rhode Island.

[2] Oil Prevention & Control. National Spill Control School, Corpus Christi State University, Thirteenth Edition, May 1990.

reveals that the travel time through the length of the drain is virtually instantaneous.[3] For this reason, it is assumed that once oil reaches such an inlet, it will flow into the navigable water. During a storm event, it is highly probable that the oil will either flow into the drainage structures or follow the natural contours of the land and flow into the navigable water. Expected minimum and maximum velocities are provided as examples of open channel and pipe flow. The ranges listed below reflect minimum and maximum velocities used as design criteria. It is shown that the time required for oil to travel through a storm drain or open channel to navigable water is negligible and can be considered instantaneous. The velocities are:
For open channels:
maximum velocity=25 feet per second
minimum velocity=3 feet per second
For storm drains:
maximum velocity=25 feet per second
minimum velocity=2 feet per second

Assuming a length of ½ mile from the point of discharge through a open concrete channel or concrete storm drain to a navigable water, the travel times (distance/velocity) are:

1.8 minutes at a velocity of 25 feet per second
14.7 minutes at a velocity of 3 feet per second
22.0 minutes at a velocity of 2 feet per second

The distances that should be considered to determine the planning distance are illustrated in Figure 1. The relevant distances can be described as follows:

D1=Distance from the nearest opportunity for release, X_1, to storm drain or open channel leading to navigable water
D2=Distance through storm drain or open channel to navigable water
D3=Distance downstream from outfall within which an environmentally sensitive area could be injured or a drinking water intake would be shut down as determined by the planning distance formula
D4=Distance from the nearest opportunity for release, X_2, to an environmentally sensitive area not associated with navigable water

Facility owners and operators whose nearest opportunity for discharge is located within ½ mile of a navigable water should complete the planning distance calculation or an alternative formula acceptable to the RA. Facilities that are located at a distance greater than ½ mile from a navigable water should also calculate a planning distance if they are in close proximity to storm drains or environmentally sensitive areas.

Storm drains or concrete drainage channels that are located in close proximity to the facility provide a direct pathway to navigable waters. Figure 1 depicts the configuration of a facility and denotes the storm drain as D1. If D1 is less than or equal to ½ mile, a discharge from the facility could pose substantial harm since the travel time through the storm drain to the navigable water (D2) is instantaneous. Even if the facility is located at a distance greater than ½ mile from the navigable water, the storm drain provides direct access to the water, regardless of the length of the drainage pipe. In this case, the owner or operator should calculate a planning distance.

A facility's proximity to an environmentally sensitive area, as depicted in D4 of Figure 1 should also be considered, regardless of the distance from the facility to navigable waters. Factors to be considered in assessing oil transport over land to sensitive environments and storm drains should include the topography of the surrounding area, drainage patterns, man-made barriers (excluding secondary containment structures), and soil distribution and porosity.

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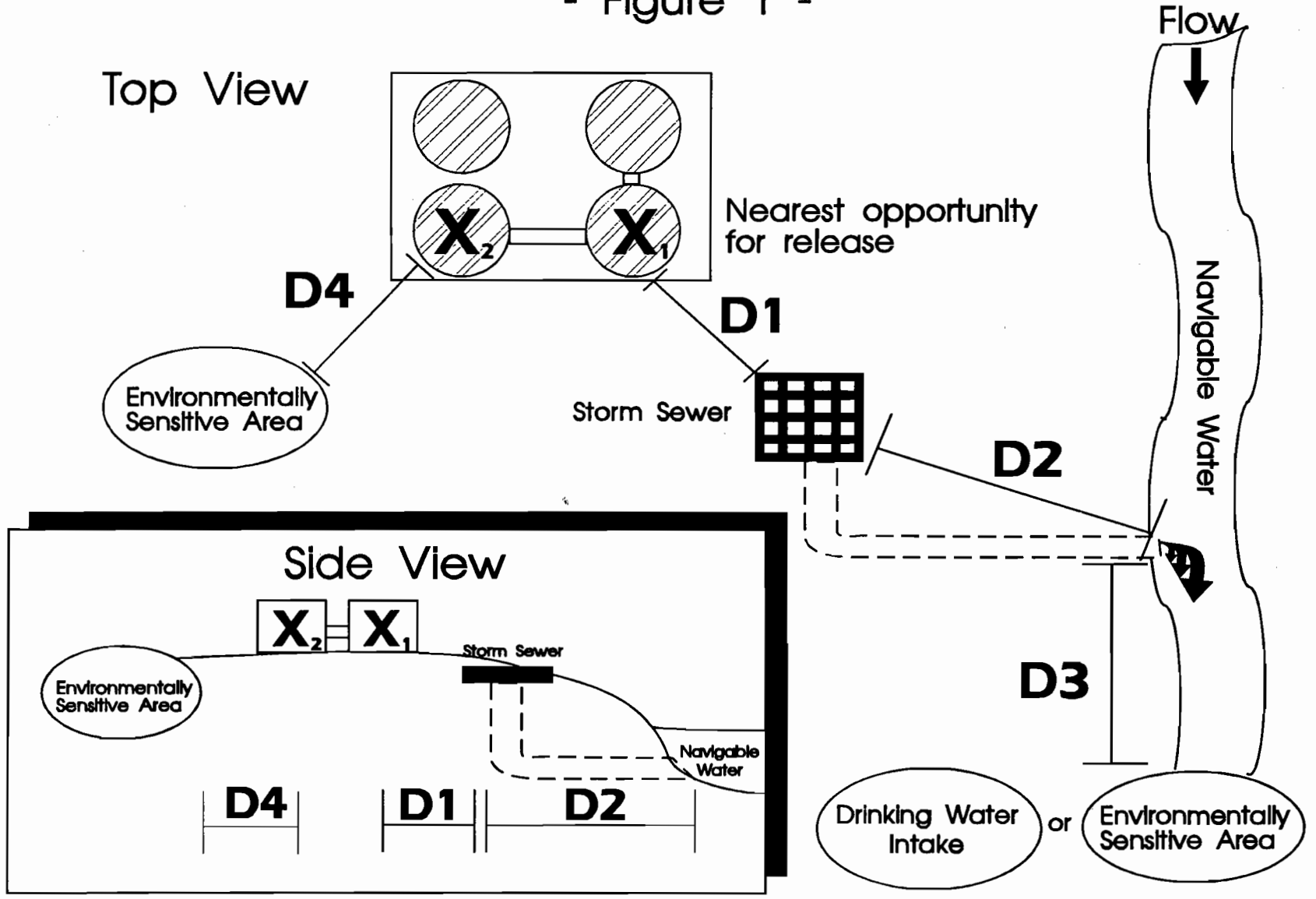
[3] The design velocities were obtained from Howard County, Maryland Department of Public Works' Storm Drainage Design Manual.

- Figure 1 -



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** Not to scale **

Appendix D to Part 112.—Environmentally Sensitive Areas

Proximity to environmentally sensitive areas has been identified as a factor in the substantial harm evaluation. To assist owners and operators in identifying these areas, environmentally sensitive areas may include a variety of areas, such as: Wetlands, National and State parks, critical habitats for endangered/threatened species, wilderness and natural areas, marine sanctuaries, conservation areas, preserves, wildlife areas, scenic and wild rivers, seashore and lakeshore recreational areas, and critical biological resource areas.

Other environmental areas that may be considered by the Regional Administrator (RA) to determine whether a facility poses significant and substantial harm to the environment include: Federal and State lands that are research natural areas, heritage program areas, land trust areas, and historical and archeological sites and parks. These areas may also include unique habitats, such as: aquaculture sites, bird nesting areas, designated migratory routes, and designated seasonal habitats. The RA may determine, on a case-by-case basis, that additional areas that possess ecological significance are considered to be environmentally sensitive for the purposes of this regulation.

Attachment C–III of appendix C of this part provides a method for owners and operators to determine if the facility is located at a distance such that a discharge from the facility could cause injury to an environmentally sensitive area. The distance calculation is based on oil transport on fast moving and still waters and over land. "Injury" is defined in § 112.2 of this part. This definition of "injury" is derived from the Natural Resource Damage Assessments rule at 43 CFR part 11.

The attachments to this appendix provide environmental information to facility owners and operators for the development of response plans. The attachments also provide information regarding the boundaries of environmentally sensitive areas located near the facility and prioritize vulnerable areas for protection in the event of a discharge. Attachment D–I provides a list of responsible Federal agencies for specific environmental resources. Critical habitats for designated endangered/threatened species have been designated as environmentally sensitive areas. Further information to assist owners and operators to delineate boundaries on critical habitats for endangered/threatened species identified by the National Marine Fisheries Service (NMFS) is provided in Attachment D–II. National Marine Sanctuaries (NMS) and National Estuarine Research Reserves (NERR) are listed in Attachment D–III. The sanctuaries and reserves are protected by various Federal regulations. In order to prioritize and allocate sufficient resources for oil containment and recovery in the event of a discharge, Attachments D–IV and D–V present a comparison of the vulnerability of certain aquatic ecosystems to oil discharges. Attachment D–IV presents a list of aquatic habitats, their importance, and vulnerability to oil discharges. Attachment D–V ranks several aquatic habitats on their relative vulnerability to oil. This prioritized list will help owners and operators to direct their initial spill response to the most critical areas.

Areas considered as environmentally sensitive will change as the various Federal and State agencies responsible for designating the areas periodically update their lists. Owners and operators are expected to ensure that facility response plans reflect the listing of sensitive environments published to a point in time 6 months prior to plan submission. For example, plans submitted to meet the February 18, 1993, deadline would only need to consider sensitive environments designated by responsible agencies in Attachment D–I as of August 18, 1992. A 6-month cutoff point for considering environmentally sensitive areas would also apply in situations where plans are periodically updated or resubmitted for approval of a material change.

Attachment D–I.—Responsible Federal Agencies for Specific Environmental Resources

For more information on the following areas, owners and operators should contact the responsible agency listed below. These agencies will provide assistance, including maps, for the areas under their jurisdiction.

Areas	Responsible federal agency
Wetlands, as defined in 40 CFR 230.3.	EPA[1]
Critical habitat for designated or proposed endangered/threatened species.	NOAA/FWS
Habitat used by designated or proposed endangered/threatened species or marine mammals defined as depleted.	NOAA/FWS
Marine sanctuaries	NOAA
National parks	DOI/NPS
Federal wilderness areas	USDA
Coast Zone Management Act designated areas.	NOAA
National estuary program	NOAA
Near coastal waters program areas.	EPA[1]
Clean lakes program critical areas	EPA[1]
National monuments	DOT
National seashore recreational areas.	DOI/NPS
National lakeshore recreational areas.	DOI
National preserves	DOI
National wildlife refuges	NOAA/FWS
Coastal barrier resource system (units, undeveloped, partially developed).	FWS
National river reach designated as recreational.	EPA[1]
Federal or state designated scenic or wild river.	DOI
National conservation areas	DOI/BLM
Hatcheries	FWS
Waterfowl management areas	FWS

[1] Where EPA is designated as the responsible agency, the information will be provided by the appropriate Regional office.

NOTE: Please contact State or local agencies for information on resources they manage.

Acronyms

BLM—Bureau of Land Management
DOI—Department of Interior
EPA—Environmental Protection Agency
FWS—Fish and Wildlife Service
NOAA—National Oceanic and Atmospheric Administration
NPS—National Park Service
USDA—United States Department of Agriculture

Attachment D–II.—Critical Habitats and Endangered/Threatened Species

1. Designated Critical Habitat for National Marine Fisheries Service (NMFS) Species

The following locations have been designated as critical habitats for NMFS species. These habitats are considered environmentally sensitive areas and are preserved by the government. Habitat boundaries for the NMFS species listed below are identified in the 50 CFR parts 226 and 227. This list is not all-inclusive. Facility owners and operators should contact the appropriate NMFS region listed in Section 3 of this attachment for further information.

NMFS species	Location
Hawaiian monk seal	NW Hawaiian Islands.
Leatherback sea turtle	Sandy Pt., St. Croix, USVI.
35 Steller sea lion rookery sites.	Alaska/N. Pacific Coast.
Winter-run chinook salmon.	Sacramento River, CA.

2. Seasonal Critical Habitats

Primary seasonal habitat areas for endangered species as identified in recovery plans and other technical documents are listed below. Facility owners and operators should contact the appropriate NMFS region listed in Section 3 of this attachment for further information.

Northern Right Whale (Final Recovery Plan, December 1991)

Florida—Georgia coast from 28°N to 32°N during the months of December through March. Calving and nursery area.

Cape Cod—Massachusetts Bay during the months of March–September. Primary feeding areas.

Great South Channel on the western edge of Georges Bank and Jeffrey's Ledge during the months of March–September. Primary feeding area.

Humpback Whale—East Coast Population (Final Recovery Plan, November 1991)

Gulf of Maine, Great South Channel, Stellwagen Bank, and Jeffrey's Ledge during the period from mid-April through mid-November. Primary feeding area.

Silver Bank and Navidad Bank off the coast of Puerto Rico, coastal areas off the northwest coast of Puerto Rico, and the U.S. Virgin Islands from mid-December through early April. Calving and nursery area.

Humpback Whale—West Coast Population (Final Recovery Plan, November 1991)

Hawaiian Islands (Central North Pacific stock) and Guam (Western North Pacific stock) from December–April. Calving and nursery area.

Central and western Gulf of Alaska, including Prince William Sound, Shelikof Straight, Barren Islands and the southern

See corrections

coastline of the Alaska peninsula during the months of May–November. Primary feeding area.

Inside Passage and coastal waters of the southeast Alaska panhandle from Yakutat Bay south to Queen Charlotte Sound during the months May–November. This area includes Glacier Bay, Ioy Straight, Stephens Passage/Frederick Sound, Seymour Canal, Sitka Sound, Cape Fairweather, Lynn Canal, Sumner Straight, Dixon Entrance, the west coast of Prince Wales Islands, and the Fairweather grounds which is an offshore bank. Primary feeding area.

Shortnose Sturgeon (NOAA Technical Report NMFS 14 and FAO Fisheries Synopais No. 140)

The following east coast rivers and bays should be included: Kennebec River, Andrescoggin River, Montsweag Bay, Merrimack River, Connecticut River, Hudson River, Delaware River, Wacoamaw River (including Winyah Bay), Lake Marion-Wateree River, lower Savannah River, Altamaha River, Ocumulgee River, and St. Johns River.

Gray Whale (5 Year Status Review)

Northern Bering and southern Chukchi Seas. Primary feeding areas.

Unlike other whale species, the gray whale is particularly vulnerable during its migration period because it migrates very close to shore. In areas such as Monterey and Point Conception it migrates within two miles of shore. The entire west coast from Alaska to the Mexican border should be listed during the migration periods. Southbound migration is during the months of October–December, and northbound migration is from mid-February to April.

Sacramento River Winter-run Chinook Salmon should be revised to reflect the revised critical habitat proposal, 57 FR 36626–36632, August 14, 1992.

(1) Sacramento River from Keswick Dam (River Mile 302) to Chipps Island (River Mile 0) at the westward margin of Sacramento-San Joaquin Delta;

(2) all waters from Chipps Island westward to Carquinez Bridge, including Honker Bay, Grizzly Bay, Suisan Bay, and Carquinez Straight;

(3) all waters of San Pablo bay from San Pablo Bay to the Golden Gate bridge.

3. NOAA National Marine Fisheries Service Regional Offices

NMFS Northeast Region, Richard B. Roe, Director, One Blackburn Drive, Gloucester, MA 01930, Tel: (508) 281–9250

NMFS Southeast Region, Andrew Kemmerer, Director, 9450 Koger Blvd., St. Petersburg, FL 33702, Tel: (813) 893–3141

NMFS Northwest Region, Rolland Schmitten, Director, 7600 Sand Point Way NE, Seattle, WA 98115–0070, Tel: (206) 526–6150

NMFS Southwest Region, Gary Matlock, Acting Director, 501 West Ocean Blvd., Suite 4200, Long Beach, CA 90802–4213, Tel: (310) 980–4001

NMFS Alaska Region, Steven Pennoyer, Director, Post Office Box 21668, Juneau, AK 99802, Tel: (907) 586–7221.

Attachment D–III.—Marine Sanctuary and Estuarine Reserves

The following sanctuaries and reserves are protected by Federal regulations:

National marine sanctuaries (NMS)	Location	Regulation
Monitor NMS.	North Carolina.	15 CFR part 924.
Key Largo NMS.	Florida	15 CFR part 929.
Channel Islands NMS.	California	15 CFR part 935.
Point Reyes/Farallon Island NMS.	California	15 CFR part 936.
Looe Key NMS.	Florida	15 CFR part 937.
Gray's Reef NMS.	Georgia	15 CFR part 938.
Fagatele Bay NMS.	American Samoa.	15 CFR part 941.
Cordell Bank NMS.	California	15 CFR part 942.
Florida Keys NMS.	Florida	pending.[1]
Flower Garden Banks NMS.	Texas	15 CFR part 943.

National estuarine research reserve (NERR)	Area of concern
Wells NERR	Rachel Carson Refuge, ME.
Great Bay NERR	Durham, NH.
Waquoit Bay NERR	Massachusetts.
Narragansett Bay NERR	Rhode Island.
Hudson River NERR	New York.
Old Woman Creek NERR	Huron, OH.
Chesapeake Bay NERR, MD.	Annapolis, MD.
Chesapeake Bay NERR, VA.	Gloucester Pt., VA.
North Carolina NERR	Wilmington, NC.
Sapelo Island NERR	Georgia.
Jobos Bay NERR	Guayama, PR.
Apalachicola River NERR	Florida.
Rookery Bay NERR	Naples, FL.
Weeks Bay NERR	Fairhope, AL.
Tijuana River NERR	Imperial Beach, CA.
Elkhorn Slough NERR	Watsonville, CA.
South Slough NERR	Charleston, OR.
Padilla Bay NERR	Mt. Vernon, WA.
Waimanu Valley NERR	Oahu, HI.

Information on these sanctuaries and reserves can be found in the regulations:

—National Marine Sanctuary Program (15 CFR part 922)

—National Estuarine Research Reserve Program (15 CFR part 921)

[1] Currently designated a National Marine Sanctuary by the Office of Ocean and Coastal Resource Management, Sanctuaries and Reserves Division. Publication in Federal Register is pending.

For additional information on area boundaries for all sites, and proposed Sanctuaries and Estuarine Reserves contact: Office of Ocean and Coastal Resource Management, Sanctuaries and Reserves Division, 1825 Connecticut Avenue, NW., room 714, Washington, DC 20235.

Attachment D–IV.—Vulnerability of Aquatic Ecosystems

Habitat	Importance	Vulnerability to oil discharges
Intertidal shore:		
Sandy Beach		Moderate.
Rocky Shore		High.
Tidal Flat	Bird nesting and feeding.	High.
Intertidal wetlands:		
Marshes	Breeding for nursery grounds for fish and wildlife, erosion control, and nutrient trap.	Low-high.
Mangroves		High.
Subtidal systems:		
Seagrass	Fish feeding and nursery; sediment containment and stabilization.	High.
Coral Reef		High.
Soft Bottom		High.
Rocky		Moderate.
Fisheries:		
Offshore	Commercial fisheries.	Low (except spawning).
Nearshore		Moderate-High.
Coral Reef		High.
Freshwater:		
Fast Flowing	Fisheries	Moderate.
Large River	Fisheries	Moderate.
Ponds	Aquaculture	High.
Lakes	Fisheries	Low.
Tundra/Taiga		High.

SOURCE: United States Department of the Interior, Fish and Wildlife Service National Wetlands Research Center.

Attachment D–V.—Vulnerability Scale of Aquatic Habitats Impacted by Oil Spills

This attachment ranks aquatic habitats by their relative degree of vulnerability to oil spills. The most vulnerable habitats are those with the lowest number corresponding to the order of importance. Facility owners and operators should use the scale to direct initial recovery efforts to the most critical areas.

Order of importance	Habitat
1	Subtidal soft bottoms, seagrass communities and freshwater systems which once impacted may incur long-term damage.
1	Sheltered marshes and mangrove coasts; difficult to clean.
2	Sheltered estuarine tidal flats; natural cleansing may take years.
3	Sheltered rocky coasts; oil may not be washed off for months; residual toxicity low but may alter habitat and slow recovery process.
3–4	Coral Reefs.
4	Gravel beaches; oil penetrates up to 60 centimeters and persists as a mousse for long periods.
5	Mixed sand and gravel beaches; penetration of oil and rapid burial; oil may persist for year; mechanical cleanup may cause significant erosion.

Order of importance	Habitat
6	Exposed, compacted tidal flat; oil penetrates deeply.
7	Medium-coarse grained sand beaches; oil penetration likely.
8	Flat, fine-grained sand beaches; compaction prohibits oil penetration.
9	Eroding wave-cut platforms; good wave action.
10	Exposed or cliffed rock headlands; good wave action.

SOURCE: United States Department of the Interior, Fish and Wildlife Service National Wetlands Research Center.

Appendix E to Part 112—Determiantion of a Worst Case Discharge

Instructions

Owners and operators are required to complete this worksheet if it is determined (from appendix C of this part) that the facility could cause substantial harm to the environment by self-selection or RA determination. The calculation of a worst case discharge is use for emergency planning purposes, and is required in § 112.20 for facility owners and operators who must prepare a response plan. When planning for the amount of resources and equipment necessary to respond to the worst case discharge planning volume, adverse weather conditions should be taken into consideration. Owners and operators would be required to determine the facility's worst case discharge from either part A for onshore storage facilities, or part B for onshore production facilities. The worksheet integrates a facility's use of secondary containment and its proximity to navigable waters.

For onshore storage facilities and production facilities, permanently manifolded tanks are defined as tanks that are designed, installed, and/or operated in such a manner that the multiple tanks function as one storage unit. In a worst case discharge scenario, a single failure could cause the release of the contents of more than one tank. The owner or operator must provide evidence in the response plan that tanks with common piping or piping systems are not operated as one unit. If such evidence is provided and is acceptable to the RA, the worst case discharge volume would be based on the capacity of the largest tank within a common secondary containment area or the largest tank within a single secondary containment area, whichever is greater.

For permanently manifolded tanks that function as one storage unit, the worst case discharge would be based on the combined storage capacity of all manifolded tanks or the capacity of the largest single tank within a secondary containment area, whichever is greater. For purposes of this determination, permanently manifolded tanks that are separated by internal divisions for each tank are considered to be single tanks and individual manifolded tank volumes are not combined.

For production facilities, the presence of exploratory wells, production wells, and storage tanks must be considered in the calculation. Part B takes these additional factors into consideration and provides steps for their inclusion in the total worst case volume. Onshore oil production facilities may include all wells, flowlines, separation equipment, storage facilities, gathering lines, and auxiliary non-transportation-related equipment and facilities in a single geographical oil or gas field operated by a single operator. Although a potential worst case volume is calculated within each section of the worksheet, the final worst case amount is dependent on the risk parameter that results in the greatest volume.

Marine transportation-related transfer facilities that contain fixed aboveground onshore structures used for bulk oil storage are jointly regulated by EPA and the U.S. Coast Guard (USCG), and are termed "complexes." Because the USCG also requires response plans from transportation-related facilities to address a worst case discharge of oil, a separate calculation for the worst case discharge volume for USCG-related facilities is included in the interim final rule which amends 33 CFR part 154 (58 FR 7330; February 5, 1993). All "complexes" must compare both calculations for worst case discharge derived by EPA and USCG and plan for whichever volume is greater.

Part A. Worst Case Discharge Calculation for Onshore Storage Facilities [1]

Part A of this worksheet is to be completed by owners or operators of SPCC-regulated facilities (excluding oil production facilities) if it is determined that the facility could cause substantial harm to the environment by self-selection or RA determination, as presented in Appendix C of this part.

If you are the owner or operator of a production facility, please proceed to Part B.

A1. Single-Tank Facilities

For facilities containing only one aboveground storage tank, the worst case volume equals the capacity of the storage tank.

—Final Worst Case Volume: _____Gal.

—Do not proceed further.

A2. Secondary Containment—Multiple Tank Facilities

Are all aboveground storage tanks or groups of aboveground storage tanks at the facility without adequate secondary containment? [2] _____(Y/N)

a. If the answer is yes, the final worst case volume equals the total aboveground oil storage capacity at the facility.

—Final Worst Case Volume: _____Gal.

—Do not proceed further.

b. If the answer is no, calculate the total aboveground capacity of tanks without adequate secondary containment. If all aboveground storage tanks or groups of aboveground storage tanks at the facility have adequate secondary containment, ENTER "0" (zero). _____Gal.

—Proceed to question A3.

A3. Distance to Navigable Waters

a. Is the nearest opportunity for discharge (i.e., storage tank, piping, or flowline) adjacent to a navigable water? [3] _____(Y/N)

b. If the answer is yes, calculate 110% of the capacity of the largest single aboveground storage tank within a secondary containment area or 110% of the combined capacity of a group of aboveground storage tanks permanently manifolded together, [4] whichever is greater, PLUS THE VOLUME DETERMINED IN QUESTION A2(b). [5]

—Final Worst Case Volume: _____Gal.

—Do not proceed further.

c. If the answer is no, calculate the capacity of the largest single aboveground storage tank within a secondary containment area or the combined capacity of a group of aboveground storage tanks permanently manifolded together, whichever is greater, PLUS THE VOLUME FROM QUESTION A2(b).

—Final Worst Case Volume: [6] _____Gal.

Part B. Worst Case Discharge Calculation for Onshore Production Facilities

Part B of this worksheet is to be completed by owners or operators of SPCC-regulated oil production facilities that are determined by the RA to have the potential to cause substantial harm and are required to prepare and submit a response plan. A production facility consists of all wells (producing and exploratory) and related equipment in a single geographical oil or gas field operated by a single operator.

B1. Single-Tank Facility

For facilities containing only one aboveground storage tank, the worst case

[1] "Storage facilities" represent all facilities subject to this part, excluding oil production facilities.

[2] Secondary containment is defined in § 112.7(e)(2) of 40 CFR Part 112, revised as of July 1, 1992. Acceptable methods and structures for containment are given in § 112.7(c)(1) of 40 CFR Part 112, revised as of July 1, 1992.

[3] Navigable waters are defined in 40 CFR Part 110.

[4] For one or more independent aboveground storage tanks within a secondary containment area, this amount is simply 110% of the capacity of the largest tank. Permanently manifolded tanks are defined as tanks that are designed, installed, and/or operated in such a manner that the multiple tanks function as one storage unit. The owner or operator must provide evidence in the response plan that tanks with common piping or piping systems are not operated as one unit. If such evidence is provided and is acceptable to the RA, the worst case discharge volume would be based on the capacity of 110% of the largest tank within a common secondary containment area or 110% of the largest tank in a single containment area, whichever is greater. For permanently manifolded tanks that function as one storage unit, the worst case discharge volume would be based on 110% of the combined storage capacity of all manifolded tanks or 110% of the largest single tank within a secondary containment area, whichever is greater. For purposes of this determination, permanently manifolded tanks that are separated by internal divisions for each tank are considered to be single tanks and individual manifolded tank volumes are not combined.

[5] If the volume determined in Question A3(b) is greater than the total aboveground storage capacity of the facility, fill in the lesser of these two volumes in the space provided.

[6] All "complexes" jointly regulated by EPA and USCG must also calculate the worst case discharge for the transportation-related portions of the facility and plan for whichever volume is greater.

volume equals the capacity of the aboveground storage tank plus the production volume of the well with the highest output (forecasted output for exploratory wells and production wells producing under pressure) at the facility.[7]

—Final Worst Case Volume:
_____ Gal.

—Do not proceed further.

B2. Secondary Containment—Multiple Tank Facilities

Are all aboveground storage tanks or groups of aboveground storage tanks at the facility without adequate secondary containment? _____ (Y/N)

a. If the answer is yes, the final worst case volume equals the total aboveground oil storage capacity without adequate secondary containment plus the production volume of the well with the highest output (forecasted output for exploratory wells and production wells producing under pressure) at the facility?[7]

—Final Worst Case Volume:
_____ Gal.

—Do not proceed further.

b. If the answer is no, calculate the total aboveground capacity of tanks without adequate secondary containment. If *all* aboveground storage tanks or groups of aboveground storage tanks at the facility have adequate secondary containment, ENTER "0" (zero). _____ Gal.

—Proceed to question B3.

B3. Distance to Navigable Waters

a. Is the nearest opportunity for discharge (i.e., storage tank, piping, or flowline) adjacent to a navigable water?
_____ (Y/N)

b. If the answer to the above question is yes, calculate 110% of the capacity of the largest single aboveground storage tank within a secondary containment area or 110% of the combined capacity of a group of aboveground storage tanks permanently manifolded together,[8] whichever is greater, plus the production volume of the well with the highest output (forecasted output for exploratory wells producing under pressure), PLUS THE VOLUME FROM QUESTION B2(b).[9]

—Final Worst Case Volume:
_____ Gal.

—Do not proceed further.

c. If the answer to the above question is no, calculate the capacity of the largest single aboveground storage tank within a secondary containment area or the combined capacity of a group of aboveground storage tanks permanently manifolded together, whichever is greater, plus the production volume[7] of the well with the highest output (forecasted output for exploratory wells producing under pressure), PLUS THE VOLUME FROM QUESTION B2(b).

—Final Worst Case Volume:[10]
_____ Gal.

Appendix F to Part 112—Guidelines for Determining and Evaluating Required Response Resources for Facility Response Plans

1. Purpose

1.1 The purpose of this appendix is to assist in the identification of response resources necessary to meet the requirements of § 112.20. These guidelines should be used by the facility owner or operator in preparing the response plan and by the Regional Administrator (RA) in reviewing facility response plans.

2. Equipment Operability and Readiness

2.1 All equipment identified in the response plan should be designed to operate in conditions based on location and season. As a result, it is difficult to identify a single catalogue of response equipment that will function effectively in each geographic location.

2.2 If applicable, facilities handling or storing oil in more than one operating environment, as indicated in Table 1, should identify equipment capable of successfully functioning in each operating environment.

2.3 When identifying equipment in the response plan, a facility owner or operator should consider the inherent limitations of the operability of equipment components and response systems. The criteria in Table 1 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 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.

2.5 Facility owners or operators should refer to the applicable Area Contingency Plan (ACP), when available, to determine if ice, debris, and/or weather-related visibility are significant factors in evaluating the operability of equipment. The ACP may also identify the average temperature ranges expected in the facility's geographic area. All equipment identified in a response plan should be designed to operate within the specified conditions or ranges.

2.6 This appendix provides guidance on response resource mobilization and response times. The distance to the facility from the storage location of the response resources should be used in determining whether the resources can arrive on-scene within the time required. A facility owner or operator should include the time for notification, mobilization, and travel time of resources identified to meet the small, medium, and worst case discharge requirements in the response plan. An on-water speed of 10 knots and a land speed of 35 miles per hour should be assumed for calculating the travel time to the site of the discharge, unless the facility owner or operator can demonstrate otherwise.

2.7 In identifying equipment, the facility owner or operator should list the storage location, quantity, and manufacturer's make and model as required in appendix G of this part. For oil recovery devices, the effective daily recovery rate, as determined using section 6 of this appendix, should be included. A facility owner or operator is responsible for ensuring that the identified boom has compatible connectors.

3. Determining Response Resources Required for Small Discharges

3.1 A facility owner or operator should ensure that sufficient response resources are available for responding to a small discharge. A small spill is defined as any spill volume less than or equal to 2,100 gallons, but not to exceed the calculated worst case discharge.

3.2 "Complexes," which are facilities regulated by EPA and U.S. Coast Guard (USCG), must also consider planning quantities for the transportation-related transfer portion of the facility. The USCG planning level synonymous with the small discharge is termed the average most probable discharge. The USCG interim final rule which amends 33 CFR part 154 (58 FR 7330; February 5, 1993) defines the average most probable discharge as a discharge of 50 barrels (2,100 gallons). Because "complexes" must compare spill volumes for a small discharge (2,100 gallons) and an average most probable discharge (2,100 gallons), and the

[7] The production volume for each production well (producing by pumping) is determined from the pumping rate of the well multiplied by 1.5 times the number of days the facility is unattended.

For each exploratory well (and production well producing under pressure) 10,000 feet deep or less, the production volume refers to the maximum 30-day forecasted well rate for the exploratory well or production well producing under pressure.

For each exploratory well (and production well producing under pressure) deeper than 10,000 feet, the production volume refers to the maximum 45-day forecasted well rate for the exploratory well or production well producing under pressure.

[8] For one or more independent aboveground storage tanks within a secondary containment area, this amount is simply 110% of the capacity of the largest tank. Permanently manifolded tanks are defined as tanks that are designed, installed, and/or operated in such a manner that the multiple tanks function as one storage unit. The owner or operator must provide evidence in the response plan that tanks with common piping or piping systems are not operated as one unit. If such evidence is provided and is acceptable to the RA, the worst case discharge volume would be based on the capacity of 110% of the largest tank within a common secondary containment area or 110% of the largest tank in a single containment area, whichever is greater. For permanently manifolded tanks that function as one storage unit, the worst case discharge volume would be based on 110% of the combined storage capacity of all manifolded tanks or 110% of the largest single tank within a secondary containment area, whichever is greater. For purposes of this determination, permanently manifolded tanks that are separated by internal divisions for each tank are considered to be single tanks and individual manifolded tank volumes are not combined.

[9] If the volume determined in Question B3(b) is greater than the total aboveground storage capacity of the facility, fill in the lesser of these two volumes in the space provided.

[10] All "complexes" jointly regulated by EPA and USCG must also calculate the worst case discharge for the transportation-related portions of the facility and plan for whichever volume is greater.

two planning quantities are identical, complex facilities must plan for small spills less than or equal to 2,100 gallons.

3.3 Where applicable, the following resources should be available in the event of this type of discharge:

3.3.1 1,000 feet of containment boom and a means of immediate deployment.

3.3.2 Oil recovery devices with an effective daily recovery rate equal to the amount of oil discharged in a small spill, within two hours of the detection of an oil discharge.

3.3.3 Oil storage capacity for recovered oily material as indicated in section 8.2 of this appendix.

4. Determining Response Resources Required for Medium Discharges

4.1 A facility owner or operator should ensure that sufficient response resources are available for responding to a medium discharge of oil from a facility. This response will require resources capable of containing and collecting up to 36,000 gallons of oil or 10 percent of the capacity of the largest aboveground storage tank, whichever is less.

4.2 "Complexes" regulated by EPA and USCG must also consider planning quantities for the transportation-related transfer portion of the facility. The USCG planning level synonymous with the medium discharge is termed the maximum most probable discharge. The USCG interim final rule which amends 33 CFR part 154 (58 FR 7330; February 5, 1993) defines the maximum most probable as a discharge of 1,200 barrels (50,400 gallons) or 10 percent of the worst case discharge, whichever is less. Owners and operators of "complexes" must compare spill volumes for a medium discharge and a maximum most probable discharge and plan for whichever quantity is greater.

4.3 Oil recovery devices identified to meet the applicable medium discharge volume planning criteria, should be able to arrive on-scene within 6 hours in higher volume port areas and the Great Lakes, and within 12 hours in all other areas. Higher volume port areas and Great Lakes areas are defined in Attachment C–III of appendix C of this part.

4.4 Because rapid control, containment, and removal of oil is critical in reducing spill impact, the effective daily recovery rate for oil recovery devices should equal 50 percent of the planning volume applicable to the facility as determined in section 4.1 of this appendix. The effective daily recovery rate for oil recovery devices identified in the plan should be determined using the criteria in section 6 of this appendix.

4.5 In addition to oil recovery capacity, the plan should identify and ensure the availability of, through contract or other approved means, sufficient quantity of boom available within the recommended response times for oil collection and containment and protection of shoreline areas. The response plan should identify and ensure the availability of the quantity of boom available through contract or other approved means.

4.6 The plan should indicate the availability of temporary storage capacity to meet the requirements of section 8.2 of this appendix. If available storage capacity is insufficient to meet this requirement, then the effective daily recovery rate should be derated to the limits of the available storage capacity.

4.7 The following is an example of a medium discharge volume planning calculation for equipment identification in a higher volume port areas: The facility's largest aboveground storage tank volume is 840,000 gallons. Ten percent of this capacity is 84,000 gallons. Since 10 percent of the facility's largest tank, or 84,000 gallons, is greater than 36,000 gallons, 36,000 gallons is used as the planning volume. The effective daily recovery rate should be 50 percent of the planning volume, or 18,000 gallons 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 rate as indicated in section 8.2 of this appendix, or 36,000 gallons per day. The facility owner or operator would use this information to identify and ensure the availability of, through contract or other approved means, the required response resources. The facility owner should also need to identify how much boom is available for use.

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

5.1 A facility owner or operator should specify the availability of sufficient response resources to respond to the worst case discharge as calculated using appendix E of this part. Section 7 describes the method used in determining adequate response resources for a worst case discharge. A worksheet is provided as Attachment F–1 at the end of this appendix to simplify the procedures involved in calculating the planning volume for response resources for the worst case discharge.

5.2 "Complexes" regulated by EPA and USCG must also consider planning for the worst case discharge at the transportation-related portion of the facility. Because the USCG also requires response plans from transportation-related facilities to address a worst case discharge of oil in the interim final rule which amends 33 CFR part 154 (58 FR 7330; February 5, 1993), a separate calculation for the worst case discharge volume has been developed for USCG-related facilities. All complex facilities must compare both calculations of worst case discharge derived by EPA and USCG and plan for whichever volume is greater.

5.3 Oil spill recovery devices (i.e., equipment and resources) identified to meet the applicable worst case discharge planning volume should be able to arrive on the scene of a discharge within the time specified for the applicable response tier listed below:

	Tier 1 (hrs)	Tier 2 (hrs)	Tier 3 (hrs)
Higher volume port area	6	30	54
Great Lakes	6	30	54
All other river, inland, and nearshore areas	12	36	60

The three levels of response tiers apply to the amount of time in which response equipment and resources should arrive at the scene of a spill to respond to the worst case discharge planning volume. For example, at a worst case discharge in an inland area, the first tier of response resources should arrive at the scene of the spill within 12 hours; the second tier of response resources should arrive within 36 hours; and the third tier of response resources should arrive within 60 hours.

5.4 The effective daily recovery rate for oil recovery devices identified in the response plan should be determined using the criteria in section 6 of this appendix. The storage locations of all equipment used to fulfill the requirements for each tier should be identified. The owner or operator of a facility whose required daily recovery capacity exceeds the applicable contracting caps in Table 5 should identify sources of additional equipment, its location, and the arrangements made to obtain this equipment during a response. While general listings of available response equipment may be used to identify additional sources, the response plan should identify the specific sources and quantities of equipment that a facility owner or operator has considered in their planning.

5.5 In addition to oil spill recovery devices, a facility owner or operator should identify and ensure the availability of, through contract or other approved means, sufficient quantities of boom that can arrive on-scene within the required response times for oil containment and collection and protection of shorelines areas.

5.6 A facility owner or operator should identify the availability of temporary storage capacity to meet the requirements of section 8.2 of this appendix. If available storage capacity is insufficient to meet this recommendation, then the effective daily recovery rate should be derated to the limits of the available storage capacity.

6. Determining Effective Daily Recovery Rate for Oil Recovery Devices

6.1 Oil recovery devices identified by a facility owner or operator should include information on the manufacturer, model, and effective daily recovery rate. These rates should be used to determine whether there is sufficient capacity to meet, to the maximum extent practicable, the applicable planning criteria for a small discharge; medium discharge; and worst case discharge.

6.2 For the purposes of determining the effective daily recovery rate 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.

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

$R = T \times 24 \text{ hours} \times E$

R—Effective daily recovery rate

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

E—20% Efficiency factor (or lower factor as determined by RA)

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 the speed of the belt or mop; surface area of the belt or mop in contact with the water surface; and the oil encounter rate. For purposes of this calculation, the assumed thickness of oil should be ¼ inch.

6.3 As an alternative to 6.2, a facility owner or operator may provide adequate evidence that a different effective daily recovery rate should be applied for a specific oil recovery device. Adequate evidence is actual verified performance data in spill conditions or tests using American Society of Testing and Materials (ASTM) Standard F631–80, F808–83 (1988).

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

R=D×U

R—Effective daily recovery rate

D—Average oil recovery rate in barrels per hour (Item 26 in F808–83; Item 13.1.15 in F631–80; or actual performance data)

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

6.4 A facility owner or operator submitting a response plan should provide data that supports the effective daily recovery rates 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).

T=267 gpm=381 barrels per hour

R=381×24×.2=1,829 barrels per day

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

220 gpm = 314 barrels per hour

R = 314 × 12 = 3,768 barrels per day

The facility owner or operator will be able to use the higher rate if sufficient temporary oil storage capacity is available.

7. Calculating Planning Volumes for a Worst Case Discharge

7.1 A facility owner or operator shall plan for a response to the facility's worst case discharge volume of oil. The worst case discharge calculation worksheet appears in appendix E of this part. Planning for on-water recovery should take into account a loss of some oil to the environment due to evaporative and natural dissipation, potential increases in volume due to emulsification, and the potential for deposit of oil on the shoreline.

7.2 The procedures discussed in sections 7.2.1–7.2.4 should be used to calculate the planning volume for response resources used by a facility owner or operator in determining the required on-water recovery capacity:

7.2.1 The following should be determined: the worst case discharge volume of oil in the facility, the appropriate group(s) for the type of oil handled or stored at the facility [persistent (Groups 2, 3, 4) or non-persistent (Group 1)], and the geographic location of the facility. See Attachment F–2 for definitions of persistent and non-persistent oils. Facilities that handle or store oil from different oil groups should calculate each group separately. This information should be used with Table 2 to determine the percentages of the total volume required for removal capacity planning. Table 2 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 for response resources should be adjusted using the appropriate emulsification factor found in Table 3.

7.2.3 The adjusted volume is multiplied by the on-water oil recovery resource mobilization factor found in Table 4, resulting in total on-water oil recovery capacity in barrels per day that should be identified or contracted to arrive on-scene within the applicable time for each response tier. The on-water resource recovery mobilization factor depends on the operating area and the three response tiers. For higher volume port areas and the Great Lakes, as defined in Attachment C–III of appendix C, of this part, the contracted tiers of resources should be located so that they can arrive on-scene within 6 hours for tier 1, 30 hours for tier 2, and 54 hours for tier 3 of the discovery of an oil discharge. For all other river, inland, and near shore areas, response resources should arrive within 12, 36, and 60 hours for tiers 1, 2, and 3, respectively.

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 2. A facility 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 required. If the required capacity exceeds the applicable cap specified in Table 5, then a facility owner or operator should contract only for the quantity of resources required to meet the cap, but should identify sources of additional resources as indicated in section 5.4 of this appendix. The owner or operator of a facility whose planning volume exceeds the cap in 1993 should make arrangements for additional capacity to be under contract by 1998. The process should be repeated in 1998 and 2003. For a facility that carries multiple groups of oil, the required effective daily recovery capacity for each group should be calculated before applying the cap.

7.3 The procedures discussed in sections 7.3.1–7.3.3 should be used to calculate the planning volume for response resources for identifying shoreline cleanup capacity:

7.3.1 The following should be determined: The worst case discharge volume of oil for the facility; the appropriate group(s) for the type of oil handled or stored at the facility [persistent (Groups 2, 3, 4) or non-persistent (Group 1)]; and the geographic area(s) in which the facility operates. For a facility storing oil from different groups, each group should be calculated separately. Using this information, Table 2 should be used to determine the percentages of the total volume of oil required for shoreline cleanup resource planning.

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

7.3.3 The resulting volume should be used to identify response resources necessary for shoreline cleanup.

7.4 The following is an example of the procedure described above: A facility with a 270,000 barrel (11.3 million gallons) capacity for #6 oil (specific gravity .96) is located in a higher volume port area. The facility is on a peninsula and has docks on both the ocean and bay side. The facility has four aboveground storage tanks with a combined total capacity of 80,000 barrels (3.36 million gallons) and no secondary containment. The remaining facility tanks are inside secondary containment structures. The largest aboveground storage tank (90,000 barrels or 3.78 million gallons) has its own secondary containment. Two 50,000 barrel (2.1 million gallon) tanks (that are not connected by a manifold) are within a common secondary containment tank area, which is capable of holding 100,000 barrels (4.2 million gallons) plus sufficient freeboard.

The worst case discharge for the facility is calculated by adding the capacity of all aboveground storage tanks without secondary containment (80,000 barrels) plus 110% of the capacity of the largest aboveground tank inside secondary containment (110%×90,000 barrels=99,000 barrels). The additional 10 percent is added to the capacity of the tanks because the facility is located adjacent to navigable water. The resulting worst case discharge volume is 179,000 barrels or 7.52 million gallons.

Since the guidelines for tiers 1, 2, and 3 for inland and nearshore exceed the caps identified in Table 5, the facility owner should contract for 10,000 barrels per day (bpd) for tier 1, 20,000 bpd for tier 2, and 40,000 bpd for tier 3. Resources for the remaining 8,795 bpd for tier 1, 11,325 bpd for tier 2, and 10,120 bpd for tier 3 should be identified but not contracted for in advance. The facility owner or operator should also identify or contact for quantities of boom identified in their response plan for the environmentally sensitive areas within the area potentially impacted by a worst case discharge from the facility. Appendix D presents a listing of environmentally sensitive areas and Attachment C–III of appendix C provides a method for calculating a planning distance to sensitive areas and drinking water intakes which may be impacted in the event of a worst case discharge.

8. Additional Equipment Necessary to Sustain Response Operations

8.1 A facility owner or operator should ensure that sufficient numbers of trained personnel and boats, aerial spotting aircraft,

containment boom, sorbent materials, boom anchoring materials, and other supplies are available to sustain response operations to completion. A facility owner or operator is not required to list these resources, but should certify their availability.

8.2 A facility owner or operator should evaluate the availability of adequate temporary storage capacity necessary to meet the affective daily recovery rates 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 rate required on scene. This capacity may be reduced if a facility owner or operator can demonstrate that the efficiencies of the oil recovery devices will reduce the overall volume of oily material that requires storage.

8.3 A facility owner or operator should ensure that their oil spill removal organization has the capability to arrange for disposal of recovered oil products. Specific disposal procedures will be addressed in the applicable ACP.

TABLE 1.—RESPONSE RESOURCE OPERATING CRITERIA OIL RECOVERY DEVICES

Operating environment		Significant wave height [1]	Sea state
River		≤1 foot	1.
Inland		≤3 feet	2.
Great Lakes		≤4 feet	2–3.
Boom Use:			
Boom property	River	Inland	Great Lakes
Significant wave height [1]	≤1	≤3	≤4.
Sea state	1	2	2–3.
Boom height—in. (draft plus freeboard)	6–18	18–42	18–42.
Reserve buoyancy to weight ratio	2:1	2:1	2:1.
Total tensile strength—lbs	4,500	15–20,000	15–20,000.
Skirt fabric tensile strength—lbs	200	300	300.
Skirt fabric tear strength—lbs	100	100	100.

[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.

TABLE 2.—REMOVAL CAPACITY PLANNING TABLE

Spill location	Nearshore/inland Great Lakes			Rivers and canals		
Sustainability of on-water oil recovery	4 days			3 days		
Oil group	Percent natural dissipation	Percent recovered floating oil	Percent oil onshore	Percent natural dissipation	Percent recovered floating oil	Percent oil onshore
1—Non-persistent oils	80	20	10	80	10	10
2—Light crudes	50	50	30	40	15	45
3—Medium crudes and fuels	30	50	50	20	15	65
4*—Heavy crudes and fuels	10	50	70	5	20	75

* For planning purposes, non-petroleum oil must be considered a Group 4 persistent oil.

TABLE 3.—EMULSIFICATION FACTORS FOR PETROLEUM OIL GROUPS [1]

Non-persistent oil:	
Group 1	1.0
Persistent oil:	
Group 2	1.8
Group 3	2.0
Group 4	1.4

[1] See Attachment F–2 for group designations for non-persistent and persistent oils.

TABLE 4.—ON-WATER OIL RECOVERY RESOURCE MOBILIZATION FACTORS

Area	Tier 1	Tier 2	Tier 3
River	.30	.40	.60
Inland/Nearshore Great Lakes	.15	.25	.40

NOTE: These mobilization factors are for total resources mobilized, not incremental response resources.

TABLE 5.—RESPONSE CAPABILITY CAPS BY GEOGRAPHIC AREA

	Tier 1	Tier 2	Tier 3
February 18, 1993:			
All except rivers and canals, Great Lakes	10K bbls/day	20K bbls/day	40K bbls/day.
Great Lakes	5K bbls/day	10K bbls/day	20K bbls/day.
Rivers and canals	1,500 bbls/day	3,000 bbls/day	6,000 bbls/day.
February 18, 1998:			
All except rivers and canals, Great Lakes	12.5K bbls/day	25K bbls/day	50K bbls/day.
Great Lakes	6.35K bbls/day	12.3K bbls/day	25K bbls/day.
Rivers	1.875 bbls/day	3,750 bbls/day	7,500 bbls/day.
February 18, 2003:			
All except rivers and canals, Great Lakes	TBD	TBD	TDB
Great Lakes	TBD	TBD	TDB
Rivers and canals	TBD	TBD	TDB

Note: The caps show cumulative overall effective daily recovery rate, not incremental increases.
TBD=To Be Determined.

Attachment F–1—Worksheet to Plan Volume of Response Resources for Worst Case Discharge

Part I *Background Information*

Step (A) Calculate Worst Case Discharge in barrels (Appendix E of this part) _____

Step (B) Oil Group [1] (Table 3 and Attachment F–2) _____

Step (C) Geographic Area (choose one)
☐ Nearshore/Inland Great Lakes
☐ or River and Canals

Step (D) Percentages of Oil (Table 2)
Percent Lost to Natural Dissipation _____(D1)
Percent Recovered Floating Oil _____(D2)
Percent Oil Onshore _____(D3)

Step (E1) On-Water Recovery

$$\frac{\text{Step (D2)} \times \text{Step (A)}}{100}$$ _____

Step (E2) On-Shore Recovery

$$\frac{\text{Step (D3)} \times \text{Step (A)}}{100}$$ _____

Step (F) Emulsification Factor (Table 3) _____

Step (G) On-Water Oil Recovery Resource Mobilization Factor (Table 4)
Tier 1 _____(G1)
Tier 2 _____(G2)
Tier 3 _____(G3)

Attachment F–1 continued—Worksheet to Plan Volume of Response Resources for Worst Case Discharge (continued)

Part II *On-Water Recovery Capacity* (barrels/day)

Tier 1 _____Step (E1) × Step (F) × Step (G1)
Tier 2 _____Step (E1) × Step (F) × Step (G2)
Tier 3 _____Step (E1) × Step (F) × Step (G3)

Part III *Shoreline Cleanup Volume* (barrels/day) _____Step (E2) × Step (F)

Part IV *Response Capacity By Geographic Area* (Table 5) (Amount needed to be contracted for, barrels/day)

Tier 1 _____(J1)
Tier 2 _____(J2)
Tier 3 _____(J3)

Part V *Amount Needed to be Identified, but not Contacted for in Advance* (barrels/day)

Tier 1 _____Part II Tier 1—Step (J1)
Tier 2 _____Part II Tier 2—Step (J2)
Tier 3 _____Part II Tier 3—× Step (J3)

Note: To convert to gallons/day, multiply the quantities in Part II—Part V by 42

Example to Attachment F–1—Worksheet to Plan Volume of Response Resources for Worst Case Discharge

Part I *Background Information*

Step (A) Calculate Worst Case Discharge in barrels (Appendix E of this part); 179,000

Step (B) Oil Group [1] (Table 3 and Attachment F–2); 4

Step (C) Geographic Area (choose one)
X—Nearshore/Inland Great Lakes or River and Canals

Step (D) Percentages of Oil (Table 2)
Percent Lost to Natural Dissipation; 10 (D1)
Percent Recovered Floating Oil; 50 (D2)
Percent Oil Onshore; 70 (D3)

Step (E1) On-Water Recovery

$$\frac{\text{Step (D2)} \times \text{Step (A)}}{100}$$ 89,500

Step (E2) On-Shore Recovery

$$\frac{\text{Step (D3)} \times \text{Step (A)}}{100}$$ 125,300

Step (F) Emulsification Factor (Table 3); 1.4

Step (G) On-Water Oil Recovery Resource Mobilization Factor (Table 4)
Tier 1; 0.15 (G1)
Tier 2; 0.25 (G2)
Tier 3; 0.40 (G3)

Part II *On-Water Recovery Capacity* (barrels/day)

Tier 1; 18,795
Step (E1) × Step (F) × Step (G1)
Tier 2; 31,325
Step (E1) × Step (F) × Step (G2)
Tier 3; 50,120
Step (E1) × Step (F) × Step (G3)

Part III *Shoreline Cleanup Volume* (barrels/day); 175,420
Step (E2) × Step (F)

Part IV *Response Capacity By Geographic Area* (Table 5) (Amount needed to be contracted for in barrels/day)

Tier 1; 10,000 (J1)
Tier 2; 20,000 (J2)
Tier 3; 40,000 (J3)

Part V *Amount Needed to be Identified, but not Contacted for in Advance* (barrels/day)

Tier 1; 8,795
Part II Tier 1—Step (J1) Step (J3)
Tier 2; 11,325
Part II Tier 2—Step (J2)
Tier 3; 10,120
Part II Tier 3—×

Note: To convert to gallons/day, multiply the quantities in Part II—Part V by 42.

