

**INFORMATION ON
SPILL PREVENTION CONTROL &
COUNTERMEASURE PLANS
(40 CFR 112)**



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EPA OIL POLLUTION PREVENTION REGULATIONS

I. INTRODUCTION

Section 311(b)(1) of the Federal Water Pollution Control Act Amendments of 1972 declares that there shall be no discharges of oil or hazardous substances into or upon the navigable waters of the United States, adjoining shoreline or into or upon the waters of the contiguous zone. Consistent with this policy, Section 311(J)(1)(C) requires that the President issue regulations to establish procedures, methods and equipment to prevent the discharge of oil or hazardous substances from vessels and onshore and offshore facilities and to contain such discharges. The EPA, after careful consideration and evaluation of Federal, regional, state and local water quality laws, rules and regulations, as well as rules of regulatory agencies in oil producing states and fire and insurance underwriter codes, established that the most effective method to meet the policy goal of FWPCA is to require that owners and operators of non-transportation related facilities develop and implement Spill Prevention, Control and Countermeasure (SPCC) Plans. This approach places the responsibility of oil prevention on the owner or operator of a non-transportation related facility which can reasonably be expected to discharge oil into U.S. navigable waters.

Regulations governing Oil Pollution Prevention for Non-Transportation Related On-Shore and Off-Shore Facilities were issued in the Federal Register on December 11, 1973, Volume 38, Number 237, Part V. These regulations define the purpose and requirements for preparation and implementation of SPCC plans and civil penalties for failure to comply with such requirements. Guidelines for Preparation and Implementation of the SPCC are also provided. The regulations became effective January 15, 1974. A copy of the regulations is attached to this outline.

These regulations relate specifically to oil of any kind or in any form. It is anticipated that other regulations will be proposed with respect to discharges and hazardous substances in the near future.

II. PROGRAM APPLICABILITY

- A. The purpose of the Oil Pollution Prevention Regulations is to prevent the discharge of oil from non-transportation related onshore and offshore facilities into or upon the navigable waters of the United States.
- B. The regulation applies to:
 - 1. Owners or operators of non-transportation related onshore and offshore facilities engaged in drilling,

producing, gathering, processing, refining, transferring, distributing or consuming oil and oil products, which due to their location, can reasonably be expected to discharge oil in harmful quantities as defined by 40 CFR part 110. Mobile and stationary facilities must comply with the requirements of the regulation.

2. All departments, agencies, and instrumentalities of the Federal Government, except that part which applies to civil penalties.

C. The regulation does not apply to:

1. Transportation related facilities which are subject to the authority and control of the Department of Transportation as defined by the Memorandum of Understanding between the Secretary of Transportation and the Administrator of the Environmental Protection Agency dated November 24, 1971, 36 FR 24000. Transportation related facilities generally relate to: vessels; vessel related transfer facilities, including transfer hoses, loading arms, storage tanks for reception of oil ballast water or tank washings from vessels and appurtenances; equipment appurtenant to a non-transportation related facility that is primarily used to transfer oil in bulk to or from a vessel; inter or intrastate pipeline systems including pumps and appurtenances as well as in-line or breakout storage tanks; and highway vehicles and railroad cars used for transporting oil in the inter or intrastate commerce.
2. Facilities with aggregate above ground storage of 1320 gallons or less provided no single container has a capacity in excess of 660 gallons.
3. Facilities with a total storage capacity of 42,000 gallons or less and such storage is buried underground.
4. Non-transportation related on-shore or off-shore facilities which, due to location, could not reasonably be expected to discharge oil into or upon the navigable waters of the United States or adjoining shorelines.

III. PROGRAM IMPLEMENTATION

- A. Owners and operators who have discharged or could reasonably be expected to discharge oil in harmful quantities as defined in 40 CFR Part 110 into or upon navigable waters of the United States shall prepare an SPCC Plan in accordance with Section 112.7, Oil Pollution Prevention Regulation.

1. Such SPCC Plan shall be prepared within six months after the effective date of January 10, 1974, and shall be fully implemented as soon as possible, but not later than one year after January 10, 1974.
2. New facilities that become operational after the effective date of the regulation that have discharged or can reasonably be expected to discharge a harmful quantity of oil into or upon navigable waters should be carried by an SPCC. Such a plan shall be prepared within 6 months after the date the plant commenced operation and shall be implemented one year from that date.
3. On-shore and off-shore mobile or portable facilities shall also prepare and implement a SPCC Plan. Such SPCC Plans need not be prepared and implemented each time the facility is moved to a new site.
4. Each SPCC Plan shall be reviewed by a Professional Engineer who will certify that the plan fulfills the requirements of the Oil Prevention Regulation and has been prepared in accordance with good engineering practices. Such certification, however, shall in no way relieve the owner or operator of his duty to prepare and fully implement the plan.

