

The following is a sample SPCC Plan for a small marina in the Midwest which stores petroleum products. This fictional sample is intended to serve as an example for facilities that are required to prepare an SPCC Plan. Individual facilities are different so each SPCC Plan will be different, and the level of detail in each Plan will be based on the design and size of the facility. A site diagram or diagrams which illustrate the design and organization of a facility [e.g., drainage patterns, location(s) of spill equipment, etc.] should be included. The statements in this document are intended solely as guidance. This document is not intended and cannot be relied upon to create rights, substantive or procedural, enforceable by any party in litigation with the United States.

a:\SamplePlan draft no. 9 01-18-02

SAMPLE DOCUMENT

SPILL PREVENTION, CONTROL AND COUNTERMEASURES (SPCC) PLAN

BENSO'S MARINA 100 NEVERSPILL ROAD PURE WATER, WI 12345

Date of Facility's First Plan: June 14, 1996

Date of Last Plan Amendment / P.E. Certification: March 23, 1997

Date of Last Plan Review: March 01, 2000

Designated staff person responsible for spill prevention: Abby MacKenzie

EMERGENCY TELEPHONE NUMBERS:

Notification Contacts:

1. Facility manager, Abby Mackenzie (123) 222-3333
2. National Response Center (800) 424-8802
3. State of Wisconsin Emergency Response Commission (123) 555-XXXX

Clean-up Contractors:

1. E-Z Clean Environmental (123) 222-3038
2. O.K. Engineering Co. (123) 222-2207

Supplies and Equipment

1. Oil City Equipment Co. (123) 222-8372
2. Northwestern Sorbent Co. (123) 222-9217

TABLE OF CONTENTS

P. E. Certification and Management Approval	PAGE	3
Plan Amendments		4
Tri-Annual Plan Review Summary		5
Introduction		6
Facility Information		7
Past Spill Experience / History		8
Potential Equipment Failures		8
Containment and Diversionary Structures		9
Demonstration of Practicability		9
Facility Drainage		9
Bulk Storage Tanks		9
Transfer Operations		10
Tank Car Loading / Unloading Racks		10
Inspections / Records		11
Security		11
Training		11
ATTACHMENTS:		
A. Substantial Harm Criteria Determination Checklist		13
B. Plot Plan Sketch		14
C. Drainage Event Records		15
D. Inspection Checklist		16
E. Training Records		18

PROFESSIONAL ENGINEER CERTIFICATION

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.

Engineer: Eric Simmons Registration Number: 454647 State: Commonwealth of Virginia

Signature: *Eric Simmons* Date of Plan Certification: June 14, 1996

**SPILL PREVENTION, CONTROL AND COUNTERMEASURE PLAN
MANAGEMENT APPROVAL**

I hereby certify that the necessary resources to implement this Plan have been committed.

Abby MacKenzie

Abby MacKenzie, Facility Manager

6-12-96

Date

CERTIFICATION OF THE APPLICABILITY OF THE SUBSTANTIAL HARM CRITERIA CHECKLIST

Please see Attachment A.

***SPCC Plan Amendment No. 1
Benzo's Marina***

Amendment No. 1: High level liquid alarms have been added to AST's 1 & 2. Inspections to assure their proper operation will be conducted in accordance with the Weekly Facility Inspection Checklist, Attachment D (modified) to this Plan.

PROFESSIONAL ENGINEER CERTIFICATION

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 Amendment has been prepared in accordance with good engineering practices. Furthermore one high liquid level alarm (model no. UI72-AZ1) has been installed on Tanks 1 and 2 according to manufacturer's and UL specifications.

Engineer: Eric Simmons Registration Number: 454647 State: Commonwealth of Virginia

Signature: *Eric Simmons* Date of Amendment No. 1 Certification: March 23, 1997

**SPILL PREVENTION, CONTROL AND COUNTERMEASURE PLAN
MANAGEMENT APPROVAL**

This SPCC plan Amendment is fully approved by the management of Benzo's Marina and has been implemented as described herein.