Attachment F–2

Attachment F–2—Definitions of Non-Persistent and Persistent Oils

[1] Facilities storing multiple groups of oil should prepare a separate worksheet for each group.

[1] Facilities storing multiple groups of oil should prepare a separate worksheet for each group.

Non-persistent or Group I oil includes:

(1) a petroleum-based oil that, at the time of shipment, consists of hydrocarbon fractions:
  (i) at least 50% of which by volume, distill at a temperature of 340 degrees C (645 degrees F), and
  (ii) at least 95% of which by volume, distill at a temperature of 370 degrees C (700 degrees F);
(2) a non-petroleum oil with a specific gravity less than 0.8.

Non-petroleum oil—oil of any kind that is not petroleum-based. It includes, but is not limited to, animal and vegetable oils.

Persistent oil includes:

(1) a petroleum-based oil that does not meet the distillation criteria for a non-persistent oil. Persistent oils are further classified based on specific gravity as follows:
  (i) Group II—specific gravity less than 0.85.
  (ii) Group III—specific gravity between 0.85 and less than 0.95.
  (iii) Group IV—specific gravity 0.95 or greater.
(2) a non-petroleum oil with a specific gravity of 0.8 or greater. These oils are further classified based on specific gravity as follows:
  (i) Group II—specific gravity between 0.8 and less than 0.85.
  (ii) Group III—specific gravity between 0.85 and less than 0.95.
  (iii) Group IV—specific gravity of 0.95 or greater.

Appendix G—Facility-Specific Response Plan

Table of Contents

1.0 Standard Facility-Specific Response Plan

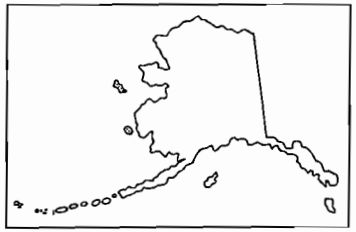
Introduction

Owners or operators of facilities regulated under this part, which pose a threat of substantial harm to the environment by discharging oil into water bodies or adjoining shorelines, are required to prepare and submit facility-specific response plans to EPA in accordance with the provisions in this Appendix. Facility owners or operators shall determine whether their facility poses substantial harm by using the flowchart presented in Attachment C–I of Appendix C to the proposed rule. Response plans must be sent to the appropriate EPA Regional office. The attached Figure G–1 lists each EPA Regional office and the EPA section and address where owners and operators should submit their response plans. Those facilities deemed by the Regional Administrator (RA) to pose a threat of significant and substantial harm to the environment will have their plans reviewed and approved by EPA. In certain cases, information required in the model response plan is similar to information currently maintained in the facility's SPCC Plan. In these cases, owners and operators may reproduce the information and include a photocopy in the response plan.

BILLING CODE 6560–50–P

FIGURE G - 1

EPA REGIONAL OFFICES FOR RESPONSE PLAN SUBMITTAL



Region I
ATTN: Response Plan Coordinator
Emergency Response Section
60 Westview Street
Lexington, MA 02173

Region II
RBP Removal and Emergency
Preparedness Programs
2890 Woodbridge Avenue (MS-211)
Edison, NJ 08837

Region III
Oil and Title III Section (3HW34)
841 Chestnut Building, 9th Floor
Philadelphia, PA 19107

Region IV
Emergency Response and Removal Branch
345 Courtland Street, N.E., 1st Floor
Atlanta, GA 30365

Region V
EERB (HSE-5J)
77 W. Jackson Blvd., 5th Floor
Chicago, IL 60604

Region VI
Contingency Planning Section (62-EP)
1445 Ross Avenue
Dallas, TX 75202-2733

Region VII
EPPB (ENSV)
25 Funston Road, 2nd Floor
Kansas City, KS 66115

Region VIII
Preparedness Section (HWM-ER)
999 18th Street, Suite 500
Denver, Co 80202-2405

Region IX
ERS (H83)
75 Hawthorne Street
San Francisco, CA 94105

Region X
SRIS (HW093)
1200 Sixth Avenue, 9th Floor
Seattle, WA 98101

BILLING CODE 6560-50-C

1.1 Emergency Response Action Plan.

Several sections of the response plan will be co-located and tabbed for easy access by response personnel during an actual emergency or oil spill. This collection of sections will be called the Emergency Response Action Plan. The Agency intends that the Action Plan contain only as much information as is necessary to combat the spill and be arranged so response actions are not delayed. The Action Plan may be arranged in a number of ways. For example, the sections of the Emergency Response Action Plan may be photocopies or condensed versions of the forms included in the associated sections of the response plan. Each Emergency Response Action Plan section should be tabbed for quick reference. The Action Plan may be maintained in the front of the same binder that contains the complete response plan or it may be contained in a separate binder. In the latter case, both binders should be kept together so that the entire plan can be accessed by the Emergency Response Coordinator and appropriate spill response personnel. The Emergency Response Action Plan shall be made up of the following sections:

1. Emergency Response Coordinator Information—(Section 1.2) partial
2. Emergency Notification Phone List—(Section 1.3.1) complete
3. Spill Response Notification Form—(Section 1.3.1) complete
4. Equipment List and Location—(Section 1.3.2) complete
5. Facility Response Team—(Section 1.3.3) partial
6. Evacuation Plan—(Section 1.3.4) condensed
7. Immediate Actions—(Section 1.7) condensed
8. Facility Diagram—(Section 1.9) complete

Collectively, the actions described in the sections listed above represent those which should be taken to stop the source of the spill, notify the appropriate people, and initiate procedures to prevent or minimize the spreading of oil.

1.2 Facility Information

The facility information form is designed to provide an overview of the site and a description of past activities at the facility. Much of the information required by this section may be obtained from the facility's existing SPCC Plan.

Facility name and location: Enter facility name and street address of the facility. Enter the address of corporate headquarters only if corporate headquarters are physically located at the facility. Include city, county, state, zip code, and phone number.

Latitude and Longitude: Enter the latitude and longitude of the facility. Include degrees, minutes, and seconds of the main entrance of the facility.

Wellhead Protection Area: Indicate if the facility is located in or drains into a wellhead protection area as defined by the Safe Drinking Water Act of 1986 (SDWA). The response plan requirements in the Wellhead Protection Program are outlined by the State in which the facility resides.[1]

Owner/operator: Write the name of the company or person operating the facility and the name of the person or company that owns the facility, if the two are different. List the address of the owner, if the two are different.

Emergency Response Coordinator: Write the name of the emergency response coordinator for the entire facility. If more than one person is listed, each individual indicated in this section shall have full authority to implement the facility response plan. For each individual, list: name, position, address, emergency phone number, and specific training experience.

Date of Oil Storage Start-up: Enter the year which the present facility first started storing oil.

Current Operation: Briefly describe the facilities operations and include Standard Industry Classification (SIC) code.

Dates and Type of Substantial Expansion: Include information on expansions that have occurred at the facility. Examples of such expansions include, but are not limited to: Throughput expansion, addition of a product line, change of a product line, and installation of additional storage capacity. The data provided should include all facility historical information and detail the expansion of the facility. An example of substantial expansion is any material alteration of the facility which causes the owner or operator of the facility to re-evaluate and increase the response equipment necessary to adequately respond to a worst case discharge from the facility.

Date of Last Update: _____

Facility Information Form

Facility Name: _____
Location (Street Address): _____
City _____
State _____
Zip _____
County _____
Phone Number ( ) _____
Latitude: _____
Degree _____
Minutes _____
Seconds _____
Longitude: _____
Degree _____
Minutes _____
Seconds _____
Wellhead Protection Area: _____
Owner: _____
Owner Address (if different from Facility Address) _____
Location (Street Address): _____
City _____
State _____
Zip _____
County _____
Phone Number ( ) _____
Operator (if not Owner): _____
Emergency Response Coordinator(s): _____
Name: _____
Position: _____
Address: _____
Emergency Phone Number: _____
Date of Oil Storage Start-up _____
Current Operation _____
Q _____

Date(s) and Type(s) of Substantial Expansion(s) (Attach additional sheets if necessary)
Q _____

1.3 Emergency Response Information

The information provided in this section should describe what will be needed in an actual emergency involving the discharge of oil or a combination of hazardous substances and oil discharge. The Emergency Response Information section of the plan must include the following components:

1. The information provided in the Emergency Notification Phone List in section 1.3.1 identifies and prioritizes the names and phone numbers of the organizations and personnel that need to be notified immediately in the event of an emergency. This section should include all the appropriate phone numbers for the facility. These numbers should be verified each time the plan is updated. The contact list should be accessible to all facility employees to ensure that, in case of a discharge, any employee on site could immediately notify the appropriate parties.

2. The Spill Response Notification Form in section 1.3.1 creates a checklist of information that should be provided to the National Response Center (NRC) and other response personnel. All information on this checklist should be known at the time of notification, or be in the process of being collected. This notification form is based on a similar form used by the NRC. Note: Do not delay notification to collect the information on the list.

3. Section 1.3.2 provides a description of the facility's list of emergency response equipment, equipment testing, and location of the equipment. When appropriate, the amount of release that emergency response equipment can handle and any limitations (e.g. launching sites) should be described.

4. Section 1.3.3 lists the facility response personnel, including those employed by the facility and those under contract to the facility for response activities, the amount of time needed for personnel to respond, their responsibility in the case of an emergency, and their level of training. Three different forms are included in this section. First, the Emergency Response Personnel List is to be composed of personnel employed by the facility whose duties involve responding to emergencies, including oil spills even when they are not physically present at the site. An example of this type of person may be the Building Engineer-in-Charge or Plant Fire Chief. Second, the Facility Response Team List is to be composed of personnel (referenced by job title/position) and contractors that will respond immediately upon discovery of an oil spill or other

[1] States with EPA approved Wellhead Protection programs are: Arkansas, Connecticut, Delaware, Illinois, Louisiana, Maine, Maryland, Massachusetts, Nevada, New Hampshire, New Mexico, New York, Oklahoma, Puerto Rico, Rhode Island, Texas and Vermont (as of August, 1992).

emergency. These are to be persons normally on the facility premises or primary response contractors (i.e., the first people to respond). Examples of these personnel would be the Facility Hazardous Materials (HAZMAT) Spill Team 1, Facility Fire Engine Company 1, Production Supervisor, or Transfer Supervisor. The last form is a list of the Emergency Response Contractors (both primary and secondary) retained by the facility. These should be listed also on the second form described above. Any changes in contractor status should be reflected in updates to the response plan. Evidence of contracts with response contractors should be included so that availability of resources can be verified. Company personnel must be able to respond immediately and adequately if contractor support is not available.

5. Section 1.3.4 lists factors that should be considered when preparing an evacuation plan.

6. Section 1.3.5 references the facility response coordinators' responsibilities in the event of an emergency.

This information should aid in the assessment of the facility's ability to respond to a worst case discharge and identify additional assistance that may be needed. In addition, it is recommended that the facility produce a wallet-size card containing a checklist of the immediate response and notification steps to be taken in the event of an oil discharge.

Date of Last Update: _____

1.3.1 Notification

Emergency Notification Phone List, Whom To Notify

Reporter's Name _____
Date _____
Facility Name _____
Owner Name _____
Facility Identification Number _____
Date and Time of Each NRC Notification _____

	Organization	Phone number
1.	National Response Center (NRC).	1–800–424–8802
2.	Facility Response Coordinator.	_____
	Evening Phone ..	_____
3.	Company Response Team.	_____
	Evening Phone ..	_____
4.	On-Scene Coordinator (OSC).	_____
	Evening Phone ..	_____
5.	Area Committee	_____
	Evening Phone ..	_____
6.	Local Response Team (Fire Dept./Cooperatives).	_____
7.	Fire Marshall	_____
	Evening Phone ..	_____
8.	State Emergency Response Commission (SERC).	_____
	Evening Phone ..	_____
9.	State Police	_____
10.	Local Emergency Planning Committee (LEPC).	_____
11.	Local Water Supply System.	_____
	Evening Phone ..	_____
12.	Weather Report .	_____
13.	Local Television/ Radio Station for Evacuation Notification.	_____
14.	Hospitals	_____

Spill Response Notification Form

Reporter's Last Name _____First _____M.I. ____
Phone Numbers: ( ) – , — ( ) –
Company _____
Organization Type _____
Position _____
Address _____

City _____
State _____
Zip _____
Were Materials Released _____(Y/N)?
Confidential _____(Y/N)?
Meeting Federal Obligations to Report _____(Y/N)?
Date Called _____
Calling for Responsible Party _____(Y/N)?
Time Called _____

Incident Description

Source and/or Cause of Incident _____

Date _____–_____–_____
Time of Incident _____AM/PM
Incident Address/Location _____

Nearest City _____
State _____
County _____
Zip _____
Distance from City _____
Units _____
Direction from City _____
Section _____
Township _____
Range _____
Container Type _____
Tank Capacity _____
Units _____
Facility Capacity _____
Units _____
Facility Latitude ____Degrees ____Minutes ____Seconds
Facility Longitude ____Degrees ____Minutes ____Seconds

Material

CHRIS Code _____

Released Quantity _____

Unit of Measure _____

Material Released in Water _____

Quantity _____

Unit/Measure _____

Response Action

Actions Taken To Correct, Control or Mitigate Incident

Impact

Number of Injuries _____
Number of Deaths _____
Were there Evacuations _____(Y/N)?
Number Evacuated _____
Was there any Damage _____(Y/N)?
Damage in Dollars (approximate) _____
Medium Affected _____
Description _____
More Information about Medium _____

Additional Information

Any information about the incident not recorded elsewhere in the report?

Caller Notifications

EPA _____(Y/N)?
USCG _____(Y/N)?
State _____(Y/N)?
Other _____(Y/N)?
Describe _____

1.3.2 Equipment

Date of Last Update: _____

Equipment List

Last Inspection or Equipment Test Date _____
Inspection Frequency _____
Regional Response Team (RRT) approval: —
1. Skimmers/Pumps—Operational Status —

Type, Model, and Year (Type) _____(Model) _____(Year) _____
Number _____
Capacity _____gal./min.
Daily Effective Recovery Rate _____
Storage Location _____

Date Fuel Last Changed _____
2. Booms—Operational Status _____
Type, Model, and Year (Type) _____(Model) _____(Year) _____
Number _____
Size _____
Containment Area _____sq. ft.
Storage Location _____
3. Chemicals Stored (Dispersants listed on EPA's NCP Product Schedule) _____
Type _____

Amount _____

Date Purchased _____

Treatment Capacity _____

Storage Location _____

Has facility applied for permit to use above listed dispersants:
State (Y/N) _____; Federal (Y/N) _____.
Name and State of On-Scene Coordinator (OSC) authorizing use _____
Date Authorized _____
4. Dispersant Dispensing Equipment—Operational Status _____
Type and Year _____

Capacity _____

Storage Location _____

Response Time (Minutes) _____

5. Sorbents—Operational Status _____
Type and Year Purchased _____
Amount _____
Absorption Capacity _____gal.
Storage Location _____
6. Hand Tools—Operational Status _____
Type and Year _____

Quantity _____

Storage Location _____

7. Communication Equipment (include operating frequency and channel and/or cellular phone numbers)—Operational Status _____
Type and Year _____

Quantity _____

Storage Location/Number _____

8. Fire Fighting and Personnel Protective Equipment—Operational Status _____
Type and Year _____

Quantity _____

Storage Location _____

9. Other (e.g., Heavy Equipment, Boats and Motors)—Operational Status _____
Type and Year _____

Quantity _____

Storage Location _____

1.3.3 Personnel

Date of last update:_____

EMERGENCY RESPONSE PERSONNEL
COMPANY PERSONNEL

Name	Phone*	Response time	Responsibility during response action	Training type/ date
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				

* Phone number to be used when person is not onsite.

Date of last update: _____

FACILITY RESPONSE TEAM

Coordinator	Response time (minutes)	Phone (day/ evening)

If the facility uses contracted help in an emergency response situation, the owner/operator must provide the contractors' names and review the contractors' capacity to provide adequate personnel and equipment.
Date of last update: _____

EMERGENCY RESPONSE CONTRACTORS

Contractor	Phone	Response time	Contract responsibility*
1. _____			
2. _____			
3. _____			
4. _____			

* Note: Include evidence of contracts agreements with response contractors to ensure the availability of personnel and equipment.

1.3.4 Evacuation Plans

Based on the analysis of the facility, as discussed elsewhere in the plan, a facility-wide evacuation plan should be developed. In addition, plans to evacuate parts of the facility or surrounding communities that are at a high risk of exposure in the event of a spill or other release must be developed. Evacuation routes must be shown on a diagram of the facility (see section 1.9). When developing evacuation plans, consideration should be given to the following:

1. Location of stored materials;
2. Hazard imposed by spilled material;
3. Spill flow direction;
4. Prevailing wind direction and speed;
5. Water currents, tides, or wave conditions (if applicable);
6. Arrival route of emergency response personnel and equipment;
7. Evacuation routes;
8. Alternative routes of evacuation;
9. Transportation of injured personnel to nearest emergency medical facility;
10. Location of alarm/notification systems;
11. The need for a centralized check-in area for evacuation validation (roll call);

12. Selection of a mitigation command center; and

13. Location of shelter at the facility as an option to evacuation.

When preparing this section of the response plan, the *Handbook of Chemical Hazard Analysis Procedures* by the Federal Emergency Management Agency (FEMA), Department of Transportation (DOT), and EPA should be referenced. *The Handbook of Chemical Hazard Analysis Procedures* is available from: FEMA, Publication Office, 500 C Street, SW., Washington, DC 20472, (202) 646–3484.

1.3.5 Coordinator's Duties

Duties of the Emergency Response Coordinator

The duties of the designated emergency response coordinator or an adequately trained and qualified person appointed by the coordinator are specified by the rule in § 112.20(h)(3)(ix). The coordinator's duties must be described and be consistent with the minimum requirements in the rule. In addition, the emergency response coordinator and any qualified appointee must be identified with the Facility Information in section 1.2.

1.4 Hazard Evaluation

This section asks the facility owner/operator to examine the facility's operations closely and to predict where releases could occur. Hazard evaluation is a widely used industry practice that allows owners and operators to develop a complete understanding of potential hazards and the response actions necessary to address these hazards. The Handbook of Chemical Hazard Analysis Procedures, prepared by the EPA, DOT, and the Federal Emergency Management Agency and the Hazardous Materials Emergency Planning Guide (NRT–1), prepared by the National Response Team are good references for conducting a hazard analysis.

Hazard identification and evaluation will assist facility owners and operators in planning for potential releases, thereby reducing the severity of discharge impacts that may occur in the future. The evaluation also may help the operator identify and correct potential sources of releases. In addition, special hazards to workers and emergency response personnel's health and safety should be evaluated, as well as the facility's spill history.

1.4.1 Hazard Identification

The following directions should be used for completing the Tank and Surface Impoundment (SI) forms that are part of this section. Similar worksheets should be developed for any other type of storage containers.

1. List each tank at the facility with a separate and distinct identifier. Begin aboveground tank identifiers with an "A" and below ground tanks identifiers with a "B", or submit multiple sheets with the aboveground tanks and below ground tanks on separate sheets.

2. Use gallons for the maximum capacity of a tank; and use square feet for the area.

3. Using the appropriate identifiers and the following instructions, fill in the appropriate forms:

- Tank or SI number—Using the aforementioned identifiers (A or B) or multiple reporting sheets, identify each tank or SI at the facility that stores oil or hazardous materials.
- Substance Stored—For each tank or SI identified, record the material that is stored therein. If the tank or SI is used to store more than one material, list all the stored materials.
- Quantity Stored—For each material stored in each tank or SI, report the average volume of material stored on any given day.
- Tank Type or Surface Area/Year—For each tank, report the type of tank (e.g. floating top), and the year the tank was originally installed. If the tank has been refabricated, the year that the latest refabrication was completed should be recorded in parentheses next to the year installed. For each SI, record the surface area of the impoundment and the year it went into service.
- Maximum Capacity—Record the operational maximum capacity for each tank and SI. If the maximum capacity varies with the season, record the upper and lower limits.
- Failure/Cause—Record the cause and date of any tank or SI failure which has resulted in a loss of tank or SI contents.

4. Using the numbers from the tank and SI forms, label a schematic drawing of the facility. This drawing should be identical to any schematic drawings included in the SPCC Plan.

5. Using knowledge of the facility and its operations, describe the following in writing:

A. The loading and unloading of transportation vehicles that risk the release of oil or hazardous substances during transport processes. These operations may include loading and unloading of trucks, railroad cars, or vessels. The volume of material involved in transfer operations should be estimated.

B. Day to day operations that may present a risk of releasing oil or a hazardous substance. These activities include scheduled venting, piping repair or replacement, valve maintenance, transfer of tank contents from one tank to another, etc. (not including transportation-related activities). The volume of material involved in these operations should be estimated.

C. The secondary containment volume associated with each tank and/or transfer point at the facility. The numbering scheme developed on the tables should be used to identify each containment area. Capacities should be listed for each individual unit (tanks, slumps, drainage traps, and ponds), as well as the facility total.

D. Normal daily throughput for the facility and any effect on potential release volumes that a negative or positive change in that throughput may cause.

Date of last update: _____

HAZARD IDENTIFICATION TANKS*

Tank no.	Substance stored (oil & hazardous substance)	Quantity stored (gallons)	Tank type/year	Maximum capacity (gal)	Failure/cause

*(Tank=any container that stores oil).

Attach as many sheets as necessary.

Date of last update: _____

HAZARD IDENTIFICATION SURFACE IMPOUNDMENTS (SI)

SI No.	Substance stored	Quantity stored (gal)	Surface area/year	Maximum capacity (gal)	Failure/cause

Attach as many sheets as necessary.

1.4.2 Vulnerability Analysis

The vulnerability analysis should address the potential effects (i.e., to human health, property, or the environment) of a spill. Attachment C–III to appendix C of this part provides a method that owners or operators could use to determine appropriate distances from the facility to environmentally sensitive areas and drinking water intakes. Owners and operators could use an alternative formula that is considered acceptable by the RA. If an alternative formula is used, documentation of the reliability and analytical soundness of the formula must be attached to the response plan cover sheet. This analysis should be prepared for each facility, and should include discussion of the vulnerability of:

1. Water intakes (drinking, cooling, or other);
2. Schools;
3. Medical facilities;
4. Residential areas;
5. Businesses;
6. Wetlands or other environmentally sensitive areas;[2]
7. Fish and wildlife;
8. Lakes and streams;
9. Endangered flora and fauna;
10. Recreational areas;
11. Transportation routes (air, land, and water);
12. Utilities; and
13. Other areas of economic importance including terrestrially sensitive

[2] Refer to Appendix D of the proposed rule for the listing of environmentally sensitive areas.

environments, aquatic environments, and unique habitats.

1.4.3 Analysis of the Potential for a Spill

Each owner or operator should analyze the probability of a spill occurring at the facility. This analysis should be quantitative, incorporating factors such as tank age, spill history, horizontal range of a potential spill, and vulnerability to natural disaster. This analysis will provide information for developing discharge scenarios for a worst case discharge and small and medium discharges and aid in the development of techniques to reduce the size and frequency of spills. The owner or operator may need to research the age of the tanks and the spill history at the facility.

1.4.4 Spill History

Briefly describe the facility's reportable spill[3] history for the entire life of the facility, including:

1. Date of discharge(s);
2. List of discharge causes;
3. Material(s) discharged;
4. Amount discharged in gallons;
5. Amount of discharge that reached navigable waters, if applicable;
6. Effectiveness and capacity of secondary containment;
7. Clean-up actions taken;
8. Steps taken to reduce possibility of recurrence;
9. Total storage capacity of the tank(s) or impoundment(s) from which the material discharged;
10. Enforcement actions;
11. Effectiveness of monitoring equipment; and
12. Description of how each spill was detected.

The information solicited in this section may be similar to requirements in § 112.4(a) of the October 22, 1991 proposed revisions to the Oil Pollution Prevention rule (56 FR 54612). Any duplicate information in § 112.4(a) may be photocopied and inserted.

1.5 Discharge Scenarios

In this section, the owner or operator is asked to provide a description of the facility's worst case discharge, as well as a small and medium spill, as appropriate. A tiered planning approach has been chosen because the response actions to a spill (i.e., necessary equipment, products, and personnel) are dependent on the magnitude of the spill. Planning for lesser discharges is necessary because the nature of the response may be qualitatively different depending on the quantity of the discharge. In this discussion, the owner or operator should discuss the potential direction of the spill pathway.

1.5.1 Small and Medium Discharge

To address tiered planning requirements, the owner or operator must consider types of facility-specific spill scenarios that may contribute to a small or medium spill. The scenarios should account for all the operations that take place at the facility, including but not limited to:

1. Loading and unloading of surface transportation;
2. Facility maintenance;
3. Facility piping;
4. Pumping stations and slumps;
5. Storage tanks;
6. Vehicle refueling; and
7. Age and condition of facility and components.

The scenarios should also consider factors that affect the response efforts required by the facility. These include but are not limited to:

1. Size of the spill;
2. Proximity to downgradient wells, waterways, and drinking water intakes;
3. Proximity to environmentally sensitive areas;
4. Likelihood that the discharge will travel offsite (i.e., topography, drainage);
5. Location of the material spilled (on a concrete pad or directly on the soil);
6. Material discharged;
7. Weather or aquatic conditions (i.e., river flow);
8. Available remediation equipment;
9. Probability of a chain reaction of failures; and
10. Direction of spill pathway.

1.5.2 Worst Case Discharge

In this section, the owner or operator must identify the worst case discharge volume at the facility. Worksheets for production and non-production facility owners and operators to use when calculating worst case discharge are presented in Appendix E to 40 CFR part 112. When planning for the worst case discharge response, all of the aforementioned factors listed in the small and medium discharge section of the response plan should be addressed. Depending on the adequacy of secondary containment and the proximity to navigable waters, the worst case discharge may be: (1) The total aboveground oil storage capacity (plus production capacity if applicable) for facilities without adequate secondary containment; (2) the capacity of the largest single tank within a common secondary containment area or the combined capacity of a group of aboveground tanks permanently manifolded together within a common secondary containment area, whichever is greater, plus an additional quantity for any tanks without secondary containment (plus production volume if applicable); (3) 110% of the capacity of the largest single tank within a secondary containment area or 110% of the combined capacity of a group of tanks within a common secondary containment area, whichever is greater (plus production volume if applicable); or (4) a combination of the above.

For onshore storage facilities and production facilities, permanently manifolded tanks are defined as tanks that are designed, installed, and/or operated in such a manner that the multiple tanks function as one storage unit. In this section of the response plan, owners and operators must provide evidence that tanks with common piping or piping systems are not operated as one unit. If such evidence is provided and is acceptable to the RA, the worst case discharge volume would be based on the combined storage capacity of all manifold tanks or the capacity of the largest single tank within the secondary containment area, whichever is greater. For permanently manifolded tanks that function as one storage unit, the worst case discharge would be based on the combined storage capacity of all manifolded tanks or the capacity of the largest single tank within a secondary containment area, whichever is greater. For purposes of the worst case discharge calculation, permanently manifolded tanks that are separated by internal divisions for each tank are considered to be single tanks and individual manifolded tank volumes are not combined.

1.6 Discharge Detection Systems

In this section, the owner or operator should provide a detailed description of the procedures and equipment used to detect discharges. A section on spill detection by personnel and a discussion of automated spill detection, if applicable, should be included for both during regular operations and after hours. In addition, the owner or operator should discuss how the reliability of any automated system will be checked and how frequently the system will be inspected.

1.6.1 Discharge Detection by Personnel

In this section, owners and operators should describe the procedures and personnel that will detect any spill or uncontrolled release of oil or hazardous material. A thorough discussion of facility inspections should be included. In addition, a description of initial response actions should be addressed. See section 1.3.1 of the response plan for emergency response information.

1.6.2 Automated Discharge Detection

In this section, facility owners and operators must describe any automated spill detection equipment that the facility has in place. This section should include a discussion of overfill alarms, secondary containment sensors, etc. A discussion of the plans to verify an automated alarm and the actions to be taken once verified must also be included.

1.7 Plan Implementation

In this section, facility owners and operators must explain in detail how to implement the facility's emergency response plan by describing response actions to be carried out under the plan to ensure the safety of the facility and to mitigate or prevent discharges described in section 1.5. This section includes the identification of response resources for small, medium, and worst case spills; disposal plans; and containment and drainage planning. A distinct list of those personnel who would be involved in the cleanup should be identified. Procedures that the facility will use, where appropriate or necessary, to update their plan after a spill event and the time frame to update the plan must be described.

[3] As described in 40 CFR part 110, reportable spills are those that: (a) Violate applicable water quality standards, or (b) cause a film or sheen upon or discoloration of the surface of the water or adjoining shorelines or cause a sludge or emulsion to be deposited beneath the surface of the water or upon adjoining shorelines.

1.7.1 Response Resources for Small, Medium, and Worst Case Spills

Once the spill scenarios have been identified in section 1.5 of the model response plan, the owner or operator should identify and describe implementation of the response actions. The facility should demonstrate accessibility to the proper response personnel and equipment to effectively respond to all of the identified spill scenarios. Guidelines for the determination and demonstration of adequate response capability are presented in Appendix F to 40 CFR part 112. In addition, steps to expedite the cleanup of spills must be discussed. At a minimum, the following items should be addressed:

1. Emergency plans for spill response;
2. Additional training;
3. Additional contracted help;
4. Access to additional equipment/experts;
5. Ability to implement plan including training and practice drills;

1.7.2 Disposal Plans

Facility owners and operators must describe how and where the facility intends to recover, reuse, decontaminate, or dispose of materials after a discharge has taken place. The appropriate permits required to transport or dispose of recovered materials according to local, State, and Federal requirements must be addressed. Materials that should be accounted for in the disposal plan include:

1. Recovered product;
2. Contaminated soil;
3. Contaminated equipment and materials, including drums, tank parts, valves, and shovels;
4. Personnel protective equipment;
5. Decontamination solutions;
6. Adsorbents; and
7. Spent Chemicals.

These plans must be prepared in accordance with Federal (e.g., the Resource Conservation and Recovery Act [RCRA]), State, and local regulations, where applicable. A copy of the disposal plans from the facility's SPCC Plan may be inserted with this section including any diagrams of those plans.

Material	Disposal facility	Location	RCRA permit/manifest
1.			
2.			
3.			
4.			

1.7.3 Containment and Drainage Planning

A proper plan to contain and control a spill through drainage may limit the threat of harm to human health and the environment. This section should describe how to contain and control a spill through drainage, including:

1. The available volume of containment (use the information presented in section 1.4.1 of this document);
2. The route of drainage from storage and transfer areas;
3. The construction materials used in drainage troughs;
4. The type and number of valves and separators used in the drainage system;
5. Sump pump capacities;
6. The containment capacity of weirs and booms that might be used and their location (see Section 1.3.2); and
7. Other cleanup materials.

In addition, facility owners and operators must meet the inspection and monitoring requirements for drainage contained in the SPCC regulation.

A copy of the containment and drainage plans from the facility's SPCC Plan may be inserted in this section, including any diagrams of those plans. [Note: A proposed general permit for stormwater drainage may contain additional requirements.]

1.8 Self-Inspection, Training, and Meeting Logs

Training and meeting logs shall be included in the response plan to aid facility owners, operators, and employees in spill prevention awareness and response requirements. Logs must be kept for facility mock alert drills, personnel training, and spill prevention meetings. Much of the recordkeeping information contained in this section is required by the existing SPCC regulation.

1.8.1 Facility Self-Inspection

Pursuant to § 112.7(e)(8) of the rule in 40 CFR part 112, revised as of July 1, 1992, each facility should conduct self-inspections and include the written procedures and records of inspections in the SPCC Plan. The inspection should include the tanks, secondary containment, and response equipment at the facility. The inspection of tanks and secondary containment required by the SPCC regulation and records of those inspections should be cross-referenced in the response plan. The inspection of response equipment is a new requirement in this plan. Facility self-inspection requires two steps: (1) A checklist of things to inspect; and (2) a method of recording the actual inspection and its findings. The date of each inspection shall be noted. These records are required to be maintained for five years.

1.8.1.1 Tank Inspection

Tank Inspection Checklist

The tank inspection checklist presented below has been included as part of SPCC guidance for inspections and monitoring. If information in this section duplicates information required in § 112.7(e) of the October 22, 1991 proposed revisions to the Oil Pollution Prevention regulation (56 FR 54612) it may be photocopied and inserted.

1. Check tanks for leaks, specifically looking for:
   A. Drip marks;
   B. Discoloration of tanks;
   C. Puddles containing stored material;
   D. Corrosion;
   E. Cracks; and
   F. Localized dead vegetation.
2. Check foundation for:
   A. Cracks;
   B. Discoloration;
   C. Puddles containing stored material;
   D. Settling;
   E. Gaps between tank and foundation; and
   F. Damage caused by vegetation roots.
3. Check piping for:
   A. Droplets of stored material;
   B. Discoloration;
   C. Corrosion;
   D. Bowing of pipe between supports;
   E. Evidence of stored material seepage on valves or seals; and
   F. Localized dead vegetation.

TANK/SURFACE IMPOUNDMENT INSPECTION LOG

Inspector	Tank or SI No.	Date	Comments

1.8.1.2 Response Equipment Inspection

Response Equipment Checklist

Using the Emergency Response Equipment List provided in section 1.3.2 of the response plan, describe each type of equipment, checking for the following:

1. Inventory (item and quantity)
2. Storage location
3. Accessibility (time to access and respond)
4. Operational status/condition
5. Actual use/testing (last test date and frequency of testing)
6. Shelf life (present age, expected replacement date)

Please note any discrepancies between the list and the actual equipment available.

RESPONSE EQUIPMENT INSPECTION LOG

[Use section 1.3.2 as checklist]

Inspector	Date	Comments

1.8.1.3 Secondary Containment Inspection

Secondary Containment Checklist

Inspect the secondary containment (as described in sections 1.4.1 and 1.7.2 of the plan), checking the following:

1. Dike or berm system.
A. Level of precipitation in dike/available capacity
B. Operational status of drainage valves
C. Dike or berm permeability
C. Debris
E. Erosion
F. Permeability of the earthen floor of diked area
G. Location/status of pipes, inlets, drainage beneath tanks, etc.
2. Secondary containment
A. Cracks
B. Discoloration
C. Presence of stored material (standing liquid)
D. Corrosion
E. Valve conditions
3. Retention and drainage ponds
A. Erosion
B. Available capacity
C. Presence of stored material
D. Debris
E. Stressed vegetation

During inspection, make note of discrepancies in any of the above mentioned items, and report them immediately to the proper facility personnel. Additionally, duplicate information from § 112.7(c) of the October 22, 1991 proposed revisions to the Oil Pollution Prevention rule (56 FR 54612) may be photocopied and inserted here.

1.8.2 Mock Alert Drills

Mock alert drills, as required by CWA section 311(j)(5), are part of the response plan and should be detailed below. During the drills, actions taken by the response team, both predicted and unpredicted, should be noted, and any problems that arise should be resolved as soon as possible.

1.8.2.1 Mock Alert Drill Logs

Mock Alert Drill Log

Date: _____
Company: _____
Response Coordinator: _____
Emergency Scenario: _____
_____
Local Response Team's Response Time: _____
Contracted Personnel Response Time: _____
Facility Personnel Response Time: _____
Notes: _____
_____
_____
_____
Changes to be Implemented: _____
_____
_____
_____
_____
_____
Time Table for Implementation: _____
_____

1.8.3 Training and Meeting Logs

Owners and operators are required by § 112.20(e)(8) to keep a personnel training log that should include a record of all formal response training received by each employee. Personnel training logs and discharge prevention meeting logs are included in sections 1.8.3.1 and 1.8.3.2 respectively.

1.8.3.1 Personnel Training Logs

PERSONNEL TRAINING

Name	Response training/date and number of hours	Prevention training/date and number of hours

1.8.3.2 Discharge Prevention Meetings Log

Discharge Prevention Meeting

Date: _____
Attendees: _____
_____
_____
_____
_____
_____
_____
_____
_____

Subject/issue identified	Required action	Implementation date

1.9 Diagrams

The facility-specific response plan should include the following diagrams. Additional diagrams that would aid in the development of response plan sections may also be included.

1. The Site Plan Diagram should include and identify:
A. The entire facility to scale;
B. Above and below ground bulk storage tanks;
C. The contents and capacities of bulk storage tanks;
D. The contents and capacity of drum storage areas;
E. the contents and capacities of surface impoundments;
F. Process buildings;
G. Transfer areas;
H. Secondary containment systems (location and capacity);
I. Structures where hazardous materials are stored or handled, including materials stored and capacity of storage;
J. Location of communication and emergency response equipment; and
K. Location of electrical equipment which contains oil.

2. The Site Drainage Plan Diagram should include:
A. Major sanitary and storm sewers, manholes, and drains;
B. Weirs and shut-off valves;
C. Surface water receiving streams;
D. Fire fighting water sources;
E. Other utilities;
F. Response personnel ingress and egress;
G. Equipment transportation routes; and
H. Direction of spill flow from release points.

3. The Site Evacuation Plan Diagram should include:
A. Site plan diagram with evacuation route(s); and
B. Location of evacuation regrouping areas.

1.10 Security

Section 112.7(e)(9) of 40 CFR part 112, revised as of July 1, 1992, requires facilities to maintain a certain level of security, as appropriate. In this section, a description of the facility security should be provided including:

1. Emergency cut-off locations (automatic or manual valves);
2. Enclosures (e.g., fencing, etc.);
3. Guards and their duties, day and night;
4. Lighting;
5. Valve and pump locks; and
6. Pipeline connection caps.

Section 112.7(g) of the October 22, 1991 proposed revisions to the Oil Pollution Prevention rule (56 FR 54612) contains similar requirements. Duplicate information may be photocopied and inserted in this section.

2.0 Response Plan Cover Sheet

A three page, computer-readable form has been developed to be completed and submitted to the RA by owners and operators who are required to prepare and submit a facility-specific response plan. The cover sheet (Attachment G–1) is intended to accompany the response plan and provide the Agency with basic information concerning the facility. This section will describe the Response Plan Cover Sheet and provide instructions for its completion.

Page One—Facility Information

Owner/Operator of Facility: Enter the name of the owner of the facility (if the owner is the operator). Enter the operator of the facility if otherwise. If the owner/operator of the facility is a corporation, enter the name of the facility's principle corporate executive. Enter as much of the name as will fit in each section.

Facility Name: Enter the proper name of the facility.

Largest Tank Capacity: Enter the capacity in GALLONS of the largest aboveground storage tank at the facility.

Maximum Storage Capacity: Enter the total maximum capacity in GALLONS of all aboveground storage tanks at the facility.

Number of Tanks: Enter the number of all aboveground storage tanks at the facility.

Page Two—Facility Information

Enter the street address, city, State, zip code, and phone number of the facility in the appropriate boxes.

Dun and Bradstreet Number: Enter the facility's Dun and Bradstreet number if available.

Standard Industrial Classification (SIC) Code: Enter the facility's SIC code as

determined by the Office of Management and Budget.

Worst Case Discharge Amount: Using information from the worksheets in appendix E, enter the amount of the worst case discharge in GALLONS.

Page Three—Determination of Substantial Harm

Using the flowchart provided in Attachment C–I of appendix C, blacken the appropriate circle to each question. Explanations to referenced terms can be found in appendix C. If an alternative formula to the ones described in Attachment C–III is used to calculate the planning distance, documentation of the reliability and analytical soundness of the formula must be attached to the response plan cover sheet.

Additional Information

Latitude and Longitude: Enter the facility latitude and longitude in degrees, minutes, and seconds.

Facility Distance to Navigable Waters: Enter the nearest distance between an opportunity for discharge (i.e., storage tank, piping, or flowline) and a navigable water.

Certification

Complete this block after all other questions have been answered.

BILLING CODE 6560–50–D

RESPONSE PLAN COVER SHEET

FORM APPROVED
OMB NO. XXXXX
APPROVAL EXPIRES [DATE]

IMPORTANT

This form is intended to be computer readable. To complete this form, entirely fill in the desired circle with black or blue ink. Please do not fold, staple, or mutilate this form. Return this form in a 9" x 12" envelope. Please print requested information in BOXES for each individual question.

CORRECT MARK

●

INCORRECT MARKS

⊘ ○ ⊙ ⊗ ◕

EXAMPLE:

NAME

E	P	A
		●
●		
	●	

OWNER / OPERATOR OF FACILITY

LAST NAME - First 15 letters

FIRST NAME - First 12 letters

FACILITY NAME

First 20 letters

INSTRUCTIONS

This form is designed to accompany a submitted Response Plan.

Explanations and detailed instructions can be found in Appendix G.

Facility information contained here will be returned with the Response Plan.

LARGEST TANK CAPACITY (GALLONS)

MAXIMUM STORAGE CAPACITY (GALLONS)

NUMBER OF TANKS

GENERAL INFORMATION

Public reporting burden for the collection of this information is estimated to vary from one hour to 270 hours per response in the first year, with an average of 5 hours per response. This estimate includes time for reviewing instructions, searching existing data sources, gathering the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate of this information, including suggestions for reducing this burden to : Chief, Information Policy Branch, PM-223, U.S. Environmental Protection Agency, 401 M Street, SW, Washington, D.C. 20460; and to the Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, D.C. 20503.

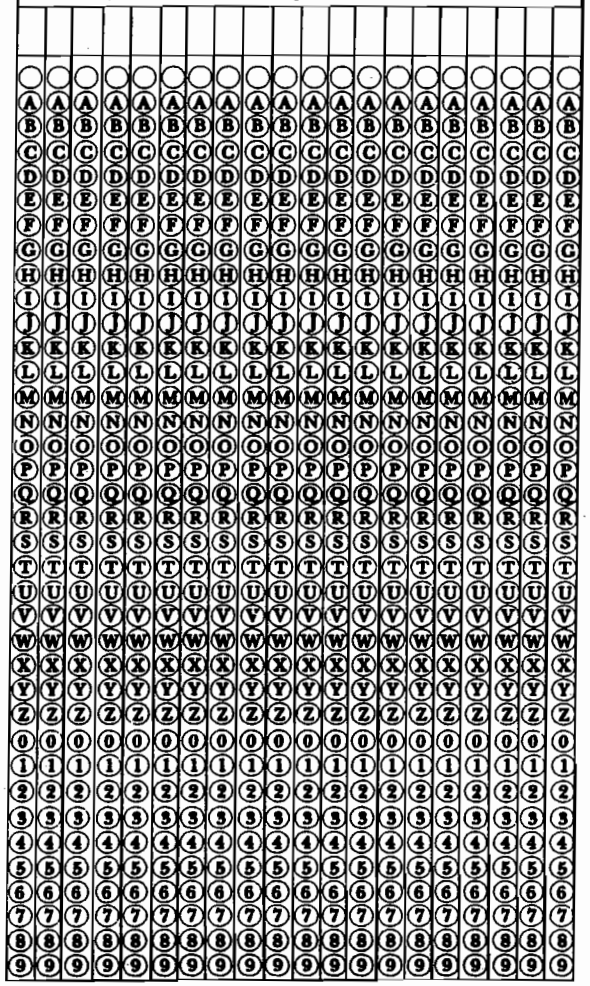
(CONTINUED)

• *REMEMBER*

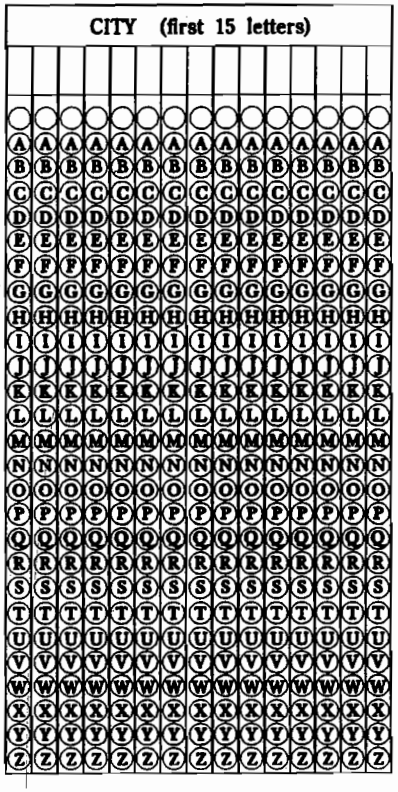
USE BLACK OR BLUE INK
DO NOT FOLD, STAPLE, OR MUTILATE THIS FORM

FACILITY ADDRESS (Street address, route or box)

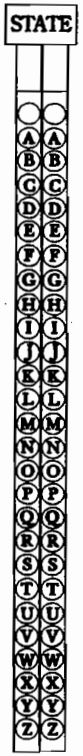
Indicate a space in the address by filling in the blank circle at the top of the column.



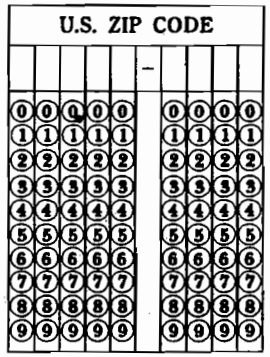
CITY (first 15 letters)



STATE

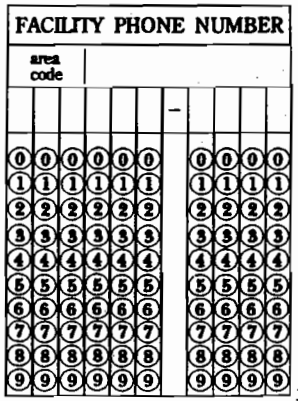


U.S. ZIP CODE

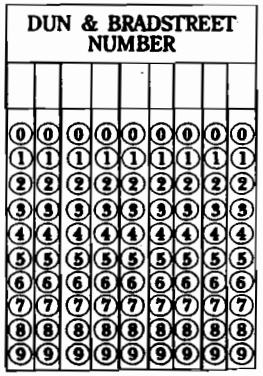


FACILITY PHONE NUMBER

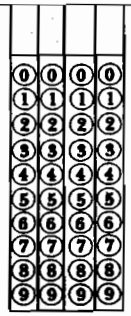
area code



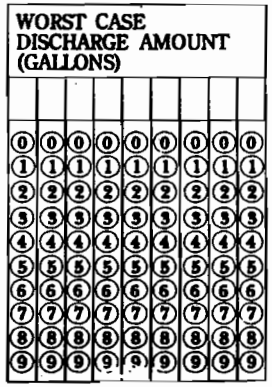
DUN & BRADSTREET NUMBER



STANDARD INDUSTRIAL CLASSIFICATION (SIC)



WORST CASE DISCHARGE AMOUNT (GALLONS)



DETERMINATION OF SUBSTANTIAL HARM

Does the facility operation include over-water transfers* of oil to or from vessels and does the facility have a maximum capacity greater than or equal to 42,000 gallons? ○ yes ○ no

Does the facility lack adequate secondary containment* for each aboveground storage area sufficiently large to contain the capacity of the largest aboveground storage tank within that storage area and is the total storage capacity greater than or equal to one million gallons? ○ yes ○ no

Is the facility located at a distance* that would shut down a public drinking water intake and is the total storage capacity greater than or equal to one million gallons? ○ yes ○ no

Is the facility located at a distance* that could cause injury to an environmentally sensitive area as referenced in Appendix D and is the total storage capacity greater than or equal to one million gallons? ○ yes ○ no

Within the past five years, has the facility experienced a reportable spill* exceeding 10,000 gallons and is the total storage capacity greater than or equal to one million gallons? ○ yes ○ no

* Explanations of the above referenced terms can be found in Appendix C. If an alternative formula to the ones contained in Attachment C-III is used to establish the appropriate distance to sensitive environments or drinking water intakes, documentation of the reliability and analytical soundness of the formula must be attached to this form.

ADDITIONAL INFORMATION

LATITUDE (DEGREES: NORTH)						
degrees		min.		sec.		
0	0	0	0	0	0	
1	1	1	1	1	1	
2	2	2	2	2	2	
3	3	3	3	3	3	
4	4	4	4	4	4	
5	5	5	5	5	5	
6	6	6	6	6	6	
7	7	7	7	7	7	
8	8	8	8	8	8	
9	9	9	9	9	9	

LONGITUDE (DEGREES: WEST)						
degrees		min.		sec.		
0	0	0	0	0	0	
1	1	1	1	1	1	
2	2	2	2	2	2	
3	3	3	3	3	3	
4	4	4	4	4	4	
5	5	5	5	5	5	
6	6	6	6	6	6	
7	7	7	7	7	7	
8	8	8	8	8	8	
9	9	9	9	9	9	

FACILITY DISTANCE TO NAVIGABLE WATER:
Fill the appropriate circle.

- 0 - 1/4 mile ○
- 1/4 - 1/2 mile ○
- 1/2 - 1 mile ○
- > 1 mile ○

● *REMEMBER*
USE BLUE OR BLACK INK
DO NOT FOLD, STAPLE, OR MUTILATE THIS FORM

CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document, and that based on my inquiry of those individuals responsible for obtaining information, I believe that the submitted information is true, accurate, and complete.

Signature

Name (please type or print)

Title

Date

BILLING CODE 6560-50-C

3.0 Definitions

Navigable Waters: Navigable waters include all waters that are used in interstate or foreign commerce, all interstate waters including wetlands, and all intrastate waters (e.g., lakes, rivers, streams, intermittent streams, mudflats, sandflats, wetlands sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds).