IV EXTENSION OF TIME

- A. The Regional Administrator may authorize an extension of time for preparation and implementation of the SPCC Plan when he finds that inability to comply with the required schedule is a result of non-availability of qualified personnel or delays in construction of equipment delivery. A request for extension will not relieve the owner or operator from his obligation to comply with requirements of the regulation.
- B. Any request for time extension may be submitted by letter to the Regional Administrator and shall include:
 1. A complete copy of the SPCC Plan if completed;
 2. A full explanation of cause for delay;
 3. A description of the specific aspects of the Plan affected by the delay;
 4. A full discussion of actions being taken or planned to minimize or mitigate the delay;

5. A proposed time schedule for implementing any corrective actions being taken or contemplated;
 6. Any other oral or written statements in support of the request.
- C. Authorization for an extension of time does not mitigate the owners or operators responsibility for implementing those aspects of the SPCC Plan not affected by the extension of time.

V AMENDMENT OF SPCC PLANS

- A. An SPCC Plan shall be submitted to the Regional Administrator for review when the facility has:
1. Discharged more than 1000 U.S. gallons of oil into or upon navigable waters or adjoining shoreline in a single spill event; or
 2. Discharged oil in harmful quantities as defined in 40 CFR Part 110 into or upon navigable waters or adjoining shoreline in two spill events, reportable under Section 311(b)(5) of the FWPCA, within any 12-month period.
- B. SPCC Plan submission shall be prepared within 60 days from the time such facility becomes subject to the requirements of the regulations as defined above.
- C. Each submission of an SPCC Plan shall include:
1. Name of facility;
 2. Name(s) of owner or operator;
 3. Location of facility;
 4. Date and year of initial facility operation;
 5. Maximum storage or handling capacity of the facilities and normal daily throughput;
 6. Description of facility including maps, flow diagrams, and topographical maps;
 7. A complete copy of SPCC Plan with any amendments;
 8. Cause(s) of spill;
 9. Corrective action and/or countermeasures;

10. Additional preventive measures taken or contemplated to minimize the possibility of recurrence;
 11. Other information as reasonably required by the Regional Administrator.
- D. The Regional Administrator after review of the SPCC Plan may determine that an amendment is necessary to prevent and contain discharges of oil from the facility. The amendment becomes effective 30 days after the owner or operator has been notified.
- E. An owner or operator may appeal a decision made by the Regional Administrator requiring an amendment. The appeal shall be made in writing to the Administration.

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 Plan).

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" as 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 belowground 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 outlined in 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).

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

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.

**THE OIL SPILL PREVENTION, CONTROL,
AND COUNTERMEASURE (SPCC) REGULATIONS**

CFR TITLE 40 PART 112 OIL POLLUTION PREVENTION

The SPCC regulations were developed in 1973 under the authority of Section 311 of the Clean Water Act. The SPCC program sets minimum standards for certain aspects of facility designing, operation, and procedures. The program's requirements were intended to provide the flexibility needed to regulate more than 650,000 diverse facilities. The SPCC program regulates non-transportation related facilities that may reasonably be expected to discharge oil into or upon the navigable waters of the U.S. or adjoining shorelines, and that have oil storage capacities of more than 660 gallons in a single tank above-ground, collectively 1,320 gallons or more above-ground or 42,000 gallons or more underground. The regulations require that a SPCC Plan be prepared within six months of commencement of operation and implemented within one year after commencement of operations. The SPCC Plan for the facility should follow the guidelines in 40 CFR Part 112.7 for prevention and control of an oil spill. If this is not practicable, a strong contingency plan following the provisions in 40 CFR Part 109 must be prepared. The SPCC Plan must be certified by a registered professional engineer.

If you are not familiar with the SPCC regulations, the following questions and answers may help clarify your situation.

- Q. What is the U.S. Environmental Protection Agency Oil Pollution Regulation?**
- A.** It is a regulation which endeavors to prevent oil spills into the waters of the United States by establishing certain requirements of owners or operators of facilities which use oil.
- Q. What types of facilities are subject to the regulations?**
- A.** All establishments whether they be onshore or offshore which handle oil are subject to the regulations if they are non-transportation related. Facilities, which due to their location, could not reasonably be expected to discharge oil into or upon the navigable waters of the United States may be exempt. This determination should be based on consideration of the geographical, locational aspects of the facility such as proximity to navigable waters, land contour, drainage, etc., and shall exclude consideration of manmade features such as dikes, equipment, or other structures which would prevent a discharge from reaching navigable waters.

