



VENOCO, INC

**SPILL PREVENTION CONTROL AND COUNTERMEASURE
PLAN**

**VENOCO, INC.
PLATFORM HOLLY
STATE OFFSHORE LEASE PRC 3242
STATE WATERS OFF SANTA BARBARA COUNTY, CALIFORNIA**

6267 CARPINTERIA AVENUE, SUITE 100
CARPINTERIA, CALIFORNIA, 93013

SEPTEMBER 11, 2015

PREPARED BY:



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PROJECT No. 24209152.00

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SPCC REGULATORY COMPLIANCE MATRIX

Compliance Element	40 CFR Part 112 Section	Document Location
General applicability to the Oil Pollution Prevention regulation	112.1	Introduction-Page 5
Definitions	112.2	Applies throughout
Compliance deadlines (facilities operating before 8/16/2002)	112.3(a)	Introduction-Page 5
Compliance deadlines (facilities operational after 11/10/2010)	112.3(b)	N/A
Compliance for onshore or offshore mobile facilities	112.3(c)	N/A
SPCC plan must be reviewed and certified by a licensed professional engineer	112.3(d)	Page 7
SPCC plan must be maintained on-site if facility is normally attended at least four hours per day or at the nearest field office if not so attended. Plan must be available to regulatory agencies for on-site review during normal working hours	112.3(e)	Page 9
Extension of time to prepare and implement SPCC plan	112.3(f)	N/A
Qualified facilities	112.3(g)	N/A
Reporting of spills to the EPA Regional Administrator	112.4(a)	Pages 14-17
Take no action until required	112.4(b)	Appendix B
Reporting of spills to the local / state agencies	112.4(c)	Pages 14-17
Amendment of SPCC Plan by EPA Regional Administrator	112.4(d), (e), (f)	Appendix B
SPCC Plan must be amended whenever there is a change in facility design, construction, operation or maintenance which materially affects the facilities potential for the discharge of oil into or upon the navigable waters of the United States or adjoining shoreline	112.5(a)	Appendix B
SPCC Plan must be reviewed and evaluated at least once every five years from the date such facility becomes subject to this part. If the facility was in operation on or before August 16, 2002, then plan must be reviewed within five years from the date of last review	112.5(b)	Appendix B
Each technical amendment to the SPCC Plan must be certified by a licensed Professional Engineer	112.5(c)	Appendix B
Qualified facilities	112.6	N/A
Conformance with regulatory requirements. Plan must include facility diagram; location and contents of containers; type of oil and capacity of each container; discharge prevention measures; discharge drainage controls; countermeasures for discharge discovery, response, and cleanup; methods of disposal; contact list and phone numbers for the facility response coordinator, contractors, and outside agencies; and procedures for reporting and responding to a discharge	112.7(a)	Applies throughout
SPCC plan must indicate where there is a reasonable potential of equipment failure that could lead to an oil spill and to include a prediction of the direction, rate of flow, and total quantity of oil which	112.7(b)	Pages 12-13

Platform Holly SPCC Plan

Compliance Element	40 CFR Part 112 Section	Document Location
could be discharged from the facility as a result of each type of major equipment failure		
Description of an appropriate containment or diversionary structure	112.7(c)	Pages 12-13
Installation of prevention systems not practical	12.7(d)	N/A
Inspections, tests, and records	112.7(e)	Pages 20-21
Personnel, training, and discharge prevention procedures	112.7(f)	Page 23
Security (excluding oil production facilities)	112.7(g)	Page 23
Facility tank car and tank truck loading/unloading rack (excluding offshore facilities)	112.7(h)	N/A
Evaluation for risk of discharge or failure due to brittle fracture or other catastrophe	112.7(i)	Page 21
Conformance with discharge prevention and containment procedures	112.7(j)	Page 19
Qualified oil-filled equipment	112.7(k)	Pages 12-13
SPCC Plan must meet requirements of Sec. 112.7	112.8(a)	N/A
Facility drainage	112.8(b)	N/A
Bulk storage containers	112.8(c)	N/A
Facility transfer operations, pumping, and facility process	112.8(d)	N/A
SPCC Plan Requirements for Onshore Oil Production Facilities	112.9	N/A
SPCC Plan Requirements for Onshore Oil Drilling and Workover Facilities	112.10	N/A
SPCC Plan Requirements for Offshore Oil Drilling, Production, or Workover Facilities	112.11	Pages 21-23
Facility Response Plans (FRP)	112.20	Oil Spill Contingency Plan
Facility Response Training and Drills/Exercises	112.21	Oil Spill Contingency Plan

N/A: NOT APPLICABLE.

Introduction

This Spill Prevention Control and Countermeasure Plan (SPCC Plan) was prepared to comply with the requirements of Part 112, Oil Pollution Prevention of the Code of Federal Regulations Title 40 (40 CFR) and specifically Sec. 112.3 to ensure compliance by the November 10, 2010 deadline for facilities in operation before August 16, 2002. Part 112 establishes the requirements for procedures, methods, and equipment to assist in preventing the discharge of oil or diesel or any material containing oil from entering into or upon the navigable waters of the United States or adjoining shorelines. These procedures, methods, and equipment are referred to as the SPCC Plan. Part 112 applies to those owners or operators of non-transportation-related onshore and offshore facilities engaged in drilling, producing, gathering, storing, processing, refining, transferring, distributing, or consuming oil, diesel or oil products. The applicable facility must also be in a location such that if an oil or diesel spill event occurred, the oil or diesel spill would be expected to reach navigable waters of the United States or adjoining shorelines and the amount of oil or diesel discharged would be in harmful quantities as defined in 40 CFR Part 110.

This plan has been prepared to describe measures implemented by Venoco, Inc. to prevent oil discharges from occurring. If such incident does occur, this plan will aid not only Venoco but also all responding parties in coordinating a safe, effective and timely response in order to mitigate the impacts of such a discharge from Platform Holly.

Management Approval/Commitment of Resources
40 CFR Part 112.7

Venoco, Inc. (Venoco) is committed to maintaining the highest standards for preventing any discharge through the implementation of this SPCC Plan. Therefore this SPCC Plan has received management participation and Venoco management has committed the necessary resources to implement the measures described in this Plan.

Keith Wenal is the Health, Environment & Safety Manager who maintains all needed authority to implement this plan at Platform Holly.

As indicated below, the authorized facility representative commits all manpower, equipment, and materials necessary to implement this plan and to expeditiously control and remove any quantity of oil or condensate that may be harmful.

Authorized Facility Representative: Keith Wenal

Title: Health, Environment & Safety Manager

Signature:



A handwritten signature in black ink, appearing to read 'KW', is written over a horizontal line.

Dated:



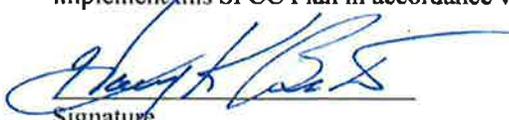
A handwritten date '9/16/15' is written over a horizontal line.

Platform Holly SPCC Plan

**Professional Engineer Certification
40 CFR Part 112.3(d)**

The undersigned Registered Professional Engineer is familiar with the requirements of Part 112 of Title 40 of the *Code of Federal Regulations* (40 CFR Part 112) and has visited and examined the facility, or has supervised examination of the facility by appropriately qualified personnel. The undersigned Registered Professional Engineer attests that this Spill Prevention Control and Countermeasure Plan has been prepared in accordance with Good Engineering Practice, including consideration of applicable industry standards and the requirements of 40 CFR Part 112; that procedures for required inspections and testing have been established; and that this Plan is adequate for the facility.

This certification in no way relieves the owner or operator of the facility of his/her duty to prepare and fully implement this SPCC Plan in accordance with the requirements of 40 CFR Part 112.


Signature

9/16/15
Date

Harry K. Bishop
Name of Professional Engineer

CH 2884
Registration Number

California
Issuing State

PE SEAL TO BE PLACED HERE



Certification of Substantial Harm Determination
40 CFR Part 112.20(e), 40 CFR Part 112.20(f)(1)

Facility Name: Venoco, Inc. Platform Holly

1. Does the facility transfer oil over water to or from vessels and does the facility have a total oil storage capacity greater than or equal to 42,000 gallons?

Yes No

2. Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and does the facility lack secondary containment that is sufficiently large to contain the capacity of the largest aboveground oil storage tank plus sufficient freeboard to allow for precipitation within any aboveground storage tank area?

Yes No

3. Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and is the facility located at a distance (as calculated using the appropriate formula) such that a discharge from the facility could cause injury to fish and wildlife and sensitive environments?

Yes No

4. Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and is the facility located at a distance (as calculated using the appropriate formula) such that a discharge from the facility would shut down a public drinking water intake?

Yes No

5. Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and has the facility experienced a reportable oil spill in an amount greater than or equal to 10,000 gallons within the last 5 years?

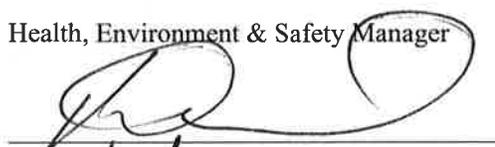
Yes No

Certification

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

Authorized Facility Representative: Keith Wenal

Title: Health, Environment & Safety Manager

Signature: 

Dated: 9/14/15

Location of SPCC Plan
40 CFR Part 112.3(e)

In accordance with 40 CFR Part 112.3(e), a complete copy of this SPCC is maintained at Platform Holly in the Control Room.

PART I – GENERAL FACILITY INFORMATION
40 CFR Part 112.7 (a)(3)

Company Information

Name of Facility:	Platform Holly
Type:	Offshore oil and gas production platform
Date of Initial Operation:	1966 (commissioned)
Location:	State offshore lease PRC 3242 in state waters off Santa Barbara County, California (See maps in Appendix C)
Physical Directions:	The platform is located two miles southwest of Coal Oil Point in state waters. The platform is only accessible by authorized boat or helicopter.
Name and Address of Operator:	Venoco, Inc. Attn: Keith Wenal 6267 Carpinteria Avenue, Suite 100 Carpinteria, CA 93013 (805) 745-2259

General Facility Description and Operations

Platform Holly is a crude oil and natural gas production platform located in state waters off of Santa Barbara County, California (approximately two miles southwest of Coal Oil Point). Figures 1, 2, and 3 in Appendix C show the location of the facility.