Oil: Oil in any kind or in any form, including, but not limited to petroleum, fuel oil, sludge, oil refuse and oil mixed with wastes other than dredged spoil.

Production Facility: Onshore oil production facilities may include all wells, flowlines, separation equipment, storage facilities, gathering lines, and auxiliary non-transportation-related equipment and facilities in a single geographical oil or gas field operated by a single operator.

Worst Case Discharge: See section 112.2(m). Worksheets to calculate worst case discharge volume are included in appendix E.

Environmentally Sensitive Areas: See appendix D.

Wellhead Protection Area: The surface and subsurface area surrounding a water well or wellfield, supplying a public water system, through which contaminants are reasonably likely to move toward and reach such water well or wellfield.

4.0 Acronyms

ACP: Area Contingency Plan
CHRIS: Chemical Hazards Response Information System
CWA: Clean Water Act
DOT: Department of Transportation
EPA: Environmental Protection Agency
FEMA: Federal Emergency Management Agency
gal: Gallons
HAZMAT: Hazardous Materials
LEPC: Local Emergency Planning Committee
NCP: National Oil and Hazardous Substances Pollution Contingency Plan
NRC: National Response Center
NRT: National Response Team
OPA: Oil Pollution Act of 1990
OSC: On-Scene Coordinator
RA: Regional Administrator
RCRA: Resource Conservation and Recovery Act
RRT: Regional Response Team
SARA: Superfund Amendments and Reauthorization Act
SERC: State Emergency Response Commission
SDWA: Safe Drinking Water Act of 1986
SI: Surface Impoundment
SIC: Standard Industry Codes
SPCC: Spill Prevention, Control and Countermeasures
USCG: United States Coast Guard

5.0 References

Concawe. 1982. *Methodologies for Hazard Analysis and Risk Assessment in the Petroleum Refining and Storage Industry.* Prepared by Concawe's Risk Assessment Ad-hoc Group.

U.S. Department of Housing and Urban Development. 1987. *Siting of HUD-Assisted Projects Near Hazardous Facilities: Acceptable Separation Distances from Explosive and Flammable Hazards.* Prepared by the Office of Environment and Energy, Environmental Planning Division, Department of Housing and Urban Development. Washington, DC.

U.S. DOT, FEMA and U.S. EPA. Handbook of Chemical Hazard Analysis Procedures.

U.S. DOT, FEMA and U.S. EPA. *Technical Guidance for Hazards Analysis: Emergency Planning for Extremely Hazardous Substances.*

The National Response Team. 1987. *Hazardous Materials Emergency Planning Guide.* Washington, DC.

The National Response Team. 1990. *Oil Spill Contingency Planning, National Status: A Report to the President.* Washington, DC. U.S. Government Printing Office.

Offshore Inspection and Enforcement Division. 1988. *Minerals Management Service, Offshore Inspection Program: National Potential Incident of Noncompliance (PINC) List.* Reston, VA.

[FR Doc. 93–3396 Filed 2–16–93; 8:45 am]

BILLING CODE 6560–50–P

See corrections

federal register

Friday
April 9, 1993

Part VII

Environmental Protection Agency

40 CFR Part 112
Oil Pollution Prevention; Correction; Proposed Rule

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 112

[SW H–FRL 4612–7]

RIN 2050–AD 30

Oil Pollution Prevention; Non-Transportation-Related Onshore Facilities; Correction

AGENCY: U.S. Environmental Protection Agency (EPA).

ACTION: Proposed rule; corrections.

SUMMARY: To ensure consistency with the regulatory text, EPA is correcting errors in the technical appendices to the proposed rule for facility response plans required by the Oil Pollution Act (OPA) of 1990, which appeared in the **Federal Register** on February 17, 1993.

DATES: Comments on the February 17, 1993, proposed rule (58 FR 8824), as corrected by this notice, must be submitted on or before April 19, 1993.

FOR FURTHER INFORMATION CONTACT: Bobbie Lively-Diebold, Response Standards and Criteria Branch, Emergency Response Division (5202G), U.S. Environmental Protection Agency, 401 M Street, SW., Washington, DC 20460 at 703–356–8774; the ERNS/SPCC Information line at 202–260–2342; or the RCRA/Superfund Hotline at 800–424–9346 (in the Washington, DC metropolitan area, 703–920–9810). The Telecommunications Device for the Deaf (TDD) Hotline number is 800–553–7672 (in the Washington, DC metropolitan area, 703–486–3323).

SUPPLEMENTARY INFORMATION:

Background

EPA published a proposed rule in the **Federal Register** on February 17, 1993 (58 FR 8824), that would revise the Oil Pollution Prevention regulation, 40 CFR part 112, originally promulgated under the authority of section 311(j) of the Clean Water Act. The proposed revision would incorporate new requirements added by section 4202(a) of the OPA, Public Law 101–380, 104 Stat. 484, subtitle B that directs facility owners and operators to prepare plans for responding to a worst case discharge of oil and to a substantial threat of such a discharge. The proposed rule would affect owners and operators of non-transportation-related onshore facilities.

Need for Correction

The proposed rule contained minor errors that may be misleading and should be corrected. In addition, although referenced in the preamble and regulatory text and available in the public docket, appendix H was inadvertently omitted from the proposed rule.

Correction of Publication

Accordingly, the proposed rule is corrected as follows:

1. On page 8851, in the first column, Amendment 7 which reads, "7. Part 112, as proposed to be revised at 56 FR 54630, is amended by adding appendices C through G to read as follows:" is corrected to read as follows:

"7. Part 112, as proposed to be revised at 56 FR 54630, is amended by adding appendices C through H to read as follows:"

2. On page 8851, in the second column, in the first full paragraph under section 2.1, the text which reads, "(1) *Transportation-Related Facilities Greater Than or Equal to 42,000 Gallons Where Operations Include Over-Water Transfer of Oil*—A transportation-related facility with a total storage capacity greater than 42,000 gallons that transfers oil over water to or from vessels must submit a response plan to EPA." is corrected to read as follows:

"(1) *Facilities Greater Than or Equal to 42,000 Gallons Where Operations Include Over-Water Transfers of Oil*—A facility with a total storage capacity greater than 42,000 gallons that transfers oil over water to or from vessels must submit a response plan to EPA."

3. On page 8851, in the second column, in the second full paragraph under section 2.1, in line 8, "each" is corrected to read "any".

4. On page 8852, within the second box down on the right side of the page that contains the substantial harm criterion for secondary containment, "each" is corrected to read "any".

5. On page 8853, in the first column, in paragraph number "2", in line 5, "each" is corrected to read "any".

6. On page 8854, in the second column, in Table 2, under item (1), "State Department of Naval Resources" is corrected to read "State Department of Natural Resources".

7. On page 8858, in the second column, in Attachment D-I, the entry in the first column "Areas" which reads "Habitat used by designated or proposed endangered/threatened species or marine mammals defined as depleted" is corrected to read "Habitat used by designated or proposed endangered/threatened species or marine mammals".

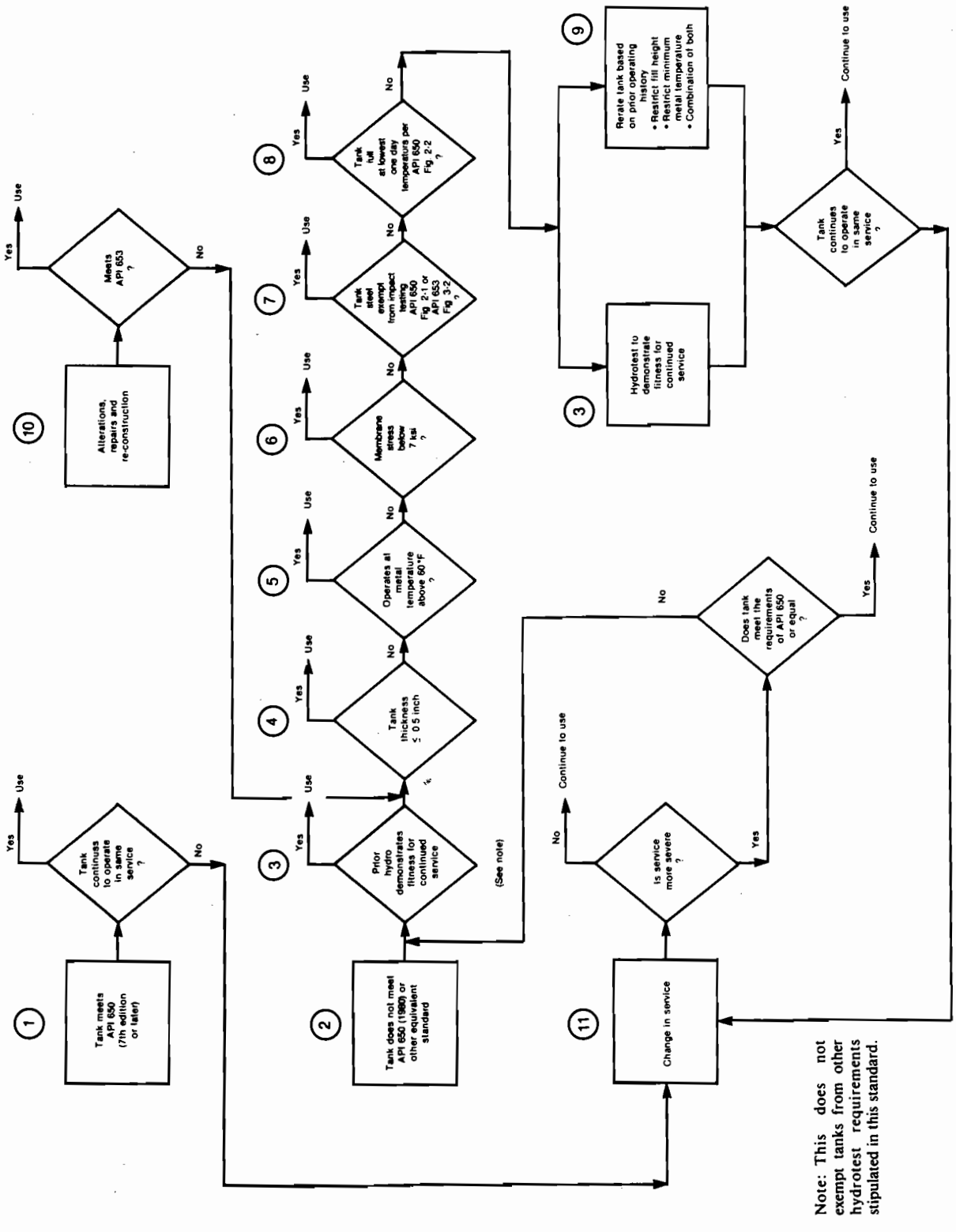
8. On page 8878, within the second question on the left side of the page that addresses the substantial harm criterion for secondary containment, "each" is corrected to read "any".

9. On page 8879, following appendix G, appendix H is added as follows:

BILLING CODE 6560–50–M

APPENDIX H TO PART 112 --

BRITTLE FRACTURE CONSIDERATIONS IN API STANDARD 653



Note: This does not exempt tanks from other hydrotest requirements stipulated in this standard.

BILLING CODE 6560-50-C

Authority: 33 U.S.C. 1321 and 1361; E.O. 12777 (3 CFR, 1991 Comp., p. 351).

Dated: March 31, 1993.

Walter W. Kovalick, Jr.,

Acting Assistant Administrator.

[FR Doc. 93–8393 Filed 4–8–93; 8:45 am]

BILLING CODE 6560–50–P

United States
Environmental Protection
Agency
(5202G)
Washington, DC 20460

Official Business
Penalty for Private Use
$300

Section Number
(a)
(b)
(1)
(A)

ENVIRONMENTAL PROTECTION AGENCY REGULATIONS ON OIL POLLUTION PREVENTION

(40 CFR 112; 38 FR 34164, December 11, 1973; Amended by 39 FR 31602, August 29, 1974; 41 FR 12657, March 26, 1976)

PART 112—OIL POLLUTION PREVENTION

Non-transportation Related Onshore and Offshore Facilities

AUTHORITY: Secs. 311(j)(1)(C), 311(j)(2), 501(a), Federal Water Pollution Control Act (Sec. 2, Pub. L. 92-500, 86 Stat. 816 et seq. (33 U.S.C. 1251 et seq.)); Sec. 4(b), Pub. L. 92-500, 86 Stat. 897; 5 U.S.C. Reorg. Plan of 1970 No. 3 (1970), 35 FR 15623, 3 CFR 1966-1970 Comp.; E.O. 11735, 38 FR 21243, 3 CFR.

§ 112.1 General applicability.

(a) This part establishes procedures, methods and equipment and other requirements for equipment to prevent the discharge of oil from non-transportation-related onshore and offshore facilities into or upon the navigable waters of the United States or adjoining shorelines.

(b) Except as provided in paragraph (d) of this section, this part applies to owners or operators of non-transportation-related onshore and offshore facilities engaged in drilling, producing, gathering, storing, processing, refining, transferring, distributing or consuming oil and oil products, and which, due to their location, could reasonably be expected to discharge oil in harmful quantities, as defined in Part 110 of this chapter, into or upon the navigable waters of the United States or adjoining shorelines.

(c) As provided in sec. 313 (86 Stat. 875) departments, agencies, and instrumentalities of the Federal government are subject to these regulations to the same extent as any person, except for the provisions of § 112.6.

(d) This part does not apply to:

(1) Facilities, equipment or operations which are not subject to the jurisdiction of the Environmental Protection Agency, as follows:

(A) onshore and offshore facilities, which, due to their location, could not reasonably be expected to discharge oil into or upon the navigable waters of the United States or adjoining shorelines. This determination shall be based solely upon a consideration of the geographical, locational aspects of the facility (such as proximity to navigable waters or adjoining shorelines, land contour, drainage, etc.) and shall exclude consideration of manmade features such as dikes, equipment or other structures which may serve to restrain, hinder, contain, or otherwise prevent a discharge of oil from reaching navigable waters of the United States or adjoining shorelines; and

(B) equipment or operations of vessels or transportation-related onshore and offshore facilities which are subject to authority and control of the Department of Transportation, as defined in the Memorandum of Understanding between the Secretary of Transportation and the Administrator of the Environmental Protection Agency, dated November 24, 1971, 36 FR 24000.

(2) those facilities which, although otherwise subject to the jurisdiction of the Environmental Protection Agency, meet both of the following requirements:

(A) the underground buried storage capacity of the facility is 42,000 gallons or less of oil, and

(B) the storage capacity, which is not buried, of the facility is 1,320 gallons or less of oil, provided no single container has a capacity in excess of 660 gallons.

[41 FR 12657, March 26, 1976]

(e) This part provides for the preparation and implementation of Spill Prevention Control and Countermeasure Plans prepared in accordance with § 112.7, designed to complement existing laws, regulations, rules, standards, policies and procedures pertaining to safety standards, fire prevention and pollution prevention rules, so as to form a comprehensive balanced Federal/State spill prevention program to minimize the potential for oil discharges. Compliance with this part does not in any way relieve the owner or operator of an onshore or an offshore facility from compliance with other Federal, State or local laws.

§ 112.2 Definitions.

For the purposes of this part:

(a) "Oil" means oil of any kind or in any form, including, but not limited to petroleum, fuel oil, sludge, oil refuse and oil mixed with wastes other than dredged spoil.

(b) "Discharge" includes but is not limited to, any spilling, leaking, pumping, pouring, emitting, emptying or dumping. For purposes of this part, the term "discharge" shall not include any discharge of oil which is authorized by a permit issued pursuant to Section 13 of the River and Harbor Act of 1899 (30 Stat. 1121, 33 U.S.C. 407), or Sections 402 or 405 of the FWPCA Amendments of 1972 (86 Stat. 816 et seq., 33 U.S.C. 1251 et seq.).

(c) "Onshore facility" means any facility of any kind located in, on, or under any land within the United States, other than submerged lands, which is not a transportation-related facility.

(d) "Offshore facility" means any facility of any kind located in, on, or under any of the navigable waters of the United States, which is not a transportation-related facility.

(e) "Owner or operator" means any person owning or operating an onshore facility or an offshore facility, and in the case of any abandoned offshore facility, the person who owned or operated such facility immediately prior to such abandonment.

(f) "Person" includes an individual, firm, corporation, association, and a partnership.

(g) "Regional Administrator", means the Regional Administrator of the Environmental Protection Agency, or his designee, in and for the Region in which the facility is located.

(h) "Transportation-related" and "non-transportation-related" as applied to an onshore or offshore facility, are defined in the Memorandum of Understanding between the Secretary of Transportation and the Administrator of the Environmental Protection Agency, dated November 24, 1971, 36 FR 24080.

(i) "Spill event" means a discharge of oil into or upon the navigable waters of the United States or adjoining shorelines in harmful quantities, as defined at 40 CFR Part 110.

(j) "United States" means the States, the District of Columbia, the Commonwealth of Puerto Rico, the Canal Zone, Guam, American Samoa, the Virgin Islands, and the Trust Territory of the Pacific Islands.

(k) The term "navigable waters" of the United States means "navigable waters" as defined in section 502(7) of the FWPCA, and includes:

(1) all navigable waters of the United States, as defined in judicial decisions prior to passage of the 1972 Amendments to the FWPCA (Pub. L. 92-500), and tributaries of such waters;

(2) interstate waters;

(3) intrastate lakes, rivers, and streams which are utilized by interstate travelers for recreational or other purposes; and

(4) intrastate lakes, rivers, and streams from which fish or shellfish are taken and sold in interstate commerce.

(l) "Vessel" means every description of watercraft or other artificial contriv-

ance used, or capable of being used as a means of transportation on water, other than a public vessel.

§ 112.3 Requirements for preparation and implementation of Spill Prevention Control and Countermeasure Plans.

(a) Owners or operators of onshore and offshore facilities in operation on or before the effective date of this part that have discharged or, due to their location, could reasonably be expected to discharge oil in harmful quantities, as defined in 40 CFR Part 110, into or upon the navigable waters of the United States or adjoining shorelines, shall prepare a Spill Prevention Control and Countermeasure Plan (hereinafter "SPCC Plan"), in writing and in accordance with section 112.7. Except as provided for in paragraph (f) of this section, such SPCC Plan shall be prepared within six months after the effective date of this part and shall be fully implemented as soon as possible, but not later than one year after the effective date of this part.

[41 FR 12657, March 26, 1976]

(b) Owners or operators of onshore and offshore facilities that become operational after the effective date of this part, and that have discharged or could reasonably be expected to discharge oil in harmful quantities, as defined in 40 CFR Part 110, into or upon the navigable waters of the United States or adjoining shorelines, shall prepare an SPCC Plan in accordance with § 112.7. Except as provided for in paragraph (f) of this section, such SPCC Plan shall be prepared within six months after the date such facility begins operations and shall be fully implemented as soon as possible, but not later than one year after such facility begins operations.

(c) Owners or operators of onshore and offshore mobile or portable facilities, such as onshore drilling or workover rigs, barge mounted offshore drilling or workover rigs, and portable fueling facilities shall prepare and implement an SPCC Plan as required by paragraphs (a), (b) and (d) of this section. The owners or operators of such facility need not prepare a new SPCC Plan each time the facility is moved to a new site. The SPCC Plan may be a general plan, prepared in accordance with section 112.7, using good engineering practice. When the mobile or portable facility is moved, it must be located and installed using the spill prevention practices outlined in the SPCC Plan for the facility. No mobile or portable facility subject to this regulation shall operate unless the SPCC Plan has been implemented. The SPCC Plan shall only apply while the facility is in a fixed (non-transportation) operating mode.

[41 FR 12657, March 26, 1976]

(d) No SPCC Plan shall be effective to satisfy the requirements of this part unless it has been reviewed by a Registered Professional Engineer and certified to by such Professional Engineer. By means of this certification the engineer, having examined the facility and being familiar with the provisions of this part, shall attest that the SPCC Plan has been prepared in accordance with good engineering practices. Such certification shall in no way relieve the owner or operator of an onshore or offshore facility of his duty to prepare and fully implement such Plan in accordance with § 112.7, as required by paragraphs (a), (b) and (c) of this section.

(e) Owners or operators of a facility for which an SPCC Plan is required pursuant to paragraphs (a), (b) or (c) of this section shall maintain a complete copy of the Plan at such facility if the facility is normally attended at least 8 hours per day, or at the nearest field office if the facility is not so attended, and shall make such Plan available to the Regional Administrator for on-site review during normal working hours.

(f) Extensions of time.

(1) The Regional Administrator may authorize an extension of time for the preparation and full implementation of an SPCC Plan beyond the time permitted for the preparation and implementation of an SPCC Plan pursuant to paragraphs (a), (b) or (c) of this section where he finds that the owner or operator of a facility subject to paragraphs (a), (b) or (c) of this section cannot fully comply with the requirements of this part as a result of either nonavailability of qualified personnel, or delays in construction or equipment delivery beyond the control and without the fault of such owner or operator or their respective agents or employees.

(2) Any owner or operator seeking an extension of time pursuant to paragraph (f) (1) of this section may submit a letter of request to the Regional Administrator. Such letter shall include:

(i) A complete copy of the SPCC Plan, if completed;

(ii) A full explanation of the cause for any such delay and the specific aspects of the SPCC Plan affected by the delay;

(iii) A full discussion of actions being taken or contemplated to minimize or mitigate such delay;

(iv) A proposed time schedule for the implementation of any corrective actions being taken or contemplated, including interim dates for completion of tests or studies, installation and operation of any necessary equipment or other preventive measures.

In addition, such owner or operator may present additional oral or written statements in support of his letter of request.

(3) The submission of a letter of request for extension of time pursuant to paragraph (f) (2) of this section shall in no way relieve the owner or operator from his obligation to comply with the requirements of § 112.3 (a), (b) or (c). Where an extension of time is authorized by the Regional Administrator for particular equipment or other specific aspects of the SPCC Plan, such extension shall in no way affect the owner's or operator's obligation to comply with the requirements of § 112.3 (a), (b) or (c) with respect to other equipment or other specific aspects of the SPCC Plan for which an extension of time has not been expressly authorized.

§ 112.4 Amendment of SPCC Plans by Regional Administrator.

(a) Notwithstanding compliance with § 112.3, whenever a facility subject to § 112.3 (a), (b) or (c) has: Discharged more than 1,000 U.S. gallons of oil into or upon the navigable waters of the United States or adjoining shorelines in a single spill event, or discharged oil in harmful quantities, as defined in 40 CFR Part 110, into or upon the navigable waters of the United States or adjoining shorelines in two spill events, reportable under section 311(b)(5) of the FWPCA, occurring within any twelve month period, the owner or operator of such facility shall submit to the Regional Administrator, within 60 days from the time such facility becomes subject to this section, the following:

(1) Name of the facility;

(2) Name(s) of the owner or operator of the facility;

(3) Location of the facility;

(4) Date and year of initial facility operation;

(5) Maximum storage or handling capacity of the facility and normal daily throughput;

(6) Description of the facility, including maps, flow diagrams, and topographical maps;

(7) A complete copy of the SPCC Plan with any amendments;

(8) The cause(s) of such spill, including a failure analysis of system or subsystem in which the failure occurred;

(9) The corrective actions and/or countermeasures taken, including an adequate description of equipment repairs and/or replacements;

(10) Additional preventive measures taken or contemplated to minimize the possibility of recurrence;

(11) Such other information as the Regional Administrator may reasonably require pertinent to the Plan or spill event.

(b) Section 112.4 shall not apply until the expiration of the time permitted for the preparation and implementation of an SPCC Plan pursuant to § 112.3 (a), (b), (c) and (f).

(c) A complete copy of all information provided to the Regional Administrator pursuant to paragraph (a) of this section shall be sent at the same time to the State agency in charge of water pollution control activities in and for the State in which the facility is located. Upon receipt of such information such State agency may conduct a review and make recommendations to the Regional Administrator as to further procedures, methods, equipment and other requirements for equipment necessary to prevent and to contain discharges of oil from such facility.

(d) After review of the SPCC Plan for a facility subject to paragraph (a) of this section, together with all other information submitted by the owner or operator of such facility, and by the State agency under paragraph (c) of this section, the Regional Administrator may require the owner or operator of such facility to amend the SPCC Plan if he finds that the Plan does not meet the requirements of this part or that the amendment of the Plan is neces-

sary to prevent and to contain discharges of oil from such facility.

(e) When the Regional Administrator proposes to require an amendment to the SPCC Plan, he shall notify the facility operator by certified mail addressed to, or by personal delivery to, the facility owner or operator, that he proposes to require an amendment to the Plan, and shall specify the terms of such amendment. If the facility owner or operator is a corporation, a copy of such notice shall also be mailed to the registered agent, if any, of such corporation in the State where such facility is located. Within 30 days from receipt of such notice, the facility owner or operator may submit written information, views, and arguments on the amendment. After considering all relevant material presented, the Regional Administrator shall notify the facility owner or operator of any amendment required or shall rescind the notice. The amendment required by the Regional Administrator shall become part of the Plan 30 days after such notice, unless the Regional Administrator, for good cause, shall specify another effective date. The owner or operator of the facility shall implement the amendment of the Plan as soon as possible, but not later than six months after the amendment becomes part of the Plan, unless the Regional Administrator specifies another date.

(f) An owner or operator may appeal a decision made by the Regional Administrator requiring an amendment to an SPCC Plan. The appeal shall be made to the Administrator of the United States Environmental Protection Agency and must be made in writing within 30 days of receipt of the notice from the Regional Administrator requiring the amendment. A complete copy of the appeal must be sent to the Regional Administrator at the time the appeal is made. The appeal shall contain a clear and concise statement of the issues and points of fact in the case. It may also contain additional information from the owner or operator, or from any other person. The Administrator or his designee may request additional information from the owner or operator, or from any other person. The Administrator or his designee shall render a decision within 60 days of receiving the appeal and shall notify the owner or operator of his decision.

[41 FR 12657, March 26, 1976]

§ 112.5 Amendment of Spill Prevention Control and Countermeasure Plans by owners or operators.

(a) Owners or operators of facilities subject to § 112.3 (a), (b) or (c) shall amend the SPCC Plan for such facility in accordance with § 112.7 whenever there is a change in facility design, construction, operation or maintenance which materially affects the facility's potential for the discharge of oil into or upon the navigable waters of the United States or adjoining shorelines. Such amendments shall be fully implemented as soon as possible, but not later than six months after such change occurs.

(b) Notwithstanding compliance with paragraph (a) of this section, owners and operators of facilities subject to § 112.3 (a), (b) or (c) shall complete a review and evaluation of the SPCC Plan at least once every three years from the date such facility becomes subject to this part. As a result of this review and evaluation, the owner or operator shall amend the SPCC Plan within six months of the review to include more effective prevention and control technology if: (1) Such technology will significantly reduce the likelihood of a spill event from the facility, and (2) if such technology has been field-proven at the time of the review.

(c) No amendment to an SPCC Plan shall be effective to satisfy the requirements of this section unless it has been certified by a Professional Engineer in accordance with § 112.3(d).

§ 112.6 Civil penalties for violation of Oil Pollution Prevention Regulations.

Owners or operators of facilities subject to § 112.3(a), (b) or (c) who violate the requirements of this Part 112 by failing or refusing to comply with any of the provisions of § 112.3, § 112.4 or § 112.5 shall be liable for a civil penalty of not more than $5,000 for each day such violation continues. Civil penalties shall be imposed in accordance with procedures set out in Part 114 of this subchapter D.

§ 112.7 Guidelines for the preparation and implementation of a Spill Prevention Control and Countermeasure Plan.

The SPCC Plan shall be a carefully thought-out plan, prepared in accordance with good engineering practices, and which has the full approval of management at a level with authority to commit the necessary resources. If the plan calls for additional facilities or procedures, methods, or equipment not yet fully operational, these items should be discussed in separate paragraphs, and the details of installation and operational start-up should be explained separately. The complete SPCC Plan shall follow the sequence outlined below, and include a discussion of the facility's conformance with the appropriate guidelines listed:

(a) A facility which has experienced one or more spill events within twelve months prior to the effective date of this part should include a written description of each such spill, corrective action taken and plans for preventing recurrence.

(b) Where experience indicates a reasonable potential for equipment failure (such as tank overflow, rupture, or leakage), the plan should include a prediction of the direction, rate of flow, and total quantity of oil which could be discharged from the facility as a result of each major type of failure.

(c) Appropriate containment and/or diversionary structures or equipment to prevent discharged oil from reaching a navigable water course should be provided. One of the following preventive systems or its equivalent should be used as a minimum:

(1) Onshore facilities.

(i) Dikes, berms or retaining walls sufficiently impervious to contain spilled oil

(ii) Curbing

(iii) Culverting, gutters or other drainage systems

(iv) Weirs, booms or other barriers

(v) Spill diversion ponds

(vi) Retention ponds

(vii) Sorbent materials

(2) Offshore facilities.

(i) Curbing, drip pans

(ii) Sumps and collection systems

(d) When it is determined that the installation of structures or equipment listed in § 112.7(c) to prevent discharged oil from reaching the navigable waters is not practicable from any onshore or offshore facility, the owner or operator should clearly demonstrate such impracticability and provide the following:

(1) A strong oil spill contingency plan following the provision of 40 CFR Part 109.

(2) A written commitment of manpower, equipment and materials required to expeditiously control and remove any harmful quantity of oil discharged.

(e) In addition to the minimal prevention standards listed under § 112.7(c), sections of the Plan should include a complete discussion of conformance with the following applicable guidelines, other effective spill prevention and containment procedures (or, if more stringent, with State rules, regulations and guidelines):

(1) *Facility drainage (onshore); (excluding production facilities).* (i) Drainage from diked storage areas should be restrained by valves or other positive means to prevent a spill or other excessive leakage of oil into the drainage system or inplant effluent treatment system, except where plan systems are designed to handle such leakage. Diked areas may be emptied by pumps or ejectors; however, these should be manually activated and the condition of the accumulation should be examined before starting to be sure no oil will be discharged into the water.

(ii) Flapper-type drain valves should not be used to drain diked areas. Valves used for the drainage of diked areas should, as far as practical, be of manual, open-and-closed design. When plant drainage drains directly into water courses and not into wastewater treatment plants, retained storm water should be inspected as provided in paragraph (e)(2)(iii) (B, C and D) before drainage.

(iii) Plant drainage systems from undiked areas should, if possible, flow into ponds, lagoons or catchment basins, designed to retain oil or return it to the facility. Catchment basins should not be located in areas subject to periodic flooding.

(iv) If plant drainage is not engineered as above, the final discharge of all in-plant ditches should be equipped with a diversion system that could, in

the event of an uncontrolled spill, return the oil to the plant.

(v) Where drainage waters are treated in more than one treatment unit, natural hydraulic flow should be used. If pump transfer is needed, two "lift" pumps should be provided, and at least one of the pumps should be permanently installed when such treatment is continuous. In any event, whatever techniques are used facility drainage systems should be adequately engineered to prevent oil from reaching navigable waters in the event of equipment failure or human error at the facility.

(2) *Bulk storage tanks (onshore); (excluding production facilities).* (i) No tank should be used for the storage of oil unless its material and construction are compatible with the material stored and conditions of storage such as pressure and temperature, etc.

(ii) All bulk storage tank installations should be constructed so that a secondary means of containment is provided for the entire contents of the largest single tank plus sufficient freeboard to allow for precipitation. Diked areas should be sufficiently impervious to contain spilled oil. Dikes, containment curbs, and pits are commonly employed for this purpose, but they may not always be appropriate. An alternative system could consist of a complete drainage trench enclosure arranged so that a spill could terminate and be safely confined in an in-plant catchment basin or holding pond.

(iii) Drainage of rainwater from the diked area into a storm drain or an effluent discharge that empties into an open water course, lake, or pond, and bypassing the in-plant treatment system may be acceptable if:

(A) The bypass valve is normally sealed closed.

(B) Inspection of the run-off rain water ensures compliance with applicable water quality standards and will not cause a harmful discharge as defined in 40 CFR 110.

(C) The bypass valve is opened, and resealed following drainage under responsible supervision.

(D) Adequate records are kept of such events.

(iv) Buried metallic storage tanks represent a potential for undetected spills. A new buried installation should be protected from corrosion by coatings, cathodic protection or other effective methods compatible with local soil conditions. Such buried tanks should at least be subjected to regular pressure testing.

(v) Partially buried metallic tanks for the storage of oil should be avoided, unless the buried section of the shell is adequately coated, since partial burial in damp earth can cause rapid corrosion of metallic surfaces, especially at the earth/air interface.

(vi) Aboveground tanks should be subject to periodic integrity testing, taking into account tank design (floating roof, etc.) and using such techniques as hydrostatic testing, visual inspection or a system of non-destructive shell thickness testing. Comparison records should be kept where appropriate, and tank supports and foundations should be included in these inspections. In addition, the outside of the tank should frequently be observed by operating personnel for signs of deterioration, leaks which might cause a spill, or accumulation of oil inside diked areas.

(vii) To control leakage through defective internal heating coils, the following factors should be considered and applied, as appropriate.

(A) The steam return or exhaust lines from internal heating coils which discharge into an open water course should be monitored for contamination, or passed through a settling tank, skimmer, or other separation or retention system.

(B) The feasibility of installing an external heating system should also be considered.

(viii) New and old tank installations should, as far as practical, be fail-safe engineered or updated into a fail-safe engineered installation to avoid spills. Consideration should be given to providing one or more of the following devices:

(A) High liquid level alarms with an audible or visual signal at a constantly manned operation or surveillance station; in smaller plants an audible air vent may suffice.

(B) Considering size and complexity of the facility, high liquid level pump cutoff devices set to stop flow at a predetermined tank content level.

(C) Direct audible or code signal communication between the tank gauger and the pumping station.

(D) A fast response system for determining the liquid level of each bulk storage tank such as digital computers, telepulse, or direct vision gauges or their equivalent.

(E) Liquid level sensing devices should be regularly tested to insure proper operation.

(ix) Plant effluents which are discharged into navigable waters should have disposal facilities observed frequently enough to detect possible system upsets that could cause an oil spill event.

(x) Visible oil leaks which result in a loss of oil from tank seams, gaskets, rivets and bolts sufficiently large to cause the accumulation of oil in diked areas should be promptly corrected.

(xi) Mobile or portable oil storage tanks (onshore) should be positioned or located so as to prevent spilled oil from reaching navigable waters. A secondary means of containment, such as dikes or catchment basins, should be furnished for the largest single compartment or tank. These facilities should be located where they will not be subject to periodic flooding or washout.

(3) *Facility transfer operations, pumping, and in-plant process (onshore); (excluding production facilities).* (i) Buried piping installations should have a protective wrapping and coating and should be cathodically protected if soil conditions warrant. If a section of buried line is exposed for any reason, it should be carefully examined for deterioration. If corrosion damage is found, additional examination and corrective action should be taken as indicated by the magnitude of the damage. An alternative would be the more frequent use of exposed pipe corridors or galleries.

(ii) When a pipeline is not in service, or in standby service for an extended time the terminal connection at the transfer point should be capped or blank-flanged, and marked as to origin.

(iii) Pipe supports should be properly designed to minimize abrasion and corrosion and allow for expansion and contraction.

(iv) All aboveground valves and pipelines should be subjected to regular examinations by operating personnel at which time the general condition of items, such as flange joints, expansion joints, valve glands and bodies, catch pans, pipeline supports, locking of valves, and metal surfaces should be assessed. In addition, periodic pressure testing may be warranted for piping in areas where facility drainage is such that a failure might lead to a spill event.

(v) Vehicular traffic granted entry into the facility should be warned verbally or by appropriate signs to be sure that the vehicle, because of its size, will not endanger above ground piping.

(4) *Facility tank car and tank truck loading/unloading rack (onshore).* (i) Tank car and tank truck loading/unloading procedures should meet the minimum requirements and regulation established by the Department of Transportation.

(ii) Where rack area drainage does not flow into a catchment basin or treatment facility designed to handle spills, a quick drainage system should be used for tank truck loading and unloading areas. The containment system should be designed to hold at least maximum capacity of any single compartment of a tank car or tank truck loaded or unloaded in the plant.

(iii) An interlocked warning light or physical barrier system, or warning signs, should be provided in loading/unloading areas to prevent vehicular departure before complete disconnect of flexible or fixed transfer lines.

(iv) Prior to filling and departure of any tank car or tank truck, the lowermost drain and all outlets of such vehicles should be closely examined for leakage, and if necessary, tightened, adjusted, or replaced to prevent liquid leakage while in transit.

(5) *Oil production facilities (onshore).* (i) *Definition.* An onshore production facility may include all wells, flowlines, separation equipment, storage facilities, gathering lines, and auxiliary non-transportation-related equipment and facilities in a single geographical oil or gas field operated by a single operator.

(ii) *Oil production facility (onshore) drainage.* (A) At tank batteries and central treating stations where an accidental discharge of oil would have a reasonable possibility of reaching navigable waters, the dikes or equivalent required under § 112.7(c)(1) should have drains closed and sealed at all times except when rainwater is being drained. Prior to drainage, the diked area should be inspected as provided in paragraph (e)(2)(iii) (B), (C), and (D). Accumulated oil on the rainwater should be picked up and returned to storage or disposed of in accordance with approved methods.

(B) Field drainage ditches, road ditches, and oil traps, sumps or skimmers, if such exist, should be inspected at regularly scheduled intervals for accumulation of oil that may have escaped from small leaks. Any such accumulations should be removed.

(iii) *Oil production facility (onshore) bulk storage tanks.* (A) No tank should be used for the storage of oil unless its material and construction are compatible with the material stored and the conditions of storage.

(B) All tank battery and central treating plant installations should be provided with a secondary means of containment for the entire contents of the largest single tank if feasible, or alternate systems such as those outlined in § 112.7(c)(1). Drainage from undiked areas should be safely confined in a catchment basin or holding pond.

(C) All tanks containing oil should be visually examined by a competent person for condition and need for maintenance on a scheduled periodic basis. Such examination should include the foundation and supports of tanks that are above the surface of the ground.

(D) New and old tank battery installations should, as far as practical, be fail-safe engineered or updated into a fail-safe engineered installation to prevent spills. Consideration should be given to one or more of the following:

(*1*) Adequate tank capacity to assure that a tank will not overfill should a pumper/gauger be delayed in making his regular rounds.

(*2*) Overflow equalizing lines between tanks so that a full tank can overflow to an adjacent tank.

(*3*) Adequate vacuum protection to prevent tank collapse during a pipeline run.

(*4*) High level sensors to generate and transmit an alarm signal to the computer where facilities are a part of a computer production control system.

(iv) *Facility transfer operations; oil production facility (onshore).* (A) All above ground valves and pipelines should be examined periodically on a scheduled basis for general condition of items such as flange joints, valve glands and bodies, drip pans, pipeline supports, pumping well polish rod stuffing boxes, bleeder and gauge valves.

(B) Salt water (oil field brine) disposal facilities should be examined often, particularly following a sudden change in atmospheric temperature to detect possible system upsets that could cause an oil discharge.

(C) Production facilities should have a program of flowline maintenance to prevent spills from this source. The program should include periodic examinations, corrosion protection, flowline replacement, and adequate records, as appropriate, for the individual facility.

(6) *Oil drilling and workover facilities (onshore)* (i) Mobile drilling or workover equipment should be positioned or located so as to prevent spilled oil from reaching navigable waters.

(ii) Depending on the location, catchment basins or diversion structures may be necessary to intercept and contain spills of fuel, crude oil, or oily drilling fluids.

(iii) Before drilling below any casing string or during workover operations, a blowout prevention (BOP) assembly and well control system should be installed that is capable of controlling any well head pressure that is expected to be encountered while that BOP assembly is on the well. Casing and BOP installations should be in accordance with State regulatory agency requirements.

(7) *Oil drilling, production, or workover facilities (offshore).* (i) Definition: "An oil drilling, production or workover facility (offshore)" may include all drilling or workover equipment, wells, flowlines, gathering lines, platforms, and auxiliary nontransportation - related equipment and facilities in a single geographical oil or gas field operated by a single operator.

(ii) Oil drainage collection equipment should be used to prevent and control small oil spillage around pumps, glands, valves, flanges, expansion joints, hoses, drain lines, separators, treaters, tanks, and allied equipment. Drains on the facility should be controlled and directed toward a central collection sump or equivalent collection system sufficient to prevent discharges of oil into the navigable waters of the United States. Where drains and sumps are not practicable oil contained in collection equipment should be removed as often as necessary to prevent overflow.

(iii) For facilities employing a sump system, sump and drains should be adequately sized and a spare pump or equivalent method should be available to remove liquid from the sump and assure that oil does not escape. A regular scheduled preventive maintenance inspection and testing program should be employed to assure reliable operation of the liquid removal system and pump start-up device. Redundant automatic sump pumps and control devices may be required on some installations.

(iv) In areas where separators and treaters are equipped with dump valves whose predominant mode of failure is in the closed position and pollution risk is high, the facility should be specially equipped to prevent the escape of oil. This could be accomplished by extending the flare line to a diked area if the separator is near shore, equipping it with a high liquid level sensor that will automatically shut-in wells producing to the separator, parallel redundant dump valves, or other feasible alternatives to prevent oil discharges.

(v) Atmospheric storage or surge tanks should be equipped with high liquid level sensing devices or other acceptable alternatives to prevent oil discharges.

(vi) Pressure tanks should be equipped with high and low pressure sensing devices to activate an alarm and/or control the flow or other acceptable alternatives to prevent oil discharges.

(vii) Tanks should be equipped with suitable corrosion protection.

(viii) A written procedure for inspecting and testing pollution prevention equipment and systems should be prepared and maintained at the facility. Such procedures should be included as part of the SPCC Plan.

(ix) Testing and inspection of the pollution prevention equipment and systems at the facility should be conducted by the owner or operator on a scheduled periodic basis commensurate with the complexity, conditions and circumstances of the facility or other appropriate regulations.

(x) Surface and subsurface well shut-in valves and devices in use at the facility should be sufficiently described to determine method of activation or control, e.g., pressure differential, change in fluid or flow conditions, combination of pressure and flow, manual or remote control mechanisms. Detailed records for each well, while not necessarily part of the plan should be kept by the owner or operator.

(xi) Before drilling below any casing string, and during workover operations a blowout preventer (BOP) assembly and well control system should be installed that is capable of controlling any well-head pressure that is expected to be encountered while that BOP assembly is on the well. Casing and BOP installations should be in accordance with State regulatory agency requirements.

(xii) Extraordinary well control measures should be provided should emergency conditions, including fire, loss of control and other abnormal conditions, occur. The degree of control system redundancy should vary with hazard exposure and probable consequences of failure. It is recommended that surface shut-in systems have redundant or "fail close" valving. Subsurface safety valves may not be needed in producing wells that will not flow but should be installed as required by applicable State regulations.

(xiii) In order that there will be no misunderstanding of joint and separate duties and obligations to perform work in a safe and pollution free manner, written instructions should be prepared by the owner or operator for contractors and subcontractors to follow whenever contract activities include servicing a well or systems appurtenant to a well or pressure vessel. Such instructions and procedures should be maintained at the offshore production facility. Under certain circumstances and conditions such contractor activities may require the presence at the facility of an authorized representative of the owner or operator who would intervene when necessary to prevent a spill event.

(xiv) All manifolds (headers) should be equipped with check valves on individual flowlines.

(xv) If the shut-in well pressure is greater than the working pressure of the flowline and manifold valves up to and including the header valves associated with that individual flowline, the flowline should be equipped with a high pressure sensing device and shutin valve at the wellhead unless provided with a pressure relief system to prevent over pressuring.

(xvi) All pipelines appurtenant to the facility should be protected from corrosion. Methods used, such as protective coatings or cathodic protection, should be discussed.

(xvii) Sub-marine pipelines appurtenant to the facility should be adequately protected against environmental stresses and other activities such as fishing operations.

(xviii) Sub-marine pipelines appurtenant to the facility should be in good

operating condition at all times and inspected on a scheduled periodic basis for failures. Such inspections should be documented and maintained at the facility.

(8) *Inspections and records.* Inspections required by this part should be in accordance with written procedures developed for the facility by the owner or operator. These written procedures and a record of the inspections, signed by the appropriate supervisor or inspector, should be made part of the SPCC Plan and maintained for a period of three years.

(9) *Security (excluding oil production facilities).* (i) All plants handling, processing, and storing oil should be fully fenced, and entrance gates should be locked and/or guarded when the plant is not in production or is unattended.

(ii) The master flow and drain valves and any other valves that will permit direct outward flow of the tank's content to the surface should be securely locked in the closed position when in non-operating or non-standby status.

(iii) The starter control on all oil pumps should be locked in the "off" position or located at a site accessible only to authorized personnel when the pumps are in a non-operating or non-standby status.

(iv) The loading/unloading connections of oil pipelines should be securely capped or blank-flanged when not in service or standby service for an extended time. This security practice should also apply to pipelines that are emptied of liquid content either by draining or by inert gas pressure.

(v) Facility lighting should be commensurate with the type and location of the facility. Consideration should be given to: (A) Discovery of spills occurring during hours of darkness, both by operating personnel, if present, and by non-operating personnel (the general public, local police, etc.) and (B) prevention of spills occurring through acts of vandalism.

(10) *Personnel, training and spill prevention procedures.* (i) Owners or operators are responsible for properly instructing their personnel in the operation and maintenance of equipment to prevent the discharges of oil and applicable pollution control laws, rules and regulations.

(ii) Each applicable facility should have a designated person who is accountable for oil spill prevention and who reports to line management.

(iii) Owners or operators should schedule and conduct spill prevention briefings for their operating personnel at intervals frequent enough to assure adequate understanding of the SPCC Plan for that facility. Such briefings should highlight and describe known spill events or failures, malfunctioning components, and recently developed precautionary measures.

APPENDIX

Memorandum of Understanding between the Secretary of Transportation and the Administrator of the Environmental Protection Agency.

SECTION II—DEFINITIONS

The Environmental Protection Agency and the Department of Transportation agree that for the purposes of Executive Order 11548, the term:

(1) "Non-transportation-related onshore and offshore facilities" means:

(A) Fixed onshore and offshore oil well drilling facilities including all equipment and appurtenances related thereto used in drilling operations for exploratory or development wells, but excluding any terminal facility, unit or process integrally associated with the handling or transferring of oil in bulk to or from a vessel.

(B) Mobile onshore and offshore oil well drilling platforms, barges, trucks, or other mobile facilities including all equipment and appurtenances related thereto when such mobile facilities are fixed in position for the purpose of drilling operations for exploratory or development wells, but excluding any terminal facility, unit or process integrally associated with the handling or transferring of oil in bulk to or from a vessel.

(C) Fixed onshore and offshore oil production structures, platforms, derricks, and rigs including all equipment and appurtenances related thereto, as well as completed wells and the wellhead separators, oil separators, and storage facilities used in the production of oil, but excluding any terminal facility, unit or process integrally associated with the handling or transferring of oil in bulk to or from a vessel.

(D) Mobile onshore and offshore oil production facilities including all equipment and appurtenances related thereto as well as completed wells and wellhead equipment, piping from wellheads to oil separators, oil separators, and storage facilities used in the production of oil when such mobile facilities are fixed in position for the purpose of oil production operations, but excluding any terminal facility, unit or process integrally associated with the handling or transferring of oil in bulk to or from a vessel.

(E) Oil refining facilities including all equipment and appurtenances related thereto as well as in-plant processing units, storage units, piping, drainage systems and waste treatment units used in the refining of oil, but excluding any terminal facility, unit or process integrally associated with the handling or transferring of oil in bulk to or from a vessel.

(F) Oil storage facilities including all equipment and appurtenances related thereto as well as fixed bulk plant storage, terminal oil storage facilities, consumer storage, pumps and drainage systems used in the storage of oil, but excluding inline or breakout storage tanks needed for the continuous operation of a pipeline system and any terminal facility, unit or process integrally associated with the handling or transferring of oil in bulk to or from a vessel.

(G) Industrial, commercial, agricultural or public facilities which use and store oil, but excluding any terminal facility, unit or process integrally associated with the handling or transferring of oil in bulk to or from a vessel.

(H) Waste treatment facilities including in-plant pipelines, effluent discharge lines, and storage tanks, but excluding waste treatment facilities located on vessels and terminal storage tanks and appurtenances for the reception of oily ballast water or tank washings from vessels and associated systems used for off-loading vessels.

(I) Loading racks, transfer hoses, loading arms and other equipment which are appurtenant to a nontransportation-related facility or terminal facility and which are used to transfer oil in bulk to or from highway vehicles or railroad cars.

(J) Highway vehicles and railroad cars which are used for the transport of oil exclusively within the confines of a nontransportation-related facility and which are not intended to transport oil in interstate or intrastate commerce.

(K) Pipeline systems which are used for the transport of oil exclusively within the confines of a nontransportation-related facility or terminal facility and which are not intended to transport oil in interstate or intrastate commerce, but excluding pipeline systems used to transfer oil in bulk to or from a vessel.

(2) "transportation-related onshore and offshore facilities" means:

(A) Onshore and offshore terminal facilities including transfer hoses, loading arms and other equipment and appurtenances used for the purpose of handling or transferring oil in bulk to or from a vessel as well as storage tanks and appurtenances for the reception of oily ballast water or tank washings from vessels, but excluding terminal waste treatment facilities and terminal oil storage facilities.

(B) Transfer hoses, loading arms and other equipment appurtenant to a nontransportation-related facility which is used to transfer oil in bulk to or from a vessel.

(C) Interstate and intrastate onshore and offshore pipeline systems including pumps and appurtenances related thereto as well as in-line or breakout storage tanks needed for the continuous operation of a pipeline system, and pipelines from onshore and offshore oil production facilities, but excluding onshore and offshore piping from wellheads to oil separators and pipelines which are used for the transport of oil exclusively within the confines of a nontransportation-related facility or terminal facility and which are not intended to transport oil in interstate or intrastate commerce or to transfer oil in bulk to or from a vessel.

(D) Highway vehicles and railroad cars which are used for the transport of oil in interstate or intrastate commerce and the equipment and appurtenances related thereto, and equipment used for the fueling of locomotive units, as well as the rights-of-way on which they operate. Excluded are highway vehicles and railroad cars and motive power used exclusively within the confines of a nontransportation-related facility or terminal facility and which are not intended for use in interstate or intrastate commerce.

PART 110—DISCHARGE OF OIL

Sec.
110.1 Definitions.
110.2 Applicability.
110.3 Discharge into navigable waters harmful.
110.4 Discharge into contiguous zone harmful.
110.5 Discharge prohibited.
110.6 Exception for vessel engines.
110.7 Dispersants.
110.8 Demonstration projects.
110.9 Notice.

AUTHORITY: The provisions of this Part 110 issued under sec. 11(b)(3), as amended, 84 Stat. 92; 33 U.S.C. 1161.

§ 110.1 Definitions.