- Q. What exactly is a non-transportation-related facility?
- A. The definition of a non-transportation-related facility is certainly complex. Generally, any facility which produces, consumes or stores oil is a non-transportation-related facility.
- Q. What then is a transportation-related facility?
- A. Usually any facility which solely transfers and transports oil is a transportation-related facility. Examples of these are pipeline systems including pumps and appurtenances related thereto as well as in-line or breakout storage tanks needed for the continuous operation of the system and highway vehicles and railroad cars which are used for the transport of oil.
- Q. Can a facility be both transportation and non-transportation related?
- A. Yes. Part of an establishment's operation may be transportation-related and part may be non-transportation-related. Those parts that are non-transportation-related are subject to the regulation.
- Q. How much oil needs to be stored on the property to be subject to the regulation?
- A. If you store 1,320 gallons or more of oil on your property, you are subject to the regulation. Additionally, if any oil storage container or tank, whether it is filled or not, has a capacity of 660 gallons, you are subject to the regulation.
- Q. If oil is stored underground, should you be concerned with this spill prevention regulation?
- A. Yes. If your facility has a sum total of 42,000 gallons or more underground storage capacity, whether or not all tanks are filled to capacity, you are subject to the spill prevention regulation.
- Q. If my facility is so located that if I had a spill and none of the spilled oil would be expected to discharge into the waters of the United States, am I subject to the regulation?
- A. No. But make this determination carefully. Any oil reaching a sewer line, drainage ditch, etc., which would then discharge oil into navigable waters, directly or indirectly, makes your facility subject to the regulation.

- Q. Who determines whether or not a facility would reasonably be expected to discharge oil into navigable waters?
- A. The facility owner or operator makes the determination. It is recommended that a registered Professional Engineer verify and certify the facility owner's decision. However, a Federal inspector may, at his option, review the decision.
- Q. Suppose my decision is wrong?
- A. You could be exposed to the penalty provisions of the regulation.
- Q. What does the spill prevention regulation require?
- A. The regulation requires that all covered facilities have a fully prepared and implemented Spill Prevention Control and Countermeasure Plan (hereinafter SPCC Plan).
- Q. What should the SPCC Plan consider and implement?
- A. The SPCC Plan should consider all factors which would prevent spilled oil from reaching the navigable waters of the United States and implement the installation and/or construction of these preventative devices.
- Q. What are some of these preventative systems to be considered and implemented?
- A. Some of these preventive systems to be considered are facility drainage, impervious dikes or barriers, sump and collection systems, retention ponds, curbing, tank corrosion protection systems, liquid level devices, periodic inspection schedules, preventive maintenance procedures, record keeping, security systems, personnel training, and emergency operating procedures.
- Q. Who is responsible for preparing the SPCC Plan?
- A. The owner or operator of the facility. However, every SPCC Plan must be reviewed and certified by a registered Professional Engineer that the Plan has been prepared in accordance with good engineering practices.
- Q. Where should the completed SPCC Plan be kept?
- A. A copy of the plan should be maintained in its entirety at the facility, or if the facility is not manned 8 hours per day, at the nearest field office which is so manned for review by the EPA Regional Administrator.

- Q. When should a new facility prepare and implement an SPCC Plan?
- A. A new facility shall prepare an SPCC Plan within six months after facility operation begins and fully implement the Plan not later than one year after the facility begins operation.
- Q. If an SPCC Plan cannot be prepared and implemented in the allowed time period, what should be done?
- A. The regulation allows the owner or operator to apply for an extension of time by applying to the Regional Administrator by letter stating reasons for the request, actions being taken to minimize the delay, and proposed time schedule. The request will be reviewed and applicant notified of the Administrator's decision.
- Q. Once a Plan is prepared and implemented, does it ever have to be amended?
- A. Yes. Whenever a facility has a spill of 1,000 gallons or more, or two reportable spills of any quantity in a calendar year, the SPCC Plan must be submitted to the State in which the facility is located and the Regional Administrator will advise if amendments are required.
- Q. If a facility does not have any spills, does it ever have to review or amend its SPCC Plan?
- A. Yes. Whenever there is a change in operation or design of a facility, the Plan must be amended and fully implemented six months after the change. Also, every three years from the date the facility becomes subject to the regulation, the Plan must be reviewed for amendment.
- Q. Do amendments have to be certified by a registered Professional Engineer?
- A. Yes, in the same manner as in preparing a Plan.
- Q. Does the regulation have any penalty provisions?
- A. Most certainly. A fine of up to \$5,000 per day for each day of violation for failing or refusing to: a) prepare an SPCC Plan; b) submitting a Plan when amendments are required because of spill incidents; c) amending Plan when operations change; d) reviewing a Plan every three years.

Q. Where can I go for additional guidance?

A. Call the Region VIII office of the Environmental Protection Agency, Emergency Response Branch at (303) 293-1723. The American Petroleum Institute may also be contacted for guidance and copies of the regulations.

The SPCC regulations have not been updated in the past decade. As a result of the Ashland Oil release of approximately one million gallons of diesel fuel in Floreffe, Pennsylvania on January 2, 1988, the Environmental Protection Agency (EPA) formed a Task Force to review the SPCC regulations and make recommendations for changing and updating the regulations. In addition, more emphasis has been placed on inspections and compliance with the current regulations.

The Task Force made a number of recommendations concerning the SPCC regulations and related activities. However, they are only recommendations and no action has been taken to implement the proposed changes.

Some of the recommendations of the Task Force were: that the SPCC regulations be amended to require all owners and operators of any new and or existing facility to notify the EPA if the facility is subject to the SPCC regulations; that 40 CFR Part 112.7 would be changed to specify mandatory compliance; and that the number of inspections of facilities be increased. The benefits of the Task Force recommendations would be prevention awareness, increased compliance, and fewer spill incidents. Currently, there are four bills being considered by Congress to create new Federal programs addressing above-ground storage tanks.

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PART II



ENVIRONMENTAL PROTECTION AGENCY

■

OIL POLLUTION PREVENTION

**Non-Transportation Related Onshore
and Offshore Facilities**

PART 110—DISCHARGE OF OIL

- Sec.
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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 cir-

cumvent 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

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 Act, 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 loca-

tion, 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 Amendment 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. (38 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(j) 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.

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(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 com-

ply 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). (1) 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 overflow 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 wellhead 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 overpressuring.

(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 break-out 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 non-transportation-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 right-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.

[FR Doc.73-25448 Filed 12-10-73;8:45 am]

THE SPCC PLAN

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 any SPCC Plan —

1. The practices devoted 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 committed 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 manpower, 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.

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 clean-up
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 equipment, containment, operation, drainage, security, etc. may provide essential information necessary to formulate the SPCC Plan. Therefore, such reports could reasonably be incorporated as part of the plan. This kind of report 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 entitled "Suggested Procedure for Development of Spill Prevention Control and Countermeasure Plans" (API Bulletin D16). This was designed primarily for oil production facilities. See Appendix C.

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

CERTIFICATION INFORMATION

- A. Name of Facility — Texas Bulk Storage Terminal
- B. Type of Facility — Crude Oil Storage and Handling
- C. Date of Initial Operation — January 1, 1974
- D. Location of Facility — 1111 Main Street, Houston, Texas
- E. Name and Address of Owner — ABC Oil Company
 P.O. Box 0000
 Houston, Texas 77000
- F. Designated Person Responsible for Oil Spill Prevention —
- NAME Mr. John Doe
- G. Oil Spill History — This facility has experienced no significant oil spill event during the twelve months prior to January 10, 1974.
- H. Management Approval — Full approval is extended by Management at a level with authority to commit the necessary resources.
- SIGNATURE
- NAME Mr. A. A. Jones
- TITLE President — ABC Oil Company
- I. 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:

SIGNATURE:

(Seal)

REGISTRATION NO.:

DATE:

STATE:

— An example of a certification page for a SPCC Plan.

APPENDIX B

SPILL PREVENTION CONTROL AND COUNTERMEASURE PLAN

ABC OIL COMPANY

**100 Neverspill Road
Post Office Box 100
Oilville, Virginia 23129
Telephone (123) 456-7890**

CONTACT

John Doe, Owner & Manager

CERTIFICATION:

Engineer:

Signature:

License Number:

State:

(Seal)

Date:

1. NAME AND OWNERSHIP

Name: ABC Oil Company
100 Neverspill Road
Post Office Box 100
Oilville, Virginia 23129
Telephone: (123) 456-7890

Manager: John Doe
505 Oil Road
Oilville, Virginia 23129
Telephone: (123) 456-0987

Owner: Same

Other Personnel: Secretary-Bookkeeper
Dispatcher
Transport Driver
(3) Deliverymen

Service Area: Mid-Wake County, Virginia

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, on-site 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 closed when the plant is unattended. Two area lights are located in such positions so as to illuminate the office and storage areas.

3. PAST SPILL EXPERIENCE

(None)

4. SPILL PREVENTION – STORAGE TANKS

- 1) Each tank is UL-142 construction (above-ground use).
- 2) The main outlet valve on each tank is locked-shut when the plant is unattended.
- 3) Each tank is equipped with a direct-reading gauge.
- 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 gals.), and allowance is made for all additional vertical tank displacement volumes below the dike height (estimated spill liquid level). Total storage capacity is 140,000 gals. A 2-in. 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) On-Site

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 one-half mile distant. Emergency containment action will constitute the erection of an earthen dam and placement of absorbent pillars at the entrance to the 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) Off-Site

Each vehicle is equipped with a shovel and two absorbent pillars. The driver is instructed to achieve emergency containment, if possible, then call 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 on-site 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 E.P.A. and the Virginia State Water Control Board.
- 6) Instructions and company regulations have been posted conspicuously which relate to oil spills prevention and countermeasure procedures.

7. FUTURE SPILL PREVENTION PLANS

By January 10, 1975 (implementation deadline) the following additional plans will be completed:

- 1) On-site storage of spill containment and retrieval materials and equipment: bagged absorbent, absorbent pillows and booms, and tools. Storage facility will be well-publicized and clearly identified.
- 2) Installation of a sand-filled catchment basin for minor, routine spillage at loading pump intakes and at loading rack. Sand to be periodically replaced.
- 3) A routine inspection program with check-off listing of tanks, piping, valves, hoses, and pumps for the prevention of both major spills and also minor spills or leakage through proper maintenance.

John Doe

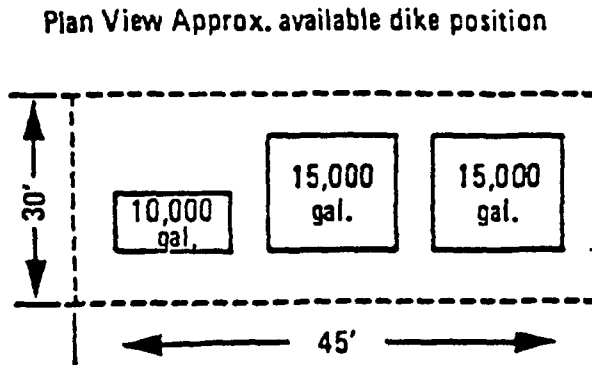
(Signature)

DIKE DESIGN PROCEDURE

1. 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 on 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. If their presence would constitute a hazard. Control of drainage shall be accessible under fire 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:
 - (ii) When storing normally stable flammable or combustible liquids, one subdivision for each tank in excess of 100,000 gallons (2,500 bbls.) and one subdivision for each group of tanks (no tank exceeding 100,000 gallons capacity) having an aggregate capacity not exceeding 150,000 gallons (3,570 bbls.).

2. EXAMPLE OF DESIGN: HORIZONTAL TANKS ONLY



Average Dike Height

- (a) Minimum containment volume is single largest tank within dike:
15,000 gals., this example.
 $15,000 \text{ gals.} \times .1337 \text{ cu. ft./gal.} = 2006 \text{ cu. ft.}$

- (b) Available Area:
 $30 \times 45 = 1350 \text{ sq. ft.}$
This example.

- (c) Average Dike height "h"
 $"h" \times 1350 = 2006$

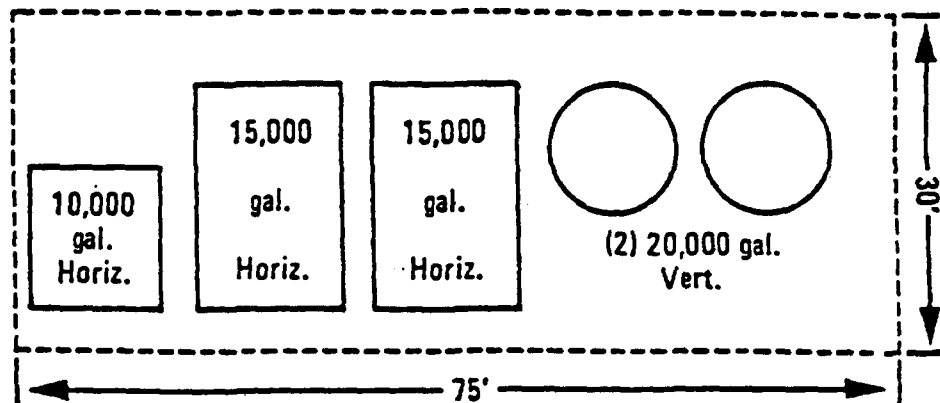
$$h = 2006 \div 1350$$

$$h = 1.486 \text{ ft.} = 17.8 \text{ inches plus freeboard.}$$

3. EXAMPLE OF DESIGN: HORIZONTAL AND VERTICAL TANKS

Plan View

Approx. available dike position



- a) From code, the minimum containment volume is single largest tank within:
20,000 gallons, this example

$$20,000 \text{ gallons} \times .1337 \text{ cu. ft./gallon} = 2674 \text{ cu. ft.}$$

- b) Available dike area, this example: $30' \times 75' = 2250 \text{ sq. ft.}$

- c) Observe that some volume of the vertical tanks go below the dike wall height (see last sentence, paragraph 1.a). This volume of the second 20,000 gallon tank (and any additional verticals) assumed *not* ruptured must be considered.

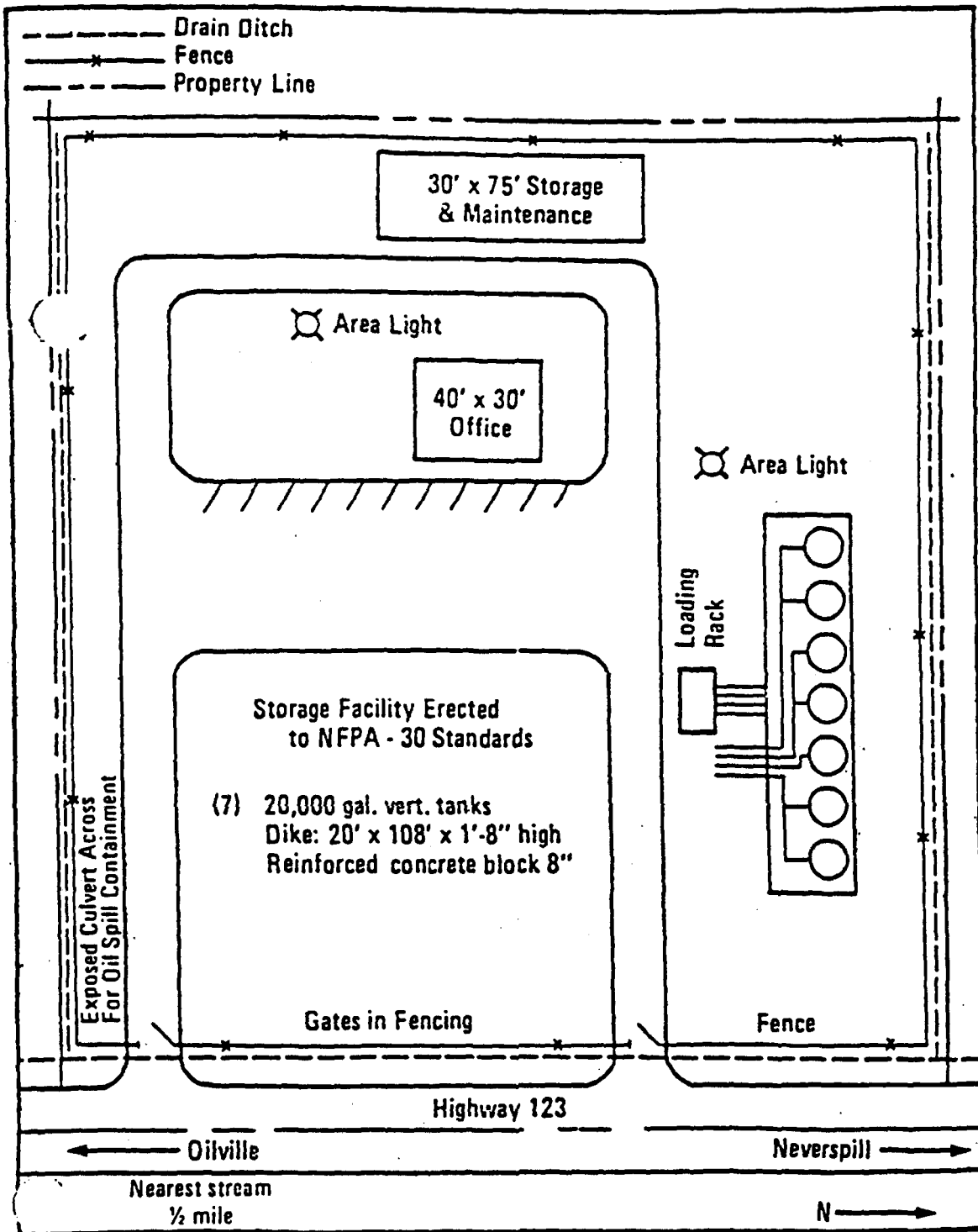
d) Average dike height "h"

"h" x Area of Dike = Minimum Containment Volume + "h" x circular area
of second and any additional certical tanks.

"h" x 2250 sq. ft. = 2674 cu. ft. + "h" x 3.14 x 5.25 x 5.25 (radius squared)

$$\begin{aligned} 2250h - 86.5h &= 2674 \\ 2163.5h &= 1.236 \text{ ft.} = 14.8 \text{ inches.} \end{aligned}$$

Average Dike Height = 15 inches approximately plus freeboard.



BULK PLANT SITE VIEW: EPA SPCC PLAN

APPENDIX C

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 _____

PART 1
GENERAL INFORMATION

7. Potential Spills — Prediction & Control:

<u>Source</u>	<u>Major Type of Failure</u>	<u>Total Quantity (bbls)</u>	<u>Rate (bbls/hr)</u>	<u>Direction of Flow*</u>	<u>Secondary Containment</u>
---------------	----------------------------------	--------------------------------------	---------------------------	-------------------------------	----------------------------------

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 _____

**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 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 _____

**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 _____

[Response to statements should be: YES, NO, or NA (Not Applicable).]

If YES, describe safety equipment and procedures used to prevent oil discharges to the water when dump valve failure occurs: _____

This image shows a single sheet of white paper with horizontal blue or grey ruling lines. The lines are evenly spaced and run across the width of the page. There is no handwriting or other markings on the paper.

Tanks
Describe equipment used to prevent oil discharges (include discussion of corrosion protection measures): _____

[illegible]

Pollution Prevention Equipment and Systems
Written inspection and testing procedures for pollution prevention equipment and systems are shown on Attachment #4.

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 over-pressuring (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 _____

**SPCC PLAN, ATTACHMENT #3
ONSHORE FACILITY BULK STORAGE TANKS
DRAINAGE SYSTEM**

Inspection Procedure:

Record of drainage, bypassing, inspection, and oil removal from secondary containment:

<u>Date of Drainage</u>	<u>Date of Bypassing</u>	<u>Date of Inspection</u>	<u>Oil Removal</u>	<u>Supervisor's or Inspector's Signature</u>
	<u>Open</u>	<u>Closed</u>		

Name of facility _____

Operator _____

**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:

<u>Item</u>	<u>Method of Activation and Control</u>	<u>Description</u>
-------------	---	--------------------

Name of facility _____

Operator _____

(Attachment #5, SPCC Plan)

APPENDIX D

SPCC INSPECTION CHECKLIST

CONTAINMENT EQUIPMENT/STRUCTURE OR CONTINGENCY PLAN

Secondary containment and/or diversionary structures are used for possible spill sources:

SOURCE

TYPE OF STRUCTURE

Select from: dikes, berms, retaining walls, curbs, culverting, gutters, drains, weirs, other barriers, spill diversions, retention ponds and sorbents.

If the containment or diversionary structures above are not practicable, state reasons for impracticability:

Attach a strong oil spill contingency plan and include a written commitment of manpower and materials required to expeditiously control and remove any harmful quantities of oil discharged. Check if attached:

Contingency Plan Written Commitment

§ 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:

(2) 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

(11) 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.

(f) **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.

SPOC INSPECTION CHECKLIST

FACILITY DRAINAGE

YES/NO

Drains from diked storage areas have valves. _____

Drain valves are manual, open-and-close design. _____

Rainwater from diked areas is inspected before drainage. _____

Plan drainage systems are equipped with either: _____

1. Ponds, lagoons or catchment basins to retain oil. _____
2. A diversionary system at the final discharge point. _____

Flow of drainage water between treatment units is by either: _____

1. Natural hydraulic flow. _____
 2. Two "lift" pumps - one a spare and one installed. _____
- _____
- _____
- _____
- _____

BULK STORAGE TANKS

YES/NO

Tank material and construction are compatible with fluid stored. _____

Secondary containment volume is greater than the largest single tank capacity plus rainwater. _____

(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 paragraphs (B), (C) and (D) (e)(2)(iii) 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.

SPOC INSPECTION CHECKLIST

BULK STORAGE TANKS (CONT.)

YES/NO

Drainage of rainwater from diked areas into open waters, by-passing inplant treatment, is accomplished according to the following:

1. Normally the by-pass valve is sealed closed. _____
2. The rainwater is inspected to insure compliance with water quality standards. _____
3. The by-pass valve is opened and resealed under responsible supervision. _____
4. Records are kept of by-passing and drainage events. _____

Buried metallic storage tanks are:

1. New tanks coated and wrapped to reduce corrosion. _____
2. Provided with cathodic protection as necessary. _____
3. Pressure tested on a scheduled, periodic basis. _____

Partially buried metallic tanks are avoided unless adequate shell coating is provided. _____

Aboveground tanks are tested by one of the following methods:

1. Hydrostatic testing _____
2. Visual inspection _____
3. Shell thickness testing. _____

Internal heating coil leakage is controlled by:

1. Monitoring the steam return or exhaust lines for oil. _____
2. Passing the steam return or exhaust lines through a settling tank or other system. _____
3. Installing external heating system. _____

(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 Part 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:

SPCC INSPECTION CHECKLIST

BULK STORAGE TANKS (CONT.)

YES/NO

All bulk storage tanks are externally inspected on a monthly basis for leaks or failures. _____

Tanks are fail safe engineered by one of the following:

1. High level alarms with an audible signal at a constantly manned station. _____
2. High liquid level pump cutoff devices. _____
3. Direct communication between the tank gauger and pumping station. _____
4. A fast means of determining the liquid level in tanks. _____
5. Liquid level sensing devices are inspected and tested on a scheduled, periodic basis. _____

Frequent plant effluent observations to detect upsets are made. _____

Mobile storage tanks are properly positioned to prevent a spill from reaching navigable water. _____

(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.

SPCC INSPECTION CHECKLIST

FACILITY TRANSFER OPERATIONS, PUMPING, AND IN-PLANT PROCESS

Buried pipelines are: YES/NO

1. Wrapped and coated to reduce corrosion. _____
2. Provided with cathodic protection as needed. _____
3. Inspected and corrective action taken as necessary when a section is exposed. _____

Pipeline terminal connections are capped or blankflanged and marked if the pipeline is not in service or on standby for long periods. _____

Pipe supports are designed to minimize abrasion and corrosion and allow for expansion and contraction. _____

All aboveground valves and pipelines are inspected on a scheduled, periodic basis. _____

Vehicles entering the facility are inspected and/or warned to avoid damaging aboveground piping. _____

(3) Facility transfer operations, pumping, and in-plant process (on-shore); (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.

SPOC INSPEC. N CHECKLIST

FACILITY TANK CAR AND TANK TRUCK LOADING/UNLOADING RACK

Loading/unloading procedures meet the minimum requirements and regulations of the Department of Transportation.

The unloading area has a quick drainage system.

The containment system will hold the maximum capacity of any single tank truck loading or unloading in the plant.

An interlocked warning light or physical barrier system or warning signs are provided in the loading/unloading area to prevent vehicular departure before disconnect of transfer lines.

Drains and outlets on tank trucks and tank cars are checked for leaks before loading or unloading.

YES/NO

SKETCH

(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.

SPCC INSPECT. CHECKLIST

INSPECTIONS AND RECORDS

YES/NO

The required inspections follow written procedures. _____

The written procedures and a record of the inspections, signed by the appropriate supervisor, are included in the SPCC Plan. _____

SECURITY

Plants handling or storing oil are fenced. _____

Entrance gates are locked and/or guarded when the plant is unattended or not in production. _____

Any valves which permit direct outward flow of a tank's contents are locked closed when in nonoperational or standby status. _____

Starter controls on all pumps in non-operational or non-standby status are locked or electrically isolated in the "off" position. _____

The loading/unloading connections of oil pipelines are capped or blank-flanged when not in service. _____

Facility lighting is adequate. _____

PERSONNEL TRAINING AND SPILL PREVENTION PROCEDURES

Personnel are properly instructed in the following:

1. Operation and maintenance of equipment to prevent oil discharges. _____
2. Applicable pollution control laws, rules, and regulations. _____

Spill prevention briefings for the operating personnel are conducted on a scheduled periodic basis. _____

(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 E

REPORT OIL OR CHEMICAL SPILLS

TO

NATIONAL RESPONSE CENTER

1-800-424-8802

U.S. EPA - REGION VIII

1-303-293-1788

STATE 24 HOUR SPILL NOTIFICATION:

-COLORADO

1-303-377-6326
OR 1-303-377-9395

-NORTH DAKOTA

1-701-224-2121

-MONTANA

1-406-444-6911

-UTAH

1-801-538-6333

-SOUTH DAKOTA

1-605-773-3231

-WYOMING

1-307-777-7781