The platform has 30 production wells and produces approximately 3,500 barrels of oil per day. Crude oil, water, and natural gas are produced from the wells into a group header that is connected to Group Separators V-107 and V-108. Natural gas is removed from the oil stream in these vessels. The oil and water are separated in V-107 and V-108. The water phase is directed to Water Surge Drum V-110 and injected into disposal wells on Platform Holly. The remaining oil/water emulsion is directed to Surge Vessel V-109 and is pumped by shipping pump P-200 to Venoco's Ellwood Onshore Facility via a 6" subsea pipeline for additional processing. Testing of individual well production rates is conducted in V-106 which flows to V-107 and V-108. Natural gas from V-107 and V-108 goes to the Gas Compressor C-101, then to the sales compressor and into 6" gas pipeline that goes from the platform to the Ellwood Onshore Facility. Oil and water collected from the well casings go to V-101. The oil and water goes from V-101 to V-107 and V-108. The wells and production vessels are located on the Production Deck and Mezzanine Deck of the platform.

Platform Holly SPCC Plan

The deck drain system water is collected in Tanks T1 & T4 which serve as secondary containment on the platform. All deck drain fluids collected in Tanks T1 & T4 are pumped into the crude oil production process before being shipped to the Ellwood Onshore Facility.

There is a control room on the Production Deck of the platform where operators monitor the facility operation. Operators staff the platform 24 hours per day.

Facility Layout Diagram

Appendix C includes facility diagrams that show the tank settings and illustrate the capacity and contents of all storage containers and/or tanks with a capacity of 55 gallons or more (see Figures 5 through 8). Also included in Appendix C are maps which show the site topography and the locations of the facilities relative to waterways, roads, and inhabited areas (see Figure 4).

Location, Field Characteristics and Proximity to Navigable Waters

The platform is located in state waters off of Santa Barbara County. The platform is surrounded by the Pacific Ocean. The closest shoreline is Coal Oil Point approximately two miles to the northeast. See Figures 1 through 4 in Appendix C for details.

Platform Holly SPCC Plan

Bulk Storage Inventory and Characteristics

The inventory of bulk oil storage containers, mobile/portable containers, flow-through vessels, and oil-filled operational equipment is provided in the following table^{2,3,4}. The tables also list spill situations that could occur within the facility. Maps and site plans are included in Appendix C.

Source: Container and Material Stored	Construction	Major Type of Failure	Total Est. Quantity ¹	Rate (BBL/HR)	Direction of Flow	Secondary Containment
Bulk Storage Containers & Mobile/Portable Containers & Flow-Through Vessels						
V-100 Wellbay Test Separator (crude oil & water)	Steel	Tank/Vessel Rupture	12 bbl (500 gal)	12	Into secondary containment	Curbed deck and sump
V-106 Test Trap (crude oil & water)	Steel	Tank/Vessel Rupture	30 bbl (1,260 gal)	30	Into secondary containment	Curbed deck and sump
V-107 Group Separator (crude oil & water)	Steel	Tank/Vessel Rupture	110 bbl (4,620 gal)	110	Into secondary containment	Curbed deck and sump
V-108 Gross Separator (crude oil & water)	Steel	Tank/Vessel Rupture	110 bbl (4,620 gal)	110	Into secondary containment	Curbed deck and sump
V-109 Water Surge Tank (crude oil & water)	Steel	Tank/Vessel Rupture	100 bbl (4,200 gal)	100	Into secondary containment	Curbed deck and sump
V-110 Oil Surge Tank (crude oil & water)	Steel	Tank/Vessel Rupture	100 bbl (4,200 gal)	100	Into secondary containment	Curbed deck and sump
V-147 Lube Oil Drain Tank (lube oil)	Steel	Tank/Vessel Rupture	3.6 bbl (152.75 gal)	3.6	Into secondary containment	Kick Plate
T-101 Lube Oil Drain Tank (out-of-service)	Steel	N/A - OOS	N/A - OOS	N/A - OOS	Into secondary containment	Curbed deck and sump
T-111 Diesel Fuel Tank (diesel)	Steel	Tank/Vessel Rupture	35.7 bbl (1,500 gal)	35.7	Into secondary containment	Curbed deck and sump
Drums (lube & hydraulic oil)	Steel	Tank/Vessel Rupture	1.3 bbl (55 gal)	1.3	Into secondary containment	Curbed deck and sump
Portable Tote Tanks (diesel)	Steel	Tank/Vessel Rupture	20-40 bbl (840-1,680 gal)	20-40	Into secondary containment	Curbed deck and sump
Portable Tote Tanks (lube oil)	Steel	Tank/Vessel Rupture	12 bbl (500 gal)	12	Into secondary containment	Curbed deck and sump
Switchgear Bldg. Diesel Generator (diesel)	Steel	Tank/Vessel Rupture	2.9 bbl (120 gal)	2.9	Into secondary containment	Switchgear room, curbed deck, and sump
Crane (diesel)	Steel	Tank/Vessel Rupture	3.3 bbl (140 gal)	3.3	Into secondary containment	Curbed deck and sump
Oil-Filled Operational Equipment						
Hy-Tran3 Transformer (FR3 Fluid)	Steel	Tank/Vessel Rupture	11 bbl (460 gal)	11	Into secondary containment	Kick plate
Well #3242-18 VSD-3 Transformer (mineral oil)	Steel	Tank/Vessel Rupture	7.5 bbl (314 gal)	7.5	Into secondary containment	Kick plate

Platform Holly SPCC Plan

Source: Container and Material Stored	Construction	Major Type of Failure	Total Est. Quantity ¹	Rate (BBL/HR)	Direction of Flow	Secondary Containment
Well #3242-9 VSD-4 Transformer (mineral oil)	Steel	Tank/Vessel Rupture	3.2 bbl (135 gal)	3.2	Into secondary containment	Kick plate
Well #3120-12 VSD-5 Transformer (mineral oil)	Steel	Tank/Vessel Rupture	3.1 bbl (132 gal)	3.1	Into secondary containment	Kick plate
Well #3120-16 VSD-6 Transformer (mineral oil)	Steel	Tank/Vessel Rupture	3.2 bbl (135 gal)	3.2	Into secondary containment	Kick plate
VSD-7 Transformer (mineral oil)	Steel	Tank/Vessel Rupture	3.2 bbl (135 gal)	3.2	Into secondary containment	Kick plate
Production Deck Switchgear Bldg. Transformer (mineral oil)	Steel	Tank/Vessel Rupture	11.2 bbl (470 gal)	11.2	Into secondary containment	Kick plate
Production Deck Eastside Transformer (mineral oil)	Steel	Tank/Vessel Rupture	19 bbl (797 gal)	19	Into secondary containment	Curbed deck and sump
Drilling Deck TR-DR-1 Transformer (FR3 Fluid)	Steel	Tank/Vessel Rupture	15.5 bbl (650 gal)	15.5	Into secondary containment	Berm
Hydraulic Unit X-318 (hydraulic oil)	Steel	Tank/Vessel Rupture	3.6 bbl (150 gal)	3.6	Into secondary containment	Curbed deck and sump
Crane (hydraulic oil)	Steel	Tank/Vessel Rupture	6 bbl (250 gal)	6	Into secondary containment	Curbed deck and sump
Associated Piping						
6" Oil Shipping Line to Ellwood Onshore Facility (crude oil & water)	Steel	Line Break	100 bbl (4,200 gal)	150	Dependent upon ocean current	Oil spill contingency plan

Notes:

¹Quantity reflects maximum operating capacity of largest vessel or tank and/or assumes 10 minutes for shutdown.

²There are no completely buried metallic storage tanks at the facility.

³There are no partially buried or bunkered metallic tanks at the facility.

⁴The storage tanks do not have internal heating coils.

PART II – SPILL RESPONSE AND REPORTING PROCEDURES

40 CFR Part 112.7

Discharge Discovery and Reporting

Primary response will be initiated by onsite personnel. Assistance from the local emergency support services and/or oil spill cooperatives will be used as necessary. All discharges of any size shall be reported to the Senior Operations Supervisor immediately who shall be responsible for initiating response operations, ensuring all agency notifications (as applicable), carrying out the control and containment, and ensuring the cleanup of the spill. As necessary, the Senior Operations Supervisor will communicate with the Venoco Sustained Incident Response Team (SIRT) Incident Commander who will provide assistance to effectively respond to the event. Included in Appendix E of this SPCC Plan is the Venoco Spill Notification and Reporting Form – CA Onshore, which contains all information on the spill and will be used when and if notification of any government, state or local agency is necessary. A Government Agency Contact list for reference is included in Appendix G.

First Person to Observe the Spill - Duties and Responsibilities

The first person to observe an oil spill would make a rapid assessment of the situation and report immediately to the Senior Operations Supervisor or Person in Charge (PIC). A checklist for the first person to observe the spill is as follows:

- A. Make a rapid assessment of the incident.
- B. Take any appropriate steps which would effectively stop the discharge in a timely manner (5 minutes or less).

Examples include:

- 1. Close block valves to stop line leaks;
 - 2. Close blow out preventers (BOP's) to stop flow from the well;
 - 3. Stop pumps if a tank is being overfilled;
 - 4. Stop fuel pumps and drain fuel lines if a fueling leak occurs;
 - 5. Shut off electric circuits that might create a fire hazard.
- C. Report to the Senior Operations Supervisor (or PIC):

As quickly as possible, the first person to observe an oil spill should report the following information to the Senior Operations Supervisor (or PIC):

- The time of the incident
- The location of the incident
- Whether the incident caused any injury to personnel

Platform Holly SPCC Plan

- The type of fluid/material spilled
- The amount of fluid/material spilled
- The status of the source
- Weather conditions

D. Assist in the response effort as instructed by the Senior Operations Supervisor.

Senior Operations Supervisor - Duties and Responsibilities

The Senior Operations Supervisor is responsible for ensuring the safety of all personnel, assessing the status of the incident, and initiating response operations including making initial agency notifications.