As used in this part, the following terms shall have the meaning indicated below:

(a) "Oil" means oil of any kind or in any form, including, but not limited to, petroleum, fuel oil, sludge, oil refuse, oil mixed with ballast or bilge, and oil mixed with wastes other than dredged spoil;

(b) "Discharge" includes, but is not limited to, any spilling, leaking, pumping, pouring, emitting, emptying or dumping;

(c) "Vessel" means every description of watercraft or other artificial contrivance used, or capable of being used, as a means of transportation on water other than a public vessel;

(d) "Public vessel" means a vessel owned or bare-boat chartered and operated by the United States, or by a State or political subdivision thereof, or by a foreign nation, except when such vessel is engaged in commerce;

(e) "United States" means the States, the District of Columbia, the Commonwealth of Puerto Rico, the Canal Zone, Guam, American Samoa, the Virgin Islands, and the Trust Territory of the Pacific Islands;

(f) "Person" includes an individual, firm, corporation, association, and a partnership;

(g) "Contiguous zone" means the entire zone established or to be established by the United States under article 24 of the Convention on the Territorial Sea and the Contiguous Zone;

(h) "Onshore facility" means any facility (including, but not limited to motor vehicles and rolling stock) of any kind located in, on, or under, any land within the United States other than submerged land;

(i) "Offshore facility" means any facility of any kind located in, on, or under, any of the navigable waters of the United States other than a vessel or public vessel;

(j) "Applicable water quality standards" means water quality standards adopted pursuant to section 10(c) of the Federal Act and State-adopted water quality standards for waters which are not interstate within the meaning of that Act.

(k) "Federal Act" means the Federal Water Pollution Control Act, as amended, 33 U.S.C. 1151, et seq.

(l) "Sheen" means an iridescent appearance on the surface of water.

(m) "Sludge" means an aggregate of oil or oil and other matter of any kind in any form other than dredged spoil having a combined specific gravity equivalent to or greater than water.

§ 110.2 Applicability.

The regulations of this part apply to the discharge of oil into or upon the navigable waters of the United States, adjoining shorelines or into or upon the waters of the contiguous zone, prohibited by section 11(b) of the Federal Act.

§ 110.3 Discharge into navigable waters harmful.

For purposes of section 11(b) of the Federal Act, discharges of such quantities of oil into or upon the navigable waters of the United States or adjoining shorelines determined to be harmful to the public health or welfare of the United States, at all times and locations and under all circumstances and conditions, except as provided in section 110.6 of this part, include discharges which:

(a) Violate applicable water quality standards, or

(b) Cause a film or sheen upon or discoloration of the surface of the water or adjoining shorelines or cause a sludge or emulsion to be deposited beneath the surface of the water or upon adjoining shorelines.

§ 110.4 Discharge into contiguous zone harmful.

For purposes of section 11(b) of the Federal Act, discharges of such quantities of oil into or upon the waters of the contiguous zone determined to be harmful to the public health or welfare of the United States, at all times and locations and under all circumstances and conditions, except as provided in section 110.6 of this part, include discharges which:

(a) Violate applicable water quality standards in navigable waters of the United States, or

(b) Cause a film or sheen upon or discoloration of the surface of the water or adjoining shorelines or cause a sludge or emulsion to be deposited beneath the surface of the water or upon adjoining shorelines.

§ 110.5 Discharge prohibited.

As provided in section 11(b)(2) of the Federal Act, no person shall discharge or cause or permit to be discharged into or upon the navigable waters of the United States, adjoining shorelines, or into or upon the waters of the contiguous zone any oil, in harmful quantities as determined in §§ 110.3 and 110.4 of this part, except as the same may be permitted in the contiguous zone under Article IV of the International Convention for the Prevention of Pollution of the Sea by Oil, 1954, as amended.

§ 110.6 Exception for vessel engines.

For purposes of section 11(b) of the Federal Act, discharges of oil from a properly functioning vessel engine are not deemed to be harmful; but such oil accumulated in a vessel's bilges shall not be so exempt.

§ 110.7 Dispersants.

Addition of dispersants or emulsifiers to oil to be discharged which would circumvent the provisions of this part is prohibited.

§ 110.8 Demonstration projects.

Notwithstanding any other provisions of this part, the Administrator of the Environmental Protection Agency may permit the discharge of oil into or upon the navigable waters of the United States, adjoining shorelines, or into or upon the waters of the contiguous zone, in connection with research, demonstration projects, or studies relating to the prevention, control, or abatement of oil pollution.

§ 110.9 Notice.

Any person in charge of any vessel or onshore or offshore facility shall, as soon as he has knowledge of any discharge of oil from such vessel or facility in violation of § 110.5 of this part, immediately notify the U.S. Coast Guard of such discharge in accordance with such procedures as the Secretary of Transportation may prescribe.

CODE OF FEDERAL REGULATIONS

TITLE 40 - PROTECTION OF THE ENVIRONMENT

PART 110 - DISCHARGE OF OIL

Earliest 1st Qtr 1995

United States
Environmental Protection
Agency

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Emergency Response

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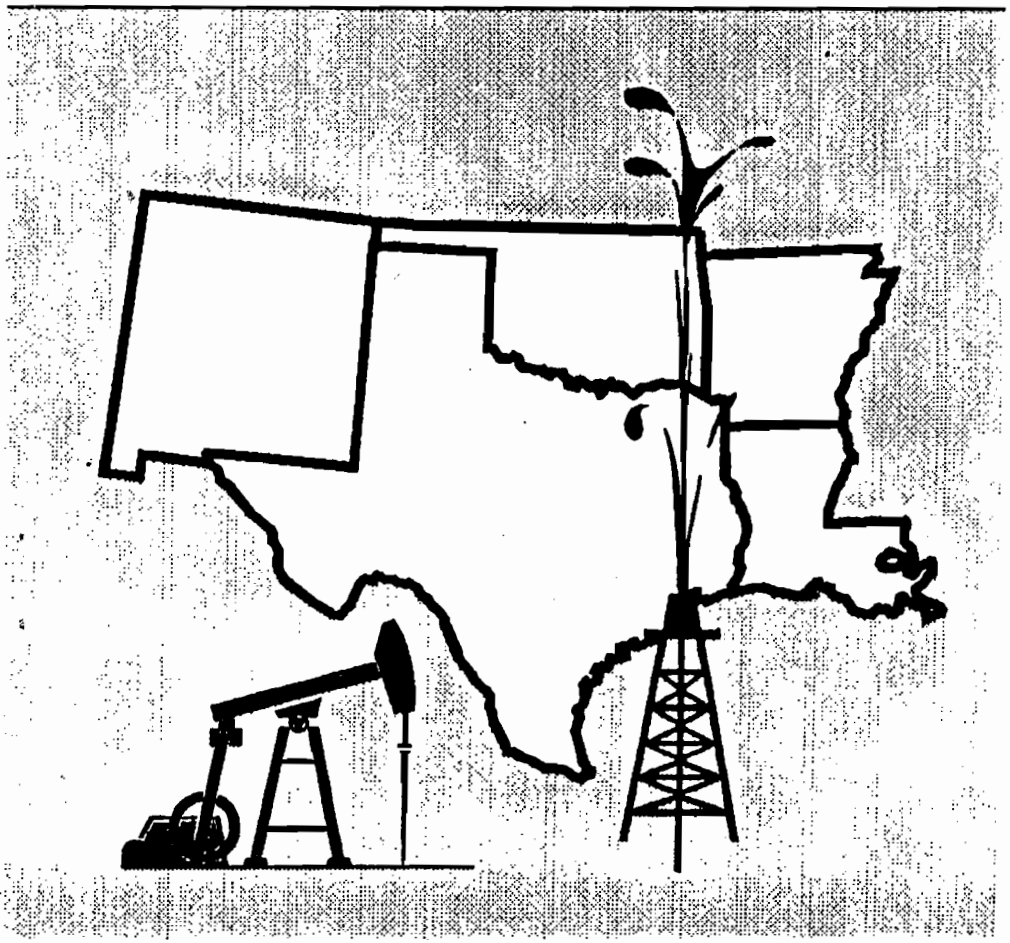
EPA

Information on SPCC Plans

40 CFR 112



INFORMATION ON SPCC PLANS

40 CFR 112

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KEY POINTS OF PREVENTION REGULATION

The Environmental Protection Agency Oil Pollution Prevention Regulation, published in the Federal Register on December 11, 1973, is addressed to non-transportation related facilities and is further identified as Title 40, Code of Federal Regulations, Part 112. The main requirement of facilities subject to the regulation is the preparation and implementation of a plan to prevent any discharge of oil into waters of the United States. The plan is referred to as a Spill Prevention Control and Countermeasure Plan (SPCC).

The following discussion will answer some of the frequently asked questions and summarize key elements of the regulation.

PURPOSE

To prevent discharges of oil into waters of the United States. The main

thrust of the regulation is "prevention" is opposed to "after-the-fact," or "reactive" measures commonly described in Spill Contingency Plans.

APPLIES TO

Owners or operators of facilities engaged in drilling, producing, gathering, storing, processing, refining, transferring, or consuming oil and oil products,/providing -

1. the facility is non-transportation related (see definition of non-transportation)

2. aboveground storage capacity of single container is in excess of 660 gallons, or an aggregate storage capacity greater than 1320 gallons, or providing that total below ground storage capacity is greater than 42,000 gallons

3. facilities, which, due to their location could reasonably expect spilled oil to reach waters of the United States.

MAIN OBJECTIVE OF REGULATION

Requires facilities which are subject to the regulation (based on above

criteria) to prepare and implement a Spill Prevention Control and Countermeasure (SPCC) Plan, prepared in accordance with guidelines outlinedin paragraph 112.7 of the regulation.

WHO PREPARES THE SPCC PLAN?

- Owners - operating their own facilities, or,
- Operators - of leased facilities, or,
- Persons in Charge - including departments, agencies, and instrumentalities of State or Federal Government.

GENERAL REQUIREMENTS OF THE SPCC PLAN

1. The SPCC Plan shall be a carefully thought out plan, prepared in accordance with good engineering practices, and which has the full approval of management at a level of authority to commit the necessary resources.

2. The complete SPCC Plan shall follow the sequence outlined (paragraph 112.7 of the regulation), and include a discussion of the facility's conformance with the appropriate guidelines listed.

SPECIFIC REQUIREMENTS

The Plan must be certified by a registered professional engineer (see paragraph 112.3(d) of the regulation).

A complete copy of the SPCC Plan shall be maintained at the facility, if the facility is normally attended at least eight hours per day, or at the nearest field office if the facility is not so attended. The plan is only submitted to EPA or State Agencies under circumstances and conditions outlined in paragraph 112.3(f) and paragraph 112.4(a).

The SPCC Plan shall be made available to the EPA Regional Administrator, or to his duly authorized representative for on-site review during normal working hours.

If a discharge occurs - in excess of 1000 gallons in a single event, or two discharges occur in "harmful quantities" within any twelve month period, the owner/operator must then submit copies of the SPCC Plan to the Regional Administrator and to the State Agency in charge of water pollution control activities. Other information must accompany the SPCC Plan as outlined in paragraph 112.4(a).

Regional Administrator:	The EPA Regional Administrator or a designee of the Regional Administrator, in and for the Region in which the facility is located.
Rivers and Canals:	Includes bodies of water confined within the inland area with a project depth of 12 feet or less, including the Intracoastal Waterway and other waterways artificially created for navigation.
SPCC Plan:	The document required by the Oil Pollution Prevention regulation that details the equipment, manpower, procedures, and steps to prevent, control and provide adequate countermeasures to an oil spill. The plan is a written description of the facility's compliance with the procedures of this regulation.
Worst-Case Discharge:	In the case of a vessel, a discharge in adverse weather conditions of its entire cargo; and in the case of an onshore or offshore facility, the largest foreseeable discharge in adverse weather conditions.

Nearshore Area:	The are extending seaward 12 miles from the boundary lines defined in 46 CFR part 7, except in the Gulf of Mexico. In the Gulf of Mexico, the nearshore area is the area extending seaward 12 miles from the line of demarcation (COLREG lines) defined in 33 CFR 80.740-80.850.
Non-persistent Oil:	A petroleum-based oil that, at the time of shipment, consists of hydrocarbon fractions: (1) at least 50% of which by volume, distill at a temperature of 340 degrees C (645 degrees F) and (2) at least 95% of which by volume, distill at a temperature of 370 degrees C (700 degrees F). A Group 1 oil can also be a non-petroleum oil with a specific gravity less than .8.
Non-petroleum Oil:	Oil of any kind that is not petroleum-based. It includes, but is not limited to, animal and vegetable oils.
Oil:	Oil in any kind or in any form, including, but not limited to petroleum, fuel oil, sludge, oil refuse, and oil mixed with wastes other than dredged soil.
Onshore Production Facilities:	Includes all wells, flowlines, separation: equipment, storage facilities, gathering lines, and auxiliary non-transportation-related equipment and facilities in a single geographical oil or gas field operated by a single operator.
Owner/Operator:	Any person owning or operating an onshore facility or an offshore facility, and in the case of any abandoned offshore facility, the person who owned or operated or maintained such facility immediately prior to such abandonment.
Persistent Oil:	Includes a petroleum-based oil that does not meet the distillation criteria for a non-persistent oil. Persistent oils are further classified based on specific gravity as follows: Group II -- specific gravity less than .85, Group III -- specific gravity between .85 and less than .95, Group IV -- specific gravity .95 or greater. Persistent oils also include non-petroleum oils with a specific gravity of .8 or greater. These oils are further classified based on specific gravity as follows: Group II -- specific gravity between .8 and less than .85, Group III -- specific gravity between .85 and less than .95 and Group IV -- specific gravity of .95 or greater.

After review of the SPCC Plan submitted under these circumstances the Regional Administrator may require an amendment to the Plan as deemed necessary to prevent any future discharges.

TIME LIMITS

For Existing Facilities:

From the effective date of the regulation (January 11, 1974)
Six months to prepare SPCC Plan (to July 11, 1974)

AND

Twelve months to implement SPCC Plan (to January 11, 1975)

For New Facilities:

From time of start-up of the new facility -
Six months to prepare SPCC Plan preparation
Twelve months to implement

TIME EXTENSIONS

At this point in time, (3-17-75), the only provision of the regulation for time extension of SPCC Plans would apply to NEW FACILITIES.

As an interpretative comment - it is difficult to anticipate circumstances which would reasonably justify an extension of time for a new facility since the normal time provision begins at the start-up date.

QUESTIONS FREQUENTLY ASKED

Question - What facilities will be subject to the 40 CFR 112 Regulation?

Answer - A. Non-transportation related facilities which have:

1. Aboveground storage capacity in excess of 1320 gallons or a single container in excess of 660 gallons

2. Underground storage capacity in excess of 42,000 gallons.

3. Facilities which due to their location and capacities in 1 and 2 could reasonably be expected to discharge into waters of the United States if a spill should occur.

Question - What is considered a non-transportation related facility?

Answer - All fixed facilities including support equipment, but excluding interstate pipelines, railroad tank cars in route, transport tuck in route and terminals associates with the transfer of bulk oil to or from a water transportation vessel.

Question - Who determines if a facility is in need of a Plan?

Answer - The owner or operator as required by the Regulation.

Question - What determines reasonability?

Answer - Location of the facility in relation to a stream, ditch, storm sewer, distance, volume of material, drainage patterns, soil conditions, etc.

Question - Who is required to prepare the SPCC Plan?

Answer - The owner/operator. The Certifying Engineer may assist, but the owner/operator is responsible.

Question - Why does the Plan have to be certified?

Answer - To assure that good engineering practices are followed in preparing the Plan.

Question - What are the requirements for certification?

Answer - The engineer should be familiar with the provisions of 40 CFR 112 and must have examined the facility -

and

be registered in at least one State. It is not necessary to be registered in the State in which the facility is located.

Question - What constitutes an SPCC Plan?

Injury: A measurable adverse change, either long- or short-term the chemical or physical quality or the viability of a nat resulting either directly or indirectly from exposure to a discha of oil, or exposure to a product of reactions resulting fro discharge of oil.

Inland Area: The area shoreward of the boundary lines defined in 46 C part 7, except in the Gulf of Mexico, and excluding the G Lakes. In the Gulf of Mexico, the Inland Area is the shoreward of the lines of demarcation (COLREG lines) defi in 33 CFR 80.740-80.850.

Navigable Waters: As defined by 40 CFR 110.1, means the waters of the Un States, including the territorial seas. The term includes:

(a) All waters that are currently used, were use the past, or may be susceptible to use in inters or foreign commerce, including all waters that subject to the ebb and flow of the tide;

(b) Interstate waters, including interstate wetla

(c) All other waters such as intrastate lakes, riv streams (including intermittent streams), mud sandflats, and wetlands, the use, degrada or destruction of which would affect or could a Interstate or foreign commerce including any waters:

(1) That are or could be used Interstate or foreign travelers recreational or other purpos

(2) From which fish or shellfish a could be taken and sold in i state or foreign commerce;

(3) That are used or could be use industrial purposes by indust in interstate commerce;

(d) All impounds of waters otherwise defined navigable waters under this section;

(e) Tributaries of waters identified in paragraph through (d) of this definition, including adja wetlands; and

(f) Wetlands adjacent to waters identified in p graphs (a) through (e) of this definition: Provi that waste treatment paragraphs) are not wa of the United States.

GLOSSARY

:harge: Includes, but is not limited to, any spilling, leaking, pumping, pouring, emitting, emptying, or dumping. Excludes discharges in compliance with a permit under section 402 of the CWA; discharges resulting from circumstances identified, reviewed, and made part of the public record with respect to a permit issued or modified under section 402 of the CWA, and subject to a conditions in such permit; or continuous or anticipated intermittent discharges from a point source, identified in a permit or permit application under section 402 of the CWA, that are caused by events occurring within the scope of relevant operating or treatment systems.

lity: Any mobile or fixed, onshore or offshore building, structure, installation, equipment, pipe, or pipeline use in oil well drilling operations, oil production, oil refining, oil storage, and waste treatment. The boundaries of a facility may depend on several site-specific factors, including, but not limited to, the ownership or operation of buildings, structures, and equipment on the same site and the types of activity at the site.

at Lakes: Lakes Superior, Michigan, Huron, Erie, and Ontario, their connecting and tributary waters, the Saint Lawrence River as far as Saint Regis, and adjacent port areas.

nful Quantity: Includes discharges of oil that violate applicable water quality standards or cause a sludge or emission to be deposited beneath the surface of the water or upon adjoining shorelines.

ıer Volume ıs: Includes the ports of: Boston, MA; New York, NY; Port Delaware Bay and River to Philadelphia, PA; St. Croix, VI; Pascagoula, MS; Mississippi River from Southwest Pass, LA to Baton Rouge, LA; Louisiana Offshore Oil Port (LOOP), LA; Lake Charles, LA; Sabine-Neches River, TX; Galveston Bay and Houston Ship Channel, TX; Corpus Christi, TX; Los Angeles/Long Beach Harbor, CA; San Francisco Bay, San Pablo Bay, Carquinez Strait, and Suisun Bay to Antioch, CA; Stratis of Juan De Fuca and Puget Sound, WA; and Prince William Sound, AK.

Answer - Follow the guidelines suggested in the Regulation - paragraph 112.7.

A sketch or drawing of the site will assist in identification the implementation.

Question - When the SPCC Plan is completed and certified, is it sent to EPA for review?

Answer - No, a certified copy of the Plan is required to be available from EPA on-site review; if the facility is attended at least eight hours a day. If the facility is not attended, then the Plan shall be kept at the nearest company office.

Question - What is the time frame for plan preparation and implementation for a new facility?

Answer - One year from the date the facility begins operation.

Question - Is an SPCC Plan required when a facility has existing preventative systems in place and no previous history of spills?

Answer - The need for an SPCC Plan is determined by criteria; the storage capacity and the location, disregarding existing man made structures.

Question - When a production lease consists of several operations, such as wells, oil/water separators, collection systems, tank batteries, etc. does each operation require a separate SPCC Plan?

Answer - No, one SPCC Plan may include all operations within a single geographical area when each is addressed in the Plan.

Question - Is every loss of oil or oil product subject to a penalty?

Answer - No, a discharge is defined in §311(a)(2) of the Federal Water Pollution Control Act as including, but not limited to, any spilling, leaking, pumping, pouring, emitting, emptying, or dumping that enters the waters of the U.S. or on the adjoining shorelines in harmful quantities. If the water is affected, a penalty could be assessed if a spill occurs and is prevented by some means from entering water, no penalty should be assessed.

Question - What is considered to be a harmful quantity?

Answer - Harmful quantity is defined in the Regulations as discharges which affect the water quality standards or cause a film or sheen upon or discoloration of the water or adjoining shorelines.

Question - What are considered navigable waters?

Answer - Section 502(7) of the EWPCA defines navigable waters as the waters of the United States. The Coast Guard interpretation includes not only the traditionally recognized navigable waters but all streams, creeks, lakes, and ponds connected to the tributary system in a river basin.

Question - Is one spillage of oil into a municipal storm sewer a violation?

Answer - If oil reaches "navigable water" a violation has occurred and penalties may result. The facility spilling the oil must also have an SPCC Plan implemented. A properly engineered plan and implemented would prevent a spill from occurring.

Question - What penalties are assessed?

Answer - Paragraph 112.6 of 40 CFR 112 authorizes the Regional Administrator to assess a civil penalty up to $5,000 per day for each violation.

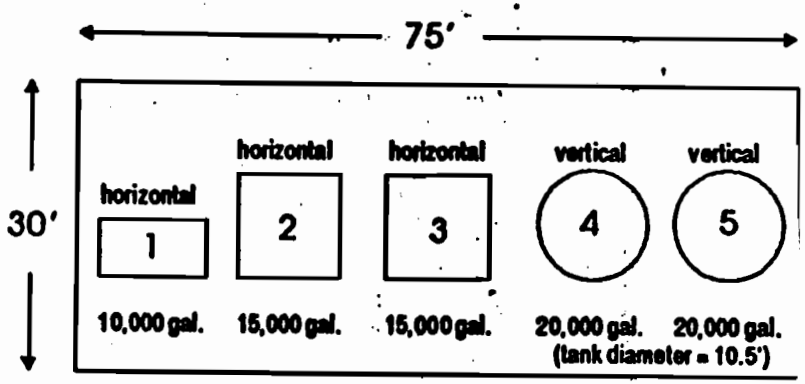
Question- Must secondary containment be provided for transfer operations (i.e. for a tanker truck loading or unloading fuel at a facility)?

Answer- The secondary containment system should be designed to hold at the least maximum capacity of any single compartment of a tank car or tank truck loading or unloading at the facility. This is not to say that a truck must park within a diked wall for loading/unloading. The regulation allows flexibility here for diversion structures such as curbing or diking to channel a potential spill to a secondary containment structure.

Question- Must an SPCC Plan be sent to EPA for review and/or approval?

Answer- Normally an SPCC Plan is not required to be sent to EPA for approval; however the owners or operators of a facility is required to maintain a complete copy of the Plan at the facility if the facility

3. Example of Design: Horizontal and Vertical Tanks
Plan View - Available Dike Position



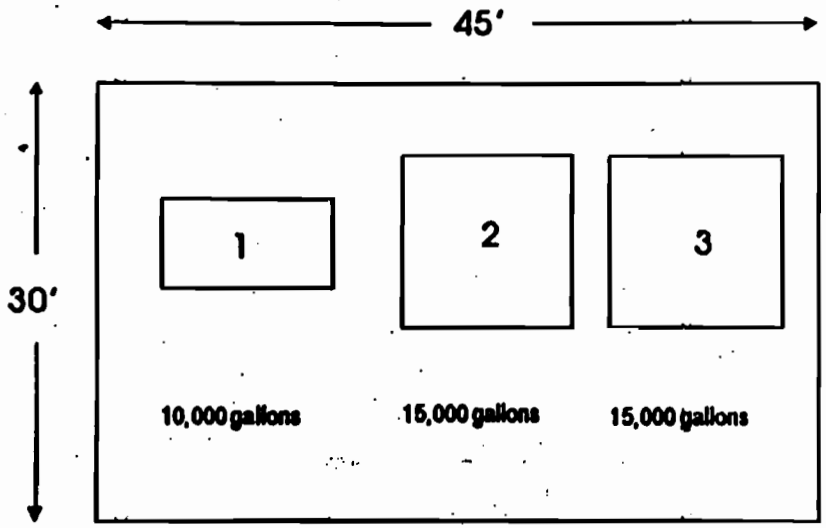
(a) From code, the Minimum Containment Volume is single largest tank wit dike; 20,000 gallons, this example.
20,000 gallons x .1337 cu. ft./gal. = 2674 cu. ft.

(b) Available Dike Area, this example: 30 ft. x 75 ft.= 2250 sq.ft.

(c) Observe that some volume of the vertical tanks goes below the dike w height (see last sentence, paragraph 1 a). This volume of the second 20,0 gallon tank (and any additional verticals) assumed not ruptured must l considered.

(d) Average Dike Height "h" is:
h x Area of Dike = Minimum Containment Volume + h x circular area of seco (and any additional vertical tanks.)
h x 2250 sq.ft. = 2674 cu.ft.+ h x 3.14 x (5.25)^2(radius squared)
2250h-86.5h = 2674
2163.5h = 2674
h = 2674/2163.5 = 1.236 ft. + freeboard (10% industry standard)
h = 1.3596ft. = 16.32 inches.

2. Example of Design: Horizontal Tanks Only
Plan View - Available Dike Position



(a) Minimum Containment Volume is single largest tank within dike: 15,000 gallons, this example.
15,000 gallons x .1337 cu.ft./gal.= 2006 cu.ft.

(b) Available Area, this example:
30 ft x 45 ft = 1350 sq. ft., this example.

(c) Average Dike Height "h" is:
h x Area of Dike = Minimum Containment Volume
h x 1350 sq.ft. = 2006 cu.ft.
h = 2006 / 1350
h = 1.486 ft.+ freeboard (10% industry standard) = 1.635 ft. = 19.62 inches

is normally attended to least 8 hours per day, or at the nearest field office if the facility is not attended. Upon inspection by EPA or representative, an SPCC Plan must be produce for the inspection review. An SPCC Plan must be submitted to EPA for review if either of the following conditions are met: (1) A facility discharges 1,000 gallons or more of oil in a single spill event, (2) A facility discharges oil in harmful quantities as defined in 40 CFR Part 110 into any waters of the United Sates in two spill events, reportable under section 311(b)(s) of the Federal Water Pollution Control Act; occurring within any twelve month period. If either conditions applies, the owner or operator of such facility is required to submit their SPCC Plan to the EPA within 60 days for review.

Question- Are SPCC Plans required for hazardous substances or hazardous wastes?

Answer- SPCC Plans are required for facilities that store or transport oil of any kind or in any form, including, but not limited to petroleum, fuel oil, sludge, oil refuse and oil mixed with wastes other than dredged spoil.

The SPCC regulation, as written, does not apply to hazardous or hazardous waste. Some RCRA permits may require secondary containment for hazardous wastes on a facility specific basis. Although secondary containment is not required by regulation for hazardous substances, EPA recommends that facility owners strongly consider it as a means of reducing environmental damage and liability resulting from an accidental release.

Question- Is a facility required to develop an SPCC Plan if a spill from the facility is not able to reach any navigable waters of the United States?

Answer- An SPCC Plan is required for any facility which, due to it's location, could reasonable by expected to discharge oil in harmful quantities, as defined in 40 CFR Part 110, into or upon the waters of the United States. The determination to develop a SPCC Plan is the responsibility of the owners or operators of the required facilities.

Question- Are federally-owned facilities subject to SPCC requirements?

Answer- Federally-owned and operated facilities are required to develop a SPCC Plan for any federal facility that meets the applicability requirements.

Question- Do the SPCC regulations spell out design requirements for diking, curbing, etc.?

Answer- The SPCC regulations requires diked areas for storage tanks to be sufficiently impervious to contain any spilled oil. All bulk storage tank installations should be constructed so that a secondary means of containment is provided for the entire contents of the largest single tank plus sufficient freeboard to allow for precipitation. Containment curbs and pits are sometime used as secondary containments but they may not always be appropriate for some facilities.

Question- What authorities do states have under the SPCC regulation?

Answer- The SPCC Program is a federally mandated program. Executive Order 11735 (August 3, 1973) delegated the authority of the President to promulgate prevention regulations for vessels or transportation, and to EPA (The Regional Administrators) for prevention for transportation related and non-transportation related facilities.

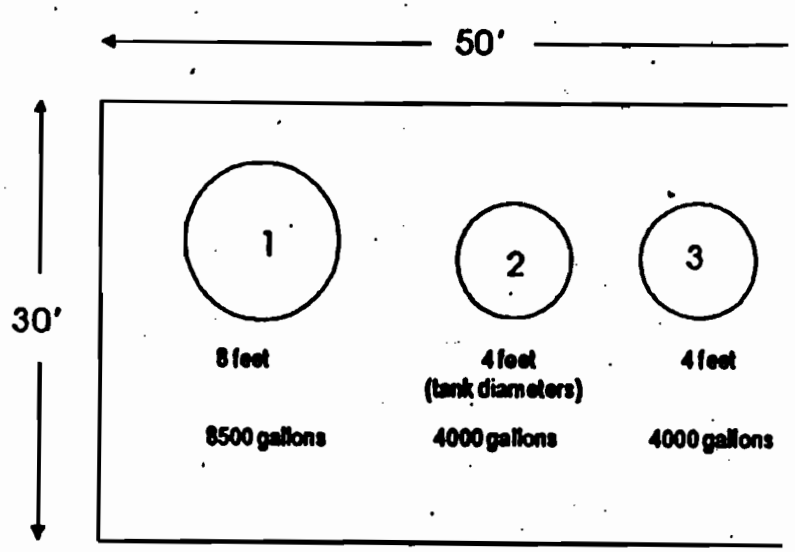
Question- If a tank is taken out of service, what measures must a facility take in order to be exempt from SPCC regulations?

Answer- Any tank taken out of service must have all pipes and fittings sealed off and tanks should be filled with a inert material, such as sand or concrete in order to be exempt from the SPCC regulations.

Question- Are tanks-within-a-tank satisfactory to meet the secondary containment requirement for SPCC?

Answer- Tanks within-a-tank may provide adequate secondary containment; however the valving must be designed so that accidental release from the inner tank (from such occurrences

1. Example of Design: Vertical Tanks Only
Plan View - Available Dike Position



(a) Minimum Containment Volume is single largest tank within dike: 8500 ga
this example.
8500 gallons x .1337 cu.ft./gal = 1136 cu.ft.

(b) Available Dike Area, this example:
50ft x 30 ft. = 1500 sq.ft.

(c) Available Dike Height "h" is:
h x Area of Dike = Min. Containment Volume + "h" x 3,14 x radius sq
of each tank (except largest tank)
h x 1500 sq.ft. = 1136 cu.ft. + "h" x 3.14 x $((2)^2 + (2)^2)$
1500h - 25.12h = 1136 cu.ft.
1474.88h = 1136cu.ft
h = 1136/1474.88 = .77 ft. + freeboard (10% industry standard) = .84
h = 10.08 inches

DIKE DESIGN PROCEDURE

General Code for Normally Stable, Flammable or Combustible Liquids

a) The volumetric capacity of the diked area shall not be less than the greatest amount of liquid that can be released from the largest tank within the diked area, assuming a full tank, plus a freeboard of at least twelve inches. The capacity of the diked area enclosing more than one tank shall be calculated by deducting the volume of the tanks other than the largest tank below the height of the dike.

b) Walls of the diked area shall be of earth, steel, concrete, or solid masonry designed to be liquid-tight and to withstand a full hydrostatic head. Earthen walls 3 feet or more in height shall have a flat section at the top not less than 2 feet wide. The slope of an earthen wall shall be consistent with the angle of repose of the material of which the wall is constructed.

c) The walls of the diked area shall be restricted to an average height of 6 feet above interior grade.

d) Where provision is made for draining water from diked areas, drainage shall be provided at a uniform slope of not less than 1 percent away from tanks toward a sump, drainbox, or other safe means of disposal located at the greatest practical distance from the tank. Such drains shall normally be controlled in a manner so as to prevent flammable or combustible liquids from entering natural water courses, public sewers, or public drains. Control of drainage shall be accessible under fir conditions.

e) No loose combustible material, empty or full drum or barrel, shall be permitted within the diked area.

f) Each diked area containing two or more tanks shall be subdivided preferably by drainage channels or at least by intermediate curbs in order to prevent spills from endangering adjacent tanks within the diked area as follows:
1) When storing normally stable, flammable or combustible liquids, one subdivision for each tank in excess of 100,000 gallons and one subdivision for each group of tanks (no tank exceeding 100,000 gallons capacity) having an aggregate capacity not exceeding 150,000 gallons.

as an inadvertent valve opening or a failure) are completely contained within the outer tank.

Question- Must each tank in a tank battery have secondary containment?

Answer- A dike for tank battery is required to contain only the largest single tank within the tank battery plus sufficient freeboard to allow for precipitation. The dike should be sufficiently impervious to contain any spilled oil from the tank battery.

Question- Should above ground tank and underground tanks be subject to inspection.

Answer- All above ground tanks should be subject to periodic integrity testing, taking into account tank design and using such techniques as hydrostatic testing, visual inspection or a system of non-destructive shell thickness testing. Tank supports and foundations should be included in these inspections.

Buried storage tanks represent a potential for undetected spills. A new buried installation should be protected from corrosion by coatings. Buried tanks should at least be subject to regular pressure testing. To quality as buried storage, a tank must be completely buried in the earth. Tanks which are in an underground basement or vault do not qualify for underground storage. The reason is that buried tanks usually have some inherent protection by the containing action of the surrounding earth.

Question- Are transformers covered under SPCC regulation?

Answer- Electrical transformers and similar equipment are covered by the SPCC regulation provided that they contain sufficient quantities of oil, and due to location, can reasonably be expected to spill their oil into navigable waters or adjoining shorelines.

Question- If the drainage from a facility discharge into a sewer system is this facility require to have a SPCC Plan?

Answer- If the sewer is a storm sewer or combined sewer, the spill could reasonably be expected to reach navigable waters and thus the plan would be required. If the flow from the sewer is entirely treated in a sewage treatment plant then an engineering

assessment should be made by the owner or operator as to whether or not the treatment system could handle the possible volume of oil without exceeding the permitted amount in the plant discharge without causing a harmful discharge. If the system could not handle the oil, then a SPCC Plan would be required.

Violations of other sections of the Federal Water Pollution Control Act or other laws may be involved in a spill to a municipal sewer system.

Question- What other regulation or standards may be applicable for oil storage facilities?

Answer- UST (Underground Storage Tank), NFPA, (National Fire Prevention Association) and State Fire Marshals.

Disclaimer: This is by no means a comprehensive list of other applicable regulations ad standards.

If you have additional questions about the SPCC Regulation please contact the United States Environmental Protection at 404/347-3931.

6) Instructions and company regulations have been posted conspicuo which relate to oil spill prevention and countermeasure procedures.

7.Future Spill Prevention Plans .

By 10 January 1975 (implementation deadline) the following additional plans be completed:

1) Onsite storage of spill containment and retrieval materials and equipment: bagged absorbent, absorbent pillars and booms, and tools. Storage fa will be well-publicized and clearly defined.

2) Installation of a sand-filled catchment basin for minor, routine spil at loading pump intakes and at loading rack. Sand to be periodi replaced.

3) A routine inspection program with check-off listing of tanks, pipi valves, hoses, and pumps for the prevention of both major spills a also minor spills or leakage through proper maintenance.

John Doe

(Signature)

4) Venting capacity is suitable for the fill and withdrawal rates.
5) Main power switch for pumps is located in a box which is locked when the bulk plant is unattended.
6) A dike surrounds the tank assembly. Its volume (height vs. area) is computed based on the single largest tank within (20,000 gallons) and allowance is made for additional vertical tank displacement volumes below the dike height (estimated spill liquid level). Total storage capacity is 140,000 gallons. a 2-inch water drain is located at the lowest point within dike enclosure and it connects to a normally-closed gate valve outside the dike.

5. Spill Prevention - Vehicular

1) Onsite
The frontal highway ditch and the ditch on the property's southern boundary intersect before crossing the highway through a culvert headed eastward and eventually to a stream located approximately on-half mile distant. Emergency containment action will constitute the erection of an earthen dam and placement of absorbent pillars at the entrance to the culvert. Additional cascading of barriers will be provided as necessary.

Personnel training and drill are described herein later.

2) Offsite
Each vehicle is equipped with a shovel and two absorbent pillars. The driver is instructed to achieve emergency containment, if possible, then call the office for help immediately.

6.Personnel

All personnel have been instructed and rehearsed in the following spill prevention and countermeasure plans:

1) No tanks or compartments to be filled without prior checking reserves.
2) No pump operations unless attended continuously.
3) Warning signs are displayed to check for line disconnections before vehicle departures.
4) Instruction has been held on oil spill prevention, containment, and retrieval methods, and a "dry-run" drill for an onsite vehicular spill incident has been conducted.
5) Instructions and phone numbers have been publicized and posted at the office regarding the report of a spill to the EPA and the Washington State Department of Ecology.

THE SPCC PLAN

BASIC CONCEPTS

There is no rigid format for an SPCC Plan. The guidelines (paragraph 112.7) of the regulation suggesting format is quoted - "The complete SPCC Plan shall follow the sequence outlined below, and include a discussion of the facility's conformance with the appropriate guidelines listed". These guidelines indicate "minimal" requirements and must necessarily provide wide latitude to the many types of facilities to which they apply.

Spills can best be controlled by installation of prevention systems, adherence to proper operating procedures, and preventative maintenance, supported by positive containment and removal. If these elements are well thought out and documented, the result will be an adequate SPCC Plan. Therefore, three basic principles should be embodied within and SPCC Plan -

1. The practices devotes to the prevention of oil spills,

2. the plan of containment should a spill occur, and

3. the plan for removal and disposal of oil.

Furthermore, the Plan must be maintained and/or revised according to any changes in operation, process, or facilities covered.

SPILL PREVENTION

Operational errors and equipment failures are the primary causes of spills. Therefore, the Plan should contain measures designed to avoid these errors and failures.

Operational Errors can be minimized through -

1. Personnel training,

2. operator awareness of the imperative nature of spill prevention, and

3. adequate supervision of procedures.

Management must be commited to spill prevention and must develop and enforce techniques for safe and efficient operation.

Equipment Failures can be minimized through -

1. proper initial selection and construction,

2. maintenance of structural integrity and function, and

3. frequent inspections.

Industry standards and sound engineering practices dictate the proper course of action in each of these areas.

CONTAINMENT OF SPILLED OIL

In our "inland" region we are generally concerned with spills from facilities where positive containment devices and systems are practical and effective. Dikes, retaining walls, curbing, spill diversion ponds, sumps, etc. fall into the category of prevention systems. Only where impracticability* to provide positive containment can be clearly demonstrated does the facility have the option to take the "contingency" plan approach. Contingency plans are considered "reactive" in nature - that is, they generally describe after-the-fact actions and can only be expected to mitigate the effects of a spill after it occurs. Therefore, preventative systems must be given first priority consideration in the initial study and preparation of the SPCC Plan.

* "Impracticability to provide positive containment" alludes mainly to those cases where severe space limitations may preclude installation of structures or equipment to prevent oil from reaching water. Justifying "impracticability" on the basis of financial considerations is difficult because the required commitment of man-power, equipment, and materials to expeditiously control, remove, and disperse of spilled oil would not normally offer any significant economic advantage.

ELEMENTS OF SPCC PLAN

While each SPCC Plan is unique, there are certain elements which may be included almost without exception to make a plan comply with provisions of the regulation and the spirit of oil spill prevention. These elements are discussed or listed as follows:

Name of facility - This may or may not be the business name.

Type of facility - This briefly describes the business activity.

Other Personnel: Secretary - Bookkeeper
Dispatcher
Transport Driver
(3) Delivery People

Service Area: King County, Washington

2. Description of Facility

The bulk plant of the ABC Oil Company handles, stores, and distributes petroleum products in the form of motor gasoline, kerosene, and No. 2 fuel oil. The accompanying drawing shows the property boundaries and adjacent highway, drainage ditches onsite buildings, and oil handling facilities.

Fixed Storage: (2) 20,000 gallon vertical tanks (premium gasoline)
(2) 20,000 gallon vertical tanks (regular gasoline)
(2) 20,000 gallon vertical tanks (No. 2 fuel oil)
(1) 20,000 gallon vertical tank (kerosene)

Total: 140,000 gallons

Vehicles: (1) Transport Truck
(4) Tankwagon Delivery Trucks

The bulk plant is surrounded by steel security fencing and the gate is locked close when the plant is unattended. Two area lights are located in such positions so a to illuminate the office and storage areas.

3. Past Spill Experience

(None)

4. Spill Prevention - Storage Tanks

1) Each tank is UL-142 construction (aboveground use)
2) The main outlet valve on each tank is locked-shut when the plant unattended.
3) Each tank is equipped with a direct-reading gauge.

APPENDIX B
SAMPLE SPCC PLAN

Spill Prevention Control and Countermeasure Plan

ABC OIL COMPANY
100 Neverspill Road
Post Office Box 100
Oilville, Washington 98000
Telephone (123) 456-7890

Contact
John Doe, Owner & Manager

CERTIFICATION:
Engineer: B. J. Embo

Signature:

License Number: 0000-00

State: Oregon
(Seal)

Date: 10 January 1974

1.Name and Ownership

Name: ABC Oil Company
100 Neverspill Road
Post Office Box 100
Oilville, Washington 9800
Telephone: (123) 456-7890

Manager: John Doe
505 Oil Road
Oilville, Washington 98000
Telephone: (123) 456-0987

Owner: Same

Date of Initial Operation - The date that the facility began operation.

Location of Facility - This may be a word description, or city address which can be supported by area maps.

Name and Address of Owner - Usually an address remote from the facility location.

Designated Person Responsible for Oil Spill Prevention - Each facility should have some person with overall oil spill responsibility. This person

should be thoroughly familiar with the regulation and the facility SPCC Plan.

Oil Spill History - This section can be either a reactive declaration, or a detailed history of significant spill events which occurred in the twelve month period prior to the publication of the regulation. In the latter case, typical information would include:

1. type and amount of oil spilled
2. location, date and time of spill(s)
3. watercourse affected
4. description of physical damage
5. cost of damage
6. cost of cleanup
7. cause of spill
8. action taken to prevent recurrence

Management Approval - This is a signed statement of a person with the authority to commit management to implementation of the Plan.

Certification - This is a statement of plan certification under the seal, signature, State and registration number of a registered professional engineer. The certifying engineer is not necessarily registered in the State in which the facility is located.

NOTE: All of the above information may be presented on a single page of an SPCC Plan. As an example, in Appendix "A" is a sheet entitled "Certification Information."

Facility Analyses - A portion of the plan should include a description of facility operation which would generally indicate the magnitude of spill potential. For example, the amount and type of storage, normal increments of transfer or patterns of usage, distribution, processes, etc. In this analyses the direction of flow of spilled oil should be indicated along with any factors which are pertinent or influence spill potential. It is appropriate to support this type information by charts, tables, plot plans etc. to aid clarity or promote brevity.

Location of Facility - The geographical location is an integral part of the SPCC Plan. Location and topographic maps can be critical in determining the adverse consequences of an oil spill. Sources for such maps include (1) U.S. Geological Survey, (2) State Highway Department, (3) County Highway Engineer, (4) Local Land Surveys, and (5) City Engineer.

Facility Inspection - An inspection report covering the facility in terms of equipments, containment, operation, drainage, security, etc. may provide essential information necessary to formulate the SPCC Plan. Therefore, such reports would best serve in the more complex facilities and is not considered necessarily an element common to all SPCC Plans.

SPCC EXAMPLES

Several industrial trade associations have developed suggested SPCC Plan preparation guidelines for use by their members. Generally these guidelines were developed for a particular type of facility and have been very helpful. However, care should be exercised not to rely totally on any stereotyped format. Each plan is unique to the facility and requires individual thought processes and tailoring to specific spill hazards.

The American Petroleum Institute has prepared a bulletin entitles "Suggested Procedures for Development of Spill Prevention Control and Countermeasure Plans" (API Bulletin D 16). This was designed primarily for oil production facilities.

The National Oil Jobbers Council has prepared a sample SPCC Plan covering a modest sized bulk plant which includes written and graphic details along with a dike design procedure. A copy of this is included in Appendix "B".

APPENDIX A

EXAMPLE CERTIFICATION PAGE

An example of a certification page for an SPCC Plan is shown below.

CERTIFICATION INFORMATION

A. Name of Facility - Washington Bulk Storage Terminal
B. Type of Facility - Crude Oil Storage and Handling
C. Date of Initial Operation - 1 January 1974
D. Location of Facility - 1111 Main Street, Seattle, WA
E. Name and Address of Owner:
ABC Oil Company
P. O. Box 100
Oilville, WA 98000
F. Designated Person Responsible for Oil Spill Prevention:
Name: John Doe
G. Oil Spill History - This facility has experienced no significant oil spill event during the twelve months prior to 10 January 1974.
H. Management Approval - Full approval is extended by Management a level with authority to commit the necessary resources toward spill prevention.

Signature

Name: Ms. A. A. Jones
Title: President, ABC Oil Company

1. Certification - I hereby certify that I have examined the facility and, being familiar with the provisions of 40 CFR, Part 112 attest that this SPCC Plan has been prepared in accordance with good engineering practices.

Name: B. J. Embo

Signature:

(Seal)
Date: 10 January 1974
0000-00

Registration N

State: Oreg

OFFICE OF WATER ABANDONS CWA REAUTHORIZATION

With Clean Water Act (CWA) reauthorization stalled and little hope for passage in the next Congress, EPA's Office of Water will shift its focus to meeting other water objectives. EPA officials say that the prospect of passing a CWA reauthorization bill in the next session of Congress is slim, and resources should be spent on meeting water quality objectives under the current CWA. Although specific objectives have yet to be developed, some new priorities include wet-weather flows and watershed-based approaches to water quality problems. EPA officials also say that if Congressional leaders or the administration decide CWA reauthorization is once again a high priority, then the agency will dedicate resources to support it.

VOC EMISSIONS STANDARDS PROPOSED

New standards for volatile organic compound (VOC) emissions from synthetic organic chemical manufacturing wastewater have been proposed by EPA (59 *FR* 46780, September 12). The proposed rule would require that "best demonstrated technology" be used for new, modified, and reconstructed process units to control wastewater emissions. The proposed standards are based on the availability of steam stripping treatment technology, which has been found to achieve the greatest VOC emission reduction among VOC control technologies. Biological treatment must achieve a 95% reduction of VOCs to be considered equivalent to steam stripping. In addition, biodegradation may be used in a series of processes where VOC reduction reaches 99%.

HAZARDOUS SPILL RESPONSE PLAN FINALIZED

EPA has finalized revisions to the National Oil and Hazardous Substances Pollution Contingency Plan (NCP). The NCP outlines the organizational structure and procedures for preparing for and responding to oil discharges and releases of hazardous substances. Changes to the national response structure include creating local planning committees and a national response unit to coordinate spill response resources. EPA also has updated the NCP list of bioremediation agents and other oil spill control substances, and has created the Oil Spill Liability Trust Fund to reimburse response and cleanup costs. For more information, contact *Rich Norris, EPA, (703) 603-9053.*

DRAFT WATER QUALITY MONITORING REPORT RELEASED

The U.S. Geological Survey's Intergovernmental Task Force on Monitoring Water Quality has developed a draft report for integrated, nationwide strategies for water quality monitoring. The draft report, scheduled to be completed by January 1995, makes recommendations to improve water quality monitoring and includes physical, chemical, and biological approaches. The five purposes of water quality monitoring identified in the report include characterizing status and trends, identifying and ranking existing and emerging problems, designing and implementing programs and projects, evaluating programs success and project compliance, and responding to emergencies. For more information, contact *Nancy Lopez, U.S. Geological Survey Office of Water, (703) 648-5014.*

RUSSIA AGREES TO STOP OCEAN DISPOSAL OF NUCLEAR WASTE

The former Soviet Union has agreed to stop disposal of low-level nuclear waste in the Arctic Ocean in exchange for U.S. assistance in expanding a liquid nuclear waste treatment facility in the Arctic. According to Congressional officials, the former Soviet Union has disposed of more than 2.5 million curies of low- and high-level radioactive waste at sea. A radioactive waste treatment facility in Murmansk, in northern Russia, does not have the capacity to treat the volume of waste generated. Most of the waste was disposed of by Russia's Northern Fleet of navy vessels and by privately owned nuclear-powered icebreaking vessels operating out of Murmansk.

AGRICULTURAL RUNOFF RULED A POINT SOURCE

A federal appeals court decision expanded the definition of point sources of pollution under the Clean Water Act (CWA) to include wet-weather flows from some farming operations. The decision, if upheld, could subject farmers to CWA citizen suits. Congressional leaders are considering legislation to clarify how runoff from agriculture should be addressed.

The court decision found that a farm in New York state was considered a point source subject to CWA regulations when it spread manure. The manure later entered a nearby stream. To be exempt from the CWA, farms must have more than 700 dairy cattle housed on the farm and no crops grown at the feeding facility. The farm was producing crops, but the court ruled that the fields were not part of the dairy operation, and therefore made the farm subject to CWA regulations.

CONGRESS REAUTHORIZES WETLANDS FUNDING

Legislation to reauthorize and expand the North American Wetlands Conservation Fund (NAWCF) has been passed by Congress and signed by President Clinton. The NAWCF, sponsored by Rep. Curt Weldon (R–Pa.) and Rep. John Dingell (R–Mich.), increases funding to protect wetlands to $20 million in fiscal years 1995 and 1996 and up to $30 million in 1997. Funding for the current program would have expired in 1995. For more information, contact *the office of Rep. Curt Weldon, (202) 225-2011.*

STATE WATER TOXICS PROGRAM RESCINDED

The California water toxics standard program has been rescinded following a court battle. Five municipal and industrial dischargers won a lawsuit against the California State Water Resources Control Board, challenging its inland surface waters plan and enclosed bays and estuaries plan. Toxic permit limits will be based on regional water quality plans and federal guidelines until the state can adopt new toxics standards. EPA is expected to adopt federal rules in July 1995.

MARINE POLLUTION PREVENTION STRATEGIES ADDRESSED

Efforts to prevent marine pollution from land-based sources will be addressed at an international meeting scheduled for March 1995 in Reykjavik, Iceland. Countries attending the meeting will divide the problem into components that can be addressed regionally. Land-based sources account for 70% to 90% of marine pollution.

Request for Data and Comment on Response Strategies for

[Federal Register: October 26, 1994]

ENVIRONMENTAL PROTECTION AGENCY
40 CFR Part 112

[FRL-5086-4]

Request for Data and Comment on Response Strategies for Facilities That Handle, Store, or Transport Certain Non-Petroleum Oils

AGENCY: U.S. Environmental Protection Agency (EPA).

ACTION: Notice and request for data.

SUMMARY: The U.S. Environmental Protection Agency (EPA) is publishing a notice and request for data regarding issues concerning the Clean Water Act section 311 (as amended by the Oil Pollution Act of 1990) requirements for facility response plan preparation as applied to non-transportation-related, onshore facilities that handle, store, or transport animal fats and vegetable oils. This notice is, in part, in response to a Petition for reconsideration of EPA's final facility response plan rule (Final Rule), (59 FR 34070, July 1, 1994), submitted to EPA by seven agricultural organizations. The Petition asserts that EPA does not adequately treat these oils differently from petroleum and toxic non-petroleum oils in the Final Rule. In support of their Petition, these organizations rely on studies that draw several conclusions concerning the physical, toxicological, and chemical properties of animal fats and vegetable oils compared with other types of oil. This notice summarizes the Petition, and asks for data and comment to assist EPA in determining whether and how the differences in properties of various oils warrant further different treatment, including possibly creating separate facility response plan regulatory regimes for these oils beyond the regime established in the July 1, 1994 Final Rule.