Abby MacKenzie

Abby MacKenzie, Facility Manager

3-23-97

Date

**SPILL PREVENTION, CONTROL AND COUNTERMEASURE PLAN
COMPLIANCE REVIEW PAGE**

In accordance with 40 CFR 112.5(b), a review and evaluation of this SPCC Plan is conducted at least once every three years. These reviews and evaluations are recorded below:

<u>Reviewer (signature)</u>	<u>Reviewer (print)</u>	<u>Date</u>	<u>Comments</u>	<u>Is P.E. re-certification required ?</u> Yes or No
1. <i>Abby MacKenzie</i>	Abby MacKenzie	3-21-93		no
1. <i>Abby MacKenzie</i>	Abby MacKenzie	2-11-96		no
1. <i>Abby MacKenzie</i>	Abby MacKenzie	3-23-97		yes
1. <i>Abby MacKenzie</i>	Abby MacKenzie	3-01-00		no
5.				
6.				
7.				
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10.				
11.				
12.				
13.				
14.				

INTRODUCTION

Spill Prevention, Control, and Countermeasure (SPCC) plans for facilities are prepared and implemented as required by the U.S. Environmental Protection Agency (U.S. EPA) Regulation contained in Title 40, Code of Federal Regulations, Part 112, (40 CFR 112). A non-transportation related facility is subject to SPCC regulations if: the capacity of any one aboveground storage tank (AST) exceeds 660 gallons; or the total aboveground storage capacity exceeds 1,320 gallons; or the underground storage (UST) capacity exceeds 42,000 gallons; and if, due to its location, the facility could reasonably be expected to discharge oil into or upon the navigable waters or adjoining shorelines of the United States.

An SPCC plan is not required to be filed with the US EPA, but a copy must be available for on-site review by the Regional Administrator (RA) during normal working hours. The SPCC plan must be submitted to the US EPA Region 5 RA and the state agency along with the other information specified in Section 112.4 if either of the following occurs:

1. The facility discharges more than 1,000 gallons of oil into or upon the navigable waters of the United States or adjoining shorelines in a single spill event; **or**
2. The facility discharges oil in quantities that may be harmful in two spill events within any twelve month period.

The following spill information must be reported within 60 days if either of the above thresholds is reached. This report is to contain the following information:

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 map.
7. A complete copy of the SPCC plan with any amendments.
8. The cause(s) of such spill(s), including a failure analysis of system or subsystem in which failure occurred.
9. The corrective actions and/or countermeasures taken, including 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 that is pertinent to the plan or spill event(s).

The SPCC plan must be amended within 6 months whenever there is a change in facility design, construction, operation, or maintenance that materially affects the facility's spill potential. The SPCC plan must be reviewed at least once every 3 years and amended to include more effective prevention and control technology, if such technology will significantly reduce the likelihood of a spill event and has been proven in the field. All such amendments must be re-certified by a registered professional engineer (PE).

Owners and operators failing or refusing to comply with this federal regulation are liable to a civil administrative penalty of up to \$11,000 per day (up to a maximum of \$127,500) or judicial civil penalties of up to \$27,500 per day.

If the owners and operators of a facility required to prepare an SPCC plan are not required to submit a Facility Response Plan, the SPCC plan should include a signed certification form, Attachment A (source is Appendix C to 40 CFR 112).

FACILITY INFORMATION

Name: Benso's Marina
Mailing Address: P.O. Box 311 K
Pure Water, WI 12345
Street Address: 100 Neverspill Road
Pure Water, WI 12345
(123) 222-2222
Owner: Ben Sophie
P.O. Box 0002
Green Bay, WI 12345

Facility Contact: Abby MacKenzie
(123) 222-2222

Location: Along Beaver River about 2 miles north of its confluence with the Chopank River at Holland Point. Road access is from WI state Road ZZ. The site is located on Talbot County AOC Map 22(H5). Latitude is 40 deg 00 min 00 sec North and longitude is 77 deg 00 min 00 sec West.

Facility Description: Benso's Marina has 600 wet slips and 200 dry slips. There is a pump-out station, a commercial fuel dock, a travel lift, a hydraulic trailer, and a fork lift. In addition, there is a ship's store, restrooms, laundry facilities, a pavilion, a picnic area, and offices.

Fixed and Mobile Storage:

- tank 1 (AST) 10,000 gallon gasoline
- tank 2 (AST) 10,000 gallon diesel
- tank 3 (AST) 500 gallon used oil
- tank 4 (UST) 3,000 gallon oil / water separator
- 3- drums (AST's) 55 gallon each (spent oil filter storage)
- 1- Spent oil filter crusher unit 10 gallon used oil
- 10- cases 60 gallon lube and motor oils

Total oil storage capacity: 23,735 gallons

See Attachment B- Plot Plan for the location of the storage tanks and general arrangements of the facility. Also provided on this plan sketch are storm water drain inlets and flow (slope) directions of rain water (and spilled oil paths).