The Senior Operations Supervisor shall:

- A. Receive an initial report from first person to observe spill and notify 9-1-1 (if an emergency).
- B. Account for all personnel.
- C. Determine whether there is a threat of fire or explosion (See SPECIAL INSTRUCTION 1 Appendix D) and evaluate the risk of H₂S gas exposure (See SPECIAL INSTRUCTION 2 Appendix D) to ensure safety of personnel. Determine whether an evacuation is necessary.
- E. Assess the magnitude of the oil spill incident, the status of control and response operations and the location and direction of movement. Confirm source of discharge.
- F. Estimate spill volume.
- G. Assist in completing a "Spill Notification and Reporting Form – CA Onshore". (See sample Form located in Appendix E). Make initial agency notifications.
- H. Contact Venoco SIRT IC with Spill Notification and Reporting Form – CA Onshore and provide assessment of situation.
- I. Discuss the response strategy.
- J. Coordinate the on scene response effort.
 - 1. Coordinate equipment deployment operations (contract or in-house).
 - 2. Coordinate containment and recovery operations.
- K. Maintain personal notes of relevant actions and decisions.

Major Spills

On-site personnel should not attempt to control major spills until the appropriate and qualified emergency response staff has arrived at the site. The Senior Operations Supervisor shall deem if contract personnel and/or equipment are required.

Contract Cleanup Personnel

Contract Cleanup Personnel would be responsible for carrying out cleanup operations as directed by the Senior Operations Supervisor. A checklist for Contract Cleanup Personnel is as follows:

1. Obtain briefing from and carry out instructions for the Senior Operations Supervisor and/or HES Coordinator.
2. Maintain radio/phone contact with the Senior Operations Supervisor, as necessary.
3. Obtain protective clothing (i.e., slickers, boots, goggles, etc.), if necessary.

Waste Disposal

Waste material collected from spills will be disposed of, re-used or recycled according to applicable waste law. Free oil and water can be re-introduced into the production streams. Hydrocarbon impacted soil may be taken to hazardous or non-hazardous landfills as appropriate. In the event that the Regional Water Quality Control Board approves the material for beneficial use, it may be used onsite to maintain roads, berms, etc.

NOTE: THE ELLWOOD OIL SPILL CONTINGENCY PLAN CONTAINS METHOD OF DISPOSAL OR RECOVERED SPILL MATERIALS.

Spill Incident Notification and Reporting Responsibilities

In the event of an oil spill, proper actions must be taken to accomplish the following:

- Prevent or minimize oil-reaching waterways
- Control the source of the spill
- Make proper notifications internally as well as to government agencies
- Conduct appropriate emergency cleanup actions
- Obtain the necessary information to allow post-incident evaluation

This section describes the notification and reporting requirements to conduct the above tasks.

Notification Procedure

Any amount of spilled oil reaching a waterway or any land spills of one barrel or greater or any spilled oil outside man-made secondary containment must be reported.

IN CASE OF AN OIL SPILL EVENT, IMMEDIATELY CONTACT THE SENIOR OPERATIONS SUPERVISOR AT (805) 961-2301 or (805) 455-9666. THE SENIOR OPERATIONS SUPERVISOR WILL MAKE ALL NECESSARY INITIAL NOTIFICATIONS.

Contact Person

EOF Office (24 hour)
Jeff MacDonald, Senior Operations Supervisor
John Garnett, Environmental Coordinator

Contact Number

(805) 961-2375
(805) 961-2301 or (805) 455-9666
805.745.2170 or 805.765.5450

The following governmental agencies will be notified as necessary:

Platform Holly SPCC Plan

1. California Emergency Management Agency (formerly Ca OES) (800) 852-7550
2. National Response Center (800) 424-8802
3. California Department of Fish and Game Office of Spill Prevention and Response (OSPR) (916) 445-0045
4. California Regional Water Quality Control Board Central Coast Regional Office (805) 549-3147

Other government agencies that may require notification:

1. California Division of Oil, Gas, & Geothermal Resources (805) 937-7246
2. Local Law Enforcement, Fire, Ambulance 911
3. Santa Barbara County Office of Emergency Services (805) 560-1081
4. Santa Barbara County Petroleum Dept. (805) 934-6128
5. Santa Barbara County A.P.C.D. (805) 961-8800
6. State Lands Commission (805) 685-8502
(562) 590-5201
7. USEPA Regional Administrator* (800) 300-2193

*Note-If an oil spill exceeds 1,000 gallons or 2 spill events of greater than 42 gallons each occur in a 12 month period, the USEPA must be notified in compliance with 40 CFR Part 112.4.

Oil Spill Response Organizations/Contractors (All 24 Hour):

1. Clean Seas (805) 684-3838
2. Marine Spill Response Corp. (MSRC) (800) 645-7745
3. CD Lyon Construction (805) 653-0173
4. Clark Engineering Construction (805) 643-8119
5. Advanced Cleanup Technologies (800) 334-2284

NOTE: SEE THE ELLWOOD OIL SPILL CONTINGENCY PLAN AND ELLWOOD EMERGENCY ACTION PLAN FOR ADDITIONAL SPILL REPORTING PROCEDURES AND AGENCY PHONE NUMBERS.

Record Keeping

Records required by applicable regulations are maintained as specified for compliance. Records are generally to be maintained as follows:

Platform Holly SPCC Plan

RECORD

LOCATION

Employee Training

7979 Hollister Ave.
Goleta, CA 93117

Environmental Permits and Records

7979 Hollister Ave.
Goleta, CA 93117

Spill Reports

7979 Hollister Ave.
Goleta, CA 93117

Facility Inspections

7979 Hollister Ave.
Goleta, CA 93117

PART III – SPILL PREVENTION, CONTROL, AND COUNTERMEASURE PROVISIONS

40 CFR Parts 112.7 and 112.11

Potential Discharge Volume, Direction of Flow 112.7(b) and Containment 112.7(a)(3)(iii)

The table of Bulk Storage Inventory and Characteristics as referenced on page 12 summarizes potential oil discharge scenarios. Other precautions have been taken into account to mitigate any possibilities for discharges such as alarms, inspections, design and materials of construction.

Secondary Containment Design, Construction Materials and Volume

In general, the platform is configured to minimize the likelihood of a discharge reaching navigable waters. The following measures have been provided:

1. Bulk storage containers are made from materials that are compatible with the materials being stored as well as the conditions of storage such as pressure and temperature.
2. In the event the primary containment fails, the platform has secondary containment in place.
3. The platform is designed with decks that drain to a sump (T-1 & T-4).
4. Rainwater that lands on the platform is collected and added to the production system, then shipped to the Ellwood Onshore Facility with the oil/water emulsion.
5. Platform Holly has the following spill response equipment available:
 - a. Expandi 4300 boom (1450 feet)
 - b. Buoys for spill tracking
 - c. 3M 156 sorbent (10 bales)
 - d. Doug C or Jackie C, (C and C Boats) (support and boom deployment)

Secondary Containment for Bulk Storage

This facility has been engineered to minimize the possibility of discharges impacting adjacent land or reaching navigable waters. Secondary containment for bulk storage containers is provided by decks that drain to a Sump Tanks T1 & T4. In addition, some containers are further protected from discharge by berms and the diesel generator is located inside the Switchgear Building. Details for the berm calculations are provided below:

Berm Capacity Calculations

LOADING/LANDING DECK TRANSFORMER BERM

The containment berm is 37' length x 15' width x 4" height.

Inside the berm there are six transformers, with the largest one containing 460 gallons of oil.

It is estimated that 75% of the berm space is available for containment.

- | | |
|----------------------------------------------------|------------------------------------------------|
| a. Berm volume (ft ³) | = (37 * 15 * 0.33) = 183 |
| b. Berm space available (ft ³) | = (0.75 * 183) = 137 |
| c. Size of largest tank in berm (ft ³) | = (460 gal / 7.48 gal/ft ³) = 61.5 |
| d. Berm free capacity/largest tank volume | = 137 / 61.5 = 223% |

Platform Holly SPCC Plan

PRODUCTION DECK SWITCHGEAR BUILDING GENERATOR

The diesel generator is located inside the Switchgear Building.
The room is 38' length x 21' width and has a 3.25" curb at the doorway.
It is estimated that 50% of the room is available for containment.
The generator fuel tank holds 120 gallons of diesel.

- a. Berm volume (ft³) = $(38 * 21 * 0.27) = 215$
- b. Berm space available (ft³) = $(0.5 * 215) = 107.5$
- c. Size of largest tank in berm (ft³) = $(120 \text{ gal} / 7.48 \text{ gal/ft}^3) = 16$
- d. Berm free capacity/largest tank volume = $107.5 / 16 = 672\%$

PRODUCTION DECK SWITCHGEAR BUILDING TRANSFORMER BERM

The indoor berm is comprised of two rectangular sections:

- 7' 4" length x 5' 6" width x 1' 5.5" height
- 3' 6" length x 2' width x 1' 5.5" height

Inside the berm there is one transformer that holds 470 gallons of oil.

- a. Berm volume (ft³) = $(7.33 * 5.5 * 1.46) + (3.5 * 2 * 1.46) = 69$
- b. Size of largest tank in berm (ft³) = $(470 \text{ gal} / 7.48 \text{ gal/ft}^3) = 63$
- c. Berm free capacity/largest tank volume = $69 / 63 = 109.5\%$

DRILLING DECK TRANSFORMER BERM

The outdoor berm is 30' length x 9' width x 7" height.
Inside the berm there is one transformer that holds 650 gallons of oil.