DATES: Submit written comments on this notice on or before January 24,

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REVENUE PROJECTIONS FROM ROUTINE CONTRACTS			JUDGEMENT FACTOR		95%						
CLIENT	SCOPE	TYPE	TOTAL $	SALES BCM$	GO GET	SALES FORECAST	JUDGEMENT FACTOR	1 QTR 94	2 QTR 94	3 QTR 94	4 QTR 94
IDC<$1MM											
NAVFAC	2 IDC Contracts, Various	$500K x2	$2,000,000	$2,000,000	100%	$2,000,000	$1,900,000	$158,333	$158,333	$158,333	$158,333
USACE	2 IDC Contracts, Various	$500K x2	$2,000,000	$2,000,000	100%	$2,000,000	$1,900,000		$158,333	$158,333	$158,333
USAF	1 IDC Contract, Various	$500K x2	$1,000,000	$1,000,000	50%	$500,000	$475,000			$59,375	$59,375
Other	2 Line Item Contracts, Var.	$250k eac	$500,000	$500,000	100%	$500,000	$475,000	$59,375	$59,375	$59,375	$59,375
S/T EST. AWARDS						$5,000,000					
JUDGEMENT FACTOR						95%					
S/T FORECAST SALES						$4,750,000		$217,708	$376,042	$435,417	$435,417

REVENUE PROJECTIONS FROM LARGE/KNOWN CONTRACTS			JUDGEMENT		50%						
CLIENT	SCOPE	TYPE	TOTAL $	SALES BCM$	GO GET	SALES FORECAST	JUDGEMENT FACTOR	1 QTR 94	2 QTR 94	3 QTR 94	4 QTR 94
IDC $1MM-$20MM KNOWN											
COE Baltimore	Envir Planning	$3mm x5y	$15,000,000	$15,000,000	10%	$1,500,000	$750,000				
COE Ft Worth	Envir Planning	$3mm x5y	$15,000,000	$15,000,000	5%	$750,000	$375,000				
COE Mobile(2)	HTRW (30% BCM sub)	$10MM	$10,000,000	$3,000,000	10%	$300,000	$150,000				
COE Baltimore(2)	HTRW (50% BCM prime)	$5MM x3y	$15,000,000	$15,000,000	10%	$1,500,000	$750,000				
COE Buffalo	HTRW (25% BCM sub)	$1MM x2y	$2,000,000	$500,000	5%	$25,000	$12,500				
COE Kansas City (4)	HTRW (25% BCM sub)	$5MM x4y	$20,000,000	$5,000,000	5%	$250,000	$125,000				
COE Omaha	HTRW (25% BCM sub)	$5MM x4y	$20,000,000	$5,000,000	5%	$250,000	$125,000				
S/T EST. AWARDS						$4,575,000					
JUDGEMENT FACTOR						50%					
S/T FORECAST SALES						$2,287,500			$114,375	$114,375	$114,375

1995.

ADDRESSES: Address comments on this notice to the docket clerk at the following address: U.S. Environmental Protection Agency, SPCC-3, 401 M Street, SW., Washington, DC 20460. Send one original and two copies to the regulatory docket and identify the copies by regulatory docket reference number SPCC-3. The docket is open from 9:00 a.m. to 4:00 p.m., Monday through Friday, excluding Federal holidays. Docket materials, including any materials referenced in this notice, may be reviewed by appointment by calling (202) 260-3046. (The titles of docket materials referenced in this notice are listed in Section VI.) Interested persons may copy a maximum of 266 pages from any one regulatory docket at no cost. Additional copies are $0.15 per page, plus a $25.00 administrative fee.

FOR FURTHER INFORMATION CONTACT: Bobbie Lively-Diebold, Oil Pollution Response and Abatement Branch, Emergency Response Division (5202G), U.S. Environmental Protection Agency, 401 M Street SW., Washington, DC 20460, at (703) 356-8744; the ERNS/SPCC Information line at (202) 260-2342; or the RCRA/Superfund Hotline at (800) 424-9346 (in the Washington, DC metropolitan area, [703] 412-9810). The Telecommunications Device for the Deaf (TDD) Hotline number is (800) 553-7672 (in the Washington, DC metropolitan area, [703] 412-3323).

SUPPLEMENTARY INFORMATION:

I. Background

A. Introduction

On July 1, 1994, EPA published its Final Rule amending the Oil Pollution Prevention regulation (40 CFR part 112) to incorporate new requirements to implement section 4202(a)(6) of the Oil Pollution Act of 1990 (OPA), amending section 311(j)(5) of the Clean Water Act (CWA). (See 33 U.S.C. 1321(j)(5).) (Oil Pollution Prevention; Non-Transportation-Related Onshore Facilities; Final Rule, 59 FR 34070, July 1, 1994.) The Final Rule directs certain facility owners and operators to prepare plans for responding to a worst case discharge of oil, and to a substantial threat of such a discharge. Under authority of section 311(j)(1)(C) of the CWA, the Final Rule requires planning for a small and medium discharge of oil, as appropriate.

Under section 4202(a)(6) of the OPA, these planning requirements apply to owners and operators of all offshore facilities and any onshore facility that, ``because of its location, could reasonably be expected to cause substantial harm to the environment by discharging

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REVENUE PROJECTIONS FROM OTHER CONTRACTS					BOOKINGS	GO	SALES	JUDGEMENT				
	CLIENT	SCOPE	TYPE	TOTAL $	BCM$	GET	FORECAST	FACTOR	1 QTR 94	2 QTR 94	3 QTR 94	4 QTR 94
	OTHER RPF'S KNOWN											
	?/COE Baltimore	TERC (5% BCM)	IDC	$100MM	$5,000,000	15%	$750,000	$375,000				
	?/COE Savannah	TERC (5% BCM)	IDC	$100MM	$5,000,000	10%	$500,000	$250,000				
	?/COE Tulsa	TERC (5% BCM)	IDC		$5,000,000		$0	$0				
	?/COE Kansas City	TERC (5% BCM)	IDC		$5,000,000		$0	$0				
	USAF AMC	1995+					$0	$0				
	USAF ACC	1995+					$0	$0				
	USN LANTDIV/SDIV	Env Svcs, Late 1994	IDC	$20MM	$20,000,000		$0	$0				
	CSC/USAFCEE	W/ Wide Svcs (10% BCM)	IDC	$30MM	$3,000,000	5%	$150,000	$75,000				
	USAF/CSC	Test Ranges Environmental	IDC	N/A	$1,000,000	5%	$50,000	$25,000				
	?/Aberdeen AMC	Facil Mstr Plans (10% BCM)	$10MM x	$30MM	$3,000,000	5%	$150,000	$75,000				
	CDM Fed Prog/EPA	RAC Contract (10% BCM)	$10MM x	$50MM	$5,000,000	10%	$500,000	$250,000				
	FAA	Hazmat Mgt Plan for UST	Line Item	N/A	$2,000,000	5%	$100,000	$50,000				
	COE Europe/Pickering	HTRW (50% BCM)	$500k x2y	$1MM	$500,000	20%	$100,000	$50,000				
	DCMA	Program EIS (25%BCM)	$2MM	N/A	$2,000,000	5%	$100,000	$50,000				
	DOE Savannah River	Project X	$500k x3y	$1.5MM	$1,500,000	10%	$150,000	$75,000				
	DOE Sandia	Sampling Program	$500k x5y	$2.5MM	$2,500,000	10%	$250,000	$125,000				
	S/T EST. AWARDS						$2,800,000					
	Judgement Factor						50%					
	S/T FORECAST BOOKINGS						$1,400,000			$70,000	$70,000	$70,000
	1994 FEDERAL AWARDS NET REVENUE PROJECTIONS								$276,208	$863,917	$1,074,792	$1,074,792

GRAND TOTAL SUMMARY	1 QTR 94	2 QTR 94	3 QTR 94	4 QTR 94
PROJECTED NET REVENUES FROM PRE 1993 AWARDS	$150,880	$336,080	$288,080	$236,080
PROJECTED NET REVENUES FROM 1993 AWARDS	$1,121,000	$1,286,286	$1,145,286	$1,190,286
PROJECTED NET REVENUES FROM FORECAST 1994 AWARDS	$276,208	$863,917	$1,074,792	$1,074,792
TOTAL NET REVENUE PROJECTIONS	$1,548,088	$2,486,282	$2,508,157	$2,501,157

EPA ANNOUNCES PROPOSED CHANGES TO THE OIL POLLUTION PREVENTION REGULATION

In response to several notable oil spills in the U.S. over the last decade, the Environmental Protection Agency (EPA) has re-examined the regulatory effectiveness of its national oil pollution prevention regulations. In 1989, after a four million gallon tank collapsed at the Ashland Oil Company in Floreffe, Pennsylvania, EPA organized a special task force to investigate the incident. The Task Force prepared a report that included recommendations to improve the effectiveness of its Spill Prevention, Control, and Countermeasures (SPCC) rule. In addition, the General Accounting Office (GAO) conducted an independent investigation of the Ashland spill and also determined that the Federal regulations should be revised to include more stringent requirements. In response to both the SPCC Task Force and GAO reports, EPA planned a two phased approach to the regulatory changes.

On October 22, 1991, the proposed Phase One revisions to the SPCC rule were published in the Federal Register. Facilities affected by this rule include all non-transportation-related onshore facilities with an above-ground oil storage capacity greater than 1,320 gallons, or 660 gallons in a single container, and facilities with an underground storage capacity of greater than 42,000 gallons. Regulated facilities are limited to those that, because of their location, could reasonably be expected to discharge oil into the navigable waters of the United States or adjoining shorelines.

The revised SPCC rule, in addition to strengthening and clarifying previous regulatory language, outlines the additional requirements that may impact the regulated community. There are four significant changes in the recently proposed rule including the implementation of notification requirements, additional SPCC Plan requirements, revised secondary containment requirements, and the inclusion of two new EPA recommendations.

Notification Requirements

Among the newly proposed requirements is a one-time mandatory notification process. Each SPCC-regulated facility will be required to complete the notification form attached, in the form of Appendix B, to the Phase One rule. Owners and operators must complete this form within 60 days of the date of the final rulemaking, which is expected to occur in the summer of 1992. EPA is planning to develop an inventory database to process the facility-specific information provided on the notification form.

SPCC Plan Requirements

Other changes in the Phase One rule involve the preparation and amendment of SPCC Plans for new and existing facilities. In the proposed rule, the owner or operator of a new facility must prepare and fully implement a Plan before beginning operations. In contrast, under the current rule, a six-month lag time is permissible between the start of operations and implementation of an SPCC Plan. Under the proposed revisions, the Plan must be amended before any change is made that may affect a facility's discharge potential. The SPCC Plan must be certified by a Registered Professional Engineer (PE). The language in the rule regarding Plan certification has not changed, but EPA solicits comments on two unresolved issues related to the status of the PE. Specifically, the Agency is seeking industry comment on whether the PE should be registered in the same State in which the facility is located and whether the PE should be financially independent of the facility.

Secondary Containment Requirements

The statutory language pertaining to secondary containment has also been amended in the proposed Phase One rule to ensure that the containment requirement is not to be interpreted as a discretionary measure. In order to emphasize the mandatory nature of the requirements, EPA has replaced the word "should" with the word "shall". This change is intended to clarify the obligations of the regulated community.

In addition, EPA is proposing to clarify the requirement regarding impermeability, by stating that the entire containment structure, including the walls and floor, must be impervious to oil for a 72-hour period. As in the current rule, the Phase One rule allows owners and operators the option of not providing secondary containment if they can demonstrate that it is impracticable. In this case, they must prepare a strong oil spill contingency plan and a written commitment of personnel, equipment, and materials for spill control and removal. Secondary containment for facilities that use oil operationally, rather than for storage purposes, has been identified as a situation where a containment structure may not be applicable.

Under the proposed revisions, facilities unable to provide secondary containment structures will be required to conduct tank integrity testing every five years, compared with a ten-year interval required of facilities with appropriate containment structures.

EPA Recommendations

In addition to establishing the above mentioned requirements, EPA has proposed two significant recommendations. EPA believes that implementation of these provisions at most facilities will decrease the likelihood of oil discharge and will mitigate those spills that may occur. It should be noted, however, that these recommendations do not apply to production facilities. The first recommendation

suggests that facilities have all buried piping tested annually or monitored monthly for integrity and leaks. The Agency also recommends that records be kept of the testing or monitoring for five years. The second Agency recommendation suggests that facilities post vehicle weight restrictions to prevent damage to underground piping. EPA is still evaluating the extent to which these provisions would further improve the effectiveness of the SPCC regulation.

SPCC Information Line

The Phase One changes outlined in this article will be followed by additional Phase Two requirements. These changes have resulted from the increased public concern over oil spill prevention and protection in the United States. Over the next year, the Agency will conduct a comprehensive outreach program to ensure that all members of the regulated community are aware of the proposed revisions. In addition, an SPCC information line is in place to answer any questions regarding the current oil pollution prevention program. The information line can be reached by dialing (202) 260-2342.

REVIEW AND APPROVAL OF RESPONSE PLANS FOR OIL COMPLEXES WITH MULTI-AGENCY JURISDICTION

Some onshore complexes subject to the response planning requirements of Section 311(j)(5) of the Clean Water Act, as amended by Section 4202 of the Oil Pollution Act (OPA) of 1990, have both transportation-related and non-transportation related facilities as defined in the Appendix to 40 CFR Part 112, the Environmental Protection Agency's (EPA) Oil Pollution Prevention regulation. By Executive Order 12777, these complexes will be subject to multi-agency jurisdiction for the purposes of response plan review and approval for the portions of the OPA response plan requirements that address transportation and non-transportation related facilities. An example of a complex regulated by several Agencies is a non-transportation bulk storage facility regulated by EPA with a marine transfer component regulated by the U.S. Coast Guard (USCG). Another example is a marine transfer facility regulated by USCG with break-out tanks regulated by the Research and Special Programs Administration (RSPA).

The USCG, in the Department of Transportation (DOT), through 33 CFR Part 154 will require response plans for applicable marine transportation related facilities. EPA, through 40 CFR Part 112, will require response plans for applicable onshore non-transportation related facilities and RSPA, in DOT, under 49 CFR Part 194 will require response plans for applicable onshore transportation related facilities, namely pipelines and pipeline facilities including break-out tanks.

The USCG, EPA and RSPA suggest that onshore complexes that are composed of both transportation related and non-transportation related facilities may prepare only one response plan to cover the entire complex. Where appropriate, the response plan can have separate sections that address different regulatory provisions or various definitions that apply to the part of the complex regulated by different Agencies, e.g., the amount of a worst case discharge. Owners or operators can choose the format for the response plan, but must prepare a cross-reference sheet that notes which elements of the plan pertain to the requirements of USCG, EPA and RSPA. Owners or operators must submit the required number of copies of the plan for review and approval to each appropriate Agency as required by its respective regulation(s).

USCG and EPA On-Scene Coordinators, the Federal officials designated by the Administrator of EPA and by the Commandant of the USCG to coordinate and direct Federal response under subpart D of the National Contingency Plan (40 CFR Part 300), may review response plans for facilities geographically located within their respective areas of responsibility. Any response plan concerns raised would be resolved through interagency discussions. Final approval of the response plan would remain with EPA for

facilities in the complex subject to 40 CFR Part 112, with the USCG for facilities in the complex subject to 33 CFR Part 154, and with RSPA for facilities in the complex subject to 49 CFR Part 194.

For further information on response plan rules, please contact the following:

- U.S. Coast Guard, Marine transportation-related facilities (published in the Federal Register February 5, 1993, p. 7330)- Lieutenant Commander Walter (Bud) Hunt (202) 267-6230;

- U.S. Environmental Protection Agency, Non-transportation-related fixed facilities (published in the Federal Register on February --, 1993, p. --) - Bobbie Lively-Diebold (703) 356-8774, or ERNS/SPCC Information Line (202) 260-2342;

- Research and Special Programs Administration, (published in the Federal Register January 5, 1993, p.244) - Lloyd W. Ulrich (202) 366-4556 or the RSPA Docket Room, (202) 366-5046.

COMPARISON OF RESPONSE PLANNING REQUIREMENTS UNDER THE ENVIRONMENTAL PROTECTION AGENCY (EPA), U.S. COAST GUARD, AND THE OFFICE OF PIPELINE SAFETY (OPS) REGULATORY PROGRAMS

This comparison is one approach that provides a general guide to the location of response plan elements in facility response plans prepared in accordance with the EPA, U.S. Coast Guard, or OPS format. This comparison provides the key references for the major response plan elements and, therefore, is not intended to be exhaustive.

RESPONSE PLAN ELEMENT	ENVIRONMENTAL PROTECTION AGENCY PROPOSED REGULATION[1]		U.S. COAST GUARD		OFFICE OF PIPELINE SAFETY APPENDIX A OF THE INTERIM FINAL REGULATION[4]
	§ 112.20	APPENDIX G	§154.1035 OF THE INTERIM FINAL REGULATION[2]	NVIC[3]	
Cross Index	Required if EPA format not followed	Required if EPA format not followed	(a)(5)	8(a)(5)	As appropriate
Emergency Response Action Plan	(h)(1)	1.1	(b) and §154.1041	8(b)	As appropriate
Facility Information	(h)(2)	1.2	(a)(1), (a)(2), and (g)(1)	8(a)(1), 8(a)(2), and (f)(1)	Section 1(b)
Facility Owner/Operator Contact Information	(h)(2)	1.2	(a)(3)	8(a)(3)	Section 1(a)(1)
Table of Contents	As appropriate	As appropriate	(a)(4)	8(a)(4)	As appropriate
Record of Changes for Plan Update	As appropriate	As appropriate	(a)(6) and §154.1065(2)-(3)	8(a)(6)	Section 8
Notification Procedures:					
Emergency notification telephone list	(h)(3)(iii)	1.3.1	(b)(1)(i)(A), (g)(2), and §154.1041(a)(3)	8(b)(1)(i)(A), 8(f)(2), and 10(c)	Sections 1(b)(2), 2(c), 5(a), 5(d), 9(a), 9(d), and 9(f)
Spill response notification form	(h)(3)(iv)	1.3.1	(b)(1)(ii)	8(b)(1)(ii)	not mentioned
*Identification of Qualified Individual[5]	(h)(2)	1.2	(b)(1)(i)(A) and §154.1026	5, 5.4, and 8(b)(1)(i)(A)	Sections 1(b)(2), 5(b), and 9(a)

RESPONSE PLAN ELEMENT	ENVIRONMENTAL PROTECTION AGENCY PROPOSED REGULATION[1]		U.S. COAST GUARD		OFFICE OF PIPELINE SAFETY APPENDIX A OF THE INTERIM FINAL REGULATION[4]
	§ 112.20	APPENDIX G	§154.1035 OF THE INTERIM FINAL REGULATION[2]	NVIC[3]	
*Responsibilities of Qualified Individual[5]	(h)(3)(ix)	1.3.5	(b)(3)(ii) and §154.1026	5.4 and 8(b)(3)(ii)	Section 4(b)
Spill Volumes/Discharge Scenarios:			§154.1025 and §154.1045		
Planning volume for average most probable (small) discharge	(h)(5)(ii)	1.5.1	(b)(2)(i)(A) and Appendix C	5, 8(b)(2)(i)(A) and Appendix C	As appropriate
Planning volume for maximum most probable (medium) discharge	(h)(5)(iii)	1.5.1	(b)(2)(i)(B) and Appendix C	5, 8(b)(2)(i)(B) and Appendix C	As appropriate
Planning volume for worst case discharge	(h)(5)(i)	1.5.2	(b)(2)(i)(C), §154.1029, and Appendix C	5, 5.2, 8(b)(2)(i)(C), and Appendix C	Sections 1(b)(6), 9(g), and 9(h)
Disposal Plans	(h)(7)(iii)	1.7.2	(b)(5)	8(b)(5)	As appropriate
*Spill response resources for worst case discharge:[5]			See footnote 6	See footnote 7	
Identification of spill removal organization(s)/evidence of contracts	(h)(3)(i)	1.3.3 and 1.7.1	(b)(3)(iv), §154.1045(e), and Appendix C	8(b)(3)(iv),11(e), and Appendix C	Sections 1(c), 4(d), and (9)(d)
Equipment lists	(h)(3)(vi) and (h)(7)(ii)	1.3.2	(g)(3), §154.1045(e), and Appendix C	8(f)(3), 11(e), and Appendix C	Sections 3(c), 3(d), 4(e)(1), and 9(e)(1)
Personnel lists	(h)(3)(v)	1.3.3	(g)(3)	8(f)(3)	Sections 3(e), 4(e)(2), and 9(e)(2)
Evacuation Plan	(h)(3)(vii)	1.3.4	Not required	Not required	As appropriate
Site-Specific Safety and Health Plan	As appropriate	As appropriate	(g)(5)	8(f)(5)	Section 9(k)(2)
Hazard Identification/Facility-Specific Information	(h)(4)	1.4.1	(c) and (g)(1)	8(c) and 8(f)(1)	Section 9(k)(1)
Identification of sensitive areas/vulnerability analysis	(h)(4)	1.4.2	(b)(4), §154.1045(k), and Appendix D	8(b)(4), 11(k), and Appendix D	Sections 9(i)(2)(i) and (ii)

RESPONSE PLAN ELEMENT	ENVIRONMENTAL PROTECTION AGENCY PROPOSED REGULATION[1]		U.S. COAST GUARD		OFFICE OF PIPELINE SAFETY APPENDIX A OF THE INTERIM FINAL REGULATION[4]
	§ 112.20	APPENDIX G	§154.1035 OF THE INTERIM FINAL REGULATION[2]	NVIC[3]	
Analysis of Spill Potential	(h)(4)	1.4.3	Not required	Not required	As appropriate
Spill History	(h)(4)	1.4.4	Not required	Not required	As appropriate
Discharge Detection Systems	(h)(6)	1.6	Not required	Not required	Sections 3(a) and 9(c)
Implementation of Response Activities	(h)(7)(i) and (h)(7)(ii)	1.7	(b)(2)(ii), (b)(3), and §154.1041(a)(1)	8(b)(2)(ii) 8(b)(3), and 10	Section 3(b), 3(c), and Section 4
*Training[5]	(h)(8)(ii)	1.8.3	(e)(1) and §154.1050	8(e)(1)	Section 6
*Drills[5]	(h)(8)(ii)	1.8.2	(e)(2) and 154.1055	8(e)(2)	Section 7
Diagrams	(h)(9)	1.9	(g)(1)	8(f)(1)	Sections 9(i) and 9(j)
Security	(h)(10)	1.10	Not required	Not required	As appropriate
*Consistency with NCP and ACPs[5]	(g)	Not mentioned	§154.1030(f) and §154.1045(k)(2)	7(e) and 11(i)	§194.107(c)

[1] Forthcoming proposed revisions to 40 CFR part 112, Oil Pollution Prevention regulation.

[2] Interim Final Rule, Response Plans for Marine Transportation-Related Facilities, 33 CFR parts 150 and 154, 58 FR 7330, February 5, 1993.

[3] Interim Guidelines for the Development and Review of Response Plans for Marine Transportation-Related Facilities Including Deepwater Ports, Navigation and Vessel Inspection Circular (NVIC) No. 7-92, September 15, 1992. See also Change 1 to NVIC 7-92, December 4, 1992.

[4] Interim Final Rule, Response Plans for Onshore Oil Pipelines, 49 CFR part 194, 58 FR 244, December 28, 1992.

[5] The response plan requirements with an asterisk refer to the response planning provisions under section 4202 of the Oil Pollution Act of 1990.

[6] The references are for Group I-IV oils. See 33 CFR 154.1047 for Group V oils, and 33 CFR 154.1049 for non-petroleum oils.

[7] The references are for Group I-IV oils. See 11.2 for Group V oils, and 11.4 for non-petroleum oils.

United States
Environmental Protection
Agency

Office of
Solid Waste and
Emergency Response

Publication 9360.8-06FS
February 1993

EPA

Facility Response Plans

Office of Emergency and Remedial Response
Emergency Response Division 5202G

Quick Reference Fact Sheet

In 1990, Congress passed the Oil Pollution Act (OPA) in part to expand the scope of public and private planning and response activities associated with discharges of oil. The OPA amends §311 of the Clean Water Act (CWA) to augment Federal response authority, increase penalties for unauthorized spills, expand the organizational structure of the Federal response framework, and provide a greater emphasis on preparedness and response activities. CWA §311 requires the preparation of plans to respond to a worst-case discharge of oil, and sets forth specific requirements for development of such plans. These response plan requirements apply to an owner/ operator of any onshore facility that, because of its location, could reasonably be expected to cause substantial harm to the environment by a discharge of oil into navigable waters,[1] adjoining shorelines, or the exclusive economic zone (i.e., "substantial harm facilities"). Section 311 of the CWA requires that owner/operators of such "substantial harm facilities" must submit their response plans by February 18, 1993, or stop handling, storing, or transporting oil. CWA §311 also provides that a subset of "substantial harm facilities" (i.e., facilities that could reasonably be expected to cause significant and substantial harm to the environment by discharging oil, or "significant and substantial harm facilities") must have their plans approved by the Federal government.

The President has delegated the authority to regulate non-transportation-related onshore facilities to the Administrator of EPA. EPA is implementing the CWA §311 response plan requirements in a proposed revision to the Oil Pollution Prevention regulation (40 CFR Part 112). The purpose of this fact sheet is to provide general information on how EPA intends to implement the CWA §311 requirements. Specifically, the fact sheet addresses who must prepare plans, which plans must be approved, and what a facility response plan should contain.

WHO MUST PREPARE PLANS? ("SUBSTANTIAL HARM FACILITIES")

Under CWA §311, only certain facilities are required to prepare and submit response plans, i.e., those facilities that could cause substantial harm to the environment. EPA has proposed two ways in which a facility may be identified as posing substantial harm: (1) through a self-selection process; or (2) by determination of the Regional Administrator (RA).

For the self-selection process, §112.20(f)(i) of the proposed rule lists specific criteria to help owner/operators evaluate whether their facilities pose substantial harm (see **Highlight 1**). The proposed rule also provides more detailed information to help owner/operators interpret these criteria to determine whether their facility should be regarded as a "substantial harm facility." For example, Appendix C of the proposed rule provides formulas to help evaluate whether a facility is located at a distance that could cause injury to an environmentally sensitive area or shut down operations at a public drinking-water intake. (NOTE: Facility owner/operators may also use an alternative formula provided that they document such use, as appropriate.) Appendix D of the proposed rule provides information on environmentally sensitive areas.

[1] Navigable waters are defined in CWA §502(7) and at 40 CFR 110.1 as waters of the United States, including the territorial seas. This definition includes, among other things, lakes, rivers, streams (including intermittent streams), mudflats, and wetlands.

Highlight 1
SELF-SELECTION CRITERIA

Under the proposed rule, a facility would fall under the "substantial harm" category if it meets at least one of the following criteria:

- The facility has a total storage capacity greater than or equal to 42,000 gallons and performs over-water oil transfers to or from vessels; OR
- The facility has a total storage capacity greater than or equal to one million gallons, and meets any one of the following conditions:
  - -- Does not have adequate secondary containment for each aboveground storage area;
  - -- Is located such that a discharge could cause "injury" to an environmentally sensitive area;
  - -- Is located such that a discharge would shut down a public drinking-water intake; or
  - -- Has had, in the past 5 years, a reportable spill greater than or equal to 10,000 gallons.

The owner/operator of any facility currently regulated by the existing Oil Pollution Prevention regulation may consult the proposed rule for details on the self-selection screening process. If the self-selection process does indicate that a facility poses a threat of "substantial harm" to the environment, the owner/operator would be required prepare and submit a facility response plan to the appropriate EPA RA. CWA §311 requires that owner/operators of "substantial harm facilities" must submit their response plans by February 18, 1993, or stop handling, storing, or transporting oil.

Under the proposal, the RA also would have the authority to determine that a facility may cause substantial harm, regardless of the results of the self-selection screening process. As set forth in §112.20(b) of the proposed rule, the RA's determination would be based on factors similar to the criteria used in the self-selection screening process, as well as other site-specific characteristics and environmental factors.

☞ IN ADDITION TO THE SELF-SELECTION PROCESS, THE RA MAY DETERMINE THAT A FACILITY POSES SUBSTANTIAL HARM.

Under the proposal, if an owner/operator determines that the facility does not have the potential to cause substantial harm, the owner/operator would have to complete the certification form contained in Appendix C of the proposed response plan rulemaking. This form would be maintained at the facility. In addition, if the self-selection process is completed using an alternative formula, the owner/operator would be required to notify the RA in writing and provide information on the reliability and analytical soundness of the alternative formula.

WHICH PLANS MUST BE APPROVED? ("SIGNIFICANT AND SUBSTANTIAL HARM FACILITIES")

In addition to the requirement to prepare response plans, CWA §311 establishes further requirements for a subset of facilities that could cause significant and substantial harm. CWA §311 requires that EPA must review and approve the response plans submitted for these facilities.

Under §112.20(f)(3) of the proposed rule, the RA would identify these "significant and substantial harm facilities" using a series of risk-based screening considerations. These considerations include factors similar to the criteria to determine substantial harm, as well as the age of the tanks, proximity to navigable waters, and spill frequency. Facilities would be notified in writing of their status as posing significant and substantial harm.

Under CWA §311, if EPA does not review and approve a "significant and substantial harm facility" plan by August 18, 1993, the facility must stop handling, storing, or transporting oil. However, the number of plans needing review may prevent RAs from approving all response plans by the statutory deadline. CWA §311 allows a "significant and substantial harm facility" owner/operator to seek Federal authorization to operate for up to two years after the plan has been submitted where the owner/operator certifies that he or she has ensured by contract or other approved means the availability of private personnel and equipment necessary to respond to a worst-case discharge.

Under §112.20(b) of the proposed rule, owner/operators who seek such authorization may submit to the RA a certification statement and proof that a written contractual agreement or other approved means is in place. Examples of "other approved means" may include:

- Certification that the owner/operator has access to the necessary personnel and equipment;

- Active membership in spill organization that ensures adequate access to the necessary personnel and equipment; or

- Other specific arrangements approved by the RA upon the request of the owner/operator.

WHAT SHOULD A FACILITY RESPONSE PLAN CONTAIN?

As discussed above, CWA §311 requires that the response plan must address certain critical items. CWA §311 requires that the response plan:

- Be consistent with the National Contingency Plan and Area Contingency Plans;

- Identify a qualified individual having full authority to implement removal actions, and require immediate communication between that person and appropriate Federal authorities and responders;

- Identify and ensure availability of resources to remove, to the maximum extent practicable, a worst-case discharge;

- Describe training, testing, unannounced drills, and response actions of persons at the facility;

- Be updated periodically; and

- Be resubmitted for approval of each significant change.

To assist owners or operators in preparing response plans, Appendix G of the proposed rule includes a model facility response plan that addresses CWA §311 provisions in a comprehensive and well-organized manner. **Highlight 2** outlines elements of the model plan.

Under the proposal, the organization of the model plan and the information contained in it would be representative of the format and level of detail needed to address the required response plan elements in an acceptable manner. However, EPA recognizes that there may be many facilities with existing response plans. Therefore, owner/operators generally would not need to prepare a separate plan to comply with CWA §311 if they have already prepared a plan, provided that the original plan: (1) satisfies the appropriate requirements and is equally stringent; (2) includes all the elements described in the model plan; (3) is cross-referenced appropriately; and (4) contains an Action Plan for use during a discharge.

Although Spill Prevention, Control, and Countermeasure (SPCC) plans (i.e., prevention plans) and response plans are different, and should be maintained as separate documents, some sections of the plans may be the same. The proposed rule would allow the owner/operator to reproduce and use those sections of the SPCC Plan in the response plan.

Highlight 2
RESPONSE PLAN ELEMENTS

Under the proposed rule, elements of an effective response plan would include the following:

- Emergency Response Action Plan[a]
- Facility name, type, location, owner, operator information
- Emergency notification, equipment, personnel, and evacuation information
- Identification and evaluation of potential spill hazards and previous spills
- Identification of small, medium, and worst-case discharge scenarios and response actions
- Description of discharge detection procedures and equipment
- Detailed implementation plan for containment and disposal
- Facility and response resource self-inspection, training, and meeting logs
- Diagrams of facility and surrounding layout, topography, and evacuation paths
- Security (fences, lighting, alarms, guards, emergency cut-off valves and locks, etc.)

[a] A response plan would serve as both a planning and action document, and the action portion should be maintained as an easily-accessible, stand-alone section of the overall plan.

SPILL PREVENTION (SPCC) PLANS AND FACILITY RESPONSE PLANS ARE DIFFERENT

The CWA §311 requirements to develop a response plan will affect many facilities that are already subject to the Oil Pollution Prevention regulation. This regulation, which has been in effect since 1973, applies to facilities that meet the characteristics set forth at 40 CFR §112.1 (see **Highlight 3**).

The owner/operator of any facility subject to the Oil Pollution Prevention regulation is required to prepare and implement an SPCC Plan. SPCC Plans focus on procedures to prevent and control oil spills. In contrast, the facility response plans required by CWA §311 are intended to focus on reactive measures, such as how facility personnel are to respond to a discharge. The response plan should be maintained as a separate document from the SPCC Plan and be easily accessible during an emergency.

Under CWA §311, certain facilities are required to submit only the response plan to EPA.

Highlight 3
FACILITIES SUBJECT TO THE OIL POLLUTION PREVENTION REGULATION

The Oil Pollution Prevention regulation applies to facilities with the following characteristics:

- Facility Type: Non-transportation-related on-shore facilities.
- Oil Product Storage: The total aboveground storage capacity at the facility is greater than 1,320 gallons (or greater than 660 gallons in a single container), or the total underground storage capacity is greater than 42,000 gallons.
- Location: Facilities that, because of their location, could reasonably be expected to discharge oil into the navigable waters of the U.S. or adjoining shorelines.

FOR MORE INFORMATION

For more information, please call the SPCC Information Line at (202) 260-2342, or the specific EPA Regional office. The mailing addresses for the offices and a map showing the geographic boundaries of the Regions are contained in the proposed regulation.

EPA Region 1 (617) 860-4361	EPA Region 2 (908) 321-6656	EPA Region 3 (215) 597-5998/1357	EPA Region 4 (404) 347-3931
EPA Region 5 (312) 886-6236	EPA Region 6 (214) 655-2270	EPA Region 7 (913) 551-5000	EPA Region 8 (303) 293-1788
EPA Region 9 (415) 744-1500	EPA Region 10 (206) 553-1090		

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Environmental Protection
Agency (OS-120)
Washington, DC 20460

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Oil Pollution Act of 1990

Does your shore installation transfer oil (fuel) over water to or from vessels? Or does it store a million gallons or more?

The Oil Pollution Act of 1990 (OPA 90) is a federal law requiring certain facilities to prepare an oil spill contingency plan. Two categories of facility were created: ''substantial harm'' facilities and ''significant and substantial harm'' facilities (referring to harm to the environment that could be caused by a discharge to navigable waters).

The bad news. Four different regulations were issued for four different types of onshore facility. There are four definitions of harm and four variations of the law's required plan. For each regulation under which you meet the definition of ''substantial harm'', you owe that regulatory agency that plan variation. A facility under multiple regulators is called a ''complex.'' Here's a summary of onshore regulations:

FACILITY TYPE	REGULATOR	REGULATION
NON-TRANSPORTATION-RELATED (e.g., aboveground and field-constructed underground storage tanks)	Environmental Protection Agency (EPA)	40 CFR 112
MARINE TRANSPORTATION-RELATED (e.g., marine fuel terminals)	Coast Guard	33 CFR 150, 33 CFR 154
PIPELINES	Research and Special Programs Administration (RSPA)	49 CFR 194
BULK PACKAGINGS (e.g., tank trucks and railcars)	Research and Special Programs Administration (RSPA)	49 CFR 171

Yes, technically you could owe four plans to four agencies (actually just three agencies since RSPA has two regulations). Yes, you probably owe the EPA a plan even if you sent one to the Coast Guard.

The good news. You'll only do one plan, regardless of how many regulators you have to send it to. If you followed NAVFAC's instructions of last October, you sent your existing Spill Contingency Plan to the EPA and the Coast Guard by the 18 Feb 1993 deadline. That was for interim compliance; for full compliance, NEESA is preparing guidance on writing a single plan to honor the requirements of all four regulations. We intend to have a draft out by the end of the summer, and a final by the end of the year.

How do you know what regulations you are ''substantial harm'' under? The flow chart on the opposite page will help you figure it out.

And what about that other harm category, the ''significant and substantial harm'' facility? Sometimes referred to as ''sig and sub'', it is a ''substantial harm'' facility that could be particularly harmful. Such a facility is subject to comprehensive review by each regulatory agency whose regulation it is ''sig and sub'' under, and it can't operate after 18 August 1993 unless its plan has been approved by such agencies. The flow chart also determines who you are ''sig and sub'' under.

The bad news. The agencies haven't got the time to review all the submitted ''sig and sub'' plans by the 18 August 1993 deadline. And your plan wouldn't be approved since it didn't provide all the information required in any of the four regulations. And even if it did, they couldn't approve it because none of the regulations are final, and your plan might not honor the final regulations.

The good news. The regulations allow a facility to apply for authorization to operate without an approved plan for up to two years beyond the 18 Feb 1993 statutory plan submittal date. You must have already lined up sufficient response resources to respond to a worst-case discharge. The Navy On-Scene Coordinator (NOSC) for your area can help.

Use the flow chart to determine who you owe a plan to (i.e., what regulations you are ''substantial harm'' under) and if anyone will have to approve your plan (i.e., what regulations you are ''sig and sub'' under). If you haven't already, IMMEDIATELY send two copies of your existing plan to every agency you owe a plan to, and IMMEDIATELY apply for authorization to operate for two years without an approved plan to every agency that will have to approve your plan.

If you owe the EPA a plan, submit their three-page form titled ''Response Plan Cover Sheet'' along with it. If you've already submitted your plan without the form, save needless correspondence by sending it now. They use the form to determine your harm category, so it is critical.

Contact your Engineering Field Division/Activity or your NOSC for more information. Our NEESA point of contact is Don Cunningham at DSN 551-3684 or commercial (805) 982-3684.

Continued on page 17

Low Emission Vehicle (LEV) Program

Southern California is the land of sunshine and smog. Southern California smog is generally caused by the exhaust of reactive hydrocarbons and other items from vehicles. California has developed numerous regulations to deal with this problem. The Department of Defense (DoD) has the largest fleet of vehicles in the Southern California region. DoD can play an important part in the alleviation of this problem. The Navy was tasked to take the lead in low emission vehicles for DoD. This led to the establishment of the low emission vehicle group at Naval Energy and Environmental Support Activity (NEESA).

...NEESA has been tasked to develop a California low emission vehicle plan, a national low emission vehicle plan, and a low emission vehicle implementation guide.

The low emission vehicle group at NEESA has been tasked to develop a California low emission vehicle plan, a national low emission vehicle plan, and a low emission vehicle implementation guide. The group has recently completed the California Plan, and will begin work on the National Plan later this year. The California Plan is written to provide DoD with early entry into the Ultra Low Emission Vehicle (ULEV) arena. The emphasis of the plan is on the Navy, but also considers the Marine Corp and the Air Force. The basis of the plan is to install Compressed Natural Gas (CNG) fueling stations and to convert a large number of vehicles to use CNG. The development of the California plan involved interagency cooperation and an extensive amount of research. Inventorying the Navy vehicle population in California and determining the size and location of the fuel stations required extensive time and travel. The basic premise of the California plan is for the Navy to convert almost all of the 1989 or newer vehicles to natural gas. We have established corridors on which goverment vehicles travel regularly in order to estimate the size of fueling stations or alternate fuel sites. By the end of this year, there will be over 600 CNG stations nationwide with public access and 55 of those station will be in Southern California. One benefit of this plan is that it will put DoD ahead of the curve and allow the "do it early factor" (credits) to take affect. This plan will allow DoD to set a good example for other fleets to follow.

The conversion to CNG is a WIN--WIN--WIN situation. The Navy WINs because the cost of the fuel is about half the price of gasoline on an equivalent gallon basis. The Navy WINs because the vehicle emissions will be reduced to the lowest level known except for electric's vehicles. The Navy WINs because the vehicle life is extended threefold with a corresponding decline in maintenance. The United States is entering the natural gas age which has many benefits. It will require a multitude of changes, but the vast majority of the changes will be for the good. Just think about this: there has NEVER been a natural gas SPILL.

Point of contact for further information is Mr. Robert Miller NEESA Code 111C3 at DSN 551-3590 or commerical (805) 982-3590.

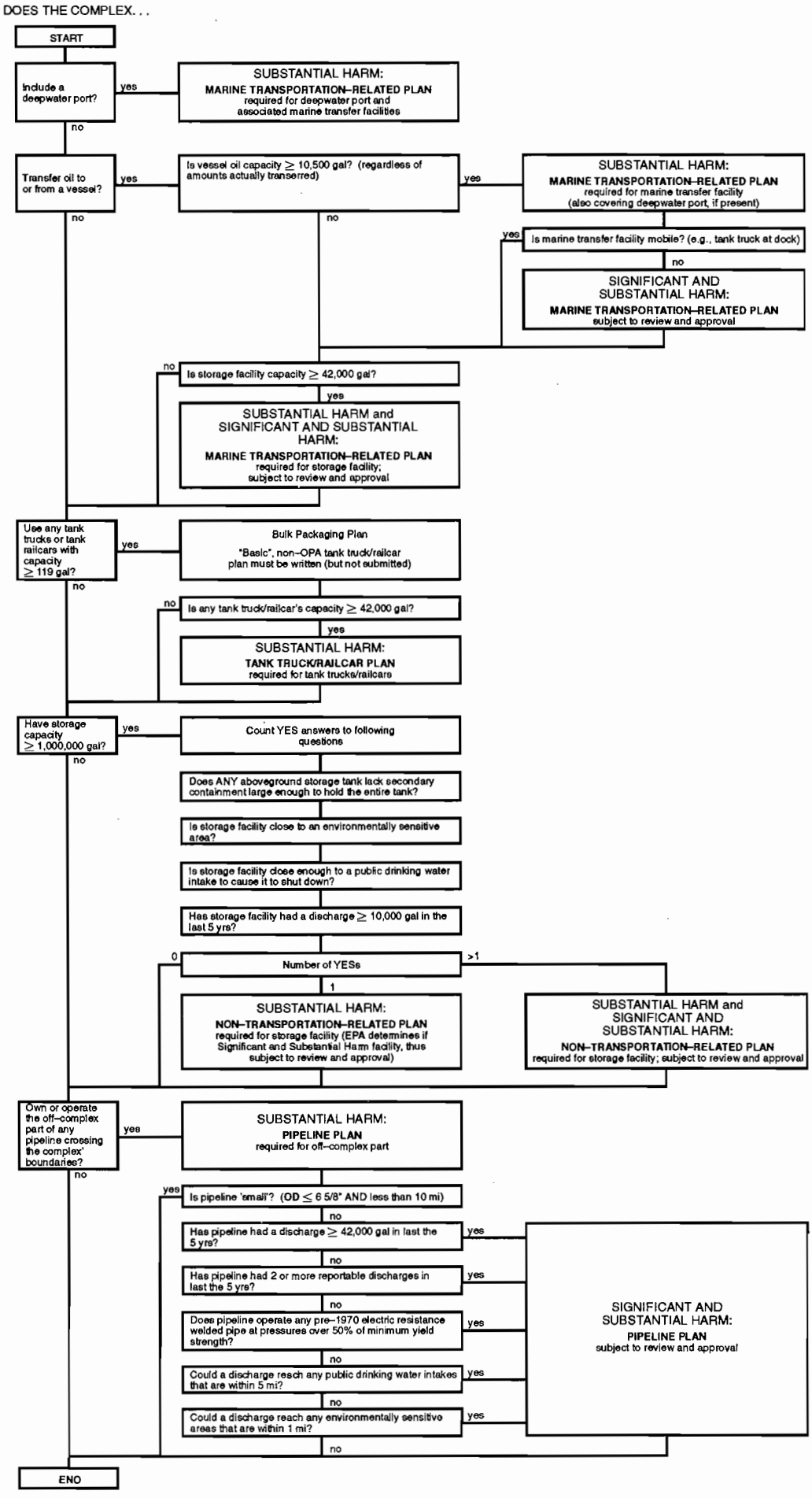
HTRW RA WBS Dictionary Available

The long-awaited Hazardous-Toxic-Radiological waste (HTRW) Remedial Action (RA) Work Breakdown Structure (WBS) Dictionary is now available for distribution from NEESA. Using the WBS has been strongly encouraged by the Navy--and mandated by the Army Corps of Engineers--to help ensure accurate and uniform government and contractor cost estimates. The dictionary, by defining WBS codes down to the third level, should assist the government and contractors in using the HTRW RA WBS properly.

In July 1993, NEESA will distribute a handbook to all engineering field activities containing the latest version of the HTRW WBS, the dictionary, and a short explanation of how the WBS is used. A supplement to this handbook will be distributed in October 1993 containing good examples of a:

- Basis of Design (for RA construction projects).
- Statement of Work (for RA service projects such as RA work plans or long-term operation and maintenance of pump-and-treat systems).
- Detailed Government Cost Estimate (for construction and service projects).
- Contractor Proposal (for construction and service projects).

For additional information, or an advance copy of the the HTRW RA WBS dictionary, contact John Fringer, or Robert Nash, NEESA Code 112E4, at DSN 551-4856 or 5070, commercial (805) 982-4856, or 5070, FAX: (805) 982-4832 or -4303


DOES THE COMPLEX. . .
START
Include a deepwater port?
yes
SUBSTANTIAL HARM:
MARINE TRANSPORTATION–RELATED PLAN
required for deepwater port and associated marine transfer facilities
no
Transfer oil to or from a vessel?
yes
Is vessel oil capacity ≥ 10,500 gal? (regardless of amounts actually transferred)
yes
SUBSTANTIAL HARM:
MARINE TRANSPORTATION–RELATED PLAN
required for marine transfer facility (also covering deepwater port, if present)
no
no
yes
Is marine transfer facility mobile? (e.g., tank truck at dock)
no
SIGNIFICANT AND SUBSTANTIAL HARM:
MARINE TRANSPORTATION–RELATED PLAN
subject to review and approval
no
Is storage facility capacity ≥ 42,000 gal?
yes
SUBSTANTIAL HARM and SIGNIFICANT AND SUBSTANTIAL HARM:
MARINE TRANSPORTATION–RELATED PLAN
required for storage facility; subject to review and approval
Use any tank trucks or tank railcars with capacity ≥ 119 gal?
yes
Bulk Packaging Plan
"Basic", non–OPA tank truck/railcar plan must be written (but not submitted)
no
no
Is any tank truck/railcar's capacity ≥ 42,000 gal?
yes
SUBSTANTIAL HARM:
TANK TRUCK/RAILCAR PLAN
required for tank trucks/railcars
Have storage capacity ≥ 1,000,000 gal?
yes
Count YES answers to following questions
no
Does ANY aboveground storage tank lack secondary containment large enough to hold the entire tank?
Is storage facility close to an environmentally sensitive area?
Is storage facility close enough to a public drinking water intake to cause it to shut down?
Has storage facility had a discharge ≥ 10,000 gal in the last 5 yrs?
0
Number of YESs
>1
1
SUBSTANTIAL HARM:
NON–TRANSPORTATION–RELATED PLAN
required for storage facility (EPA determines if Significant and Substantial Harm facility, thus subject to review and approval)
SUBSTANTIAL HARM and SIGNIFICANT AND SUBSTANTIAL HARM:
NON–TRANSPORTATION–RELATED PLAN
required for storage facility; subject to review and approval
Own or operate the off–complex part of any pipeline crossing the complex' boundaries?
yes
SUBSTANTIAL HARM:
PIPELINE PLAN
required for off–complex part
no
yes
Is pipeline 'small'? (OD ≤ 6 5/8" AND less than 10 mi)
no
Has pipeline had a discharge ≥ 42,000 gal in last the 5 yrs?
yes
no
Has pipeline had 2 or more reportable discharges in last the 5 yrs?
yes
no
Does pipeline operate any pre–1970 electric resistance welded pipe at pressures over 50% of minimum yield strength?
yes
no
Could a discharge resch any public drinking water intakes that are within 5 mi?
yes
no
Could a discharge reach any environmentally sensitive areas that are within 1 mi?
yes
SIGNIFICANT AND SUBSTANTIAL HARM:
PIPELINE PLAN
subject to review and approval
no
END

Navy Environmental Health Center Supports IRP

This is the first in a series of articles to describe services available from the Environmental Programs Directorate and to share information on the "lessons learned" during 1992. In late 1991, the Bureau of Medicine and Surgery signed a Memorandum of Understanding with the Naval Facilities Engineering Command to initiate Navy Medical Department support for the Installation Restoration Program (IRP). The Navy Environmental Health Center created an Environmental Programs Directorate tasked to perform a wide variety of health related services for the engineering field divisions and engineering field activities. In particular, the directorate reviews IRP documents with emphasis on risk assessments and health and safety plans. In addition, to document reviews, the Environmental Programs Directorate provides emergency response consultation, and conducts health related training in risk assessments, public health assessments, and environmental risk communication. In addition, the directorate coordinates efforts of the Agency for Toxic Substances and Disease Registry (ATSDR).

This first article focuses on the directorate's role with ATSDR as the agency completes a public health assessment (PHA) for each Navy IRP site. The Environmental Programs Directorate assists with advance coordination of ATSDR site visits, accompanies ATSDR during each site visit, and reviews the draft and final PHA documents.

ATSDR is one of the newest federal health agencies within the U.S. Public Health Service. Under Comprehensive Environmental Response Compensation and Liability Act/Superfund Amendments and Reauthorization Act, ATSDR conducts PHAs for sites on the National Priorities List. A PHA is the evaluation of data and information on the release of hazardous substances into the environment to assess past, current, and future public health effects. In addition, the PHA is used to prepare health advisories, and to identify health studies or actions required to evaluate and/or mitigate human health effects. ATSDR reviews three categories of information for the PHA:

1. Environmental data.
2. Community health concerns.
3. Health outcome data.

The primary emphasis of the PHA is to evaluate potential exposure pathways, in particular, those that result in potential human exposure. Most of the environmental data ATSDR needs are found in remedial investigation reports and other environmental studies conducted under the IRP and sent to ATSDR by the Navy. However, information on concentrations at off-site human exposure ponits is not usually available at the beginning of the remedial investigation. Early identification of ATSDR data needs in the IRP work plans is critical to the development of the most efficient and effective sampling strategy and to the evaluation of potential public health issues.

While most of the specific data needs identified by ATSDR are the same as those routinely required under the Environmental Protection Agency, ATSDR has typically requested additional environmental data or information in the following categories:

a. Contaminant concentrations in all of the off-site media to which the public may be exposed.

b. Appropriate detection limits and levels of quality control/quality assurance in samples to ensure the resulting data are adequate for assessing possible human exposures.

c. Discrete samples that reflect the potential range of exposure of the public.

d. Surface soil samples not deeper than three inches.

e. More extensive biota studies, and analyses of edible portions only.

f. More ambient and indoor air sampling.

g. Lists of physical hazards and barriers to site access.

The information in this article is intended to provide general guidelines in assisting the Remedial Project Managers and other environmental staffs with the planning of site characterizations and work plans to address ATSDR information as soon as possible in the IRP process. The role for the Environmental Programs Directorate is to act as an interface among the installation level environmental staff, the Remedial Project manager, and perhaps, the local Navy Medical Depart-

Continued on page 19

Aboveground Storage Tank Regulations

Market demand for aboveground tanks is increasing rapidly. Specific regulations apply to this method of storage.

by Wayne Geyer

There are critical differences between the potential for environmental impact of aboveground and underground oil storage. For example, while leaks from underground storage tanks (USTs) seep into soil or aquifers, the concern with aboveground storage tanks (ASTs) is that an overfill or tank rupture can cause product to escape into a navigable stream and immediately create an oil spill pollution incident.

The U.S. Environmental Protection Agency (EPA) has very distinct programs outlining regulation parameters for each type of storage, including source of authority, regulatory cutoffs and exclusions, definitions, prevention and response requirements, and penalties, etc. Engineers considering changing or recommending a change in type of storage, particularly from a UST to an AST, need to be aware of existing federal regulations.

UST regulation, administered primarily by the states, falls under EPA Regulation 40 CFR 280. EPA's underground storage tank program, which began in 1988, and the individual state programs that have evolved since then, provide generally accepted benchmarks for safe, reliable underground storage of petroleum and hazardous liquid products.

Since the federal UST program began, remediation costs have skyrocketed as a result of the need to clean up leaking tank and piping sites, backfill and surrounding soil or groundwater. Compliance with federal and state UST regulations has not been cheap, and is expected to top $23 billion, according to some estimates.

• **Engineers considering use of aboveground storage tanks need to be aware of the federal regulations that apply to ASTs.**

Partly as a result, market demand has shifted toward use of aboveground storage tanks, a trend that is expected to continue. Industry figures show a 100 percent increase in factory fabricated aboveground tank activity during the last four years.

ASTs have been regulated by EPA since 1973 under 40 CFR Part 112, the Oil Pollution Prevention regulation. This regulation also is known in the industry as the Spill Prevention, Control and Countermeasure (SPCC) regulation.

EPA is currently revising and updating the SPCC regulation in two phases. The proposed Phase I modifications clarify that certain provisions are mandatory, not discretionary. Whereas current SPCC language is more of a guideline, mandatory compliance with industry standards soon will be the rule for AST construction and management near navigable waterways.

Part 311 of the Clean Water Act directed EPA to

One Success Story

A major chemical company on the upper Texas Gulf Coast needed to expand its facility. A consultant was hired to perform the delineation of the wetlands and assist with the permit application. The COE was brought into the permit application process early. After completing the sequencing process (avoid, minimize, compensate), the expansion was determined to impact 17 wetland acres.

After negotiation, the COE agreed to an enhancement of 25 acres of a low-grade wetland on property adjacent to the facility. The conceptual design of the enhancement area, plant requirements and monitoring plan were included in the permit application. Although enhancement of a low-grade wetlands was acceptable, the COE usually requires the creation of wetlands from a non-jurisdictional upland area.

After a six-month review, the chemical company received its permit to build, with the stipulation that wetlands enhancement be completed within 18 months. Wetlands enhancement included the construction design and oversight, planting design, procurement, planting and monitoring. The enhancement was completed one year after the permit was received from the COE. Monitoring is in progress.

A key element in this successful project was including COE in the planning process. The consultant coordinated the input from all interested agencies, obtained consensus on the mitigation plan, and was instrumental in the chemical company receiving a 1- to 1.5-acre offset for the impacted wetland.

nal water level, retention time, site topography and the amount of wastewater being added.

- The dominant pollutant consumption process, including sedimentation, soil physical processes, biomass production, harvesting of vegetation and microbial processes.

Wetlands wastewater treatment systems are easy to maintain, provide reliable and effective treatment and are inexpensive to construct and operate. They also tolerate fluctuating hydrologic rates and pollutant loading, and provide indirect benefits such as recreational and educational areas and wildlife habitats.

But they require large land area for treatment and do not offer precise design and operating criteria like conventional wastewater treatment processes. Biological and hydrological complexity, unknown process dynamics and problems with pests also are drawbacks for wetlands treatment systems.

Recently, developers and municipalities have shown increased interest in using wetlands' pollutant filtering and water storage capacity to treat storm water. But here there must be assurance the wetlands will not be damaged. In developing plans to treat storm water, EPA will likely require best management practices (BMP). BMPs for storm water treatment help to ensure that solids are settled, flows are regulated and harmful pollutants are removed before the storm water enters the wetlands.

The regulations specify pretreatment levels, minimum residence times, hydraulic and hydrological requirements to maximize water contact with biota and sediments and outflow rates. Erosion and sediment controls also are required. The EPA and various states are developing biological water criteria to protect wetlands' biological diversity and habitat, and prevent major changes.

Mitigation banking

Since the early 1980s, mitigation banking has been used to compensate for unavoidable project-related wetlands losses. In mitigation banking, a developer creates, restores or preserves fish and wildlife habitats before construction project impacts. The benefits from these measures are quantified, and the developer receives wetlands mitigation credits from the regulatory agency. These credits are placed in a mitigation bank account. When the developer proposes a project involving unavoidable losses of fish and wildlife resources, the losses are quantified using the same method that was used to determine credits, and an equal amount is withdrawn.

In July 1992, the Galveston, Texas, COE District issued guidelines for the development and use of mitigation banks. Other districts are following this lead. The mitigation banking process follows a simple path. First, the sequencing evaluation is performed to consider avoidance or minimization of wetlands impacts. Then, mitigation or creation of a compensating wetlands is determined. If the applicant must compensate for impacted wetlands, COE may allow use of a previously developed mitigation bank. However, the applicant must first demonstrate there is no practical alternative to the impact on the wetlands.

In-kind and on-site compensation is preferred by the COE, but if the applicant can show that compensation mitigation will result in higher quality wetlands, the COE may accept it. If the use of a bank is allowed, it must be located within the same watershed or hydrologic basin as the area impacted.

Mitigation banks provide advanced compensation for impacted wetlands. To gain the wetlands credit, it must be functioning before any element of the proposed project affects a wetlands. Once created, mitigation banks provide more certainty that larger wetlands will prosper. The COE in Galveston is enthusiastic about mitigation banking. They are encouraging creative mitigation banking proposals for functional wetlands uses.

Conclusion

Wetlands are important natural resources. The COE is charged with protecting wetlands while allowing for industrial development and expansion. Both are necessary for the nation's future, and both can be achieved through cooperation. Early inclusion of the COE in the decision process for any new development or expansion is essential to permitting success. Effective and protective use of wetlands will provide benefits to industry.

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promulgate regulations concerning harmful discharges of oil and hazardous substances into waterways by non-transportation related onshore and offshore facilities. The Clean Water Act prohibits discharges and can impose civil or criminal penalties. As a result, the SPCC program for regulation of oil storage and discharges was first published in 1973, and subsequently amended in 1976.

Originally, the SPCC plan established procedures, methods and equipment to prevent the discharge of oil from non-transportation related facilities into navigable waters or adjoining shorelines. The regulation applied to single tanks with capacity greater than 660 gallons, or total tank aggregate capacity greater than 1320 gallons.

The new guidelines will strengthen this provision and continue an emphasis on good engineering practice and judgment. One important addition to Phase I is that all tanks must have secondary containment impervious to oil for a minimum of 72 hours.

Some other proposed changes to SPCC include mandating:

- That a plan be developed prior to beginning operations and be certified by an independent professional engineer who has visited the site. (Currently, a plan must be prepared within six months of commencing operations and implemented within 12 months.)
- That storage system integrity testing requirements for tanks, and especially for piping, be added. Proposed requirements call for piping integrity to be tested annually; tanks with secondary containment to be tested every 10 years; tanks without secondary containment every five years.
- That amendments to an SPCC plan be made by a professional engineer prior to reconstruction or movement of tanks, replacement of tanks or piping, and alteration of secondary systems.

Oil Pollution Act

The Oil Pollution Act (OPA) of 1990 places on the on-shore facility tank owner or operator the liability for removal costs and damages, if oil or other hazardous substances are discharged from the facility into navigable waters and adjoining shorelines. OPA stipulates the type of damages the owner must pay as a result of destruction of natural resources, and establishes a federal fund where cleanup measures are deemed unsuitable, as in the case of delinquent owners. The U.S. Coast Guard has primary enforcement of OPA.

When combined with the Clean Water Act, OPA is designed to protect the nation's waters without addressing soil or groundwater contamination, unless the groundwater is hydrogeologically connected. Up to 80 percent of ASTs are believed to be impacted by OPA.

In January 1993, EPA published regulations that revise the Oil Pollution Act of 1990 requirements, originally promulgated under the Clean Water Act. Sometimes erroneously referred to as Phase II of the SPCC, these regulations can have serious financial repercussions for large AST facility owners and operators who must prepare and file response plans for a worst-case discharge of oil that poses a threat to the nation's waters. If total aggregate storage is more than 1 million gallons and the facility is near a public drinking water intake, is near an environmentally sensitive area, does not have adequate secondary containment, or has a significant spill history, it must make a submittal to EPA. EPA must approve plans where a facility can cause "significant and substantial harm." Facilities with storage of 42,000 gallons or more must still file notification for

AST Regulation

40 CFR 112, based on SPCC Phase I proposed rules, Oct. 22, 1992

An aboveground storage tank is defined as any tank not completely buried, including bunkered tanks. The primary charter of 40 CFR 112 is to prevent spills of oil by non-transportation related onshore and offshore facilities into U.S. surface waters and surrounding shorelines, including wetlands.

Exemptions

- USTs under 40 CFR 280.
- Onshore facilities that, due to their location, could not reasonably be expected to discharge oil into waterways.
- Vessels under DOT requirements.

Size limitations

- Individual ASTs greater than 660 gallons.
- AST aggregates greater than 1320 gallons.
- UST aggregates greater than 42,000 gallons.

Regulated substances

- Oil in any form, including petroleum, sludges, oil refuse, crude oil, animal and vegetable oils.

Corrosion

- Partially buried tanks protected using coatings and cathodic protection.
- Piping protected as in 40 CFR 280.
- Compatible with stored product.

Structure

- Construction and materials must conform with industry standards in application of good engineering practice.
- References API, UL, NFPA, ASME.

Containment

- All ASTs must be contained to prevent discharged oil from reaching navigable waters (includes double-wall steel, under recent interpretation).
- Containment impervious to oil for 72 hours.
- Dike, curbs and pits to contain largest tank, plus sufficient freeboard for bulk storage containers.

Testing/release detection

- Integrity test of tanks every five years, and piping every year.
- Those with secondary containment must have integrity test every 10 years.
- Piping and valves examined monthly.

Financial responsibility

- No insurance required, although Senate and House are introducing language similar to 40 CFR 280.

Cleanup

- Plan developed specifically for site.
- Materials and manpower for control and removal must be provided for facilities without secondary containment.
- Large tank site owners/operators may have to submit a facility response plan for approval. Revision to the Oil Pollution Act which amends the Clean Water Act.

Other

- Parallel UST overfill prevention.
- Independent professional engineer required to develop strong oil spill contingency plan.
- Security to minimize vandalism.
- Training for facility personnel to minimize operator error.

Environmental groups are seeking a comprehensive regulatory program for ASTs.

exemption or file a response plan. Typically, the response plans will incorporate contingency planning requirements, mandating that tank owners have means to contain a leak via accessible equipment and manpower.

NPDES and other regulations

The National Pollutant Discharge Elimination System (NPDES) does not govern ASTs specifically, but it does regulate discharge of pollutants into surface waters. For ASTs, this means runoff from diked areas cannot be directed immediately into a storm sewer, unless quality standards are met. To comply, the industry may be forced to use separators or other forms of water treatment prior to discharging surface runoff into storm sewers.

In many areas, the petroleum marketing industry is already installing Phase I (vapors recovered from USTs as tanks are loaded) and Phase II (vapors recovered from automobiles as they're being filled) to comply with specific regional clean air mandates.

Title I of the Clean Air Act concentrates on reducing ozone, carbon monoxide and particulate problems in specific non-attainment areas. In many metropolitan areas, Stage II vapor recovery soon will be mandated by Section 182 of the CAA to reduce air quality concerns. This rule can impact both AST and UST sites, particularly where large volume hydrocarbon use takes place. The cost to comply is estimated by some groups to run from $2 billion to $4 billion.

The Superfund Amendments and Reauthorization Act (SARA), Title II, requires AST non-petroleum tank owners to report spills of hazardous wastes, mandates liability coverage and cost recovery for cleanups from responsible parties and establishes cleanup requirements. According to Title II, for emergency planning measures, public health officials and agencies are required to have access to certain chemical information.

The Occupational Safety and Health Administration (OSHA) has developed national standards (29 CFR, 1910, 106) for handling, storage and use of flammable and combustible liquids. The rules apply to liquids with flashpoints below 200°F. Many OSHA requirements are taken from National Fire Protection Association code (NFPA 30) requirements for flammable and combustible liquids and from other standards. OSHA earlier this year also released 29 CFR Section 1910.146, "Permit Required Confined Spaces for General Industry."

Fire and building codes for flammable and combustible liquids are normally followed in order for an installation to meet "authority having jurisdiction" requirements; code language is more extensive and restrictive for ASTs than USTs. Obviously, the concern is for public safety from fires rather than environmental concerns. In the summer of 1993, both the NFPA 30A and UFC model codes will be voted on to adopt expanded language for ASTs, where motor fuels will be dispensed from ASTs into motor vehicles. This is a very significant change, which reflects the ongoing trend toward ASTs.

Congress has proposed reauthorization of the Resource Conservation and Recovery Act (RCRA), Subtitle C. Some versions have included AST language that parallels UST language. Several bills to regulate ASTs have been introduced on Capitol Hill in recent years.

Several bills to regulate ASTs have been introduced on Capitol Hill in recent years.

Environmental groups are seeking a comprehensive regulatory program for AST design, construction, operations, maintenance, financial responsibility, and cleanup requirements that are similar to current UST rules to protect groundwater and soils.

On March 16, 1993, Rep. James Moran (D-Va.) and Sen. Chuck Robb (D-Va.) introduced a bill, in the House of Representatives (H. R.1360) and in the Senate (S. 588), respectively, to establish leak detection, corrosion protection, registration fees, structural integrity and secondary containment for ASTs. This bill is similar to S. 1761, introduced in September 1991 and reintroduced in March 1993, by Sen. Thomas Daschle (D-S.D.). The Moran/Robb bill, however, also will exempt a portion of tanks with less than 12,000-gallon capacity.

Parts 262, 264, 265 of RCRA, Subtitle C, also apply to ASTs as standards applicable to generators of hazardous waste and affiliated treatment/storage/disposal facilities.

Subtitle I of RCRA orders owners and operators of USTs who install tanks after December 1988 to meet requirements concerning correct installation, spill and overfill protection, corrosion protection, and leak detection. Similar issues are also regulated for USTs installed before December 1988. Also, Subtitle I addresses corrective action in response to leaks, closure requirements for tanks temporarily or permanently closed, and financial responsibility for the cost of cleaning up a leak and compensating others for bodily injury and property damage caused by a leaking UST.

New UST systems installed since the regulations went into effect require certification that the tank and piping are designed, constructed and installed to industry codes; incorporate devices for preventing spills and overfills; and include leak detection for both the tank and piping.

By December 1998, all UST systems (including those installed prior to implementation of the UST regulations in 1988) must have corrosion protection for steel tanks and piping, and incorporate devices that prevent spills and overfills. Release detection must be phased in by the end of next year or earlier, depending on the age of the tank system.

State and local regulations may differ from federal. Owners and operators unfamiliar with such regulations should contact the local fire marshal for help.

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ENVIRONMENTAL PROTECTION AGENCY REGULATIONS ON OIL POLLUTION PREVENTION

(40 CFR 112; 38 FR 34164, December 11, 1973; Amended by 39 FR 31602, August 29, 1974; 41 FR 12657, March 26, 1976)

PART 112—OIL POLLUTION PREVENTION

Non-transportation Related Onshore and Offshore Facilities

AUTHORITY: Secs. 311(j)(1)(C), 311(j)(2), 501(a), Federal Water Pollution Control Act (Sec. 2, Pub. L. 92-500, 86 Stat. 816 et seq. (33 U.S.C. 1251 et seq.)); Sec. 4(b), Pub. L. 92-500, 86 Stat. 897; 5 U.S.C. Reorg. Plan of 1970 No. 3 (1970), 35 FR 15623, 3 CFR 1966-1970 Comp.; E.O. 11735, 38 FR 21243, 3 CFR.

§ 112.1 General applicability.

(a) This part establishes procedures, methods and equipment and other requirements for equipment to prevent the discharge of oil from non-transportation-related onshore and offshore facilities into or upon the navigable waters of the United States or adjoining shorelines.

(b) Except as provided in paragraph (d) of this section, this part applies to owners or operators of non-transportation-related onshore and offshore facilities engaged in drilling, producing, gathering, storing, processing, refining, transferring, distributing or consuming oil and oil products, and which, due to their location, could reasonably be expected to discharge oil in harmful quantities, as defined in Part 110 of this chapter, into or upon the navigable waters of the United States or adjoining shorelines.

(c) As provided in sec. 313 (86 Stat. 875) departments, agencies, and instrumentalities of the Federal government are subject to these regulations to the same extent as any person, except for the provisions of § 112.6.

(d) This part does not apply to:

(1) Facilities, equipment or operations which are not subject to the jurisdiction of the Environmental Protection Agency, as follows:

(A) onshore and offshore facilities, which, due to their location, could not reasonably be expected to discharge oil into or upon the navigable waters of the United States or adjoining shorelines. This determination shall be based solely upon a consideration of the geographical, locational aspects of the facility (such as proximity to navigable waters or adjoining shorelines, land contour, drainage, etc.) and shall exclude consideration of manmade features such as dikes, equipment or other structures which may serve to restrain, hinder, contain, or otherwise prevent a discharge of oil from reaching navigable waters of the United States or adjoining shorelines; and

(B) equipment or operations of vessels or transportation-related onshore and offshore facilities which are subject to authority and control of the Department of Transportation, as defined in the Memorandum of Understanding between the Secretary of Transportation and the Administrator of the Environmental Protection Agency, dated November 24, 1971, 36 FR 24000.

(2) those facilities which, although otherwise subject to the jurisdiction of the Environmental Protection Agency, meet both of the following requirements:

(A) the underground buried storage capacity of the facility is 42,000 gallons or less of oil, and

(B) the storage capacity, which is not buried, of the facility is 1,320 gallons or less of oil, provided no single container has a capacity in excess of 660 gallons.

[41 FR 12657, March 26, 1976]

(e) This part provides for the preparation and implementation of Spill Prevention Control and Countermeasure Plans prepared in accordance with § 112.7, designed to complement existing laws, regulations, rules, standards, policies and procedures pertaining to safety standards, fire prevention and pollution prevention rules, so as to form a comprehensive balanced Federal/State spill prevention program to minimize the potential for oil discharges. Compliance with this part does not in any way relieve the owner or operator of an onshore or an offshore facility from compliance with other Federal, State or local laws.

§ 112.2 Definitions.

For the purposes of this part:

(a) "Oil" means oil of any kind or in any form, including, but not limited to petroleum, fuel oil, sludge, oil refuse and oil mixed with wastes other than dredged spoil.

(b) "Discharge" includes but is not limited to, any spilling, leaking, pumping, pouring, emitting, emptying or dumping. For purposes of this part, the term "discharge" shall not include any discharge of oil which is authorized by a permit issued pursuant to Section 13 of the River and Harbor Act of 1899 (30 Stat. 1121, 33 U.S.C. 407), or Sections 402 or 405 of the FWPCA Amendments of 1972 (86 Stat. 816 et seq., 33 U.S.C. 1251 et seq.).

(c) "Onshore facility" means any facility of any kind located in, on, or under any land within the United States, other than submerged lands, which is not a transportation-related facility.

(d) "Offshore facility" means any facility of any kind located in, on, or under any of the navigable waters of the United States, which is not a transportation-related facility.

(e) "Owner or operator" means any person owning or operating an onshore facility or an offshore facility, and in the case of any abandoned offshore facility, the person who owned or operated such facility immediately prior to such abandonment.

(f) "Person" includes an individual, firm, corporation, association, and a partnership.

(g) "Regional Administrator", means the Regional Administrator of the Environmental Protection Agency, or his designee, in and for the Region in which the facility is located.

(h) "Transportation-related" and "non-transportation-related" as applied to an onshore or offshore facility, are defined in the Memorandum of Understanding between the Secretary of Transportation and the Administrator of the Environmental Protection Agency, dated November 24, 1971, 36 FR 24080.

(i) "Spill event" means a discharge of oil into or upon the navigable waters of the United States or adjoining shorelines in harmful quantities, as defined in 40 CFR Part 110.

(j) "United States" means the States, the District of Columbia, the Commonwealth of Puerto Rico, the Canal Zone, Guam, American Samoa, the Virgin Islands, and the Trust Territory of the Pacific Islands.

(k) The term "navigable waters" of the United States means "navigable waters" as defined in section 502(7) of the FWPCA, and includes:

(1) all navigable waters of the United States, as defined in judicial decisions prior to passage of the 1972 Amendments to the FWPCA (Pub. L. 92-500), and tributaries of such waters;

(2) interstate waters;

(3) intrastate lakes, rivers, and streams which are utilized by interstate travelers for recreational or other purposes; and

(4) intrastate lakes, rivers, and streams from which fish or shellfish are taken and sold in interstate commerce.

(l) "Vessel" means every description of watercraft or other artificial contriv-

ance used, or capable of being used as a means of transportation on water, other than a public vessel.

§ 112.3 Requirements for preparation and implementation of Spill Prevention Control and Countermeasure Plans.

(a) Owners or operators of onshore and offshore facilities in operation on or before the effective date of this part that have discharged or, due to their location, could reasonably be expected to discharge oil in harmful quantities, as defined in 40 CFR Part 110, into or upon the navigable waters of the United States or adjoining shorelines, shall prepare a Spill Prevention Control and Countermeasure Plan (hereinafter "SPCC Plan"), in writing and in accordance with section 112.7. Except as provided for in paragraph (f) of this section, such SPCC Plan shall be prepared within six months after the effective date of this part and shall be fully implemented as soon as possible, but not later than one year after the effective date of this part.

[41 FR 12657, March 26, 1976]

(b) Owners or operators of onshore and offshore facilities that become operational after the effective date of this part, and that have discharged or could reasonably be expected to discharge oil in harmful quantities, as defined in 40 CFR Part 110, into or upon the navigable waters of the United States or adjoining shorelines, shall prepare an SPCC Plan in accordance with § 112.7. Except as provided for in paragraph (f) of this section, such SPCC Plan shall be prepared within six months after the date such facility begins operations and shall be fully implemented as soon as possible, but not later than one year after such facility begins operations.

(c) Owners or operators of onshore and offshore mobile or portable facilities, such as onshore drilling or workover rigs, barge mounted offshore drilling or workover rigs, and portable fueling facilities shall prepare and implement an SPCC Plan as required by paragraphs (a), (b) and (d) of this section. The owners or operators of such facility need not prepare a new SPCC Plan each time the facility is moved to a new site. The SPCC Plan may be a general plan, prepared in accordance with section 112.7, using good engineering practice. When the mobile or portable facility is moved, it must be located and installed using the spill prevention practices outlined in the SPCC Plan for the facility. No mobile or portable facility subject to this regulation shall operate unless the SPCC Plan has been implemented. The SPCC Plan shall only apply while the facility is in a fixed (non-transportation) operating mode.

[41 FR 12657, March 26, 1976]

(d) No SPCC Plan shall be effective to satisfy the requirements of this part unless it has been reviewed by a Registered Professional Engineer and certified to by such Professional Engineer. By means of this certification the engineer, having examined the facility and being familiar with the provisions of this part, shall attest that the SPCC Plan has been prepared in accordance with good engineering practices. Such certification shall in no way relieve the owner or operator of an onshore or offshore facility of his duty to prepare and fully implement such Plan in accordance with § 112.7, as required by paragraphs (a), (b) and (c) of this section.

(e) Owners or operators of a facility for which an SPCC Plan is required pursuant to paragraphs (a), (b) or (c) of this section shall maintain a complete copy of the Plan at such facility if the facility is normally attended at least 8 hours per day, or at the nearest field office if the facility is not so attended, and shall make such Plan available to the Regional Administrator for on-site review during normal working hours.

(f) Extensions of time.

(1) The Regional Administrator may authorize an extension of time for the preparation and full implementation of an SPCC Plan beyond the time permitted for the preparation and implementation of an SPCC Plan pursuant to paragraphs (a), (b) or (c) of this section where he finds that the owner or operator of a facility subject to paragraphs (a), (b) or (c) of this section cannot fully comply with the requirements of this part as a result of either nonavailability of qualified personnel, or delays in construction or equipment delivery beyond the control and without the fault of such owner or operator or their respective agents or employees.

(2) Any owner or operator seeking an extension of time pursuant to paragraph (f) (1) of this section may submit a letter of request to the Regional Administrator. Such letter shall include:

(i) A complete copy of the SPCC Plan, if completed;

(ii) A full explanation of the cause for any such delay and the specific aspects of the SPCC Plan affected by the delay;

(iii) A full discussion of actions being taken or contemplated to minimize or mitigate such delay;

(iv) A proposed time schedule for the implementation of any corrective actions being taken or contemplated, including interim dates for completion of tests or studies, installation and operation of any necessary equipment or other preventive measures.

In addition, such owner or operator may present additional oral or written statements in support of his letter of request.

(3) The submission of a letter of request for extension of time pursuant to paragraph (f) (2) of this section shall in no way relieve the owner or operator from his obligation to comply with the requirements of § 112.3 (a), (b) or (c). Where an extension of time is authorized by the Regional Administrator for particular equipment or other specific aspects of the SPCC Plan, such extension shall in no way affect the owner's or operator's obligation to comply with the requirements of § 112.3 (a), (b) or (c) with respect to other equipment or other specific aspects of the SPCC Plan for which an extension of time has not been expressly authorized.

§ 112.4 Amendment of SPCC Plans by Regional Administrator.

(a) Notwithstanding compliance with § 112.3, whenever a facility subject to § 112.3 (a), (b) or (c) has: Discharged more than 1,000 U.S. gallons of oil into or upon the navigable waters of the United States or adjoining shorelines in a single spill event, or discharged oil in harmful quantities, as defined in 40 CFR Part 110, into or upon the navigable waters of the United States or adjoining shorelines in two spill events, reportable under section 311(b)(5) of the FWPCA, occurring within any twelve month period, the owner or operator of such facility shall submit to the Regional Administrator, within 60 days from the time such facility becomes subject to this section, the following:

(1) Name of the facility;

(2) Name(s) of the owner or operator of the facility;

(3) Location of the facility;

(4) Date and year of initial facility operation;

(5) Maximum storage or handling capacity of the facility and normal daily throughput;

(6) Description of the facility, including maps, flow diagrams, and topographical maps;

(7) A complete copy of the SPCC Plan with any amendments;

(8) The cause(s) of such spill, including a failure analysis of system or subsystem in which the failure occurred;

(9) The corrective actions and/or countermeasures taken, including an adequate description of equipment repairs and/or replacements;

(10) Additional preventive measures taken or contemplated to minimize the possibility of recurrence;

(11) Such other information as the Regional Administrator may reasonably require pertinent to the Plan or spill event.

(b) Section 112.4 shall not apply until the expiration of the time permitted for the preparation and implementation of an SPCC Plan pursuant to § 112.3 (a), (b), (c) and (f).

(c) A complete copy of all information provided to the Regional Administrator pursuant to paragraph (a) of this section shall be sent at the same time to the State agency in charge of water pollution control activities in and for the State in which the facility is located. Upon receipt of such information such State agency may conduct a review and make recommendations to the Regional Administrator as to further procedures, methods, equipment and other requirements for equipment necessary to prevent and to contain discharges of oil from such facility.

(d) After review of the SPCC Plan for a facility subject to paragraph (a) of this section, together with all other information submitted by the owner or operator of such facility, and by the State agency under paragraph (c) of this section, the Regional Administrator may require the owner or operator of such facility to amend the SPCC Plan if he finds that the Plan does not meet the requirements of this part or that the amendment of the Plan is neces-

sary to prevent and to contain discharges of oil from such facility.

(e) When the Regional Administrator proposes to require an amendment to the SPCC Plan, he shall notify the facility operator by certified mail addressed to, or by personal delivery to, the facility owner or operator, that he proposes to require an amendment to the Plan, and shall specify the terms of such amendment. If the facility owner or operator is a corporation, a copy of such notice shall also be mailed to the registered agent, if any, of such corporation in the State where such facility is located. Within 30 days from receipt of such notice, the facility owner or operator may submit written information, views, and arguments on the amendment. After considering all relevant material presented, the Regional Administrator shall notify the facility owner or operator of any amendment required or shall rescind the notice. The amendment required by the Regional Administrator shall become part of the Plan 30 days after such notice, unless the Regional Administrator, for good cause, shall specify another effective date. The owner or operator of the facility shall implement the amendment of the Plan as soon as possible, but not later than six months after the amendment becomes part of the Plan, unless the Regional Administrator specifies another date.

(f) An owner or operator may appeal a decision made by the Regional Administrator requiring an amendment to an SPCC Plan. The appeal shall be made to the Administrator of the United States Environmental Protection Agency and must be made in writing within 30 days of receipt of the notice from the Regional Administrator requiring the amendment. A complete copy of the appeal must be sent to the Regional Administrator at the time the appeal is made. The appeal shall contain a clear and concise statement of the issues and points of fact in the case. It may also contain additional information from the owner or operator, or from any other person. The Administrator or his designee may request additional information from the owner or operator, or from any other person. The Administrator or his designee shall render a decision within 60 days of receiving the appeal and shall notify the owner or operator of his decision.

[41 FR 12657, March 26, 1976]

§ 112.5 Amendment of Spill Prevention Control and Countermeasure Plans by owners or operators.

(a) Owners or operators of facilities subject to § 112.3 (a), (b) or (c) shall amend the SPCC Plan for such facility in accordance with § 112.7 whenever there is a change in facility design, construction, operation or maintenance which materially affects the facility's potential for the discharge of oil into or upon the navigable waters of the United States or adjoining shorelines. Such amendments shall be fully implemented as soon as possible, but not later than six months after such change occurs.

(b) Notwithstanding compliance with paragraph (a) of this section, owners and operators of facilities subject to § 112.3 (a), (b) or (c) shall complete a review and evaluation of the SPCC Plan at least once every three years from the date such facility becomes subject to this part. As a result of this review and evaluation, the owner or operator shall amend the SPCC Plan within six months of the review to include more effective prevention and control technology if: (1) Such technology will significantly reduce the likelihood of a spill event from the facility, and (2) if such technology has been field-proven at the time of the review.

(c) No amendment to an SPCC Plan shall be effective to satisfy the requirements of this section unless it has been certified by a Professional Engineer in accordance with § 112.3(d).

§ 112.6 Civil penalties for violation of Oil Pollution Prevention Regulations.

Owners or operators of facilities subject to § 112.3(a), (b) or (c) who violate the requirements of this Part 112 by failing or refusing to comply with any of the provisions of § 112.3, § 112.4 or § 112.5 shall be liable for a civil penalty of not more than $5,000 for each day such violation continues. Civil penalties shall be imposed in accordance with procedures set out in Part 114 of this subchapter D.

§ 112.7 Guidelines for the preparation and implementation of a Spill Prevention Control and Countermeasure Plan.

The SPCC Plan shall be a carefully thought-out plan, prepared in accordance with good engineering practices, and which has the full approval of management at a level with authority to commit the necessary resources. If the plan calls for additional facilities or procedures, methods, or equipment not yet fully operational, these items should be discussed in separate paragraphs, and the details of installation and operational start-up should be explained separately. The complete SPCC Plan shall follow the sequence outlined below, and include a discussion of the facility's conformance with the appropriate guidelines listed:

(a) A facility which has experienced one or more spill events within twelve months prior to the effective date of this part should include a written description of each such spill, corrective action taken and plans for preventing recurrence.

(b) Where experience indicates a reasonable potential for equipment failure (such as tank overflow, rupture, or leakage), the plan should include a prediction of the direction, rate of flow, and total quantity of oil which could be discharged from the facility as a result of each major type of failure.

(c) Appropriate containment and/or diversionary structures or equipment to prevent discharged oil from reaching a navigable water course should be provided. One of the following preventive systems or its equivalent should be used as a minimum:

(1) Onshore facilities.

(i) Dikes, berms or retaining walls sufficiently impervious to contain spilled oil

(ii) Curbing

(iii) Culverting, gutters or other drainage systems

(iv) Weirs, booms or other barriers

(v) Spill diversion ponds

(vi) Retention ponds

(vii) Sorbent materials

(2) Offshore facilities.

(i) Curbing, drip pans

(ii) Sumps and collection systems

(d) When it is determined that the installation of structures or equipment listed in § 112.7(c) to prevent discharged oil from reaching the navigable waters is not practicable from any onshore or offshore facility, the owner or operator should clearly demonstrate such impracticability and provide the following:

(1) A strong oil spill contingency plan following the provision of 40 CFR Part 109.

(2) A written commitment of manpower, equipment and materials required to expeditiously control and remove any harmful quantity of oil discharged.

(e) In addition to the minimal prevention standards listed under § 112.7 (c), sections of the Plan should include a complete discussion of conformance with the following applicable guidelines, other effective spill prevention and containment procedures (or, if more stringent, with State rules, regulations and guidelines):

(1) *Facility drainage (onshore); (excluding production facilities).* (i) Drainage from diked storage areas should be restrained by valves or other positive means to prevent a spill or other excessive leakage of oil into the drainage system or inplant effluent treatment system, except where plan systems are designed to handle such leakage. Diked areas may be emptied by pumps or ejectors; however, these should be manually activated and the condition of the accumulation should be examined before starting to be sure no oil will be discharged into the water.

(ii) Flapper-type drain valves should not be used to drain diked areas. Valves used for the drainage of diked areas should, as far as practical, be of manual, open-and-closed design. When plant drainage drains directly into water courses and not into wastewater treatment plants, retained storm water should be inspected as provided in paragraph (e)(2)(iii) (B, C and D) before drainage.

(iii) Plant drainage systems from undiked areas should, if possible, flow into ponds, lagoons or catchment basins, designed to retain oil or return it to the facility. Catchment basins should not be located in areas subject to periodic flooding.

(iv) If plant drainage is not engineered as above, the final discharge of all in-plant ditches should be equipped with a diversion system that could, in

the event of an uncontrolled spill, return the oil to the plant.

(v) Where drainage waters are treated in more than one treatment unit, natural hydraulic flow should be used. If pump transfer is needed, two "lift" pumps should be provided, and at least one of the pumps should be permanently installed when such treatment is continuous. In any event, whatever techniques are used facility drainage systems should be adequately engineered to prevent oil from reaching navigable waters in the event of equipment failure or human error at the facility.

(2) *Bulk storage tanks (onshore); (excluding production facilities).* (i) No tank should be used for the storage of oil unless its material and construction are compatible with the material stored and conditions of storage such as pressure and temperature, etc.

(ii) All bulk storage tank installations should be constructed so that a secondary means of containment is provided for the entire contents of the largest single tank plus sufficient freeboard to allow for precipitation. Diked areas should be sufficiently impervious to contain spilled oil. Dikes, containment curbs, and pits are commonly employed for this purpose, but they may not always be appropriate. An alternative system could consist of a complete drainage trench enclosure arranged so that a spill could terminate and be safely confined in an in-plant catchment basin or holding pond.

(iii) Drainage of rainwater from the diked area into a storm drain or an effluent discharge that empties into an open water course, lake, or pond, and bypassing the in-plant treatment system may be acceptable if:

(A) The bypass valve is normally sealed closed.

(B) Inspection of the run-off rain water ensures compliance with applicable water quality standards and will not cause a harmful discharge as defined in 40 CFR 110.

(C) The bypass valve is opened, and resealed following drainage under responsible supervision.

(D) Adequate records are kept of such events.

(iv) Buried metallic storage tanks represent a potential for undetected spills. A new buried installation should be protected from corrosion by coatings, cathodic protection or other effective methods compatible with local soil conditions. Such buried tanks should at least be subjected to regular pressure testing.

(v) Partially buried metallic tanks for the storage of oil should be avoided, unless the buried section of the shell is adequately coated, since partial burial in damp earth can cause rapid corrosion of metallic surfaces, especially at the earth/air interface.

(vi) Aboveground tanks should be subject to periodic integrity testing, taking into account tank design (floating roof, etc.) and using such techniques as hydrostatic testing, visual inspection or a system of non-destructive shell thickness testing. Comparison records should be kept where appropriate, and tank supports and foundations should be included in these inspections. In addition, the outside of the tank should frequently be observed by operating personnel for signs of deterioration, leaks which might cause a spill, or accumulation of oil inside diked areas.

(vii) To control leakage through defective internal heating coils, the following factors should be considered and applied, as appropriate.

(A) The steam return or exhaust lines from internal heating coils which discharge into an open water course should be monitored for contamination, or passed through a settling tank, skimmer, or other separation or retention system.

(B) The feasibility of installing an external heating system should also be considered.

(viii) New and old tank installations should, as far as practical, be fail-safe engineered or updated into a fail-safe engineered installation to avoid spills. Consideration should be given to providing one or more of the following devices:

(A) High liquid level alarms with an audible or visual signal at a constantly manned operation or surveillance station; in smaller plants an audible air vent may suffice.

(B) Considering size and complexity of the facility, high liquid level pump cutoff devices set to stop flow at a predetermined tank content level.

(C) Direct audible or code signal communication between the tank gauger and the pumping station.

(D) A fast response system for determining the liquid level of each bulk storage tank such as digital computers, telepulse, or direct vision gauges or their equivalent.

(E) Liquid level sensing devices should be regularly tested to insure proper operation.

(ix) Plant effluents which are discharged into navigable waters should have disposal facilities observed frequently enough to detect possible system upsets that could cause an oil spill event.

(x) Visible oil leaks which result in a loss of oil from tank seams, gaskets, rivets and bolts sufficiently large to cause the accumulation of oil in diked areas should be promptly corrected.

(xi) Mobile or portable oil storage tanks (onshore) should be positioned or located so as to prevent spilled oil from reaching navigable waters. A secondary means of containment, such as dikes or catchment basins, should be furnished for the largest single compartment or tank. These facilities should be located where they will not be subject to periodic flooding or washout.

(3) *Facility transfer operations, pumping, and in-plant process (onshore); (excluding production facilities).* (i) Buried piping installations should have a protective wrapping and coating and should be cathodically protected if soil conditions warrant. If a section of buried line is exposed for any reason, it should be carefully examined for deterioration. If corrosion damage is found, additional examination and corrective action should be taken as indicated by the magnitude of the damage. An alternative would be the more frequent use of exposed pipe corridors or galleries.

(ii) When a pipeline is not in service, or in standby service for an extended time the terminal connection at the transfer point should be capped or blank-flanged, and marked as to origin.

(iii) Pipe supports should be properly designed to minimize abrasion and corrosion and allow for expansion and contraction.

(iv) All aboveground valves and pipelines should be subjected to regular examinations by operating personnel at which time the general condition of items, such as flange joints, expansion joints, valve glands and bodies, catch pans, pipeline supports, locking of valves, and metal surfaces should be assessed. In addition, periodic pressure testing may be warranted for piping in areas where facility drainage is such that a failure might lead to a spill event.

(v) Vehicular traffic granted entry into the facility should be warned verbally or by appropriate signs to be sure that the vehicle, because of its size, will not endanger above ground piping.

(4) *Facility tank car and tank truck loading/unloading rack (onshore).* (i) Tank car and tank truck loading/unloading procedures should meet the minimum requirements and regulation established by the Department of Transportation.

(ii) Where rack area drainage does not flow into a catchment basin or treatment facility designed to handle spills, a quick drainage system should be used for tank truck loading and unloading areas. The containment system should be designed to hold at least maximum capacity of any single compartment of a tank car or tank truck loaded or unloaded in the plant.

(iii) An interlocked warning light or physical barrier system, or warning signs, should be provided in loading/unloading areas to prevent vehicular departure before complete disconnect of flexible or fixed transfer lines.

(iv) Prior to filling and departure of any tank car or tank truck, the lowermost drain and all outlets of such vehicles should be closely examined for leakage, and if necessary, tightened, adjusted, or replaced to prevent liquid leakage while in transit.

(5) *Oil production facilities (onshore).* (i) *Definition.* An onshore production facility may include all wells, flowlines, separation equipment, storage facilities, gathering lines, and auxiliary non-transportation-related equipment and facilities in a single geographical oil or gas field operated by a single operator.

(ii) *Oil production facility (onshore) drainage.* (A) At tank batteries and central treating stations where an accidental discharge of oil would have a reasonable possibility of reaching navigable waters, the dikes or equivalent required under § 112.7(c)(1) should have drains closed and sealed at all times except when rainwater is being drained. Prior to drainage, the diked area should be inspected as provided in paragraph (e)(2)(iii) (B), C), and (D). Accumulated oil on the rainwater should be picked up and returned to storage or disposed of in accordance with approved methods.

(B) Field drainage ditches, road ditches, and oil traps, sumps or skimmers, if such exist, should be inspected at regularly scheduled intervals for accumulation of oil that may have escaped from small leaks. Any such accumulations should be removed.

(iii) *Oil production facility (onshore) bulk storage tanks.* (A) No tank should be used for the storage of oil unless its material and construction are compatible with the material stored and the conditions of storage.

(B) All tank battery and central treating plant installations should be provided with a secondary means of containment for the entire contents of the largest single tank if feasible, or alternate systems such as those outlined in § 112.7(c)(1). Drainage from undiked areas should be safely confined in a catchment basin or holding pond.

(C) All tanks containing oil should be visually examined by a competent person for condition and need for maintenance on a scheduled periodic basis. Such examination should include the foundation and supports of tanks that are above the surface of the ground.

(D) New and old tank battery installations should, as far as practical, be fail-safe engineered or updated into a fail-safe engineered installation to prevent spills. Consideration should be given to one or more of the following:

(*1*) Adequate tank capacity to assure that a tank will not overfill should a pumper/gauger be delayed in making his regular rounds.

(*2*) Overflow equalizing lines between tanks so that a full tank can overflow to an adjacent tank.

(*3*) Adequate vacuum protection to prevent tank collapse during a pipeline run.

(*4*) High level sensors to generate and transmit an alarm signal to the computer where facilities are a part of a computer production control system.

(iv) *Facility transfer operations, oil production facility (onshore).* (A) All above ground valves and pipelines should be examined periodically on a scheduled basis for general condition of items such as flange joints, valve glands and bodies, drip pans, pipeline supports, pumping well polish rod stuffing boxes, bleeder and gauge valves.

(B) Salt water (oil field brine) disposal facilities should be examined often, particularly following a sudden change in atmospheric temperature to detect possible system upsets that could cause an oil discharge.

(C) Production facilities should have a program of flowline maintenance to prevent spills from this source. The program should include periodic examinations, corrosion protection, flowline replacement, and adequate records, as appropriate, for the individual facility.

(*6*) *Oil drilling and workover facilities (onshore)* (i) Mobile drilling or workover equipment should be positioned or located so as to prevent spilled oil from reaching navigable waters.

(ii) Depending on the location, catchment basins or diversion structures may be necessary to intercept and contain spills of fuel, crude oil, or oily drilling fluids.

(iii) Before drilling below any casing string or during workover operations, a blowout prevention (BOP) assembly and well control system should be installed that is capable of controlling any well head pressure that is expected to be encountered while that BOP assembly is on the well. Casing and BOP installations should be in accordance with State regulatory agency requirements.

(*7*) *Oil drilling, production, or workover facilities (offshore).* (i) Definition: "An oil drilling, production or workover facility (offshore)" may include all drilling or workover equipment, wells, flowlines, gathering lines, platforms, and auxiliary nontransportation - related equipment and facilities in a single geographical oil or gas field operated by a single operator.

(ii) Oil drainage collection equipment should be used to prevent and control small oil spillage around pumps, glands, valves, flanges, expansion joints, hoses, drain lines, separators, treaters, tanks, and allied equipment. Drains on the facility should be controlled and directed toward a central collection sump or equivalent collection system sufficient to prevent discharges of oil into the navigable waters of the United States. Where drains and sumps are not practicable oil contained in collection equipment should be removed as often as necessary to prevent overflow.

(iii) For facilities employing a sump system, sump and drains should be adequately sized and a spare pump or equivalent method should be available to remove liquid from the sump and assure that oil does not escape. A regular scheduled preventive maintenance inspection and testing program should be employed to assure reliable operation of the liquid removal system and pump start-up device. Redundant automatic sump pumps and control devices may be required on some installations.

(iv) In areas where separators and treaters are equipped with dump valves whose predominant mode of failure is in the closed position and pollution risk is high, the facility should be specially equipped to prevent the escape of oil. This could be accomplished by extending the flare line to a diked area if the separator is near shore, equipping it with a high liquid level sensor that will automatically shut-in wells producing to the separator, parallel redundant dump valves, or other feasible alternatives to prevent oil discharges.

(v) Atmospheric storage or surge tanks should be equipped with high liquid level sensing devices or other acceptable alternatives to prevent oil discharges.

(vi) Pressure tanks should be equipped with high and low pressure sensing devices to activate an alarm and/or control the flow or other acceptable alternatives to prevent oil discharges.

(vii) Tanks should be equipped with suitable corrosion protection.

(viii) A written procedure for inspecting and testing pollution prevention equipment and systems should be prepared and maintained at the facility. Such procedures should be included as part of the SPCC Plan.

(ix) Testing and inspection of the pollution prevention equipment and systems at the facility should be conducted by the owner or operator on a scheduled periodic basis commensurate with the complexity, conditions and circumstances of the facility or other appropriate regulations.

(x) Surface and subsurface well shut-in valves and devices in use at the facility should be sufficiently described to determine method of activation or control, e.g., pressure differential, change in fluid or flow conditions, combination of pressure and flow, manual or remote control mechanisms. Detailed records for each well, while not necessarily part of the plan should be kept by the owner or operator.

(xi) Before drilling below any casing string, and during workover operations a blowout preventer (BOP) assembly and well control system should be installed that is capable of controlling any well-head pressure that is expected to be encountered while that BOP assembly is on the well. Casing and BOP installations should be in accordance with State regulatory agency requirements.

(xii) Extraordinary well control measures should be provided should emergency conditions, including fire, loss of control and other abnormal conditions, occur. The degree of control system redundancy should vary with hazard exposure and probable consequences of failure. It is recommended that surface shut-in systems have redundant or "fail close" valving. Subsurface safety valves may not be needed in producing wells that will not flow but should be installed as required by applicable State regulations.

(xiii) In order that there will be no misunderstanding of joint and separate duties and obligations to perform work in a safe and pollution free manner, written instructions should be prepared by the owner or operator for contractors and subcontractors to follow whenever contract activities include servicing a well or systems appurtenant to a well or pressure vessel. Such instructions and procedures should be maintained at the offshore production facility. Under certain circumstances and conditions such contractor activities may require the presence at the facility of an authorized representative of the owner or operator who would intervene when necessary to prevent a spill event.

(xiv) All manifolds (headers) should be equipped with check valves on individual flowlines.

(xv) If the shut-in well pressure is greater than the working pressure of the flowline and manifold valves up to and including the header valves associated with that individual flowline, the flowline should be equipped with a high pressure sensing device and shutin valve at the wellhead unless provided with a pressure relief system to prevent over pressuring.

(xvi) All pipelines appurtenant to the facility should be protected from corrosion. Methods used, such as protective coatings or cathodic protection, should be discussed.

(xvii) Sub-marine pipelines appurtenant to the facility should be adequately protected against environmental stresses and other activities such as fishing operations.

(xviii) Sub-marine pipelines appurtenant to the facility should be in good

operating condition at all times and inspected on a scheduled periodic basis for failures. Such inspections should be documented and maintained at the facility.

(8) *Inspections and records.* Inspections required by this part should be in accordance with written procedures developed for the facility by the owner or operator. These written procedures and a record of the inspections, signed by the appropriate supervisor or inspector, should be made part of the SPCC Plan and maintained for a period of three years.

(9) *Security (excluding oil production facilities).* (i) All plants handling, processing, and storing oil should be fully fenced, and entrance gates should be locked and/or guarded when the plant is not in production or is unattended.

(ii) The master flow and drain valves and any other valves that will permit direct outward flow of the tank's content to the surface should be securely locked in the closed position when in non-operating or non-standby status.

(iii) The starter control on all oil pumps should be locked in the "off" position or located at a site accessible only to authorized personnel when the pumps are in a non-operating or non-standby status.

(iv) The loading/unloading connections of oil pipelines should be securely capped or blank-flanged when not in service or standby service for an extended time. This security practice should also apply to pipelines that are emptied of liquid content either by draining or by inert gas pressure.

(v) Facility lighting should be commensurate with the type and location of the facility. Consideration should be given to: (A) Discovery of spills occurring during hours of darkness, both by operating personnel, if present, and by non-operating personnel (the general public, local police, etc.) and (B) prevention of spills occurring through acts of vandalism.

(10) *Personnel, training and spill prevention procedures.* (i) Owners or operators are responsible for properly instructing their personnel in the operation and maintenance of equipment to prevent the discharges of oil and applicable pollution control laws, rules and regulations.

(ii) Each applicable facility should have a designated person who is accountable for oil spill prevention and who reports to line management.

(iii) Owners or operators should schedule and conduct spill prevention briefings for their operating personnel at intervals frequent enough to assure adequate understanding of the SPCC Plan for that facility. Such briefings should highlight and describe known spill events or failures, malfunctioning components, and recently developed precautionary measures.

APPENDIX

Memorandum of Understanding between the Secretary of Transportation and the Administrator of the Environmental Protection Agency.

SECTION II—DEFINITIONS

The Environmental Protection Agency and the Department of Transportation agree that for the purposes of Executive Order 11548, the term:

(1) "Non-transportation-related onshore and offshore facilities" means:

(A) Fixed onshore and offshore oil well drilling facilities including all equipment and appurtenances related thereto used in drilling operations for exploratory or development wells, but excluding any terminal facility, unit or process integrally associated with the handling or transferring of oil in bulk to or from a vessel.

(B) Mobile onshore and offshore oil well drilling platforms, barges, trucks, or other mobile facilities including all equipment and appurtenances related thereto when such mobile facilities are fixed in position for the purpose of drilling operations for exploratory or development wells, but excluding any terminal facility, unit or process integrally associated with the handling or transferring of oil in bulk to or from a vessel.

(C) Fixed onshore and offshore oil production structures, platforms, derricks, and rigs including all equipment and appurtenances related thereto, as well as completed wells and the wellhead separators, oil separators, and storage facilities used in the production of oil, but excluding any terminal facility, unit or process integrally associated with the handling or transferring of oil in bulk to or from a vessel.

(D) Mobile onshore and offshore oil production facilities including all equipment and appurtenances related thereto as well as completed wells and wellhead equipment, piping from wellheads to oil separators, oil separators, and storage facilities used in the production of oil when such mobile facilities are fixed in position for the purpose of oil production operations, but excluding any terminal facility, unit or process integrally associated with the handling or transferring of oil in bulk to or from a vessel.

(E) Oil refining facilities including all equipment and appurtenances related thereto as well as in-plant processing units, storage units, piping, drainage systems and waste treatment units used in the refining of oil, but excluding any terminal facility, unit or process integrally associated with the handling or transferring of oil in bulk to or from a vessel.