PAST SPILL EXPERIENCE- 40 CFR 112.7 (a)

<u>Description of Spill</u>	<u>Corrective Actions Taken</u>	<u>Plan for Preventing Recurrence</u>
On 4-07-97, tank 2 was overfilled during refilling after visual level gauge failed. Approximately 300 gallons were spilled.	Diesel fuel spilled within secondary containment and was cleaned-up according to state requirements or levels using absorbents. Contaminated soil was removed and replaced with similar clay-bentonite material.	High level alarms were installed on all outside AST's. The level indicators and alarms are regularly tested (weekly) to ensure proper operation

POTENTIAL EQUIPMENT FAILURES- 40 CFR 112.7(b). (See Attachment B for tank arrangements and spill flow patterns)

<u>Potential Failure</u>	<u>Spill Direction</u>	<u>Volume Released</u>	<u>Spill Rate</u>
Complete failure of a full tank	East to Beaver River	10, 000 gallons	Instantaneous
Partial failure of a full tank	East or North to Beaver River or to oil / water separator	up to 10, 000 gallons	Gradual to Instantaneous
Tank overfill	East or North to Beaver River or to oil / water separator	up to 2, 000 gallons	Up to 50 gallons / minute
Pipe failure	East or North to Carol Creek or to oil / water separator	up to 10, 000 gallons	Up to 50 gallons / minute
Leaking pipe or valve packing	East or North to Beaver River or to oil / water separator	up to several gallons	Gradual
Tank truck leak or failure	To oil / water separator	up to 2, 000 gallons	Gradual to instantaneous
Hose leak during transfer	To oil / water separator	up to 50 gallons	Up to 50 gallons / minute
Pump rupture or failure	To oil / water separator	up to 50 gallons	Up to 50 gallons / minute
Oil / water separator	East to Beaver River	up to 10, 000 gallons	Up to 50 gallons / minute

CONTAINMENT AND DIVERSIONARY STRUCTURES- 40 CFR 112.7(c)(1)

- i. Dikes are provided around tanks 1 and 2 (10,000 gallons each) which store gasoline and diesel fuel, respectively. The floor and walls of their containment is a clay - bentonite mixture and been determined to be impervious. It was applied under the supervision of a soils engineer and done in conformance to his specifications. The containment capacity has 11,500 gallons to allow sufficient freeboard for precipitation (15% or 4" for the 25 year, 24 hour worst rainfall event). The used oil AST (tank 3) utilizes its double wall design as secondary containment. The 55 gallon drums are placed on spill pallets inside the maintenance shop where 55+ gallons of secondary containment is provided. Any spills in the building are directed away from all floor drains and doorways (via sloped floors) and the building's walls are impervious (via coated concrete with caulking) at the base where spills could accumulate.
- ii. The loading and unloading area for tank trucks is curbed to provide secondary containment. This curbed area provides a catchment basin of 2,230 gallons which is larger than the largest compartment of the petroleum suppliers' trucks which normally have 2,000 gallons capacity maximum. The low point of the curbing is fitted with a valve which is closed during any transfer operation. Normally, the rain water will flow through this valve (normally in the open position) to the collection area described in (iii) below.
- ii. Surface drainage is engineered so that oil spilled outside of diked or curbed areas will drain away from the docks and water and flow to a low point, collection area which drains into the oil / water separator (tank 4) in the parking lot. See Attachment B for the rain water flow directions. The oil / water separator's outlet valve may be readily closed in the event of a major spill. The maximum amount of spilled oil outside of diked or curbed areas would be roughly 10,000 gallons (from tank 1's secondary containment failure). The size of the oil / water separator is 30 % of this amount and the additional volume provided by the collection area (300 gallons) provides a total volume of 3,300 gallons.
- ii. Weirs, booms, and other barriers are stored in the shed next to the oil tanks 1 & 2. Two 300 foot sections of boom, 600 pounds off "oil dry", and seven boxes of 2 ft. X by 3 ft. absorbent pads are standard inventory for the facility. These inventories are checked monthly to replenish used materials.