- a. Berm volume (ft³) = $(30 * 9 * 0.58) = 156.6$
- b. Size of largest tank in berm (ft³) = $(650 \text{ gal} / 7.48 \text{ gal/ft}^3) = 86.9$
- c. Berm free capacity/largest tank volume = $156.6 / 86.9 = 180\%$

LOADING/LANDING DECK – V-147 BERM

V-147 is located on the landing deck next to Tanks T1 & T4
The containment around V-147 measures 29.75' x 15.4' x 8" height
There is displacement within the containment caused by T1 & T4
The capacity of V-147 is 152.75 gallons

- a. Berm volume (ft³) = $(29.75 * 15.4 * 0.75) = 343.6$
- b. Berm space available (ft³) = $343.6 - ((\pi)(6^2))(0.75) + ((\pi)(3.75^2))(0.75) = 225.6$
- d. Berm free capacity/largest tank volume = $225.6 / 20.42 = 1,104\%$

Inspections, Tests and Records 112.7(e)

This Plan outlines procedures for inspecting the facility equipment in accordance with SPCC requirements. Records of inspections performed as described in this Plan and signed by the appropriate supervisor are part of this Plan, and are maintained with this Plan at the facility for a minimum of three years. The reports include a description of the inspection procedure, the date of inspection, if drainage of rainwater was required, and the inspector's signature.

Tank Inspection Methods, Procedures and Record Keeping

Four types of facility inspections are conducted as follows:

1. Daily shift inspections of platform equipment are conducted by the operators. The inspections include visual checks of all process vessels, storage tanks, pumps, compressors, wellheads, and visible piping for leakage or potential failure. It also includes a visual observation of the ocean surface for oil sheens. Shift inspection sheets are completed to document the inspections. These inspection records are kept as part of the facility records.
2. A monthly inspection, including testing of alarms, is performed as required by the State Lands Commission (SLC). A SLC representative observes these inspections. Records of these inspections are kept as part of the facility records.
3. A Monthly Facility Inspection is performed by the HES Coordinator. Records of these inspections are kept as part of the facility records. The monthly inspection includes the following:
 - a. Observe all storage tank components for defects, including seams, gaskets, piping connections, valves, sightglasses, tank foundations, leak detection systems, and equalizing lines.
 - b. Observe containment structures to assure they are in proper condition (checking for cracks, holes, etc.) and that they are constructed as specified in the SPCC Plan. Containment structures that appear inadequate are noted.
 - c. Observe circulating, transfer, and shipping pumps for leaks.
 - d. Check communication systems and alarms.
4. The Senior Operations Supervisor or his designee will conduct formal tank setting inspections every six months. The inspection will include visually inspecting the tanks and appurtenant piping for integrity of seams, bolts, gaskets, valves, connecting pipeline, etc. for indications of deterioration, leaking, or accumulation of oil inside the containment area. Hydrostatic testing (or equivalent) will be performed if necessary to confirm tank integrity. Additionally, all secondary containment devices including berms will be inspected to ensure that they are intact and will provide the required containment. Formal inspections are documented on inspection logs. Leaks or potential failures found during the inspection are noted on the log. A visual inspection log is included in Appendix F.

Facility inspections are conducted routinely and any unusual conditions or problems following a sudden change in atmospheric temperature, leaks around tank foundation, and seam failures. Tank walls are inspected internally when a tank is removed from service for maintenance that requires tank to be emptied.

Anytime a field-constructed tank undergoes a repair, alteration, reconstruction, or a change in service that might affect the risk of a discharge or failure due to brittle fracture, the container is evaluated using appropriate means i.e. visual, ultra-sonic testing, magnetic particle testing, hydrotesting, etc.

Other Spill Prevention Measures per 40 CFR 112.11

The following are additional spill prevention measures in place at the facility:

- **Oil Drainage Collection Equipment (40 CFR 112.11(b)):** The platform is equipped with oil drainage collection equipment to prevent and control small oil discharges around pumps, glands, valves, flanges, expansion joints, hoses, drain lines, separators, treaters, tanks, and associated equipment. Deck drains flow into the 55 barrel Drain Sump Tank T-1 on the loading/landing deck level. All fluid collected in Tank T-1 is automatically pumped into Surge Vessel V-109 and is pumped from there to shore.
- **Sump System (40 CFR 112.11(c)):** Drain Sump Tank T-1 operates as a sump system. It has one pump that operates automatically. The tank is equipped with a high level alarm and a platform shutdown switch if the level in the tank rises too high. There is no spare sump pump. If Tank T-1 overflows, the fluid goes into Tank T-4 on the same deck. Monthly preventive maintenance is performed on the pump as prompted by CMMS preventive maintenance program. The monthly maintenance includes inspection of the pump and its start-up system.
- **Separator Dump Valves (40 CFR 112.11(d)):** The group and test separator vessels have dump valves which predominantly fail to the closed position. The separators have high liquid level sensors that automatically shut down all producing wells.
- **High Liquid Level Sensing Devices on Atmospheric Pressure Storage Containers (40 CFR 112.11(e)):** There is one oil storage tank that operates at atmospheric pressure – Diesel Tank T-111. This tank is only manually filled when fluid is transferred from portable tote tanks – it is not automatically filled. Consequently, high liquid level alarms are not necessary on this containers.
- **High and Low Pressure Sensing Devices on Pressurized Storage Containers (40 CFR 112.11(f)):** V-100, V-101, V-106, V-107, V-108, V-109, V-147 and V-110 are equipped with high and low pressure alarms and shut downs that will shut off all producing wells.
- **Corrosion Protection for Containers (40 CFR 112.11(g)):** Containers are externally painted to prevent corrosion. Containers are internally coated to prevent corrosion. Corrosion inhibitor chemicals are used in the production process to protect piping and vessels. Corrosion coupons are utilized to monitor corrosion rates.
- **Procedure for Pollution Prevention Inspection and Testing (40 CFR 112.11(h)):**
 - The Pollution Prevention Inspection and Testing Program has three components: 1) Daily visual inspections of facility equipment by operating personnel; 2) Monthly testing of alarms and shutdowns performed during the Monthly Inspections conducted as required by the State Lands Commission; and 3) Spill response drills and exercises.
 - Daily inspections include visual checks of process vessels, pumps, compressors, wellheads, and visible piping for leakage or unusual conditions. The Monthly Inspection includes testing of alarms and shutdowns.
 - The spill response drills and exercises consist of: 1) Annual spill drills that test deployment of facility owned equipment to simulated oil discharges; 2) Annual tabletop exercises of the Facility's Spill Management Team; and 3) Quarterly drills of notification procedures between the facility personnel and the Qualified Individual.
- **Periodic Inspection and Testing of Pollution Control Equipment (40 CFR 112.11(i)):**
 - Daily visual inspections of facility equipment shall be conducted by operating personnel. Monthly testing of all alarms shall be performed during the Monthly Inspection, as required by the State Lands Commission. The alarm activating equipment shall be manually tested, and witnessed by State Lands Commission personnel. This testing shall be tracked in the CMMS computer program. Test reports shall be kept on file in the Platform File Room for a minimum of three years.

Platform Holly SPCC Plan

- Spill response drills, tabletop exercises, and spill notification drills shall be conducted as required by state regulations and the Procedure for Pollution Prevention Inspection and Testing outlined above.
- **Well Shut-in Valves (40 CFR 112.11(j)):** The well flowlines are all equipped with a surface shut-in valve (Surface Safety Valve – SSV). The surface safety valves automatically close due to high or low pressure in the oil or gas production system, when high levels occur in production vessels or whenever there is an emergency shutdown of the platform. There are subsurface shut-in valves (Sub-Surface Safety Valve – SSSV) in every well except for #3242-18. The SSSV's fail closed if there is a fire or platform catastrophe.
- **Well Control System for Workovers (40 CFR 112.11(k)):** A blowout preventer (BOP) assembly and well control system is installed before drilling below any casing string and as required during workover operations. The BOP assembly is capable of controlling any expected wellhead pressure.
- **Check Valves on Flowlines (40 CFR 112.11(l)):** All well flowlines are equipped with check valves upstream of their connection point into the group header.
- **High Pressure Wells Flowline Shut-in Device (40 CFR 112.11(m)):** None of the wells have a shut-in pressure that exceeds the working pressure of the flowlines or production manifold.
- **Corrosion Protection for Pipelines (40 CFR 112.11(n)):** The pipelines are protected against external corrosion by a cathodic protection system. Corrosion inhibitor chemical is injected into the production system on the platform and is also injected at the shipping pump site for protection of the shipping line from the platform to shore. Corrosion inhibitor is also used to protect the gas pipeline to shore. The oil shipping line is cleaned by pigging operations weekly and the gas pipeline is cleaned by pigging monthly.
- **Protection of Sub-Marine Piping (40 CFR 112.11(o)):** Coast Guard regulations require that fishing boats remain at least 300 feet away from the platform. Drag nets are not allowed to be used for fishing. Navigation maps show the pipeline route to shore.
- **Maintenance of Sub-Marine Piping (40 CFR 112.11(p)):** Pressure testing and smart pigging of the sub-marine piping between the platform and shore are performed every year. Weekly visual inspection of the pipeline route between the platform and shore is performed by the crew of a service boat to look for leaks. Records of the inspections are kept as part of the facility records.

Security

The platform is staffed 24 hours per day and is only accessible by authorized boat or helicopter. The platform has adequate lighting to allow discovery of discharges during hours of darkness and to aid in preventing acts of vandalism.

Personnel, Training, and Discharge Prevention Procedures

The Senior Operations Supervisor has been designated as the point of contact for all discharge prevention and response at this facility. The Senior Operations Supervisor also conducts the operations/safety meetings at least once a year but more frequently as needs arise, according to the Senior Operations Supervisor's discretion. Every person who enters this facility (contractor or employee) is advised that every inhabitant must at all times act in a manner to preserve life and property, and prevent pollution of the environment by the proper use of the facility's prevention and containment systems. No pollutant, regardless of the volume, is allowed to drain into the ocean.

- A. Personnel are properly instructed in the following:

Platform Holly SPCC Plan

- Operation and maintenance of equipment to prevent oil discharges.
 - Applicable pollution control laws, rules, and regulations.
- B. Instruction procedures for staff include:
- That all personnel understand the procedures described in this SPCC Plan and are informed of the requirements under applicable pollution control laws, rule and regulations.
 - Employees receive supervised on-the-job training, and introduction to field equipment and facility operations.
 - Trained on risks associated with potential exposure to hydrogen sulfide (H₂S).
- C. Instruction procedures for oil process related contractors include:
- That all contract personnel are familiar with the pertinent facility operations, safety procedures, and spill prevention and control procedures described in this Plan prior to working at the facility.
 - All contractors working at this facility receive and/or are advised as to where a copy of this Plan is located.

APPENDIX A

SPCC PLAN DISTRIBUTION LIST

**PLATFORM HOLLY
SPILL PREVENTION CONTROL
AND COUNTERMEASURE PLAN**

September 2015 Distribution List

VENOCO, INC.

Platform Holly

Copy Number 1 of 7

VENOCO, INC.

7979 Hollister Ave.

Goleta, CA 93117

Copy Number 2 of 7

VENOCO, INC.

6267 Carpinteria Ave., Suite 100

Carpinteria, CA 93013

Copy Number 3 of 7

**SANTA BARBARA COUNTY ENVIRONMENTAL HEALTH SERVICES /
HAZARDOUS MATERIALS UNIT**

225 Camino del Remedio

Santa Barbara, CA 93110

Copy Number 4 of 7

SANTA BARBARA COUNTY PETROLEUM DEPT.

624 West Foster Road, Suite C

Santa Maria, CA 93455

Copy Number 5 of 7

STATE LANDS COMMISSION

200 Oceangate, Suite 900

Long Beach, CA 90802

Copy Number 6 of 7

SCS TRACER ENVIRONMENTAL

2601 Skyway Drive, Suite A1

Santa Maria, CA 93455

Copy Number 7 of 7

APPENDIX B

SPCC REVIEW REQUIREMENTS & CHECKLIST

SPCC PLAN REVIEW REQUIREMENTS AND CHECKLIST

The regulation requires that the SPCC plan be reviewed for possible revisions every five years from date of preparation or anytime there is a facility change (equipment, operations, maintenance, etc.) which materially affects the facility's potential for the discharge of oil into navigable waters of the United States or adjoining shorelines. The plan must be amended not later than six months after the five year review or the facility change occurred. (40 CFR Part 112) Additionally, the SPCC Plan must be modified if so requested by the Regional Administrator or other regulatory agency.

To maintain the SPCC Plan current, it is recommended that this checklist be reviewed at least annually.

NON-TECHNICAL AMENDMENTS

- Non-technical amendments are not certified by a Professional Engineer.
- Examples of changes include, but are not limited to, phone numbers, name changes, or any non-technical text change(s).

TECHNICAL AMENDMENTS

Technical amendments are certified by a Professional Engineer (§112.5(c)).

Examples of changes may require amendment of the Plan include, but are not limited to, commissioning or decommissioning containers; replacement, reconstruction, or movement of containers; reconstruction, replacements, or installation of piping systems; construction or demolition that might alter secondary containment structures; changes of product or service; or addition/deletion of standard operation or maintenance procedures related to discharge prevention measures. It is the responsibility of the facility to determine, and confirm with the regulatory authority as necessary, what constitutes a technical amendment. The preamble of the rule states that an amendment is required only "when there is a change that materially affects the facility's potential to discharge oil" (67 FR 47091).

An amendment made under this section will be prepared within six (6) months of the change and implemented as soon as possible but not later than six (6) months following preparation of the amendment.

Technical Amendments affecting various pages within the plan can be P.E. certified on those pages, certifying those amendments only, and will be documented on the log form below.

MANAGEMENT REVIEW

Management will review this SPCC Plan at least each five (5) years and document the review in the log below (§112.5(b)).

PLAN REVIEW CHECKLIST

	YES	NO ¹
Have all spill events been properly recorded and agencies notified?	_____	_____
Have there been any oil spill deployment exercises held?	_____	_____
Is the oil spill equipment in working order?	_____	_____
Has the oil spill plan been modified?	_____	_____
Have the inspections required by this plan been made?	_____	_____
Has the appropriate documentation for the above records been filed?	_____	_____
Have the training requirements referenced in this plan been complied with?	_____	_____
Has the appropriate documentation for training been filed?	_____	_____
Have there been organizational changes and/or phone number changes?	_____	_____
Have there been any facility modifications or additions?	_____	_____

I HAVE REVIEWED THE ABOVE QUESTIONS AND HAVE ANSWERED THEM TO THE BEST OF MY KNOWLEDGE.

Date

Signed

Title

¹ The SPCC Plan may need to be re-certified. Check the requirements of 40 CFR Part 112.

RECORD OF SPCC PLAN REVISIONS

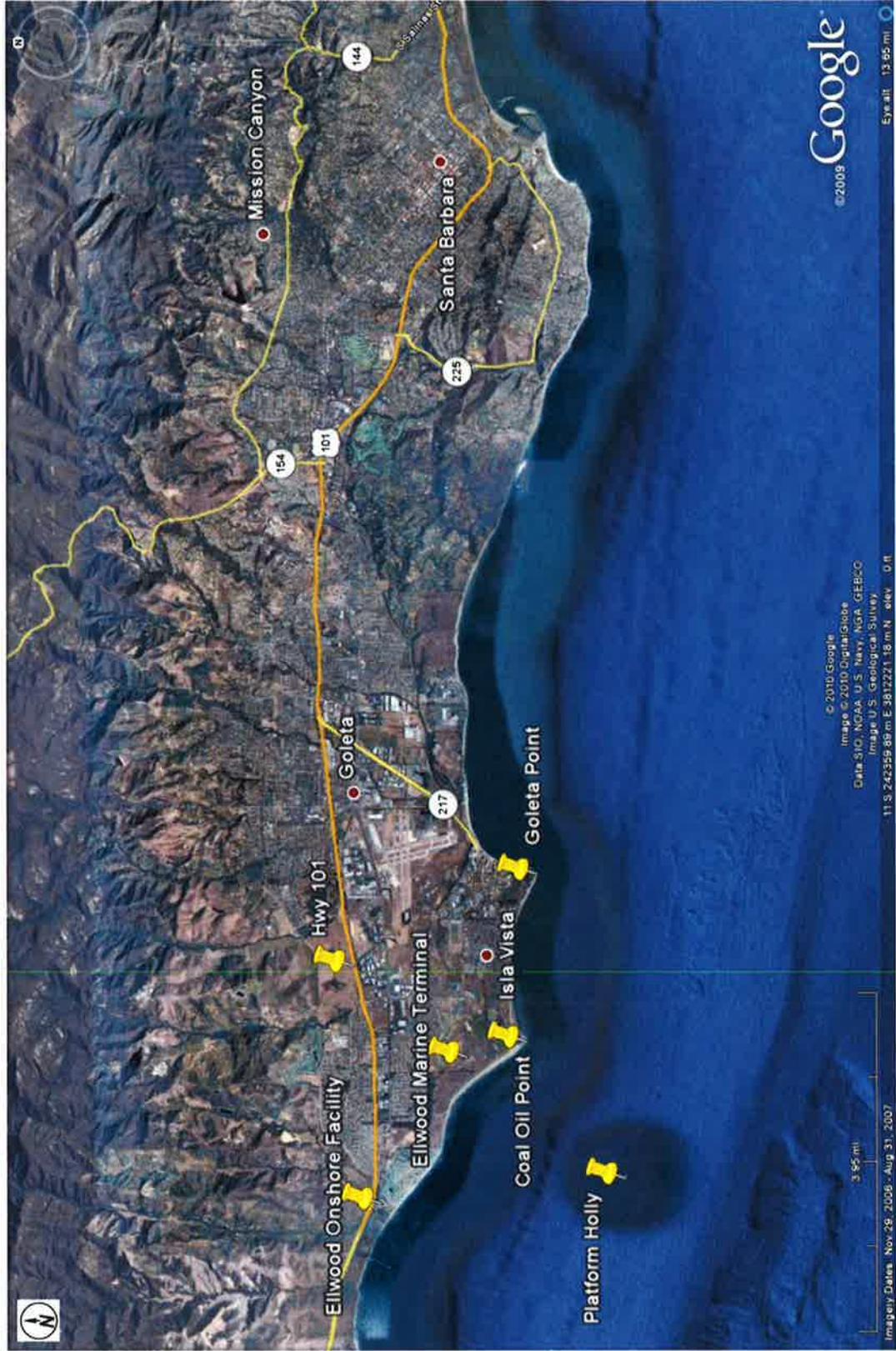
**THIS IS A NEW PLAN AS OF SEPTEMBER, 2010.
FUTURE REVISIONS WILL BE LISTED BELOW.**

REVISION	PAGE/DESCRIPTION	DATE OF REVISION	PREVIOUS REVISION
Rev. #1	<p>Pg. 11 – Identified T1 & T4 as secondary containment in the facility description.</p> <p>Pg. 12 – Added V-147 to bulk storage inventory. Marked T-101 as Out-of-service (OOS)</p> <p>Pg. 16 – Updated Contact Information</p> <p>Pg. 20 – Added secondary containment calculation for V-147</p> <p>Figure 5- Replaced T-5 oil sump tank with V-147 lube oil drain tank</p> <p>Appendix H – Added V-147 and removed T-101 (OOS) to substantial harm calculation</p>	9/11/2015	

APPENDIX C

MAPS AND SITE PLANS

FIGURE 1 Facility Location – Regional (Aerial View)



Scale (Miles) 0 — 3.95

FIGURE 2 Facility Location – Regional (Schematic)

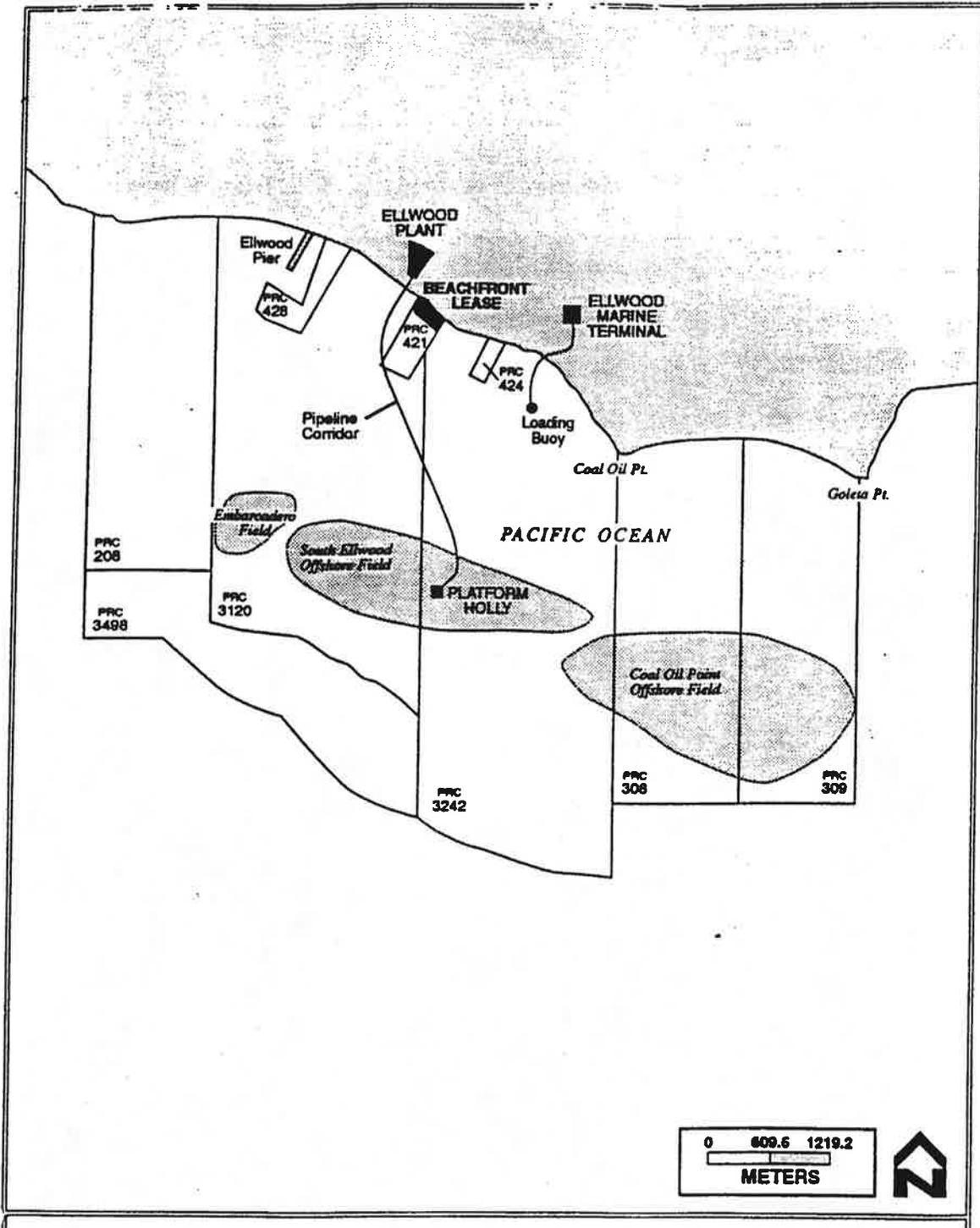
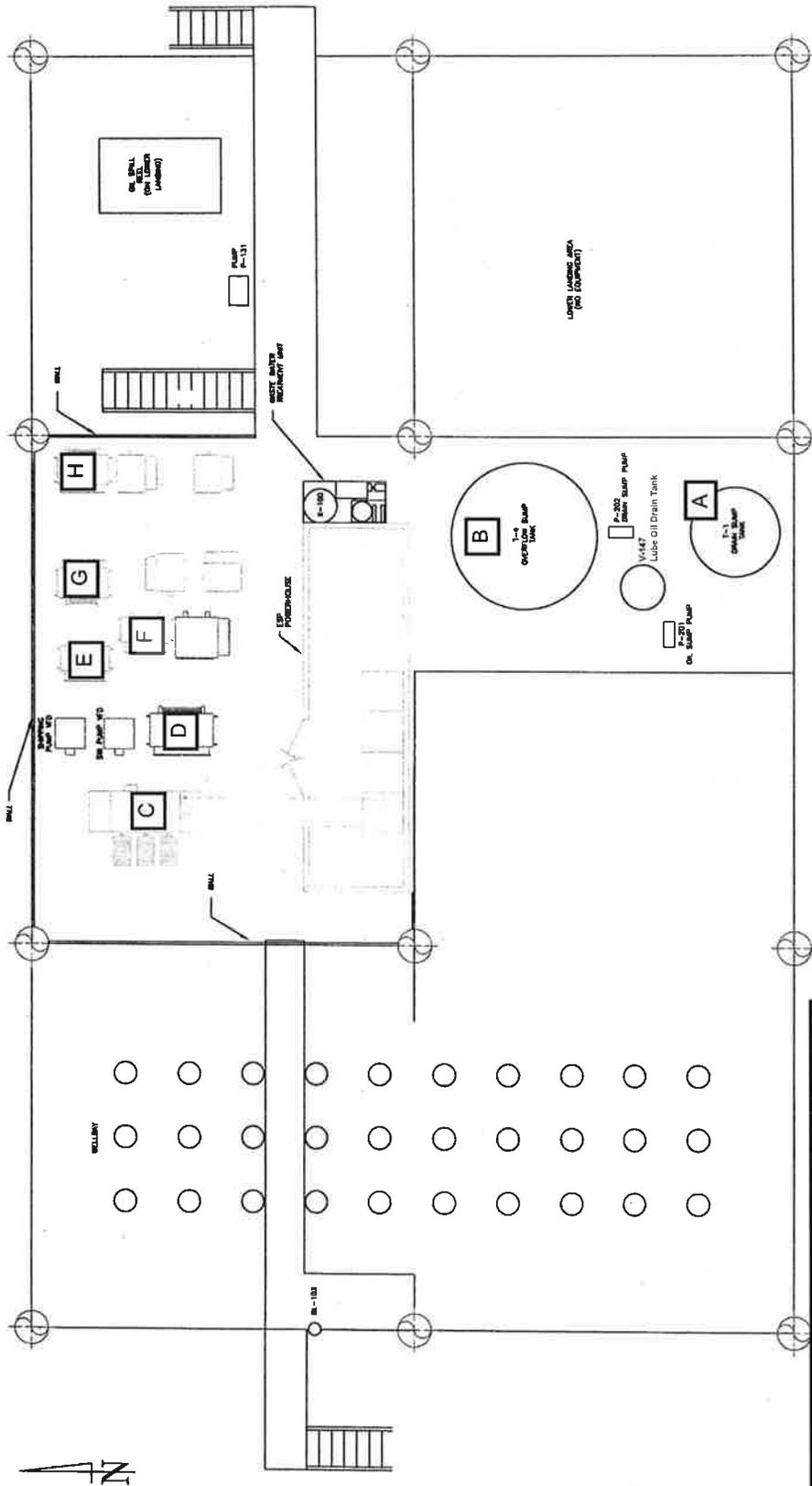


FIGURE 3 Facility Location – Local (Aerial View)



Scale (Feet) 0 ————— 149

FIGURE 5 Facility Layout - Loading/Landing Deck



- A = T-1 Drain Sump Tank (55 bbl - secondary containment)
- B = T-4 Overflow Sump Tank (150 bbl - secondary containment)
- C = Hy-Tran3 Transformer (11 bbl - FR3 fluid)
- D = Well #3242-18 VSD-3 Transformer (7.5 bbl - mineral oil)
- E = Well #3242-9 VSD-4 Transformer (3.2 bbl - mineral oil)
- F = Well #3120-12 VSD-5 Transformer (3.1 bbl - mineral oil)
- G = Well #3120-16 VSD-6 Transformer (3.2 bbl - mineral oil)
- H = VSD-7 Transformer (3.2 bbl - mineral oil)

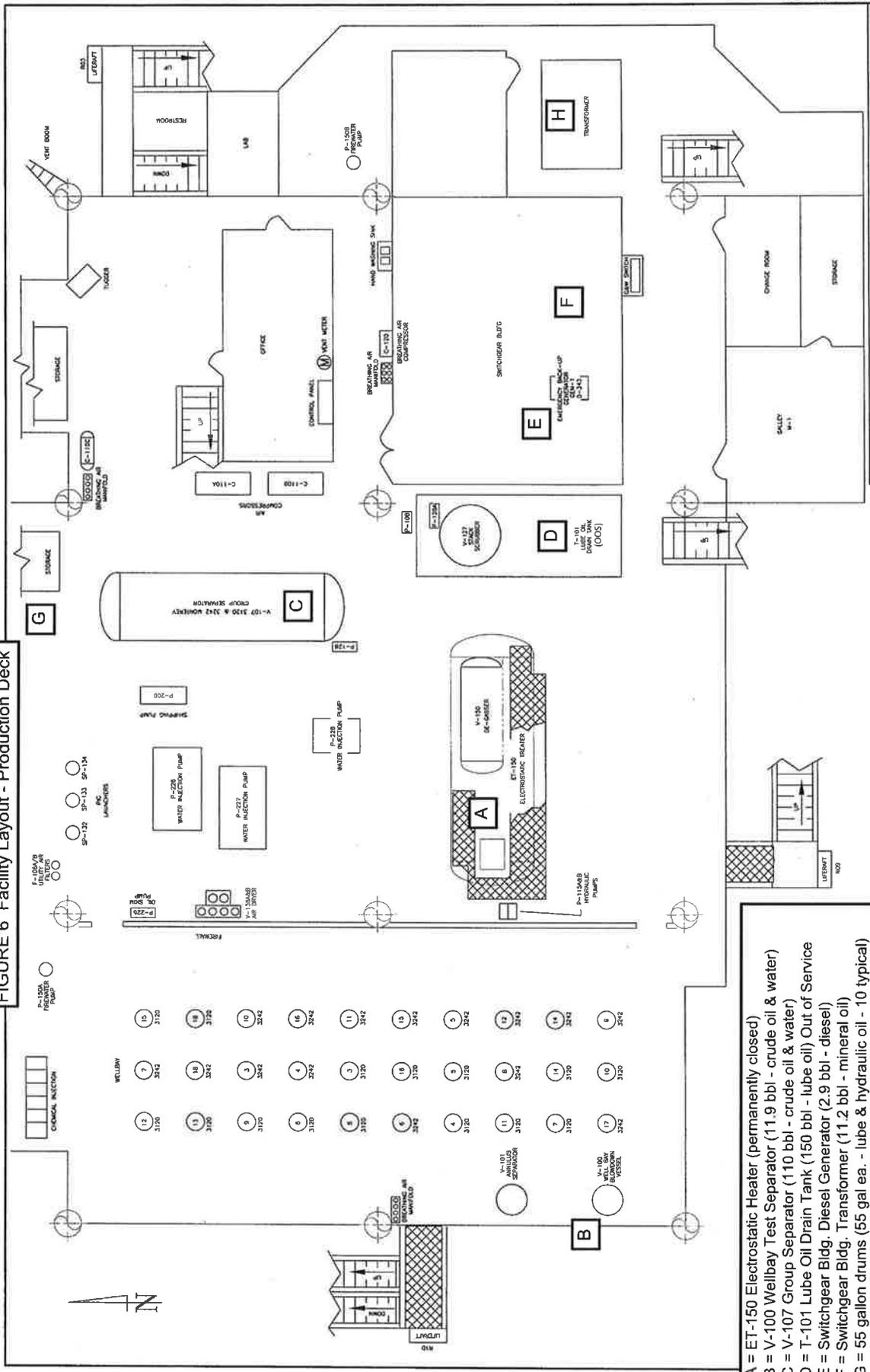
REVISIONS		DATE		BY		DESCRIPTION	
1	11/11/06	8	2/17/06	8	2/17/06	8	2/17/06
2	11/11/06	5	1/17/06	5	1/17/06	5	1/17/06
3	11/11/06	4	1/17/06	4	1/17/06	4	1/17/06
4	11/11/06	3	1/17/06	3	1/17/06	3	1/17/06
5	11/11/06	2	1/17/06	2	1/17/06	2	1/17/06
6	11/11/06	1	1/17/06	1	1/17/06	1	1/17/06

INIT.	DATE	ENGINEER	DATE	DATE	DATE

ENGINEERING RECORD	DATE	BY	DATE	DATE
DESIGNED				
DRAWN				
CHECKED				
APPROVED				
PROJECT ENGR.				
DATE				

VENOCO INC.	COMPANY	3-22-91	3-22-91
PLATFORM HOLLY OFFSHORE, SANTA BARBARA, CA.	PROJECT	1-96	1-96
	SCALE	1/4"=1'-0"	1/4"=1'-0"
	DWG. NO.	F-11231-21	6

FIGURE 6 Facility Layout - Production Deck



- A = ET-150 Electrostatic Heater (permanently closed)
- B = V-100 Wellbay Test Separator (11.9 bbl - crude oil & water)
- C = V-107 Group Separator (110 bbl - crude oil & water)
- D = T-101 Lube Oil Drain Tank (150 bbl - lube oil) Out of Service
- E = Switchgear Bldg. Diesel Generator (2.9 bbl - diesel)
- F = Switchgear Bldg. Transformer (11.2 bbl - mineral oil)
- G = 55 gallon drums (55 gal ea. - lube & hydraulic oil - 10 typical)
- H = Eastside Transformer (19 bbl - mineral oil)

COMMON		PLOT PLAN		ENGINEERING RECORD	
NO.	DESCRIPTION	DATE	BY	DATE	BY
1	DESIGNED	3-22-91	MGM		
2	DRAWN				
3	CHECKED				
4	APPROVED				
5	PROJECT				
6	OPERATIONS				
7	REVISIONS				
8	REVISIONS				
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100	REVISIONS				

APPENDIX D

SPECIAL INSTRUCTIONS

SPECIAL INSTRUCTION 1

FACTORS TO CONSIDER IN DETERMINING WHETHER THERE IS A THREAT OF FIRE OF EXPLOSION

In the initial evaluation of an oil spill incident, the Senior Operations Supervisor or operator in charge would assess the threat of fire and explosion.

Because hydrocarbons are combustible, there always is the threat that a fire or explosion may occur during control and/or response operations. Volatile components in the spilled oil will evaporate giving rise to a hydrocarbon/air mixture. Because these hydrocarbon vapors are denser than air, they will accumulate, particularly in confined or poorly ventilated areas. The risk of fire and explosion is greatest just after the release when the evaporation rate is at a maximum, and will normally diminish rapidly with time.

Ignition may be caused not only by the more obvious sources, such as a fire, but also by an electrical system, the hot exhaust of an internal combustion engine, by sparks from electrical equipment, mechanical or friction sources, hot flying particles from burning embers, welding and cutting equipment, and the discharge of static electricity. Great care must be taken to eliminate all possible sources of ignition.

Although heavier petroleum products become more and more difficult to ignite with time, especially when the layers are thin, oil impregnated floating debris may act as a wick increasing the ignitability of heavy products. Care must be taken, therefore, to ensure that the spilled oil is not ignited in the liquid phase by burning debris.

Equipment used in an ignitable atmosphere must be explosion proof. If explosion proof equipment is not available, work should be allowed to proceed only when tests with a combustible gas indicator (e.g., explosimeter) show that the area is safe. Once again, the danger is highest in confined and poorly ventilated areas.

Accumulations of hydrocarbon vapors can have an adverse effect on personnel at quite low concentrations. Vapors can dull the sense of smell and symptoms of diminished responsibility and dizziness similar to drunkenness can occur along with headaches and irritation of the eyes. Vapor concentrations around the lower explosion limit (LEL) can quickly cause suffocation, paralysis, and death. For this reason, personnel should not be allowed to work for any period of time without breathing apparatus when concentrations exceed about 2 percent of the LEL or about 250 ppm. If entry to areas of high vapor concentrations is necessary, breathing apparatus must be worn. Venoco work permit air testing guidelines shall be strictly enforced.

SPECIAL INSTRUCTION 2

INFORMATION ON THE PHYSIOLOGICAL EFFECTS OF H₂S GAS

A. SPECIAL PROPERTIES

Hydrogen sulfide gas is **heavier** than air, so it will sink in the atmosphere. Once released to the atmosphere, it is likely to accumulate and hang in confined and/or poorly ventilated areas.

Changes in atmospheric pressure, wind, and other ventilation factors can suddenly turn an otherwise harmless level of gas into a deadly concentration. This is particularly true around poorly ventilated areas. For this reason, standard fire safety precautions, which call for personnel to kneel or lie close to the floor to avoid smoke inhalation, should **not** be followed in the presence of hydrogen sulfide. Instead, **personnel will find the air safer away from the floor.**

Hydrogen sulfide gas also is **colorless**. The gas has a distinctive odor (i.e., like rotten eggs) when it is present in low concentrations. However, at higher concentrations, the gas will deaden olfactory senses, masking the disagreeable odor, and increasing the danger to personnel. Even in lower concentrations, exposure over a short period of time may so accustom personnel to the odor that they will not notice it. It can also be effectively masked at times by the general odor of crude oil. At higher concentrations, the presence of the gas may also be detected by the unpleasant physical symptoms it produces (See Part B of this SPECIAL INSTRUCTION).

Hydrogen sulfide also is reactive, and can react with the iron in a storage container to form ferrous sulfide, which is pyrophoric and may spontaneously ignite when exposed to air.

Finally, hydrogen sulfide gas is **flammable**. In concentrations exceeding 43,000 ppm it is capable of exploding when mixed in a two-to-three or greater ratio with oxygen and ignited. To guard against an explosion, Venoco's Hot Work Policy shall be strictly enforced.

B. PHYSIOLOGICAL EFFECTS

Hydrogen sulfide gas may be **deadly**.

In low concentrations (i.e., less than 500 ppm), hydrogen sulfide gas produces coughing and burning sensations in the eyes, throat, and other mucous membranes. Other symptoms may include headache, dizziness, nausea, blurred vision, and inflamed eyes.

Exposure to moderately high concentrations (i.e., between 500-1,000 ppm) of this gas may cause unconsciousness, but should not cause paralysis of the lungs or respiratory system. In these cases, it is essential that the victim be moved to a fresh air area. Normal breathing should resume without artificial respiration.

In heavy concentrations (i.e., greater than 1,000 ppm), hydrogen sulfide gas can **kill** a person by paralyzing the nerve endings around the lungs so that the body cannot inhale or exhale. Death occurs from asphyxiation unless the victim receives artificial respiration before heart action has ceased.

Figure 1 is a chart outlining the physical symptoms likely to occur in an individual exposed to various concentrations of hydrogen sulfide gas.

FIGURE 1		INFORMATION ON THE PHYSIOLOGICAL EFFECTS OF H₂S GAS		
CONCENTRATION		EXPOSURE TIME		
P.P.M.	0 TO 2 MINUTES	15 TO 30 MINUTES	30 MINUTES TO 1 HR.	
1-15	Detectable by "rotten egg" smell.	Detectable.	Detectable. Maximum allowable concentration for 8-hour exposure without protective mask.	
50-150	Coughing. Slight irritation of eyes. Loss of sense of smell.	Disturbed respiration. Pain in the eyes. Sleepiness.	Throat and eye irritation.	
150-250	Loss of sense of smell.	Throat and eye irritation.	Throat and eye irritation.	
250-350	Irritation of eyes. Loss of sense of smell.	Irritation of eyes and respiratory tract.	Painful secretion of tears, weariness. May cause death in longer exposure.	
350-450	Irritation of eyes. Loss of sense of smell.	Difficult respiration. Irritation of eyes.	Increased irritation of eyes and nasal tract. Dull headache. Serious respiratory disturbance. May cause death.	
450-900	Coughing. Unconsciousness. Serious respiratory disturbance.	Respiratory disturbance. Eye irritation. Unconsciousness.	Serious eye irritation. Slow pulse, rapid shallow breathing. Respiratory paralysis, convulsions, asphyxia and death.	
1000	Unconsciousness.	Death.	Death.	

At lower concentrations the gas is detectable by smell and most claim it to be a distinct rotten egg odor. At elevated concentrations (100-150 ppm) the sense of smell is quickly lost.

APPENDIX E

**SPILL NOTIFICATION AND REPORTING FORM –
CA ONSHORE**



SPILL REPORT AND INCIDENT NOTIFICATION FORM – CA ONSHORE

** Do not delay reporting pending additional information **

REPORTING PARTY

Reporter's Name:							
Position:							
Phone Numbers:		Day:			Evening:		
Company:							
Address:							
Were Materials Discharged?		Y <input type="checkbox"/>	N <input type="checkbox"/>	Confidential?		Y <input type="checkbox"/>	N <input type="checkbox"/>
Calling for Responsible Party?		Y <input type="checkbox"/>	N <input type="checkbox"/>				

RESPONSIBLE PARTY

Company:	Venoco, Inc.
Contact:	Ed O'Donnell
Address:	6267 Carpinteria Ave
	Carpinteria, CA 93013
Phone:	(805) 745-2100

RELEASE DESCRIPTION

Source of Release:			
Date of Release:		Time of Release:	
Incident Location (address, Lat/Long, GPS):			
Nearest City:		Distance to City:	

MATERIAL

Type of Material:				
Est. Discharge Quantity:		Bbl, Gal, or Lbs:		
Discharged to Water?	Y <input type="checkbox"/>	N <input type="checkbox"/>	Quantity:	Bbl, Gal, or Lbs:
If oil, Description of Slick:				
Est. Size of Slick:				
Direction of Movement:				

RESPONSE ACTION

Actions taken to isolate, contain and control release:			

IMPACTS

Number of Injuries:		Number of Deaths:			
Were there any evacuations?		Y <input type="checkbox"/>	N <input type="checkbox"/>	Number evacuated:	
Was there any damage?		Y <input type="checkbox"/>	N <input type="checkbox"/>		
Medium Affected:	Water	Land	Air		
Description of Medium Affected:					

WEATHER AND WATER CONDITIONS

Temperature:	Air	°	Water	°
Wind:	mph from the			
Current:	knots to the		Wave Height:	



NOTIFICATIONS:			
AGENCIES:			
<input type="checkbox"/>	911		
<input type="checkbox"/>	National Response Center	Report #:	Time Reported:
<input type="checkbox"/>	United States Coast Guard	Report #:	Time Reported:
<input type="checkbox"/>	CA Office of Emergency Services		
<input type="checkbox"/>	CA DOGGR		Time Reported:
<input type="checkbox"/>			Time Reported:
<input type="checkbox"/>			Time Reported:
<input type="checkbox"/>			Time Reported:
INTERNAL:			

APPENDIX F

INSPECTION CHECKLIST

FACILITY INSPECTION CHECKLIST—Platform Holly

Instructions: This inspection record will be completed every six months. Place an X in the appropriate box for each item. If any response requires elaboration, do so in the Descriptions and Comments space provided. Further descriptions or comments should be attached on a separate sheet of paper if necessary.

	<u>Yes</u>	<u>No</u>	<u>DESCRIPTIONS AND COMMENTS</u>
Tank surfaces show signs of leakage			
Tanks are damaged, rusted, or deteriorated			
Bolts, rivets, or seams are damaged			
Tank supports are deteriorated or bulked			
Tank foundations have eroded or settled			
Level gauges or alarms are inoperative			
Vents are obstructed			
Valve seals or gaskets are leaking			
Pipelines or supports are damaged or deteriorated			
Buried pipelines are exposed			
Loading/unloading area is damaged or deteriorated			
Connections are not capped or blank-flanged			
Secondary containment is damaged or stained			
Dike drainage valves are open			
Oil/water separator is functioning properly			
Oil/water separator effluent has a sheen			
Fencing, gates, or lighting is non-functional			
Secondary containment devices are intact and functional			

Remarks:

Signature: _____

Date: _____

Title: _____

APPENDIX G

GOVERNMENT AGENCY CONTACTS

GOVERNMENT AGENCY CONTACTS

The list of government agency contact people follows:

FEDERAL AGENCIES

NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION (NOAA)

Jordan Stout, NOAA Scientific Support Coordinator
Coast Guard Island, Bldg. 50-7
Alameda, CA 94501
(510) 437-5344 (office) / (206) 321-3320 (cell)
(206) 526-4911 (Duty Officer if SCC cannot be reached or for 24/7 emergency support)

National Weather Service (Recorded Data – Los Angeles, Ventura, Santa Barbara areas)
(805) 988-6610

NATIONAL RESPONSE CENTER

c/o United States Coast Guard (CG-3RPF-2) – Room 2111-B
2100 2nd Street, SW
Washington, DC 20593-0001
(800) 424-8802

U.S. ARMY CORPS OF ENGINEERS

Emergency Management Branch
P. O. Box 532711
Los Angeles, CA 90053-2325
(213) 452-3440 (Emergency Operations Center – EOC)
(213) 452-3441 (Emergency Response)

U.S. ENVIRONMENTAL PROTECTION AGENCY

75 Hawthorne Street
San Francisco, CA 94105
(415) 947-8000 (general)
(800) 300-2193 (24-hour environmental emergencies)

U.S. FISH AND WILDLIFE

Pacific Southwest Region - Ecological Services
Ventura Fish and Wildlife Office
2493 Portola Road, Suite B
Ventura, CA 93003
(805) 644-1766

STATE & LOCAL AGENCIES

CALIFORNIA EMERGENCY MANAGEMENT AGENCY (FORMERLY CA OES)

3650 Schriever Avenue
Mather, CA 95655
(800) 852-7550 (emergency)
(916) 845-8510 (main number)

DEPARTMENT OF FISH AND GAME

Office of Spill Prevention and Response (OSPR)
1700 K Street, Suite 250
Sacramento, CA 95811
(916) 445-9338
(916) 445-0045 (24 hour dispatch)
(858) 467-4201 (South Coast Regional Office)

DIVISION OF OIL, GAS, and GEOTHERMAL RESOURCES

District No. 3
5075 S. Bradley Road, Suite 221
Santa Maria, CA 93455
(805) 937-7246

REGIONAL WATER QUALITY CONTROL BOARD

Central Coast Region
895 Aerovista Place, Suite 101
San Luis Obispo, CA 93401
(805) 549-3147

SANTA BARBARA COUNTY AIR POLLUTION CONTROL DISTRICT

260 N. San Antonio Road, Suite A
Santa Barbara, CA 93110-1315
(805) 961-8800

**SANTA BARBARA COUNTY ENVIRONMENTAL HEALTH SERVICES /
HAZARDOUS MATERIALS UNIT**

225 Camino del Remedio,
Santa Barbara, CA 93110
(805)-681-4900

STATE AGENCIES (cont.)

SANTA BARBARA COUNTY OFFICE OF EMERGENCY SERVICES

105 East Anapamu Street, Suite 3
Santa Barbara, CA 93101
(805) 560-1081

SANTA BARBARA COUNTY PETROLEUM DEPARTMENT

624 West Foster Road Suite C
Santa Maria, CA 93455
(805) 934-6128

STATE LANDS COMMISSION

200 Oceangate, Suite 900
Long Beach, CA 90802
(562) 590-5201

APPENDIX H

SUBSTANTIAL HARM CRITERIA CALCULATION

SUBSTANTIAL HARM CRITERIA CALCULATION

Platform Holly

Site	Tank Description	Tank Volume bbl	Tank Volume Gallons
Loading/Landing Deck	Hy-Tran3 Transformer	11.0	460.0
	Well #3242-18 VSD-3 Transformer	7.5	314.0
	Well #3242-9 VSD-4 Transformer	3.2	135.0
	Well #3120-12 VSD-5 Transformer	3.1	132.0
	Well #3120-16 VSD-6 Transformer	3.2	135.0
	V-147 Lube Oil Drain Tank	3.6	151.0
	VSD-7 Transformer	3.2	135.0
	Subtotal	34.8	1462.0
Production Deck	V-100 Wellbay Test Separator	11.9	500.0
	V-106 Test Trap	30.0	1260.0
	V-107 Group Separator	110.0	4620.0
	V-108 Group Separator	110.0	4620.0
	V-109 Water Surge Tank	100.0	4200.0
	V-110 Oil Surge Tank	100.0	4200.0
	Switchgear Bldg. Diesel Generator	2.9	120.0
	Switchgear Bldg. Transformer	11.2	470.0
	55 Gallon Drums (10 typical)	13.1	550.0
	Eastside Transformer	19.0	797.0
	Subtotal	508.0	21337.0
Drilling Deck	55 Gallon Drums (15 typical)	19.6	825.0
	Portable Diesel Totes (2 typical)	80.0	3360.0
	Portable Lube Oil Totes (1 typical)	11.9	500.0
	T-111 Diesel Fuel Tank	35.7	1500.0
	Crane (diesel)	3.3	140.0
	Crane (hydraulic oil)	6.0	250.0
	Hydraulic Unit X-318	3.6	150.0
	TR-DR-1 Transformer	15.5	650.0
	Subtotal	175.6	7375.0
Total	718.4	30174.0	