(F) Oil storage facilities including all equipment and appurtenances related thereto as well as fixed bulk plant storage, terminal oil storage facilities, consumer storage, pumps and drainage systems used in the storage of oil, but excluding inline or breakout storage tanks needed for the continuous operation of a pipeline system and any terminal facility, unit or process integrally associated with the handling or transferring of oil in bulk to or from a vessel.

(G) Industrial, commercial, agricultural or public facilities which use and store oil, but excluding any terminal facility, unit or process integrally associated with the handling or transferring of oil in bulk to or from a vessel.

(H) Waste treatment facilities including in-plant pipelines, effluent discharge lines, and storage tanks, but excluding waste treatment facilities located on vessels and terminal storage tanks and appurtenances for the reception of oily ballast water or tank washings from vessels and associated systems used for off-loading vessels.

(I) Loading racks, transfer hoses, loading arms and other equipment which are appurtenant to a nontransportation-related facility or terminal facility and which are used to transfer oil in bulk to or from highway vehicles or railroad cars.

(J) Highway vehicles and railroad cars which are used for the transport of oil exclusively within the confines of a nontransportation-related facility and which are not intended to transport oil in interstate or intrastate commerce.

(K) Pipeline systems which are used for the transport of oil exclusively within the confines of a nontransportation-related facility or terminal facility and which are not intended to transport oil in interstate or intrastate commerce, but excluding pipeline systems used to transfer oil in bulk to or from a vessel.

(2) "transportation-related onshore and offshore facilities" means:

(A) Onshore and offshore terminal facilities including transfer hoses, loading arms and other equipment and appurtenances used for the purpose of handling or transferring oil in bulk to or from a vessel as well as storage tanks and appurtenances for the reception of oily ballast water or tank washings from vessels, but excluding terminal waste treatment facilities and terminal oil storage facilities.

(B) Transfer hoses, loading arms and other equipment appurtenant to a nontransportation-related facility which is used to transfer oil in bulk to or from a vessel.

(C) Interstate and intrastate onshore and offshore pipeline systems including pumps and appurtenances related thereto as well as in-line or breakout storage tanks needed for the continuous operation of a pipeline system, and pipelines from onshore and offshore oil production facilities, but excluding onshore and offshore piping from wellheads to oil separators and pipelines which are used for the transport of oil exclusively within the confines of a nontransportation-related facility or terminal facility and which are not intended to transport oil in interstate or intrastate commerce or to transfer oil in bulk to or from a vessel.

(D) Highway vehicles and railroad cars which are used for the transport of oil in interstate or intrastate commerce and the equipment and appurtenances related thereto, and equipment used for the fueling of locomotive units, as well as the rights-of-way on which they operate. Excluded are highway vehicles and railroad cars and motive power used exclusively within the confines of a nontransportation-related facility or terminal facility and which are not intended for use in interstate or intrastate commerce.

J. L. Pierce

for reporting "call-down list" refer to 112.7a, 3 IX in oct 22, 91 Regs page # 54634

Suggested Procedure for Development of Spill Prevention Control and Countermeasure Plans

(To Assist Conformance to Requirements of *Title 40, Code of Federal Regulations, Part 112.)*

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Users of this publication should become familiar with its scope and content. This publication is intended to supplement rather than replace individual engineering judgment.

OFFICIAL PUBLICATION

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TABLE OF CONTENTS

APPENDICES

Section

POLICY

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FOREWORD

In 1970 Congress enacted the Water Quality Improvement Act which stated that the policy of the United States is that there shall be no discharges of oil into the navigable waters of the United States. The discharge of harmful quantities of oil into navigable waters of the United States is prohibited. The current definition of what has been determined to be a "harmful quantity" includes in *Title 40, Code of Federal Regulations, Part 110 (40 CFR Part 110)**, "Protection of Environment—Discharge of Oil", those discharges which will cause a sheen or discoloration of the surface of the water or a sludge or emulsion to be deposited beneath the surface of the water. *Title 40, Code of Federal Regulations, Part 112 (40 CFR Part 112)**, "Oil Pollution Prevention—Non-transportation Related Onshore and Offshore Facilities", was promulgated December 11, 1973 pursuant to Section 311 (j)(1)(C) of the Federal Water Polution Control Act Amendments of 1972 which requires the establishment of procedures, methods, and equipment to prevent and contain discharges of oil.

This bulletin has been developed by the American Petroleum Institute, Production Department, to assist oil and gas producing operators in their efforts to comply with the regulations in *40 CFR Part 112*. These regulations became effective on January 10, 1974, and are applicable to non-transportation related onshore and offshore facilities which have discharged or, due to their location, could reasonably be expected to discharge oil into or upon the navigable waters of the United States or adjoining shorelines. As pertaining to offshore facilities, the regulations are limited to those facilities that lie within, on, or under any of the navigable waters of the United States. Facilities located beyond the territorial seas are not covered by *40 CFR Part 112*.

These regulations require that operators of applicable facilities prepare a Spill Prevention Control and Countermeasure (SPCC) Plan for each production facility (which may include a portion or all of the producing facilities of each individual operator within an oilfield) by July 10, 1974 unless an extension is granted because compliance is not possible due to the nonavailability of qualified personnel or if there are delays in construction or equipment delivery beyond the control and without the fault of the operator. Implementation of the individual SPCC Plans is to be accomplished by January 10, 1975 unless qualified personnel are not available or if there are delays in construction or equipment delivery beyond the control and without the fault of the operator. Attached are suggested forms, Part I and Part II (Alternates A, B, and C), which may be utilized and/or copied as necessary in the preparation of either single or multiple facility SPCC Plans.

Regardless of the size or location of an oil producer's operation, it is necessary that an assessment be made of those operations to determine whether or not the provisions of the oil pollution prevention regulations are applicable. Basically, the criteria is that if it can be reasonably expected that a discharge of oil at a production facility, including a gasoline plant, will enter the navigable waters of the United States or adjoining shorelines that facility is subject to the regulations. The attached regulations and discussion will assist the operator in making the proper assessment.

As is indicated by the title of the regulations their purpose is to *prevent* oil discharges from getting into navigable waters. The first line of defense is to urge the use of pollution prevention equipment and to train and educate operating personnel to reduce human errors so that accidental discharges may be reduced to a minimum. The second line of defense is secondary containment, where appropriate, to prevent any accidental discharge from reaching navigable waters. Where secondary containment is not practicable, the operator must show that he has prepared an adequate oil spill contingency plan and that management is in full support of the contingency plan with a commitment of necessary manpower and materials.

This Second Edition supersedes and replaces the First Edition, March 1974 (Reissued February 1976).

Attention Users: Portions of this publication have been changed from the previous edition. The location of changes have been marked with a bar in the margin, as shown to the left of this paragraph. In some cases the changes may be significant, while in other cases the changes reflect minor editorial adjustments. The bar notations in the margins are provided as an aid to users as to those parts of this publication that have been changed from the previous edition, but API makes no warranty as to the accuracy of such bar notations.

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SUGGESTED PROCEDURE FOR DEVELOPMENT OF SPILL PREVENTION CONTROL AND COUNTERMEASURE PLANS

(To Assist Conformance to Requirements of *Title 40, Code of Federal Regulations, Part 112.)*

INTRODUCTION

The Federal Water Pollution Control Act Amendments of 1972 require the Administrator of the Environmental Protection Agency (EPA), with other federal, state, and interstate agencies, to enter into programs designed to prevent, reduce, or eliminate pollution of the navigable waters of the United States. On December 11, 1973, the EPA published regulations for the prevention of pollution of waters of the United States by oil emanating from non-transportation related onshore and offshore facilities. The regulations are identified as *Title 40, Code of Federal Regulations, Part 112 (40 CFR Part 112),* "Oil Pollution Prevention—Non-transportation Related Onshore and Offshore Facilities", and became effective on January 10, 1974.

These regulations require the preparation and implementation of a Spill Prevention Control and Countermeasure (SPCC) Plan for all non-transportation related facilities (onshore and offshore) which have discharged or could reasonably be expected to discharge oil into the navigable waters of the United States or the adjoining shorelines. This bulletin has been prepared by the American Petroleum Institute, Production Department, to assist the oil and gas producing industry in understanding the regulations and in developing the SPCC Plans wherever they are needed. Included in this bulletin are: (a) a copy of the oil pollution prevention regulations *(40 CFR Part 112),* (b) discharge of oil regulations *(40 CFR Part 110),* (c) suggested forms for use in preparation of SPCC Plans, (d) discussion of the regulations, and (e) instructions for preparing SPCC Plans as required by the regulations. Attached are suggested forms, Part I and Part II (Alternates A, B, and C), which may be utilized and/or copied as necessary in the preparation of single or multiple facility SPCC Plans.

The attached forms for use in preparation of SPCC Plans were developed specifically for the oil *producing* industry. The regulations require that owners or operators (including contractor operators) of mobile drilling and workover rigs must also prepare and implement SPCC Plans for each rig. With the exception of offshore drilling and workover rigs, the forms presented in this bulletin should not be assumed to be applicable for any other phase of industry, including drilling and workover rigs used in onshore operations. The form developed for offshore producing facilities is also intended to be applicable to offshore drilling and workover rigs. Owners or operators of onshore drilling and workover rigs should review the regulations and comply with requirements applicable to their specific operations. Owners or operators of facilities are advised to consult with their legal counsel with respect to the applicability of the suggested procedure and forms.

The objective of these regulations is to *prevent* the discharge of oil in harmful quantities into the navigable waters of the United States or adjoining shorelines. The accomplishment of this objective requires an assessment of each facility for the possibility of any such discharge of oil. Where such potential exists, the regulations urge that (a) employees be adequately trained to reduce the number of human errors that often cause spills; (b) inspection procedures be implemented; (c) when appropriate, pollution prevention equipment be installed and maintained; and (d) secondary containment, if practicable, be provided to contain any oil that may be spilled.

GENERAL DISCUSSION

(Administrative Sections of *40 CFR Part 112;* Sections 112.1 - 112.6; Pages 34165-34167)

APPLICABILITY

Except for facilities listed below, a SPCC Plan must be prepared by the owner or operator of onshore and offshore non-transportation related production facilities engaged in drilling, producing, gathering, storing, processing, refining, transferring, distributing, and consuming oil and oil products. The exceptions to this requirement are as follows:

(1) Equipment or operations of vessels or facilities which are subject to authority and control of the U.S. Department of Transportation. On page 34170 of the attached copy of the regulations *(40 CFR Part 112)* there is a copy of a Memorandum of Understanding between the Secretary of Transportation and the Administrator of the EPA defining transportation related and non-transportation related facilities.

(2) Facilities having a total above-ground storage capacity of 1,320 gallons or less of oil, provided no single container has a capacity in excess of 660 gallons.

(3) Facilities having a total storage capacity of 42,000 gallons or less and with such total storage capacity buried underground.

(4) Facilities which, due to their location, could not reasonably be expected to discharge oil into or upon the navigable waters of the United States or adjoining shorelines.

Non-transportation related production facilities include, but are not limited to, oil production lease facilities, mobile or portable drilling or workover rigs operating in a fixed mode, portable fueling facilities, and gas processing plants. Gas treating and compression operations integrally associated with oil production operations or gas processing plants are to be considered a part of the production lease or plant facility.

Individual SPCC Plans must be prepared by the owner or operator of each mobile or portable drilling or workover rig. These plans will apply from location to location and need not be redone each time the rig moves. Well and lease service operations such as paraffin and scale removal, etc., are to be covered by the SPCC Plan prepared for the lease production facility.

In order to determine which production facilities will require SPCC Plans, the owner or operator must make a determination of those facilities from which a discharge could "reasonably be expected" to get into navigable waters or upon adjoining shorelines. Obviously, if a facility is far removed from navigable waters the chance for a discharge at that location getting into the navigable waters may be very remote. All facilities should be examined critically to determine if, in the judgment of the owner or operator, a discharge at that location could logically be expected to get into such water. Among the factors the owner or operator should consider in making such determination are:

(1) prior spill history;
(2) location (proximity to navigable waters);
(3) potential size of discharge;
(4) type of soil and terrain; and
(5) frequency and amount of rainfall.

The phrase "reasonably be expected" means that the expectation is logical, rational, sensible, justifiable, credible, plausible, etc.

The term "navigable waters" is defined in the attached regulations *(40 CFR Part 112)* in Section 112.2 (k) (see page 34165). Generally speaking, every body of water or continuous stream should be considered as navigable. The definition includes the following:

(1) waters that are navigable in fact;
(2) waters declared navigable by a Federal agency or court;
(3) tributaries of navigable waters;
(4) interstate waters; and
(5) intrastate lakes, rivers, and streams
  (a) from which fish or shellfish are taken and sold in interstate commerce, or
  (b) which are utilized by interstate travelers for recreational or other purposes.

REQUIREMENTS FOR PREPARATION AND IMPLEMENTATION OF SPCC PLANS

SPCC Plans are to be prepared and maintained at an appropriate place near or at the facility by July 10, 1974, for facilities in operation on January 10, 1974, or within 6 months of the date of first operation for newly constructed facilities. If it is not possible to prepare the SPCC Plan within the required period because of nonavailability of qualified manpower the operator may request an extension of time from the EPA Regional Administrator, setting forth the details of the request in a letter.

Operators are to implement the SPCC Plans as soon as possible after preparation, but no later than one year after date of first operation or by January 10, 1975, whichever is the latest. If an operator cannot comply with this time requirement due to nonavailability of qualified personnel or delay in construction or equipment delivery beyond his control, he may request an extension of time by a letter request to the EPA Regional Administrator. The letter must include:

(1) a complete copy of the SPCC Plan;
(2) a full explanation of the cause for any such delay and the specific aspects of the SPCC Plan affected by the delay;
(3) a full discussion of actions being taken or contemplated to minimize or mitigate such delay; and
(4) a proposed time schedule for the implementation of any corrective actions being taken or contemplated, including interim dates for completion of tests or studies, installation and operation of any necessary equipment, or other preventive measures.

CERTIFICATION

Each SPCC Plan must be reviewed and certified by a Registered Professional Engineer. The engineer must be familiar with the provisions of 40 CFR, Part 112 and must have examined the facility and attest that the Plan has been prepared in accordance with good engineering practices. It is not necessary by this regulation that the engineer be registered in the state in which the facility is located. However, for the protection of the Registered Professional Engineer local licensing requirements should be ascertained.

PLAN AVAILABILITY

The operator of a facility for which a SPCC Plan is required must maintain a complete copy of the Plan at the facility, if manned at least 8 hours per day, or at the nearest field office if unmanned. The Plan must be made available to EPA personnel for on-site review anytime during normal working hours.

AMENDMENTS

The owner or operator is required to amend the Plan for the following reasons:

(1) when required by the EPA after review of the Plan, submitted because of a spill event;
(2) whenever there is a change in facility design, construction, operations, or maintenance which materially affects the potential for an oil spill; or
(3) the owner or operator is required to review each SPCC Plan at least once every three years, and an amendment is required if such review indicates more effective control and prevention technology will significantly reduce the likelihood of a spill event (and if such technology has been field proven).

Commencing January 10, 1975, unless an extension of time has been granted by the EPA Regional Administrator, the operator must submit the SPCC Plan with any amendments to EPA and to the appropriate state agencies whenever a facility has:

(1) discharged more than 1,000 U. S. gallons (approximately 24 barrels) into navigable waters in a single spill event; or
(2) discharged oil in harmful quantities, as defined in *40 CFR Part 110,* into navigable waters in two reportable spill events within any 12-month period.

Within 60 days of the occurrence of either of these two conditions the operator must submit to the EPA Regional Administrator the following:

(1) Name of the facility.
(2) Name of the owner or operator of the facility.
(3) Location of the facility.
(4) Date of initial facility operation (date of first production or first gas plant start-up).
(5) Maximum storage or handling capacity of the facility and current normal daily throughput.
(6) Description of the facility, including maps, flow diagrams, and topographical maps.
(7) A complete copy of the SPCC Plan with any amendments.
(8) The cause of such spill, including a failure analysis of the system or subsystem in which the failure occurred. Lease production facilities may be divided into drilling, production, and gathering systems for identification purposes in reporting to EPA. These major systems can be broken down into various components or subsystems. The failure analysis is to examine and explain the reason for the failure resulting in the spill event. The analysis should be explicit, definitive, and not general. For instance, it would be inadequate to report simply that the cause of a spill was the failure of a storage tank. The failure analysis should indicate in some detail the nature of failure that caused the spill.
(9) The corrective actions and/or countermeasures taken, including an adequate description of equipment repairs and/or replacements.
(10) Additional preventive measures taken or contemplated to minimize the possibility of recurrence.
(11) Such other information as the EPA Regional Administrator may require.

A complete copy of all information provided to EPA must also be sent at the same time to the state agency in charge of water pollution control activities. The state agency may review the information and make recommendations to EPA to prevent and to contain discharges of oil from the facility. The EPA will review the information and any recommendations made by the state agency and may require the operator to amend the SPCC Plan. When EPA proposes to require an amendment to the Plan, the operator will be notified by certified mail or by personal delivery. The EPA will specify the terms of such amendment. Within 30 days from receipt of this notice, the operator may submit written information, views, and arguments on the proposed amendment requirement. After considering all material presented, EPA will notify the operator of the amendment required or will rescind the notice. The amendment required becomes a part of the SPCC Plan 30 days after such notice, unless the operator appeals, and the operator must implement the amendment as soon as possible but not later than six months after the amendment becomes a part of the Plan.

All SPCC Plan amendments, except those proposed by the EPA Regional Administrator, must be certified by a Registered Professional Engineer.

CIVIL PENALTIES

Owners or operators of facilities who violate the requirements of the regulations relating to the preparation, implementation, and amendments to SPCC Plans are liable for a civil penalty of not more than $5,000 for each day that such violation continues. The EPA Regional Administrator may assess and compromise such civil penalty. No penalty will be assessed until the owner or operator has been given notice and an opportunity for hearing.

GUIDELINES FOR PLAN PREPARATION AND IMPLEMENTATION

(Section 112.7; *40 CFR Part 112;* Pages 34167-34170)

Guidelines for the preparation and implementation of a SPCC Plan are given in Section 112.7 of the regulations *(40 CFR Part 112).* The Plan is to be a carefully thought-out Plan prepared in accord-

ance with good engineering practices and which has the full approval of management at a level of authority to commit the necessary resources. If the Plan calls for additional facilities or procedures, methods, or equipment not yet fully operational, these items are to be discussed separately. The details of installation and operational start-up should be explained.

The suggested forms as attached in Part I and Part II (Alternates A, B, and C), were developed to assist the oil producing industry in preparation of SPCC Plans for onshore and offshore facilities of a non-transportation nature which have discharged or, due to their location, could reasonably be expected to discharge oil into or upon the navigable waters of the United States or adjoining shorelines. It is not necessary that SPCC Plans be prepared utilizing these particular forms. However, these suggested forms may be utilized and/or copied as necessary in the preparation of either single or multiple facility SPCC Plans. The use of these suggested forms will simplify preparation and provide uniformity in completed Plans.

The forms that have been developed are:

(1) PART I, GENERAL INFORMATION. This form is for recording information of a general nature and is applicable to all facilities.

(2) PART II, DESIGN AND OPERATING INFORMATION. There are three different or alternate forms developed for the purpose of recording information specific to the design and operation of a facility, as such design and operation pertain to the prevention of discharge of harmful quantities of oil into navigable waters. The forms are for three different classifications of facilities as follows:

(a) ALTERNATE A, ONSHORE FACILITY (EXCLUDING PRODUCTION). This form is for onshore facilities that are not oil producing facilities, such as gasoline plants.

(b) ALTERNATE B, ONSHORE OIL PRODUCTION FACILITY. This form is for onshore facilities involved in the production of oil, including condensate. Includes all producing facilities such as wells, gathering lines, separation and treating, and storage or custody transfer. This form, without review and study, should not necessarily be presumed to be adequate to meet all the requirements for preparation of SPCC Plans for onshore drilling and workover rigs.

(c) ALTERNATE C, OFFSHORE OIL DRILLING, PRODUCTION, OR WORKOVER FACILITY. This form is for offshore non-transportation related production facilities, located in, on, or under any of the navigable waters of the United States and mobile drilling and workover rigs while they are operating within the navigable waters. It is not necessary, by *40 CFR Part 112,* to prepare SPCC Plans for facilities that are located beyond the territorial seas. So many of the provisions in Section 112.7 (e)(7) (see page 34169) of *40 CFR Part 112* (attached) are applicable to both production and drilling or workover operations that it is thought that one form should be adequate for all such facilities.

A completed Plan utilizing the attached suggested forms will consist of three parts:

(1) Part I, General Information.
(2) Part II, Design and Operating Information (Alternate A, B, or C).
(3) Appendix—supplemental information recommended by the guidelines, such as inspection records, written procedures, contingency plans, maps, etc.

To assist in the differentiation between "onshore" and "offshore" facilities the following comments may be helpful:

"Offshore" facilities mean those facilities that are located in rivers, lakes, bays, estuaries, territorial waters of the United States, or in marsh areas where some or all of the facility is over or in water. There will be some locations where the determination of whether the facility is "offshore" or "onshore" will be doubtful, e.g., inland rivers; small, shallow lakes; etc. The question of proper identification of the facility in doubtful locations should be referred to appropriate legal counsel.

The guidelines provide for inspections of certain items of equipment to determine the state of their condition and ability to adequately prevent the accidental discharge of oil as a result of failure. The procedures for conducting inspections should be written in the SPCC Plan and a record of such inspections should be made a part of the Plan and retained for a period of three years.

A production facility (onshore or offshore) may include all operations within a single geographical field. However, if it is appropriate, a facility may be subdivided and a SPCC Plan prepared for each division. The SPCC Plan prepared for a gas plant, whether located onshore or offshore, should follow the format of the form designated "Part II, Alternate A, Onshore Facility (Excluding Production)".

The forms are designed so that the preparing person can usually answer "YES", "NO", or "NA" (not applicable) to statements referring to the guideline provisions of the regulation. Space is provided for discussion of the operations or proce-

dures when appropriate. In general, a "NO" response to a statement will require discussion. A "YES" or "NA" response also may require discussion for clarification. If additional space for discussion is needed, an attachment may be used. In some cases the guidelines provide for additional information, and in these cases an acceptable attachment is provided as a part of this Bulletin.

PART I INSTRUCTIONS — GENERAL INFORMATION

1. Enter a descriptive name for the area to be included in the Plan. The name could be the field name if all operations within one field are included, or a field name with the name of the specific operations included.

2. Classify the facility as: (a) onshore facility-gas plant (or other); (b) onshore production facility; (c) offshore production facility; (d) offshore drilling (or workover) facility; or (e) offshore production facility-gas plant.

3. The facility location should include the county (parish) and state and the distance and direction from a nearby town.

4. Enter the name of the person (corporation, company, partnership, individual, etc.) responsible for the facility operations and the address to which correspondence regarding the facility should be sent.

5. Enter the name and title of the designated person who is accountable for oil spill prevention and who reports to line management. In various situations, this person could be a company employee such as a superintendent or foreman, or an owner or operator's agent with similar responsibilities and authority.

6. If a facility has experienced one or more reportable oil spills within the 12 months prior to the effective date of the regulation (January 10, 1974), a written description of each such spill, the corrective action taken, and the plans for preventing recurrence must be included in the Plan. Attachment #1 may be used for this purpose.

The overall Plan must have full approval of management at a level with authority to commit the necessary resources.

A Registered Professional Engineer must certify that he has reviewed the Plan, has examined the facility, is familiar with the provisions of the regulations *(40 CFR Part 112)*, and can attest that the SPCC Plan has been prepared in accordance with good engineering practices.

Where experience indicates a reasonable potential for equipment failure, the Plan for a facility should include a prediction of the direction, rate of flow, and total quantity of oil which could be discharged as a result of each major type of failure. As a result of the prediction, appropriate containment and/or diversionary structures or equipment to prevent discharge oil from reaching navigable waters should be provided, when practicable. In some cases, a narrative description of flow and the containment method will be sufficient. In more complex situations, especially those involving multiple operations, an appropriate map may be attached to show locations of the potential sources of oil discharges, direction of flow, and locations of any navigable waters.

When it is determined that the installation of structures or equipment to prevent discharged oil from reaching navigable waters is not practicable for the facility, the owner or operator should explain why and provide the following:

(1) A strong oil spill contingency plan.
(2) A written commitment of manpower, equipment, and materials required to expeditiously control and remove any harmful quantities of oil discharged. Attachment #2 is provided to assist in meeting this requirement.

The regulations *(40 CFR Part 112)* state that the Plan should provide for inspections of some operations. The inspections should be in accordance with written procedures developed for the facility by the owner or operator. These written procedures and a record of the inspections signed by the appropriate supervisor or inspector should be made a part of the SPCC Plan. The written procedures for the inspections should be prepared for the individual facility by the owner or operator and should be attached to the appropriate inspection record.

Owners or operators of a facility are responsible under the guidelines for properly instructing their personnel in (a) the operation and maintenance of equipment to prevent the discharge of oil to navigable water, and (b) the applicable pollution control laws, rules, and regulations affecting the facility. Owners or operators should schedule and conduct spill prevention briefings for their operating personnel at intervals frequent enough to assure adequate understanding of the SPCC Plan. These briefings should highlight and describe known spill events or failures, malfunctioning components, and recently developed precautionary measures.

PART II, ALTERNATE A INSTRUCTIONS
ONSHORE FACILITY (EXCLUDING PRODUCTION)

This form may be used in the preparation of SPCC Plans for non-production onshore facilities, such as gasoline plants.

A. Facility Drainage

Diked storage areas should have manual valves, manually activated pumps or ejectors, or other acceptable alternatives to drain or empty retained storm water. The condition of the water should be checked before drainage to ensure that no oil is discharged.

Plant drainage systems for undiked areas should flow, if possible, into either (a) ponds, lagoons, or catchment basins designed to retain oil or return it to the facility, or (b) a diversion system at the final discharge of all in-plant ditches that could contain an uncontrolled spill and return the oil to the plant. Where drainage waters are treated in more than one treatment unit, natural hydraulic flow should be used. If pump transfer is used, two "lift" pumps should be provided. If the treatment is continuous, one of the pumps should be permanently installed.

Drainage of rain water from dikes into a storm drain or into an effluent discharge which empties into an open watercourse, lake, or pond may bypass the in-plant treatment system if (a) the bypass valve is normally sealed closed, (b) the effluent is inspected to ensure compliance with applicable water quality standards and that no harmful discharge will occur, (c) the opening and resealing of the bypass valve is conducted under responsible supervision, and (d) adequate records are kept of such events.

B. Bulk Storage Tanks

Bulk oil storage tank construction and material should be compatible with the oil stored and the storage conditions such as pressure, temperature, etc.

Secondary containment should be provided for the capacity of the largest single tank plus a sufficient allowance for precipitation. Dikes, curbs, and pits are commonly used for this purpose. Dikes should be sufficiently impervious to contain oil. In considering the additional volume to be provided to take care of precipitation, the determination should consider the greatest amount of rainfall that may reasonably be expected to occur in a storm. An alternative system could consist of a drainage trench arranged so that a spill could terminate and be contained in a catchment basin.

New metallic tanks buried underground should be protected from corrosion by coatings, cathodic protection, or other effective methods compatible with local soil conditions. Such tanks should be pressure tested at regular intervals. Partially buried metallic tanks should be avoided unless buried portions are adequately protected.

Above-ground tanks should be subjected to appropriate integrity testing. Appropriate procedures might include hydrostatic testing, visual inspections, or inspection by a system of non-destructive shell thickness gauging. Appropriate records of the inspections should be maintained. Records need not be maintained for the regular, routine observations made by the plant workmen.

When leakage from defective internal heating coils could discharge oil into an open watercourse, such leakage should be controlled by (a) monitoring the steam return or exhaust lines for the presence of oil; (b) passing the steam return or exhaust lines through a settling tank, skimmer, or other separation system; or (c) replacing the internal heating coil with an external heating system.

Each bulk storage tank should be externally examined frequently for signs of deterioration and leaks. All tank installations should be fail-safe engineered, as far as practicable. Consideration should be given to the use of high-liquid-level alarms with an audible or visual signal, high-level pump cutoff devices, fast response system for determining liquid levels, equalizing lines between tanks, or other automatic safety devices.

Plant effluents which are discharged into a watercourse should have disposal facilities observed frequently enough to detect any possible system upset that could cause an oil discharge. Visible oil leaks which result in a loss of oil from tank seams, gaskets, rivets, or bolts should be promptly corrected.

C. Facility Transfer Operations, Pumping, and In-plant Process

Buried piping installations should have a protective wrapping and coating and should be cathodically protected if soil conditions warrant. If a section of buried line is exposed for any reason, it should be inspected for condition. If corrosion damage is found, additional inspection and corrective action should be taken as indicated by the magnitude of the damage. When a pipeline is not in service or is in standby service for an extended time, the terminal connection at the transfer point should be capped or blind-flanged. Pipe supports should be properly designed to minimize abrasion and corrosion and allow for expansion and contraction. All above-ground valves and pipeline should be subjected to regular examination. Vehicle traffic should be warned and/or regulated to assure no danger to above-ground piping.

D. Facility Tank Car and Tank Truck Loading/Unloading Rack

Tank car and tank truck loading/unloading rack procedures should meet the minimum requirements established by the Department of Transportation (refer to *49 CFR Parts 171, 173, 174, 177, and 179*).* A quick drainage system should be provided in loading/unloading areas. The containment system should be designed to hold at least maximum

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capacity of any single tank truck compartment loaded or unloaded in the plant. An interlocked warning light, a physical barrier system, or warning signs should be provided in loading/unloading areas to prevent vehicle departure before complete disconnect. Drains and outlets on tank cars and tank trucks should be examined for leakage prior to filling.

E. Security

All plants (excluding oil production facilities) should use as security measures, fences and locked and/or guarded gates when the plant is not in production or is unattended. Other measures should include locked valves on tanks if the valves could permit a spill, secured or electrically isolated starter controls on oil pumps, capped or blind-flanged loading/unloading connections of oil pipelines when not in service, and lighting adequate to permit surveillance of the facility. The lighting around the facility should be discussed in the SPCC Plan.

PART II, ALTERNATE B INSTRUCTIONS, ONSHORE OIL PRODUCTION FACILITY

This form may be used to prepare a SPCC Plan for oil production facilities located onshore. It has been developed specifically for producing operations and should not necessarily be presumed to be adequate for application to onshore drilling or workover rigs.

A. Facility Drainage

Diked storage areas should have manual valves or other acceptable alternative on drains. The condition of retained storm water for the presence of oil should be determined before drainage.

All drains from tank battery or central treating station secondary containment structures should be closed and sealed except during drainage of rain water.

Drainage of rain water from dikes into a storm drain or into an effluent discharge which empties into an open watercourse, lake, or pond may bypass the facility treatment system if (a) the bypass valve is normally sealed closed, (b) the effluent is inspected to ensure compliance with applicable water quality standards and that no harmful discharge will occur, (c) the opening and resealing of the bypass valve is conducted under responsible supervision, and (d) adequate records are kept of such events. Field drainage ditches, road ditches, and oil traps or skimmers should be inspected at regular intervals for accumulations of oil that may have escaped from small leaks. Accumulated oil should be returned to storage or disposed of by an approved method.

B. Bulk Storage Tanks

Oil storage tank construction and material should be compatible with the oil stored and the storage conditions such as pressure, temperature, etc.

Secondary containment should be provided for the capacity of the largest single tank plus a sufficient allowance for precipitation. Dikes, curbs, and pits are commonly used for this purpose. Dikes should be sufficiently impervious to contain oil. In considering the additional volume to be provided to take care of precipitation, the determination should consider the greatest amount of rainfall that may be reasonably expected to occur in a storm. An alternative system could consist of a drainage trench arranged so a spill could terminate and be contained in a catchment basin.

Tanks should be visually examined by a competent person for condition and need for maintenance on a scheduled, periodic basis. Such inspection should include the foundation and supports of tanks that are above the surface of the ground. These examinations should be more comprehensive than the observations made by pumpers in their routine activities.

Both new and old tank battery installations should be properly designed and equipped to prevent the accidental discharge of oil. Fail-safe engineering features which should be considered in construction or modification include adequate sizing of tanks, use of overflow equalizing lines, adequate vacuum protection, and the use of high-liquid-level sensors when a computer production control system is used.

C. Facility Transfer Operations

In the oil and water transfer operations that take place within the facility, all above-ground valves and pipelines should be examined on a scheduled basis for general conditions of items such as flange joints, valve glands and bodies, drip pans, pipeline supports, pumping well polish rod stuffing boxes, bleeder and gauge valves, etc. Salt water disposal facilities should be examined frequently, particularly following changes in pressure or temperature conditions that could cause line failure. Records should be kept of flow line repairs and used by the operator as a basis for a maintenance and replacement program designed to eliminate or minimize accidental oil discharges.

D. Oil Drilling & Workover Facilities

During drilling or workover operations, the production facility operator should ascertain that a blowout preventer assembly and well control system is installed that will be capable of controlling any wellhead pressure anticipated. [The drilling or workover rig owner or operator (contractor) must prepare and implement a SPCC Plan that will pertain to the drilling or workover rig.] The blowout preventer installation should be in accordance with requirements of state and other applicable rules and regulations. The degree of well control system redundancy and "fail-safe" valving design should vary with hazard exposure and probable consequences of failure.

PART II, ALTERNATE C INSTRUCTIONS
OFFSHORE OIL DRILLING, PRODUCTION, OR WORKOVER FACILITY

This form may be used in preparation of SPCC Plans for offshore production facilities and drilling or workover rigs used in offshore operations. The form was designed specifically for producing facilities but is also thought to be adequate for application to offshore drilling and workover rigs.

A. Facility Drainage

All sources of drips and small spillages of oil on offshore platforms should be protected with drains and drip pans to catch the oil before it can enter the water. Drip pans should be observed at regular intervals and emptied when necessary to make sure they do not fill to overflowing. Drains should empty into sumps which should be emptied as often as necessary to prevent overflowing.

B. Sump System

The sumps provided as overflow and spill collection equipment should be large enough to allow protection against accidental spillages. Some adequate alternate means should be provided for removing the liquid caught in the sumps in case the primary sump pump becomes inoperative. The pump and start-up device should be inspected and tested at regular intervals to ensure they are functional at all times.

C. Separator and Treater Dump Valves

If the predominant mode of failure of dump valves used on separators and treaters at an offshore facility is in the closed position, the potential for pollution is not great if the pressure relief line extends to a surge tank or scrubber which would catch any fluid overflowing through the relief line.

D. Tanks

All tanks should be equipped with protective devices to reduce the potential for overflowing or rupturing and, thus, discharging oil upon the surface of the water. Atmospheric storage or surge tanks should be equipped with high-liquid-level sensors or other acceptable alternatives to prevent spills, and pressure tanks should have high and low pressure sensors to activate alarms and/or control flow or other acceptable alternatives to prevent spills. Tanks should be adequately protected internally and externally from corrosion, as required to prevent leakage or spillage.

E. Pollution Prevention Equipment and Systems

Inspection and testing procedures for pollution prevention equipment and systems should be developed and a copy of such procedures maintained at the facility (see Attachment #4). Such equipment as high and low level sensors, high and low pressure sensors, etc. should be inspected and tested at periodic intervals.

F. Well Control Systems and Equipment

Producing Wells. Type of surface and subsurface shut-in valves and devices in use at the facility should be described as to method of operation and control (refer to Attachment #5).

Drilling and Workover Operations. During drilling or workover operations, a blowout preventer assembly and well control system should be installed that is capable of controlling any wellhead pressure anticipated. Casing and blowout preventer installations should be in accordance with requirements of applicable rules and regulations.

The degree of well control system redundancy and "fail-safe" valving design should vary with hazard exposure and probable consequences of failure.

G. Written Instructions for Contractors

The regulations state that in order that there will be no misunderstanding of the joint and separate duties and obligations to perform work in a safe and pollution-free manner, written instructions should be prepared by the owner or operator for contractors and subcontractors to follow whenever contract activities include servicing a well or systems appurtenant to a well or pressure vessel. Such instructions and procedures should be maintained at the facility. Under certain circumstances, contractor activities may require intervention by an authorized representative of the owner or operator to prevent a spill event. *(Appropriate legal counsel should be consulted regarding implementation of this section.)*

H. Flowlines

1. All headers should be equipped with check valves on individual flowlines.
2. If the shut-in wellhead pressure is greater than the working pressure of the flowline from the well and/or the header valves associated with that individual flowline, the flowline should be equipped with a pressure sensing device and shut-in valve at the wellhead unless a pressure relief system is provided.

I. Pipelines

1. All pipelines appurtenant to the facility should be protected against corrosion. Methods of providing such protection should be described.
2. Submarine pipelines associated with the facility should be adequately protected against environmental stresses and other activities such as fishing operations.
3. Submarine pipelines should be inspected for failures periodically. A documented record of such inspections should be maintained at the facility.

NOTE TO USERS

The following suggested model forms (Part I and Part II, Alternates A, B, and C) have been perforated at the fold for ease in removal from this bulletin and use in preparing SPCC Plans. These forms may be copied, if necessary, to provide additional forms when multiple SPCC Plans are to be prepared by an operator.

(Prior to completing Part I, refer to regulations and instructions page 5.)

SPILL PREVENTION CONTROL & COUNTERMEASURE PLAN

PART I
GENERAL INFORMATION

1. Name of facility _____

2. Type of facility _____

3. Location of facility _____

_____

_____

4. Name and address of owner or operator:

Name _____

Address _____

_____

_____

5. Designated person accountable for oil spill prevention at facility:

Name and title _____

6. Facility experienced a reportable oil spill event during the twelve months prior to Jan. 10, 1974 (effective date of 40 CFR, Part 112). (If YES, complete Attachment #1.) _____

MANAGEMENT APPROVAL

This SPCC Plan will be implemented as herein described.

Signature _____

Name _____

Title _____

CERTIFICATION

I hereby certify that I have examined the facility, and being familiar with the provisions of 40 CFR, Part 112, attest that this SPCC Plan has been prepared in accordance with good engineering practices.

_____
Printed Name of Registered Professional Engineer

(Seal)

_____
Signature of Registered Professional Engineer

Date _____ Registration No. _____ State _____

7. **Potential Spills — Prediction & Control:**

Source	Major Type of Failure	Total Quantity (bbls)	Rate (bbls/hr)	Direction of Flow*	Secondary Containment

Discussion:

*Attach map if appropriate.

Name of facility _____

Operator _____

PART I
GENERAL INFORMATION

[Response to statements should be: YES, NO, or NA (Not Applicable).]

8. Containment or diversionary structures or equipment to prevent oil from reaching navigable waters are practicable. (If NO, complete Attachment #2.) _____

9. **Inspections and Records**
   A. The required inspections follow written procedures. _____
   B. The written procedures and a record of inspections, signed by the appropriate supervisor or inspector, are attached. _____
   Discussion: _____

10. **Personnel Training and Spill Prevention Procedures**
   A. Personnel are properly instructed in the following:
   (1) operation and maintenance of equipment to prevent oil discharges, and _____
   (2) applicable pollution control laws, rules, and regulations. _____
   Describe procedures employed for instruction: _____

   B. Scheduled prevention briefings for the operating personnel are conducted frequently enough to assure adequate understanding of the SPCC Plan. _____
   Describe briefing program: _____

Name of facility _____

Operator _____

(Prior to completi)art II, Alternate A, refer to regulations and)uctions pages 6-7.)

PART II, ALTERNATE A
DESIGN AND OPERATING INFORMATION
ONSHORE FACILITY (EXCLUDING PRODUCTION)

A. **Facility Drainage**

1. Drainage from diked storage areas is controlled as follows (include operating description of valves, pumps, ejectors, etc. *(Note: Flapper-type valves should not be used):*_____

2. Drainage from undiked areas is controlled as follows (include description of ponds, lagoons, or catchment basins and methods of retaining and returning oil to facility):_____

3. The procedure for supervising the drainage of rain water from secondary containment into a storm drain or an open watercourse is as follows (include description of (a) inspection for pollutants, and (b) method of valving security). (A record of inspection and drainage events is to be maintained on a form similar to Attachment #3):_____

Name of facility_____

Operator_____

PART II, ALTERNATE A
DESIGN AND OPERATING INFORMATION
ONSHORE FACILITY (EXCLUDING PRODUCTION)

[Response to statements should be: YES, NO, or NA (Not Applicable).]

B. **Bulk Storage Tanks**

1. Describe tank design, materials of construction, fail-safe engineering features, and if needed, corrosion protection: _____

2. Describe secondary containment design, construction materials, and volume: _____

3. Describe tank inspection methods, procedures, and record keeping: _____

4. Internal heating coil leakage is controlled by one or more of the following control factors:
   (a) Monitoring the steam return or exhaust lines for oil. _____
   Describe monitoring procedure: _____
   (b) Passing the steam return or exhaust lines through a settling tank, skimmer, or other separation system. _____
   (c) Installing external heating systems. _____

5. Disposal facilities for plant effluents discharged into navigable waters are observed frequently for indication of possible upsets which may cause an oil spill event. _____
   Describe method and frequency of observations: _____

Name of facility _____

Operator _____

PART II, ALTERNATE A
DESIGN AND OPERATING INFORMATION
ONSHORE FACILITY (EXCLUDING PRODUCTION)

[Response to statements should be: YES, NO, or NA (Not Applicable).]

C. Facility Transfer Operations, Pumping, and In-plant Process

1. Corrosion protection for buried pipelines:
   (a) Pipelines are wrapped and coated to reduce corrosion. _____
   (b) Cathodic protection is provided for pipelines if determined necessary by electrolytic testing. _____
   (c) When a pipeline section is exposed, it is examined and corrective action taken as necessary. _____

2. Pipeline terminal connections are capped or blank-flanged and marked if the pipeline is not in service or on standby service for extended periods. _____
   Describe criteria for determining when to cap or blank-flange: _____

3. Pipe supports are designed to minimize abrasion and corrosion and allow for expansion and contraction. _____
   Describe pipe support design: _____

4. Describe procedures for regularly examining all above-ground valves and pipelines (including flange joints, valve glands and bodies, catch pans, pipeline supports, locking of valves, and metal surfaces): _____

5. Describe procedures for warning vehicles entering the facility to avoid damaging above-ground piping: _____

Name of facility _____

Operator _____

PART II, ALTERNATE A
DESIGN AND OPERATING INFORMATION
ONSHORE FACILITY (EXCLUDING PRODUCTION)

[Response to statements should be: YES, NO, or NA (Not Applicable).]

D. Facility Tank Car & Tank Truck Loading/Unloading Rack

Tank car and tank truck loading/unloading occurs at the facility. (If YES, complete 1 through 5 below.) _____

1. Loading/unloading procedures meet the minimum requirements and regulations of the Department of Transportation (refer to *49 CFR Parts 171, 173, 174, 177, and 179*). _____

2. The unloading area has a quick drainage system. _____

3. The containment system will hold the maximum capacity of any single compartment of a tank truck loaded/unloaded in the plant. _____
   Describe containment system design, construction materials, and volume: _____

4. An interlocked warning light, a physical barrier system, or warning signs are provided in loading/unloading areas to prevent vehicular departure before disconnect of transfer lines. _____
   Describe methods, procedures, and/or equipment used to prevent premature vehicular departure: _____

5. Drains and outlets on tank trucks and tank cars are checked for leakage before loading/unloading or departure. _____

Name of facility _____

Operator _____

PART II, ALTERNATE A
DESIGN AND OPERATING INFORMATION
ONSHORE FACILITY (EXCLUDING PRODUCTION)

[Response to statements should be: YES, NO, or NA (Not Applicable).]

E. Security

1. Plants handling, processing, or storing oil are fenced. _____

2. Entrance gates are locked and/or guarded when the plant is unattended or not in production. _____

3. Any valves which permit direct outward flow of a tank's contents are locked closed when in non-operating or standby status. _____

4. Starter controls on all oil pumps in non-operating or standby status are:
   (a) locked in the off position; _____
   (b) located at site accessible only to authorized personnel. _____

5. Discussion of items 1 through 4 as appropriate: _____

6. Discussion of the lighting around the facility: _____

Name of facility _____

Operator _____

(Prior to comple... Part II, Alternate B, refer to regulations an... ...structions page 7.)

PART II, ALTERNATE B
DESIGN AND OPERATING INFORMATION
ONSHORE OIL PRODUCTION FACILITY

[Response to statements should be: YES, NO, or NA (Not Applicable).]

A. **Facility Drainage**

1. Drainage from diked storage areas is controlled as follows (include operating description of valves, pumps, ejectors, etc.): _____

2. The procedure for supervising the drainage of rain water from secondary containment into a storm drain or an open watercourse is as follows (include description of (a) inspection for pollutants, and (b) method of valving security). (A record of inspection and drainage events is to be maintained on a form similar to Attachment #3): _____

3. Field drainage ditches, road ditches, and oil traps, sumps, or skimmers, if such exist, are inspected at regularly scheduled intervals for accumulations of oil. _____
Describe inspection procedures, intervals, and methods employed to remove oil: _____

B. **Bulk Storage Tanks**

1. Describe tank design, materials of construction, and fail-safe engineering features: _____

Name of facility _____

Operator _____

PART II, ALTERNATE B
DESIGN AND OPERATING INFORMATION
ONSHORE OIL PRODUCTION FACILITY

[Response to statements should be: YES, NO, or NA (Not Applicable).]

2. Describe secondary containment design, construction materials, and volume: _____

3. Describe tank examination methods and procedures: _____

C. **Facility Transfer Operations**

1. Describe scheduled basis for examinations of above-ground valves and pipelines and salt water disposal facilities: _____

2. Describe flowline maintenance program to prevent spills: _____

D. **Oil Drilling and Workover Facilities**

1. A blowout preventer (BOP) assembly and well control system is installed before drilling below any casing string and, as required during workover operations. _____
2. The BOP assembly is capable of controlling any expected wellhead pressure. _____
3. Casing and BOP installations conform to state regulations. _____

Name of facility _____

Operator _____

(Prior to completing Part II, Alternate C, refer to regulations and instructions page 8.)

PART II, ALTERNATE C
DESIGN AND OPERATING INFORMATION
OFFSHORE OIL DRILLING, PRODUCTION, OR WORKOVER FACILITY

[Response to statements should be: YES, NO, or NA (Not Applicable).]

A. **Facility Drainage**

1. Oil drainage and collection equipment is used to catch small oil leakage around pumps, glands, valves, flanges, expansion joints, hoses, drain lines, separators, treaters, tanks, etc. _____
2. Drains direct all oil to a central sump or equivalent. _____
3. Where drains and sumps are not practicable, oil collection equipment is emptied as often as necessary to prevent overflow. _____

   Discuss frequency of surveillance and removal of oil from collection equipment: _____

B. **Sump System**

A sump system is used at this facility. (If YES, complete 1 and 2 below.) _____

1. Describe operation of sump and drain liquid removal system: _____

2. Describe preventive maintenance inspection, test program, and record keeping: _____

Name of facility _____

Operator _____

PART II, ALTERNATE C
DESIGN AND OPERATING INFORMATION
OFFSHORE OIL DRILLING, PRODUCTION, OR WORKOVER FACILITY

[Response to statements should be: YES, NO, or NA (Not Applicable).]

C. Separator and Treater Dump Valves

In areas where pollution risk is high as a result of dump valve failure is the predominant mode of failure in the closed position? _____

If YES, describe safety equipment and procedures used to prevent oil discharges to the water when dump valve failure occurs: _____

D. Tanks

Describe equipment used to prevent oil discharges (include discussion of corrosion protection measures): _____

E. Pollution Prevention Equipment and Systems

Written inspection and testing procedures for pollution prevention equipment and systems are shown on Attachment #4.

F. Well Control Systems and Equipment

1. *Producing Wells.* Types of surface and subsurface shut-in valves and devices utilized at this facility are described as to the method of operation and control on Attachment #5.
2. *Drilling and Workover Operations.* A blowout preventer (BOP) assembly and well control system is installed before drilling below any casing string and, as required during workover operations. _____

Name of facility _____

Operator _____

PART II, ALTERNATE C
DESIGN AND OPERATING INFORMATION
OFFSHORE OIL DRILLING, PRODUCTION, OR WORKOVER FACILITY

[Response to statements should be: YES, NO, or NA (Not Applicable).]

2. The BOP assembly is capable of controlling any expected wellhead pressure. _____
3. Casing and BOP installations conform to applicable rules and regulations. _____

G. Written Instructions for Contractors

1. Written instructions discussing duties and obligations to prevent pollution are prepared for contractors servicing a well or systems appurtenant to a well or pressure vessels. _____
2. These instructions are maintained at the offshore facility. _____
3. An authorized representative of the owner or operator is present under certain circumstances and conditions to intervene when necessary to prevent a spill event. _____

H. Flowlines

1. All headers have check valves on individual flowlines. _____
2. Where the shut-in well pressure is greater than the working pressure of the flowline, manifold valves, and flowline header valves, the flowline shall have a high pressure sensing device and shut-in valve at the wellhead to prevent overpressuring (unless a pressure relief system is provided). _____

I. Pipelines

1. Describe corrosion protection measures for pipelines within the facility: _____
2. Submarine pipelines connected to the facility are adequately protected against environmental stresses and fishing operations. _____
3. Describe submarine pipeline inspection-for-failure procedures and record keeping: _____

Name of facility _____

Operator _____

SPCC PLAN, ATTACHMENT #1
SPILL HISTORY

(Complete this form for any reportable spill(s) which has (have) occurred from this facility during the twelve months prior to January 10, 1974 into _____ navigable water.)

1. Date _____ Volume _____ Cause: _____

   Corrective action taken: _____

   Plans for preventing recurrence: _____

2. Date _____ Volume _____ Cause: _____

   Corrective action taken: _____

   Plans for preventing recurrence: _____

3. Date _____ Volume _____ Cause: _____

   Corrective action taken: _____

   Plans for preventing recurrence: _____

Name of facility _____

Operator _____

SPCC PLAN, ATTACHMENT #2
OIL SPILL CONTINGENCY PLANS AND
WRITTEN COMMITMENT OF MANPOWER, EQUIPMENT, AND MATERIALS

Secondary containment or diversionary structures are impracticable for this facility for the following reasons (attach additional pages if necessary):

	Yes
A strong oil spill contingency plan is attached.	_____
A written commitment of manpower, equipment, and materials is attached.	_____

Name of facility _____

Operator _____

(Attachment #2, SPCC Plan)

SPCC PLAN, ATTACHMENT #3
ONSHORE FACILITY BULK STORAGE TANKS
DRAINAGE SYSTEM

Inspection Procedure:

Record of drainage, bypassing, inspection, and oil removal from secondary containment:

Date of Drainage	Date of Bypassing		Date of Inspection	Oil Removal	Supervisor's or Inspector's Signature
	Open	Closed			

Name of facility _____

Operator _____

(Attachment #3, SPCC Plan)

SPCC PLAN, ATTACHMENT #4
OFFSHORE OIL DRILLING, PRODUCTION, OR WORKOVER FACILITY
POLLUTION PREVENTION EQUIPMENT AND SYSTEMS

Pollution Prevention Equipment:

Description	Inspection Procedures	Test Procedures

Inspection or Test Date	Condition	Action Taken	Supervisor's or Inspector's Signature

Name of facility _____

Operator _____

SPCC PLAN ATTACHMENT #5
OFFSHORE OIL DRILLING, PRODUCTION, OR WORKOVER FACILITY
WELL CONTROL SYSTEMS AND EQUIPMENT

List type(s) of surface and subsurface well shut-in valves and devices used to maintain control of wells, showing (a) method of activation and control, and (b) description:

Item	Method of Activation and Control	Description

Name of facility _____

Operator _____

Order No. 811-10720

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APPENDIX A

federal register

TUESDAY, DECEMBER 11, 1973
WASHINGTON, D.C.

Volume 38 ■ Number 237

PART II

ENVIRONMENTAL PROTECTION AGENCY

■

OIL POLLUTION PREVENTION

Non-Transportation Related Onshore and Offshore Facilities

Title 40—Protection of the Environment

CHAPTER I—ENVIRONMENTAL PROTECTION AGENCY

SUBCHAPTER D—WATER PROGRAMS

PART 112—OIL POLLUTION PREVENTION

Non-transportation Related Onshore and Offshore Facilities

Notice of proposed rule making was published on July 19, 1973, containing proposed regulations, required by an pursuant to section 311(j)(1)(C) of the Federal Water Pollution Control A t, as amended (86 Stat. 868, 33 U.S.C. 1251 et seq.), (FWPCA), to prevent discharges of oil into the navigable waters of the United States and to contain such discharges if they occur. The proposed regulations endeavor to prevent such spills by establishing procedures, methods and equipment requirements of owners or operators of facilities engaged in drilling, producing, gathering, storing, processing, refining, transferring, distributing, or consuming oil.

Written comments on the proposed regulations were solicited and received from interested parties. In addition, a number of verbal comments on the proposal were also received. The written comments are on file at the Division of Oil and Hazardous Materials, Office of Water Program Operations, U.S. Environmental Protection Agency, Washington, D.C.

All of the comments have been given careful consideration and a number of changes have been made in the regulation. These changes incorporate either suggestions made in the comments or ideas initiated by the suggestions.

Some comments reflected a misunderstanding of the fundamental principles of the regulation, specifically as they applied to older facilities and marginal operations. During the development of the regulation it was recognized that no single design or operational standard can be prescribed for all non-transportation related facilities, since the equipment and operational procedures appropriate for one facility may not be appropriate for another because of factors such as function, location, and age of each facility. Also, new facilities could achieve a higher level of spill prevention than older facilities by the use of fail-safe design concepts and innovative spill prevention methods and procedures. It was concluded that older facilities and marginal operations could develop strong spill contingency plans and commit manpower, oil containment devices and removal equipment to compensate for inherent weaknesses in the spill prevention plan.

Appropriate changes were made in the regulation to simplify, clarify or correct deficiencies in the proposal.

A discussion of these changes, section by section follows:

A. *Section 112.1—General applicability.* Section 112.1(b), the "foreseeability provision", contained in .112.1(d)(4) was added to paragraph 112.1(b). As modified, the regulation applies to non-transportation-related onshore and offshore facilities which, due to their location, could reasonably be expected to discharge oil into or upon the navigable waters of the United States or adjoining shorelines.

Sections 112.1(b), 112.1(d)(4) and 112.3 are now consistent.

Section 112.1(d)(1) was expanded to further clarify the respective authorities of the Department of Transportation and the Environmental Protection Agency by referring to the Memorandum of Understanding between the Secretary of Transportation and the Administrator of the Environmental Protection Agency (Appendix).

Section 112.1(d)(2), the figure for barrels was converted to gallons, a unit of measure more familiar to the public, and now reads "42000 gallons."

Section 112.1(d)(3), exemption for facilities with nonburied tankage was extended to 1320 gallons in aggregate with no single tank larger than 660 gallons and applies to all oils, not just heating oil and motor fuel. Tanks of 660 gallons are the normal domestic code size for nonburied heating oil tanks. Buildings may have two such tanks. Facilities containing small quantities of oil other than motor fuel or heating oil would also be exempt, thus making this consistent with the definition of oil in § 112.2.

B. *Section 112.2—Definitions.* Section 112.2(1), the term "navigable waters" was expanded to the more descriptive definition used by the National Pollutant Discharge Elimination System.

Section 112.2(m), the U.S. Coast Guard definition of the term "vessel" was included. This term is used in the regulation and the definition is consistent with the Department of Transportation regulations.

C. *Section 112.3—Requirements for the preparation and implementation of spill prevention control and countermeasure plans.* A new paragraph (c) was added to § 112.3 which applies to mobile or portable facilities subject to the regulation. These facilities need not prepare a new Spill Prevention Control and Countermeasure Plan (SPCC Plan) each time the facility is moved to a new site, but may prepare a general plan, identifying good spill prevention engineering practices (as outlined in the guidelines, § 112.7), and implement these practices at each new location.

Section 112.3(a), (b) and (f) (which was § 112.3(e) in the proposed rule making) have been modified to allow extensions of time beyond the normally specified periods to apply to the preparation of plans as well as to their implementation and to remove the time limitation of one year for extensions. Extensions may be allowed for whatever period of time considered reasonable by the Regional Administrator.

Section 112.3(e) (which was § 112.3 (d) in the proposed rule making) was modified to require the maintenance of the SPCC Plan for inspection at the facility only if the facility was normally manned. If the facility is unmanned, the Plan may be kept at the nearest field office.

Section 112.3(a)(1) (§ 112.3(e)(1) in the proposed regulation) was changed to include the nonavailability of qualified personnel as a reason for the Regional Administrator granting an extension of time.

D. *Section 112.4—Amendment of spill prevention control and countermeasure plans by Regional Administrator.* Section 112.4(a)(11), permits the Regional Administrator to require that the owner or operator furnish additional information to EPA after one or more spill event has occurred. The change limits the request for additional information to that pertinent to the SPCC Plan or to the pollution incident.

Section 112.4(b) now reads "Section 112.4 * * *", not "This subsection * * *"

Section 112.4(e) allowed the Regional Administrator to require amendments to SPCC Plans and specifies that the amendment must be incorporated in the Plan within 30 days unless the Regional Administrator specifies an earlier effective date. The change allows the Regional Administrator to specify any appropriate date that is reasonable.

Section 112.4(f). A new § 112.4(f) has been added which provides for an appeal by an owner or operator from a decision rendered by the Regional Administrator on an amendment to an SPCC Plan. The appeal is made to the Administrator of EPA and the paragraph outlines the procedures for making such an appeal.

E. *Section 112.5—Amendment of spill prevention control and countermeasure plans by owners or operators.* Section 112.5(b) required the owner or operator to amend the SPCC Plan every three years. The amendment required the incorporation of any new, field-proven technology and had to be certified by a Professional Engineer.

The change requires that the owner or operator review the Plan every three years to see if it needs amendment. New technology need be incorporated only if it will significantly reduce the likelihood of a spill. The change will prevent frivolous retrofitting of equipment to facilities whose prevention plans are working successfully, and will not require engineering certification unless an amendment is necessary.

Section 112.5(c), this paragraph required that the owner or operator amend his SPCC Plan when his facility became subject to §112.4 (amendment by the Regional Administrator). This paragraph has been removed. It is inconsistent to require the owner or operator to independently amend the Plan while the Regional Administrator is reviewing it for possible amendment.

F. *Section 112.6—Civil penalties.* There are no changes in this section.

G. *Section 112.7—Guidelines for the preparation and implementation of a spill prevention control and countermeasure plan.* Numerous changes have been made in the guidelines section; the changes have been primarily:

1. To correct the use of language inconsistent with guidelines. For example, the word "shall" has been changed to "should" in § 112.7(a) through (e).

2. To give the engineer preparing the Plan greater latitude to use alternative methods better suited to a given facility or local conditions.

3. To cover facilities subject to the regulation, but for which no guidelines were previously given. This category includes such things as mobile facilities, and drilling and workover rigs.

In addition, wording was changed to differentiate between periodic observations by operating personnel and formal inspections with attendant record keeping.

These regulations shall become effective January 10, 1974.

Dated: November 27, 1973.

JOHN QUARLES,
Acting Administrator.

A new Part 112 would be added to subchapter D, Chapter I of Title 40, Code of Federal Regulations as follows:

Sec.
112.1 General applicability.
112.2 Definitions.
112.3 Requirements for preparation and implementation of Spill Prevention Control and Countermeasure plans.
112.4 Amendment of Spill Prevention Control and Countermeasure Plans by Regional Administrator.
112.5 Admendment of Spill Prevention Control and Countermeasure Plans by owners or operators.
112.6 Civil penalties.
112.7 Guidelines for the preparation and implementation of a Spill Prevention Control and Countermeasure Plan.
Appendix Memorandum of Understanding Between the Secretary of the Department of Transportation and the Administrator of the Environmental Protection Agency. Section II—Definitions.

AUTHORITY: Secs. 311(j)(1)(C), 311(j)(2), 501(a), Federal Water Pollution Control Act (Sec. 2, Pub. L. 92-500, 86 Stat. 816 et seq. (33 U.S.C. 1251 et seq.)); Sec. 4(b), Pub. L. 92-500, 86 Stat. 897; 5 U.S.C. Reorg. Plan of 1970 No. 3 (1970), 35 FR 15623, 3 CFR 1966-1970 Comp.; E.O. 11735, 38 FR 21243, 3 CFR.

§ 112.1 General applicability.

(a) This part establishes procedures, methods and equipment and other requirements for equipment to prevent the discharge of oil from non-transportation-related onshore and offshore facilities into or upon the navigable waters of the United States or adjoining shorelines.

(b) Except as provided in paragraph (d) of this section, this part applies to owners or operators of non-transportation-related onshore and offshore facilities engaged in drilling, producing, gathering, storing, processing, refining, transferring, distributing or consuming oil and oil products, and which, due to their location, could reasonably be expected to discharge oil in harmful quantities, as defined in Part 110 of this chapter, into or upon the navigable waters of the United States or adjoining shorelines.

(c) As provided in sec. 313 (86 Stat. 875) departments, agencies, and instrumentalities of the Federal government are subject to these regulations to the same extent as any person, except for the provisions of § 112.6.

(d) This part does not apply to:

(1) Equipment or operations of vessels or transportation-related onshore and offshore facilities which are subject to authority and control of the Department of Transportation, as defined in the Memorandum of Understanding between the Secretary of Transportation and the Administrator of the Environmental Protection Agency, dated November 24, 1971, 36 FR 24000.

(2) Facilities which have an aggregate storage of 1320 gallons or less of oil, provided no single container has a capacity in excess of 660 gallons.

(3) Facilities which have a total storage capacity of 42000 gallons or less of oil and such total storage capacity is buried underground.

(4) Non-transportation-related onshore and offshore facilities, which, due to their location, could not reasonably be expected to discharge oil into or upon the navigable waters of the United States or adjoining shorelines.

(e) This part provides for the preparation and implementation of Spill Prevention Control and Countermeasure Plans prepared in accordance with § 112.7, designed to complement existing laws, regulations, rules, standards, policies and procedures pertaining to safety standards, fire prevention and pollution prevention rules, so as to form a comprehensive balanced Federal/State spill prevention program to minimize the potential for oil discharges. Compliance with this part does not in any way relieve the owner or operator of an onshore or an offshore facility from compliance with other Federal, State or local laws.

§ 112.2 Definitions.

For the purposes of this part:

(a) "Oil" means oil of any kind or in any form, including, but not limited to petroleum, fuel oil, sludge, oil refuse and oil mixed with wastes other than dredged spoil.

(b) "Discharge" includes but is not limited to, any spilling, leaking, pumping, pouring, emitting, emptying or dumping. For purposes of this part, the term "discharge" shall not include any discharge of oil which is authorized by a permit issued pursuant to Section 13 of the River and Harbor Act of 1899 (30 Stat. 1121, 33 U.S.C. 407), or Sections 402 or 405 of the FWPCA Amendments of 1972 (86 Stat. 816 et seq., 33 U.S.C. 1251 et seq.).

(c) "Onshore facility" means any facility of any kind located in, on, or under any land within the United States, other than submerged lands, which is not a transportation-related facility.

(d) "Offshore facility" means any facility of any kind located in, on, or under any of the navigable waters of the United States, which is not a transportation-related facility.

(e) "Owner or operator" means any person owning or operating an onshore facility or an offshore facility, and in the case of any abandoned offshore facility, the person who owned or operated such facility immediately prior to such abandonment.

(f) "Person" includes an individual, firm, corporation, association, and a partnership.

(g) "Regional Administrator", means the Regional Administrator of the Environmental Protection Agency, or his designee, in and for the Region in which the facility is located.

(h) "Transportation-related" and "non-transportation-related" as applied to an onshore or offshore facility, are defined in the Memorandum of Understanding between the Secretary of Transportation and the Administrator of the Environmental Protection Agency, dated November 24, 1971, 36 FR 24080.

(i) "Spill event" means a discharge of oil into or upon the navigable waters of the United States or adjoining shorelines in harmful quantities, as defined at 40 CFR Part 110.

(j) "United States" means the States, the District of Columbia, the Commonwealth of Puerto Rico, the Canal Zone, Guam, American Samoa, the Virgin Islands, and the Trust Territory of the Pacific Islands.

(k) The term "navigable waters" of the United States means "navigable waters" as defined in section 502(7) of the FWPCA, and includes:

(1) all navigable waters of the United States, as defined in judicial decisions prior to passage of the 1972 Amendments to the FWPCA (Pub. L. 92-500), and tributaries of such waters;

(2) interstate waters;

(3) intrastate lakes, rivers, and streams which are utilized by interstate travelers for recreational or other purposes; and

(4) intrastate lakes, rivers, and streams from which fish or shellfish are taken and sold in interstate commerce.

(l) "Vessel" means every description of watercraft or other artificial contrivance used, or capable of being used as a means of transportation on water, other than a public vessel.

§ 112.3 Requirements for preparation and implementation of Spill Prevention Control and Countermeasure Plans.

(a) Owners or operators of onshore and offshore facilities in operation on or before the effective date of this part that have discharged or could reasonably be expected to discharge oil in harmful quantities, as defined in 40 CFR Part 110, into or upon the navigable waters of the United States or adjoining shorelines, shall prepare a Spill Prevention Control and Countermeasure Plan (hereinafter "SPCC Plan"), in accordance with § 112.7. Except as provided for in paragraph (f) of this section, such SPCC Plan shall be prepared within six months after the effective date of this part and shall be fully implemented as soon as possible, but not later than one year after the effective date of this part.

(b) Owners or operators of onshore and offshore facilities that become operational after the effective date of this part, and that have discharged or could reasonably be expected to discharge oil in harmful quantities, as defined in 40 CFR Part 110, into or upon the navigable waters of the United States or adjoining shorelines, shall prepare an SPCC Plan in accordance with § 112.7. Except as provided for in paragraph (f) of this section, such SPCC Plan shall be prepared within six months after the date such facility begins operations and shall be fully implemented as soon as possible, but not later than one year after such facility begins operations.

(c) Onshore and offshore mobile or portable facilities such as onshore drilling or workover rigs, barge mounted offshore drilling or workover rigs, and portable fueling facilities shall prepare and implement an SPCC Plan as required by paragraphs (a), (b) and (d) of this section. The owner or operator of such facility need not prepare and implement a new SPCC Plan each time the facility is moved to a new site. The SPCC Plan for mobile facilities should be prepared in accordance with § 112.7, using good engineering practice, and when the mobile facility is moved it should be located and installed using spill prevention practices outlined in the SPCC Plan for the facility. The SPCC Plan shall only apply while the facility is in a fixed (non transportation) operating mode.

(d) No SPCC Plan shall be effective to satisfy the requirements of this part unless it has been reviewed by a Registered Professional Engineer and certified to by such Professional Engineer. By means of this certification the engineer, having examined the facility and being familiar with the provisions of this part, shall attest that the SPCC Plan has been prepared in accordance with good engineering practices. Such certification shall in no way relieve the owner or operator of an onshore or offshore facility of his duty to prepare and fully implement such Plan in accordance with § 112.7, as required by paragraphs (a), (b) and (c) of this section.

(e) Owners or operators of a facility for which an SPCC Plan is required pursuant to paragraphs (a), (b) or (c) of this section shall maintain a complete copy of the Plan at such facility if the facility is normally attended at least 8 hours per day, or at the nearest field office if the facility is not so attended, and shall make such Plan available to the Regional Administrator for on-site review during normal working hours.

(f) Extensions of time.

(1) The Regional Administrator may authorize an extension of time for the preparation and full implementation of an SPCC Plan beyond the time permitted for the preparation and implementation of an SPCC Plan pursuant to paragraphs (a), (b) or (c) of this section where he finds that the owner or operator of a facility subject to paragraphs (a), (b) or (c) of this section cannot fully comply with the requirements of this part as a result of either nonavailability of qualified personnel, or delays in construction or equipment delivery beyond the control and without the fault of such owner or operator or their respective agents or employees.

(2) Any owner or operator seeking an extension of time pursuant to paragraph (f)(1) of this section may submit a letter of request to the Regional Administrator. Such letter shall include:

(i) A complete copy of the SPCC Plan, if completed;

(ii) A full explanation of the cause for any such delay and the specific aspects of the SPCC Plan affected by the delay;

(iii) A full discussion of actions being taken or contemplated to minimize or mitigate such delay;

(iv) A proposed time schedule for the implementation of any corrective actions being taken or contemplated, including interim dates for completion of tests or studies, installation and operation of any necessary equipment or other preventive measures.

In addition, such owner or operator may present additional oral or written statements in support of his letter of request.

(3) The submission of a letter of request for extension of time pursuant to paragraph (f)(2) of this section shall in no way relieve the owner or operator from his obligation to comply with the requirements of § 112.3 (a), (b) or (c). Where an extension of time is authorized by the Regional Administrator for particular equipment or other specific aspects of the SPCC Plan, such extension shall in no way affect the owner's or operator's obligation to comply with the requirements of § 112.3 (a), (b) or (c) with respect to other equipment or other specific aspects of the SPCC Plan for which an extension of time has not been expressly authorized.

§ 112.4 Amendment of SPCC Plans by Regional Administrator.

(a) Notwithstanding compliance with § 112.3, whenever a facility subject to § 112.3 (a), (b) or (c) has: Discharged more than 1,000 U.S. gallons of oil into or upon the navigable waters of the United States or adjoining shorelines in a single spill event, or discharged oil in harmful quantities, as defined in 40 CFR Part 110, into or upon the navigable waters of the United States or adjoining shorelines in two spill events, reportable under section 311(b)(5) of the FWPCA, occurring within any twelve month period, the owner or operator of such facility shall submit to the Regional Administrator, within 60 days from the time such facility becomes subject to this section, the following:

(1) Name of the facility;

(2) Name(s) of the owner or operator of the facility;

(3) Location of the facility;

(4) Date and year of initial facility operation;

(5) Maximum storage or handling capacity of the facility and normal daily throughput;

(6) Description of the facility, including maps, flow diagrams, and topographical maps;

(7) A complete copy of the SPCC Plan with any amendments;

(8) The cause(s) of such spill, including a failure analysis of system or subsystem in which the failure occurred;

(9) The corrective actions and/or countermeasures taken, including an adequate description of equipment repairs and/or replacements;

(10) Additional preventive measures taken or contemplated to minimize the possibility of recurrence;

(11) Such other information as the Regional Administrator may reasonably require pertinent to the Plan or spill event.

(b) Section 112.4 shall not apply until the expiration of the time permitted for the preparation and implementation of an SPCC Plan pursuant to § 112.3 (a), (b), (c) and (f).

(c) A complete copy of all information provided to the Regional Administrator pursuant to paragraph (a) of this section shall be sent at the same time to the State agency in charge of water pollution control activities in and for the State in which the facility is located. Upon receipt of such information such State agency may conduct a review and make recommendations to the Regional Administrator as to further procedures, methods, equipment and other requirements for equipment necessary to prevent and to contain discharges of oil from such facility.

(d) After review of the SPCC Plan for a facility subject to paragraph (a) of this section, together with all other information submitted by the owner or operator of such facility, and by the State agency under paragraph (c) of this section, the Regional Administrator may require the owner or operator of such facility to amend the SPCC Plan if he finds that the Plan does not meet the requirements of this part or that the amendment of the Plan is necessary to prevent and to contain discharges of oil from such facility.

(e) When the Regional Administrator proposes to require an amendment to the SPCC Plan, he shall notify the facility operator by certified mail addressed to, or by personal delivery to, the facility owner or operator, that he proposes to require an amendment to the Plan, and shall specify the terms of such amendment. If the facility owner or operator is a corporation, a copy of such notice shall also be mailed to the registered agent, if any, of such corporation in the State where such facility is located. Within 30 days from receipt of such notice, the facility owner or operator may submit written information, views, and arguments on the amendment. After considering all relevant material presented, the Regional Administrator shall notify the facility owner or operator of any amendment required or shall rescind the notice. The amendment required by the Regional Administrator shall become part of the Plan 30 days

after such notice, unless the Regional Administrator, for good cause, shall specify another effective date. The owner or operator of the facility shall implement the amendment of the Plan as soon as possible, but not later than six months after the amendment becomes part of the Plan, unless the Regional Administrator specifies another date.

(f) An owner or operator may appeal a decision made by the Regional Administrator requiring an amendment to an SPCC Plan. The appeal shall be made to the Administrator of the United States Environmental Protection Agency and must be made in writing within 30 days of receipt of the notice from the Regional Administrator requiring the amendment. A complete copy of the appeal must be sent to the Regional Administrator at the time the appeal is made. The appeal shall contain a clear and concise statement of the issues and points of fact in the case. It may also contain additional information which the owner or operator wishes to present in support of his argument. The Administrator or his designee may request additional information from the owner or operator, or from any other person. The Administrator or his designee may request additional information from the owner or operator, or from any other person. The Administrator or his designee shall render a decision within 60 days of receiving the appeal and shall notify the owner or operator of his decision.

§ 112.5 Amendment of Spill Prevention Control and Countermeasure Plans by owners or operators.

(a) Owners or operators of facilities subject to § 112.3 (a), (b) or (c) shall amend the SPCC Plan for such facility in accordance with § 112.7 whenever there is a change in facility design, construction, operation or maintenance which materially affects the facility's potential for the discharge of oil into or upon the navigable waters of the United States or adjoining shorelines. Such amendments shall be fully implemented as soon as possible, but not later than six months after such change occurs.

(b) Notwithstanding compliance with paragraph (a) of this section, owners and operators of facilities subject to § 112.3 (a), (b) or (c) shall complete a review and evaluation of the SPCC Plan at least once every three years from the date such facility becomes subject to this part. As a result of this review and evaluation, the owner or operator shall amend the SPCC Plan within six months of the review to include more effective prevention and control technology if: (1) Such technology will significantly reduce the likelihood of a spill event from the facility, and (2) if such technology has been field-proven at the time of the review.

(c) No amendment to an SPCC Plan shall be effective to satisfy the requirements of this section unless it has been certified by a Professional Engineer in accordance with § 112.3(d).

§ 112.6 Civil penalties.

Owners or operators of facilities subject to § 112.3 (a), (b) or (c) who violate the requirements of this part by failing or refusing to comply with any of the provisions of § 112.3, § 112.4, or § 112.5 shall be liable for a civil penalty of not more than $5,000 for each day that such violation continues. The Regional Administrator may assess and compromise such civil penalty. No penalty shall be assessed until the owner or operator shall have been given notice and an opportunity for hearing.

§ 112.7 Guidelines for the preparation and implementation of a Spill Prevention Control and Countermeasure Plan.

The SPCC Plan shall be a carefully thought-out plan, prepared in accordance with good engineering practices, and which has the full approval of management at a level with authority to commit the necessary resources. If the plan calls for additional facilities or procedures, methods, or equipment not yet fully operational, these items should be discussed in separate paragraphs, and the details of installation and operational start-up should be explained separately. The complete SPCC Plan shall follow the sequence outlined below, and include a discussion of the facility's conformance with the appropriate guidelines listed:

(a) A facility which has experienced one or more spill events within twelve months prior to the effective date of this part should include a written description of each such spill, corrective action taken and plans for preventing recurrence.

(b) Where experience indicates a reasonable potential for equipment failure (such as tank overflow, rupture, or leakage), the plan should include a prediction of the direction, rate of flow, and total quantity of oil which could be discharged from the facility as a result of each major type of failure.

(c) Appropriate containment and/or diversionary structures or equipment to prevent discharged oil from reaching a navigable water course should be provided. One of the following preventive systems or its equivalent should be used as a minimum:

(1) Onshore facilities.

(i) Dikes, berms or retaining walls sufficiently impervious to contain spilled oil

(ii) Curbing

(iii) Culverting, gutters or other drainage systems

(iv) Weirs, booms or other barriers

(v) Spill diversion ponds

(vi) Retention ponds

(vii) Sorbent materials

(2) Offshore facilities.

(i) Curbing, drip pans

(ii) Sumps and collection systems

(d) When it is determined that the installation of structures or equipment listed in § 112.7(c) to prevent discharged oil from reaching the navigable waters is not practicable from any onshore or offshore facility, the owner or operator should clearly demonstrate such impracticability and provide the following:

(1) A strong oil spill contingency plan following the provision of 40 CFR Part 109.

(2) A written commitment of manpower, equipment and materials required to expeditiously control and remove any harmful quantity of oil discharged.

(e) In addition to the minimal prevention standards listed under § 112.7 (c), sections of the Plan should include a complete discussion of conformance with the following applicable guidelines, other effective spill prevention and containment procedures (or, if more stringent, with State rules, regulations and guidelines):

(1) *Facility drainage (onshore); (excluding production facilities).* (i) Drainage from diked storage areas should be restrained by valves or other positive means to prevent a spill or other excessive leakage of oil into the drainage system or inplant effluent treatment system, except where plan systems are designed to handle such leakage. Diked areas may be emptied by pumps or ejectors; however, these should be manually activated and the condition of the accumulation should be examined before starting to be sure no oil will be discharged into the water.

(ii) Flapper-type drain valves should not be used to drain diked areas. Valves used for the drainage of diked areas should, as far as practical, be of manual, open-and-closed design. When plant drainage drains directly into water courses and not into wastewater treatment plants, retained storm water should be inspected as provided in paragraph (e)(2)(iii) (B, C and D) before drainage.

(iii) Plant drainage systems from undiked areas should, if possible, flow into ponds, lagoons or catchment basins, designed to retain oil or return it to the facility. Catchment basins should not be located in areas subject to periodic flooding.

(iv) If plant drainage is not engineered as above, the final discharge of all in-plant ditches should be equipped with a diversion system that could, in the event of an uncontrolled spill, return the oil to the plant.

(v) Where drainage waters are treated in more than one treatment unit, natural hydraulic flow should be used. If pump transfer is needed, two "lift" pumps should be provided, and at least one of the pumps should be permanently installed when such treatment is continuous. In any event, whatever techniques are used facility drainage systems should be adequately engineered to prevent oil from reaching navigable waters in the event of equipment failure or human error at the facility.

(2) *Bulk storage tanks (onshore); (excluding production facilities).* (i) No

tank should be used for the storage of oil unless its material and construction are compatible with the material stored and conditions of storage such as pressure and temperature, etc.

(ii) All bulk storage tank installations should be constructed so that a secondary means of containment is provided for the entire contents of the largest single tank plus sufficient freeboard to allow for precipitation. Diked areas should be sufficiently impervious to contain spilled oil. Dikes, containment curbs, and pits are commonly employed for this purpose, but they may not always be appropriate. An alternative system could consist of a complete drainage trench enclosure arranged so that a spill could terminate and be safely confined in an in-plant catchment basin or holding pond.

(iii) Drainage of rainwater from the diked area into a storm drain or an effluent discharge that empties into an open water course, lake, or pond, and bypassing the in-plant treatment system may be acceptable if:

(A) The bypass valve is normally sealed closed.

(B) Inspection of the run-off rain water ensures compliance with applicable water quality standards and will not cause a harmful discharge as defined in 40 CFR 110.

(C) The bypass valve is opened, and resealed following drainage under responsible supervision.

(D) Adequate records are kept of such events.

(iv) Buried metallic storage tanks represent a potential for undetected spills. A new buried installation should be protected from corrosion by coatings, cathodic protection or other effective methods compatible with local soil conditions. Such buried tanks should at least be subjected to regular pressure testing.

(v) Partially buried metallic tanks for the storage of oil should be avoided, unless the buried section of the shell is adequately coated, since partial burial in damp earth can cause rapid corrosion of metallic surfaces, especially at the earth/air interface.

(vi) Aboveground tanks should be subject to periodic integrity testing, taking into account tank design (floating roof, etc.) and using such techniques as hydrostatic testing, visual inspection or a system of non-destructive shell thickness testing. Comparison records should be kept where appropriate, and tank supports and foundations should be included in these inspections. In addition, the outside of the tank should frequently be observed by operating personnel for signs of deterioration, leaks which might cause a spill, or accumulation of oil inside diked areas.

(vii) To control leakage through defective internal heating coils, the following factors should be considered and applied, as appropriate.

(A) The steam return or exhaust lines from internal heating coils which discharge into an open water course should be monitored for contamination, or passed through a settling tank, skimmer, or other separation or retention system.

(B) The feasibility of installing an external heating system should also be considered.

(viii) New and old tank installations should, as far as practical, be fail-safe engineered or updated into a fail-safe engineered installation to avoid spills. Consideration should be given to providing one or more of the following devices:

(A) High liquid level alarms with an audible or visual signal at a constantly manned operation or surveillance station; in smaller plants an audible air vent may suffice.

(B) Considering size and complexity of the facility, high liquid level pump cutoff devices set to stop flow at a predetermined tank content level.

(C) Direct audible or code signal communication between the tank gauger and the pumping station.

(D) A fast response system for determining the liquid level of each bulk storage tank such as digital computers, telepulse, or direct vision gauges or their equivalent.

(E) Liquid level sensing devices should be regularly tested to insure proper operation.

(ix) Plant effluents which are discharged into navigable waters should have disposal facilities observed frequently enough to detect possible system upsets that could cause an oil spill event.

(x) Visible oil leaks which result in a loss of oil from tank seams, gaskets, rivets and bolts sufficiently large to cause the accumulation of oil in diked areas should be promptly corrected.

(xi) Mobile or portable oil storage tanks (onshore) should be positioned or located so as to prevent spilled oil from reaching navigable waters. A secondary means of containment, such as dikes or catchment basins, should be furnished for the largest single compartment or tank. These facilities should be located where they will not be subject to periodic flooding or washout.

(3) *Facility transfer operations, pumping, and in-plant process (onshore); (excluding production facilities).* (i) Buried piping installations should have a protective wrapping and coating and should be cathodically protected if soil conditions warrant. If a section of buried line is exposed for any reason, it should be carefully examined for deterioration. If corrosion damage is found, additional examination and corrective action should be taken as indicated by the magnitude of the damage. An alternative would be the more frequent use of exposed pipe corridors or galleries.

(ii) When a pipeline is not in service, or in standby service for an extended time the terminal connection at the transfer point should be capped or blank-flanged, and marked as to origin.

(iii) Pipe supports should be properly designed to minimize abrasion and corrosion and allow for expansion and contraction.

(iv) All aboveground valves and pipelines should be subjected to regular examinations by operating personnel at which time the general condition of items, such as flange joints, expansion joints, valve glands and bodies, catch pans, pipeline supports, locking of valves, and metal surfaces should be assessed. In addition, periodic pressure testing may be warranted for piping in areas where facility drainage is such that a failure might lead to a spill event.

(v) Vehicular traffic granted entry into the facility should be warned verbally or by appropriate signs to be sure that the vehicle, because of its size, will not endanger above ground piping.

(4) *Facility tank car and tank truck loading/unloading rack (onshore).* (i) Tank car and tank truck loading/unloading procedures should meet the minimum requirements and regulation established by the Department of Transportation.

(ii) Where rack area drainage does not flow into a catchment basin or treatment facility designed to handle spills, a quick drainage system should be used for tank truck loading and unloading areas. The containment system should be designed to hold at least maximum capacity of any single compartment of a tank car or tank truck loaded or unloaded in the plant.

(iii) An interlocked warning light or physical barrier system, or warning signs, should be provided in loading/unloading areas to prevent vehicular departure before complete disconnect of flexible or fixed transfer lines.

(iv) Prior to filling and departure of any tank car or tank truck, the lowermost drain and all outlets of such vehicles should be closely examined for leakage, and if necessary, tightened, adjusted, or replaced to prevent liquid leakage while in transit.

(5) *Oil production facilities (onshore)* (i) *Definition.* An onshore production facility may include all wells, flowlines, separation equipment, storage facilities, gathering lines, and auxiliary non-transportation-related equipment and facilities in a single geographical oil or gas field operated by a single operator.

(ii) *Oil production facility (onshore) drainage.* (A) At tank batteries and central treating stations where an accidental discharge of oil would have a reasonable possibility of reaching navigable waters, the dikes or equivalent required under § 112.7(c)(1) should have drains closed and sealed at all times except when rainwater is being drained. Prior to drainage, the diked area should be inspected as provided in paragraph (e)(2)(iii) (B), C), and (D). Accumulated oil on the rainwater should be picked up and returned to storage or disposed of in accordance with approved methods.

(B) Field drainage ditches, road ditches, and oil traps, sumps or skimmers, if such exist, should be inspected at regularly scheduled intervals for accumulation of oil that may have escaped from small leaks. Any such accumulations should be removed.

(iii) *Oil production facility (onshore) bulk storage tanks.* (A) No tank should be used for the storage of oil unless its material and construction are compatible with the material stored and the conditions of storage.

(B) All tank battery and central treating plant installations should be provided with a secondary means of containment for the entire contents of the largest single tank if feasible, or alternate systems such as those outlined in § 112.7(c)(1). Drainage from undiked areas should be safely confined in a catchment basin or holding pond.

(C) All tanks containing oil should be visually examined by a competent person for condition and need for maintenance on a scheduled periodic basis. Such examination should include the foundation and supports of tanks that are above the surface of the ground.

(D) New and old tank battery installations should, as far as practical, be fail-safe engineered or updated into a fail-safe engineered installation to prevent spills. Consideration should be given to one or more of the following:

(*1*) Adequate tank capacity to assure that a tank will not overfill should a pumper/gauger be delayed in making his regular rounds.

(*2*) Overflow equalizing lines between tanks so that a full tank can overflow to an adjacent tank.

(*3*) Adequate vacuum protection to prevent tank collapse during a pipeline run.

(*4*) High level sensors to generate and transmit an alarm signal to the computer where facilities are a part of a computer production control system.

(iv) *Facility transfer operations, oil production facility (onshore).* (A) All above ground valves and pipelines should be examined periodically on a scheduled basis for general condition of items such as flange joints, valve glands and bodies, drip pans, pipeline supports, pumping well polish rod stuffing boxes, bleeder and gauge valves.

(B) Salt water (oil field brine) disposal facilities should be examined often, particularly following a sudden change in atmospheric temperature to detect possible system upsets that could cause an oil discharge.

(C) Production facilities should have a program of flowline maintenance to prevent spills from this source. The program should include periodic examinations, corrosion protection, flowline replacement, and adequate records, as appropriate, for the individual facility.

(6) *Oil drilling and workover facilities (onshore)* (i) Mobile drilling or workover equipment should be positioned or located so as to prevent spilled oil from reaching navigable waters.

(ii) Depending on the location, catchment basins or diversion structures may be necessary to intercept and contain spills of fuel, crude oil, or oily drilling fluids.

(iii) Before drilling below any casing string or during workover operations, a blowout prevention (BOP) assembly and well control system should be installed that is capable of controlling any well head pressure that is expected to be encountered while that BOP assembly is on the well. Casing and BOP installations should be in accordance with State regulatory agency requirements.

(7) *Oil drilling, production, or workover facilities (offshore).* (i) Definition: "An oil drilling, production or workover facility (offshore)" may include all drilling or workover equipment, wells, flowlines, gathering lines, platforms, and auxiliary nontransportation - related equipment and facilities in a single geographical oil or gas field operated by a single operator.

(ii) Oil drainage collection equipment should be used to prevent and control small oil spillage around pumps, glands, valves, flanges, expansion joints, hoses, drain lines, separators, treaters, tanks, and allied equipment. Drains on the facility should be controlled and directed toward a central collection sump or equivalent collection system sufficient to prevent discharges of oil into the navigable waters of the United States. Where drains and sumps are not practicable oil contained in collection equipment should be removed as often as necessary to prevent overflow.

(iii) For facilities employing a sump system, sump and drains should be adequately sized and a spare pump or equivalent method should be available to remove liquid from the sump and assure that oil does not escape. A regular scheduled preventive maintenance inspection and testing program should be employed to assure reliable operation of the liquid removal system and pump start-up device. Redundant automatic sump pumps and control devices may be required on some installations.

(iv) In areas where separators and treaters are equipped with dump valves whose predominant mode of failure is in the closed position and pollution risk is high, the facility should be specially equipped to prevent the escape of oil. This could be accomplished by extending the flare line to a diked area if the separator is near shore, equipping it with a high liquid level sensor that will automatically shut-in wells producing to the separator, parallel redundant dump valves, or other feasible alternatives to prevent oil discharges.

(v) Atmospheric storage or surge tanks should be equipped with high liquid level sensing devices or other acceptable alternatives to prevent oil discharges.

(vi) Pressure tanks should be equipped with high and low pressure sensing devices to activate an alarm and/or control the flow or other acceptable alternatives to prevent oil discharges.

(vii) Tanks should be equipped with suitable corrosion protection.

(viii) A written procedure for inspecting and testing pollution prevention equipment and systems should be prepared and maintained at the facility. Such procedures should be included as part of the SPCC Plan.

(ix) Testing and inspection of the pollution prevention equipment and systems at the facility should be conducted by the owner or operator on a scheduled periodic basis commensurate with the complexity, conditions and circumstances of the facility or other appropriate regulations.

(x) Surface and subsurface well shut-in valves and devices in use at the facility should be sufficiently described to determine method of activation or control, e.g., pressure differential, change in fluid or flow conditions, combination of pressure and flow, manual or remote control mechanisms. Detailed records for each well, while not necessarily part of the plan should be kept by the owner or operator.

(xi) Before drilling below any casing string, and during workover operations a blowout preventer (BOP) assembly and well control system should be installed that is capable of controlling any well-head pressure that is expected to be encountered while that BOP assembly is on the well. Casing and BOP installations should be in accordance with State regulatory agency requirements.

(xii) Extraordinary well control measures should be provided should emergency conditions, including fire, loss of control and other abnormal conditions, occur. The degree of control system redundancy should vary with hazard exposure and probable consequences of failure. It is recommended that surface shut-in systems have redundant or "fail close" valving. Subsurface safety valves may not be needed in producing wells that will not flow but should be installed as required by applicable State regulations.

(xiii) In order that there will be no misunderstanding of joint and separate duties and obligations to perform work in a safe and pollution free manner, written instructions should be prepared by the owner or operator for contractors and subcontractors to follow whenever contract activities include servicing a well or systems appurtenant to a well or pressure vessel. Such instructions and procedures should be maintained at the offshore production facility. Under certain circumstances and conditions such contractor activities may require the presence at the facility of an authorized representative of the owner or operator who would intervene when necessary to prevent a spill event.

(xiv) All manifolds (headers) should be equipped with check valves on individual flowlines.

(xv) If the shut-in well pressure is greater than the working pressure of the flowline and manifold valves up to and including the header valves associated with that individual flowline, the flowline should be equipped with a high pressure sensing device and shutin valve at the wellhead unless provided with a pressure relief system to prevent over pressuring.

(xvi) All pipelines appurtenant to the facility should be protected from corrosion. Methods used, such as protective coatings or cathodic protection, should be discussed.

(xvii) Sub-marine pipelines appurtenant to the facility should be adequately protected against environmental stresses and other activities such as fishing operations.

(xviii) Sub-marine pipelines appurtenant to the facility should be in good

operating condition at all times and inspected on a scheduled periodic basis for failures. Such inspections should be documented and maintained at the facility.

(8) *Inspections and records.* Inspections required by this part should be in accordance with written procedures developed for the facility by the owner or operator. These written procedures and a record of the inspections, signed by the appropriate supervisor or inspector, should be made part of the SPCC Plan and maintained for a period of three years.

(9) *Security (excluding oil production facilities).* (i) All plants handling, processing, and storing oil should be fully fenced, and entrance gates should be locked and/or guarded when the plant is not in production or is unattended.

(ii) The master flow and drain valves and any other valves that will permit direct outward flow of the tank's content to the surface should be securely locked in the closed position when in non-operating or non-standby status.

(iii) The starter control on all oil pumps should be locked in the "off" position or located at a site accessible only to authorized personnel when the pumps are in a non-operating or non-standby status.

(iv) The loading/unloading connections of oil pipelines should be securely capped or blank-flanged when not in service or standby service for an extended time. This security practice should also apply to pipelines that are emptied of liquid content either by draining or by inert gas pressure.

(v) Facility lighting should be commensurate with the type and location of the facility. Consideration should be given to: (A) Discovery of spills occurring during hours of darkness, both by operating personnel, if present, and by non-operating personnel (the general public, local police, etc.) and (B) prevention of spills occurring through acts of vandalism.

(10) *Personnel, training and spill prevention procedures.* (i) Owners or operators are responsible for properly instructing their personnel in the operation and maintenance of equipment to prevent the discharges of oil and applicable pollution control laws, rules and regulations.

(ii) Each applicable facility should have a designated person who is accountable for oil spill prevention and who reports to line management.

(iii) Owners or operators should schedule and conduct spill prevention briefings for their operating personnel at intervals frequent enough to assure adequate understanding of the SPCC Plan for that facility. Such briefings should highlight and describe known spill events or failures, malfunctioning components, and recently developed precautionary measures.

APPENDIX

Memorandum of Understanding between the Secretary of Transportation and the Administrator of the Environmental Protection Agency.

SECTION II—DEFINITIONS

The Environmental Protection Agency and the Department of Transportation agree that for the purposes of Executive Order 11548, the term:

(1) "Non-transportation-related onshore and offshore facilities" means:

(A) Fixed onshore and offshore oil well drilling facilities including all equipment and appurtenances related thereto used in drilling operations for exploratory or development wells, but excluding any terminal facility, unit or process integrally associated with the handling or transferring of oil in bulk to or from a vessel.

(B) Mobile onshore and offshore oil well drilling platforms, barges, trucks, or other mobile facilities including all equipment and appurtenances related thereto when such mobile facilities are fixed in position for the purpose of drilling operations for exploratory or development wells, but excluding any terminal facility, unit or process integrally associated with the handling or transferring of oil in bulk to or from a vessel.

(C) Fixed onshore and offshore oil production structures, platforms, derricks, and rigs including all equipment and appurtenances related thereto, as well as completed wells and the wellhead separators, oil separators, and storage facilities used in the production of oil, but excluding any terminal facility, unit or process integrally associated with the handling or transferring of oil in bulk to or from a vessel.

(D) Mobile onshore and offshore oil production facilities including all equipment and appurtenances related thereto as well as completed wells and wellhead equipment, piping from wellheads to oil separators, oil separators, and storage facilities used in the production of oil when such mobile facilities are fixed in position for the purpose of oil production operations, but excluding any terminal facility, unit or process integrally associated with the handling or transferring of oil in bulk to or from a vessel.

(E) Oil refining facilities including all equipment and appurtenances related thereto as well as in-plant processing units, storage units, piping, drainage systems and waste treatment units used in the refining of oil, but excluding any terminal facility, unit or process integrally associated with the handling or transferring of oil in bulk to or from a vessel.

(F) Oil storage facilities including all equipment and appurtenances related thereto as well as fixed bulk plant storage, terminal oil storage facilities, consumer storage, pumps and drainage systems used in the storage of oil, but excluding inline or breakout storage tanks needed for the continuous operation of a pipeline system and any terminal facility, unit or process integrally associated with the handling or transferring of oil in bulk to or from a vessel.

(G) Industrial, commercial, agricultural or public facilities which use and store oil, but excluding any terminal facility, unit or process integrally associated with the handling or transferring of oil in bulk to or from a vessel.

(H) Waste treatment facilities including in-plant pipelines, effluent discharge lines, and storage tanks, but excluding waste treatment facilities located on vessels and terminal storage tanks and appurtenances for the reception of oily ballast water or tank washings from vessels and associated systems used for off-loading vessels.

(I) Loading racks, transfer hoses, loading arms and other equipment which are appurtenant to a nontransportation-related facility or terminal facility and which are used to transfer oil in bulk to or from highway vehicles or railroad cars.

(J) Highway vehicles and railroad cars which are used for the transport of oil exclusively within the confines of a nontransportation-related facility and which are not intended to transport oil in interstate or intrastate commerce.

(K) Pipeline systems which are used for the transport of oil exclusively within the confines of a nontransportation-related facility or terminal facility and which are not intended to transport oil in interstate or intrastate commerce, but excluding pipeline systems used to transfer oil in bulk to or from a vessel.

(2) "transportation-related onshore and offshore facilities" means:

(A) Onshore and offshore terminal facilities including transfer hoses, loading arms and other equipment and appurtenances used for the purpose of handling or transferring oil in bulk to or from a vessel as well as storage tanks and appurtenances for the reception of oily ballast water or tank washings from vessels, but excluding terminal waste treatment facilities and terminal oil storage facilities.

(B) Transfer hoses, loading arms and other equipment appurtenant to a nontransportation-related facility which is used to transfer oil in bulk to or from a vessel.

(C) Interstate and intrastate onshore and offshore pipeline systems including pumps and appurtenances related thereto as well as in-line or breakout storage tanks needed for the continuous operation of a pipeline system, and pipelines from onshore and offshore oil production facilities, but excluding onshore and offshore piping from wellheads to oil separators and pipelines which are used for the transport of oil exclusively within the confines of a nontransportation-related facility or terminal facility and which are not intended to transport oil in interstate or intrastate commerce or to transfer oil in bulk to or from a vessel.

(D) Highway vehicles and railroad cars which are used for the transport of oil in interstate or intrastate commerce and the equipment and appurtenances related thereto, and equipment used for the fueling of locomotive units, as well as the rights-of-way on which they operate. Excluded are highway vehicles and railroad cars and motive power used exclusively within the confines of a nontransportation-related facility or terminal facility and which are not intended for use in interstate or intrastate commerce.

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PART 110—DISCHARGE OF OIL

Sec.
110.1 Definitions.
110.2 Applicability.
110.3 Discharge into navigable waters harmful.
110.4 Discharge into contiguous zone harmful.
110.5 Discharge prohibited.
110.6 Exception for vessel engines.
110.7 Dispersants.
110.8 Demonstration projects.
110.9 Notice.

AUTHORITY: The provisions of this Part 110 issued under sec. 11(b)(3), as amended, 84 Stat. 92; 33 U.S.C. 1161.

§ 110.1 Definitions.

As used in this part, the following terms shall have the meaning indicated below:

(a) "Oil" means oil of any kind or in any form, including, but not limited to, petroleum, fuel oil, sludge, oil refuse, oil mixed with ballast or bilge, and oil mixed with wastes other than dredged spoil;

(b) "Discharge" includes, but is not limited to, any spilling, leaking, pumping, pouring, emitting, emptying or dumping;

(c) "Vessel" means every description of watercraft or other artificial contrivance used, or capable of being used, as a means of transportation on water other than a public vessel;

(d) "Public vessel" means a vessel owned or bare-boat chartered and operated by the United States, or by a State or political subdivision thereof, or by a foreign nation, except when such vessel is engaged in commerce;

(e) "United States" means the States, the District of Columbia, the Commonwealth of Puerto Rico, the Canal Zone, Guam, American Samoa, the Virgin Islands, and the Trust Territory of the Pacific Islands;

(f) "Person" includes an individual, firm, corporation, association, and a partnership;

(g) "Contiguous zone" means the entire zone established or to be established by the United States under article 24 of the Convention on the Territorial Sea and the Contiguous Zone;

(h) "Onshore facility" means any facility (including, but not limited to motor vehicles and rolling stock) of any kind located in, on, or under, any land within the United States other than submerged land;

(i) "Offshore facility" means any facility of any kind located in, on, or under, any of the navigable waters of the United States other than a vessel or public vessel;

(j) "Applicable water quality standards" means water quality standards adopted pursuant to section 10(c) of the Federal Act and State-adopted water quality standards for waters which are not interstate within the meaning of that Act.

(k) "Federal Act" means the Federal Water Pollution Control Act, as amended, 33 U.S.C. 1151, et seq.

(l) "Sheen" means an iridescent appearance on the surface of water.

(m) "Sludge" means an aggregate of oil or oil and other matter of any kind in any form other than dredged spoil having a combined specific gravity equivalent to or greater than water.

§ 110.2 Applicability.

The regulations of this part apply to the discharge of oil into or upon the navigable waters of the United States, adjoining shorelines or into or upon the waters of the contiguous zone, prohibited by section 11(b) of the Federal Act.

§ 110.3 Discharge into navigable waters harmful.

For purposes of section 11(b) of the Federal Act, discharges of such quantities of oil into or upon the navigable waters of the United States or adjoining shorelines determined to be harmful to the public health or welfare of the United States, at all times and locations and under all circumstances and conditions, except as provided in section 110.6 of this part, include discharges which:

(a) Violate applicable water quality standards, or

(b) Cause a film or sheen upon or discoloration of the surface of the water or adjoining shorelines or cause a sludge or emulsion to be deposited beneath the surface of the water or upon adjoining shorelines.

§ 110.4 Discharge into contiguous zone harmful.

For purposes of section 11(b) of the Federal Act, discharges of such quantities of oil into or upon the waters of the contiguous zone determined to be harmful to the public health or welfare of the United States, at all times and locations and under all circumstances and conditions, except as provided in section 110.6 of this part, include discharges which:

(a) Violate applicable water quality standards in navigable waters of the United States, or

(b) Cause a film or sheen upon or discoloration of the surface of the water or adjoining shorelines or cause a sludge or emulsion to be deposited beneath the surface of the water or upon adjoining shorelines.

§ 110.5 Discharge prohibited.

As provided in section 11(b)(2) of the Federal Act, no person shall discharge or cause or permit to be discharged into or upon the navigable waters of the United States, adjoining shorelines, or into or upon the waters of the contiguous zone any oil, in harmful quantities as determined in §§ 110.3 and 110.4 of this part, except as the same may be permitted in the contiguous zone under Article IV of the International Convention for the Prevention of Pollution of the Sea by Oil, 1954, as amended.

§ 110.6 Exception for vessel engines.

For purposes of section 11(b) of the Federal Act, discharges of oil from a properly functioning vessel engine are not deemed to be harmful; but such oil accumulated in a vessel's bilges shall not be so exempt.

§ 110.7 Dispersants.

Addition of dispersants or emulsifiers to oil to be discharged which would circumvent the provisions of this part is prohibited.

§ 110.8 Demonstration projects.

Notwithstanding any other provisions of this part, the Administrator of the Environmental Protection Agency may permit the discharge of oil into or upon the navigable waters of the United States, adjoining shorelines, or into or upon the waters of the contiguous zone, in connection with research, demonstration projects, or studies relating to the prevention, control, or abatement of oil pollution.

§ 110.9 Notice.

Any person in charge of any vessel or onshore or offshore facility shall, as soon as he has knowledge of any discharge of oil from such vessel or facility in violation of § 110.5 of this part, immediately notify the U.S. Coast Guard of such discharge in accordance with such procedures as the Secretary of Transportation may prescribe.

Appendix B

CODE OF FEDERAL REGULATIONS

TITLE 40 - PROTECTION OF THE ENVIRONMENT

PART 110 - DISCHARGE OF OIL