DEMONSTRATION OF PRACTICABILITY- 40 CFR 112.7(d)

Benso's management has determined that use of the containment and diversionary structures and the use of readily available spill equipment to prevent discharged oil from reaching navigable water, is practical and effective at this facility.

FACILITY DRAINAGE- 40 CFR 112.7(e)(1)

- i. Drainage from the diked area for tanks 1 & 2 is restrained by a manually operated gate valve to prevent a spill from entering the facility's drainage system.
- ii. The gate (block) valve in (i) above is normally sealed closed except when draining the secondary containment structure.
- iii. Spills from AST's will be restrained by secondary containment. Spills during transfer operations will be restrained by the curbing in the catchment area. Spills outside of containment and catchment areas will flow by gravity into the oil water / separator where oil will be retained until it can be pumped out.

BULK STORAGE TANKS- 40 CFR 112.7(e)(2)

- i. All of the AST's are of Underwriter Laboratories, UL-142 construction and are compatible with the oil they contain and the temperature and pressure conditions of storage.

- ii Secondary containment volume for tank 1 and 2 is 11, 800 gallons (greater than 110 percent of the largest tank). Tank 3 is of double wall design and requires no further secondary containment.
- iii Portable and other mobile oil storage tanks, such as 55 gallon drums, are stored in the maintenance shop, where secondary containment is provided via spill pallets. These drums will not be subject to periodic flooding.
- iv In the diked area, drainage of rainwater is controlled via the following:
 - a. The bypass block valve is normally sealed.
 - b. Accumulated rainwater is inspected for the presence of an oil sheen before draining off uncontaminated (oil-free) water.
 - c. The bypass valve is opened and resealed under supervision.
 - d. Records are kept of drainage events on the form shown in Attachment C.
- v There are no partially buried storage tanks at the facility.
- vi Thickness testing is done on AST's on a bi-yearly basis using a system of non-destructive testing such as ultrasonic or x-ray. Comparison records are maintained for three years. Visual inspections are performed daily according to the procedure located on page 14 and include inspection of tank supports and foundations. The UST(oil/water separator) is tested in accordance with 40 CFR 280 requirements.
- vii There are no internal heating coils at this facility.
- viii Each AST (except for the drums) is equipped with a direct-reading level gauge. Venting capacity is suitable for the anticipated fill and withdrawal rates. The gauges are tested in accordance with Attachment D.
- ix The oil section of the oil / water separator is equipped with a high level alarm.
- x Plant effluent discharged into Beaver River is observed daily to detect possible upsets in the oil / water separator.
- xi Oil leaks which result in a loss of oil from tank seams, gaskets, rivets, and bolts are corrected within 8 hours of detection.

TRANSFER OPERATIONS, PUMPING, AND IN-PLANT PROCESSES- 40 CFR 112.7(e)(3)

- i Buried piping in this facility is used to connect the fueling docks with tanks 1 & 2 and is used to service tank 4 (oil / water separator). All buried piping is of double wall design.
- ii Pipelines not in service or on standby for an extended period (over 3 months) are capped or blank flanged and marked as to their origin.
- iii All pipe supports are designed to minimize abrasion and corrosion and to allow for expansion and contraction.
- iv All aboveground pipelines and valves are examined daily to assess their condition and written records are kept on a weekly basis. Pressure testing for piping is conducted as warranted.
- v Warning signs are posted at the entrance to the facility to prevent vehicles from damaging the aboveground pipelines.

TANK CAR AND TRUCK LOADING / UNLOADING RACKS- 40 CFR 112.7(e)(4)

- i The tank truck loading and unloading procedures meet the minimum requirements of the U.S. Department of Transportation.
- ii Curbing is installed as catchment (2,320 gallons volume) at the vehicle loading / unloading rack area and will hold the single largest compartment of any tank truck servicing the facility which is 2,000 gallons.
- iii Warning signs and wheel chock blocks are utilized at the loading / unloading racks to prevent premature vehicular departure.
- iv The lower-most drain and all outlets on tank trucks are inspected for leaks prior to departure.
- v All deliveries and transfers of oil products are supervised by at least one Benso staff member.
- vi Rail tank cars are not utilized in this facility.

INSPECTIONS AND RECORDS- 40 CFR 112.7(e)(8)

Daily visual inspections consist of a complete walk-through of the facility to check the following: piping, equipment and tanks for leakage, soils for staining and discoloring, excessive accumulation of rainwater in the dike, verification that the dike drain valve is sealed closed, and to confirm that the facility effluent (from water separator) is free from oil. The level in the oil section of the oil / water separator is visually checked on a monthly basis and after any oil spill which reaches the facility drainage system.

The checklist provided in Attachment D is used during weekly inspections. These items covered in the inspections are performed in accordance with written procedures such as API standards and with good engineering practices. This written weekly report (checklist) is prepared and is signed by the inspector and the original copies are maintained on file for three years.

SECURITY- 40 CFR 112.7(e)(9)

- i. The three outside AST's are surrounded by steel security fencing and the entrance gate is locked when the facility is unattended. Drums are located in the building which is locked when the facility is unattended.
- i. The master flow and drain valves are locked in the closed position when in non-operating or standby status.
- i. The electrical starter controls for the oil pumps are located in the office, which is locked when the pumps are not in use.
- i. The loading and unloading connections of oil pipelines are capped when not in service or when in standby service for an extended time.
- i. Two area lights are located in such a position so as to illuminate the office and storage areas. Consideration was given to discovering spills at night and preventing spills occurring through vandalism.

PERSONNEL TRAINING AND SPILL PREVENTION PROCEDURES- 40CFR 112.7 (e)(10)

- i Facility personnel have been instructed by management in the operation and maintenance of pollution prevention equipment and pollution control laws and regulations.
- ii The facility manager, Abby MacKenzie is accountable for oil spill prevention at this facility.
- iii Yearly spill prevention briefings are provided by management for operating personnel to ensure adequate understanding of the SPCC plan. These briefings highlight any past spill events or failures and recently

developed precautionary measures. Training includes oil spill prevention, containment, and retrieval methods. A simulation of an on-site vehicular spill has been conducted and future exercises shall be periodically held to prepare for possible spill responses. Records of these briefings and spill prevention training are kept on the form shown in Attachment E. New employees are trained in SPCC within 2 weeks of starting work.

Instructions and phone numbers regarding the reporting of a spill to the National Response Center and the state are listed on the cover page of this plan and have been posted in the office.

**Attachment A CERTIFICATION OF THE APPLICABILITY
OF THE SUBSTANTIAL HARM CRITERIA CHECKLIST**

FACILITY NAME: Benso's Marina FACILITY ADDRESS: 100 Neverspill Road
Pure Water, WI 12345

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 oil 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 formula in Attachment C-III, Appendix C, 40 CFR 112 or a comparable formula¹) such that a discharge from the facility could cause injury to fish and wildlife and sensitive environments? For further description of fish and wildlife and sensitive environments, see Appendices I, II, and III to DOC/NOAA's "Guidance for Facility and Vessel Response Environments" (Section 10, Appendix E, 40 CFR 112 for availability) and the applicable Area Contingency Plan.
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 (Attachment C-III, Appendix C, 40 CFR 112 or a comparable formula¹) such that a discharge from the facility would shut down a public drinking water intake²?
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.

Abby McKenzie
Name (please type or print)

Abby MacKenzie
Signature

Facility Manager
Title

06 / 14 / 96
Date

¹If a comparable formula is used, documentation of the reliability and analytical soundness of the comparable formula must be attached to this form.

²For the purposes of 40 CFR part 112, public drinking water intakes are analogous to public water systems as described at 40 CFR 143.2(c).(from 40 CFR 112 Appendix C, Attachment C-II)

SUBJECT BENZO'S MARINA
PLOT PLAN SKETCH

MADE BY RCM DATE 11-09-95

CHECKED BY _____ DATE _____

APPROVED BY _____ DATE _____

CONTRACT NO. _____

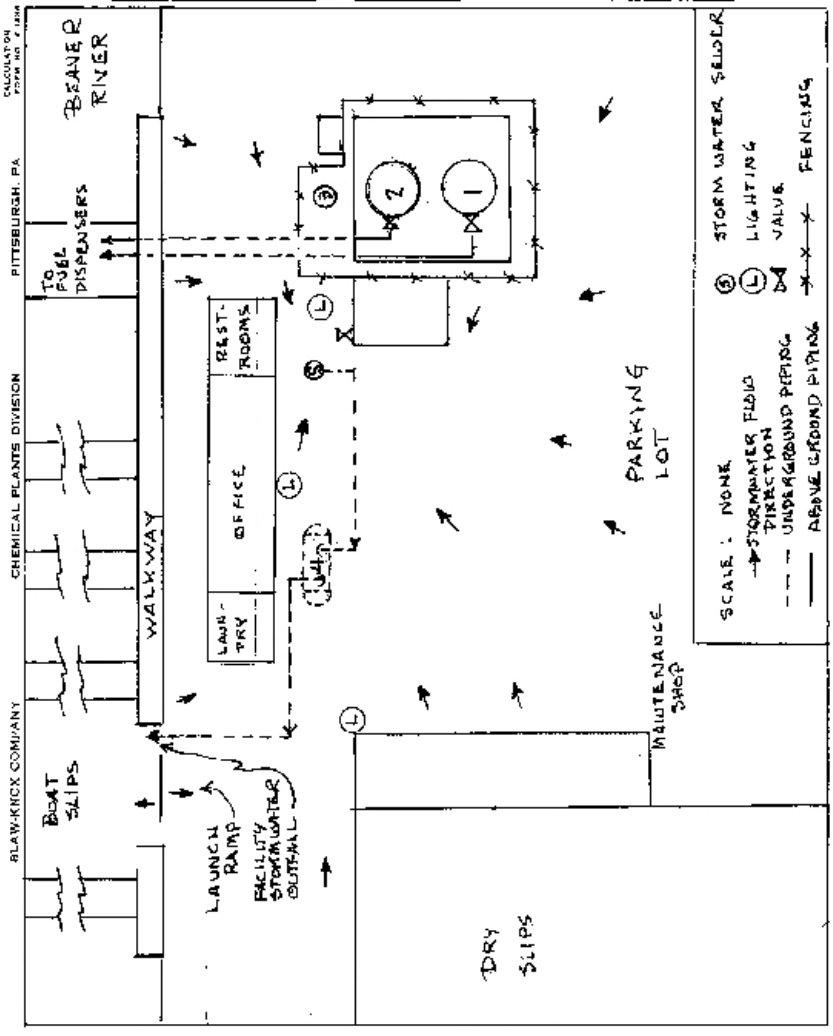
FLOW SHEET NO. _____

AREA NO. _____

ITEM NO. _____

DRAWING NO. _____

PAGE 1 OF 1



RECORD OF DIKE DRAINAGE EVENTS

DATE	OPERATOR	CONDITION OF WATER	VOLUME DRAINED

Attachment D **WEEKLY FACILITY INSPECTION CHECKLIST**

Date: _____ Time: _____ Inspector: _____	X = Satisfactory NA = Not Applicable 0 = Repair or Adjustment Required C = Comment under Remarks/Recommendation

DIKES	
	Any noticeable oil sheen on runoff
	Containment area drainage valves closed and locked
	Oil/water separator systems working properly
	Effluent from oil/water separator inspected
	No visible oil sheen in containment area
	No standing water in containment area
	Block valve in working order
	Oil/water separator oil compartment free of oil (monthly inspection)

AST's	
	Tank condition good (no rusting, corrosion, pitting)
	Bolts, rivets, or seams not damaged
	Tank foundation intact
	Level gauges and alarms working properly
	Vents not obstructed
	Valves, flanges, and gaskets free from leaks
	Containment walls intact

	Tank and ground surfaces checked for signs of leakage

PIPES	
	Buried pipelines not exposed
	Out-of-service pipes capped
	Signs/barriers to protect pipelines from vehicles in place
	No leaks at valves, flanges, or other fittings
	No signs of corrosion damage to pipelines or supports

TRUCK	LOADING / UNLOADING AREAS
	Warning signs posted
	No leaks in hoses
	Drip pans not overflowing
	Catch basins free of contamination
	Containment curbing or trenches intact
	Connections capped or blank-flanged
	No standing water in rack are

SECURITY	
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	Gates have locks
	ASTs locked when not in use
	Starter controls for pumps locked when not in use
	Lighting is working properly
	Fence and gates intact

TRAINING	
	Training records are in order (monthly check)
	Spill prevention briefing held (monthly check)

MISCELLANEOUS MONTHLY	
	oil / water separator oil level
	spill kits inventory replenishment

REMARKS / RECOMMENDATIONS:

