

EPA/USCG/DOT Complex Facility Response Plan

For the

**Petroleum Fuel & Terminal Company
Baltimore South Terminal
1622 South Clinton Street
Baltimore, MD**

Operated by

Petroleum Fuel & Terminal Company

Prepared to meet the requirements of

**40 CFR Part 112,
33 CFR Part 154, and
49 CFR Part 194**

**U.S. Environmental Protection Agency FRP ID Number
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BAL01239**

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APPENDIX B	CALCULATIONS/WORKSHEETS
APPENDIX C	ENVIRONMENTAL SENSITIVITY INDEX / NAVIGATION CHARTS
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APPENDIX E	ENDANGERED SPECIES LIST
APPENDIX F	INCIDENT COMMAND JOB DESCRIPTION
APPENDIX G	INCIDENT SPECIFIC CHECKLIST
APPENDIX H	COMMUNICATIONS PLAN
APPENDIX I	SITE-SPECIFIC SAFETY AND HEALTH PLAN
APPENDIX J	MATERIAL SAFETY DATA SHEETS (MSDS)
APPENDIX K	SELF-INSPECTION, DRILLS/EXERCISES, AND RESPONSE TRAINING FORMS

USCG CROSS-REFERENCE

This facility is a bulk storage tank facility that is considered a **complex**, possessing a combination of marine-transportation-related (MTR) and non-transportation-related components as well as an onshore pipeline that is subject to the jurisdiction of more than one Federal agency under Section 311(j) of the Clean Water Act. The facility's MTR component is regulated by the United States Coast Guard (USCG) at 33 CFR 154, Subpart F, its non-transportation-related component is regulated by the Environmental Protection Agency (EPA) at 40 CFR 112.20, and the onshore pipeline is regulated by the Department of Transportation (DOT) at 29 CFR 194, Subpart B.

This Facility Response Plan (FRP) is written according to the EPA format specified in 40 CFR 112, Appendix F. The following regulatory cross-reference identifies within this plan the applicable sections required by the USCG format specified in 33 CFR 154.1030.

USCG – EPA CROSS REFERENCE	
General Response Plan Contents, USCG Format 33 CFR 154.1030	Corresponding Section Within This Plan
a. Introduction and plan content	
1. Facility specific information	Page xi, 1.2.1, 2.1
2. Facility description	1.2.7
3. Facility contact information	Page xi, 1.2.4, 2.1
4. Table of contents	Page i
5. Cross reference	Page iii
6. Record of changes	Page xvii
b. Emergency Response Action Plan	
1. Notification procedures	1.1, 1.3
i. Emergency response contacts listing	1.1.2, 1.3.1
A. Listing including facility response personnel, spill management team, oil spill removal organizations, qualified individuals and designated alternatives.	1.1.6, 1.3.4
B. Listing including Federal, State, or local agencies, as required	1.1.2, 1.3.1
b. Spill Response Notification Form	1.1.3, 1.3.1
2. Facility's spill mitigation procedures	
i. Volumes and oil groups involved in discharges	1.5
A. Average most probable discharge from the MTR facility	1.5.1
B. Maximum most probable discharge from the MTR facility	1.5.2
C. Worst case discharge from the MTR facility	1.5.3, Appendix B
ii. Procedures for facility personnel to mitigate or prevent discharges from a variety of scenarios	1.5.4
A. Tank overfill	1.5.4
B. Tank failure	1.5.4
C. Piping rupture	1.5.4
D. Piping leak	1.5.4
E. Explosion or fire	1.5.4
G. Equipment failure	1.5.4
iii. Listing of equipment and the responsibilities of facility personnel to mitigate an average most probable discharge	1.1.4, 1.3.2, 1.5.1, 1.7.1
3. Facility's response activities	
i. Description of the facility personnel's responsibilities to initiate a response and supervise response resources pending the arrival of the qualified individual.	1.1.8, 1.7.1.2
ii. Description of the responsibilities and authority of the qualified	1.3.6

individual and alternate	
iii. Organizational structure that will be used to manage the response actions	1.8.2
A. Command and control	1.8.2
B. Public information	1.8.2
C. Safety	1.8.2
D. Liaison with government agencies	1.8.2
E. Spill Operations	1.8.2
F. Planning	1.8.2
G. Logistics support	1.8.2
H. Finance	1.8.2
iv. Oil spill removal organizations and the spill management team that will be capable of providing the following resources	1.3.4
A. Equipment and supplies to meet the requirements of §§154.1047	Appendix A
B. Trained personnel necessary to continue operation of the equipment and staff the oil spill removal organization and spill management team for the first 7 days of the response	Appendix A
v. Job descriptions for each spill management team member within the organizational structure	1.8.2
vi. Listing of the resource providers and specific resources necessary to provide the dispersant capabilities required in this subpart. Applies to facilities that handle, store, or transport group II through group IV petroleum oils, and that operate in waters where dispersant use is pre-authorized	NA
4. Fish and wildlife and sensitive environments	
i. Identify areas of economic importance and environmental sensitivity which are potentially impacted by a worst case discharge.	1.4.2
ii. Worst case discharge	
A. Listing of all fish and wildlife and sensitive environments which are potentially impacted by a discharge	1.4.2
B. Description of all the response actions that the facility anticipates taking to protect these fish and wildlife and sensitive environments.	1.5.3
C. Map or chart showing the location of those fish and wildlife and sensitive environments which are potentially impacted.	Figure 5, Appendix C
iii. For a worst case discharge, identify appropriate equipment and required personnel to protect fish and wildlife and sensitive environments which fall within the calculated distance	1.3.2, 1.5.3, 1.7.1, Appendix A
A. Identify the appropriate equipment and required personnel to protect all fish and wildlife and sensitive environments in the ACP for the distances that oils are likely to travel in the noted geographic area(s) and number of days	1.3.2, 1.5.3, 1.7.1, Appendix A
B. Calculation of spill planning distance	1.4.2
1. Distance from the facility reached in 48 hours at maximum current	NA
2. Substitute spill trajectory or model that is acceptable to the COTP.	NA
3. The procedures contained in the Environmental Protection's Agency's regulations on oil pollution prevention for non-transportation-related onshore facilities at 40 CFR part 112, appendix C, Attachment C-III	1.4.2
C. Based on historical information or a spill trajectory or model, the COTP may require the additional fish and wildlife and sensitive environments also be protected.	NA
5. Disposal plan	1.7.2
c. Training and Exercises	
1. Training procedures	1.8.3
2. Exercise procedures	1.8.2

d. Plan review and update procedures	Page xiv
e. Appendices	
1. Facility-specific information	
i. Physical description of the facility including a plan of the facility showing the mooring areas, transfer locations, control stations, locations of safety equipment, and the location and capacities of all piping and storage tanks	1.2.7, Figure 1
ii. Identification of sizes, types, and number of vessels that the facility can transfer oil to or from simultaneously	1.4.1
iii. Identification of the first valve(s) on facility piping separating the transportation-related portion of the facility from the non-transportation-related portion of the facility	Figure 1
iv. Information on the oil(s) and hazardous material handled, stored, or transported at the facility in bulk.	Appendix J
A. Generic or chemical name	Appendix J
B. Description of the appearance and odor	Appendix J
C. Physical and chemical characteristics	Appendix J
D. Hazards involved in handling the oil(s) and hazardous materials	Appendix J
E. Listing of firefighting procedures and extinguishing agents effective with fires involving the oil(s) and hazardous materials	Appendix J
v. Any other information which the facility owner or operator determines to be pertinent to an oil spill response	NA
2. List of contacts	
i. Primary and alternate qualified individual(s)	1.1.1, 1.2.5, 1.3.6
ii. Contact(s) identified for activation of the response resources	1.1.1, 1.1.2, 1.3.1, 1.3.6
iii. Appropriate Federal, State, and local officials	1.1.2, 1.3.1
3. Equipment lists and records	
i. Listing of equipment and facility personnel required to respond to an average most probable discharge	1.1.4, 1.3.2, 1.3.4, 1.5.1, 1.7.1
ii. Detailed listing of all the major equipment identified in the plan as belonging to an oil spill removal organization(s) that is available to respond to a maximum most probable or worst case discharge	Appendix A
iii. Note indicating whether oil spill removal organization(s) are classified by the Coast Guard and their capacity has been determined to equal or exceed the response capability needed by the facility. For those oil spill removal organization(s) that are not Coast Guard classified, provide a listing of response equipment	Appendix A
A. Type, make, model, and year of manufacture	NA
B. For oil recovery devices, effective daily recovery rate	NA
C. For containment boom, overall boom height and type of end connectors	NA
D. Spill scenario in which the equipment will be used for or which it is contracted	NA
E. Total daily capacity for storage and disposal of recovered oil	NA
F. For communication equipment, the type and amount of equipment intended for use during response activities	NA
G. Location of the equipment	NA
H. Date of the last inspection by the oil spill removal organization(s)	NA
4. Communications plan	Appendix H
5. Site-specific safety and health plan	Appendix I
6. List of acronyms and definitions	3.0
7. Geographic-specific appendix for each zone in which a mobile facility operates	NA

DOT CROSS-REFERENCE

This Facility Response Plan (FRP) is written according to the EPA format specified in 40 CFR 112, Appendix F. The following regulatory cross-reference identifies within this plan the applicable sections required by the DOT format specified in 49 CFR 194.

DOT – EPA CROSS REFERENCE	
Subpart B - Response Plans, DOT Format 49 <u>CFR</u> 194	Corresponding Section Within This Plan
194.101 Operators required to submit plans	
194.103 Significant and substantial harm: operator's statement	Page xii
194.105 Worst case discharge	1.5.3, Appendix B
194.107 General response plan requirements:	
(a) Response Resources and Procedures	1.1.4, 1.1.8, 1.3.2, 1.5.3, 1.5.4, 1.7.1, Appendix A
(b) Consistency with NCP and ACP(s)	1.2.7
(c) Each response plan must include:	
(1) Core Plan Contents	
(i) An information summary as required in 194.113	See below
(ii) Immediate notification procedures	1.3.1
(iii) Spill detection and mitigation procedures	1.6.1, 1.6.2, 1.7.1
(iv) The name, address, and telephone number of the oil spill response organization, if appropriate	1.3.4
(v) Response activities and response resources	1.1.4, 1.1.8, 1.3.2, 1.5.3, 1.5.4, 1.7.1, Appendix A
(vi) Names and telephone numbers of federal, state and local agencies with which the operator expects to have pollution control responsibilities or support	1.3.1
(vii) Training procedures	1.8.3
(viii) Equipment testing	1.8.2
(ix) Drill types, schedules, and procedures	1.8.2
(x) Plan review and update procedures	Page xi
(2) An appendix for each response zone	Refer to (c)(1)(i) – (ix) above
194.109 Submission of state response plans	NA
194.111 Response plan retention	Page x
194.113 Information summary (see 194.107(c)(1)(i))	
(a) Core plan information summary	
(1) Name and address of operator	Page xi, 1.2.4
(2) Description of each response zone	1.4
(b) Response zone appendix information summary	
(1) Core plan information summary	1.2.4, 1.4
(2) Name, and telephone of qualified individual available on 24-hour basis	1.1.1, 1.2.5, 1.3.6
(3) Description of response zone	1.4
(4) List of line section for each pipeline	1.4
(5) Significant and substantial harm determination	Page xii
(6) Type of oil and volume of WCD	1.5.3, Appendix B
194.115 Response resources	1.1.4, 1.1.8, 1.3.2, 1.7.1, Appendix A
194.117 Training	1.8.3
194.119 Submission and approval procedures	
194.121 Response plan review and update procedures	Page xiv

DOT – CROSS REFERENCE PER 49 CFR 194	
Appendix A to Part 194	Corresponding Section Within This Plan
Response Plan: Section 1. Information Summary	
(a) Core plan:	
(1) The name and address of the operator;	Page xi, 1.2.4
(2) For each response zone which contains one or more line sections that meet the criteria for determining significant and substantial harm as described in § 194.103, a listing and description of the response zones, including county(s) and state(s).	1.4
(b) For each response zone appendix:	
(1) The information summary for the core plan;	See Items (a) through (c), this page
(2) The name and telephone number of the qualified individual, available on a 24-hour basis;	1.2.5, 1.3.1, 1.3.6
(3) A description of the response zone, including county(s) and state(s) in which a worst case discharge could cause substantial harm to the environment;	1.4
(4) A list of line sections contained in the response zone, identified by milepost or survey station number or other operator designation.	1.4
(5) The basis for the operator's determination of significant and substantial harm; and	Page xii
(6) The type of oil and volume of the worst case discharge	1.5.3, Appendix B
(c) The certification that the operator has obtained, through contract or other approved means, the necessary private personnel and equipment to respond, to the maximum extent practicable, to a worst case discharge or a substantial threat of such a discharge.	Appendix A
Response Plan: Section 2. Notification Procedures	
(a) Notification requirements that apply in each area of operation of pipelines covered by the plan, including applicable State or local requirements;	1.1.2, 1.3.1
(b) A checklist of notifications the operator or qualified individual is required to make under the response plan, listed in the order of priority;	1.1.2, 1.3.1
(c) Names of persons (individuals or organizations) to be notified of a discharge, indicating whether notification is to be performed by operating personnel or other personnel;	1.1.2, 1.3.1
(d) Procedures for notifying qualified individuals;	1.3.1
(e) The primary and secondary communication methods by which notifications can be made; and	1.1.8, 1.7.1.1
(f) The information to be provided in the initial and each follow-up notification, including the following:	1.1.3, 1.3.1
(1) Name of pipeline;	Spill Response Notification Form
(2) Time of discharge;	
(3) Location of discharge;	
(4) Name of oil involved;	
(5) Reason for discharge (e.g., material failure, excavation damage, corrosion);	
(6) Estimated volume of oil discharged;	

(7) Weather conditions on scene; and	
(8) Actions taken or planned by persons on scene.	
Response Plan: Section 3. Spill Detection and On-Scene Spill Mitigation Procedures	
(a) Methods of initial discharge detection;	1.6.1, 1.6.2
(b) Procedures, listed in the order of priority, that personnel are required to follow in responding to a pipeline emergency to mitigate or prevent any discharge from the pipeline;	1.1.8, 1.7.1.1, 1.7.1.2
(c) A list of equipment that may be needed in response activities on land and navigable waters, including:	1.3.2, 1.5.3, 1.5.4, 1.7.1, Appendix A
(1) Transfer hoses and connection equipment;	1.3.2, 1.5.3, 1.5.4, 1.7.1, Appendix A
(2) Portable pumps and ancillary equipment; and	1.3.2, 1.5.3, 1.5.4, 1.7.1, Appendix A
(3) Facilities available to transport and receive oil from a leaking pipeline;	1.3.2, 1.5.3, 1.5.4, 1.7.1, Appendix A
(d) Identification of the availability, location, and contact telephone numbers to obtain equipment for response activities on a 24-hour basis; and	1.3.2, 1.5.3, 1.5.4, 1.7.1, Appendix A
(e) Identification of personnel and their location, telephone numbers, and responsibilities for use of equipment in response activities on a 24-hour basis.	1.3.2, 1.5.3, 1.5.4, 1.7.1, Appendix A
Response Plan: Section 4. Response Activities	
(a) Responsibilities of, and actions to be taken by, operating personnel to initiate and supervise response actions pending the arrival of the qualified individual or other response resources identified in the response plan; and	1.1.8, 1.7.1.1, 1.7.1.2
(b) The qualified individual's responsibilities and authority, including notification of the response resources identified in the plan;	1.3.6
(c) Procedures for coordinating the actions of the operator or qualified individual with the action of the OSC responsible for monitoring or directing those actions;	1.3.1, 1.3.6, 1.8.2, Appendix F
(d) Oil spill response organizations available, through contract or other approved means, to respond to a worst case discharge to the maximum extent practicable;	1.3.4, Appendix A
(e) For each organization identified under paragraph (d) of this section, a listing of:	
(1) Equipment and supplies available; and	Appendix A
(2) Trained personnel necessary to continue operation of the equipment and staff the oil spill removal organization for the first 7 days of the response.	Appendix A
Response Plan: Section 5. List of Contacts	
The names and addresses of the following individuals or organizations, with telephone numbers at which they can be contacted on a 24-hour basis:	
(a) A list of persons the plan requires the operator to contact;	1.1.2, 1.3.1
(b) Qualified individuals for the operator's areas of operation;	1.1.1, 1.3.6
(c) Applicable insurance representatives or surveyors for the operator's areas of operation; and	Ken Fenton, President, See Section 1.1.2, 1.3.1
(d) Persons or organizations to notify for activation of response resources.	1.1.2, 1.3.1
Response Plan: Section 6. Training Procedures Contacts	
A description of the training procedures and programs of the operator.	1.8.3
Response Plan: Section 7. Drill Procedures	
A description of the drill procedures and programs the operator uses to assess whether its response plan will function as planned. It would	

include:	
(a) Announced and unannounced drills;	1.8.2
(b) The types of drills and their frequencies.	1.8.2
Response Plan: Section 8. Response Plan Review and Update	
(a) Procedures to meet § 194.121; and	Page xv
(b) Procedures to review the plan after a worst case discharge and to evaluate and record the plan's effectiveness.	1.7.4
Response Plan: Section 9. Response Zone Appendices	
Each response zone appendix would provide the following information:	
(a) The name and telephone number of the qualified individual;	1.1.1, 1.1.2, 1.3.1, 1.3.6
(b) Notification procedures;	1.3.1
(c) Spill detection and mitigation procedures;	1.6.1, 1.6.2, 1.7.1
(d) Name, address, and telephone number of oil spill response organization;	1.3.4, Appendix A
(e) Response activities and response resources including—	
(1) Equipment and supplies necessary to meet § 194.115, and	Appendix A
(2) The trained personnel necessary to sustain operation of the equipment and to staff the oil spill removal organization and spill management team for the first 7 days of the response;	Appendix A
(f) Names and telephone numbers of Federal, state and local agencies which the operator expects to assume pollution response responsibilities;	1.1.2, 1.3.1
(g) The worst case discharge volume;	1.5.3, Appendix B
(h) The method used to determine the worst case discharge volume, with calculations;	Appendix B
(i) A map that clearly shows—(1) The location of the worst case discharge, and(2) The distance between each line section in the response zone and—(i) Each potentially affected public drinking water intake, lake, river, and stream within a radius of 5 miles (8 kilometers) of the line section, and(ii) Each potentially affected environmentally sensitive area within a radius of 1 mile (1.6 kilometer) of the line section;	Figures 4, 5, 6
(j) A piping diagram and plan-profile drawing of each line section, which may be kept separate from the response plan if the location is identified; and	Piping diagrams maintained under separate cover at the Baltimore South Terminal.
(k) For every oil transported by each pipeline in the response zone, emergency response data that—(1) Include the name, description, physical and chemical characteristics, health and safety hazards, and initial spill-handling and firefighting methods; and(2) Meet 29 CFR 1910.1200 or 49 CFR 172.602.	Appendix J

PLAN APPROVALS AND REVIEWS

DISTRIBUTION LIST

This Facility Response Plan (FRP) has been distributed to the following individuals and organizations:

Plan Holder's Name	Job Title	Facility/Organization/Location
Greg Raisch	Facility Compliance Officer	Petroleum Fuel & Terminal Company 2801 Rock Road Granite City, IL 62040
Chris Casnelli	Facility Compliance Officer	Petroleum Fuel & Terminal Company 701 Michigan Avenue Norfolk, VA 23508
Bill Ransom	Terminal Manager	PF&T Baltimore South Terminal 1622 South Clinton Street Baltimore, MD 21224
NA	Captain of the Port	United States Coast Guard District 5 - Sector Baltimore Port Safety and Security Branch 2401 Hawkins Point Road Building 70 Baltimore, MD 21226
Linda Ziegler	Environmental Coordinator	Environmental Protection Agency Region 3 Removal Enforcement and Oil Section (3HS322) 1650 Arch Street Philadelphia, PA 19147
John Hess	Director of Emergency Support	Office of Pipeline Safety Pipeline and Hazardous Material Safety Administration U.S. Department of Transportation 1200 New Jersey Avenue, SE East Building, 2nd Floor Washington, DC 20590 202-366-4031

FRP COVER SHEET

GENERAL INFORMATION	
Owner of Facility:	Petroleum Fuel & Terminal Company
Owner Address:	8235 Forsyth Blvd., Suite 400
City, State, and U.S. Zip Code:	Clayton, MO 63105
Owner Phone No.:	314-889-0214
Operator of Facility:	Petroleum Fuel & Terminal Company
Facility Name:	Baltimore South Terminal
Facility Address:	1622 South Clinton Street
City, State, and U.S. Zip Code:	Baltimore, MD 21224
Facility Phone No. / Fax No.:	410-342-7800 410-342-7804 (fax)
EPA FRP ID #:	FRP 03-A051
USCG FIN #:	BAL01239
Pipeline ID:	Petroleum Fuel & Terminal Co., OP ID #99043
DOT RSPA Tracking #	1156
Dun & Bradstreet Number:	052619160
SIC Code:	4226 - Special Warehousing and Storage 5171 - Petroleum Bulk Stations and Terminals
NAICS Code(s):	493190 - Other Warehousing and Storage 424710 - Petroleum Bulk Stations and Terminals
(b) (7)(F)	
(b) (7)(F)	
Number of Large Aboveground Oil Storage Tanks:	19
Facility Distance to Navigable Water:	0 - 1/4 mile

APPLICABILITY OF SUBSTANTIAL HARM CRITERIA

Substantial Harm Criteria for USEPA Regulated, Non-Transportation-Related, Onshore Facilities		YES	NO
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?		√	<input type="checkbox"/>
Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and, within any storage area, 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?		<input type="checkbox"/>	√
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 in Appendix C or a comparable formula) such that a discharge from the facility could cause injury to fish and wildlife and sensitive environments?		√	<input type="checkbox"/>
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 Appendix C or comparable formula) such that a discharge from the facility would shut down a public drinking water intake?		<input type="checkbox"/>	√
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?		<input type="checkbox"/>	√
Substantial / Substantial & Significant Harm Criteria for USCG Regulated, Fixed, Marine-Transportation-Related Facilities		YES	NO
Substantial Harm	Is the facility a fixed MTR onshore facility capable of transferring oil to or from a vessel with a capacity of 250 barrels or more and deepwater ports?	√	<input type="checkbox"/>
	Is the facility a mobile MTR facility used or intended to be used to transfer oil to or from a vessel with a capacity of 250 barrels or more?	<input type="checkbox"/>	√
	Is the facility one of those MTR facilities specifically designated as substantial harm facilities by the COTP?	<input type="checkbox"/>	√
Substantial and Significant Harm	Is the facility a deepwater ports or fixed MTR onshore facility capable of transferring oil to or from a vessel with a capacity of 250 barrels or more except for facilities that are part of a non-transportation-related fixed onshore facility with a storage capacity of less than 42,000 gallons?	<input type="checkbox"/>	√
	Is the facility one of those MTR facilities specifically designated as significant and substantial harm facilities by the COTP?	<input type="checkbox"/>	√
Significant and Substantial Harm; Operator's Statement for DOT Regulated, Onshore Oil Pipeline			
Operator Statement:			
<p>There is potential for major failure or rupture in the pipeline while product is transferred to and from the PF&T Baltimore South Terminal (South Clinton Street) and the PF&T Baltimore North Terminal (Erdman Avenue) via pipeline transfer. The total length of the pipeline is 3.14 miles and for response planning purposes, it is divided into four (4) response zones with several line sections within each zone. The diameter of the pipeline over its entire length is 12 inches; therefore, each of the pipeline line sections can be expected to cause significant and substantial harm to the environment in the event of a discharge of oil into or on the navigable waters or adjoining shorelines.</p>			

MANAGEMENT CERTIFICATION

APPROVAL / CERTIFICATION	
I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document, and that based on my inquiry of those individuals responsible for obtaining information, I believe that the submitted information is true, accurate, and complete. This plan will be implemented as herein described.	
Management	
Signature:	
Name (Please type or print):	Bill Ransom
Title:	Terminal Manager
Date:	
Designated person accountable for oil spill prevention at the facility:	
Name:	Bill Ransom
Title:	Terminal Manager

MANAGEMENT CERTIFICATION

APPROVAL / CERTIFICATION	
I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document, and that based on my inquiry of those individuals responsible for obtaining information, I believe that the submitted information is true, accurate, and complete. This plan will be implemented as herein described.	
Management	
Signature:	<i>Bill Ransom</i>
Name (Please type or print):	Bill Ransom
Title:	Terminal Manager
Date:	5/31/11
Designated person accountable for oil spill prevention at the facility:	
Name:	Bill Ransom
Title:	Terminal Manager

PLAN REVIEW & REVISION PROCEDURES

USEPA Regulated, Non-Transportation-Related, Onshore Facilities

Baltimore South Terminal personnel will review and revise this plan as follows per EPA regulations at 40 CFR Part 112.20:

- **Review** relevant portions of the National Oil and Hazardous Substances Pollution Contingency Plan (NCP) and applicable Area Contingency Plans annually and, if necessary, revise the FRP to ensure consistency with these plans.
- **Review and Update** this FRP periodically to reflect changes at the facility.
- **Revise and resubmit** revised portions of this FRP within 60 days of each change that materially may affect the response to a worst case discharge, including:
 - (i) A change in the facility's configuration that materially alters the information included in the response plan.
 - (ii) A change in the type of oil handled, stored, or transferred that materially alters the required response resources.
 - (iii) A material change in capabilities of the oil spill removal organization(s) that provide equipment and personnel to respond to discharges of oil.
 - (iv) A material change in the facility's spill prevention and response equipment or emergency response procedures.
 - (v) Any other changes that materially affect the implementation of the response plan.
- **Provide copies of changes** to EPA Region 3 as they occur for amendments to personnel and telephone number lists included in this FRP or a change in spill response organizations that do not result in a material change in support capabilities.
- **Include** the EPA-issued facility identification number (where one has been assigned) when submitting changes to a response plan.

Note: Amendments to personnel and telephone number lists included in the response plan and a change in the oil spill removal organization(s) that does not result in a material change in support capabilities do not require approval by the Regional Administrator. Facility owners or operators shall provide a copy of such changes to the Regional Administrator as the revisions occur.

USCG Regulated, Fixed, Marine Transportation-Related Facilities

Baltimore South Terminal personnel will review and revise this plan as follows per Coast Guard regulations at 33 CFR Part 154.1065:

- **Review** response plan annually. This review shall incorporate any revisions to the plan, including listings of fish and wildlife and sensitive environments identified in the ACP in effect 6 months prior to plan review.
- **Submit** any revision(s) to the response plan to the COTP and all other holders of the response plan for information or approval, as appropriate.
 - (i) Enter any required revisions on the record of changes page.
 - (ii) Along with the revisions, submit a cover letter containing a detailed listing of all revisions to the response plan.
 - (iii) If no revisions are required, indicate the completion of the annual review on the record of changes page.
 - (iv) The COTP will review the revision(s) submitted by the owner or operator and will give written notice to the owner or operator of any COTP objection(s) to the proposed revisions

within 30 days of the date the revision(s) were submitted to the COTP. The revisions shall become effective not later than 30 days from their submission to the COTP unless the COTP indicates otherwise in writing as provided in this paragraph. If the COTP indicates that the revision(s) need to be modified before implementation, the owner or operator will modify the revision(s) within the time period set by the COTP.

- **Submit** revisions to a previously submitted or approved plan to the COTP and all other holders of the response plan for information or approval within 30 days, whenever there is—
 - (i) A change in the facility's configuration that significantly affects the information included in the response plan;
 - (ii) A change in the type of oil (petroleum oil group) handled, stored, or transported that affects the required response resources;
 - (iii) A change in the name(s) or capabilities of the oil spill removal organization required by §154.1045;
 - (iv) A change in the facility's emergency response procedures;
 - (v) A change in the facility's operating area that includes ports or geographic area(s) not covered by the previously approved plan. A facility may not operate in an area not covered in a plan previously submitted or approved, as appropriate, unless the revised plan is approved or interim operating approval is received under §154.1025; or
 - (vi) Any other changes that significantly affect the implementation of the plan.
- **Revise** a response plan at any time as a result of a compliance inspection if the COTP determines that the response plan does not meet the requirements of this subpart or as a result of inadequacies noted in the response plan during an actual pollution incident at the facility.

Note: Revisions to personnel and telephone number lists included in the response plan do not require COTP approval. The COTP and all other holders of the response plan shall be advised of these revisions and provided a copy of the revisions as they occur.

DOT Regulated, Onshore Oil Pipeline

Baltimore South Terminal personnel will review and revise this plan as follows per DOT regulations at 49 CFR Part 194.121:

- **Update** this FRP to address new or different operating conditions or information. In addition, each operator shall review its response plan in full at least every 5 years from the date of the last approval
- **Modify** this FRP immediately to address any new or different operating conditions or information that would substantially affect the implementation of the plan. Within 30 days of making such a change to the plan, submit the change to PHMSA. Examples of changes in operating conditions that would cause a significant change to the plan include:
 - An extension of the existing pipeline or construction of a new pipeline in a response zone not covered by the previously approved plan
 - Relocation or replacement of the pipeline in a way that substantially affects the information included in the response plan, such as a change to the worst case discharge volume
 - The type of oil transported, if the type affects the required response resources, such as a change from crude oil to gasoline
 - The name of the oil spill removal organization
 - Emergency response procedures
 - The qualified individual
 - A change in the NCP or an ACP that has significant impact on the equipment appropriate for response activities
 - Any other information relating to circumstances that may affect full implementation of the plan
- If PHMSA determines that a change to a response plan does not meet the requirements of this part, PHMSA will notify the operator of any alleged deficiencies, and provide the operator an opportunity to respond, including an opportunity for an informal conference, to any proposed plan revisions and an

opportunity to correct any deficiencies.

- An operator who disagrees with a determination that proposed revisions to a plan are deficient may petition PHMSA for reconsideration, within 30 days from the date of receipt of PHMSA's notice. After considering all relevant material presented in writing or at the conference, PHMSA will notify the operator of its final decision. The operator must comply with the final decision within 30 days of issuance unless PHMSA allows additional time.

TERMINAL COMMITMENTS

OIL SPILL RESPONSE PLAN COMMITMENTS			
Frequency	Commitment	Responsible Person	FRP Section
Continuous	Maintain response material and equipment	QI and OSRO	1.3.2
Continuous	Comply with security measures: maintain fencing, lighting, locks, cap and mark piping not in service or in extended standby status.	QI	1.10
During Product Transfers	Follow tank truck transfer procedures	QI	1.4
Daily	Terminal walk down: inspect tank level gauges or control room level transmitter reading, and secondary containment areas.	QI	1.6.1, 1.8.1.3
Monthly	Inspect tanks and secondary containments in accordance with SPCC Plan	QI	1.6.1, 1.8.1.1
Quarterly	Conduct QI notification drill	QI	1.8.2
Quarterly	Complete QI Notification Drill Log	QI	1.8.2.1
Monthly	Inspect response equipment	QI and OSRO	1.8.1.2
Annually	Conduct equipment deployment drill	QI and OSRO	1.8.2
Annually	Complete Response Equipment Testing and Deployment Log	QI and OSRO	1.3.1
Annually	FRP review and update (if needed)	QI	Page xiv
Annually	Review National and Area Contingency Plans, update FRP if needed	QI and OSRO	Page xiv
Annually	Conduct Spill Management Team (SMT) tabletop exercise (TTX)	QI and OSRO	1.8.2
Annually	Complete Spill Management Team Tabletop Exercise Form	QI and OSRO	1.8.2.2
Annually	OSRO equipment deployment exercise	QI and OSRO	1.8.2
Annually	Conduct Discharge Prevention Meeting and Complete Discharge Prevention Meeting Log	QI	1.8.3.2
One-time	QI Training	Corporate	1.8.3
After each training course	Complete Personnel Response Training Log	QI	1.8.3.1
Annually or as needed	Maintain OSRO purchase order	Corporate	1.7.1
At agency request	Participate in external drill/exercise	QI	1.8.2
At discovery of oil spill	Initiate notification procedure of Section 1.3.1 by notifying supervisor	QI	1.3.1
At discovery of oil spill	Complete notifications on Emergency Notification Phone List	QI	1.3.1
At discovery of oil	Complete notification of NRC using Spill Response	QI	1.3.1

OIL SPILL RESPONSE PLAN COMMITMENTS			
Frequency	Commitment	Responsible Person	FRP Section
discharge to navigable waters	Notification Form		
At discovery of small, medium, or worst-case discharge	Make initial response to spill	QI	1.7.1.1
During spill clean-up	Implement disposal plan	QI	1.7.2
After an oil spill	Post-discharge review	Corporate	1.7.4
When plan is updated	Confirm notification phone numbers	QI	1.3.1
Within 60 days of material change to FRP	Revise and resubmit to USCG and EPA	Corporate	Page xiv
As minor changes to FRP occur	Provide copies of changes to USCG and EPA	Corporate	Page xiv

<i>EMERGENCY RESPONSE ACTION PLAN</i>

1.0 FACILITY RESPONSE PLAN

1.1 EMERGENCY RESPONSE ACTION PLAN (ERAP)

The Emergency Response Action Plan (ERAP) includes an excerpt of those pages of the full FRP that contain the information necessary to combat an oil spill, arranged so response actions are not delayed.

In particular, the EPA requires the ERAP to contain copies of the following sections of the full FRP plan:

- 1. Qualified Individual (QI) Information** (Section 1.2 - partial)
- 2. Emergency Notification Phone List** (Section 1.3.1 - partial)
- 3. Spill Response Notification Form** (Section 1.3.1 - partial)
- 4. Response Equipment List and Location** (1.3.2 - complete)
- 5. Response Equipment Testing and Deployment** (Section 1.3.3 - complete)
- 6. Facility Response Team** (Section 1.3.4 - partial)
- 7. Evacuation Plan** (Section 1.3.5 - condensed)
- 8. Immediate Actions** (Section 1.7.1 - complete)
- 9. Facility Diagram** (Section 1.9 - complete)

As indicated, these ERAP sections are condensed text and/or diagrams from the full FRP that begins with Section 1.2. Hence, in maintaining this plan, it is important to remember that changes in the subsequent sections of the FRP, as given in parenthesis above, should also be made as needed in the ERAP.

EMERGENCY RESPONSE ACTION PLAN

1.1.1 QUALIFIED INDIVIDUAL INFORMATION (Section 1.2 – partial)

The Qualified Individual (QI) or designee has full authority for implementing this Facility Response Plan. The QIs are as follows:

Qualified Individual	Position	(b) (6)	Phone	Response Training*
Bill Ransom	Terminal Manager	(b) (6)	410-342-7800 - W (b) (6) 443-532-0039 - C	<ul style="list-style-type: none"> ▪ 40-hr OSHA HAZWOPER ▪ 8-hr OSHA refresher ▪ 25+ years terminaling exp.
Ward Degrange	Assistant Terminal Manager	(b) (6)	410-342-7800 - W 410-404-0561 - C	<ul style="list-style-type: none"> ▪ 40-hr OSHA HAZWOPER ▪ 8-hr OSHA refresher ▪ 11+ years terminaling exp.
Jack Wienhold	Terminal Manager (N. Terminal)	(b) (6)	410-327-3808 - W (b) (6) 410-365-1570 - C	<ul style="list-style-type: none"> ▪ 40-hr OSHA HAZWOPER ▪ 8-hr OSHA refresher ▪ 40+ years terminaling exp.

* Terminal personnel training records are maintained at the facility under separate cover

<i>EMERGENCY RESPONSE ACTION PLAN</i>

1.1.2 EMERGENCY NOTIFICATION PHONE LIST (Section 1.3 – partial)

Emergency Notification Phone List identifies and prioritizes the names and phone numbers of the organizations and personnel that need to be notified in the event of an emergency. The list is divided into two sections with notification sheets. The first sheet lists the required notifications. The following sheets list the optional notifications to be performed as appropriate for the situation. These numbers must be verified each time that this plan is updated. This list is accessible to all facility employees to ensure that, in case of a discharge, any employee on-site could immediately notify the appropriate parties.

<i>EMERGENCY RESPONSE ACTION PLAN</i>

Emergency Notification Phone List

Sheet 1 of 3
Updated 5/11

Name of Individual Making Report: _____

Date: _____

Facility Name: Baltimore South TerminalOwner Name: Petroleum Fuel & Terminal Company

FRP ID #: 03-A051

USCG FIN #: BAL01239

OP ID#: 99043 (Petroleum Fuel & Terminal Co.)

REQUIRED NOTIFICATIONS				
	Organization Notification Required for an Oil Discharge	Phone Number	Person Notified	Time Notified
X	National Response Center (NRC)	800-424-8802 (24 hour)		
Internal Response (required notifications)				
L T O O R T O	Ken Fenton President, Terminal Division	314-889-9610 - W		
	Bill Ransom Terminal Manager (TM) Qualified Individual - QI	410-342-7800 - W (b) (6) 443-532-0039 - C		
	Ward Degrange Alternate Terminal Manager Alternate QI	410-342-7800 - W 410-404-0561 - C		
	Jack Wienhold Terminal Manager (North Terminal) Alternate QI	410-327-3808 - W (b) (6) 410-365-1570 - C		
Local Response				
Q I O R I C	Baltimore City Fire Department	911 / 410-396-9350		
	Baltimore City Police Department	911 / 410-396-2525		
	Miller Environmental Group (OSRO)	410-631-9193 (24-hour)		
	Triumvirate Environmental (OSRO)	410-636-3700		
	Clean Harbors (OSRO)	301-939-6000 800-645-8265 (toll free)		
Agency Notifications				
Q I O R	Federal On-Scene Coordinator (FOSC) EPA Region 3	215-814-5000 800-438-2474		
	USCG – COTP Baltimore	410-576-2693		
	U.S. DOT Crisis Management Center	202-366-1863 (24-hour)		

EMERGENCY RESPONSE ACTION PLAN

REQUIRED NOTIFICATIONS				
	Organization Notification Required for an Oil Discharge	Phone Number	Person Notified	Time Notified
I C	Maryland Public Service Commission (for pipeline spills) John Clementson, Ast. Chief Engineer	800-492-0474 410-767-8111 – W (b) (6) 410-279-6171 – C		
	State Emergency Response Commission (SERC) Maryland Department of the Environment	866-633-4686 (Emergency & Oil Spill Hotline) 877-634-6361		
	Local Emergency Planning Commission (LEPC) Baltimore County Emergency Management Agency [as Baltimore County Fire Department]	410-887-4511		

(Continued)

<i>EMERGENCY RESPONSE ACTION PLAN</i>

Emergency Notification Phone List

Sheet 2 of 3
Updated 5/11

AS NEEDED NOTIFICATIONS			
Organization Notification Performed <u>as Appropriate</u>	Phone Number	Person Notified	Time Notified
Sensitive resources, as needed			
Water Intakes			
Baltimore Gas & Electric	800-685-0123		
Schools			
St. Kasmir School	410-342-2681		
Medical Facilities			
Johns Hopkins Bayview Medical Center	410-550-0100		
Harbor Hospital	410-350-3200		
Businesses			
NA			
Utilities			
Baltimore Gas & Electric (electric / gas)	800-685-0123		
City of Baltimore, Department of Public works (local water supply / wastewater treatment)	410-396-3500		
Back River Treatment Plant	410-396-9800		
Patapsco Treatment Plant	410-396-2800		
Recreation Areas			
City of Baltimore, Department of Recreation and Parks	410-396-7900		
Anne Arundel County, Recreation and Parks	410-222-7317		
Fort McHenry Park	410-962-4290		
Conservation Area (Trustees of Sensitive Areas)			
Fort Howard Park Sparrow Pt. Rec. Office	410-887-7529		
North Point State Park	410-477-0757		
Fort McHenry Park	410-962-4290		

(Continued)

<i>EMERGENCY RESPONSE ACTION PLAN</i>

Emergency Notification Phone List

Sheet 3 of 3
Updated 5/11

AS NEEDED NOTIFICATIONS			
Organization Notification Performed as Appropriate	Phone Number	Person Notified	Time Notified
Others, as needed			
Colonial Pipeline Company	410-355-8155		
United States Coast Guard, 5th District, Baltimore Sector Command Center Activities Baltimore	410-576-2525 410-576-2693		
United States Environmental Protection Agency, Region 3	800-436-2474 215-814-5000		
United States Department of Transportation Crisis Management Center Pipeline and Hazardous Material Safety Administration, Office of Pipeline Safety	202-366-1863 202-366-4595		
Maryland Port Police	410-633-1092		
Baltimore City Marine Police (One-call center)	410-396-5352		
Maryland Department of the Environment (MDE)	410-539-3000		
Maryland Emergency Management Agency (MEMA)	877-636-2872		
Maryland Department of Natural Resources (MDNR)	877-620-8367		
Maryland Department of Transportation (MDOT)	410-865-1000		
Maryland Department of Labor (MDOL)	410-230-6001		
Maryland Public Service Commission (for pipeline spills) John Clementson, Ast. Chief Engineer	800-492-0474 410-767-8111 – W (b) (6) 410-279-6171 – C		
Occupational Safety and Health Administration (OSHA)	800-321-6742		
U.S. Fish & Wildlife Service, Washington, D.C. Office	800-344-9453		
Tri-State Bird Rescue & Research, Inc.	302-737-9543		
Weather Report (NOAA, Dial-a-forecast)	703-996-2200 x 1		
Local Media Notifications: WYPR – FM 88.1 WCBM – AM 680 WBAL – TV 11 (NBC)	410-235-1660 410-922-6680 410-338-6501		

<i>EMERGENCY RESPONSE ACTION PLAN</i>

The following are NON-EMERGENCY numbers. For emergencies, call 911			
---	--	--	--

Baltimore City Fire Department	410-396-9350		
Baltimore City Police Department	410-396-2525		
Ambulance – Transcare, Inc.	410-242-9000		
Maryland State Police	410-486-3101		
Maryland State Fire Marshal	410-339-4200		
Back River Treatment Plant	410-396-9800		
Hospitals			
Johns Hopkins Bayview Medical Center	410-550-0100		
Harbor Hospital	410-350-3200		

<i>EMERGENCY RESPONSE ACTION PLAN</i>

1.1.3 SPILL RESPONSE NOTIFICATION FORM (Section 1.3.1 – partial)

Spill Response Notification Form is a checklist of information that shall be provided to the National Response Center and other response personnel. Initial notification must not be delayed pending collection of all information. **It is not necessary to wait for all information before calling NRC. National Response Center – 1-800-424-8802.**

(A) Reporting Party

Name: _____
 Phones: 410-342-7800

 Fax: 410-342-7804

 Company: Baltimore South Terminal

 Position: _____
 Address: 1622 South Clinton Street

 City: Baltimore

 State: MD

 Zip: 21224

 Person Discovering Discharge: _____
 Name: _____
 Company/Org: Petroleum Fuel & Terminal

 Pipeline: Petroleum Fuel & Terminal Co.,
OP ID #99043

(B) Suspected Responsible Party

Name: _____
 Phones: () _____

 () _____

 Company: _____
 Organization Type: _____
 Private Citizenship: _____
 Private Enterprise: _____
 Public Utility: _____
 Government: _____
 Local _____; State _____; Federal _____
 City: _____
 State: _____
 Zip: _____

Were Materials Discharged? _____ (Y/N)

Is this a Confidential Report? No _____Are You Calling for Responsible Party? Yes _____Are You Meeting Federal Obligations to Report? Yes _____

Date Called: _____

Time Called: _____

Incident DescriptionSource and / or Cause of Incident: _____

Date of Incident: _____

Time of Incident: _____

Weather Conditions: _____

Incident Address / Location: _____

Nearest City / State / Zip: Baltimore, MD

Distance from City: _____

Direction from City: _____

Range: _____

Container Type: _____

Tank Oil Storage Capacity: _____

(b) (7)(F)

<i>EMERGENCY RESPONSE ACTION PLAN</i>

Material

CHRIS (Chemical Hazards Response Information System) Code (or Type if Code Unknown)	<input type="checkbox"/> OTW (Oils, Fuel: 2) <input type="checkbox"/> ODS (Oils: diesel) <input type="checkbox"/> GAT (Gasolines: automotive) <input type="checkbox"/> KRS (Kerosene) <input type="checkbox"/> OLB (Oils, miscellaneous: lubricating) <input type="checkbox"/> ETH (Non-Oils, Denatured ethanol)	
Discharged Quantity		
Unit of Measure		
Material Discharged In Water		

Response Action

Actions Taken to Correct, Control, or Mitigate Incident: _____

Impact

Number of Injuries: _____ Number of Deaths: _____

Were There Evacuations? _____ (Y / N) Number Evacuated: _____

Was there any Damage? _____ (Y / N) Damage in Dollars (approx.): _____

Medium (air, land, or water) affected: _____

Additional Information

Any information about the incident not recorded elsewhere in the report: _____

Caller Notifications

Agencies notified:

MDE? _____ (Y/N) EPA? _____ (Y/N) USCG? _____ (Y/N) Other? _____ (Y/N)

Describe: _____

EMERGENCY RESPONSE ACTION PLAN

1.1.4 RESPONSE EQUIPMENT LIST AND LOCATION (Section 1.3.2 – complete)

The inventory of response equipment maintained at the facility is summarized in the table below. These resources are suitable for initial release mitigation efforts for a variety of spill scenarios spills by facility personnel, as they may deem appropriate.

For larger spills, the facility would utilize an Oil Spill Removal Organization (OSRO) and other clean-up contractors for response to a discharge. OSROs on contract maintain equipment and resources suitable for response to larger spills, up to and including a worst case discharge from this facility. See list of OSRO(s) for this facility in Section 1.3.4 of this plan and refer to Appendix A of this Plan for OSRO information, contracts, and equipment. Refer to Section 1.7.1.1 for a comprehensive discussion of spills response resources and plan.

FACILITY SPILL RESPONSE EQUIPMENT						
1. Skimmers / Pumps						
Type, Model, Year Purchased	Number	Operational Status	Capacity (gal/min)	Daily Effective Recovery Rate	Storage Location	Date Fuel Last Changed
NONE						
2. Boom						
Type, Model, Year Purchased	Number	Operational Status	Size (length in ft)	Containment Area (ft2)	Storage Location	
6" diameter x 12" skirt, 22-oz PVC fabric with universal connectors	1	Operational	1,100	NA	North Dock	
3. Chemicals Stored (Dispersants listed on EPA's NCP Product Schedule)						
Type	Amount	Date Purchased	Treatment Capacity	Storage Location		
NONE						
Were appropriate procedures used to receive approval for use of dispersants in accordance with the NCP (40 <u>CFR</u> 300.910) and the Area Contingency Plan (ACP), where applicable? _____(Y/N)						
Name and State of On-Scene Coordinator (OSC) authorizing use: _____						
Date Authorized: _____						
4. Dispersant Dispensing Equipment						
Type and Year Purchased	Capacity	Operational Status	Storage Location	Response Time (minutes)		
NONE						

EMERGENCY RESPONSE ACTION PLAN

FACILITY SPILL RESPONSE EQUIPMENT

5. Sorbents

Type and Year Purchased	Amount	Operational Status	Absorption Capacity (gal)	Storage Location
6"/8"/10" absorbent boom	600+ ft (6' sections)	Operational	NA	North Dock
Absorbent pads	10-15 bales (50 pads/bale)	Operational	NA	North Dock and South Dock
Sand	10-20 tons	Operational	NA	Outside Meter/Boiler Room

6. Hand Tools (Hand tools at terminal is not dedicated to emergency response)

Type and year	Quantity	Operational Status	Storage Location
Shovels, rakes, etc.	NA	Operational	Tank Farm Area C

7. Communication Equipment (Communication equipment at terminal is not dedicated to emergency response)

Type / Year Purchased	Quantity	Operational Status	Operating Frequency	Phone #	Storage Location
Handheld radios	6	Operational	NA	NA	Terminal Office
Mobile-phone	1	Operational	NA	NA	Terminal Office

8. Fire Fighting and Personal Protective Equipment

Type and year	Operational Status	Quantity	Storage Location
Various	Operational	NA	Throughout terminal

9. Other (e.g., Heavy Equipment, Boats, and Motors)

Type and year	Operational Status	Quantity	Storage Location
20-ft boat with 115-hp outboard motor	Operational	2	Meter/Boiler Room
12-ft aluminum rowboat with 8-hp outboard motor	Operational	1	North Dock
3,500-watt generator	Operational	1	Meter/Boiler Room

<i>EMERGENCY RESPONSE ACTION PLAN</i>

1.1.5 **RESPONSE EQUIPMENT TESTING AND DEPLOYMENT** (Section 1.3.3 – complete)

The contracted OSRO(s) for the facility will provide annual certifications to this terminal that indicate they have met the regulatory requirements for equipment testing and deployment of their response equipment, adequate to maintain the required USCG OSRO classifications for this facility. These certifications shall be kept in terminal records for 5 years. The most recent OSRO certifications are available in Appendix A of this plan.

In addition to the response resources and capabilities provided by the contracted OSRO(s), the facility owns and maintains on-site some response equipment. At this facility, the Terminal Manager ensures the following requirements are met regarding this equipment:

- Containment booms, skimmers, vessels, and other major equipment listed or referenced in the plan are periodically inspected and maintained in good operating condition, in accordance with manufacturer's recommendations, and best commercial practices; and
- All inspection and maintenance is documented and that these records are maintained for 3 years.

For equipment which must be inspected and maintained under this section the USCG may:

- Verify that the equipment inventories exist as represented
- Verify the existences of records required under this section
- Verify that the records of inspection and maintenance reflect the actual condition of any equipment listed or referenced
- Inspect and require operational tests of equipment

The Response Equipment Testing and Deployment Log below or comparable terminal form can be used to document the boom or other deployment drills for OSRO response equipment. These exercises are conducted to ensure that boom or other response equipment is operational and the personnel who would deploy and operate the equipment in a spill response are capable of doing so. Only a representative sample of each type of response equipment needs to be deployed and operated, as long as the rest is properly maintained. Representative samples of spill response equipment that will be relied upon for response to a small, medium, or worst-case discharge as discussed in Section 1.7.1 will be tested and deployed annually by terminal personnel or OSRO personnel in liaison with the terminal personnel. Testing of response equipment may be conducted while it is being deployed, and deployment drills may be performed during personnel training. Documentation for OSRO equipment testing/deployment is provided in Appendix A to this plan. Documentation for facility equipment testing/deployment is provided in Appendix K to this plan.

RESPONSE EQUIPMENT TESTING AND DEPLOYMENT LOG				
Date of Last Inspection / Equipment Test	Inspection Frequency	Date of Last Deployment	Deployment Frequency	OSRO Certification

EMERGENCY RESPONSE ACTION PLAN

1.1.6 FACILITY RESPONSE TEAM (Section 1.3.4 – partial)

The **Facility Response Team** list is comprised of both Baltimore South Terminal emergency response personnel (referenced by job title/position) and the emergency response contractors (OSRO companies). They will respond immediately upon discovery of an oil spill (i.e., the first people to respond). These are the people normally on-site or the primary response contractors that would come from off-site locations.

FACILITY RESPONSE TEAM				
Name	Phone	Response Time ¹	Responsibility during response action	Response training type / date ²
Bill Ransom	410-342-7800 - W (b) (6) 443-532-0039 - C	45 min	Incident Commander QI Terminal Manager	<ul style="list-style-type: none"> ▪ 40-hr OSHA HAZWOPER ▪ 8-hr OSHA refresher ▪ 25+ years terminaling exp.
Ward Degrange	410-342-7800 - W 410-404-0561 - C	30 min	Alternate QI Ast. Terminal Manager	<ul style="list-style-type: none"> ▪ 40-hr OSHA HAZWOPER ▪ 8-hr OSHA refresher ▪ 11+ years terminaling exp.
Bill Baker	410-342-7805 - W (b) (6) 443-857-3903 - C	30 min	Secure source, contain and mitigate effects of spill as directed	<ul style="list-style-type: none"> ▪ 40-hr OSHA HAZWOPER ▪ 8-hr OSHA refresher ▪ 40+ years terminaling exp.
Joe Lechert	410-342-7800 - W (b) (6)	15 min	Secure source, contain and mitigate effects of spill as directed	<ul style="list-style-type: none"> ▪ 40-hr OSHA HAZWOPER ▪ 8-hr OSHA refresher ▪ 35+ years terminaling exp.
Mike McKenzie	410-342-7805 - W (b) (6)	15 min	Secure source, contain and mitigate effects of spill as directed	<ul style="list-style-type: none"> ▪ 40-hr OSHA HAZWOPER ▪ 8-hr OSHA refresher ▪ 19+ years terminaling exp.
Miller Environmental Group (OSRO)	410-631-9193 (24-hour)	< 1 hour	OSRO - refer to Emergency Response Contractors Table given previously	Company training including OSHA 40-hour HAZWOPR
Triumvirate Environmental (OSRO)	410-636-3700	< 2 hours	OSRO - refer to Emergency Response Contractors Table given previously	Company training including OSHA 40-hour HAZWOPR
Clean Harbors (OSRO)	301-939-6000 800-645-8265 (toll free)	< 2 hours	OSRO - refer to Emergency Response Contractors Table given previously	Company training including OSHA 40-hour HAZWOPR

- 1) 3-5 minute response time for on-site facility personnel during business hours
- 2) Terminal personnel training records are maintained at the facility under separate cover

<i>EMERGENCY RESPONSE ACTION PLAN</i>

1.1.7 EVACUATION PLAN (Section 1.3.5 – condensed)

The Terminal Manager or designee will assume the role of Qualified Individual (QI) and determine the need for evacuation of the facility. Evacuation, if necessary, will be directed by the QI, in cooperation with the Incident Commander (IC) of the local emergency responders, such as the fire or police department. Facility evacuation points, evacuation routes, arrival routes for emergency responders, and all locations associated with evacuation plans are displayed on the Site Evacuation Plan Diagram (Figure 3), located in Sections 1.1.9 and 1.9 of this plan.

Personnel are directed to use the Terminal Office gate as the primary evacuation point, but may use the other facility access points, including the Truck Rack entrance gate and the Meter/Boiler Room exit gate, as alternate evacuation points. If site emergency conditions permit, personnel will report to the primary gathering point/check-in area, located at the first floor of the Terminal Office. If conditions dictate otherwise, personnel will report to the alternate gathering point/check-in area, located north of the terminal at the corner of South Clinton Street and Boston Street. A roll call will be conducted at the gathering point/check-in area to account for all personnel.

If conditions allow, the Terminal Office will serve as the Command Center for any spill. If conditions dictate otherwise, an alternate Command Center may be set up at the Best Western Hotel and Conference Center, located at 5625 O'Donnell St., Baltimore, MD 21224). The Terminal Office may also be used for on-site shelter if approved by the Incident Commander or QI.

Emergency response personnel and response equipment will arrive via South Clinton Street and proceed through the Terminal Office gate or the Meter/Boiler Room gate. The QI or designated terminal personnel on-site will guide response personnel as they arrive at the terminal. Any injured personnel will normally be transported by emergency medical service to the Johns Hopkins Bayview Medical Center, located about 2 miles northeast of the facility in Baltimore, MD. For minor injuries, an individual could be transported by private or terminal vehicle.

Community evacuation, if necessary, will be handled by local emergency officials according to the LEPC evacuation plan. If necessary resources exceed the capacity of the Baltimore County emergency response team, they will contact the Maryland Department of the Environment to request the assistance of a state Regional Response Team (Region 3 RRT) for support.

<i>EMERGENCY RESPONSE ACTION PLAN</i>

1.1.8 IMMEDIATE ACTIONS (Section 1.7.1 – complete)**RESPONSE RESOURCES FOR SMALL, MEDIUM, AND WORST CASE SPILLS**

This section describes the response actions to be carried out and the response resources necessary to ensure the safety of the facility and to mitigate or prevent discharges described in Section 1.5 of this plan.

RESPONSE RESOURCES AND ACTIONSFacility Response Equipment

Response equipment owned and maintained on-site is listed in Section 1.3.2 of this plan and includes containment boom, some sorbents, and small watercraft. In addition to the equipment listed in Section 1.3.2 and the facility resources and capabilities described in Section 1.5 of this plan, the facility has a variable amount of available capacity to store recovered product. The table below summarizes this available capacity.

Quantity	Description	Volume
4	OWS #001 OWS #002 OWS #003 OWS #004	12,000 gallons 1,000 gallons 1,000 gallons 6,000 gallons
1	Groundwater Recovery Tank	500 gallons

Personnel that would be involved in spill response are listed in Section 1.3.4 of this plan. Available remediation equipment on-site is appropriate for an immediate response by limited personnel to a variety of spill scenarios. However, the facility's on-site equipment is not sufficient or appropriate for a response to a worst case discharge and the ability of facility personnel to contribute significantly to the spill response/mitigation effort would be limited. Therefore, it is a priority for facility personnel to notify the facility's OSRO(s) or spill contractor(s), secure facility operations, maintain communication lines, and otherwise follow the Oil Spill Response – Immediate Actions provided in Section 1.7.1.2 of this plan. If necessary, facility personnel should evacuate the facility according to the procedures identified in Section 1.3.5 of this plan. Additional equipment and resources (as described above) for response to a worst case discharge will be provided, as needed, by the OSRO(s) and can be deployed in a timely fashion.

Contract Resources

In the event of a discharge that is beyond the initial response capabilities of the local response personnel, contract manpower and equipment resources can be obtained through Oil Spill Removal Organization(s) (OSRO). These OSROs can provide manpower and containment/clean-up equipment for the response operation on land, water, or adjacent shorelines. Terminal Management (QI) will typically handle notification/implementation of these OSRO resources. The Emergency Response Contractors in Section 1.3.4 of this plan provides a reference for the OSROs, detailing their telephone numbers, locations, and estimated response times.

The facility retains Miller Environmental Group as an OSRO that has received OSRO classification by the USCG for all levels (MM, W1, W2, and W3) for the River and Canal operating environments, which includes the Baltimore South Terminal. Additionally, the facility has relationships with other spill responders in the area, including OSROs Triumvirate Environmental and Clean Harbors. OSRO contact information is provided in Section 1.3.4 of this plan while OSRO contracts, equipment lists, and equipment testing information are provided in Appendix A to this plan.

The OSROs have response resources available that are equal to those required for response to small, medium, and worst case discharges at this site, as determined in Section 1.5 of this plan, including the Tier 1, 2, and 3 response levels. The resources provided will be appropriate for the River and Canal operating environment, and will be adequate to continue operations for the first 3 days of the response. The OSROs also have access to pre-identified

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sub-contractors. The facility may periodically add and list in Section 1.3.4 additional contractors for small oil spill response emergency response services or to support the listed OSROs.

The following sections outline the various response equipment/resources available from the facility, other Company facilities, OSROs, and other outside resources.

Cooperative/Mutual Aid Resources

Cooperative/Mutual Aid resources are not currently available to the facility.

Experts and Consultants

The Company maintains a relationship with various environmental and technical consultants that can provide support in the event of an emergency incident. These consultants can provide expertise and support in the areas of emergency response management, environmental services, site assessment, permitting, waste treatment, recycling, dewatering, hazardous waste disposal, and remediation. Implementation of these services should be coordinated through corporate management.

Volunteers

Volunteers will not be utilized by the Company for responding to spills originating from the facility. All volunteers will be referred to the State or Federal On-Scene Coordinator (USCG or EPA).

Communications

Effective and efficient communications systems are essential for emergency response at every level. The communications system will be utilized to gather information and current status reports as well as to provide coordination and direction to widely separated work groups involved in search, containment/diversion, repair, traffic control, public control or evacuation, and restoration.

Lines of communication between the Incident Commander and local response personnel are demonstrated in the organization charts, provided in Section 1.8.2 of this plan. Communication of the overall spill response operation between the facility and the responsible government agencies in the Federal Regional Response Team (RRT) will occur between the Incident Commander and the Federal On-Scene Coordinator.

Central Communications System

Prearranged communication channels are of the utmost importance in dealing with facility emergencies. The predetermined communications channels include the following:

- A list of emergency telephone numbers for internal management and emergency response personnel.
- A list of emergency telephone numbers for various external resources such as the fire and police department, medical, and regulatory agencies.
- A list of emergency telephone numbers for contract response resources.

All of the emergency telephone numbers described above are provided in Sections 1.3.1 and 1.3.4 of this plan.

Communications Equipment

Field communications during a spill response to a small or medium discharge will be handled via the existing facility communications network. This network will utilize existing radios, telephones, beepers, FAX machines, and computers and will be maintained by facility personnel. In the event of a worst case discharge, field communications will be enhanced with other company and contract resources as the situation demands.

Communication Types

- **Radios** - Handheld and vehicle mounted radio sets are the most effective means of communication for the field response operation. The units are battery operated, multi-channeled, and have a typical

<i>EMERGENCY RESPONSE ACTION PLAN</i>

range that will cover the area of the response operation. Additional radio sets and battery packs/charges will be necessary in the event of a prolonged response operation.

- **Telephone (Conventional)** - Conventional land line telephones are the most effective means of communication for regulatory and advisory notifications during a spill response operation. Additional telephone lines can be installed in the event of a prolonged response operation.
- **Telephone (Cellular)** - Cellular telephones allow for added mobility and response effectiveness. Cellular phones are commonly maintained by certain facility personnel. Additional cellular phones can be secured in the event of a prolonged response operation.
- **FAX Machines** - FAX machines allow for a rapid transfer of information/documentation such as status reports/updates, written notifications, and purchase orders.
- **Computers** - Computers are commonly used in networks, which allow access to various other locations and company personnel. Computers also speed the consolidation of information and preparation of written reports.

Emergency Plans for Spill Response (Operational Plan) by Terminal Personnel

Initial Response

Upon discovery of any size oil spill from any source, facility personnel will immediately perform the actions listed on “Oil Spill Response - Immediate Actions” given in Section 1.7.1.2 of this plan. This includes notification of the Terminal Manager or the Assistant Terminal Manager that will assume the duties of the QI. The individual discovering the spill becomes the Incident Commander (IC) until relieved of this responsibility.

The QI will initiate the notifications (refer to Section 1.3.1 of this plan) and other initial actions (refer to Section 1.3.6 of this plan) if the spill has resulted in a discharge of oil from the site or if a discharge appears probable.

Within the first hour of discovery of a spill, terminal personnel will:

- Make an immediate assessment of the incident
- Eliminate any existing or possible sources of ignition
- Secure the source of the spill if it can be performed safely and poses no threat to human health
- Initiate notifications (refer to Section 1.3.1)
- Ensure the terminal ceases operation of truck transfers, tank transfers, and/or pipeline transfers
- Deploy terminal response equipment, including sorbent pads and/or booms, and absorbent material to contain, divert, and absorb oil on the ground, within terminal drainage ditches or pathways, or within secondary dike areas, as may be appropriate to mitigate spill flow direction

In addition, within the first two hours, the OSRO may utilize a portable pump for transfer to portable tanks or tank trucks, as necessary, to recover contained oil. Recovered oil will be returned to compatible facility storage tanks or stored in the OSRO tanks or trucks.

Spill Management Team (SMT)

The Spill Management Team will consist of personnel identified in Section 1.3.4 of this plan who will staff the organizational structure identified in Section 1.8.2 of this plan to manage response plan implementation.

Evaluation

In the event of a spill at the facility, the QI will notify the OSRO that their services may be required pending additional evaluation. The QI, with the support of the OSRO if needed, will evaluate the spill, based on the best available information and initial projections for factors including, but not limited to, the following:

- Quantity of spill
- Spill source secured
- Material spilled
- Time elapsed since spill began
- Natural resources at risk
- Public water sources at risk

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- Weather conditions
- Present location of spill

Mobilization

If required, the QI will instruct the primary OSRO to mobilize in the shortest feasible time. When in doubt, it is better to mobilize than to have resources on standby. OSROs will mobilize from their nearest response locations, but may request additional resources from subcontractors or other OSRO locations as warranted in liaison with the terminal QI.

Initial Control and Mitigation Opportunities Completed by OSRO Contractor(s)

The OSRO shall evaluate the specifics of the situation to determine opportunities to effectively intercept and remove the oil and protect natural resources at risk. The opportunities may include, but are not limited to:

- Deciding which mobilization site(s) to use at the facility. This shall be based on which sites offer the best opportunity to control and mitigate the discharge consistent with areas at risk.
- Using sorbent materials, skimmers, or vacuum methods to remove oil from the water surface.

Every effort will be made to protect fish and wildlife and sensitive areas from oil incursion. These areas are identified in Section 1.4.2 of this plan. Potential deployment sites for containment boom, recovery equipment, and/or sorbent materials are listed in Table in Section 1.5.3 of this plan

Contractor Response Plan

- When appropriate, the OSRO shall follow its own mobile response plan measures and, if requested, make an over flight of the area as soon as possible to confirm the extent of the spill.
- Weather information will be obtained using local sources.
- The material spilled, estimated quantity, time since spill began, and confirmation that the spill source is secured shall be reviewed by conferring with facility personnel.
- The resources at risk, priorities for protection, and response strategies shall be reviewed with the Federal On-Scene Coordinator (FOSC) and the Maryland Department of the Environment (MDE), if requested or as needed.
- A detailed response plan will be formulated by the OSRO and reviewed by the QI or designee, plus FOSC and MDE representatives, if on-site.
- The QI or designee and the OSRO will meet as required to assess conditions, effectiveness of response measures, and the need to redirect response efforts.
- The extent of onshore land, marsh, wetlands, or wildlife cleanup to be pursued shall be determined through consultation with regulatory agencies.

On-Scene Command Post for Worst-Case Discharge

The Terminal Office will serve as the Incident Command Post for any spill, unless conditions require the command post to be located off-site, because it is the on-site location for communications equipment (telephone and computer), terminal records, and meeting facilities.

Additional Response Training, Contracted Help, Response Equipment / Experts

OSRO spill response equipment will be provided from the OSRO's equipment yards, as needed. The OSROs have multiple facilities within the state and region that can provide additional equipment, labor, and capabilities to supplement their responding work crews, as may be necessary. In addition, OSROs have access to subcontractors in the Baltimore, MD area that can provide additional response equipment and manpower, if necessary. OSRO contact information is provided in Section 1.3.1 and 1.3.4.

OSROs can also provide access to experts as needed for spill response strategies from its own staff and the facility can also access Antea Group, the facility's FRP plan writer, for a regulatory expert as may also be needed. Additional OSRO information is provided in Appendix A of this plan.

EMERGENCY RESPONSE ACTION PLAN

Ability to Implement Plan, Including Response Training and Practice Drills

The facility and its OSRO conduct response training and practice drills in accordance with Section 1.3.3 and 1.8.2 of this plan. Documentation of completion of drills/exercise required of the facility and its OSROs, as described in Section 1.8.2 of this plan, is maintained with terminal records for at least five (5) years. Documentation for the most recent exercises and drills conducted by the facility and its OSROs is provided in Appendices A and K to this plan. The facility's ability to implement the plan includes access to additional equipment resources as given in this section and also in Appendix A to this plan.

OIL SPILL RESPONSE - IMMEDIATE ACTIONS

Initial response actions are those taken by local personnel immediately upon becoming aware of a discharge or emergency incident, before the local response personnel are formed and functioning. Timely implementation of these initial steps is of the utmost importance because they can greatly affect the overall response operation.

Upon detection of a discharge, terminal personnel will initiate response by following the steps in the Oil Spill Response – Immediate Actions table below. The individual discovering the spill is to take these actions **only if they can be performed safely**. These steps involve making the appropriate notifications in accordance with Section 1.3.1 of this plan. Section 1.3.4 of this plan lists facility response personnel, spill response resources, and other company personnel.

OIL SPILL RESPONSE – IMMEDIATE ACTIONS		
1	Conduct a brief initial assessment: Are any personnel injured? Are any personnel in danger? What product was spilled? Has the source of the spill been stopped? Is oil in the drainage system? Is contractor assistance necessary?	Activate First Aid and call the police and/or fire department, if appropriate.
2	Stop the product flow.	Act quickly to secure pumps, close valves, etc.
3	Shut off ignition sources.	Motors, electrical circuits, open flames, welding, etc.
4	Warn terminal personnel.	Enforce safety and security measures.
5	Notify the Terminal Manager, who will assume site QI duties.	The QI will use “Oil Spill Reporting Procedure” to determine if “Emergency Notification Phone List” and “Spill Response Notification Form” need to be completed. Refer to contact information for NRC and FOSC in Section 1.3.1 of this plan.
6	Initiate containment.	Take necessary measures to contain the spill utilizing the facility’s response equipment.
7	Coordinate with response contractors and agencies.	At direction of QI.

It is important to note that these actions are intended only as guidelines. The appropriate response to a particular incident may vary depending on the nature and severity of the incident and on other factors that are not readily addressed. Note that, without exception, personnel and public safety is first priority.

The first Company person on scene will function as the person-in-charge until relieved by an authorized supervisor who will assume the position of Incident Commander (IC). Transfer of command will take place as more senior management respond to the incident. For response operations within the control of the local response personnel, the role of IC will typically be assumed and retained by Terminal Management. The person functioning as IC during

<i>EMERGENCY RESPONSE ACTION PLAN</i>

the initial response period has the authority to take the steps necessary to control the situation and must not be constrained by these general guidelines.

Maps and figures have been redacted in accordance with the FOIA Exemption 7(F).

<i>FACILITY INFORMATION</i>

1.2 FACILITY INFORMATION

1.2.1 FACILITY NAME AND LOCATION

Facility Name:	PF&T Baltimore South Terminal
Location (Street Address):	1622 South Clinton Street
City/State/Zip:	Baltimore, MD 21224
County:	Baltimore
Phone Number:	410-342-7800
Fax Number:	410-342-7804
EPA FRP ID Number:	FRP 03-A051
USCG FIN Number:	BAL01239
Pipeline ID :	OP ID

1.2.2 LATITUDE AND LONGITUDE

(b) (7)(F)

1.2.3 WELLHEAD PROTECTION AREA

This facility is not located within a Wellhead Protection Area, as determined by the Maryland Department of the Environment Water Supply Program. Refer to Appendix D to this plan.

1.2.4 OWNER / OPERATOR

	Owner	Operator
Owner/Operator:	Petroleum Fuel & Terminal Co.	Petroleum Fuel & Terminal Co.
Location (Street Address):	8235 Forsyth Blvd., Suite 400	1622 South Clinton Street
City/State/Zip:	Clayton, MO 63105	Baltimore, MD 21224
County:	St. Louis	Baltimore
Phone Number:	314-889-0214	410-342-7800
24 Hr. Emergency Phone Number:	314-889-9600	443-532-0039

1.2.5 QUALIFIED INDIVIDUAL

Qualified Individual(s):	Bill Ransom	Ward Degrange
Position:	Terminal Manager	Assistant Terminal Manager
Work Address:	1622 South Clinton St. Baltimore, MD 21224	1622 South Clinton St. Baltimore, MD 21224
Work Phone Number:	410-342-7800	410-342-7800
Cellular Phone Number:	443-532-0039	410-404-0561
Pager Phone Number:	NA	NA
Response Training	<ul style="list-style-type: none"> ▪ 40-hr OSHA HAZWOPER ▪ 8-hr OSHA refresher ▪ 25+ years terminaling exp. 	<ul style="list-style-type: none"> ▪ 11+ years terminaling exp.

<i>FACILITY INFORMATION</i>

1.2.6 DATE OF OIL STORAGE START-UP

Date of Oil Storage Start-up:	1938 - Initial Start-up
EPA FRP ID Number:	FRP 03-A051
USCG FIN Number:	BAL01239

1.2.7 CURRENT OPERATION

This Facility Response Plan (FRP) has been prepared to satisfy applicable requirements in 40 CFR Part 112, 33 CFR Part 154, and 49 CFR 194. PF&T hereby certifies that this response plan is consistent with the most current versions of the National Contingency Plan (NCP) (40 CFR Part 300) and the applicable Area Contingency Plan for this area, the Upper Chesapeake Estuary Area Contingency Plan.

Description of Operation

This facility operates as a bulk liquid petroleum tank storage terminal that is located in Baltimore, MD and is situated on the bank of the Northwest Branch (Harbor) of the Patapsco River. The facility occupies approximately 14 acres of land. Refer to the Topographic Site Map (Figure 4) in Section 1.9 of this plan for a depiction of the site and its immediate vicinity.

The facility is considered a complex, possessing a combination of marine-transportation-related (MTR), non-transportation-related components, and an onshore oil pipeline, that is subject to the jurisdiction of more than one Federal agency. The facility has a fixed, MTR component consisting of docks with transfer equipment and associated piping that is regulated by the United States Coast Guard at 33 CFR 154, Subpart F. The facility has an onshore, non-transportation-related component consisting primarily of bulk storage tank farms and transfer areas that is regulated by the Environmental Protection Agency at 40 CFR 112.20. The facility also has an onshore pipeline that is regulated by the Department of Transportation at 29 CFR 194, Subpart B. The facility operates on a NON-Higher Volume Port Area basis.

Petroleum products can be transferred to and from the facility by marine vessels, tank trucks, rail tank cars, and pipeline. All transfer modes at the facility are capable of both shipping and receiving product. The facility typically distributes product to tank trucks at the Truck Rack and receives product at the Rail Tank Car Unloading Area via tank car. Product transfers at the Ship Dock and Barge Dock, as well as through the pipeline, are more variable and involve both shipping and receiving. The facility is operated and manned 24 hours per day, 7 days per week. For every marine vessel delivery, an operator who has been properly trained is present at the terminal's dock. Further, experienced and trained terminal personnel are on duty to supervise, coordinate and perform all the required facility activities.

This facility has 19 bulk product storage tanks and has a total storage capacity of (b) (7)(F) (including out-of-service, small, and miscellaneous tanks) with an average daily storage volume of (b) (7)(F). Daily throughput is approximately 1,500 barrels, inclusive of all products handled.

The facility is connected to the PF&T Baltimore North Terminal (5101 Erdman Avenue) by an onshore oil pipeline. The 12-inch pipeline runs 3.14 miles between the two terminals and is used for the transfer of light products.

SIC Codes:	4226 - Special Warehousing and Storage
	5171 - Petroleum Bulk Stations and Terminals
NAICS Codes:	493190 - Other Warehousing and Storage
	424710 - Petroleum Bulk Stations and Terminals
Dun & Bradstreet Number:	052619160

Products Handled

Products handled at this facility include:

<i>FACILITY INFORMATION</i>

- Gasoline
- Distillate
- Biodiesel
- Marine Diesel
- Asphalt
- Heating Oil
- Therminol®

Note: Material Safety Data Sheets (MSDS) are referenced in Appendix J to this plan and maintained separately at the facility.

Truck Rack

The facility is equipped with a five (5) bay, five (5) spot truck loading rack. A maximum of five tank trucks may load simultaneously. The rack is typically used to load tank trucks, but is capable of unloading tank trucks as well. The Truck Rack operates continuously.

Transfer Rate: 500 gpm (maximum) per truck

(b) (7)(F)

Ship Dock (North Dock)

The facility is equipped with a Ship Dock that is situated on the shore of the Patapsco River, Northwest Branch (Baltimore Harbor). The North Dock has two (2) transfer locations that can handle either a tank ship or a tank barge, but is incapable of simultaneous operations. The dock is capable of both loading and unloading vessels.

Transfer Rate: Loading: 4,000 – 7,000 bbls/hr per ship
Unloading: 5,000 – 8,000 bbls/hr per ship

Ship Capacity: (b) (7)(F)

Discharge Prevention: Active containment measures
USCG Operations Manual governing marine transfers maintained in Barge Dock Office

Barge Dock (South Dock)

The facility is equipped with a Barge Dock that is situated on the shore of the Patapsco River, Northwest Branch (Baltimore Harbor). The South Dock has three (3) transfer locations that can handle two tank barges at a time. The dock is capable of both loading and unloading vessels.

Transfer Rate: Loading: 5,000 bbls/hr per barge (average)
Unloading: 5,000 – 8,000 bbls/hr per barge (average)

(b) (7)(F)

Discharge Prevention: Active containment measures
USCG Operations Manual governing marine transfers maintained in

<i>FACILITY INFORMATION</i>

Barge Dock Office

Rail Tank Car Unloading Area

The facility is equipped with a Rail Tank Car Unloading Area, located north of Tank Farm Area #5. The area is not a constructed rack but rather consists of two rail spurs equipped with headers that can bottom unload oil. The area is capable of accommodating up to ten (10) rail tank cars and can conduct simultaneous operations. The area is typically used to unload rail tank cars, but is capable of loading rail tank cars as well.

Transfer Rate: 1,200 bbls/hr per car (average)

(b) (7)(F) [REDACTED]

Discharge Prevention: Earthen and asphalt berms
Active containment measures
Safe operating procedures are posted in the transfer area

Inter-facility pipeline

The facility is connected to the PF&T Baltimore North Terminal by an onshore oil pipeline. The 12-inch pipeline runs 3.14 miles between the two terminals and is used for the transfer of light products between the terminals.

Secondary Containment

Secondary containment for the non-transportation-related component of the facility consists of a system of earthen dikes that contains the terminal's bulk product storage tanks. Additionally, the facility uses outer ring walls to provide secondary containment for several large product storage tanks. The volumes of the dikes and ring walls are more than adequate to contain their largest tanks' contents. Specific secondary containment volumes are detailed in Section 1.4 of this Plan. There is no constructed secondary containment for the MTR component of the facility. Instead the MTR component of the facility would rely on active containment measures utilizing spill response equipment stored on-site.

1.2.8 DATES AND TYPES OF SUBSTANTIAL EXPANSION

Substantial Expansion(s):	Date	Type
Initial start-up for oil storage	1938	N/A
Installation of Tanks #54-8, 54-9, 54-11	1941	Installation of additional oil storage capacity
Installation of Tanks #30-6, 30-12, 34-7, 80-5, 80-13,	1943	Installation of additional oil storage capacity
Installation of Tanks #175-15, 195-17, 200-16,	1980	Installation of additional oil storage capacity
Installation of Tanks #175-18, 175-19, 175-20	1982	Installation of additional oil storage capacity
Tanks #10-2, 10-4, 175-19, 175-20 converted to asphalt service	1998	Change in material handling and storage
Tanks #175-15, 175-18 converted to asphalt service	1999	Change in material handling and storage
Tank #175-15 converted to distillate storage and Tank #195-17 converted to gasoline/distillate service	2010	Change in material handling and storage

<i>EMERGENCY RESPONSE INFORMATION</i>

1.3 EMERGENCY RESPONSE INFORMATION

1.3.1 NOTIFICATION

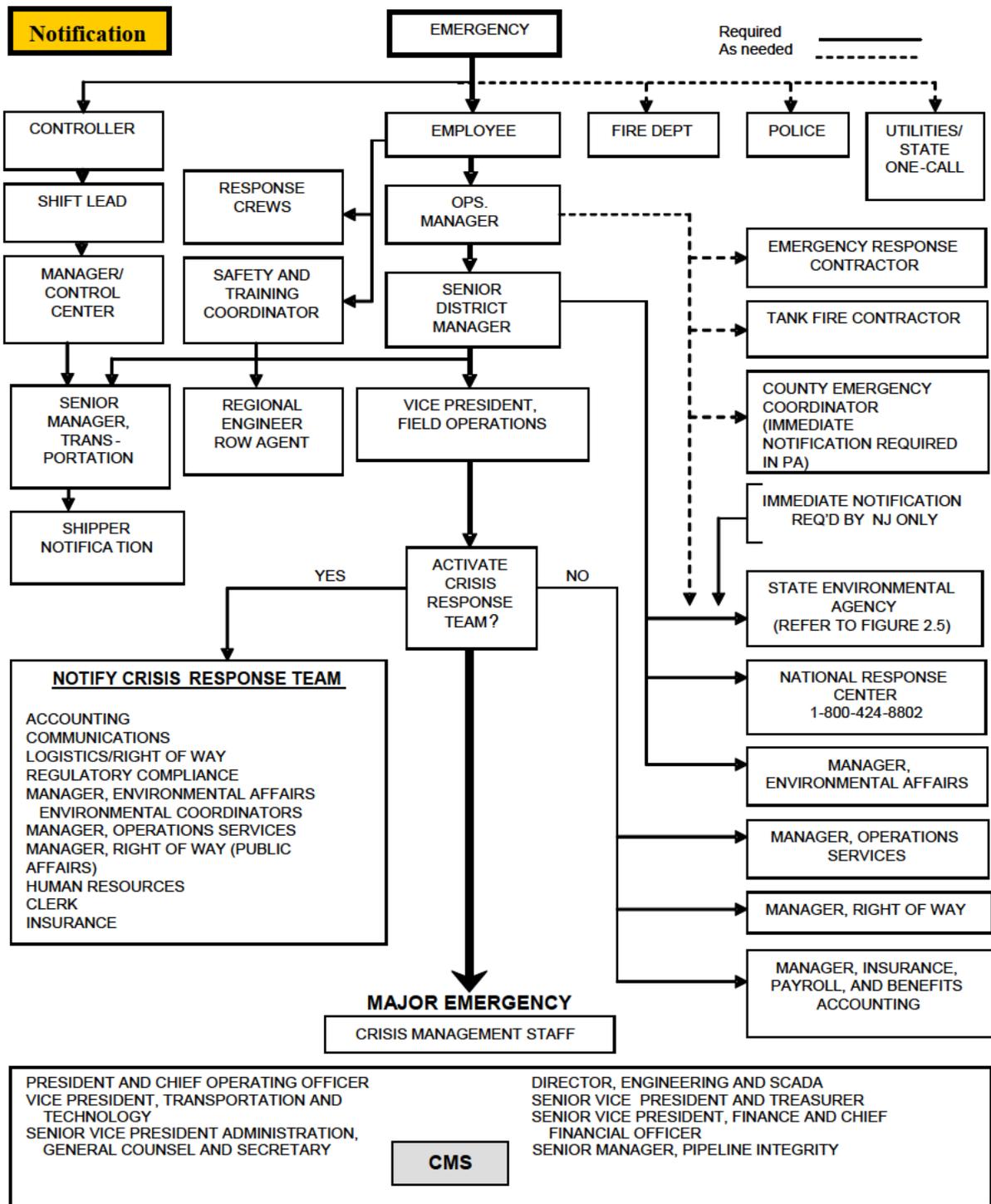
Spill Reporting Procedure on the following page consists of a decision tree designed to help the QI with spill notification decisions.

Emergency Notification Phone List identifies and prioritizes the names and phone numbers of the organizations and personnel that need to be notified in the event of an emergency. The list is divided into two sections with notification sheets. The first sheet lists the required notifications. The following sheets list the optional notifications to be performed as appropriate for the situation. These numbers must be verified each time that this plan is updated. This list is accessible to all facility employees to ensure that, in case of a discharge, any employee on-site could immediately notify the appropriate parties.

Spill Response Notification Form is a checklist of information that shall be provided to the National Response Center and other response personnel. Initial notification must not be delayed pending collection of all information. **It is not necessary to wait for all information before calling NRC. National Response Center – 1-800-424-8802.**

EMERGENCY RESPONSE INFORMATION

Spill Reporting Procedure



EMERGENCY RESPONSE INFORMATION

Emergency Notification Phone ListSheet 1 of 3
Updated 5/11

Name of Individual Making Report: _____

Date: _____

Facility Name: Baltimore South TerminalOwner Name: Petroleum Fuel & Terminal Company

FRP ID #: 03-A051

USCG FIN #: BAL01239

OP ID#: 99043 (Petroleum Fuel & Terminal Co.)

REQUIRED NOTIFICATIONS				
Organization Notification Required for an Oil Discharge		Phone Number	Person Notified	Time Notified
X	National Response Center (NRC)	800-424-8802 (24 hour)		
Internal Response (required notifications)				
L T O O T O	Ken Fenton President, Terminal Division	314-889-9610 - W		
	Bill Ransom Terminal Manager (TM) Qualified Individual - QI	410-342-7800 - W (b) (6) 443-532-0039 - C		
	Ward Degrange Alternate Terminal Manager Alternate QI	410-342-7800 - W 410-404-0561 - C		
	Jack Wienhold Terminal Manager (North Terminal) Alternate QI	410-327-3808 - W (b) (6) 410-365-1570 - C		
Local Response				
Q I O I C	Baltimore City Fire Department	911 / 410-396-9350		
	Baltimore City Police Department	911 / 410-396-2525		
	Miller Environmental Group (OSRO)	410-631-9193 (24-hour)		
	Triumvirate Environmental (OSRO)	410-636-3700		
	Clean Harbors (OSRO)	301-939-6000 800-645-8265 (toll free)		
Agency Notifications				
Q I O	Federal On-Scene Coordinator (FOSC) EPA Region 3	215-814-5000 800-438-2474		
	USCG – COTP Baltimore	410-576-2693		
	U.S. DOT Crisis Management Center	202-366-1863 (24-hour)		

EMERGENCY RESPONSE INFORMATION

REQUIRED NOTIFICATIONS				
	Organization Notification Required for an Oil Discharge	Phone Number	Person Notified	Time Notified
I C	Maryland Public Service Commission (for pipeline spills) John Clementson, Ast. Chief Engineer	800-492-0474 410-767-8111 – W (b) (6) 410-279-6171 – C		
	State Emergency Response Commission (SERC) Maryland Department of the Environment	866-633-4686 (Emergency & Oil Spill Hotline) 877-634-6361		
	Local Emergency Planning Commission (LEPC) Baltimore County Emergency Management Agency [as Baltimore County Fire Department]	410-887-4511		

(Continued)

<i>EMERGENCY RESPONSE INFORMATION</i>

Emergency Notification Phone List

Sheet 2 of 3
Updated 5/11

AS NEEDED NOTIFICATIONS			
Organization Notification Performed <u>as Appropriate</u>	Phone Number	Person Notified	Time Notified
Sensitive resources, as needed			
Water Intakes			
Baltimore Gas & Electric	800-685-0123		
Schools			
St. Kasmir School	410-342-2681		
Medical Facilities			
Johns Hopkins Bayview Medical Center	410-550-0100		
Harbor Hospital	410-350-3200		
Businesses			
NA			
Utilities			
Baltimore Gas & Electric (electric / gas)	800-685-0123		
City of Baltimore, Department of Public works (local water supply / wastewater treatment)	410-396-3500		
Back River Treatment Plant	410-396-9800		
Patapsco Treatment Plant	410-396-2800		
Recreation Areas			
City of Baltimore, Department of Recreation and Parks	410-396-7900		
Anne Arundel County, Recreation and Parks	410-222-7317		
Fort McHenry Park	410-962-4290		
Conservation Area (Trustees of Sensitive Areas)			
Fort Howard Park Sparrow Pt. Rec. Office	410-887-7529		
North Point State Park	410-477-0757		
Fort McHenry Park	410-962-4290		

(Continued)

EMERGENCY RESPONSE INFORMATION

Emergency Notification Phone List

Sheet 3 of 3
Updated 5/11

AS NEEDED NOTIFICATIONS			
Organization Notification Performed as Appropriate	Phone Number	Person Notified	Time Notified
Others, as needed			
Colonial Pipeline Company	410-355-8155		
United States Coast Guard, 5th District, Baltimore Sector Command Center Activities Baltimore	410-576-2525 410-576-2693		
United States Environmental Protection Agency, Region 3	800-436-2474 215-814-5000		
United States Department of Transportation Crisis Management Center Pipeline and Hazardous Material Safety Administration, Office of Pipeline Safety	202-366-1863 202-366-4595		
Maryland Port Police	410-633-1092		
Baltimore City Marine Police (One-call center)	410-396-5352		
Maryland Department of the Environment (MDE)	410-539-3000		
Maryland Emergency Management Agency (MEMA)	877-636-2872		
Maryland Department of Natural Resources (MDNR)	877-620-8367		
Maryland Department of Transportation (MDOT)	410-865-1000		
Maryland Department of Labor (MDOL)	410-230-6001		
Maryland Public Service Commission (for pipeline spills) John Clementson, Ast. Chief Engineer	800-492-0474 410-767-8111 – W (b) (6) 410-279-6171 – C		
Occupational Safety and Health Administration (OSHA)	800-321-6742		
U.S. Fish & Wildlife Service, Washington, D.C. Office	800-344-9453		
Tri-State Bird Rescue & Research, Inc.	302-737-9543		
Weather Report (NOAA, Dial-a-forecast)	703-996-2200 x 1		
Local Media Notifications: WYPR – FM 88.1 WCBM – AM 680 WBAL – TV 11 (NBC)	410-235-1660 410-922-6680 410-338-6501		

<i>EMERGENCY RESPONSE INFORMATION</i>

The following are NON-EMERGENCY numbers. For emergencies, call 911			
---	--	--	--

Baltimore City Fire Department	410-396-9350		
Baltimore City Police Department	410-396-2525		
Ambulance – Transcare, Inc.	410-242-9000		
Maryland State Police	410-486-3101		
Maryland State Fire Marshal	410-339-4200		
Back River Treatment Plant	410-396-9800		
Hospitals			
Johns Hopkins Bayview Medical Center	410-550-0100		
Harbor Hospital	410-350-3200		

<i>EMERGENCY RESPONSE INFORMATION</i>

Spill Response Notification Form

Initial notification must not be delayed pending collection of all information. **It is not necessary to wait for all information before calling NRC. National Response Center – 1-800-424-8802.**

(A) Reporting Party

Name: _____
 Phones: **410-342-7800** _____
 Fax: **410-342-7804** _____
 Company: **Baltimore South Terminal** _____
 Position: _____
 Address: **1622 South Clinton Street** _____
 City: **Baltimore** _____
 State: **MD** _____
 Zip: **21224** _____
 Person Discovering Discharge: _____
 Name: _____
 Company/Org: **Petroleum Fuel & Terminal** _____
 Pipeline: **Petroleum Fuel & Terminal Co.,
 OP ID #99043** _____

(B) Suspected Responsible Party

Name: _____
 Phones: () _____
 Fax: () _____
 Company: _____
 Organization Type: _____
 Private Citizenship: _____
 Private Enterprise: _____
 Public Utility: _____
 Government: _____
 Local _____; State _____; Federal _____
 City: _____
 State: _____
 Zip: _____

Were Materials Discharged? _____ (Y/N)

Is this a Confidential Report? No _____

Are You Calling for Responsible Party? Yes _____

Are You Meeting Federal Obligations to Report? Yes _____

Date Called: _____

Time Called: _____

Incident Description

Source and / or Cause of Incident: _____

Date of Incident: _____

Time of Incident: _____

Weather Conditions: _____

Incident Address / Location: _____

Nearest City / State / Zip: Baltimore, MD

Distance from City: _____

Direction from City: _____

Range: _____

Container Type: _____

Tank Oil Storage Capacity: _____

(b) (7)(F)

<i>EMERGENCY RESPONSE INFORMATION</i>

Material

CHRIS (Chemical Hazards Response Information System) Code (or Type if Code Unknown)	<input type="checkbox"/> OTW (Oils, Fuel: 2) <input type="checkbox"/> ODS (Oils: diesel) <input type="checkbox"/> GAT (Gasolines: automotive) <input type="checkbox"/> KRS (Kerosene) <input type="checkbox"/> OLB (Oils, miscellaneous: lubricating) <input type="checkbox"/> ETH (Non-Oils, Denatured ethanol)	
Discharged Quantity		
Unit of Measure		
Material Discharged In Water		

Response Action

Actions Taken to Correct, Control, or Mitigate Incident: _____

Impact

Number of Injuries: _____ Number of Deaths: _____

Were There Evacuations? _____ (Y / N) Number Evacuated: _____

Was there any Damage? _____ (Y / N) Damage in Dollars (approx.): _____

Medium (air, land, or water) affected: _____

Additional Information

Any information about the incident not recorded elsewhere in the report: _____

Caller Notifications

Agencies notified:

MDE? _____ (Y/N) EPA? _____ (Y/N) USCG? _____ (Y/N) Other? _____ (Y/N)

Describe: _____

EMERGENCY RESPONSE INFORMATION

1.3.2 RESPONSE EQUIPMENT LIST

The inventory of response equipment maintained at the facility is summarized in the table below. These resources are suitable for initial release mitigation efforts for a variety of spill scenarios spills by facility personnel, as they may deem appropriate.

For larger spills, the facility would utilize an Oil Spill Removal Organization (OSRO) and other clean-up contractors for response to a discharge. OSROs on contract maintain equipment and resources suitable for response to larger spills, up to and including a worst case discharge from this facility. See list of OSRO(s) for this facility in Section 1.3.4 of this plan and refer to Appendix A of this Plan for OSRO information, contracts, and equipment. Refer to Section 1.7.1.1 for a comprehensive discussion of spills response resources and plan.

FACILITY SPILL RESPONSE EQUIPMENT						
1. Skimmers / Pumps						
Type, Model, Year Purchased	Number	Operational Status	Capacity (gal/min)	Daily Effective Recovery Rate	Storage Location	Date Fuel Last Changed
NONE						
2. Boom						
Type, Model, Year Purchased	Number	Operational Status	Size (length in ft)	Containment Area (ft ²)	Storage Location	
6" diameter x 12" skirt, 22-oz PVC fabric with universal connectors	1	Operational	1,100	NA	North Dock	
3. Chemicals Stored (Dispersants listed on EPA's NCP Product Schedule)						
Type	Amount	Date Purchased	Treatment Capacity	Storage Location		
NONE						
Were appropriate procedures used to receive approval for use of dispersants in accordance with the NCP (40 <u>CFR</u> 300.910) and the Area Contingency Plan (ACP), where applicable? _____(Y/N)						
Name and State of On-Scene Coordinator (OSC) authorizing use: _____						
Date Authorized: _____						
4. Dispersant Dispensing Equipment						
Type and Year Purchased	Capacity	Operational Status	Storage Location	Response Time (minutes)		
NONE						

EMERGENCY RESPONSE INFORMATION

FACILITY SPILL RESPONSE EQUIPMENT

5. Sorbents

Type and Year Purchased	Amount	Operational Status	Absorption Capacity (gal)	Storage Location
6"/8"/10" absorbent boom	600+ ft (6' sections)	Operational	NA	North Dock
Absorbent pads	10-15 bales (50 pads/bale)	Operational	NA	North Dock and South Dock
Sand	10-20 tons	Operational	NA	Outside Meter/Boiler Room

6. Hand Tools (Hand tools at terminal is not dedicated to emergency response)

Type and year	Quantity	Operational Status	Storage Location
Shovels, rakes, etc.	NA	Operational	Tank Farm Area C

7. Communication Equipment (Communication equipment at terminal is not dedicated to emergency response)

Type / Year Purchased	Quantity	Operational Status	Operating Frequency	Phone #	Storage Location
Handheld radios	6	Operational	NA	NA	Terminal Office
Mobile-phone	1	Operational	NA	NA	Terminal Office

8. Fire Fighting and Personal Protective Equipment

Type and year	Operational Status	Quantity	Storage Location
Various	Operational	NA	Throughout terminal

9. Other (e.g., Heavy Equipment, Boats, and Motors)

Type and year	Operational Status	Quantity	Storage Location
20-ft boat with 115-hp outboard motor	Operational	2	Meter/Boiler Room
12-ft aluminum rowboat with 8-hp outboard motor	Operational	1	North Dock
3,500-watt generator	Operational	1	Meter/Boiler Room

<i>EMERGENCY RESPONSE INFORMATION</i>

1.3.3 RESPONSE EQUIPMENT TESTING/DEPLOYMENT

The contracted OSRO(s) for the facility will provide annual certifications to this terminal that indicate they have met the regulatory requirements for equipment testing and deployment of their response equipment, adequate to maintain the required Federal USG OSRO classifications for this facility. These certifications shall be kept in terminal records for 5 years. The most recent OSRO certifications are available in Appendix A of this plan.

In addition to the response resources and capabilities provided by the contracted OSRO(s), the facility owns and maintains on-site some response equipment. At this facility, the Terminal Manager ensures the following requirements are met regarding this equipment:

- Containment booms, skimmers, vessels, and other major equipment listed or referenced in the plan are periodically inspected and maintained in good operating condition, in accordance with manufacturer's recommendations, and best commercial practices; and
- All inspection and maintenance is documented and that these records are maintained for 3 years.

For equipment which must be inspected and maintained under this section the USCG may:

- Verify that the equipment inventories exist as represented
- Verify the existences of records required under this section
- Verify that the records of inspection and maintenance reflect the actual condition of any equipment listed or referenced
- Inspect and require operational tests of equipment

The Response Equipment Testing and Deployment Log below or comparable terminal form can be used to document the boom or other deployment drills for OSRO response equipment. These exercises are conducted to ensure that boom or other response equipment is operational and the personnel who would deploy and operate the equipment in a spill response are capable of doing so. Only a representative sample of each type of response equipment needs to be deployed and operated, as long as the rest is properly maintained. Representative samples of spill response equipment that will be relied upon for response to a small, medium, or worst-case discharge as discussed in Section 1.7.1 will be tested and deployed annually by terminal personnel or OSRO personnel in liaison with the terminal personnel. Testing of response equipment may be conducted while it is being deployed, and deployment drills may be performed during personnel training. Documentation for OSRO equipment testing/deployment is provided in Appendix A to this plan. Documentation for facility equipment testing/deployment is provided in Appendix K to this plan.

RESPONSE EQUIPMENT TESTING AND DEPLOYMENT LOG				
Date of Last Inspection / Equipment Test	Inspection Frequency	Date of Last Deployment	Deployment Frequency	OSRO Certification

EMERGENCY RESPONSE INFORMATION

1.3.4 PERSONNEL

The **Emergency Response Personnel** list includes all personnel employed by the facility whose duties involve responding to emergencies, including oil spills, even when they are not physically present at the site.

COMPANY EMERGENCY RESPONSE PERSONNEL				
Name	Phone	Response Time ¹	Responsibility during response action	Response training type / date ²
Ken Fenton	314-889-9610 - W	NA	President, Terminal Division	<ul style="list-style-type: none"> ▪ 40-hr OSHA HAZWOPER ▪ Incident Command System ▪ Supervisor Manager Training
Bill Ransom	410-342-7800 - W (b) (6) 443-532-0039 - C	45 min	Incident Commander QI Terminal Manager	<ul style="list-style-type: none"> ▪ 40-hr OSHA HAZWOPER ▪ 8-hr OSHA refresher ▪ 25+ years terminaling exp.
Ward Degrange	410-342-7800 - W 410-404-0561 - C	30 min	Alternate QI Ast. Terminal Manager	<ul style="list-style-type: none"> ▪ 40-hr OSHA HAZWOPER ▪ 8-hr OSHA refresher ▪ 11+ years terminaling exp.
Bill Baker	410-342-7805 - W (b) (6) 443-857-3903 - C	30 min	Secure source, contain and mitigate effects of spill as directed	<ul style="list-style-type: none"> ▪ 40-hr OSHA HAZWOPER ▪ 8-hr OSHA refresher ▪ 40+ years terminaling exp.
Joe Lechert	410-342-7800 - W (b) (6)	15 min	Secure source, contain and mitigate effects of spill as directed	<ul style="list-style-type: none"> ▪ 40-hr OSHA HAZWOPER ▪ 8-hr OSHA refresher ▪ 35+ years terminaling exp.
Mike McKenzie	410-342-7805 - W (b) (6)	15 min	Secure source, contain and mitigate effects of spill as directed	<ul style="list-style-type: none"> ▪ 40-hr OSHA HAZWOPER ▪ 8-hr OSHA refresher ▪ 19+ years terminaling exp.
Jack Wienhold	410-327-3808 - W (b) (6) 410-365-1570 - C	1 hour	Deputy Incident Commander Alternate QI Terminal Manager	<ul style="list-style-type: none"> ▪ 40-hr OSHA HAZWOPER ▪ 8-hr OSHA refresher ▪ 40+ years terminaling exp.
Bob Beam	410-327-3808 - W (b) (6)	1 hour	Secure source, contain and mitigate effects of spill as directed	<ul style="list-style-type: none"> ▪ 40-hr OSHA HAZWOPER ▪ 8-hr OSHA refresher ▪ 25+ years terminaling exp.
R.Hoffer	410-493-8797	30 min	Secure source, contain and mitigate effects of spill as directed	<ul style="list-style-type: none"> ▪ 40-hr OSHA HAZWOPER ▪ 8-hr OSHA refresher
C. Baer	410-638-6065	30 min		
B. Upp	410-238-2450	30 min		
T. Kuhn	443-506-1162	30 min		
B. Blume	443-317-8245	30 min		
J. Kelly	443-231-7715	30 min		
B. Blevins	410-900-6147	30 min		
W. Cameron	443-858-2457	30 min		
M. Crunkilton	443-564-6930	30 min		
B. Hess	410-371-8730	30 min		
D. Morris	410-375-0367	30 min		
D. McComas	410-858-8524	30 min		
J. Sealey	410-679-9362	30 min		
C. McCord	717-235-2683	1 hour		
J. Stealey	443-600-1252	30 min		

1) 3-5 minute response time for on-site facility personnel during business hours

2) Terminal personnel training records are maintained at the facility under separate cover

EMERGENCY RESPONSE INFORMATION

The **Emergency Response Contractors** list includes primary and secondary emergency response contractors retained by the facility. For larger spills, the facility would utilize an Oil Spill Removal Organization (OSRO) and other clean-up contractors for response to a discharge. OSROs on contract maintain 1,000' of containment boom and have any additional equipment that may be needed for response to a worst case discharge. Refer to Appendix A to this plan for OSRO information, contracts, and equipment and Section 1.7.1.1 for a discussion of response resources, including contractor resources.

EMERGENCY RESPONSE CONTRACTORS (SPILL RESPONSE RESOURCES)				
Company/Contractor	Telephone #	Address	Response Time (hours)	Contract Responsibility
OSRO				
Miller Environmental Group, Inc	410-631-9193 (24-hour)	4616 Newgate Avenue Baltimore, MD 21224	< 1	Respond with equipment, supplies, personnel, etc. to an oil spill beyond the capabilities of the terminal's Emergency Response Personnel. USCG OSRO CLASSIFICATION: (Baltimore COTP Zone) River/Canal: MM, W1, W2, W3
Triumvirate Environmental	410-636-3700	1500 Carbon Avenue Baltimore, MD 21226	< 2	Respond with equipment, supplies, personnel, etc. to an oil spill beyond the capabilities of the terminal's Emergency Response Personnel. USCG OSRO CLASSIFICATION: (Baltimore COTP Zone) River/Canal: MM, W1, W2, W3
Clean Harbors Environmental Services, Inc.	301-939-6000 800-645-8265 (toll free)	3527 Whiskey Bottom Road Laurel, MD 20724	< 4	Respond with equipment, supplies, personnel, etc. to an oil spill beyond the capabilities of the terminal's Emergency Response Personnel. USCG OSRO CLASSIFICATION: (Baltimore COTP Zone) River/Canal: MM, W1, W2, W3
Other Resources				
None				
Waste Disposal				
A to Z Environmental Group	410-679-1308	1801 E. Fayette St. Baltimore, MD 21231	< 2	Environmental Remediation/Clean-up & Hazardous Waste Transport
Subsurface Technologies	410-848-6219	1301 Avondale Road New Windsor, MD 21776	< 4	Environmental Remediation/Clean-up & Hazardous Waste Transport

<i>EMERGENCY RESPONSE INFORMATION</i>

The **Facility Response Team** list is comprised of both Baltimore South Terminal emergency response personnel (referenced by job title/position) and the emergency response contractors (OSRO companies). They will respond immediately upon discovery of an oil spill (i.e., the first people to respond). These are the people normally on-site or the primary response contractors that would come from off-site locations.

FACILITY RESPONSE TEAM				
Name	Phone	Response Time ¹	Responsibility during response action	Response training type / date ²
Bill Ransom	410-342-7800 - W (b) (6) 443-532-0039 - C	45 min	Incident Commander QI Terminal Manager	<ul style="list-style-type: none"> ▪ 40-hr OSHA HAZWOPER ▪ 8-hr OSHA refresher ▪ 25+ years terminaling exp.
Ward Degrange	410-342-7800 - W 410-404-0561 - C	30 min	Alternate QI Ast. Terminal Manager	<ul style="list-style-type: none"> ▪ 40-hr OSHA HAZWOPER ▪ 8-hr OSHA refresher ▪ 11+ years terminaling exp.
Bill Baker	410-342-7805 - W (b) (6) 443-857-3903 - C	30 min	Secure source, contain and mitigate effects of spill as directed	<ul style="list-style-type: none"> ▪ 40-hr OSHA HAZWOPER ▪ 8-hr OSHA refresher ▪ 40+ years terminaling exp.
Joe Lechert	410-342-7800 - W (b) (6)	15 min	Secure source, contain and mitigate effects of spill as directed	<ul style="list-style-type: none"> ▪ 40-hr OSHA HAZWOPER ▪ 8-hr OSHA refresher ▪ 35+ years terminaling exp.
Mike McKenzie	410-342-7805 - W (b) (6)	15 min	Secure source, contain and mitigate effects of spill as directed	<ul style="list-style-type: none"> ▪ 40-hr OSHA HAZWOPER ▪ 8-hr OSHA refresher ▪ 19+ years terminaling exp.
Miller Environmental Group (OSRO)	410-631-9193 (24-hour)	< 1 hour	OSRO - refer to Emergency Response Contractors Table given previously	Company training including OSHA 40-hour HAZWOPR
Triumvirate Environmental (OSRO)	410-636-3700	< 2 hours	OSRO - refer to Emergency Response Contractors Table given previously	Company training including OSHA 40-hour HAZWOPR
Clean Harbors (OSRO)	301-939-6000 800-645-8265 (toll free)	< 2 hours	OSRO - refer to Emergency Response Contractors Table given previously	Company training including OSHA 40-hour HAZWOPR

- 3) 3-5 minute response time for on-site facility personnel during business hours
 4) Terminal personnel training records are maintained at the facility under separate cover

<i>EMERGENCY RESPONSE INFORMATION</i>

The **Terminal Spill Management Team** list includes personnel identified to staff the Spill Management Team (SMT) structure identified in Section 1.8.2 of this plan to manage response plan implementation.

TERMINAL SPILL MANAGEMENT TEAM		
Name	Facility Position	SMT Functional Position(s)
Bill Ransom	Terminal Manager QI	Incident Commander (IC), Public Information, Liaison
Ward Degrange	Ast. Terminal Manager Alt. QI	Safety, Logistics, Liaison with Government Agencies
Bill Baker	Terminal Foreman	Spill Operations, Planning, Finance, Logistics
Lechert, Mckenzie, Hoffer, Kuhn, Blume, Kelly, Blevins, Cameron, Crunkilton, Hess	Terminal Operator	Spill Operations, Planning, Finance

EMERGENCY RESPONSE INFORMATION

1.3.5 EVACUATION PLANS

Facility personnel shall adhere to the following procedures with regard to evacuation:

Assess the Situation

The Qualified Individual (Emergency Team Coordinator) shall assess the situation to the extent that time and safety permit when initiating an evacuation. The following factors shall be taken into account:

Location of stored materials

There are five (5) distinct containment areas for bulk product storage at the facility. Tank Farm Area #1 contains Tanks #20-1, 10-2, 5-3, 10-4, and 5-10; Tank Farm Area #2 contains Tanks #30-12, 80-13, 30-6, and 80-5; Tank Farm Area #3 contains Tank #54-11; Tank Farm Area #4 contains Tanks #34-7, 54-8, 54-9; and Tank Farm Area #5 contains Tank #175-19 and 175-20. Additionally, the largest bulk storage tanks at the facility, Tanks #175-15, 175-18, 195-17, and 200-16, are located outside of containment areas but within outer ring walls built to a height of 43-45 feet. These tank farm areas and outer ring walls encompass all bulk product storage tanks at the facility.

The facility also stores a variety of petroleum products in smaller, miscellaneous containers and drums throughout the facility. Specific secondary containment volumes are detailed in Section 1.4 of this Plan. Refer to the Site Plan Diagram (Figure 1) in Section 1.9 of this plan that shows the location of stored materials at the facility.

Hazards imposed by spilled materials

A detailed listing of hazards associated with each product stored is contained in Material Safety Data Sheets that are maintained at the facility under separate cover. The potential for fire and vapor inhalation are the primary hazards posed by a spill of gasoline or diesel fuel. The potential for contact thermal burns and vapor inhalation are the primary hazards posed by a spill of heated asphalt. The primary evacuation route for facility personnel is unlikely to be impacted by a spill. A description of these routes is provided below. Refer to the Evacuation Diagram (Figure 3) in Section 1.9 of this plan that shows personnel evacuation routes.

Spill Flow Direction

The general topography at the site slopes west towards the waterfront of the Patapsco River, Northwest Branch, however, the gradient is very slight. Drainage patterns within specific areas can vary, and are described as follows:

- Tank Farm Area #1 – Stormwater flows into a drain located near the northwest dike wall. The drain connects to the main yard drain which conveys drainage to OWS #001.
- Tank Farm Area #2 - Stormwater flows into one of two drains located along the south dike wall. The drains connect to OWS #002 and OWS #003.
- Tank Farm Area #3 – This area is several feet below the general site grade. Stormwater flows into a drain located in the western portion the area. The stormwater is then pumped into the main yard drain which conveys drainage to OWS #001.
- Tank Farm Area #4 – This area is several feet below the general site grade. Stormwater flows into a drain located along the south dike wall. The stormwater is then pumped into the main drainage line that connects OWS #001. Stormwater can also be pumped into main yard drain from northwest portion of the area.
- Tank Farm Area #5 – Stormwater flows into a drain located along the east wall of the dike. The drain conveys stormwater to Outfall #005, located along South Haven Street.
- Outer Ring Wall Tanks – Stormwater drained from the outer ring walls of Tanks #195-17 and #200-16 flows into a drain that connects to the main yard drain which conveys drainage to OWS #001. Stormwater drained from the outer ring walls of Tanks #175-15 and #175-18 flows into a drain which connects to the main drainage line serving OWS #001.

<i>EMERGENCY RESPONSE INFORMATION</i>

- Truck Rack – Stormwater that accumulates within curbing flows to drainage grates centrally located within each bay. The stormwater is then conveyed into the main drainage line that connects to OWS #001.
- Ship Dock and Barge Dock – Stormwater flows west directly into the Patapsco River, Northwest Branch. Spills occurring shoreside of the docks but outside of constructed containment would flow west towards the Patapsco River.
- Rail Tank Car Unloading Area – Stormwater flows southwest along the railroad tracks.
- Truck Unloading Pad – Stormwater that accumulates within curbing flows to a drainage grate that connects to Tank Farm Area #1.

Otherwise, stormwater from miscellaneous transfer spots and operational areas at the facility follow the general site gradient, flowing west towards the Patapsco River, Northwest Branch. Likewise, any uncontained spills or spills resulting from the failure of secondary containment would flow west towards the Patapsco River, Northwest Branch. Facility drainage patterns are depicted in the Site Drainage Plan Diagram (Figure 2) in Section 1.9 of this plan. The trajectory for the entire planning distance spill pathway is depicted in the Worst Case Discharge/Environmental Sensitivity Diagram (Figure 5) in Section 1.9 of this plan.

Prevailing wind direction and speed

The prevailing wind direction at this facility is from the west with an average speed of about 7 miles per hour. The prevailing wind speed and direction varies somewhat by month with the wind speed generally increasing in the colder months. Wind data from the National Weather Service Baltimore – Inner Harbor weather station recorded from November 2009 to October 2010 are given below:

November	NE, 6.2 mph	March	NW, 7.6 mph	July	SW, 5.2 mph
December	W/SW, 7.2 mph	April	W, 6.5 mph	August	S/SE, 4.8 mph
January, 2010	W, 8.2 mph	May	SE, 6.5 mph	September	SW, 8.4 mph
February	N/NW, 9.7 mph	June	W, 5.7 mph	October	W, 8.7 mph

Facility personnel should attempt to remain upwind of releases during evacuation procedures; wind direction can be determined by observing wind socks at the facility.

Water currents, tides, or wave conditions

The Baltimore Harbor and Patapsco River Northwest Branch are subject to a diurnal tide (2-cycles each day) having only a moderate rise and fall with a range of 2 feet. Current velocity is predicted as weak, less than 1 knot, and averages 0.5 knot. Wave action in this area is primarily generated from marine traffic creating a confused wave pattern most of the time.

Arrival route of emergency response personnel and equipment

The facility is located in Baltimore, MD, just east of the downtown area. Emergency response equipment and personnel will arrive via South Clinton Street and proceed through the Terminal Office entrance/exit gate or the Meter/Boiler Room exit gate. Alternately, emergency response equipment and personnel could arrive at the facility's docks via the Patapsco River/Northwest Branch. Critical information shall be conveyed to all outside responding parties. Refer to the Topographic Site Map (Figure 4) and Site Drainage Plan Diagram (Figure 2) in Section 1.9 of this plan for geographic location and access routes to the site.

Establish Command Center

The necessity of a command center depends on the type and magnitude of emergency (e.g., catastrophic spill, a major structural fire, or multiple events). The facility has selected the following location(s) to serve as the command center(s):

Command Center: Terminal Office

Alternate Command Center: Best Western Hotel and Conference Center
(5625 O'Donnell St., Baltimore, MD, 21224)

EMERGENCY RESPONSE INFORMATION

At the Baltimore South Terminal, the Terminal Office is the on-site location for communications equipment, terminal records, meeting facilities, and administrative equipment. In the event the Terminal Office was inaccessible or otherwise incapable of serving as the command center, an alternate command center would be established at the Best Western Hotel and Conference Center

Send Evacuation Signal

The designated evacuation signal at the Baltimore South Terminal is the sounding of an air horn that is kept at the Terminal Office. Additionally, portable radios and personal communication would be relied during a facility-wide evacuation to help communicate and disseminate the evacuation message. This method of evacuation notification shall be communicated to all terminal personnel and reviewed as part of monthly safety training.

Transport Injured Personnel

The emergency medical organizations will be notified and injured personnel will be transported by ambulance to the nearest hospital. Johns Hopkins Bayview Medical Center (listed in the Section 1.3.1) is located about 2 miles northeast of the facility and driving directions from the terminal are as follows:

- Head north on South Clinton St.
- Turn right at Boston St.
- Turn left at South Haven Ct.
- Turn right at Eastern Ave.
- Turn left at Bayview Blvd.
- Turn right at Nathan Shock Dr.
- Turn left at Bioscience Dr.

For minor injuries, an individual could be transported by private or terminal vehicle.

Exit Facility by Designated Emergency Route Assignments

The critical locations of concern in emergency situations are the tank farms and barge dock. All employees should be able to escape from the following areas where there are facility operations:

- Terminal Office
- Ship Dock Area
- Barge Dock Area
- Truck Rack
- Rail Tank Car Unloading Area
- Within tank farm area diking surrounding product storage tanks
- Ancillary buildings including the Meter/Boiler Room, Foam Shed, etc.

Persons not involved in emergency response efforts shall leave the facility area affected by the incident. Those employees designated to remain behind to care for essential facility operations, operate fire fighting systems, or perform response related tasks shall likewise exit if it becomes absolutely necessary due to life threatening conditions.

Facility Ingress/Egress Points

There are three (3) main access points at the facility. The Terminal Office entrance/exit gate is located at the southern end of the terminal leading to South Clinton Street and is the primary access point to the facility's operational areas. The Truck Rack entrance gate is located to the north of Tank Farm Area #3 and also leads to South Clinton Street. The Meter/Boiler Room exit gate is located at the northern end of the property and leads to Danville Avenue. The Truck Rack entrance gate and Meter/Boil Room exit gate primarily serve the Truck Rack. Additionally, a fourth gate provides access Tank Farm Area #5. If emergency conditions dictate, any facility gate can serve as ingress or egress points. Facility ingress/egress points are portrayed in the Site Evacuation Plan Diagram (Figure 3) in Section 1.9 on this plan.

<i>EMERGENCY RESPONSE INFORMATION</i>

Primary Evacuation Route

During an emergency evacuation, facility personnel are directed to immediately evacuate the critical locations of concern listed above and use the **Terminal Office gate** as the primary facility evacuation point. This gate provides access to South Clinton Street. After evacuating the facility, personnel will proceed to the gathering point(s)/check-in area(s) described below.

Contractors and vendors shall be informed of evacuation procedures upon entering the terminal. Evacuation routes and locations are portrayed in the Site Evacuation Plan Diagram (Figure 3) in Section 1.9 of this plan.

Alternate Routes of Evacuation

If site emergency conditions prevent the use of the primary evacuation routes and evacuation points, facility personnel are directed to use alternate evacuation routes and evacuation points. At this facility, personnel are directed to immediately evacuate the critical locations of concern listed above and use the **Truck Rack entrance gate** or the **Meter/Boiler Room gate** as alternate facility evacuation points. The Truck Rack entrance gate provides access to South Clinton Street while the Meter/Boiler Room gate, situated at the northern end of the property, provides access to Danville Avenue. After evacuating the facility, personnel will proceed to the gathering point(s)/check-in area(s) described below.

Contractors and vendors shall be informed of evacuation procedures upon entering the terminal. Evacuation routes and locations are portrayed in the Site Evacuation Plan Diagram (Figure 3) in Section 1.9 of this plan.

Proceed to Designated Places of Shelter / Gathering Points

The location of the designated shelter within the terminal property would be the **Terminal Office**. Employees would not take refuge in an area not designated in this plan unless emergency circumstances absolutely prevent evacuation via the main exits. Those individuals designated to remain behind to control critical operations should clearly understand that they are to remain for active emergency purposes, and not for refuge in a location presumed to be safe.

In the event of emergency evacuation, personnel shall proceed directly to the pre-determined gathering point(s)/check-in area(s). Once assembled at the gathering point(s)/check-in area(s), a roll call will be conducted to account for all personnel and further instructions will be given.

On-site Shelter: Terminal Office, first floor

Primary Gathering Point / Check-in Area: Terminal Office, first floor

Alternate Gathering Point / Check-in Area: Corner of South Clinton St. and Boston St.

Evacuation routes and shelter and gathering point locations are portrayed in the Site Evacuation Plan Diagram (Figure 3) in Section 1.9 of this plan.

Initiate Procedures to Account for all Employees

All personnel are familiar with the procedures to account for employees after an emergency evacuation has been completed. These procedures are as follows:

- The Qualified Individual shall be responsible for accounting for all employees after an emergency.
- A written report on the head count shall be given to a member of the Emergency Management Team.
- The police and/or fire department shall be informed if any person is believed missing.
- Designated employees may try to account for missing persons. However, at no time during a search shall an employee place himself or someone else at risk through his actions.

<i>EMERGENCY RESPONSE INFORMATION</i>

Evacuation Procedures for Surrounding Areas

In the event that evacuation of the areas surrounding the facility is warranted, the EC or QI would coordinate efforts with police, fire department, and/or the Local Emergency Planning Committee (LEPC). Contact information for local authorities is provided in Section 1.3.1 of this plan.

The following information shall be provided to the LEPC and outside emergency response groups:

- Nature of the emergency episode.
- Reason for requesting an evacuation.
- Location where the Qualified Individual can be reached.

This procedure shall also suffice for SARA Title III reporting purposes.

Community evacuation, if necessary, will be handled by local emergency officials according to the LEPC evacuation plan. If necessary resources exceed the capacity of the Baltimore County emergency response team, they will contact the Maryland Department of the Environment to request the assistance of a state Regional Response Team (Region 3 RRT) for support.

<i>EMERGENCY RESPONSE INFORMATION</i>

1.3.6 QUALIFIED INDIVIDUAL'S DUTIES

The following table provides the Qualified Individuals (QIs) at the Baltimore South Terminal. While these individuals have been granted the above authority to act as Qualified Individuals, it does not preclude other PF&T representatives from also performing these duties.

Qualified Individual	Position	(b) (6)	Phone	Response Training*
Bill Ransom	Terminal Manager	(b) (6)	410-342-7800 - W (b) (6) 443-532-0039 - C	<ul style="list-style-type: none"> ▪ 40-hr OSHA HAZWOPER ▪ 8-hr OSHA refresher ▪ 25+ years terminaling exp.
Ward Degrange	Assistant Terminal Manager		410-342-7800 - W 410-404-0561 - C	<ul style="list-style-type: none"> ▪ 40-hr OSHA HAZWOPER ▪ 8-hr OSHA refresher ▪ 11+ years terminaling exp.
Jack Wienhold	Terminal Manager (N. Terminal)		410-327-3808 - W (b) (6) 410-365-1570 - C	<ul style="list-style-type: none"> ▪ 40-hr OSHA HAZWOPER ▪ 8-hr OSHA refresher ▪ 40+ years terminaling exp.

* Terminal personnel training records are maintained at the facility under separate cover

Qualified Individuals have the following responsibilities and authority:

Qualified Individual (QI) Duties
(A) Activate internal alarms and hazard communication systems to notify on-site personnel.
(B) Notify all response personnel, as needed.
(C) Identify the character, exact source, amount, and extent of the release, as well as other items needed for notification.
(D) Notify and provide necessary information to the appropriate Federal, State and local authorities with designated response roles, including the National Response Center, State Emergency Response Commission, and Local Emergency Planning Committee.
(E) Assess the interaction of the spilled substance with water and/or other substances stored at the facility and notify response personnel at the scene of that assessment.
(F) Assess the possible hazards to human health and the environment due to the release, considering both the direct and indirect effects (i.e., the effects of any toxic, irritating, or asphyxiating chemicals that may be generated, or the effects of any hazardous surface water runoffs from water or chemical agents used to control fire and heat-induced explosion).
(G) Assess and implement prompt removal actions to contain and remove the substance released.
(H) Coordinate rescue and response actions as previously arranged with all response personnel.
(I) Use authority to immediately access company funding to initiate cleanup activities.
(J) Direct cleanup activities until properly relieved of this responsibility.

<i>HAZARD EVALUATION</i>

1.4 HAZARD EVALUATION

This section predicts where discharges could occur, based on an examination of the facility. The primary spill flow direction from an uncontained spill for all tank farm tanks is west towards the waterfront of the Patapsco River, Northwest Branch.

The facility is a bulk liquid petroleum storage terminal that primarily stores gasoline, distillate, biodiesel, marine diesel, asphalt, and ethanol in bulk. The facility arrangement is shown on the Site Plan Diagram (Figure 1) in Section 1.9 of this plan. Product is stored in large aboveground oil storage tanks ranging from approximately 5,000 to 200,000 barrels in storage capacity. The facility also has several smaller tanks for heating oil, Therminol®, and various other oils and oil mixes. The majority of the site encompasses tank dike storage areas that meet fire code standards including the provisions of National Fire Protection Association (NFPA) Code 30.

Schematic drawing of facility

The Site Plan Diagram (Figure 1) in Section 1.9 of this plan identifies the following equipment and locations at the facility:

- Entire facility to scale
- Above and below ground bulk oil storage tanks
- Contents and capacities of bulk oil storage tanks
- Contents and capacity of drum oil storage areas
- Contents and capacities of surface impoundments
- Process/operations buildings
- Transfer areas
- Secondary containment systems (location and capacity)
- Structures where hazardous materials are stored or handled, including materials stored and capacity of storage
- Location of communication and emergency response equipment
- Location of electrical equipment which contains oil in excess of 55 gallons
- Location of the USCG/EPA interface valve

Onshore Oil Pipeline

PIPELINE INFORMATION

Petroleum Fuel & Terminal Company operates two bulk oil storage terminals, Baltimore South Terminal (facility) and Baltimore North Terminal (5101 Erdman Avenue), both of which are within the city limits of Baltimore and the state of Maryland. PF&T also operates the 12-inch onshore oil pipeline that connects the facilities. The pipeline runs parallel with existing railroad tracks for most of its length and is located completely within the city limits of Baltimore and the state of Maryland. The pipeline is utilized to transfer light products between the terminals.

The total length of the pipeline is 16,580 feet (3.14 miles) with a displacement (product volume) of 2,427 barrels. Pipeline transfers between the terminals are accomplished by pump or gravity flow, depending on the gradient of flow (the facility is downgradient from Baltimore North Terminal). The rate of transfer for light product transfers between the terminals ranges from 2,500 – 3,500 barrels per hour (bph) with average transfer rates closer to 3,500 bph.

PIPELINE SPILL RESPONSE ZONE(S)

This plan provides the oil spill response guidelines for PF&T's shore personnel, including notification and identification of response resources for spills from the pipeline. There is potential for major failure or rupture in the pipeline during pipeline transfer. The pipeline is divided into four (4) response zone to facilitate fast response decisions and to identify effective spill prevention and containment procedures. The pipeline is composed of a total of 14 line sections which are organized by response zone.

<i>HAZARD EVALUATION</i>

The diameter of the pipeline over its entire length is 12 inches; therefore, **each of the pipeline line sections can be expected to cause significant and substantial harm** to the environment in the event of a discharge of oil into or on the navigable waters or adjoining shorelines, according to the significant and substantial harm criteria outlined in 49 CFR 194.103. Any line section within a particular response zone that is expected to cause significant and substantial harm qualifies that entire response for response planning purposes. The following table provides summary descriptions of the response zones that comprise the length of the pipeline.

Response Zone	Description
Zone 1 Terminal Area to East Lombard Street Overpass	Represents the northern portion of the pipeline from (b) (7)(F) at the PF&T Erdman Avenue terminal facility to (b) (7)(F) located near the East Lombard Street overpass adjacent to Consolidated Rail Corporation's rail car storage yard. A (b) (7)(F)
Zone 2 Consolidated Rail – Eastern Avenue Area	Represents the pipeline from (b) (7)(F) to the (b) (7)(F) located approximately 70 feet north of Eastern Avenue near South Kresson Street.
Zone 3 Eastern Avenue – Boston Street Area	Represents the pipeline from the valve pit at (b) (7)(F) located at the intersection of Consolidated Rail Corp's tracks and Boston Street. This zone includes the elevated portion of the pipeline crossing Eastern Avenue. (b) (7)(F)
Zone 4 Boston Street –Clinton Street Area	Represents the southern portion of the pipeline from (b) (7)(F) to its termination point at the PF& T South Clinton Street terminal facility at (b) (7)(F).

PIPELINE SPILL FLOW DIRECTION

Zone 1 – Terminal Area and East Lombard Street Overpass

The maximum drain-down for this segment would occur from the tank valve at the PF&T Erdman Avenue terminal to (b) (7)(F) the East Lombard Street overpass adjacent to Consolidated Rail Corporation's storage yard. The quantity of oil or gasoline in the pipeline for this segment is approximately 863 barrels (36,246 gallons).

The direction of flow of the discharged product from (b) (7)(F) would parallel the railroad tracks to Monument Street and Pulaski Highway and enter into open channels or the underground storm drainage system, then flow eastward toward Herring Run and Back River west of the Harbor Tunnel Thruway. The direction of product discharged between (b) (7)(F) would flow along open drainage ditches toward the railroad trestle crossing the Amtrak tracks then flow toward Herring Run and Back River. The direction of product discharged from (b) (7)(F) would flow northward along the railroad tracks in Consolidated Rail Corporation's storage yard to the trestle crossing Amtrak tracks then eastward toward Herring Run and Back River.

Zone 2 – Consolidated Rail – Eastern Avenue Area

The maximum drain-down for this segment would occur from the Consolidated Rail storage yard at (b) (7)(F) to the (b) (7)(F) near the Eastern Avenue underpass. The quantity of oil in the pipeline for this segment is approximately 270 barrels (11,340 gallons).

The pipeline is parallel to Consolidated Rail's track and runs along the east side then crosses to the west side of the tracks near (b) (7)(F) 300 feet south of the East Lombard Street overpass. The product discharged in this segment would flow parallel to the tracks to the Eastern Avenue underpass than enter into the underground storm drainage system along Eastern Avenue and then discharged south toward Northwest Harbor.

<i>HAZARD EVALUATION</i>

Zone 3 – Eastern Avenue – Boston Street Area

The maximum drain-down for this segment would occur from the (b) (7)(F) to (b) (b) located at the intersection of the railroad tracks and Boston Street. The quantity of product in the pipeline for this segment is approximately 582 barrels (24,444 gallons).

The direction of flow of the discharged product would flow parallel with the tracks in open channels or enter the underground storm drainage system near O'Donnell Street and Boston Street then flow south toward Northwest Harbor.

Zone 4 – Boston Street – Clinton Street Area

The maximum drain-down for this segment would occur from (b) (7)(F) 0 near Boston Street to its termination point at the storage tank facility at (b) (7)(F) on the property of Petroleum Fuel & Terminal Company. The quantity of product in the pipeline for this segment is approximately 746 barrels (31,332 gallons).

The direction of flow of the discharged product (b) (7)(F) would flow parallel to the railroad tracks to Holabird Avenue then enter in open channels or underground storm drains and flow southward toward Northwest Harbor. The direction of flow for product discharged between (b) (7)(F) would flow along Holabird Avenue in open channels or underground storm drains west toward Clinton Street then flow into Northwest Harbor.

PIPELINE LINE SECTIONS

The following table provides the pipeline line sections, organized by response zone, that comprise the onshore oil pipeline. The line sections are identified by survey station number and operator designation.

Response Zone	Line Section	Operator Designation
Zone 1 Terminal Area to East Lombard Street Overpass	1	* Location Map & General Information
	2	Facility at 5101 Erdman Avenue * (b) (7)(F) Baltimore and Ohio Rail Road
	3	(b) (7)(F) Pulaski Highway and Monument Street Potts & Callahan Company
	4	(b) (7)(F) Amtrak Consolidated Rail Corporation
	5	(b) (7)(F) Consolidated Rail Corporation E. Lombard Street
Zone 2 Consolidated Rail – Eastern Avenue Area	6	(b) (7)(F) E. Lombard Street Consolidated Rail Corporation Gough Street / S. Lehigh Street
	7	(b) (7)(F) Gough Street / S. Lehigh Street Eastern Avenue Underpass / S. Kresson Street Consolidated Rail Corporation
Zone 3 Eastern Avenue – Boston	7	(b) (7)(F) Gough Street / S. Lehigh Street Eastern Avenue Underpass / S. Kresson Street Consolidated Rail Corporation

HAZARD EVALUATION

Response Zone	Line Section	Operator Designation
Street Area	8	(b) (7)(F) Consolidated Rail Corporation Haven Street / Hudson Street Consolidated Rail Corporation
	9	(b) (7)(F) Consolidated Rail Corporation O'Donnell Street Overpass Exxon Tank Farm
	10	(b) (7)(F) Consolidated Rail Corporation Boston Street Danville Avenue
Zone 4 Boston Street –Clinton Street Area	10	(b) (7)(F) Consolidated Rail Corporation Boston Street Danville Avenue
	11	(b) (7)(F) Consolidated Rail Corporation Holabird Avenue
	12	(b) (7)(F) Holabird Avenue
	13	(b) (7)(F) Holabird Avenue Hale Coporation S. Clinton Street
	14	(b) (7)(F) S. Clinton Street / Eastborne Avenue Facility at 1622 S. Clinton Street

Loading / Unloading of Tanks and Transportation Vehicles

The facility conducts bulk liquid transfer activities via tank truck, barge, rail tank car, and pipeline. River dock transfers are considered marine-transportation-related (MTR) and are regulated by the United States Coast Guard (USCG) and the facility has an approved USCG Operations Manual governing transfers. However, the truck transfer locations that are incidental to transportation are regulated by the federal Environmental Protection Agency (EPA) as non-transportation related areas. Pipeline receipts for the facility are regulated by the Pipeline and Hazardous Materials Safety Administration of the federal Department of Transportation (DOT).

Secondary containment, diversionary structures, and/or active control measures to prevent discharged oil from reaching navigable waters as well as any best management practice (BMP) procedures that may be in place for product transfer operations are also described. A summary table of information is provided below following the narratives. Spills that can potentially occur at the transfer areas are described as follows:

TRUCK RACK

The facility has one constructed (walk up) Truck Rack. It can be described as a five (5) bay, five (5) spot loading rack for loading of diesel, biodiesel, ethanol, and asphalt in bulk into tank trucks. The rack is typically used to load tank trucks, but is capable of unloading tank trucks as well.

Facility operators load trucks with top loading arms. Bay 5 on the west side of the rack is for asphalt only, and asphalt can also be loaded at Bay 2 and Bay 4. Biodiesel can be transferred at Bay 1 and 2, and diesel can be transferred at Bay 1 and 2, also. Denatured ethanol can be transferred at Bay 1. No asphalt additives are injected into the asphalt at the rack or in tank storage.

<i>HAZARD EVALUATION</i>

SHIP DOCK (NORTH DOCK)

The North Dock has two (2) transfer locations that can handle either a tank ship or a tank barge, but is incapable of simultaneous operations. The dock is capable of both loading and unloading vessels. Products transferred at the dock include gasoline, diesel, biodiesel, ethanol, asphalt.

The dock construction is approximately 500 feet by 100 feet and includes a dock shed. The maximum size of a vessel that is normally moored at the dock is 400 feet by 800 feet. The loaded draft at the dock is 40 feet. The maximum capacity of a vessel that is normally moored at the dock is 300,000 barrels, though the capacities of the individual vessels vary according to design.

Several pipelines connect the transfer equipment at the dock to storage tanks in the tank farm areas. The first valves within secondary containment (EPA/USCG interface valves) for each pipeline are located directly outside of the individual storage tanks they serve. The maximum pipeline length from dock to tank is about 3,500 feet. The asphalt pipelines are insulated, heat-traced pipelines specifically designed to transport elevated temperature petroleum products.

BARGE DOCK (SOUTH DOCK)

The South Dock has three (3) transfer locations that can handle two tank barges at a time. The dock is capable of both loading and unloading vessels. Products transferred at the dock include gasoline, diesel, and asphalt.

The dock construction is approximately 400 feet by 50 feet and includes a dock shed. The size of vessels moored at the dock ranges from 20 feet by 40 feet to 80 feet by 500 feet. The loaded draft at the dock is restricted to 24 feet. The maximum capacity of a vessel that is normally moored at the dock is 50,000 barrels, though the capacities of the individual vessels vary according to design.

Several pipelines connect the transfer equipment at the dock to storage tanks in the tank farm areas. The first valves within secondary containment (EPA/USCG interface valves) for each pipeline are located directly outside of the individual storage tanks they serve. The maximum pipeline length from dock to tank is about 3,500 feet. The asphalt pipelines are insulated, heat-traced pipelines specifically designed to transport elevated temperature petroleum products.

RAIL TANK CAR UNLOADING AREA

The Rail Tank Car Unloading Area is not a constructed rack but rather consists of two rail spurs equipped with headers that can bottom unload gasoline, diesel, and ethanol. The area is capable of accommodating up to ten (10) rail tank cars and can conduct simultaneous operations. The area is typically used to unload rail tank cars, but is capable of loading rail tank cars as well.

INTER-FACILITY PIPELINE

The PF&T Baltimore South Terminal (facility) is connected to the PF&T Baltimore North Terminal (5101 Erdman Avenue) by an onshore oil pipeline. The 12-inch pipeline runs 3.14 miles between the two terminals and is used for the transfer of gasoline, diesel, and ethanol between the terminals. Product from this pipeline can be directed to any of the onsite bulk storage tanks. A detailed discussion of this onshore oil pipeline, including pipeline spill response, is included in Section 1.4 of this plan.

TRUCK UNLOADING PAD

The Truck Unloading Pad is not a constructed rack but rather consists of a bermed concrete pad located outside of Tank Farm Area #1. The pad is equipped with a single hose and connection and is used to unload biodiesel into bulk tank storage.

MISCELLANEOUS TRANSFER SPOTS

Miscellaneous transfer spots are transfer areas without hard connections (valve connections, hoses, pump assembly, etc.). Miscellaneous transfer spots at this facility are limited to the delivery spot for the heating oil tank. The tank is located on the southeast side of the Terminal Office, along South Clinton Street.

HAZARD EVALUATION

Transfers at this delivery spot involve the unloading of delivered heating oil. A single hose and connection is used for transfers involving unloading. The spot does not have constructed secondary containment but would instead rely on surface depressions in the immediate vicinity for containment and would be subject to active control measures.

Transfer activities are typically characterized as follows:

TERMINAL TRANSFER ACTIVITY SUMMARY TABLE	
Truck Rack	
Loading Bays:	Five (5)
Transfer Rate:	500 gal/min (<i>maximum</i>) per truck
Average Transfer Size:	8,000 gallons
(b) (7)(F)	
Simultaneous Operations:	Up to five (5)
Transfer Frequency:	Daily
Product(s):	Diesel, Biodiesel, Ethanol, Asphalt
Ship Dock	
Transfer Points:	Two (2)
Loading Transfer Rate:	4,000 – 7,000 bbls/hr per ship
Unloading Transfer Rate:	5,000 – 8,000 bbls/hr per ship
Average Transfer Size:	200,000 barrels
(b) (7)(F)	
Ship Dimensions:	Up to 400' x 800'
Simultaneous Operations:	One (1)
Transfer Frequency:	Once per month
Product(s):	Gasoline, Diesel, Biodiesel, Ethanol, Asphalt
Barge Dock	
Transfer Points:	Two (2)
Loading Transfer Rate:	5,000 bbls/hr (<i>average</i>) per barge
Unloading Transfer Rate:	6,000 bbls/hr (<i>average</i>) per barge
Average Transfer Size:	20,000 barrels
(b) (7)(F)	
Barge Dimensions:	20' x 40' to 80' x 500'
Simultaneous Operations:	Two (2)
Transfer Frequency:	Variable
Product(s):	Gasoline, Diesel, Asphalt
Rail Tank Car Unloading Area	
Loading Bays:	Ten (10)
Transfer Rate:	1,200 bbls/hr (<i>average</i>)
Average Transfer Size:	280,000 gallons
(b) (7)(F)	
Simultaneous Operations:	Ten (10) car transfers at a time
Transfer Frequency:	800 per year
Product(s):	Biodiesel, Ethanol
Inter-Facility Pipeline	
Transfer Rate	3,500 bbls/hr
Transfer (Lot) Size:	15,000 – 20,000 barrels
Transfer Frequency:	Weekly
Product(s):	Gasoline, Diesel, Ethanol

<i>HAZARD EVALUATION</i>

During the process of loading the oil into tank trucks, the Department of Transportation's regulations for the loading and unloading of hazardous materials will be followed as they pertain to these operations and are outlined in Title 49 CFR Part 1777 - Transportation, Subpart B - Loading and Unloading.

For tank truck and rail tank car transfer operations, a qualified terminal operator will conduct the transfer and ensure that no product is spilled, or that in the event of a spill, appropriate steps will be taken to contain, remove, and/or prevent further discharges. Both terminal operators and truck drivers have sufficient training to monitor operations and to complete leak checks.

For dock transfer operations, a person-in-charge will be present and ensure that no oil is spilled, or that in the event of a spill, appropriate steps will be taken to contain, remove, and/or prevent further discharges. Transfer operations at the dock will observe the protocol described in the facility's USCG Operations Manual, which is maintained in the Barge Dock Office.

Spill prevention and response measures for onshore pipeline transfers between the two PF&T terminals are addressed in Section 1.4 of this plan.

Day-to-Day Operations

The day-to-day operations at the facility that present the primary risk of discharging oil or releasing a hazardous substance are transfer operations at the Truck Rack, Ship Dock, Barge Dock, Truck Unloading Pad, and Rail Tank Car Unloading Area.

In addition to the normal transfer operations, day-to-day operations that may present a risk of discharging oil or releasing a hazardous substance can include scheduled piping and pump repair, equipment replacement, and maintenance. Maintenance is performed on equipment and piping on a regular basis and as required.

Secondary Containment

Secondary containment for the facility's oil storage equipment and operations is discussed in this section. Specific secondary containment volumes are detailed in the table below.

Tanks

The bulk product tanks within the facility's tank farm areas have secondary containment consisting of a system of earthen and/or concrete dikes. The bulk product tanks located outside of diked areas are provided with secondary containment by constructed outer ring walls. In addition to bulk product tanks, miscellaneous containers and drums are also located throughout the facility. Miscellaneous containers, including small, shop-built tanks, are provided secondary containment by double wall design or building wall and floor containment for those tanks located within buildings. Drums are provided secondary containment by local surface depressions, concrete curbing at the Truck Rack, or building wall and floor containment for those drums located within buildings.

The individual diked areas or Tank Farm Areas at the facility are not all capable of containing the entire contents of the largest tank within that area with allowance for freeboard. The facility has overcome this secondary containment shortfall by installing piping between several of the areas that links their secondary containment capacities. Specifically, Tank Farm Area #1 is connected via three 12-inch pipes through its southern dike wall to Tank Farm Area #2. Tank Farm Area #2 is connected via one 6-inch pipe to Tank Farm Area #3, in addition to its connection to Tank Farm Area #1. Tank Farm Area #3 is connected via one 6-inch pipes through its southwestern dike wall to Tank Farm Area #1. Secondary containment volumes for all containers are detailed below and on the "Hazard Identification Tanks" form located in Section 1.4.1 of this plan. The capacities are further discussed in the facility's SPCC Plan, which is maintained at the facility under separate cover.

Transfer Areas

The Truck Rack has secondary containment in the form of a "quick drainage system" that consists of concrete curbing and drainage grates central to each bay that drains to oil/water separator (OWS) #001. The combined

<i>HAZARD EVALUATION</i>

containment capacities of the curbing and OWS #001 are sufficient to contain the entire contents of the largest compartment of a tank truck.

The Ship Dock and Barge Dock have no constructed secondary containment for potential spills as it has been determined to be impractical for dock transfers. Instead, the facility would rely on active containment measures, including drip pans under connections, to provide containment in the event of a spill during transfer operations. Spill response equipment that is sufficient to respond to a variety of discharge scenarios from the MTR component of the facility is stored on the docks. A full inventory of this equipment is provided in Section 1.3.2 of this plan.

The Rail Tank Car Unloading Area has constructed secondary containment in the form of concrete curbing along the rail sidings; however, boom deployment across the rails during transfer operations is required to complete the secondary containment. The capacity of the completed secondary containment is adequate to contain the entire contents of a rail tank car. Active containment measures are also available for any potential spills at this location.

The Truck Unloading Pad has secondary containment in the form of concrete curbing and a drainage grate that drains to Tank Farm Area #1. The combined containment capacities of the curbing and the diked area are sufficient to contain the entire contents of the largest compartment of a tank truck.

Miscellaneous transfer spots at this facility are limited to the delivery spot for the heating oil tank. The spot does not have constructed secondary containment but would instead rely on surface depressions in the immediate vicinity for containment and would be subject to active control measures.

Containment volumes for the facility's transfer areas are detailed below and described in further detail in the facility's SPCC Plan, which is maintained at the facility under separate cover.

Drainage of Rain Water from Secondary Containment

The topography at the site is relatively flat with a slight slope west towards the Patapsco River, Northwest Branch; however, drainage patterns within specific areas can vary. Stormwater within each tank farm areas is managed as follows:

- Tank Farm Area #1 – Stormwater flows into a drain located near the northwest dike wall. The drain connects to the main yard drain which conveys drainage to OWS #001. The water is passively separated from any oil and then discharged into the Patapsco River, Northwest Branch at Outfall #001. Additionally, stormwater that accumulates within the curbing of the Truck Unloading Pad flows to a drainage grate that connects to Tank Farm Area #1.
- Tank Farm Area #2 - Stormwater flows into one of two drains located along the south dike wall. The drains connect to OWS #002 and OWS #003. The water is passively separated from any oil and is then discharged into the Patapsco River, Northwest Branch at Outfall #002 or Outfall #003.
- Tank Farm Area #3 – This area is several feet below the general site grade. Stormwater flows into a drain located in the western portion the area. The stormwater is then pumped into the main yard drain which conveys drainage to OWS #001. The water is passively separated from any oil and then discharged into the Patapsco River, Northwest Branch at Outfall #001.
- Tank Farm Area #4 – This area is several feet below the general site grade. Stormwater flows into a drain located along the south dike wall. The stormwater is then pumped into the main drainage line that connects OWS #001. Stormwater can also be pumped into main yard drain from northwest portion of the area. The water is passively separated from any oil and then discharged into the Patapsco River, Northwest Branch at Outfall #001.
- Tank Farm Area #5 – Stormwater that collects within the diked area and is generally left to evaporate. Stormwater can be drained from the area, however, through use of a drain located along the east wall of the dike. The drain conveys stormwater to Outfall #005, located along South Haven Street. Flow from the drain to the discharge is controlled through use of a manually operated, open-close valve that is maintained in the closed position. Prior to discharge, accumulated stormwater is inspected for oil sheen. If a sheen is detected, the oil is pumped into a vacuum truck or drums for proper disposal. Otherwise, the stormwater is discharged to the ground by opening the drain valve.

<i>HAZARD EVALUATION</i>

The outer ring walls feature drainage valves that allow for drainage of accumulated stormwater. The valves are manually operated, open-close design and they are maintained in the closed position. Prior to discharge, accumulated stormwater is inspected for oil sheen. If a sheen is detected, the oil is pumped into a vacuum truck or drums for proper disposal. Otherwise, the stormwater is discharged to the ground by opening the drain valve.

The Truck Rack is covered by a canopy that helps prevent significant stormwater accumulations within the rack's curbing. Stormwater that does accumulate within the curbing flows to drainage grates centrally located within each bay. The stormwater is then conveyed into the main drainage line that connects to OWS #001. The water is passively separated from any oil and then discharged into the Patapsco River, Northwest Branch at Outfall #001.

All drainage from the various containment areas is completed in accordance with the facility's NPDES permit.

Potential containment structures at the facility are presented in the table below. Tanks and containers are provided with adequate capacity necessary to satisfy secondary containment requirements.

SECONDARY CONTAINMENT SUMMARY TABLE		
Containment Area ID	Container(s) Within Dike Area	Secondary Containment Type
Tank Farm Area #1	Tanks #20-1, 10-2, 5-3, 10-4, 5-10	Earthen and Concrete Dike
Tank Farm Area #2	Tanks #80-13, 80-5, 30-6, 30-12	Concrete Dike
Tank Farm Area #3	Tank #54-11	Concrete Dike
Tank Farm Area #4	Tanks #54-8, 54-9, 34-7	Concrete Dike
Tank Farm Area #5	Tanks #175-19, 175-20, Heater Oil Tank	Earthen Dike
Ring Wall Tanks	Tank #200-16	Outer Ring Wall
	Tank #195-17	Outer Ring Wall
	Tank #175-15	Outer Ring Wall
	Tank #175-18	Outer Ring Wall
Truck Rack Area	Tank Truck	Concrete curbing and oil/water separator
Truck Unloading Pad Area	Tank Truck	Concrete curbing and Tank Farm Area #1 dike
Rail Tank Car Unloading Area	Rail Tank Car	Earthen and asphalt berm
Miscellaneous Transfer Areas	Tank Truck	Surface depressions

Normal Daily Throughput

The Normal Daily Throughput (inclusive of all products) for the facility is as follows:

Normal Daily Throughput	Average Daily Storage	Total Storage
15,000 bbls/day	Variable	(b) (7)(F)

Note: Total Storage volume above accounts for all tanks, whether in service or not.

Due to the component make up of the system (steel piping, steel loading arms, etc., which do not substantially wear with use), an increase or decrease in throughput would not adversely affect the potential discharge volumes.

HAZARD EVALUATION

1.4.1 HAZARD IDENTIFICATION

The following, limited tank table provides some information for the aboveground product storage tanks at the facility.

ABOVEGROUND TANKS									
TANK ID	Substance Stored	Operating Status	Average Quantity Stored (GAL)	(b) (7)(F)	Average Daily Throughput (GAL)	Type*	Year	Failure/Cause	(b) (7)(F)
20-1	Biodiesel or Distillate	Active	NA		NA	Cone	1938	None	
10-2	Asphalt	Active	NA		NA	Cone	1938	None	
5-3	Distillate	Active	NA		NA	Cone	1938	None	
10-4	Asphalt	Active	NA		NA	Cone	1938	None	
5-10	Distillate	Active	NA		NA	Cone	1938	None	
80-13	Asphalt	Active	NA		NA	Cone	1943	None	
80-5	Gasoline, Ethanol, or Distillate	Active	NA		NA	IFR	1943	None	
30-6	Gasoline, Ethanol, or Distillate	Active	NA		NA	IFR	1943	None	
30-12	Marine Diesel	Active	NA		NA	Cone	1943	None	
54-11	Distillate	Active	NA		NA	Cone	1941	None	
54-8	Gasoline, Ethanol, or Distillate	Active	NA		NA	IFR	1941	None	
54-9	Gasoline, Ethanol, or Distillate	Active	NA		NA	IFR	1941	None	
34-7	Gasoline, Ethanol, or Distillate	Active	NA		NA	IFR	1943	None	
175-19	Asphalt	Active	NA		NA	Cone	1982	None	
175-20	Asphalt	Active	NA		NA	Cone	1982	None	
200-16	Gasoline, Ethanol, or Distillate	Active	NA		NA	IFR	1980	None	
195-17	Gasoline, Ethanol, or Distillate	Active	NA		NA	IFR	1980	None	
175-15	Distillate	Active	NA		NA	Cone	1980	None	
175-18	Asphalt	Active	NA		NA	Cone	1982	None	
Total Capacity:			-		-				

HAZARD EVALUATION

* Cone – Fixed Cone Roof / Welded Steel
IFR - Internal Floating Roof

MISCELLANEOUS CONTAINERS AND DRUMS

CONTAINER ID	Substance Stored	Operating Status	Average Quantity Stored (GAL)	(b) (7)(F)	Average Daily Throughput (GAL)	Type	Year	Failure/Cause	(b) (7)(F)
Expansion Tank (East)	Therminol®	Active	NA		NA	NA	NA	NA	
Expansion Tank (West)	Therminol®	Active	NA		NA	NA	NA	NA	
Heater Oil Tank	Heating Oil	Active	NA		NA	NA	NA	NA	
Groundwater Recovery Tank	Product Contact Water	Active	NA		NA	NA	NA	NA	
Office Heater Oil Tank	Heating Oil	Active	NA		NA	NA	NA	NA	
Drums (~15), Outside Warehouse	Satellite Accumulation	Active	NA		NA	NA	NA	NA	
Drums (~2), Warehouse	Satellite Accumulation	Active	NA		NA	NA	NA	NA	
Drums (~2), Outside Area #2	Satellite Accumulation	Active	NA		NA	NA	NA	NA	
Drum, Truck Loading Rack Area	Satellite Accumulation	Active	NA		NA	NA	NA	NA	
Total Capacity:			-		-				

BELOWGROUND TANKS

CONTAINER ID	Substance Stored	Average Quantity Stored (GAL)	Shell Capacity (GAL)	Average Daily Throughput (GAL)	Type	Year	Failure/Cause	Secondary Containment Volume (GAL)
NONE								

<i>HAZARD EVALUATION</i>

SURFACE IMPOUNDMENTS								
SURFACE IMPOUNDMENT ID	Substance Stored	Average Quantity Stored (GAL)	Shell Capacity (GAL)	Average Daily Throughput (GAL)	Surface Area	Year	Failure/Cause	Secondary Containment Volume (GAL)
NONE								

*DISCHARGE SCENARIOS***1.4.2 VULNERABILITY ANALYSIS**

A vulnerability analysis addresses the potential effects (i.e., to human health, property, or the environment) of an oil spill originating from the facility. The areas potentially affected by an uncontained spill include the area in the facility's immediate vicinity and the areas within the facility's planning distance. The planning distance (D) is the distance, in miles, downstream from the facility within which fish and wildlife and sensitive environments could be injured or a public drinking water intake would be shut down in the event of an uncontained oil discharge.

Planning Distance

The facility is located just east of downtown Baltimore across the harbor from Locust Point. The facility is situated on the Northwest Branch (Harbor) of the Patapsco River in an area characterized by industrial use. The facility is located in Baltimore County, MD within the Patapsco River Watershed.

Since the facility handles petroleum products on or near the Patapsco River, a tidally-influenced navigable waterway, the facility elects to use the planning distance calculation methodology provided in 40 CFR Part 112, Appendix C, Attachment C-III. The planning distance for this vulnerability analysis is based on non-persistent oil discharges into tidal waters 5 miles from the terminal down current during ebb tide and to the point of maximum tidal influence or 5 miles, whichever is less, during flood tide. The planning distance for this facility is **5 miles**.

For a spill planning distance scenario, an assumption must be made that one of the worst case discharge scenarios presented in Section 1.5.3 to this plan has occurred. These scenarios involve the failure of constructed containment or transfer equipment at the docks, where product would flow directly into the Patapsco River. During flood tide, the release would travel inland on the Patapsco River and Baltimore's Inner Harbor. During ebb tide, the release would travel out towards the Chesapeake Bay.

The calculation for the distance oil may travel in moving waters (as presented in 40 CFR Part 112, Appendix C, Attachment C-III) is given as follows:

$$D = V * T * C$$

Where: D = planning distance (miles)
 V = velocity of stream (ft/sec)
 T = time interval (hours)
 C = conversion factor (0.68 sec*mile/hr*ft)

Spill flow velocities were assumed to be coupled to the current speed of the tidal flow. The maximum current speed for Baltimore Harbor near the terminal is approximately 0.6 m/s for both ebb and flow tides. Tidal current speeds were obtained from information provided by the National Oceanic and Atmospheric Administration (NOAA).

The planning distance formula given above can be rearranged to calculate deployment times for response personnel and equipment:

$$T = D / (V * C)$$

The balance of this section describes the natural and human resources that occur within the spill planning distance described above. This plan uses the Upper Chesapeake Estuary Area Contingency Plan and Baltimore Harbor navigation charts as its principle sources in compiling the resource information provided below. Pertinent sensitivity index maps for the facility and its planning distance spill pathway are included in Appendix C to this plan. Navigation charts for the Baltimore Harbor covering the planning distance spill pathway are also included in Appendix C to this plan.

<i>DISCHARGE SCENARIOS</i>

(b) (7)(F)



(b) (7)(F)

Residential Areas

The facility is located in the city of Baltimore, Maryland. The area in which the facility is located is a heavily developed industrial area. However, there are some small residential areas in the vicinity of the facility that could be affected by a discharge from the facility, depending on the size and complexity of the discharge. The following residential areas are potentially vulnerable to a discharge from the facility:

<i>DISCHARGE SCENARIOS</i>

Residential Areas	Approximate Distance From Facility
Canton	¼ mile north from terminal up Clinton St
Dundalk	1 ½ miles southeast from terminal
Turner Station	1 ¼ miles southeast from terminal

Any evacuation efforts which may be necessary for the areas described above will be coordinated with the local emergency assistance agencies (police department, fire department, etc.) as described in Section 1.3.5 of this plan.

Business Areas

The facility is located in the city of Baltimore, Maryland. The area in which the facility is located is a heavily developed industrial area. Many of the businesses in the area have marine operations. Some of these businesses could be vulnerable to a discharge from the facility; however, impacts to these businesses due to a release from the terminal would most likely be limited to temporary restricted access from emergency response activities. The following business areas are potentially vulnerable to a discharge from the facility:

Business Areas	Approximate Distance From Facility
Transcom Terminals	Adjacent to the facility to the south
Rukert Terminals	Adjacent to the facility to the north down the street to the south of facility
Hale Container Lines	¼ mile to the south of the facility on Clinton St

Telephone numbers for these businesses are provided in the Emergency Notification Phone List in Section 1.3.1 of this plan. Any evacuation efforts which may be necessary for the areas described above will be coordinated with the local emergency assistance agencies (police department, fire department, etc.) as described in Section 1.3.5 of this plan.

Fish and Wildlife

There are oil sensitive fish and wildlife that could be affected by a discharge from the facility. They include various crabs, and anadromous and resident estuarine fish, and various shore birds, wading birds, waterfowl, gulls and terns found in and along the shoreline of the Patapsco River and its tributaries.

In the event of a discharge from the facility, PF&T shall make every effort to protect fish and wildlife. The listings and determinations provided in the area contingency plan may not be comprehensive, current, or accurately depict the entire scope of a particular sensitive environment. For these reasons, it is strongly recommend that during a response situation, the USFWS and applicable state agencies be contacted for information regarding wetlands and other sensitive environments. Upon contact the agencies will be able to:

- Identify and establish priorities for fish and wildlife, wetlands, and other sensitive environments requiring protection from any direct or indirect effects from a discharge.
- Identify potential environmental effects on fish and wildlife, wetlands, and other sensitive environments resulting from removal actions or countermeasures.

Select sensitivity index maps in Appendix G to this plan depict fish and wildlife, wetlands, and other sensitive environments, as determined by the area contingency plan.

Wetlands and other Sensitive Environments

Sensitive areas were identified in the Patapsco River (Northwest Branch and Middle Branch) and the Inner Harbor. The size and diversity of the wetland environments vary with season and year. All environmental areas deserve protection from pollution, but they must be prioritized during a response so as to protect the most sensitive and

<i>DISCHARGE SCENARIOS</i>

susceptible areas to pollution. The following sensitive environmental resources are potentially vulnerable to a discharge from the facility:

Sensitive Environmental Resources	Approximate Distance From Facility
Baltimore City, Inner Harbor, Point environmental habitat	4 miles
Baltimore City, Fells Point Area, Polygon environmental habitat	3.5 miles
Northwest Harbor, Intertidal flat, exposed and/or sheltered, Polygon environmental habitat	3 miles
Fort McHenry, National monument, historic landmark	2 miles
Gwynns Falls, Polygon environmental habitat	4 miles
Sollers Point, Marsh, tidal or fresh	1 mile
Curtis Bay, Intertidal Flat	2 miles
Baltimore Harbor Shoreline, Intertidal flat	3 miles
Stony Beach, Marsh, tidal or fresh	5 miles
Fort Smallwood Park, Marsh	7 miles

These sensitive environments and resources are identified in select sensitivity index maps in Appendix C to this plan. Telephone numbers for these sensitive environments and resources are provided in the Emergency Notification Phone List in Section 1.3.1 of this plan.

Lakes and Streams

The following lakes, streams or rivers are potentially vulnerable to a discharge from the facility:

Lakes and Streams	Approximate Distance From Facility
Patapsco River	<1/4 mile east
Middlebranch	3 miles northwest
Northwest Harbor	2 miles northeast
Innerharbor	3 miles northeast
Fells Point	3.5 miles northeast
Gwynns Falls	4 miles northwest
Colgate Creek	2 miles northeast
Curtis Bay	2 miles south

These lakes and streams are identified in the Baltimore Harbor navigation charts included in Appendix C and also on the Environmental Sensitivity/Worst Case Discharge Diagram (Figure 5) in Section 1.9 of this plan.

Endangered Flora and Fauna

There are a number of rare, endangered, or threatened species throughout Baltimore County and the state of Maryland. A listing of these species, as provided by the Maryland Department of Natural Resources Wildlife and Heritage Service and the U.S. Fish and Wildlife Service, is included in Appendix E to this plan.

<i>DISCHARGE SCENARIOS</i>

Recreational Areas

The area around the facility is highly industrialized. However, there are several recreational areas that can potentially be impacted by released product, as well as by the emergency response efforts. The following recreational areas are potentially vulnerable to a discharge from the facility:

Recreational Area	Approximate Distance From Facility
Canton Waterfront Park	3 miles (Northwest Branch)
Maryland Korean War Memorial	3 miles (Northwest Branch)
Federal Hill Park	3 miles (Inner Harbor)
Fort McHenry	2 miles (Northwest Branch)
Ferry Bar	2 miles (Northwest Branch)
Patapsco Valley State Park	4 miles (Patapsco River)
Reed Bird Island Park	4.5 Miles (Patapsco River)
Cherry Hill Park	4.5 Miles (Patapsco River)
Smith Cove	5 miles (Middle Branch)
Middlebranch Park	5 miles (Middle Branch)
Vietnam Veterans Memorial Broening Park	5 miles (Middle Branch)
Swann Park	5.5 miles (Middle Branch)
Stony Beach	5 miles (Patapsco River)
Fort Smallwood	7 miles (Patapsco River)

The recreational areas that may be potentially impacted by a discharge from the facility are more fully identified on select sensitivity index maps in Appendix C. Telephone numbers for these recreation areas are provided in the Emergency Notification Phone List in Section 1.3.1 of this plan.

Transportation Routes (air, land, and water)

A large-scale response to an oil spill on the Patapsco River could temporarily impede marine operations on that body of water. However, effective deployment of containment devices could contain the release to a small areal extent and minimize these impacts. At a minimum, it is expected that implementation of the FRP response procedures to a worst case discharge would limit (or reduce the duration of) any impacts to shipping routes to the greatest extent practical.

South Clinton Street, adjacent to the east of the Facility, could be expected to be impassable during emergency response activities from a large release of product, fire or explosion at the facility. In addition, access to other nearby roads may be indirectly affected by the initial emergency response effort (as opposed to direct impacts from released product).

These routes can be identified on the Topographic Site Map (Figure 4) in Section 1.9 of this plan. The local emergency assistance agencies (police department, fire department, etc.) would be contacted as needed for traffic control in the area of the discharge. Proper coordination with applicable agencies (i.e., the Coast Guard) would be conducted to warn vessel operators of the potential hazards in the area.

(b) (7)(F)

(b) (7)(F)

Other Areas of Economic Importance

The only area of economic importance that is potentially vulnerable to a discharge from the facility is:

Other Areas of Economic Importance	Approximate Distance From Facility
Fort McHenry National Monument	1/6 mile directly west from our terminal on the northwestern branch of the Patapsco River

The telephone number for this resource is provided in the Emergency Notification Phone List in Section 1.3.1 of this plan.

<i>DISCHARGE SCENARIOS</i>

1.4.3 ANALYSIS OF POTENTIAL FOR AN OIL SPILL

The potential for a significant spill at the facility is minimal due to the spill prevention measures that are in place and the operating procedures followed by facility personnel. A copy of the Facility Reportable Oil Spill History Log in Section 1.4.4 of this plan details the information that is required to be collected and reported in the event of an oil spill at the facility. The facility has records documenting all reportable spills occurring at the facility within the past 15 years. These records are maintained under separate cover at the facility. Otherwise, the facility has historically experienced no damage due to natural disasters from earthquakes, floods, tornadoes, hurricanes, etc. Spill prevention measures include a number of discharge detection methods and various inspection procedures. The potential for a spill of sufficient magnitude to escape the facility is highly unlikely due to the spill mitigation measures inherent in the facility design. Spill mitigation measures include facility designs intended to direct releases to containment areas where they can be promptly controlled and remediated.

The facility is located adjacent to the Patapsco River, Northwest Branch on its western side. The general topography at the site slopes west towards the Patapsco River, Northwest Branch. Given facility secondary containment, a spill from the EPA regulated, non-transportation-related portion of the facility is predicted to be contained within facility diking or curbing. The only areas or operations outside of complete constructed secondary containment are the unloading spot for heating oil and the Rail Tank Car Unloading Area. The unloading spot for heating oil would rely on local surface depressions and active containment measures to provide secondary containment, while the Rail Tank Car Unloading Area has concrete curbing constructed along the rail sidings and would rely on the deployment of boom during transfer activities to complete the secondary containment. Spills occurring at the USCG regulated, marine-transportation-related portion of the facility could be released directly into the Patapsco River. Spills occurring shoreside of the docks but outside of constructed containment would flow west towards the Patapsco River. Secondary containment systems and spill flow direction at the facility are described in greater detail in Section 1.4 of this plan.

The greatest horizontal range of release from the facility, as discussed in the Planning Distance portion of Section 1.4.2 of this plan, is about 5 miles. In a worst case discharge scenario, an uncontained release would reach the Patapsco River, Northwest Branch where it could travel up to 5 miles with the tidal current and potentially impact the Baltimore Harbor. This spill pathway comprises the horizontal range of the worst case discharge planning distance. A high priority during larger spills would be to prevent oil from reaching the Patapsco River. Although facility personnel would take initial mitigation actions (e.g., earthen containment structures and deployment of boom and absorbents) as deemed appropriate, OSROs are available to the terminal and will initiate equipment deployment in a timely manner.

The field erected, above ground product storage tanks at this facility were constructed between 1938 and 1982 and meet current standards. The potential for a spill related to tank age or condition of the facility's oil handling equipment is believed to be low in part because of the regular inspection and preventive maintenance program. This maintenance and inspection program, described in further detail in Section 1.8.1 of this plan, includes tank inspections and hydrostatic testing and is performed at regularly scheduled intervals to ensure that any weaknesses are discovered before problems occur. The facility is located in an area of low seismic activity and relatively stable soils. Any other factors affecting the likelihood of a release occurring are believed to be minimal.

All personnel responsible for terminal operations are qualified for their responsibilities. New personnel receive on-the-job training working with experienced operating personnel as well as training in the areas of safety, spill prevention, emergency response, and applicable pollution prevention laws, rules and regulations. They become qualified prior to assuming unsupervised operating responsibilities. An incident specific checklist for a variety of emergency situations is provided in Appendix G to this plan.

DISCHARGE SCENARIOS

SPILL SCENARIOS AND LIKELIHOOD OF A RELEASE				
Location / Incident	Product(s)	Spill Quantity (gallons)	Probability	Likely Consequence
Tank Farm Area #1				
Tanks #20-1, 10-2, 5-3, 10-4, 5-10	Distillate, Biodiesel, Asphalt	<2,100	Low - Medium	Contained within tank farm earthen and concrete dike
		2,100 to 36,000	Low	
		(b) (7) (F)	Low	
Tank Farm Area #2				
Tanks #80-13, 80-5, 30-6, 30-12	Gasoline, Distillate, Marine Diesel, Asphalt	<2,100	Low	Contained within tank farm concrete dike
		2,100 to 36,000	Low	
		(b) (7) (F)	Low	
Tank Farm Area #3				
Tank #54-11	Distillate	<2,100	Low	Contained within tank farm concrete dike
		2,100 to 36,000	Low	
		(b) (7) (F)	Low	
Tank Farm Area #4				
Tanks #54-8, 54-9, 34-7	Gasoline, Ethanol	<2,100	Low	Contained within tank farm concrete dike
		2,100 to 36,000	Low	
		(b) (7) (F)	Low	
Tank Farm Area #5				
Tanks #175-19, 175-20, Heater Oil Tank	Asphalt, Heating Oil	<2,100	Low - Medium	Contained within tank farm earthen dike
		2,100 to 36,000	Low	
		(b) (7) (F)	Low	
Ring Wall Tanks				
Tanks #200-16, 195-17, 175-15, 175-18	Gasoline, Distillate, Asphalt	<2,100	Low	Contained within outer ring wall
		2,100 to 36,000	Low	
		(b) (7) (F)	Low	
Transfer Areas				
Truck Rack	Diesel, Biodiesel, Ethanol, Asphalt	<2,100	Medium	Contained within concrete curbing and oil/water separator
		(b) (7) (F)	Low	
Ship Dock	Gasoline, Diesel, Biodiesel, Ethanol, Asphalt	<2,100	Medium	Discharge into Patapsco River
		(b) (7) (F)	Medium	

DISCHARGE SCENARIOS

SPILL SCENARIOS AND LIKELIHOOD OF A RELEASE				
Location / Incident	Product(s)	Spill Quantity (gallons)	Probability	Likely Consequence
		(b) (7) (F)	Low	
Barge Dock	Gasoline, Diesel, Asphalt	<2,100	Medium	Discharge into Patapsco River
		2,100 to 54,000	Medium	
		(b) (7) (F)	Low	
Rail Tank Car Unloading Area	Biodiesel, Ethanol	<2,100	Medium	Contained within earthen and asphalt berm
		(b) (7) (F)	Low	
Truck Unloading Pad	Biodiesel	<2,100	Medium	Contained within concrete curbing and balance within tank farm earthen and concrete dike
		(b) (7)(F)	Low	
Miscellaneous Transfer Spots	Heating Oil	<2,100	Medium	Contained within local surface depressions

<i>DISCHARGE SCENARIOS</i>

1.4.4 FACILITY REPORTABLE OIL SPILL HISTORY

The facility maintains a separate Oil Spill History file in the Terminal Office. The blank form below encompasses the information that should be recorded for each reportable oil spill incident to the extent that such information is reasonably identifiable.

Facility Reportable Oil Spill History Form	
Date of discharge(s):	
List of discharge causes:	
Material(s) discharged:	
Amount of discharged in gallons:	
Amount of discharge that reached navigable waters, if applicable:	
Effectiveness and secondary containment capacity:	
Clean-up actions taken:	
Steps taken to reduce possibility of recurrence:	
Total oil storage capacity of the tank(s) or impoundment(s) from which the material discharged:	
Enforcement actions:	
Effectiveness of monitoring equipment:	
Description(s) of how each oil spill was detected:	

The following pages contain the facility's reportable spill history.

DISCHARGE SCENARIOS

Facility Reportable Oil Spill History Log	
Date of discharge(s):	1/17/79
Location/Source of discharge:	Facility transfer hose
List of discharge cause(s):	Hose broke loose from flange
Material(s) discharged:	No. 2 Fuel Oil
Amount of discharge in gallons:	Approximately 200-250 gallons
Amount of discharge that reached navigable waters, if applicable:	Unknown
Amount recovered:	NA
Effectiveness and secondary containment capacity:	NA
Clean-up actions taken:	Yes
Steps taken to reduce possibility of recurrence:	NA
Total oil storage capacity of the tank(s) or impoundment(s) from which the material discharged:	NA
Enforcement actions:	NA
Effectiveness of monitoring equipment:	NA
Description(s) of how each oil spill was detected:	NA
Date of discharge(s):	11/19/86
Location/Source of discharge:	Oil/Water Separator
List of discharge cause(s):	Failure
Material(s) discharged:	Gasoline
Amount of discharge in gallons:	Approximately 40-50 gallons
Amount of discharge that reached navigable waters, if applicable:	Unknown
Amount recovered:	NA
Effectiveness and secondary containment capacity:	NA
Clean-up actions taken:	Yes, Cleanup operations conducted by George Goodhues & Sons using absorbents and boom
Steps taken to reduce possibility of recurrence:	NA
Total oil storage capacity of the tank(s) or impoundment(s) from which the material discharged:	NA
Enforcement actions:	NA
Effectiveness of monitoring equipment:	NA
Description(s) of how each oil spill was detected:	NA
Date of discharge(s):	8/19/87
Location/Source of discharge:	Tank 80-13
List of discharge cause(s):	Tank sump failed
Material(s) discharged:	No. 2 Fuel Oil
Amount of discharge in gallons:	~200,000 gallons
Amount of discharge that reached navigable waters, if applicable:	~26,700 gallons
Amount recovered:	NA
Effectiveness and secondary containment capacity:	Containment was breeched
Clean-up actions taken:	Yes
Steps taken to reduce possibility of recurrence:	NA
Total oil storage capacity of the tank(s) or impoundment(s) from which the material discharged:	NA
Enforcement actions:	NA
Effectiveness of monitoring equipment:	NA
Description(s) of how each oil spill was detected:	NA

DISCHARGE SCENARIOS

Facility Reportable Oil Spill History Log	
Date of discharge(s):	1/30/91
Location/Source of discharge:	Crane
List of discharge cause(s):	Rupture of hydraulic lines
Material(s) discharged:	Hydraulic oil
Amount of discharge in gallons:	~1 quart
Amount of discharge that reached navigable waters, if applicable:	None
Amount recovered:	NA
Effectiveness and secondary containment capacity:	NA
Clean-up actions taken:	Yes, spill cleaned up and hydraulic lines repaired
Steps taken to reduce possibility of recurrence:	NA
Total oil storage capacity of the tank(s) or impoundment(s) from which the material discharged:	NA
Enforcement actions:	NA
Effectiveness of monitoring equipment:	NA
Description(s) of how each oil spill was detected:	NA
Date of discharge(s):	11/16/94
Location/Source of discharge:	8-inch No. 6 Fuel Oil dock line
List of discharge cause(s):	Leaking dock line
Material(s) discharged:	No. 6 Fuel Oil
Amount of discharge in gallons:	~1 gallon
Amount of discharge that reached navigable waters, if applicable:	Unknown
Amount recovered:	NA
Effectiveness and secondary containment capacity:	NA
Clean-up actions taken:	Yes, area boomed off, dock line drained and repaired, and spill cleaned up
Steps taken to reduce possibility of recurrence:	NA
Total oil storage capacity of the tank(s) or impoundment(s) from which the material discharged:	NA
Enforcement actions:	NA
Effectiveness of monitoring equipment:	NA
Description(s) of how each oil spill was detected:	NA
Date of discharge(s):	10/17/96
Location/Source of discharge:	Oil drum
List of discharge cause(s):	Drum overflowing during pumping of drip containment pan into drum
Material(s) discharged:	No. 6 Fuel Oil
Amount of discharge in gallons:	~1 gallon
Amount of discharge that reached navigable waters, if applicable:	Unknown
Amount recovered:	NA
Effectiveness and secondary containment capacity:	NA
Clean-up actions taken:	Yes
Steps taken to reduce possibility of recurrence:	Yes, cleanup operations conducted using absorbents and boom
Total oil storage capacity of the tank(s) or impoundment(s) from which the material discharged:	NA
Enforcement actions:	NA
Effectiveness of monitoring equipment:	NA
Description(s) of how each oil spill was detected:	NA

DISCHARGE SCENARIOS

1.5 DISCHARGE SCENARIOS

This facility is a bulk storage tank facility that is considered a complex, possessing a combination of marine-transportation-related (MTR) and non-transportation-related components that is subject to the jurisdiction of more than one Federal agency. The facility has a fixed, MTR component; an onshore, non-transportation-related component; and an onshore oil pipeline. The facility operates on a NON-Higher Volume Port Area basis.

As an EPA/USCG/DOT complex, the facility must perform discharge calculations for all of its components. These calculations are described as follows:

DISCHARGE VOLUME CALCULATION
USEPA Regulated, Non-Transportation-Related, Onshore Facilities
<p>Worst Case Discharge (WCD)</p> <p>100% of the largest single tank plus the volume of all tanks without adequate secondary containment. WCD determination, as given in 40 <u>CFR</u> 112, Appendix D, is provided in Appendix B to this plan.</p> <p>Medium Discharge</p> <p>Discharge greater than 2,100 gallons (50 Bbls) and less than or equal to 36,000 gallons (857 Bbls), or 10% of the WCD, whichever is less.</p> <p>Small Discharge</p> <p>Discharge of less than or equal to 2,100 gallons (50 Bbls) or 1% of the WCD, whichever is less.</p>
USCG Regulated, Fixed, Marine-Transportation-Related Facilities
<p>Worst Case Discharge (WCD)</p> <p>The sum of the following:</p> <ol style="list-style-type: none"> (1) The loss of the entire capacity of all in-line and break out tank(s) needed for the continuous operation of the pipelines used for the purposes of handling or transporting oil, in bulk, to or from a vessel regardless of the presence of secondary containment; and (2) The discharge from all piping carrying oil between the marine transfer manifold and the non-transportation-related portion of the facility. The discharge from each pipe is calculated as follows: The maximum time to discover the release from the pipe in hours, plus the maximum time to shut down flow from the pipe in hours (based on historic discharge data or the best estimate in the absence of historic discharge data for the facility) multiplied by the maximum flow rate expressed in barrels per hour (based on the maximum relief valve setting or maximum system pressure when relief valves are not provided) plus the total line drainage volume expressed in barrels for the pipe between the marine manifold and the non-transportation-related portion of the facility. <p>WCD determination, as given in 33 <u>CFR</u> 154.1029, is provided in Appendix B to this plan.</p> <p>Maximum Most Probable Discharge (MMPD)</p> <p>A discharge of the lesser of 1,200 barrels (50,400 gallons) or 10 percent of the volume of a worst case discharge.</p> <p>Average Most Probable Discharge (AMPD)</p> <p>A discharge of the lesser of 50 barrels (2,100 gallons) or 1 percent of the volume of the worst case discharge.</p>

<i>DISCHARGE SCENARIOS</i>

DOT Regulated, Onshore Oil Pipeline
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Worst Case Discharge (WCD)

The pipeline's maximum release time in hours, plus the maximum shutdown response time in hours (based on historic discharge data or in the absence of such historic data, the operator's best estimate), multiplied by the maximum flow rate expressed in barrels per hour (based on the maximum daily capacity of the pipeline), plus the largest line drainage volume after shutdown of the line section(s) in the response zone expressed in barrels. WCD determination, as given in 49 CFR 194.105, is provided in Appendix B to this plan.

For purposes of this section, the following terms are of particular importance:

Spill

An on-site release of oil to the ground from its intended container or from a transfer operation, inside or outside of secondary containment, or to water in an on-site pond, drainage pipe, or ditch.

Discharge

A spill that escapes secondary containment, drainage controls, or on-site response efforts and reaches off-site waterways or their shorelines, thereby becoming a reportable spill. For the full definition see Section 3.3 of this plan.

Incident Tier

Incidents at the terminal can be categorized in one of three tiers, characterized by escalating magnitude and required response:

Tier I Incidents (12 hours)

Tier I incidents are smaller operational events that usually occur at or near a terminal facility. For these incidents, the Field Response Team will be composed of facility personnel and other local area responders (e.g., Fire Department/Hazmat, local contractors).

Tier II Incidents (36 hours)

Tier II incidents are events that require a level of response that exceeds the resources of the local facility. For Tier II incidents, the Field Response Team will be composed of the facility personnel supplemented by regional contractors, industry mutual aid personnel, and/or government response personnel.

Tier III Incidents (60 hours)

Tier III incidents are events that significantly exceed the resources of the local facility personnel. The response operation will likely be subject to governmental control or direction. For Tier III Incidents, the Field Response Team will be composed of local, national and, possibly, international contractors, and governmental officials.

Oil Group

The classification system for **petroleum-based oils** is based on certain consistent and measureable characteristics. Oil groups are used in determining spill response planning strategies and logistics.

Non-Persistent Oil – Group 1

A petroleum-based oil that, at the time of shipment, consists of hydrocarbon fractions:

- (A) At least 50 percent of which by volume, distill at a temperature of 340 degrees C (645 degrees F)
- (B) At least 95 percent of which by volume, distill at a temperature of 370 degrees C (700 degrees F)

<i>DISCHARGE SCENARIOS</i>

Persistent Oil – Groups 2 - 5

A petroleum-based oil that does not meet the distillation criteria for a non-persistent oil. Persistent oils are further classified based on specific gravity as follows:

- (A) Group 2—specific gravity less than 0.85
- (B) Group 3—specific gravity equal to or greater than 0.85 and less than 0.95
- (C) Group 4—specific gravity equal to or greater than 0.95 and less than 1.0
- (D) Group 5—specific gravity equal to or greater than 1.0

The following table summarizes the storage of petroleum-based oils at the facility, according to oil group.

Oil Group	Storage at this Facility
Group 1	Gasoline, Ethanol
Group 2	No. 2 Fuel Oil, Biodiesel
Group 3	Marine Diesel
Group 4	None
Group 5	Asphalt

Materials stored in bulk at this facility include Gasoline, Ethanol, No. 2 Fuel Oil, Biodiesel, Marine Diesel, and Asphalt. For planning purposes, these materials encompass Oil Groups 1, 2, 3, and 5.

Group 1 Oils are considered non-persistent light oils. These oils may penetrate porous surfaces, requiring more extensive cleanup activities if the oils impact a shore area. The primary hazards associated with these oils are flammability and vapor inhalation as these oils volatilize quickly. These oils are identified as having high fluidity, clarity, rapid spreading rate, strong odor, and high evaporation rate. They do not tend to adhere to surfaces and can largely be removed by flushing and allowing the oil to evaporate.

Group 2 Oils are considered persistent oils and are similar enough in their physical properties that spill response strategies and techniques will not vary greatly. Group 2 Oils, however, do not present as much of flammability or vapor inhalation hazard as they volatilize to a much lesser extent than Group 1 Oils. Containment and removal activities are more feasible because of the lower flammability hazard; however, these oils may form unstable emulsions in higher watercourse wave action areas.

Group 3 Oils are considered persistent oils and represent a significantly heavier, more viscous petroleum fraction with correspondingly lower vapor pressure properties and higher flash point thresholds. Vapor inhalation at normal ambient temperatures is not expected to be a significant hazard and the materials are only moderately combustible in liquid phase. As with Group 2 Oils, these oils may form unstable emulsions in higher watercourse wave action areas.

Group 5 Oils are considered persistent oils and have a specific gravity greater than 1.0. Asphalt in storage at the facility is heated in order to maintain it in a transferrable, liquid stage. In its heated state, the primary hazards associated with the asphalt are contact thermal burns and dangerous vapor inhalation. Asphalt is a relatively stable petroleum product that tends to adhere to surfaces and will harden as it cools, allowing for a variety of containment opportunities. Further, because asphalt has a higher specific gravity than water, it will sink to the bottom of any body of water into which it is discharged.

The following sections describe the small, medium, and worst case discharges from the facility, including the potential direction of the spill pathway, the factors that affect response to those scenarios, and the required response resources.

<i>DISCHARGE SCENARIOS</i>

1.5.1 SMALL / AVERAGE MOST PROBABLE (AMP) DISCHARGE

Description

<u>EPA</u>		<u>USCG</u>
Non-Transportation-Related	=	Marine-Transportation-Related
Small Discharge:		AMP Discharge:
2,100 gallons (50 bbls)		2,100 gallons (50 bbls)

As described in the beginning of Section 1.5, the small discharge at the non-transportation-related component of this facility and the average most probable discharge at the MTR component of this facility are both 2,100 gallons (50 bbls). Therefore, this section includes considerations for both discharge scenarios. Examples of small/average most probable discharge scenarios may include, but are not limited to:

- Failure of manifold, mechanical loading arm, other transfer equipment, or hoses
- Tank or truck overfill
- Tank failure
- Piping/manifold rupture
- Leaking pipes, flanges, or valves
- Explosion or fire
- Equipment failure
- Personnel error during maintenance or oil transfer operations

This size discharge would most likely occur due to minor equipment failures or human error. This size discharge would likely be noticed quickly and appropriate clean up measures taken since product transfers at the Truck Rack, Ship and Barge Docks, and Rail Tank Car Unloading Area are monitored by facility personnel and facility and vessel personnel (including persons-in-charge), respectively. Discharge detection equipment and procedures are described in greater detail in Section 1.6 of this plan.

Refer to Section 1.4.3 of this plan for an analysis of the potential for an oil spill at this facility.

Prevention

Several elements of the facility's operations and administration help to limit the number of occurrences and the volume of discharges. The facility maintains a copy of their USCG Operations Manual at the dock shed. The USCG Operations Manual provides important safety, material handling, and response information for transfers at the Ship Dock and Barge Dock. Also, employees receive periodic training on the proper, safe transfer procedures for transfers to and from tanks (e.g., proper tank gauging procedures) for all transfer modes. This training includes what to do in the event of an unusual occurrence such as equipment rupture (i.e., how to transfer spilled material to other available tankage, etc.). In addition, facility personnel periodically conduct site walks where evidence of discharges would be observed.

Finally, preventive maintenance, inspection, and testing of equipment are performed at regularly scheduled intervals to ensure that any weaknesses are discovered before problems occur. This regular inspection and maintenance program ensures that tank age and the condition of the facility's oil handling equipment do not significantly contribute to the risk of a discharge from the facility. The facility's testing, inspection, and maintenance programs are described in greater detail in Section 1.8.1 of this plan.

Facility Response Resources / Capability

The regulatory requirement for both the non-transportation-related and the MTR components is that the facilities identify sufficient response resources to respond to a small discharge, equal to or less than 2,100 gallons (50 bbls). The facility must identify the source of 1,000 feet of containment boom or two times the length of the largest vessel that regularly conducts oil transfers to or from the facility, whichever is greater, and a means deploying it available at the spill site within one (1) hour of the discovery of a spill. The facility must also identify oil recovery devices

<i>DISCHARGE SCENARIOS</i>

with an effective daily recovery capacity equal to the amount of oil discharged in a small discharge or greater which is available at the facility within two (2) hours of the detection of an oil discharge. A combination of terminal and OSRO resources will be used, as necessary, to meet these requirements. Sufficient response resources and storage capacities are described below.

Containment Boom (1 hour deployment)

- The facility maintains over 1,000 feet of containment boom on-site. This amount of boom is more than twice the length of the largest vessels that transfer product at the Barge Dock (500 feet in length).
- Miller Environmental Group is the OSRO/responder the terminal will use to satisfy the requirement for identifying the source for containment boom twice the length of the largest vessels that transfer product at the Ship Dock (800 feet in length). This company is located in Baltimore, MD and is within the 1-hour deployment time range.
- Copies of this company's response equipment and capabilities are included as Appendix A to this plan.

Oil Recovery Devices (2 hour deployment)

- Miller Environmental Group and Triumvirate Environmental are the OSROs/responder the terminal will use to satisfy this requirement. Both of these companies are located in Baltimore, MD, within the 2-hour deployment time range.
- Copies of these companies' response equipment and capabilities are included as Appendix A to this plan.

Oil Storage Capacity

The facility can utilize existing tank storage capacity to satisfy the need of 50 bbls of oil storage capacity. Specification fuels could be blended directly back into existing storage tanks for reuse. Off-specification fuels could be recovered and trucked off-site to a refiner. If additional storage capacity is needed, immediately available options include:

- Oil/water separators
- Frac Tank Rental
- Currently out-of-service facility tankage

Implementation of this plan utilizing the response resources identified in this section is described in Section 1.7.1.

Factors that Affect Response

The response efforts for small discharges at the facility are affected by various factors, including the following site elements, response mitigating measures, weather, or other factors:

Size of the discharge

Any of the scenarios listed at the beginning of this section could spill enough oil to cause a small/average most probable discharge of 2,100 gallons or less if on-site containment fails.

Direction of discharge pathway

The spill flow pathways for small discharge scenarios from the non-transportation-related component of the facility and for average most probable discharge scenarios from the MTR component of the facility are discussed in this section. The general topography at the site slopes west towards the waterfront of the Patapsco River, Northwest Branch, however, the gradient is very slight. Drainage patterns within specific areas can vary, and are described as follows:

- Tank Farm Area #1 – Stormwater flows into a drain located near the northwest dike wall. The drain connects to the main yard drain which conveys drainage to OWS #001.
- Tank Farm Area #2 - Stormwater flows into one of two drains located along the south dike wall. The drains connect to OWS #002 and OWS #003.

<i>DISCHARGE SCENARIOS</i>

- Tank Farm Area #3 – This area is several feet below the general site grade. Stormwater flows into a drain located in the western portion the area. The stormwater is then pumped into the main yard drain which conveys drainage to OWS #001.
- Tank Farm Area #4 – This area is several feet below the general site grade. Stormwater flows into a drain located along the south dike wall. The stormwater is then pumped into the main drainage line that connects OWS #001. Stormwater can also be pumped into main yard drain from northwest portion of the area.
- Tank Farm Area #5 – Stormwater flows into a drain located along the east wall of the dike. The drain conveys stormwater to Outfall #005, located along South Haven Street.
- Outer Ring Wall Tanks – Stormwater drained from the outer ring walls of Tanks #195-17 and #200-16 flows into a drain that connects to the main yard drain which conveys drainage to OWS #001. Stormwater drained from the outer ring walls of Tanks #175-15 and #175-18 flows into a drain which connects to the main drainage line serving OWS #001.
- Truck Rack – Stormwater that accumulates within curbing flows to drainage grates centrally located within each bay. The stormwater is then conveyed into the main drainage line that connects to OWS #001.
- Ship Dock and Barge Dock – Stormwater flows west directly into the Patapsco River, Northwest Branch.
- Rail Tank Car Unloading Area – Stormwater flows southwest along the railroad tracks.
- Truck Unloading Pad – Stormwater that accumulates within curbing flows to a drainage grate that connects to Tank Farm Area #1.

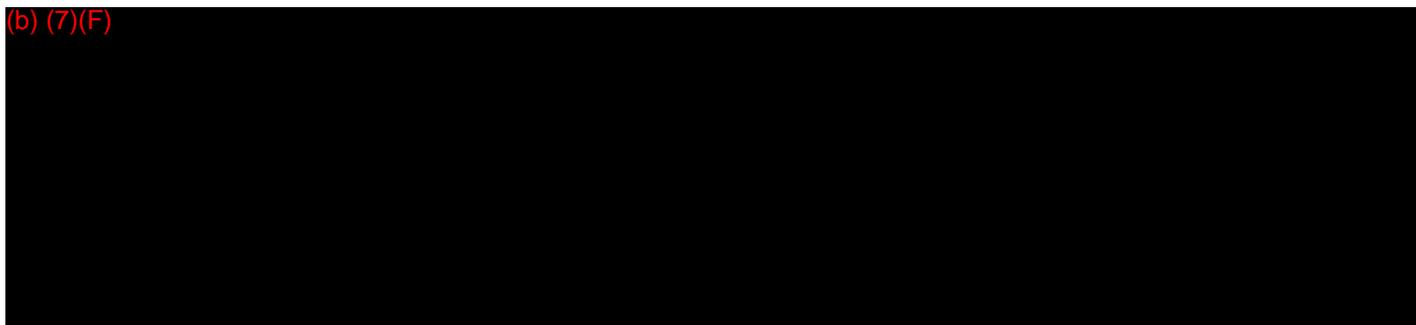
Otherwise, stormwater from miscellaneous transfer spots and operational areas at the facility follow the general site gradient, flowing west towards the Patapsco River, Northwest Branch. Likewise, any uncontained spills or spills resulting from the failure of secondary containment would flow west towards the Patapsco River, Northwest Branch. Facility drainage patterns are depicted in the Site Drainage Plan Diagram (Figure 2) in Section 1.9 of this plan.

Likelihood that a discharge will travel off-site

The likelihood that a spill from a small discharge scenario will travel off-site is small, considering that all primary oil containers and oil bearing equipment are provided with constructed secondary containment. Additionally, transfers at the non-transportation-related transfer areas are provided with adequate secondary containment as discussed in Section 1.4 of this plan. A response involving deployment of sorbents or containment boom would probably be effective in preventing an uncontained spill from traveling off-site.

The likelihood that a spill from an average most probable discharge would travel off-site is moderate, considering transfer equipment at the Ship Dock and Barge Dock do not have constructed secondary containment. However, a spill from the docks that discharged directly into the Patapsco River, Northwest Branch would likely be contained by a response involving deployment of sorbents or containment boom stored at the docks. Further, if the spilled material is asphalt in either discharge scenario, it is unlikely to flow quickly or a great distance off-site, due to its flow characteristics. Refer to the site drainage and discharge pathway descriptions provided above.

(b) (7)(F)



Proximity to fish and wildlife and sensitive environments

Small/average most probable discharges are not expected to significantly affect fish and wildlife and sensitive environments. There are no nature preserves, conservation areas, or other designated sensitive areas within the immediate vicinity of the facility. It is very unlikely that an average most probable/small discharge would be sufficient in quantity to reach or otherwise impact any fish and wildlife or other sensitive environments. Refer to the site drainage and discharge pathway descriptions provided above.

<i>DISCHARGE SCENARIOS</i>

Material discharged

Oil materials that could be released in a small/average most probable discharge at this facility include gasoline, ethanol, distillate, biodiesel, marine diesel, and asphalt. Group 1 Oils (gasoline, ethanol) are considered non-persistent oils, while Groups 2 Oils (distillate, biodiesel), Group 3 Oils (marine diesel), and Group 5 Oils (asphalt) are considered persistent for response planning purposes. Properties of the oil groups and their associated characteristic hazards are discussed in Section 1.5 of this plan. Response personnel will need to recognize which hazards are present in order to provide appropriate personal protection. MSDSs for materials stored on-site are referenced in Appendix J to this plan but maintained under separate cover at the facility.

Location of the material discharged

The spilled materials from a small discharge scenario would be released onto the concrete and/or paved surfaces within the tank farm areas and non-transportation-related transfer areas at the facility.

The spilled material from an average most probable discharge would be released directly into the waters of the Patapsco River, Northwest Branch for spills occurring at the Ship Dock or Barge Dock, or onto the concrete and/or paved surfaces outside of secondary containment for spill occurring shoreside of the docks. Refer to the site drainage and discharge pathway descriptions provided above.

Weather or aquatic conditions

Weather or aquatic conditions will impact the appropriate response actions. Rainfall will accelerate the flow of spilled oil to drainage pathways; therefore, the first priority for response during rainfall events is to place sorbent and retention materials in the facility's drainage paths. Likewise, increased tidal variation, flood events, or other periods of elevated volume in the Patapsco River, Northwest Branch will cause the current speed to increase and consequently accelerate the flow of spilled oil. Depending on actual response time during an oil spill, this may result in deployment of response materials further down the spill pathway. Refer to the site drainage and discharge pathway descriptions provided above.

Available remediation equipment

Available remediation equipment (refer to Section 1.3.2) on-site is appropriate for an immediate response by limited personnel to a variety of spill scenarios, including the small/average most probable discharge scenarios listed previously. While the facility's OSRO or spill contractor would be notified initially of a spill and the best method for containment determined, spills from small discharge scenarios would most likely be effectively contained by secondary containment measures in place at the facility. Spills from average most probable discharges would most likely be effectively contained by facility personnel through containment measures which include the use of spill response equipment stored at the docks. In addition, the facility's OSRO or spill contractor may provide additional equipment and resources (as described above) to respond to this type of discharge.

Probability of a chain reaction of failures

The probability of a chain reaction of failures is low. The facility's large product storage tanks have a combined (b) (7)(F) ns and are located in tank farm areas with dike walls constructed of compacted earth and/or concrete. Several of the tank farm areas feature aboveground piping running between dike walls to connect their containment capacities, allowing for some relief for the dike walls from the weight and pressure of an accumulation of spilled material. As mentioned previously in this plan, the majority of the site encompasses tank dike storage areas that meet fire code standards including the provisions of NFPA Code 30.

None of the average most probable discharge scenarios given previously would have the effect of initiating a sequence or chain reaction of failures as the spill flow pathways for average most probable discharge scenarios are directly into the water or flowing outside of secondary containment towards the waterfront.

<i>DISCHARGE SCENARIOS</i>

1.5.2 MEDIUM / MAXIMUM MOST PROBABLE (MMP) DISCHARGE

* Medium Discharge Scenario given in Appendix F of 40 CFR 112.20 as Section 1.5.1.

Description

<u>EPA</u>		<u>USCG</u>
Non-Transportation-Related	<	Marine-Transportation-Related
Medium Discharge:		MMP Discharge:
36,000 gallons (857 bbls)		50,400 gallons (1,200 bbls)

As described in the beginning of Section 1.5, the medium discharge at the non-transportation-related component of this facility is 36,000 gallons (857 bbls) and the maximum most probable discharge at the MTR component of this facility is 1,200 barrels (50,400 gallons). As the larger of the two volumes, the facility is directed to use maximum most probable discharge from the MTR component of the facility for planning purposes. Examples of maximum most probable discharge scenarios may include, but are not limited to:

- Failure of manifold, mechanical loading arm, other transfer equipment, or hoses
- Tank or truck overfill
- Tank failure
- Piping/manifold rupture
- Leaking pipes, flanges, or valves
- Explosion or fire
- Equipment failure
- Personnel error during maintenance or oil transfer operations

This size discharge would most likely occur due to equipment failures or human error. This size discharge would likely be noticed quickly and appropriate clean up measures taken since product transfers are monitored by facility and vessel personnel, including persons-in-charge. Discharge detection equipment and procedures are described in greater detail in Section 1.6 of this plan.

Refer to Section 1.4.3 of this plan for an analysis of the potential for an oil spill at this facility.

Prevention

Several elements of the facility's operations and administration help to limit the number of occurrences and the volume of discharges. The facility maintains a copy of their USCG Operations Manual at the dock shed. The USCG Operations Manual provides important safety, material handling, and response information for transfers at the Ship Dock and Barge Dock. Also, employees receive periodic training on the proper, safe transfer procedures for transfers to and from tanks (e.g., proper tank gauging procedures) for all transfer modes. This training includes what to do in the event of an unusual occurrence such as equipment rupture (i.e., how to transfer spilled material to other available tankage, etc.). In addition, facility personnel periodically conduct site walks where evidence of discharges would be observed.

Finally, preventive maintenance, inspection, and testing of equipment are performed at regularly scheduled intervals to ensure that any weaknesses are discovered before problems occur. This regular inspection and maintenance program ensures that tank age and the condition of the facility's oil handling equipment do not significantly contribute to the risk of a discharge from the facility. The facility's testing, inspection, and maintenance programs are described in greater detail in Section 1.8.1 of this plan.

Facility Response Resources / Capability

The regulatory requirement for the MTR component of the facility is that the facility identifies response resources capable of containing and collecting 1,200 barrels (50,400 gallons) of oil. Oil recovery devices with an effective daily recovery capacity (EDRC) of half the planning volume, 25,200 gallons per day for the MTR component must

<i>DISCHARGE SCENARIOS</i>

be located such that they are capable of arriving on-scene within 12 hours. Regulations also require the facility to identify sufficient quantity of containment boom available to arrive within 12 hours for oil collection and containment and for protection of fish and wildlife and sensitive environments. Refer to Section 1.4.2 for a discussion of potentially affected fish and wildlife and sensitive environments and to the table at end of this Section 1.5.3 of this plan that summarizes containment strategies and locations.

Sufficient temporary storage to contain twice the EDRC, 50,400 gallons of oil for the MTR component of the facility, must be provided. A combination of terminal and OSRO resources will be used, as necessary. Sufficient response resources and storage capacities are described below.

Containment Boom (12 hour deployment)

- The facility maintains over 1,000 feet of containment boom on-site. This amount of boom is more than twice the length of the largest vessels that transfer product at the Barge Dock (500 feet in length).
- Miller Environmental Group, Triumvirate Environmental, and Clean Harbors are the OSRO/responders the terminal will use to satisfy the requirement for identifying the source for containment boom twice the length of the largest vessels that transfer product at the Ship Dock (800 feet in length). These companies are located in the Baltimore, MD area and are within the 12-hour deployment time range.
- Miller Environmental Group, Triumvirate Environmental, and Clean Harbors have multiple facilities located within the 12-hour deployment time range that are capable of supporting this terminal.
- Copies of these companies' response equipment and capabilities are included as Appendix A to this plan.

Oil Recovery Devices (12 hour deployment)

- Miller Environmental Group, Triumvirate Environmental, and Clean Harbors are the OSRO/responders the terminal will use to satisfy this requirement. These companies are located in the Baltimore, MD area and are within the 12-hour deployment time range.
- Miller Environmental Group, Triumvirate Environmental, and Clean Harbors have multiple facilities located within the 12-hour deployment time range that are capable of supporting this terminal.
- Copies of these companies' response equipment and capabilities are included as Appendix A to this plan.

Oil Storage Capacity

The facility can utilize existing tank storage capacity to satisfy the need of 1,200 bbls of oil storage capacity. Specification fuels could be blended directly back into existing storage tanks for reuse. Off-specification fuels could be recovered and trucked off-site to a refiner. If additional storage capacity is needed, immediately available options include:

- Oil/water separators
- Frac Tank Rental
- Currently out-of-service facility tankage

Implementation of this plan utilizing the response resources identified in this section is described in Section 1.7.1.

Factors that Affect Response

The response efforts for maximum most probable discharges at the facility are affected by various factors, including the following site elements, response mitigating measures, weather, or other factors:

Size of the discharge

Any of the scenarios listed at the beginning of this section could spill enough oil to cause a maximum most probable discharge of 1,200 barrels (50,400 gallons) if on-site containment fails.

Direction of discharge pathway

The spill flow pathways for maximum most probable discharge scenarios from the MTR component of the facility are discussed in this section. The general topography at the site slopes west towards the waterfront of the Patapsco

<i>DISCHARGE SCENARIOS</i>

River, Northwest Branch, however, the gradient is very slight. Spills occurring at the Ship Dock or Barge Dock would likely discharge directly into the Patapsco River, Northwest Branch. Spills occurring shoreside of the docks from piping running outside of secondary containment would follow the general site gradient towards the waterfront of the river. Facility drainage patterns are depicted in the Site Drainage Plan Diagram (Figure 2) in Section 1.9 of this plan.

Likelihood that a discharge will travel off-site

The likelihood that a spill from a maximum most probable discharge would travel off-site is moderate, considering transfer equipment at the Ship Dock and Barge Dock do not have constructed secondary containment. However, a spill from the docks that discharged directly into the Patapsco River, Northwest Branch could be at least partially contained by a response involving deployment of sorbents or containment boom stored at the docks. Further, if the spilled material is asphalt, it is unlikely to flow quickly or a great distance off-site, due to its flow characteristics. Refer to the site drainage and discharge pathway descriptions provided above.

Proximity to downgradient wells, waterways, and drinking water intakes

Maximum most probable discharges may potentially impact downgradient wells, waterways, or drinking water intakes. There are no downgradient wells or drinking water intakes within the vicinity of the facility or its spill pathway planning distance; however, this type of discharge does have the potential to affect waterways as a spill at the Ship Dock or Barge Dock would likely flow directly into the Patapsco River, Northwest Branch. Spills, especially light product spills, occurring shoreside of the dock but outside of secondary containment could potentially reach the waterfront of the Patapsco River, Northwest Branch. Refer to Section 1.4.2 of this plan for a discussion of nearby water intakes and other environmental sensitivity features. Refer to the site drainage and discharge pathway descriptions provided above.

Proximity to fish and wildlife and sensitive environments

Maximum most probable discharges have the potential to affect fish and wildlife and sensitive environments. There are no nature preserves, conservation areas, or other designated sensitive areas within the immediate vicinity of the facility. There are sensitive environments within the planning distance spill pathway, but this type of discharge would most likely not be of sufficient quantity to reach or otherwise impact them. Refer to Section 1.4.2 for a discussion of potentially affected fish and wildlife and sensitive environments. Refer to the site drainage and discharge pathway descriptions provided above.

Material discharged

Oil materials that could be released in a maximum most probable discharge at this facility include gasoline, ethanol, distillate, biodiesel, marine diesel, and asphalt. Group 1 Oils (gasoline, ethanol) are considered non-persistent oils, while Groups 2 Oils (distillate, biodiesel), Group 3 Oils (marine diesel), and Group 5 Oils (asphalt) are considered persistent for response planning purposes. Properties of the oil groups and their associated characteristic hazards are discussed in Section 1.5 of this plan. Response personnel will need to recognize which hazards are present in order to provide appropriate personal protection. MSDSs for materials stored on-site are referenced in Appendix J to this plan but maintained under separate cover at the facility.

Location of the material discharged

The spilled material from a maximum most probable discharge would be released directly into the waters of the Patapsco River, Northwest Branch for spills occurring at the Ship Dock or Barge Dock, or onto the concrete and/or paved surfaces outside of secondary containment for spill occurring shoreside of the docks. Refer to the site drainage and discharge pathway descriptions provided above.

Weather or aquatic conditions

Weather or aquatic conditions will impact the appropriate response actions. Rainfall will accelerate the flow of spilled oil to drainage pathways; therefore, the first priority for response during rainfall events is to place sorbent and retention materials in the facility's drainage paths. Likewise, increased tidal variation, flood events, or other periods of elevated volume in the Patapsco River, Northwest Branch will cause the current speed to increase and

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consequently accelerate the flow of spilled oil. Depending on actual response time during an oil spill, this may result in deployment of response materials further down the spill pathway. Refer to the site drainage and discharge pathway descriptions provided above.

Available remediation equipment

Available remediation equipment (refer to Section 1.3.2) on-site is appropriate for an immediate response by limited personnel to a variety of spill scenarios, including the maximum most probable discharge scenarios listed previously. While the facility's OSRO or spill contractor would be notified initially of a spill and the best method for containment determined, spills from maximum most probable discharge scenarios could be at least partially contained by facility personnel through containment measures which include the use of spill response equipment stored at the docks. In addition, the facility's OSRO or spill contractor would likely provide additional equipment and resources (as described previously) to respond to this type of discharge.

Probability of a chain reaction of failures

None of the maximum most probable discharge scenarios given previously would have the effect of initiating a sequence or chain reaction of failures as the spill flow pathways for average most probable discharge scenarios are directly into the water or flowing outside of secondary containment towards the waterfront.

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1.5.3 WORST CASE DISCHARGE

* Worst Case Discharge Scenario given in Appendix F of 40 CFR 112.20 as Section 1.5.2.

(b) (7)(F)

As described in the beginning of Section 1.5, different planning volumes derived from different calculation methodologies are used for the worst case discharge scenarios from the non-transportation-related and MTR components of the facility as well as the onshore oil pipeline. As the largest of the volumes, the facility is directed to use the worst case discharge from the non-transportation-related component of the facility for planning purposes. However, the facility is also required to use the worst case discharges from the MTR component of the facility and the onshore oil pipeline for planning purposes. Therefore, this section includes considerations for each discharge scenario.

Non-Transportation-Related Component

The worst case discharge scenario from the non-transportation-related component of this facility is the complete failure of its (b) (7)(F)

was determined using a worksheet in 40 CFR 112, Appendix D, Part A, which is included in Appendix B to this plan. For a discharge of this size to reach a navigable waterway or leave the facility property, the diking system of the tank farm area in which the tank is located would have to be damaged or destroyed (breached). This size discharge would most likely occur due to a natural disaster or catastrophic event. Examples of worst case discharge scenarios may include, but are not limited to:

- Tank fire
- Earthquake-induced spills
- Catastrophic tank shell failure
- Hurricane-induced spills
- Tornado-induced spills

A worst case discharge from the non-transportation-related component of the facility would be detected immediately because the scenarios described above either involve a condition where terminal personnel would be on high alert (e.g., hurricane-induced spills) or a catastrophic event (e.g., tank fire) that would be immediately known to terminal personnel and properties surrounding the facility. A discharge of this magnitude is considered extremely unlikely because of the very infrequent occurrence of the scenarios described above and the complete failure of both the tank shell and the tank farm area diking system required by a worst case discharge scenario.

MTR Component

The worst case discharge scenario from the MTR component of this facility is a product loss equivalent to the total volume of all piping carrying oil between the marine transfer manifold and the non-transportation-related portion of the facility. (b) (7)(F) was determined using the calculation methodology provided in 33 CFR 154.1029 and this calculation is included in Appendix B to this plan. Examples of worst case discharge scenarios may include, but are not limited to:

- Failure of manifold, mechanical loading arm, other transfer equipment, or hoses
- Piping/manifold rupture
- Leaking pipes, flanges, or valves

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- Explosion or fire
- Equipment failure
- Personnel error during maintenance or oil transfer operations

A worst case discharge from the MTR component of the facility would most likely occur due to equipment failures or human error. This size discharge would likely be noticed quickly and appropriate clean up measures taken since product transfers are monitored by facility and vessel personnel, including persons-in-charge. Discharge detection equipment and procedures are described in greater detail in Section 1.6 of this plan.

Onshore Oil Pipeline

The worst case discharge scenario from the onshore oil pipeline is a product loss equivalent to the total volume of all piping carrying oil between the facility and the Baltimore North Terminal. This planning volume of 7,677 bbls (322,434 gallons) was determined using the calculation methodology provided in 49 CFR 194.105 and this calculation is included in Appendix B to this plan.

Refer to Section 1.4.3 of this plan for an analysis of the potential for an oil spill at this facility.

Prevention

For a worst case discharge caused by a natural disaster, preparedness is more appropriate than prevention. The facility employees receive training periodically on the proper procedures to deal with a natural disaster. Employees are also trained in procedures to follow if the facility must be evacuated (refer to Section 1.3.5 of this plan).

The importance of preparedness notwithstanding, several elements of the facility's operations and administration help to limit the number of occurrences and the volume of discharges. The facility maintains a copy of their USCG Operations Manual at the dock shed. The USCG Operations Manual provides important safety, material handling, and response information for transfers at the Ship Dock and Barge Dock. Also, employees receive periodic training on the proper, safe transfer procedures for transfers to and from tanks (e.g., proper tank gauging procedures) for all transfer modes. This training includes what to do in the event of an unusual occurrence such as equipment rupture (i.e., how to transfer spilled material to other available tankage, etc.). In addition, facility personnel periodically conduct site walks where evidence of discharges would be observed.

The facility performs preventive maintenance, inspection, and testing of oil-handling equipment at regularly scheduled intervals to ensure that any weaknesses are discovered before problems occur. This regular inspection and maintenance program ensures that tank age and the condition of the facility's oil handling equipment do not significantly contribute to the risk of a discharge from the facility. The facility's testing, inspection, and maintenance programs are described in greater detail in Section 1.8.1 of this plan.

The facility employs certain practices to help prevent the occurrence and propagation of a fire. The majority of the site encompasses tank dike storage areas that meet fire code standards including the provisions of National Fire Protection Association (NFPA) Code 30. Also, the facility has fire extinguishers located throughout critical facility areas. A fire fighting water source is provided by a fire hydrant on the east side of South Clinton Street, near the Terminal Office entrance/exit gate. This hydrant location is identified on the Site Drainage Plan Diagram (Figure 2) in Section 1.9 of this plan. Additional fire fighting capacity would be provided by local fire departments, who are invited to coordinate fire response.

Finally, note that tanks can be expected, due to their shape and due to product weight, to fare very well during severe weather. California earthquake experience at tank farms suggests such cylindrical structures can withstand severe stresses.

Facility Response Resources / Capability

The regulatory requirement for non-transportation-related and MTR components as well as the onshore oil pipeline is that the facility identify and ensure the availability of sufficient response resources to respond to the worst case discharge of oil to the maximum extent practicable.

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For the non-transportation-related component of the facility, response capacities for worst case discharge planning volumes are calculated in accordance with the procedures outlined in 40 CFR Part 112, Appendix E, and shown on Attachment E-1 in Appendix C to this plan. For the MTR component of the facility, response capacities for worst case discharge planning volumes for Groups 1, 2, and 3 Oils are calculated in accordance with the procedures outlined in 33 CFR Part 154, Appendix C, and shown on the same planning worksheet in Appendix C to this plan. For the onshore oil pipeline, the response resources required for the non-transportation-related component of the facility are sufficient in terms of capacity and response time for response to a pipeline worst case discharge. Required response resources and capabilities for the Group 5 Oils handled at the facility are discussed following the table below. All volumes are given in barrels (bbl) or barrels per day (bpd). The table below summarizes the required planning volumes for response resources for worst case discharges at the facility.

RESPONSE RESOURCES PLANNING VOLUMES FOR WORST CASE DISCHARGES						
Response Planning		Non-Transportation-Related		Marine-Transportation-Related		
Resource Type	Response Tier ⁴	Group 1 Oils (barrels)	Group 2 Oils (barrels)	Group 1 Oils (barrels)	Group 2 Oils (barrels)	Group 3 Oils (barrels)
On-Water Oil Recovery Capacity ¹	Tier 1	6,000	16,200	247	666	740
	Tier 2	8,000	21,600	329	888	986
	Tier 3	12,000	32,400	493	1,332	1,480
Shoreline Clean-Up Volume ²	-	20,000	162,000	822	6,656	10,684
On-Water Oil Response Capacity ³	Tier 1	4,125	14,325	0	0	0
	Tier 2	4,250	17,850	0	0	0
	Tier 3	4,500	24,900	0	0	0

- 1 - On-Water Oil Recovery Capacity: The terminal must contract for resources with the EDRC noted below to arrive on scene within the time specified. At least 20 percent of the on-water response equipment shall be capable of operating in water of 6 feet or less depth.
- 2 - Shoreline Cleanup: The terminal must identify an OSRO with the indicated shoreline cleanup capacity.
- 3 - On-Water Recovery Capacity Needed to be Identified, but not Contracted for in Advance: The terminal must identify, but is not required to contract for in advance, resources with the EDRC noted below to arrive on scene within the time specified.
- 4 - Tier 1 resources to arrive on scene in 12 hrs
Tier 2 resources to arrive on scene in 36 hrs
Tier 3 resources to arrive on scene in 60 hrs

A worst case discharge from the facility could involve the release of asphalt, considered a Group 5 Oil for response planning purposes. Group 5 Oils have a specific gravity higher than 1.0 and thus sink in water, so there is expected to be little if any on-water recovery or shoreline cleanup of discharged product. Consequently, neither Attachment E-1 (Worksheet to Plan Volume of Response Resources for Worst Case Discharge – Petroleum Oils) to 40 CFR Part 112, Appendix E, nor the planning volume requirements described in 33 CFR 154, Appendix C, are applicable to the response capacities required for Group 5 Oil storage.

Facilities that handle, store, or transport Group 5 Oils are required to identify the following response resources:

- Sonar, sampling equipment, or other methods for locating the oil on the bottom or suspended in the water column
 - PF&T will establish the boundaries of the discharge using divers and clam shell digging devices – asphalt does not readily migrate once on the bottom

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- Containment boom, sorbent boom, silt curtains, or other methods for containing the oil that may remain floating on the surface or to reduce spreading on the bottom
 - PF&T maintains some response equipment on-site, including containment boom, granular sorbents, hand tools, etc. OSROs are contracted to respond to spills beyond the terminal's response capabilities
- Dredges, pumps, or other equipment necessary to recover oil from the bottom and shoreline
 - PF&T would contract for the removal of the asphalt. Initial planning calls for removal by mechanical means, using a barge/crane operation to dig out Asphalt with clam shells and grappling hooks. Addition measures will be decided upon on a per incident basis with agreement from all Federal, State, and local agencies.
- Equipment necessary to assess the impact of such discharges
 - PF&T would determine the impact of any discharge once the boundaries of the spill were located. Divers and bottom sampling by mechanical means would conduct this analysis.
- Other appropriate equipment necessary to respond to a discharge involving the type of oil handled, stored, or transported
 - PF&T would consider other equipment deemed necessary for the response on a per incident basis depending solely on the scope and circumstances of the discharge. Decisions made in this respect would be made by a Qualified Individual or contractor.

The facility has sufficient equipment to meet the above requirements for response to a worst case discharge of a Group 5 Oil within 24 hours of discovery of a discharge to the area where the facility operates through using a combination of equipment on-site plus equipment available through its spill response contractors. Additionally, the facility has sufficient equipment to respond to a worst case discharge of Group 1, 2, and 3 Oils within the required response tiers through using a combination of equipment on-site plus equipment available through its spill response contractors. The facility would rely on OSROs Miller Environmental Group, Triumvirate Environmental, and Clean Harbors to provide response personnel, equipment, and other resources for a large and sustained response effort. All the response resources identified for medium case discharge scenarios (refer to Section 1.5.2 of this plan) include containment boom, oil recovery devices, and oil storage capacity and would be used for response to a worst case discharge. On-site equipment available for response to a worst case discharge includes equipment listed in Section 1.3.2 of this plan and available storage capacity as tabulated in Section 1.7.1 of this plan.

In addition to these resources, the facility's contracted OSROs have response equipment/capabilities including, but not limited to: fully stocked response trailers/trucks, absorbent booms/pads, drain mats, Oil Dry®, drums, totes, portable tanks, vacuum trucks, dump trucks, air compressors, bobcats, excavators, pumps, skimmers, and yard equipment. These OSRO resources and capabilities are listed in Appendix A to this plan. Finally, the facility or its OSROs could activate additional spill response contractors as the situation demands.

The response resources identified above are capable of being used in close-to-shore response activities in shallow water; at least 20 percent of the on-water response equipment is capable of operating in water of 6 feet or less depth. In addition to the facility's on-site response equipment, the containment booms provided by the spill response contractors can arrive in the specified tier requirements and are sufficient for containment and collection of released materials and protection of fish and wildlife and sensitive environments. Refer to Section 1.4.2 of this plan for a discussion of potentially affected fish and wildlife and sensitive environments.

The QI is the individual designated at this facility to work with local fire departments for Group 5 Oil fires and also to ensure that sufficient, well-trained fire fighting resources are available within a reasonable response time to respond to a worst case discharge. External fire fighting resources available to the facility include a fire hydrant in the vicinity of the facility, local fire departments, and USCG fire fighting resources. The facility also maintains an assortment of portable fire extinguishers on-site.

Implementation of this plan utilizing the response resources identified in this section is described in Section 1.7.1.

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Factors that Affect Response

The response efforts for a Worst Case Discharge at the facility are affected by various factors, including the following site elements, response mitigating measures, weather, or other factors:

Size of the discharge

Any of the scenarios listed at the beginning of this section could spill enough oil to cause a worst case discharge of (b) (7)(F) from the non-transportation-related component of the facility or (b) (7)(F) from the MTR component of the facility, if constructed containment were to fail.

Direction of discharge pathway

The most likely spill flow pathway from the EPA worst case discharge scenarios described above would be generally west towards the waterfront of the Patapsco River, Northwest Branch. A spill uncontained by the tank's outer ring wall would flow into the streets surrounding the tank construction where the spill would then be conveyed via overland flow west towards the waterfront and discharge into the river.

The most likely spill flow pathway from the USCG worst case discharge scenarios would be directly into the Patapsco River, Northwest Branch for spills occurring at the Ship Dock or Barge Dock. Spills occurring shoreside of the docks from piping running outside of secondary containment would follow the general site gradient west towards the waterfront of the river. Facility drainage patterns are depicted in the Site Drainage Plan Diagram (Figure 2) in Section 1.9 of this plan. The trajectory for the entire planning distance spill pathway is depicted in the Worst Case Discharge/Environmental Sensitivity Diagram (Figure 5) in Section 1.9 of this plan.

Likelihood that a discharge will travel off-site

The likelihood that a spill from worst case discharge scenarios from either the non-transportation-related or MTR components of the facility would travel off-site is definite, considering the nature of the worst case discharge scenarios. It is unreasonable to expect that a response involving deployment of on-site spill response equipment available to the facility personnel could be effective in preventing a worst case discharge from traveling off-site. Refer to the site drainage and discharge pathway descriptions provided above.

Proximity to downgradient wells, waterways, and drinking water intakes

Worst case discharges from either the non-transportation-related or MTR components of the facility would impact downgradient wells, waterways, or drinking water intakes. There are no downgradient wells or drinking water intakes within the vicinity of the facility or its effective spill pathway planning distance; however, this type of discharge would affect a waterway as a worst case discharge scenario involves a discharge into the Patapsco River, Northwest Branch. Refer to Section 1.4.2 of this plan for a discussion of nearby water intakes and other environmental sensitivity features. Refer to the site drainage and discharge pathway descriptions provided above.

Proximity of fish and wildlife and sensitive environments

Worst case discharge scenarios from either the non-transportation-related or MTR components of the facility have the potential to affect fish and wildlife and sensitive environments. While there are no nature preserves, conservation areas, or other designated sensitive areas within the immediate vicinity of the facility, they do exist within its effective planning distance spill pathway. Refer to Section 1.4.2 for a discussion of potentially affected fish and wildlife and sensitive environments. Refer to the site drainage and discharge pathway descriptions provided above.

Material discharged

Oil materials that could be released in worst case discharge scenarios from the non-transportation-related component of the facility are gasoline and distillate.

Oil materials that could be released in worst case discharge scenarios from the MTR component of the facility include gasoline, ethanol, distillate, biodiesel, marine diesel, and asphalt. Group 1 Oils (gasoline, ethanol) are considered non-persistent oils, while Groups 2 Oils (distillate, biodiesel), Group 3 Oils (marine diesel), and Group 5

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Oils (asphalt) are considered persistent for response planning purposes. Properties of the oil groups and their associated characteristic hazards are discussed in Section 1.5 of this plan. Response personnel will need to recognize which hazards are present in order to provide appropriate personal protection. MSDSs for materials stored on-site are referenced in Appendix J to this plan but maintained under separate cover at the facility.

Location of the material discharged

The spilled materials from a worst case discharge from the non-transportation-related component of the facility would be released onto the paved streets surrounding the tank construction and the concrete and/or paved surfaces in and around the facility.

The spilled material from worst case discharge from the MTR component of the facility would be released directly into the waters of the Patapsco River, Northwest Branch for spills occurring at the Ship Dock or Barge Dock, or onto the concrete and/or paved surfaces outside of secondary containment for spills occurring shoreside of the docks. Refer to the site drainage and discharge pathway descriptions provided above.

Weather or aquatic conditions

Weather or aquatic conditions will impact the appropriate response actions. Rainfall will accelerate the flow of spilled oil to drainage pathways; therefore, the first priority for response during rainfall events is to place sorbent and retention materials in the facility's drainage paths. Likewise, increased tidal variation, flood events, or other periods of elevated volume in the Patapsco River, Northwest Branch will cause the current speed to increase and consequently accelerate the flow of spilled oil. Depending on actual response time during an oil spill, this may result in deployment of response materials further down the spill pathway. Refer to the site drainage and discharge pathway descriptions provided above.

Available remediation equipment

Available remediation equipment (refer to Section 1.3.2) on-site is appropriate for an immediate response by limited personnel to a variety of spill scenarios. However, the facility's on-site equipment is not sufficient or appropriate for a response to a worst case discharge and the ability of facility personnel to contribute significantly to the spill response/mitigation effort would be limited. Therefore, it is a priority for facility personnel to notify the facility's OSRO(s) or spill contractor(s), secure facility operations, maintain communication lines, and otherwise follow the Oil Spill Response – Immediate Actions provided in Section 1.7.1.2 of this plan. If necessary, facility personnel should evacuate the facility according to the procedures identified in Section 1.3.5 of this plan. Additional equipment and resources (as described above) for response to a worst case discharge will be provided, as needed, by the OSRO(s) and can be deployed in a timely fashion.

Probability of a chain reaction of failures

The probability of a chain reaction of failures is low. The facility's large product storage tanks have a combined capacity of (b) (7)(F) and are located in tank farm areas with dike walls constructed of compacted earth and/or concrete. Several of the tank farm areas feature aboveground piping running between dike walls to connect their containment capacities, allowing for some relief for the dike walls from the weight and pressure of an accumulation of spilled material. As mentioned previously in this plan, the majority of the site encompasses tank dike storage areas that meet fire code standards including the provisions of NFPA Code 30. A catastrophic failure of the full contents of the largest tank, (b) (7)(F) should be contained within its constructed secondary containment.

None of the previously given worst case discharge scenarios for the MTR component of the facility would have the effect of initiating a sequence or chain reaction of failures as the spill flow pathways for worst case discharge scenarios are directly into the water or flowing outside of secondary containment towards the waterfront.

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1.5.4 RESPONSE PROCEDURES FOR DISCHARGE SCENARIOS

This section provides prioritized procedures for facility personnel to mitigate or prevent any discharge or substantial threat of a discharge of oil resulting from operational activities associated with internal or external facility transfers, including specific procedures to shut down affected operations. Note that these procedures are appropriate for implementation by all terminal personnel, except where the Terminal Manager or QI are specifically designated. Refer to Section 1.3.6 of this plan for a listing of designated QIs and a summary of their authorities and responsibilities. A copy of these procedures is maintained at the facility operational areas.

It is important to note that these procedures are intended only as guidelines. The appropriate response to a particular incident may vary depending on the nature and severity of the incident and on other factors that are not readily addressed. Note that, without exception, personnel and public safety is first priority. The person discovering the spill should undertake these procedures **only if they can be performed safely**. These procedures address actions to be taken by facility personnel in the event of a discharge, potential discharge, or emergency involving the following equipment and scenarios:

- Failure of manifold, mechanical loading arm, other transfer equipment, or hoses, as appropriate
- Tank overfill
- Tank failure
- Piping rupture
- Piping leak, both under pressure and not under pressure, if applicable
- Explosion or fire
- Equipment failure (e.g. pumping system failure, relief valve failure, or other general equipment relevant to operational activities associated with internal or external facility transfers)

Response procedures for emergencies involving this equipment and these scenarios are described in greater detail below.

Failure of manifold, mechanical loading arm, other transfer equipment, or hoses, etc.

In the event of equipment failure at transfer areas at the facility including the Truck Rack, Ship Dock, Barge Dock, and Rail Tank Car Unloading Area, facility personnel should take the following actions:

1. Cease all transfer operations
2. Engage emergency shut-off device **–only if safe to do so–**
3. Guard against sources of ignition
4. Notify the Terminal Manager as soon as possible
5. Take appropriate action to contain the spill to the extent possible **–only if safe to do so–**

The designated QI should take the following actions:

1. Notify the USCG
2. Call the spill response contractor(s)
3. Notify the National Response Center

Tank overfill/failure

In the event a tank overfill occurs, facility personnel should take the following actions:

1. Cease all transfer operations
2. Shut down pumps and secure the operation by closing tank valves, as necessary **–only if safe to do so–**
3. Notify the Terminal Manager as soon as possible
4. Take appropriate action to contain the spill to the extent possible **–only if safe to do so–**
5. Secure the area by barricading roadways in the area of the spill and closing facility entrance gates until the spill is under control
6. Advise all operating personnel, contractor personnel, and truck drivers in the area of the emergency and have them immediately cease all operations and shut down engines to guard against possible sources of ignition

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7. Along with the Terminal Manager, evacuate the area of all personnel if the spilled material poses a health hazard
8. Set up the fire equipment if a fire hazard is probable due to the character of the product spilled
9. Initiate spill cleanup and decontamination procedures under the direction of the Terminal Manager
10. Transfer excess product from overfilled tank to another tank

Piping rupture/leak

If the piping rupture is inside the facility diked areas, facility personnel should immediately take the following actions:

1. Cease all transfer operations
2. Secure the block valves of the ruptured line **–only if safe to do so–**
3. Close the drain valves for the diked area **–only if safe to do so–**
4. Take appropriate action to contain the spill to the extent possible **–only if safe to do so–**
5. Notify the Terminal Manager

If the piping rupture is outside of the facility diked areas, facility personnel should immediately take the following actions:

1. Cease all transfer operations
2. Secure the block valves of the ruptured line **–only if safe to do so–**
3. Deploy response equipment to block flow into drainage grates and sewers **–only if safe to do so–**
4. Take appropriate action to contain the spill to the extent possible **–only if safe to do so–**
5. Notify the Terminal Manager
6. Initiate boom deployment procedures if the spill enters a navigable waterway **–only if safe to do so–**

Preventive measures to reduce the possibility of piping rupture/leak include:

1. Attention of the operator during transfer activities
2. Frequent checks/inspections during transfer activities
3. Routine inspection programs for all oil handling equipment
4. Annual terminal pipe systems tests

Major equipment failure (pumps, valves, relief valves)

In the event of a power failure or any other occurrence that renders the entire facility or any major component thereof inoperable, a pipeline failure, imminent flooding or natural hazard, or an occurrence outside company property that threatens the safety, operation, or security of the company's property or personnel, facility personnel should take the following steps:

1. Contact the Terminal Manager. If unable to contact the Terminal Manager, the next person in order on the Spill Management Team list in Section 1.3.4 of this plan. Proceed down the list until some designated person is reached
2. Remain on duty until the Terminal Manager or other person is contacted and further instructions received

Explosion/Fire

In the event of an explosion/fire, facility personnel shall contact the Terminal Manager immediately and proceed to initiate incipient stage fire fighting procedures (cease all on-going transfer activity, close tank and piping valves as necessary, identify important product information, etc.) General emergency response procedures, including response to fire emergency, are outlined in the facility's Emergency Response Plan, maintained at the facility under separate cover. **Note:** Facility personnel should not participate in the fire fighting activities beyond incipient stage fire fighting procedures for response to a tank fire; instead, they should provide information and support to the responding fire department. The fire fighting strategies listed below are provided for informational purposes and do not qualify facility personnel as trained emergency responders or fire fighters.

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Tank fires

Facility personnel should be prepared to provide the following information to the responding fire department when notifying them of a tank fire:

1. The address of the facility and direction to the facility
2. The identify of the product involved in the tank fire and the identify of products in any nearby tanks that could potentially be affected by the tank fire heat
3. Product specific physical properties and hazards, available on product data sheets or MSDSs

Basic fire fighting strategies for tank fires within bulk product storage tanks include:

1. Extinguish fires in the tank farm areas with foam to reduce heat input to tank contents
2. Apply cooling water streams to the tank shell and intact portion of roof provided the run-off does not enter the tank. Avoid directing any water stream into the tank. It is extremely important to get fire water streams on the storage tank shells within the first 10 to 20 minutes due to tremendous buildup of heat from flame exposure or heat radiation
3. Apply cooling water to other tanks exposed to heat of fire
4. Cover the area where fire fighting equipment and especially personnel and are staged and operating with a fine water mist to help prevent ignition of any potentially explosive atmospheres and to help scrub some of the smoke in the vicinity of the personnel
5. Monitor drains by tanks, both to prevent overflow of dikes and to prevent flammable material from forming explosive mixtures in the waste water or outfall water system
6. Use portable foam carts and dry chemical extinguishers for small fires
7. When the fire has been extinguished, continue to cool exposed metal to prevent re-ignition
8. Toxic and hazardous products of combustion make all chemical tank fires a situation where positive pressure, self-contained breathing apparatus (SCBA) is required. Bunker coats, fireman's boots, and fire fighting gloves are a minimum requirement for personal protective equipment
9. If at all possible, always approach the fire from the upwind side
10. Once the fire is under control, a plan for extinguishing or allowing it to burn out will be devised

Residual oil tank fires

When burning, all residual fuel oils develop a heat wave that travels downward at a rate of 15 to 50 inches per hour. Temperature of the oil in this heat wave may reach 500°F to 600°F. When this heat wave reaches the bottom water, or if sufficient water is entrained in the bottom oil, a violent "boil-over" will result. Burning oil first erupts and then falls, spreading even beyond the dike walls of the tank. The column of flame can be 300 to 400 feet in diameter at the base, spreading wider as it rises 1,000 feet or more. The beginning of a "boil-over" is indicated usually by both an increase in height and an increase in brightness of the flames, immediately prior to the actual eruption of the boiling oil. A "boil-over" is a violent eruption. A "slop-over" results from expansion of frothing of the heating liquid.

Basic fire fighting strategies for residual oil tank fires within bulk product storage tanks include:

1. Test the tank shell with a water stream in order to determine the downward progress of the heat wave
2. The daily oil inventory should be consulted to determine tank product and bottom water gauges
3. If extinguishment has failed by the time the heat wave has reached a point five feet above a known bottom water level, evacuate all personnel immediately from the area. Be on guard against successive "boil-overs" from a burning tank as this often occurs
4. Conduct all necessary work within the dike area during the early part of the fire so that as the fire progresses, extinguishment procedures can be carried on from a safer distance

Extinguishing fires within dike areas

Once a fire is under control, a plan for extinguishing or allowing it to burn out will be devised. To extinguish, teamwork is necessary using hose lines with overlapping nozzle spray patterns to sweep and cool the liquid surface. Dry chemical extinguishers can be used in conjunction with water spray patterns to complete the extinguishing. If foam is used for extinguishing, it must be applied by gently banking it off a wall or the ground and allowing it to slide on and across the liquid surface until the surface is completely

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covered. Never plunge water or foam streams directly into a burning liquid, as this will only agitate and intensify the fire, as well as ruin the foam. In all cases, attack the fire from the upwind side and provide a water spray protection to personnel directly involved in fighting the fire.

Pump seal fires

Pump seal fires are the result of flammable liquids escaping through the mechanical seal to the atmosphere, and ignition usually occurs from friction heat on the pump shaft. Prevention of such seal failures and resulting fires can only be accomplished by frequent inspection of equipment by operations and maintenance personnel.

Basic fire fighting strategies for residual pump seal fires within bulk product storage tanks include:

1. Any pumps found to have problems with vibrations, excessive noise, leaking seals, etc., should be taken out of service and the problem corrected
2. Engage emergency shut-off devices
3. If a pump seal fire occurs, immediately stop the pump and close the suction and discharge valves. This will isolate the pump and stop the flow of liquid feeding the fire
4. Apply a heavy concentration of fire water spray to the pump and any equipment exposed to the flame. The pump and related hot metal must be cooled to prevent re-ignition before attempting to isolate and extinguish the fire
5. When the pump is isolated and cooled, extinguish the fire by using dry chemical extinguishers. After the fire is extinguished, continue to cool the hot metal with fire water to prevent re-ignition. A water spray should be maintained over the pump area until flammable liquid is no longer escaping

Tank truck fires

In the event a tank truck fire occurs, terminal personnel should take the following actions:

1. Cease all transfer operations
2. Engage emergency shut-off device **–only if safe to do so–**
3. Guard against sources of ignition
4. Notify the Terminal Manager as soon as possible
5. Take appropriate action to contain the spill to the extent possible **–only if safe to do so–**

DISCHARGE DETECTION SYSTEMS

1.6 DISCHARGE DETECTION SYSTEMS

The facility relies on manual discharge detection performed by terminal personnel. The facility also maintains a Spill Prevention, Control, and Countermeasures (SPCC) Plan, which is maintained at this facility under separate cover.

The related 3.14 mile underground pipeline relies on both manual discharge detection as described above and automated detection systems, which area described further in Section 1.6.2.

1.6.1 DISCHARGE DETECTION BY PERSONNEL

Detection Procedures

Because the nature of the routine duties of terminal personnel brings them into contact with oil storage and handling areas at the site, they are likely to discover any releases of oil or other substances during the course of performing these duties. Specific detection methods utilized by facility personnel include:

- Daily visual inspections (including tanks, truck rack, secondary containment, aboveground piping, etc.) are conducted during operating personnel rounds. Inspections are discussed in greater detail below.
- Product storage tanks are gauged and tank inventories are recorded on a regular basis. Product levels determined through gauging are compared to sales, deliveries, and receipts daily in order to verify them. Product withdrawals from storage tanks are monitored, using meters, and recorded on a daily basis.
- Monthly inspections of secondary containment and tank gauging equipment are performed.
- Any accumulation of stormwater is monitored carefully for visible oil sheen.
- Properly trained terminal operators conduct all transfer operations at the Truck Rack, Ship Dock, Barge Dock, and Rail Tank Car Unloading Area as well as pipeline transfers between the Baltimore North Terminal and Baltimore South Terminal.

Facility Inspections

Terminal personnel perform a daily inspection of the terminal's tank farm area and perform a daily inspection of the transfer areas. Any observations noted of significance during daily inspections are verbally called to the attention of the Terminal Manager. Otherwise, logged inspections are performed in accordance with the facility's SPCC Plan and documented on monthly checklists. Logged inspections include:

- Visual inspection of tanks, drums, oil-bearing equipment, piping, valves, flanges, and tank appurtenances, including relief valves, roof vents, and tank gauges
- Visual inspection of earthen dikes, subdikes, and secondary containment
- Visual inspection of ground surface surrounding tanks
- Visual inspection of transfer areas and loading racks, including hoses, connections, and meters
- Visual inspection of onshore oil pipeline

In particular, these areas are inspected for oil leaks, spills, accumulation of water, and integrity of containment. Tank liquid levels are checked periodically and the level gauge for the storage tanks before and after transfers are recorded in terminal files. Examples of inspection forms used at the facility are provided in Appendix K to this plan. Completed inspection forms are maintained with the facility's SPCC Plan.

Painting or other repairs are performed as deemed necessary for safe operation. Tank inspections and repairs are done in accordance with API 653 specifications. Any visible oil leaks which may occur from tank seams, gaskets, rivets and bolts will be immediately corrected. Repairs are done according to API 653 standards and records of repairs are kept at the terminal permanently.

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1.7 PLAN IMPLEMENTATION

1.7.1 RESPONSE RESOURCES FOR SMALL, MEDIUM, AND WORST CASE SPILLS

This section describes the response actions to be carried out and the response resources necessary to ensure the safety of the facility and to mitigate or prevent discharges described in Section 1.5 of this plan.

1.7.1.1 RESPONSE RESOURCES AND ACTIONS

Facility Response Equipment

Response equipment owned and maintained on-site is listed in Section 1.3.2 of this plan and includes containment boom, some sorbents, and small watercraft. In addition to the equipment listed in Section 1.3.2 and the facility resources and capabilities described in Section 1.5 of this plan, the facility has a variable amount of available capacity to store recovered product. The table below summarizes this available capacity.

Quantity	Description	Volume
4	OWS #001 OWS #002 OWS #003 OWS #004	12,000 gallons 1,000 gallons 1,000 gallons 6,000 gallons
1	Groundwater Recovery Tank	500 gallons

Personnel that would be involved in spill response are listed in Section 1.3.4 of this plan. Available remediation equipment on-site is appropriate for an immediate response by limited personnel to a variety of spill scenarios. However, the facility's on-site equipment is not sufficient or appropriate for a response to a worst case discharge and the ability of facility personnel to contribute significantly to the spill response/mitigation effort would be limited. Therefore, it is a priority for facility personnel to notify the facility's OSRO(s) or spill contractor(s), secure facility operations, maintain communication lines, and otherwise follow the Oil Spill Response – Immediate Actions provided in Section 1.7.1.2 of this plan. If necessary, facility personnel should evacuate the facility according to the procedures identified in Section 1.3.5 of this plan. Additional equipment and resources (as described above) for response to a worst case discharge will be provided, as needed, by the OSRO(s) and can be deployed in a timely fashion.

Contract Resources

In the event of a discharge that is beyond the initial response capabilities of the local response personnel, contract manpower and equipment resources can be obtained through Oil Spill Removal Organization(s) (OSRO). These OSROs can provide manpower and containment/clean-up equipment for the response operation on land, water, or adjacent shorelines. Terminal Management (QI) will typically handle notification/implementation of these OSRO resources. The Emergency Response Contractors in Section 1.3.4 of this plan provides a reference for the OSROs, detailing their telephone numbers, locations, and estimated response times.

The facility retains Miller Environmental Group as an OSRO that has received OSRO classification by the USCG for all levels (MM, W1, W2, and W3) for the River and Canal operating environments, which includes the Baltimore South Terminal. Additionally, the facility has relationships with other spill responders in the area, including OSROs Triumvirate Environmental and Clean Harbors. OSRO contact information is provided in Section 1.3.4 of this plan while OSRO contracts, equipment lists, and equipment testing information are provided in Appendix A to this plan.

The OSROs have response resources available that are equal to those required for response to small, medium, and worst case discharges at this site, as determined in Section 1.5 of this plan, including the Tier 1, 2, and 3 response

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levels. The resources provided will be appropriate for the River and Canal operating environment, and will be adequate to continue operations for the first 3 days of the response. The OSROs also have access to pre-identified sub-contractors. The facility may periodically add and list in Section 1.3.4 additional contractors for small oil spill response emergency response services or to support the listed OSROs.

The following sections outline the various response equipment/resources available from the facility, other Company facilities, OSROs, and other outside resources.

Cooperative/Mutual Aid Resources

Cooperative/Mutual Aid resources are not currently available to the facility.

Experts and Consultants

The Company maintains a relationship with various environmental and technical consultants that can provide support in the event of an emergency incident. These consultants can provide expertise and support in the areas of emergency response management, environmental services, site assessment, permitting, waste treatment, recycling, dewatering, hazardous waste disposal, and remediation. Implementation of these services should be coordinated through corporate management.

Volunteers

Volunteers will not be utilized by the Company for responding to spills originating from the facility. All volunteers will be referred to the State or Federal On-Scene Coordinator (USCG or EPA).

Communications

Effective and efficient communications systems are essential for emergency response at every level. The communications system will be utilized to gather information and current status reports as well as to provide coordination and direction to widely separated work groups involved in search, containment/diversion, repair, traffic control, public control or evacuation, and restoration.

Lines of communication between the Incident Commander and local response personnel are demonstrated in the organization charts, provided in Section 1.8.2 of this plan. Communication of the overall spill response operation between the facility and the responsible government agencies in the Federal Regional Response Team (RRT) will occur between the Incident Commander and the Federal On-Scene Coordinator.

Central Communications System

Prearranged communication channels are of the utmost importance in dealing with facility emergencies. The predetermined communications channels include the following:

- A list of emergency telephone numbers for internal management and emergency response personnel.
- A list of emergency telephone numbers for various external resources such as the fire and police department, medical, and regulatory agencies.
- A list of emergency telephone numbers for contract response resources.

All of the emergency telephone numbers described above are provided in Sections 1.3.1 and 1.3.4 of this plan.

Communications Equipment

Field communications during a spill response to a small or medium discharge will be handled via the existing facility communications network. This network will utilize existing radios, telephones, beepers, FAX machines, and computers and will be maintained by facility personnel. In the event of a worst case discharge, field communications will be enhanced with other company and contract resources as the situation demands.

Communication Types

- **Radios** - Handheld and vehicle mounted radio sets are the most effective means of communication for the field response operation. The units are battery operated, multi-channeled, and have a typical

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range that will cover the area of the response operation. Additional radio sets and battery packs/charges will be necessary in the event of a prolonged response operation.

- **Telephone (Conventional)** - Conventional land line telephones are the most effective means of communication for regulatory and advisory notifications during a spill response operation. Additional telephone lines can be installed in the event of a prolonged response operation.
- **Telephone (Cellular)** - Cellular telephones allow for added mobility and response effectiveness. Cellular phones are commonly maintained by certain facility personnel. Additional cellular phones can be secured in the event of a prolonged response operation.
- **FAX Machines** - FAX machines allow for a rapid transfer of information/documentation such as status reports/updates, written notifications, and purchase orders.
- **Computers** - Computers are commonly used in networks, which allow access to various other locations and company personnel. Computers also speed the consolidation of information and preparation of written reports.

Emergency Plans for Spill Response (Operational Plan) by Terminal Personnel

Initial Response

Upon discovery of any size oil spill from any source, facility personnel will immediately perform the actions listed on “Oil Spill Response - Immediate Actions” given in Section 1.7.1.2 of this plan. This includes notification of the Terminal Manager or the Assistant Terminal Manager that will assume the duties of the QI. The individual discovering the spill becomes the Incident Commander (IC) until relieved of this responsibility.

The QI will initiate the notifications (refer to Section 1.3.1 of this plan) and other initial actions (refer to Section 1.3.6 of this plan) if the spill has resulted in a discharge of oil from the site or if a discharge appears probable.

Within the first hour of discovery of a spill, terminal personnel will:

- Make an immediate assessment of the incident
- Eliminate any existing or possible sources of ignition
- Secure the source of the spill if it can be performed safely and poses no threat to human health
- Initiate notifications (refer to Section 1.3.1)
- Ensure the terminal ceases operation of truck transfers, tank transfers, and/or pipeline transfers
- Deploy terminal response equipment, including sorbent pads and/or booms, and absorbent material to contain, divert, and absorb oil on the ground, within terminal drainage ditches or pathways, or within secondary dike areas, as may be appropriate to mitigate spill flow direction

In addition, within the first two hours, the OSRO may utilize a portable pump for transfer to portable tanks or tank trucks, as necessary, to recover contained oil. Recovered oil will be returned to compatible facility storage tanks or stored in the OSRO tanks or trucks.

Spill Management Team (SMT)

The Spill Management Team will consist of personnel identified in Section 1.3.4 of this plan who will staff the organizational structure identified in Section 1.8.2 of this plan to manage response plan implementation.

Evaluation

In the event of a spill at the facility, the QI will notify the OSRO that their services may be required pending additional evaluation. The QI, with the support of the OSRO if needed, will evaluate the spill, based on the best available information and initial projections for factors including, but not limited to, the following:

- Quantity of spill
- Spill source secured
- Material spilled
- Time elapsed since spill began
- Natural resources at risk
- Public water sources at risk

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- Weather conditions
- Present location of spill

Mobilization

If required, the QI will instruct the primary OSRO to mobilize in the shortest feasible time. When in doubt, it is better to mobilize than to have resources on standby. OSROs will mobilize from their nearest response locations, but may request additional resources from subcontractors or other OSRO locations as warranted in liaison with the terminal QI.

Initial Control and Mitigation Opportunities Completed by OSRO Contractor(s)

The OSRO shall evaluate the specifics of the situation to determine opportunities to effectively intercept and remove the oil and protect natural resources at risk. The opportunities may include, but are not limited to:

- Deciding which mobilization site(s) to use at the facility. This shall be based on which sites offer the best opportunity to control and mitigate the discharge consistent with areas at risk.
- Using sorbent materials, skimmers, or vacuum methods to remove oil from the water surface.

Every effort will be made to protect fish and wildlife and sensitive areas from oil incursion. These areas are identified in Section 1.4.2 of this plan. Potential deployment sites for containment boom, recovery equipment, and/or sorbent materials are listed in Table in Section 1.5.3 of this plan

Contractor Response Plan

- When appropriate, the OSRO shall follow its own mobile response plan measures and, if requested, make an over flight of the area as soon as possible to confirm the extent of the spill.
- Weather information will be obtained using local sources.
- The material spilled, estimated quantity, time since spill began, and confirmation that the spill source is secured shall be reviewed by conferring with facility personnel.
- The resources at risk, priorities for protection, and response strategies shall be reviewed with the Federal On-Scene Coordinator (FOSC) and the Maryland Department of the Environment (MDE), if requested or as needed.
- A detailed response plan will be formulated by the OSRO and reviewed by the QI or designee, plus FOSC and MDE representatives, if on-site.
- The QI or designee and the OSRO will meet as required to assess conditions, effectiveness of response measures, and the need to redirect response efforts.
- The extent of onshore land, marsh, wetlands, or wildlife cleanup to be pursued shall be determined through consultation with regulatory agencies.

On-Scene Command Post for Worst-Case Discharge

The Terminal Office will serve as the Incident Command Post for any spill, unless conditions require the command post to be located off-site, because it is the on-site location for communications equipment (telephone and computer), terminal records, and meeting facilities.

Additional Response Training, Contracted Help, Response Equipment / Experts

OSRO spill response equipment will be provided from the OSRO's equipment yards, as needed. The OSROs have multiple facilities within the state and region that can provide additional equipment, labor, and capabilities to supplement their responding work crews, as may be necessary. In addition, OSROs have access to subcontractors in the Baltimore, MD area that can provide additional response equipment and manpower, if necessary. OSRO contact information is provided in Section 1.3.1 and 1.3.4.

OSROs can also provide access to experts as needed for spill response strategies from its own staff and the facility can also access Antea Group, the facility's FRP plan writer, for a regulatory expert as may also be needed. Additional OSRO information is provided in Appendix A of this plan.

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Ability to Implement Plan, Including Response Training and Practice Drills

The facility and its OSRO conduct response training and practice drills in accordance with Section 1.3.3 and 1.8.2 of this plan. Documentation of completion of drills/exercise required of the facility and its OSROs, as described in Section 1.8.2 of this plan, is maintained with terminal records for at least five (5) years. Documentation for the most recent exercises and drills conducted by the facility and its OSROs is provided in Appendices A and K to this plan. The facility's ability to implement the plan includes access to additional equipment resources as given in this section and also in Appendix A to this plan.

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1.7.1.2 OIL SPILL RESPONSE - IMMEDIATE ACTIONS

Initial response actions are those taken by local personnel immediately upon becoming aware of a discharge or emergency incident, before the local response personnel are formed and functioning. Timely implementation of these initial steps is of the utmost importance because they can greatly affect the overall response operation.

Upon detection of a discharge, terminal personnel will initiate response by following the steps in the Oil Spill Response – Immediate Actions table below. The individual discovering the spill is to take these actions **only if they can be performed safely**. These steps involve making the appropriate notifications in accordance with Section 1.3.1 of this plan. Section 1.3.4 of this plan lists facility response personnel, spill response resources, and other company personnel.

OIL SPILL RESPONSE – IMMEDIATE ACTIONS		
1	Conduct a brief initial assessment: Are any personnel injured? Are any personnel in danger? What product was spilled? Has the source of the spill been stopped? Is oil in the drainage system? Is contractor assistance necessary?	Activate First Aid and call the police and/or fire department, if appropriate.
2	Stop the product flow.	Act quickly to secure pumps, close valves, etc.
3	Shut off ignition sources.	Motors, electrical circuits, open flames, welding, etc.
4	Warn terminal personnel.	Enforce safety and security measures.
5	Notify the Terminal Manager, who will assume site QI duties.	The QI will use “Oil Spill Reporting Procedure” to determine if “Emergency Notification Phone List” and “Spill Response Notification Form” need to be completed. Refer to contact information for NRC and FOSC in Section 1.3.1 of this plan.
6	Initiate containment.	Take necessary measures to contain the spill utilizing the facility’s response equipment.
7	Coordinate with response contractors and agencies.	At direction of QI.

It is important to note that these actions are intended only as guidelines. The appropriate response to a particular incident may vary depending on the nature and severity of the incident and on other factors that are not readily addressed. Note that, without exception, personnel and public safety is first priority.

The first company person on scene will function as the person-in-charge until relieved by an authorized supervisor who will assume the position of Incident Commander (IC). Transfer of command will take place as more senior management respond to the incident. For response operations within the control of the local response personnel, the role of IC will typically be assumed and retained by Terminal Management. The person functioning as IC during the initial response period has the authority to take the steps necessary to control the situation and must not be constrained by these general guidelines.

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1.7.2 DISPOSAL PLANS

The table below contains a summary of the facility's disposal plan. Listed below the table is the facility strategy for disposing of waste generated by a response operation.

Material	TSDf	Location	Phone #
Recovered Product	Miller Environmental Group or Triumvirate Environmental or Subsurface Technologies or A to Z Environmental	Refer to Emergency Response Contractors table in Section 1.3.4	Refer to Emergency Response Contractors table in Section 1.3.4
Petroleum Contaminated Water			
Contaminated Soil			
Contaminated Equipment			
Personal Protective Equipment			
Decontamination Solutions			
Absorbents (pads, booms, etc.)			
Spent Chemicals	NA	NA	NA

The facility (RCRA generator ID: MDD09180512) may generate oily waste or other contaminated materials that are classified as solids. These materials may be disposed of as *Special Waste* in an approved landfill through use of its OSRO(s). The facility typically does not generate hazardous waste. In the event the facility did generate hazardous waste, it would rely on its OSRO(s) to complete hazardous waste manifests and transport and treat hazardous waste. The OSRO shall be responsible for the clean-up and disposal of their own equipment.

This FRP is prepared in accordance with the applicable federal, state, and local requirements for disposal of both solid and liquid wastes. The QI is responsible for ensuring compliance with these requirements during containment and cleanup of a discharge.

The following disposal techniques are available for recovered oil and oiled debris:

- In Situ Burning/Open Burning
- Recycling
- Landfill Disposal
- Incineration
- Deep Well Injection

These disposal techniques are described in greater detail below.

In situ burning

In situ burning is defined as the process of burning an oil spill on land or water. To accomplish this, the oil slick must be relatively fresh and at least 3 mm thick.

Fresh oil slicks of sufficient thickness can be ignited by matches, burning rags, air deployable igniters, and lasers. Up to 90 percent of an oil spill can be removed from the water surface by in situ burning. When the burning is completed, a tarry residue will remain on the water surface.

Since the volatile components in the oil begin to evaporate as soon as the spill occurs, the potential for in situ burning decreases with time. Depending on wind speed and temperature, as much as 50 percent of oil slick can evaporate in 24 hours or less. Once this occurs, it may be impossible to ignite the oil remaining on the surface.

In situ burning is not effective in areas where the wind condition exceeds 30 knots (high winds will blow the flame out). In situ burning may not be possible for weathered or emulsified oil.

Burning creates black smoke which could violate air quality control regulations and present a health hazard for nearby communities.

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Fate and effect of in situ burning

In situ burning produces a variety of toxic chemicals that can adversely affect human health and welfare. For example, soot and polynuclear aromatic hydrocarbons created by in situ burning may produce cancer and mutations in living tissue. The smoke from burning oil also may contain zinc, vanadium, lead, nickel, or other metals which are harmful to human health.

Combustion products from in situ burning can travel great distances before falling to earth. The fallout resulting from in situ burning can affect the environment in the following ways:

- Carcinogenic compounds and heavy metals in the fallout could enter both the aquatic and terrestrial food web
- Fallout can contaminate fresh water lakes that provide drinking water
- Excessive fallout can coat plants and block the sunlight needed for photosynthesis
- Fallout can increase the absorption of solar radiation by ice and snow. Consequently, this could contribute to early breakup in the area that is contaminated

Burning oil contributes to acid rain formation. If the oil contains sulfur, sulfur dioxide will be produced as the oil burns. Afterwards, it will combine with water vapor in the smoke plume and form sulfuric acid. Nitrogen oxides produced during the burning process may combine with water vapor to form nitric acid. As these acids fall with rain, they may adversely affect aquatic wildlife and stunt plant growth.

In situ burning should not be used for large spills without permits from federal, state, and local agencies responsible for air quality control.

Personnel must not work near burning oil without appropriate respiratory protection recommended by a certified Industrial Hygienist or the Occupational Safety and Health Administration.

Guideline for in situ burning

Permission for in situ burning may be difficult to obtain when the burn takes place near populated areas. As a general rule, in situ burning would be appropriate only when atmospheric conditions will allow the smoke to rise several hundred feet and rapidly dissipate.

Smoke from burning oil will normally rise until its temperature drops to equal the ambient temperature. Afterward, it will travel in a horizontal direction under the influence of prevailing winds.

A temperature inversion may cause the smoke to remain close to the ground and make it unsafe for personnel to work near the burning oil without respiratory protection (an inversion occurs when the temperature for some distance upwards increases with height).

Open burning

Open burning is the process of burning recovered oil and oily debris under ambient conditions. This process differs from in situ burning in that the oil or oily debris is cleaned up and taken to a specified location for burning.

When agency approval is provided, open burning can be accomplished by placing oil and oiled material in a pit and igniting it.

Recycling

Recovered oil can be shipped to refineries for treatment to remove water and debris. Afterwards, it may be blended and sold as a commercial product.

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Landfill Disposal

In the United States, landfill disposal of free liquids is prohibited under federal law. However, oily waste may be placed in landfills if it is solidified using techniques approved by federal agencies.

Incineration

In the United States there are licensed incineration facilities as well as portable incinerators that may be brought to a spill site. Names and phone numbers for contacts at these facilities may be obtained from the Environmental Protection Agency.

Bioremediation

Bioremediation is a general term used to refer to the process of microbial (bacterial) dissimilation of organic matter. There are essentially three methods: 1) natural cleansing, in which microbes occurring in the environment are allowed to consume oil products without intervention; 2) bioaugmentation, in which the environment is supplemented with commercially cultured microbes (with or without fertilizers); and 3) bioenhancement, in which naturally occurring microbes are supplemented with nutrient fertilizers, particularly nitrogen and phosphorus. It should be noted that bioremediation is a method of removing oil from the substrate, it is not, however, environmental restoration.

Vendors

Potential vendors of bioremedial agents must submit to responsible agencies documentation as to the product characteristics. This information is evaluated relative to the following general criteria:

1. Vendor should be an entity duly established under the laws of the United States to do business.
2. Documentation should be provided defining the capability of the product to degrade hydrocarbons. Estimate the extent and rate of degradation of hydrocarbons that can be expected to be achieved. Describe the method(s) used to test the product's effectiveness.
3. The product or vendor should document a demonstrated capability in oil spill remediation. Acceptable project experience may include an on-site project or pilot study.
4. The product must be listed on the EPA National Contingency Plan Product Schedule.
5. Documentation must be provided which established the nontoxic character of the product, associated byproducts, and biodegradation products.
6. The vendor should provide certification that OSHA training standards have been met for on-scene personnel involved in the remediation project.
7. The vendor should be capable of performing the sampling and analyses necessary to confirm the effectiveness of the product. Pre-and post-treatment sampling may be required for each spill site remediation. Sampling procedures and subsequent analyses must meet the approval of the Federal and/or State On-Scene Coordinator.
8. If microbes are to be used in a bioremediation process, a general description should be provided of how the microbes were selected and cultured as well as documentation that the strain is not pathogenic. Genetically-engineered organisms probably will not be approved for spill site remediation at this time.
9. Describe the nutrient requirements necessary for the optimal effectiveness of the product. Provide a detailed description of how this determination was calculated. Provide a description of any nutrient to be used to enhance the effectiveness of the product.

Bioremediation Proposal

At the time of a spill, specific information should be developed and submitted to the Regional Response Team (though the Federal On-Scene Coordinator) for evaluation. This proposal will be evaluated on its merits and should address the following details:

1. State the objectives of the remediation effort.
2. Describe the environment of the proposed remediation effort. Areas considered for bioremediation may include: open water, boomed areas, marsh, beaches, developed shoreline, mudflats, creek banks, and inland soil.

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3. Describe the application procedure. Include personnel, materials, and equipment. The vendor must demonstrate the capability to apply the product in the manner appropriate to a specific spill incident.
4. Provide a detailed scope of work describing specific measureable endpoints that will be used to assess the efficiency of the treatment. Provide the appropriate baseline information to determine the safe and effective use of the product. Depending upon the characteristics of the spill site, required information may include: population counts for total and contaminant degrading bacteria; a description of how the addition of cultured microbes will enhance the cleanup; a characterization of groundwater quality; and, a determination of the presence of any substances which may inhibit remediation. Provide a sampling and monitoring plan. Include locations and schedules for sampling and describe the types of analyses which may be required to determine the effectiveness of the product.
5. A determination of the potential for adverse chemical or biological reactions that may occur due to the remediation effort. Include toxicity, low oxygen conditions caused by heterotrophic or autotrophic growth, and physical damage to the habitat during application. Use of a product may not be considered without a comprehensive response to this requirement.

Oily debris disposal

Oiled driftwood, vegetation, and peat can be burned in portable open-pit incinerators if permits are obtained from state and federal agencies responsible for air quality control.

Historically, landfilling has been the primary technique for disposing of oiled dirt, gravel, and sand. However, in many locations, environmental regulations may prohibit this disposal technique. Prior approval should be obtained before sending oiled debris to an approved facility for disposal.

Portable fluid bed or rotary kiln incinerators can be used to remove the oil from the beach material. These units are capable of operating at high temperatures up to 2,300°F and will destroy hydrocarbons in the beach material.

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1.7.3 CONTAINMENT AND DRAINAGE PLANNING

Available Volume of Containment

Tanks

The bulk product tanks within the facility's tank farm areas have secondary containment consisting of a system of earthen and/or concrete dikes. The bulk product tanks located outside of diked areas are provided with secondary containment by constructed outer ring walls. In addition to bulk product tanks, miscellaneous containers and drums are also located throughout the facility. Miscellaneous containers, including small, shop-built tanks, are provided secondary containment by double wall design or building wall and floor containment for those tanks located within buildings. Drums are provided secondary containment by local surface depressions, concrete curbing at the Truck Rack, or building wall and floor containment for those drums located within buildings.

The individual diked areas or Tank Farm Areas at the facility are not all capable of containing the entire contents of the largest tank within that area with allowance for freeboard. The facility has overcome this secondary containment shortfall by installing piping between several of the areas that links their secondary containment capacities. Specifically, Tank Farm Area #1 is connected via three 12-inch pipes through its southern dike wall to Tank Farm Area #2. Tank Farm Area #2 is connected via one 6-inch pipe to Tank Farm Area #3, in addition to its connection to Tank Farm Area #1. Tank Farm Area #3 is connected via one 6-inch pipes through its southwestern dike wall to Tank Farm Area #1. Specific secondary containment volumes for all containers are detailed in Section 1.4 of this Plan and further discussed in the facility's SPCC Plan, which is maintained at the facility under separate cover. Refer to the Site Plan Diagram (Figure 1) in Section 1.9 of this plan that shows the locations of bulk product storage tanks and tank farm areas and also summarizes the tank capacities, service type, and secondary containment capacities.

Transfer Areas

The Truck Rack has secondary containment in the form of a "quick drainage system" that consists of concrete curbing and drainage grates central to each bay that drains to an OWS #001. The combined containment capacities of the curbing and OWS #001 are sufficient to contain the entire contents of the largest compartment of a tank truck.

The Ship Dock and Barge Dock have no constructed secondary containment for potential spills as it has been determined to be impractical for dock transfers. Instead, the facility would rely on active containment measures, including drip pans under connections, to provide containment in the event of a spill during transfer operations. Spill response equipment that is sufficient to respond to a variety of discharge scenarios from the MTR component of the facility is stored on the docks. A full inventory of this equipment is provided in Section 1.3.2 of this plan.

The Rail Tank Car Unloading Area has constructed secondary containment in the form of concrete curbing along the rail sidings; however, boom deployment across the rails during transfer operations is required to complete the secondary containment. The capacity of the completed secondary containment is adequate to contain the entire contents of a rail tank car. Active containment measures are also available for any potential spills at this location.

The Truck Unloading Pad has secondary containment in the form of concrete curbing and a drainage grate that drains to Tank Farm Area #1. The combined containment capacities of the curbing and the diked area are sufficient to contain the entire contents of the largest compartment of a tank truck.

Miscellaneous transfer spots at this facility are limited to the delivery spot for the heating oil tank. The spot does not have constructed secondary containment but would instead rely on surface depressions in the immediate vicinity for containment and would be subject to active control measures.

Containment volumes for the facility's transfer areas are detailed in a secondary containment summary table in Section 1.4 of this plan and described in further detail in the facility's SPCC Plan, which is maintained at the facility under separate cover. Refer to the Site Plan Diagram (Figure 1) in Section 1.9 of this plan that shows the locations of the transfer areas at the facility and their associated secondary containment capacities.

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Route(s) of Drainage

Spill Flow Direction

The general topography at the site slopes west towards the waterfront of the Patapsco River, Northwest Branch, however, the gradient is very slight. Drainage patterns within specific areas can vary, and are described as follows:

- Tank Farm Area #1 – Stormwater flows into a drain located near the northwest dike wall. The drain connects to the main yard drain which conveys drainage to OWS #001.
- Tank Farm Area #2 - Stormwater flows into one of two drains located along the south dike wall. The drains connect to OWS #002 and OWS #003.
- Tank Farm Area #3 – This area is several feet below the general site grade. Stormwater flows into a drain located in the western portion the area. The stormwater is then pumped into the main yard drain which conveys drainage to OWS #001.
- Tank Farm Area #4 – This area is several feet below the general site grade. Stormwater flows into a drain located along the south dike wall. The stormwater is then pumped into the main drainage line that connects OWS #001. Stormwater can also be pumped into main yard drain from northwest portion of the area.
- Tank Farm Area #5 – Stormwater flows into a drain located along the east wall of the dike. The drain conveys stormwater to Outfall #005, located along South Haven Street.
- Outer Ring Wall Tanks – Stormwater drained from the outer ring walls of Tanks #195-17 and #200-16 flows into a drain that connects to the main yard drain which conveys drainage to OWS #001. Stormwater drained from the outer ring walls of Tanks #175-15 and #175-18 flows into a drain which connects to the main drainage line serving OWS #001.
- Truck Rack – Stormwater that accumulates within curbing flows to drainage grates centrally located within each bay. The stormwater is then conveyed into the main drainage line that connects to OWS #001.
- Ship Dock and Barge Dock – Stormwater flows west directly into the Patapsco River, Northwest Branch. Spill occurring shoreside of the docks but outside of constructed secondary containment
- Rail Tank Car Unloading Area – Stormwater flows southwest along the railroad tracks.
- Truck Unloading Pad – Stormwater that accumulates within curbing flows to a drainage grate that connects to Tank Farm Area #1.

Otherwise, stormwater from miscellaneous transfer spots and operational areas at the facility follow the general site gradient, flowing west towards the Patapsco River, Northwest Branch. Likewise, spills from the MTR component of the facility as well as any uncontained spills or spills resulting from the failure of secondary containment would flow west towards the river. Facility drainage patterns are depicted in the Site Drainage Plan Diagram (Figure 2) in Section 1.9 of this plan. The trajectory for the entire planning distance spill pathway is depicted in the Worst Case Discharge/Environmental Sensitivity Diagram (Figure 5) in Section 1.9 of this plan.

Drainage of Rain Water from Secondary Containment

The topography at the site is relatively flat with a slight slope west towards the Patapsco River, Northwest Branch; however, drainage patterns within specific areas can vary. Stormwater within each tank farm areas is managed as follows:

- Tank Farm Area #1 – Stormwater flows into a drain located near the northwest dike wall. The drain connects to the main yard drain which conveys drainage to OWS #001. The water is passively separated from any oil and then discharged into the Patapsco River, Northwest Branch at Outfall #001. Additionally, stormwater that accumulates within the curbing of the Truck Unloading Pad flows to a drainage grate that connects to Tank Farm Area #1.
- Tank Farm Area #2 - Stormwater flows into one of two drains located along the south dike wall. The drains connect to OWS #002 and OWS #003. The water is passively separated from any oil and is then discharged into the Patapsco River, Northwest Branch at Outfall #002 or Outfall #003.
- Tank Farm Area #3 – This area is several feet below the general site grade. Stormwater flows into a drain located in the western portion the area. The stormwater is then pumped into the main yard drain which conveys drainage to OWS #001. The water is passively separated from any oil and then discharged into the Patapsco River, Northwest Branch at Outfall #001.
- Tank Farm Area #4 – This area is several feet below the general site grade. Stormwater flows into a drain located along the south dike wall. The stormwater is then pumped into the main drainage line that connects OWS #001. Stormwater can also be pumped into main yard drain from northwest portion of the area. The

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water is passively separated from any oil and then discharged into the Patapsco River, Northwest Branch at Outfall #001.

- Tank Farm Area #5 – Stormwater that collects within the diked area and is generally left to evaporate. Stormwater can be drained from the area, however, through use of a drain located along the east wall of the dike. The drain conveys stormwater to Outfall #005, located along South Haven Street. Flow from the drain to the discharge is controlled through use of a manually operated, open-close valve that is maintained in the closed position. Prior to discharge, accumulated stormwater is inspected for oil sheen. If a sheen is detected, the oil is pumped into a vacuum truck or drums for proper disposal. Otherwise, the stormwater is discharged to the ground by opening the drain valve.

The outer ring walls feature drainage valves that allow for drainage of accumulated stormwater. The valves are manually operated, open-close design and they are maintained in the closed position. Prior to discharge, accumulated stormwater is inspected for oil sheen. If a sheen is detected, the oil is pumped into a vacuum truck or drums for proper disposal. Otherwise, the stormwater is discharged to the ground by opening the drain valve.

The Truck Rack is covered by a canopy that helps prevent significant stormwater accumulations within the rack's curbing. Stormwater that does accumulate within the curbing flows to drainage grates centrally located within each bay. The stormwater is then conveyed into the main drainage line that connects to OWS #001. The water is passively separated from any oil and then discharged into the Patapsco River, Northwest Branch at Outfall #001.

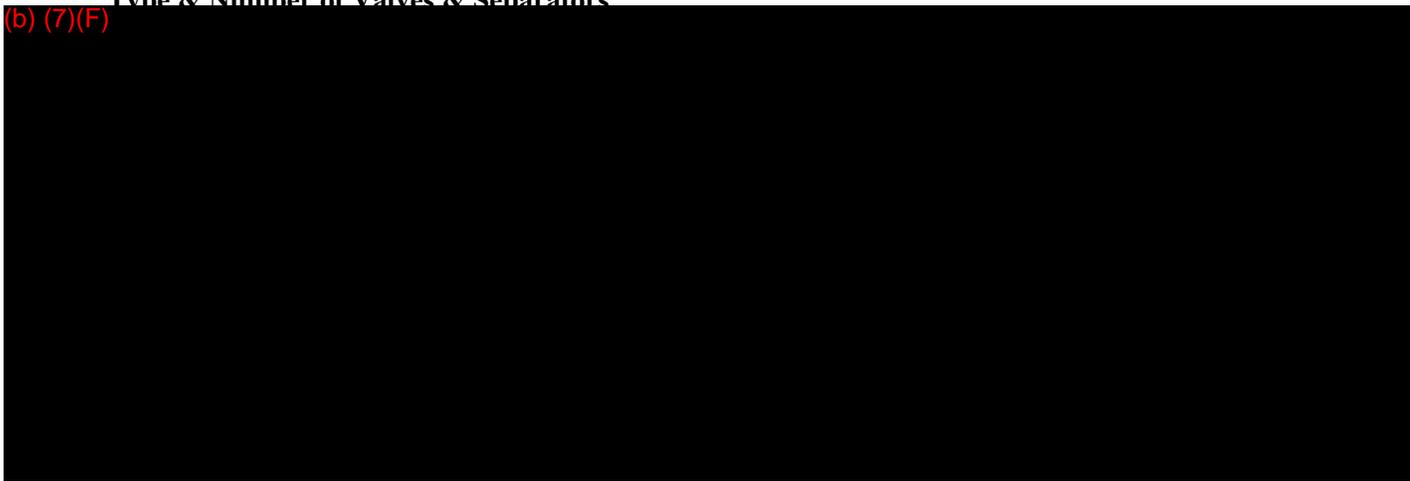
All drainage from the various containment areas is completed in accordance with the facility's NPDES permit.

Construction Materials Used in Drainage Troughs

There are no constructed drainage troughs or ditches at this facility.

Type & Number of Valves & Separators

(b) (7)(F)



Sump Pump Capacities

Tank Farm Areas #3 and #4 are both several feet below the general site grade. Drains within these tank farm areas serve as sumps and accumulated stormwater is pumped from the drains up and over the dike wall and into the drainage pathways described previously in this section. The capacities of the transfer pumps used to accomplish this stormwater pump-out are sufficient to prevent any accumulation of stormwater within these diked areas that may compromise the safety and operability of the tanks.

Containment Capacity of Weirs & Booms

There are no weirs at the facility.

The facility maintains on-site 1,100 feet of 6-inch diameter hard containment boom with 12-inch skirt as well as over 600 feet of absorbent boom. The containment capacity of the boom is sufficient to satisfy the facility's

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response requirement requirements and to respond to a variety of spill scenarios, as described in Section 1.5 of this plan. A complete listing of the facility's spill response equipment is provided in Section 1.3.2 of this plan.

Other Cleanup Materials

The facility also maintains on-site absorbent pads, granular sorbents, and other spill response equipment. A complete listing of the facility's spill response equipment is provided in Section 1.3.2 of this plan.

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1.7.4 DESCRIPTION OF POST-DISCHARGE REVIEW PROCEDURE TO ASSESS THE RESPONSE

Following all spills, the terminal QI will conduct a post-discharge review of the spill response plan to evaluate and validate its effectiveness. All reviews may include OSRO team members, corporate personnel, and any other individuals or contractors deemed necessary to conduct a thorough evaluation of the containment and cleanup procedures.

At the conclusion of the review, a report of the findings and conclusions may be prepared and distributed. Appropriate corrective actions, including revisions to the FRP, will be recommended. Plan amendments should be completed within 60 days of identifying necessary changes.

The following series of questions serve as points of focus for an evaluation of an oil spill response:

Detection

- Was the spill detected promptly?
- How was it detected?
- By whom?
- Could it have been detected earlier? How?
- Are any instruments or procedures available to consider which might aid in spill detection?

Notification

- Were proper procedures followed in notifying government agencies? Were notifications prompt?
- Was management notified promptly?
- Was management response appropriate?
- Was corporate notified promptly? If so, why, how, and who? If not, why not?

Assessment/Evaluation

- Was the magnitude of the problem assessed correctly at the start?
- What means were used for this assessment?
- Are any guides or aids needed to assist spill evaluation?
- What sources of information were available on winds and on water currents?
- Is our information adequate?
- Was this information useful (and used) for spill trajectory forecasts? Were such forecasts realistic?
- Do we have adequate information on oil properties?
- Do we need additional information on changes of oil properties with time, i.e., as a result of weathering and other processes?

Mobilization

- What steps were taken to mobilize oil spill countermeasures?
- What resources were used?
- Was mobilization prompt?
- Could it have been speeded up or should it have been?
- What about mobilization of manpower resources?
- Was the local oil spill cooperative used appropriately?
- How could this be improved?
- Was it appropriate to mobilize outside resources and was this promptly initiated?
- What other corporate resources are available and have they been identified and used adequately?

Response - Strategy

- Is there an adequate spill response plan for the location?
- Is it flexible enough to cope with unexpected spill events?

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- Does the plan include clear understanding of local environmental sensitivities?
- What was the initial strategy for response to this spill?
- Is this strategy defined in the spill plan?
- How did the strategy evolve and change during this spill and how were these changes implemented?
- What caused such changes?
- Are there improvements needed? More training?

Response - Resources Used

- What resources were mobilized?
- How were they mobilized?
- How did resource utilization change with time? Why?
- Were resources used effectively?
 - Contractors
 - Government agencies
 - Company resources
 - Cooperatives
 - Volunteers
 - Consultants
 - Other (e.g., bird rescue centers)
- What changes would have been useful?
- Do we have adequate knowledge of resource availability?

Response - Effectiveness

- Was containment effective and prompt?
- How could it have been improved?
- Should the location or the local cooperative have additional resources for containment?
- Was recovery effective and prompt?
- How could it have been improved?
- Should the location or the local cooperative have additional resources for recovery of spilled oil?

Command Structure

- Who was initially in charge of spill response?
- What sort of organization was initially set up?
- How did this change with time? Why?
- What changes would have been useful?
- Was there adequate surveillance?
- Should there be any changes?
- Were communications adequate?
- What improvements are needed? Hardware, procedures, etc.
- Was support from financial services adequate? Prompt?
- Should there be any changes?
- Is more planning needed?
- Should financial procedures be developed to handle such incidents?

Measurement

- Was there adequate measurement or estimation of the volume of oil spilled?
- Was there adequate measurement or estimation of the volume of oil recovered?
- Should better measurement procedures be developed for either phase of operations?
- If so, what would be appropriate and acceptable?

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Government Relations

- What are the roles and effects of the various government agencies which were involved?
- Was there a single focal point among the government agencies for contact?
- Should there have been better focus of communications to the agencies?
- Were government agencies adequately informed at all stages?
- Were too many agencies involved?
- Are any changes needed in procedures to manage government relations?
- Was there adequate agreement with the government agencies on criteria for cleanup?
- How was this agreement developed?
- Were we too agreeable with the agencies in accepting their requests for specific action items (e.g., degree of cleanup)?
- Should there be advance planning of criteria for cleanup, aimed at specific local environmentally sensitive areas? (Such criteria should probably also be designed for different types or oils.)

Public Relations

- How were relations with the media handled?
- What problems were encountered?
- Are improvements needed?
- How could public outcry have been reduced? Was it serious?
- Would it be useful to undertake a public information effort to "educate" reporters about oil and its effects if spilled?
- These areas should be investigated shortly after the incident to assure that actions taken are fresh in peoples' minds.

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1.8 SELF-INSPECTION, DRILLS/EXERCISES, AND RESPONSE TRAINING

This section describes the self-inspection, drills/exercises, and response training conducted at the Baltimore South Terminal.

1.8.1 FACILITY SELF-INSPECTION

Tanks (Section 1.8.1.1), response equipment (Section 1.8.1.2), and secondary containment (Section 1.8.1.3) are inspected in accordance with the procedures described below. Completed copies of the blank inspection forms provided in Appendix K to this plan are kept on file for five (5) years in the Terminal Office.

1.8.1.1 TANK INSPECTION

A regular inspection schedule is carried out in accordance with the following written procedures to ensure that the oil storage containers and associated valves and piping are intact and to correct any deterioration or malfunction before an oil spill or leak occurs. Visual inspection is completed in combination with periodic integrity testing.

Preventive Maintenance (PM) of all oil handling equipment is performed on a periodic basis as recommended by the equipment manufacturers and/or by the schedules, evaluations, examinations, or descriptions required by SPCC Plan regulations. Based on manufacturers' recommendations, local, state and federal regulations, and operator experience, PM tasks are scheduled and procedures written as needed to perform the work. In addition, periodic inspections are performed and defects are repaired as soon as possible. The following visual inspections are performed with the noted frequency:

1. Visual inspection of tank areas, drum storage areas, and transfer areas (daily)
2. Visual inspection of individual tanks, valves, piping, and inlet and outlet flanges (daily)
3. Visual inspection of earthen dike walls and ground surface surrounding tanks (daily)
4. Visual inspection of tank shell, foundations, and appurtenances (monthly)
5. Visual inspection of loading/unloading areas, small containers, and treatment systems (monthly)
6. Visual inspection of facility physical security (yearly)

Daily walkabouts of the tank farm and truck rack allow for equipment observation/inspection. During inspections, particular attention is paid to the following:

- For tanks: leaks, specifically looking for drip marks; discoloration of tanks; puddles containing spilled or leaked material; corrosion; cracks; and localized dead vegetation
- For tank foundations: cracks; discoloration; puddles containing spilled or leaked material; settling; gaps between tank foundation; and damage caused by vegetation
- For piping: droplets of stored material; discoloration; corrosion; bowing of pipe between supports; evidence of stored material seepage from valves or seals; and localized dead vegetation

Monthly Inspections

Facility personnel complete a Monthly Inspection Checklist as included in Appendix K to this plan. All inspections are kept on file for not less than five (5) years. Facility personnel note any deficiencies or problems on the inspection form. Facility personnel address those items identified in the inspection and, if necessary, take corrective action. The resolution of problems and deficiencies identified in the monthly inspection is documented and kept on file for at least five (5) years.

Annual Inspections

Facility personnel complete an Annual Inspection Checklist as included in Appendix K to this plan. All inspections are kept on file for not less than five (5) years. Facility personnel check facility security controls (fencing, gates, lighting, signage, locks, etc.) and note any deficiencies or problems on the inspection form. Target dates are set to

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take corrective action on items identified. The resolution of problems and deficiencies identified in the monthly inspection is documented and kept on file for at least five (5) years.

Integrity Testing

Periodic integrity testing of aboveground storage tanks at this facility is conducted based upon a schedule of visual inspection plus non-destructive testing (NDT) as needed in accordance with the PF&T Tank Testing Program. This schedule will be maintained in this facility's SPCC Plan, kept under separate cover. Additional testing will be required if substantial repairs to the tank are necessary. If NDT testing is required due to tank size or design, the integrity testing/inspection methods utilized will follow inspection guidance of American Petroleum Institute (API) Standard 653 or protocols of the Steel Tank Institute (STI) Standard SP-001 or Underwriter Laboratories (UL) Standard. The following encompasses the specific provisions of the facility's tank testing program:

- Inspections and their frequency must comply with the requirements of API 653. These include all large aboveground vertical tanks built in accordance with API-650 and its predecessor API-12C. Also included are the smaller shop-fabricated vertical tanks (less than 1,000 barrels) built in accordance with API-650 appendix J and API-12F. Note: Tanks less than 100 gallons are typically exempt from regulatory requirements.

Otherwise, inspections and associated testing, e.g., ultrasonic testing, vacuum testing, or hammer testing will be recurring at appropriate intervals based on initial testing results, measured corrosion rates, and inspector recommendations. This may include a recommendation by the inspector to accept, in lieu of NDT, the monthly facility inspection reports as an indication that sufficient inspection has been completed for those small tanks that are located within constructed containment (that both surrounds and underlies the tanks).

1.8.1.2 RESPONSE EQUIPMENT INSPECTION

The contracted OSRO(s) for the facility will provide annual certifications to this terminal that indicate they have met the regulatory requirements for equipment testing and deployment of their response equipment, adequate to maintain the required Federal USCG OSRO classifications for this facility. These certifications shall be kept in terminal records for 5 years. The most recent OSRO certifications are available in Appendix A of this plan.

In addition to the response resources and capabilities provided by the contracted OSRO(s), the facility owns and maintains on-site some response equipment. Terminal response equipment, listed in Section 1.3.2 of this plan must be regularly inspected for the following items: inventory, storage location, accessibility, operational status/condition, actual use/testing, and shelf life. A blank Response Equipment Inspection Log is provided in Appendix K to this plan for use as a guide.

At this facility, the Terminal Manager ensures the following requirements are met regarding this equipment:

- Containment booms, skimmers, vessels, and other major equipment listed or referenced in the plan are periodically inspected and maintained in good operating condition, in accordance with manufacturer's recommendations, and best commercial practices; and
- All inspection and maintenance is documented and that these records are maintained for 3 years.

For equipment which must be inspected and maintained under this section by the USCG may:

- Verify that the equipment inventories exist as represented
- Verify the existences of records required under this section
- Verify that the records of inspection and maintenance reflect the actual condition of any equipment listed or referenced
- Inspect and require operational tests of equipment

1.8.1.3 SECONDARY CONTAINMENT INSPECTION

Secondary containment areas will be inspected daily in accordance with the facility's SPCC Plan. The inspections include the following:

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- Dike or berm system: level of precipitation in dike/available capacity; operational status of drainage valves; dike or berm permeability; debris; erosion; permeability of the floor of the diked area; location/status of pipes, inlets, drainage beneath tanks, vegetation obscuring inspection of tank and piping, etc.
- Secondary Containment: cracks; discoloration; presence of spilled or leaked material (standing liquid); corrosion; valve conditions.
- Retention and drainage ponds: erosion; available capacity; presence of spilled or leaked material; debris; and stressed vegetation (possible indication of leak).

In addition to the daily walkabout inspections, terminal personnel perform monthly logged inspections of dike and berm systems, secondary containment, and impoundment areas such the surface depression located on the eastern portion of the facility. A blank Secondary Containment Inspection Log is provided in Appendix K to this plan for use as a guide.

Secondary containment inspection records are kept for five (5) years in the Terminal Office.

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1.8.2 FACILITY DRILLS/EXERCISES

The terminal drill and exercise program is based on the National Preparedness for Response Exercise Program (PREP) Guidelines for United States Coast Guard regulated facilities and also recommended for use by the Federal EPA (refer to Section 4.0 of this plan). The program includes both internal and external exercises.

A summary of the requirements for this facility is provided in the table below. For more detail, refer to the PREP Guidelines.

NATIONAL PREPAREDNESS FOR RESPONSE EXERCISE PROGRAM (PREP)		
Type of Exercises	Internal / External	Frequency
Q.I. Notification	Internal	Quarterly
Emergency Procedures Exercise (Optional)	Internal	Quarterly
Spill Management Team – Table Top Exercise ⁽¹⁾	Internal	Annual
Facility-Owned Equipment Deployment Exercise	Internal	Semi-Annual
OSRO Equipment Deployment Exercise	Internal	Annual
Unannounced Exercise ⁽²⁾	Internal	Annual
Area Exercise	External	Triennial ⁽³⁾
Government-initiated Unannounced Exercise	External	Triennial ⁽³⁾

- ⁽¹⁾ At least one spill management team tabletop exercise in a triennial cycle would involve simulation of a worst-case discharge scenario.
- ⁽²⁾ Each plan holder must conduct a minimum of one (1) unannounced exercise per year, consisting of any of the exercises listed above it, except for the QI Notification Exercise.
- ⁽³⁾ Plan holders who have successfully completed a PREP government-initiated unannounced exercise will not be required to participate in another one for at least 36 months from the date of the exercise.

Internal Drills / Exercises

Internal exercises are designed to examine the various components of the response plan to ensure the plan is adequate to meet the needs of the organization for spill response. They are conducted wholly within the Baltimore South Terminal and can include the OSRO, but usually not other members of the response community.

Internal exercises for the facility consist of:

QI Notification Exercise (Quarterly)

The purpose of the QI notification exercise is to ensure that the QI can be reached in a spill response emergency. Contact by telephone, radio, pager, or facsimile must be made with the QI, and confirmation from the QI received. At least once a year, the exercise should be conducted during non-business hours. These exercises will be conducted either by facility personnel or by the OSRO.

Spill Management Team Tabletop Exercise (Annual)

Annual Spill Management Team (SMT) Tabletop Exercises (TTX) will be conducted by the OSRO as the contracted SMT. The purpose of the SMT TTX is to exercise the spill management team's organization, communication, and decision-making in managing a spill response. The exercises will use the terminal's FRP to ensure that the SMT reviews the following elements:

- Knowledge of the response plan
- Proper notifications
- Communications system
- Ability to access an OSRO

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- Coordination of internal organization personnel with responsibility for spill response
- An annual review of the transition from a local team to a regional, national, and international team, as appropriate
- Ability to effectively coordinate spill response activity with the National Response System (NRS) infrastructure. (If personnel from the NRS are not participating in the exercise, the spill management team should demonstrate knowledge of response coordination with the NRS)
- Ability to access information in Area Contingency Plan for location of sensitive areas, resources available within the area, unique conditions of area, etc.

The TTX will include involvement of one or more terminal representatives. At least one SMT TTX in each triennial cycle will involve a worst case discharge scenario.

Facility-Owned Equipment Deployment Exercise (Semi-Annual)

The facility will deploy and operate facility-owned and operated response equipment identified in the response plan. The equipment to be deployed would be either (1) the minimum amount of equipment for deployment as described in "Guiding Principles", or (2) the equipment necessary to respond to an average most probable discharge at the facility, whichever is less. All of the facility personnel involved in equipment deployment operations must be included in a comprehensive training program. All of the facility's equipment must be included in a comprehensive maintenance program. The maintenance program must ensure that the equipment is periodically inspected and maintained in good operating condition in accordance with the manufacturer's recommendations and best commercial practices.

The primary requirements for the equipment deployment exercise are:

- Facility personnel demonstrate the ability to deploy and operate equipment
- The response equipment is in proper working order
- Area Contingency Plan containment, protection, and diversion strategies should also be included

The facility should take credit for this exercise when conducted in conjunction with other exercises as long as all objectives are met, the exercise is evaluated, and a proper record is generated. Credit should be taken for an actual spill response when these objectives are met, the response is evaluated, and a proper record is generated. Credit should be taken for deployment conducted during training. All inspection and maintenance must be documented by the owner. The facility QI will maintain the documentation for at least 3 years at the terminal under separate cover.

OSRO Equipment Deployment Exercise (Annual)

The OSRO will annually conduct a deployment exercise utilizing spill response equipment. Exercises will involve deployment of each type of boom and each type of oil recovery system currently in use at the site as described in Section 1.5 of this plan.

OSRO personnel will deploy sorbents, boom, other sorbent material, and/or block drainage ditches to simulate retaining of oil in ditches during the semi-annual terminal equipment drill. The sorbent deployed during drills will be similar to the material to actually be deployed during a spill response.

The primary requirements for the equipment deployment exercise are:

- The personnel that would normally operate or supervise the operation of the response equipment will participate in the exercise. The personnel must demonstrate their ability to deploy and operate the equipment. All personnel involved in equipment deployment and operation will be involved in a training program.
- The response equipment must be in good operating condition. The equipment must be appropriate for the intended operating environment (i.e., river/canal operating environment). The equipment must operate during the exercise. All response equipment is included in a maintenance program.

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The OSRO is required by contract to provide documentation of annual equipment deployment exercises. PREP drills/exercises requirements for deployment of OSRO response equipment will be conducted by the OSRO. The facility QI will maintain the OSRO documentation provided in Appendix A to this plan.

Unannounced Exercise (Annual)

Any of the exercises (other than QI notification), if conducted unannounced and evaluated, would satisfy this requirement. Response to an actual spill, if evaluated, would also satisfy this credit.

The facility is prepared and would participate in an unannounced exercise if requested by the Federal EPA upon their arrival at the facility. Depending on the scenario, the EPA proposed for the exercise, the unannounced exercise may or may not involve the participation of the facility's contracted OSROs. In the event the facility participated in and successfully completed a government-initiated unannounced exercise, the facility would not be required to participate in another Federal government-initiated unannounced exercise for at least 36 months.

Emergency Procedures Exercise (Quarterly - Optional)

This facility has the option of conducting emergency procedures exercises. For PREP guidelines purposes, these exercises are designed to exercise the facility emergency procedures related to oil transfers. The objective is to ensure personnel knowledge of actions to be taken to mitigate a spill. This exercise may be a walk-through of the emergency procedures. An emergency procedures exercise conducted unannounced would satisfy the requirement for the annual unannounced exercise.

Internal exercises conducted at this facility are *self-evaluated* and *self-certified*, in accordance with the following PREP definitions:

- **Self-evaluation** means that the plan holder is responsible for carefully examining the effectiveness of the plan for response during the exercise. The plan holder may choose the mechanism for conducting this appraisal, as long as it appropriately measures the plan effectiveness. The plan holder is responsible for addressing issues that arise in the exercise that would lead to improvements in the response plan or any aspect of preparedness for spill response. The plan holder is responsible for incorporating necessary changes to the response plan as a result of the exercise.
- **Self-certification** is where the plan holder declares he or she has met the following standards: (1) completion of the exercise; (2) conducting of the exercise in accordance with the PREP guidelines, meeting all objectives listed; and (3) evaluation of the exercise using a mechanism that appraises the effectiveness of the response or contingency plan. Proper documentation for self-certification should include, at a minimum, the following information:
 - The type of exercise
 - Date and time of the exercise
 - A description of the exercise
 - The objectives met in the exercise
 - The components of the response plan exercised
 - Lessons learned

The facility may take credit for multiple exercises when conducted in conjunction, as long as all objectives for each exercise are met, the exercise is evaluated, and a proper record is generated. Credit may be taken for an actual spill response when the objectives are met, the response is evaluated, and a proper record is generated.

Documentation forms for QI Notification Exercises and Spill Management Team Tabletop Exercises are provided in Sections 1.8.2.1 and 1.8.2.2 of this plan, respectively. Records of internal exercises/drills conducted at the facility are retained on file for at least five (5) years at the Terminal Office.

External Drills / Exercises

External exercises are designed to examine the response plan and the ability of plan holders to coordinate with the response community to conduct an effective spill response. They extend beyond the internal focus of the company organization to include other members of the response community.

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External exercises include Area Exercises and may also include government-initiated Unannounced Exercises. The facility will participate in external exercises as required by the lead agency (USCG).

Area Exercise (Triennially)

The purpose of the area exercise is to exercise the entire response community in a particular area. An area is defined as “that geographic area for which a separate and distinct Area Contingency Plan has been prepared, as described in OPA 90.” The response community includes the federal, state, and local government and industry. The area exercises are designed to exercise the government and industry interface for spill response.

The goal of area exercises is to ensure that all areas of the country are exercised triennially. All of the area exercises will be developed by an exercise design team. The exercise design team is comprised of representatives from the federal, state, and local government and industry. A lead plan holder would lead each area exercise. The lead plan holder is the organization (government or industry) that holds the primary plan that is exercised in the area exercise. The lead plan holder would have the final word on designing the scope and scenario of the exercise.

The National Scheduling Coordination Committee (NSCC) is responsible for authorizing credit for area exercises, based on the recommendations of the On-Scene Coordinator. Credit should be given to a plan holder for participation in an area exercise if the following circumstances exist (1) the response plan was utilized in an actual spill response; (2) the response involved the entire response community; (3) the objectives of the area exercise were met as outlined in the PREP guidelines; (4) the response was evaluated; and (5) the spill response was properly documented and certified. Note that actual spills must involve, at minimum, deployment of worst-case discharge Tier 1 capabilities to be eligible for this credit.

The Baltimore South Terminal is one of several bulk storage terminals located along the Baltimore harbor; hence, it is possible it would be involved in an area response exercise. Accordingly, the facility would participate in any such exercises if requested by the coordinating agency or one of its contracted OSROs.

Government-Initiated Unannounced Exercise (Triennially)

The government-initiated unannounced exercises are designed to give the agency with primary regulatory oversight over a particular industry the opportunity to evaluate, on a random basis, the response preparedness of that industry. Government-initiated unannounced exercises are limited to 10% of the plan holders per EPA region per year. Such exercises involve response to a small discharge (2,100 gallons outside secondary containment) and the deployment of equipment identified in the FRP to respond to such a discharge.

A plan holder that has successfully completed a government-initiated unannounced exercise would not be required to participate in another Federal government - initiated unannounced exercise for at least 36 months from the time of the last exercise provided that the drill protocols and method of evaluation are equivalent.

Credit may be granted by the federal EPA for an actual spill response when the PREP objectives are met, the response is evaluated by the EPA, and a proper record is generated. Plan holders participating in this exercise may take credit for notification and equipment deployment exercises, if criteria for those exercises are met, the response is evaluated by the plan holder, and a proper record generated. Documentation forms for QI Notification Exercises and Spill Management Team Tabletop Exercises are provided in Sections 1.8.2.1 and 1.8.2.2 of this plan, respectively, and also in Appendix K to this plan.

Records of external exercises/drills conducted at the facility are retained on file for at least five (5) years in the Terminal Office.

Exercise of Response Plan Components

The PREP guidelines are based on a triennial (3-year) cycle. Every 3 years all components of the entire response plan must be exercised. All components need not be exercised during each exercise, as long as each component is exercised at least once within the triennial cycle. The terminal QI is responsible for documenting the components completed in each exercise.

SELF-INSPECTION, DRILLS/EXERCISES, AND RESPONSE TRAINING

The following components must be exercised:

Organizational Design

- 1) Notifications
- 2) Staff mobilization
- 3) Ability to operate within the response management system described in this plan

Operational Response

- 4) Discharge control
- 5) Assessment of discharge
- 6) Containment of discharge
- 7) Recovery of spilled material
- 8) Protection of sensitive areas
- 9) Disposal of recovered material and contaminated debris

Response Support

- 10) Communications
- 11) Transportation
- 12) Personnel support
- 13) Equipment maintenance and support
- 14) Procurement
- 15) Documentation

In a triennial cycle, internal exercises are conducted as follows:

- 12 QI notification exercises (conducted quarterly)
- 12 Emergency procedures exercises (conducted quarterly; **optional** for this facility)
- 3 Spill Management Team tabletop exercises (conducted annually) – one must involve a worst case discharge scenario
- 3 OSRO equipment deployment exercises (the OSRO will be required by contract to provide annual documentation of equipment deployment)
- 3 unannounced exercises – any of the exercises (other than QI notification), if conducted unannounced, and evaluated, would satisfy this requirement (conducted annually – response to an actual spill will be evaluated and taken as credit for this requirement)
- Triennial exercise of the entire response plan - each of the 15 components of the plan, as listed above, must be exercised at least once in the triennial cycle.

Crisis Response and Incident Command System

This section describes organizational features and duties of local response personnel and the broader Company Crisis Response Team.

The key to an effective emergency response is a rapid, coordinated, tiered response by the affected facility, and the Crisis Response Team, consistent with the magnitude of an incident.

First response to an incident at the facility will be provided by local response personnel. The Crisis Response Team will respond, to the degree necessary, to incidents exceeding local capability. If a response exceeds the local response personnel's capabilities, the Local Incident Commander will activate the Crisis Response Team.

These response teams will use the NIIMS Incident Command System (ICS) to manage the emergency response activities. Because ICS is a management tool that is readily adaptable to incidents of varying magnitude, it will typically be used for all emergency incidents. Staffing levels will be adjusted to meet specific response team needs based on incident size, severity, and type of emergency.

An explanation of ICS and the roles and responsibilities for primary members of the response teams are provided in Appendix F to this plan. Additionally, the USCG Incident Management Handbook (IMH) contains an in-depth description of all ICS positions, ICS development, response objectives and strategies, command responsibilities, ICS

SELF-INSPECTION, DRILLS/EXERCISES, AND RESPONSE TRAINING

specific glossary/acronyms, resource typing, the IAP process, and meetings. The IMH can be located at www.uscg.mil/hq/nswfweb/download/IMH/IMH-2001.pdf.

Qualified Individual

It is the responsibility of the Qualified Individual (QI) or his/her designee to coordinate with the Federal On-Scene Coordinator (FOSC) and State On-Scene Coordinator (SOSC) throughout the response. The vital duties of the QI are described in Section 1.3.6 of this plan.

Local Response Personnel

The first company employee on scene will function as the Incident Commander and person-in-charge until relieved by an authorized supervisor who will then assume the position of Incident Commander (IC). Transfer of command will take place as more senior management respond to the incident. For response operations within the control of the local response personnel, the role of IC will typically be assumed and retained by Terminal Management.

The number of positions/personnel required to staff the local response personnel will depend on the size and complexity of the incident. The duties of each position may be performed by the IC directly or delegated as the situation demands. The IC is always responsible for directing the response activities and will assume the duties of all the primary positions until the duties can be delegated to other qualified personnel.

The local response personnel should try to fill the necessary positions and request additional support from the Crisis Response Team to fill/back up all the positions as the incident may dictate.

Crisis Response Team

For spill response operations outside the capabilities of the local response personnel, the QI/AQI or IC will determine the need for mobilization of the Crisis Response Team (CRT). The members of the local response personnel will typically become members of the CRT.

The Crisis Response Team (CRT), once fully staffed, is designed to cover all aspects of a comprehensive and prolonged incident response. The number of positions/personnel required to staff the CRT will depend on the size and complexity of the incident. During a prolonged response, additional personnel may be cascaded in, and more than one level within the Team may be involved to sustain 24-hour operations.

The CRT is basically organized according to the NIIMS Incident Command System principles, described below. Led by the Incident Commander, the team is composed of the following principal components:

- Command
- Operations
- Planning
- Logistics
- Finance

The Crisis Response Team is staffed by specially trained personnel from various facility/corporate locations, and by various contract resources as the situation requires. The CRT is headed by the Senior Management Advisors (SMA)

Incident Command System

The Incident Command System (ICS) is intended to be used as an emergency management tool to aid in mitigating all types of emergency incidents. This system is readily adaptable to very small emergency incidents as well as more significant or complex emergencies. The ICS utilizes the following criteria as key operational factors:

- Assigns overall authority to one individual
- Provides structured authority, roles and responsibilities during emergencies
- The system is simple and familiar, and is used routinely at all incidents
- Communications are structured
- There is a structured system for response and assignment of resources
- The system provides for expansion, escalation, and transfer/transition of roles and responsibilities

SELF-INSPECTION, DRILLS/EXERCISES, AND RESPONSE TRAINING

- The system allows for "Unified Command" where agency involvement at the command level is required

Effective establishment and utilization of the ICS during response to all types of emergencies can:

- Provide for increased safety
- Shorten emergency mitigation time by providing more effective and organized mitigation
- Cause increased confidence and support from local, state, and federal public sector emergency response personnel
- Provide a solid cornerstone for emergency planning efforts

Unified Command

As a component of an ICS, the Unified Command (UC) is a structure that brings together the Incident Commanders of all major organizations involved in the incident to coordinate an effective response while still meeting their own responsibilities. The UC links the organizations responding to the incident and provides a forum for the Responsible Party and responding agencies to make consensus decisions. Under the UC, the various jurisdictions and/or agencies and responders may blend together throughout the organization to create an integrated response team. The ICS process requires the UC to set clear objectives to guide the on-scene response resources.

Multiple jurisdictions may be involved in a response effort utilizing Unified Command. These jurisdictions could be represented by any combination of:

- Geographic boundaries
- Government levels
- Functional responsibilities
- Statutory responsibilities

The participants of Unified Command for a specific incident will be determined taking into account the specifics of the incident and existing response plans and/or decisions reached during the initial meeting of the UC. The UC may change, as an incident progresses in order to account for changes in the situation.

The UC is responsible for overall management of an incident. The UC directs incident activities and approves and releases resources. The UC structure is a vehicle for the coordination, cooperation and communication that is essential to an effective response. UC representatives must be able to:

- Agree on common incident objectives and priorities
- Have the capability to sustain a 24-hour-7-day-a-week commitment to the incident
- Have the authority to commit agency or company resources to the incident
- Have the authority to spend agency or company funds
- Agree on an incident response organization
- Agree on the appropriate Command and General Staff assignments
- Commit to speak with "one voice" through the Information Officer or Joint Information Center
- Agree on logistical support procedures
- Agree on cost-sharing procedures

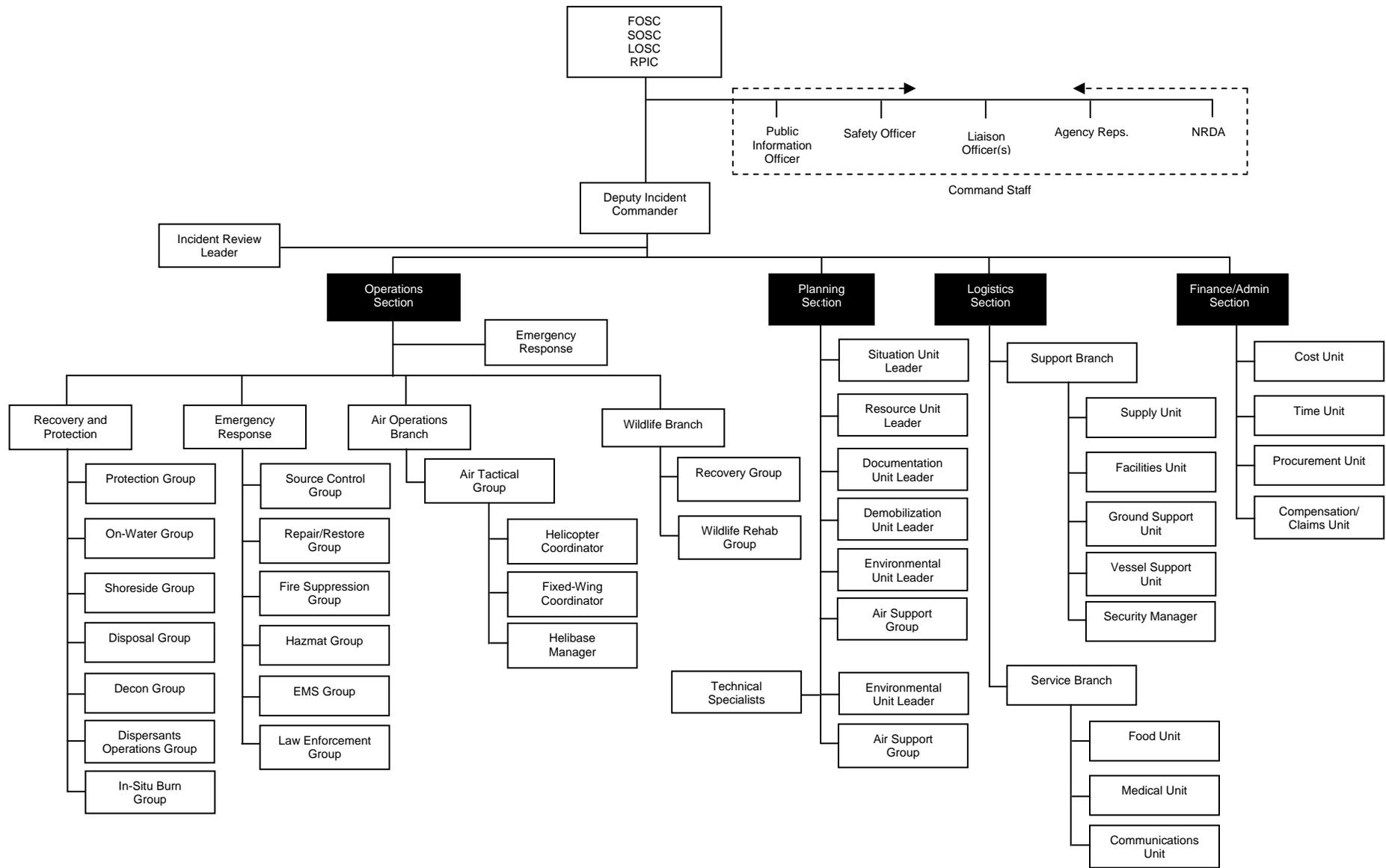
Site Safety and Health Plan(s) Development

The Incident Commander or Safety Representative is responsible for preparing a Site Safety and Health Plan that establishes site-specific policies, practices, and procedures to protect workers and the public from contacting potential chemical and/or physical hazards. A Site Safety and Health Plan will:

- Describe who is responsible for monitoring site safety
- Characterize the risks associated with each operation that will be conducted in the area covered by the plan
- Describe known chemical and physical hazards, and the measures that have been instituted to eliminate the hazards or reduce them to acceptable levels
- Define the level of HAZWOPER training required for workers commensurate with their job responsibilities
- Describe site control measures, and will include a site map.
- Describe decontamination procedures for personnel and equipment.

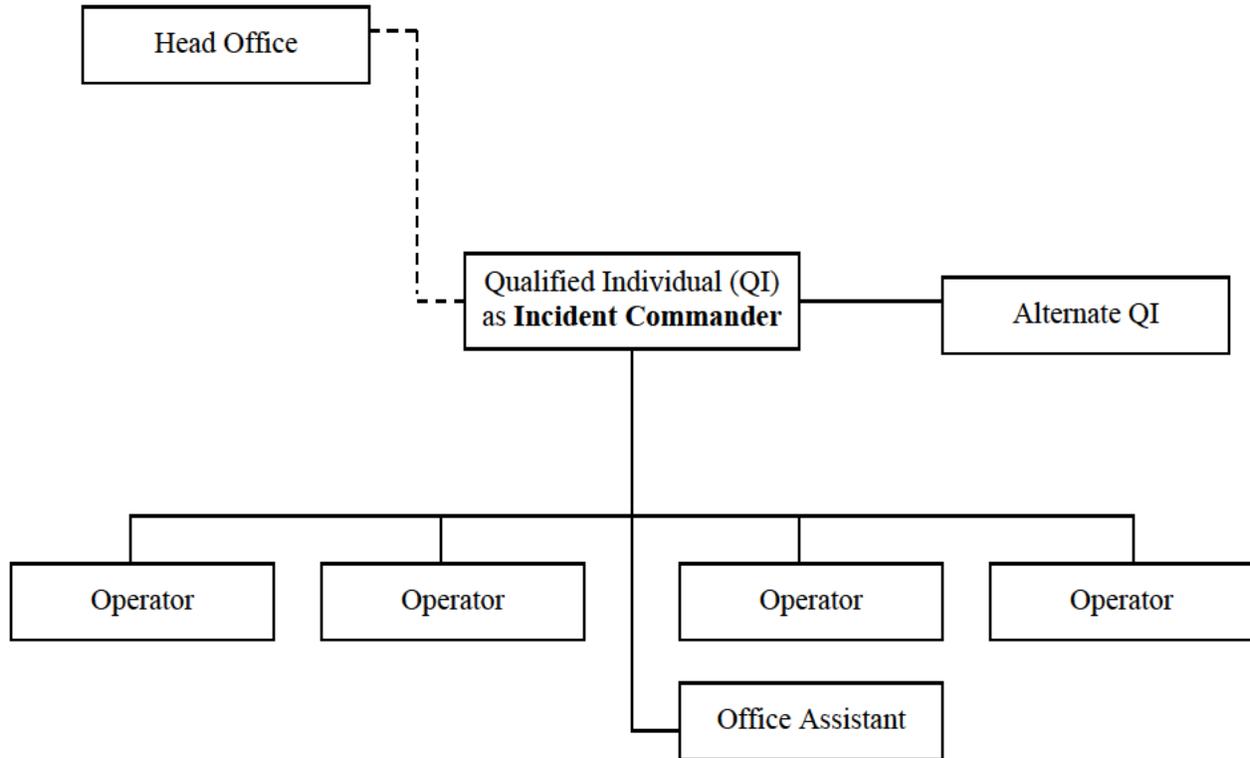
SELF-INSPECTION, DRILLS/EXERCISES, AND RESPONSE TRAINING

INCIDENT COMMAND SYSTEM



SELF-INSPECTION, DRILLS/EXERCISES, AND RESPONSE TRAINING

PF&T INCIDENT RESPONSE ORGANIZATION



TERMINAL SPILL MANAGEMENT TEAM		
Name	Facility Position	SMT Functional Position(s)
Bill Ransom	Terminal Manager QI	Incident Commander (IC), Public Information, Liaison
Ward Degrange	Ast. Terminal Manager Alt. QI	Safety, Logistics, Liaison with Government Agencies
Bill Baker	Terminal Foreman	Spill Operations, Planning, Finance, Logistics
Lechert, Mckenzie, Hoffer, Kuhn, Blume, Kelly, Blevins, Cameron, Crunkilton, Hess	Terminal Operator	Spill Operations, Planning, Finance

*SELF-INSPECTION, DRILLS/EXERCISES, AND RESPONSE TRAINING***Command and Control**

In order to maintain adequate Command and Control, the following procedures will be followed by the Designated Company Representative:

Start Up

- Upon notification of the incident, decide start up strategy, consult with appropriate advisors and conduct site inspections
- If appropriate, request required government agency approval for dispersant use
- At spill location, hold strategy and start-up planning meeting with advisors
- Establish response priorities
- Authorize procurement of agreed equipment, manpower and services
- Keep senior management informed of situation
- Notify government agencies of proposed activities
- Identify technical requirements needed for handling oil spill emergency
- Confirm that appropriate agencies have been notified

Daily

- Hold planning meeting with advisors
- Meet with government agencies to obtain agreement on acceptable levels of response and environmental clean up
- Conduct site inspection to make sure objectives are being accomplished
- Meet with media representatives
- Evaluate and adjust response priorities
- Transmit updated status report and press releases to senior management
- Maintain log

Periodic

- Authorize procurement of agreed equipment, manpower and services
- Approve invoices for payment
- Attend press/local audience conferences on notification from Public Relations Representative

Stand Down

- Before leaving site, provide Historian with a copy of any notes or observations made during the operation for use at the post incident meeting
- Monitor oil spill response team

Points to Consider

- Before the team initiates spill response efforts, hold a meeting to ensure everyone understands such things as method by which team members will pass information between themselves, ecological and socioeconomic areas to be protected first, who is handling each task, and present status of response efforts
- Oil Spill Cooperatives may be the best source for immediate equipment needs
- Frequent press statements and public meeting may increase public confidence
- Plan for the worst case situation when oil spill emergencies occur
- Always assume shoreline will be affected when large spills occur
- To the extent possible, purchase the materials, equipment, and other resources used in the spill clean up effort from the local community to minimize the economic impact of the situation
- During oil spill emergencies, many people become "Instant Experts." Always require consultants and technical personnel to support their recommendation with proven examples and data
- Show appreciation for accomplishments by Response Team members to increase morale
- Do NOT boom products with flash points less than 100°F (such as gasoline)

SELF-INSPECTION, DRILLS/EXERCISES, AND RESPONSE TRAINING

- Know how to contact each team member at all times

Public Information

If there is a significant spill or emergency situation, PF&T will likely engage a professional public relations firm to handle communication with the public. The on-site representative from the public relations firm(s) will assist the designated company representative in the preparation and delivery of all news releases. They will handle all media inquiries and monitor the local media reactions to the situation.

Safety

The individual(s) responsible for safety should be well versed in safe operation practices and HAZWOPER training requirements as well as having basic knowledge of first aid. He will identify potential safety problems at the spill site and communicate this information to the field forces.

Safety personnel are responsible for ensuring that response personnel receive appropriate safety training and for proper expertise on the safe practices to be followed in oil spill control and/or response operations.

Start Up

- Attend start up briefing
- Apply for manpower, equipment, and services necessary to ensure safe operations at site
- Establish instruction and training facilities for response personnel and ensure that they receive appropriate training (i.e., HAZWOPER, etc.)
- Provide advice on practices and procedures that will enhance the safety of field response personnel

Daily

- Attend planning and briefing meetings
- Recommend precautions that can be taken to address chemical/physical hazards associated with response operations
- Hold meeting with safety personnel
- Monitor clean up operations and advise if it is necessary to halt any activities. Safety personnel have the authority to halt any activities which contravene legal or company requirements or pose hazardous conditions to response personnel
- Examine or prepare the operating and safety instructions for all equipment and products delivered to site to ensure that they are relayed to and understood by operators
- Maintain records on personnel receiving safety training
- Monitor effectiveness of instruction and training facilities
- Maintain log

Periodic

- Prepare and distribute safety bulletins
- Investigate, report, and record all accidents, and develop remedial actions to avoid future occurrences
- Attend induction and debriefing of contractors

Stand Down

- Provide a copy or any notes or observations made during the operation for use at the post incident meeting
- Monitor relevant developments in safety techniques

Points to Consider

- Prohibit smoking at work site
- Prohibit alcohol consumption at work site
- Limit contract workers to 12 hour shifts

*SELF-INSPECTION, DRILLS/EXERCISES, AND RESPONSE TRAINING***Liaison with Government Agencies**

The liaison communicates information to local, state, and federal authorities. He assures that company operations are not at variance with efforts or programs of the various government agencies involved. The liaison person is responsible for advising various government agencies involved and ensuring that relevant regulations are being followed.

Start Up

- Provide information on all government agency contacts for inclusion in initial incident briefing
- Attend the incident start up briefing
- Ensure that all appropriate regulatory bodies have been notified of spill
- Assist in obtaining approval from appropriate government agencies for proposed control and/or response operations
- Assist in the determination of appropriate disposal site(s)

Daily

- Attend planning meetings and provide relevant input to Incident Action Plan
- Provide Incident Action Plans to government agencies
- Provide status reports to government agencies
- Assist in the preparation and updating of information releases
- Monitor all operations subject to governmental agency regulations to ensure compliance with statutory requirements
- Assist in obtaining regulatory approvals/permits for waste storage/disposal, dispersant use, burning operations, wildlife rescue and rehabilitation operations, and access to government land/or equipment
- Keep Public Relation Representative informed of the concerns of local, state, and federal authorities
- Maintain log

Periodic

- Conduct observation tours for government agency representatives as required

Stand Down

- Before leaving site, provide a copy of any notes or observations made during the operation for use at the post incident meeting
- Monitor changes and additions to all relevant policies and regulations of government agencies
- Hold and maintain an up to date list of relevant government agencies

Points to Consider

- Response team members should not make statements about the government's response or involvement
- Questions from government agencies should be directed to the Liaison
- It is important for all company personnel and contractors to have a warm and friendly attitude towards government agencies

Spill Operations

The Spill Operation is lead by the designated employee or the Contracted Spill Coordinator who is in charge of all field operations relating to the oil spill clean up efforts. He delegates responsibilities to the clean up advisor and COOP Manager (if involved). He also communicates frequently with his assistants to let them know how various phases of the operation are going. He identifies future requirements of his staff and arranges for more equipment or personnel as required.

He/she is responsible for all field operations in the removal of the oil from offshore/nearshore waters an/or shorelines.

*SELF-INSPECTION, DRILLS/EXERCISES, AND RESPONSE TRAINING*Start Up

- Assist in the preparation of the incident briefing form
- At incident location, prepare input to and attend start up briefing
- Prepare containment on land/inshore water plans
- Evaluate situation at oil spill site(s) to assess amount of oil to be removed and methods to be employed. Work with Liaison to establish if shoreline protection and/or clean up is to be attempted; if so, where and to what degree
- Agree with local authorities on the details/extent of cleaning to be carried out
- Ensure that response personnel are aware of and follow company policies and appropriate government agency directives
- Ensure the safety of all response personnel

Daily

- Supervise the implementation of Incident Action Plans and ensure that response personnel have the equipment, materials, and supplies needed to conduct response operations in a safe, effective, and efficient fashion
- Provide Public Relation Representatives with information for status reports
- Attend planning meetings
- Attend briefing meeting
- Maintain log

Stand Down

- Communicate with relevant governmental and local authorities that acceptable stand down conditions exist on each clean up site
- Monitor developments in shore clean up techniques and equipment
- Monitor developments in containment and recovery techniques and equipment
- Maintain an up to date register or specialists in oil containment and recovery

Planning

Planning personnel will coordinate the collection, evaluation, dissemination and use of information about the current forecasted condition of the spill and on the status of resources assigned to the response operation. They will utilize information and input from the other site personnel, and strategic objectives of the Incident Action Plans. They will make current information available to on site supervisor, coordinate the notification of response team members and document all aspects of the incident control and response operations.

Planning personnel are responsible for providing all scientific technical support for response operations, coordinating the preparation of the Incident Action Plan, as well as notifying team members and documenting all events.

Start Up

- Ensure predesignated response team members have been notified of activity status
- Attend start up incident briefing
- Gather information on prediction of extent/nature of spill impact
- Communicate with dispersants experts and appropriate governmental officials to obtain information on the potential for using chemical dispersants
- Communicate with on scene supervisors to obtain information concerning damage or potential damage to environment
- Ensure log books, mail systems, office equipment, record keeping systems, and administrative support are available

*SELF-INSPECTION, DRILLS/EXERCISES, AND RESPONSE TRAINING*Daily

- Attend daily planning meetings
- Attend briefing meetings
- Prepare Incident Action Plans
- Conduct section meetings and make section assignments
- Monitor effects of clean up operations on ecology and report to the Designated Company Representative
- Monitor effectiveness of offshore and onshore clean up operations regarding proper disposal and storage and report to the Designated Company Representative
- Ensure minutes of meeting are transcribed and distributed within 24 hours
- Maintain log

Periodic

- Coordinate monitoring activities with government agencies
- Monitor oil impact in treated and untreated areas
- Communicate with Liaison Personnel and Public Relations Representative to ensure environmental authorities and institutions are informed of the status of clean up operations
- Ensure aerial surveillance is conducted to locate endangered wildlife habitats that may be threatened
- Approve hiring of consultants to research response and problems for similar emergencies
- Provide input to establish priorities for shoreline protection
- Monitor quantity of recovered oil on hand that can be recycled

Stand Down

- Provide a copy of any notes or observations made during the operation for use at the post incident meeting
- Review developments in oil spill chemical treatment and ensure report findings are periodically forwarded to appropriate authorities
- Review amendments to list of approved chemicals and advance planning initiatives
- Maintain awareness of significant developments concerning the environmental impact of oil pollution
- Review with relevant government/local authorities that acceptable stand down conditions exist on each clean up site
- Ensure full chronological report is prepared for Designated Company Representative

Logistics Support

The Logistics Support has the responsibility for seeing that adequate food, shelter, protective clothing, transportation, security, communications and first aid facilities are available for all personnel on site requiring such assistance.

The Logistics Support is responsible for the prompt supply of all equipment, vehicles, aircraft, and materials required for the clean up operation. Provide food and shelter arrangements for clean up personnel.

Start Up

- Attend start up incident briefing
- On receiving standby, begin making arrangements for initial catering/janitorial services required. Make arrangements for initial block booking of hotel accommodations
- Assist in establishing incident command post at location agreed upon by Designated Company Representative
- Establish security and field control points at location agreed upon by Designated Company Representative
- Arrange for office furniture, equipment, administrative services, and personnel as required

*SELF-INSPECTION, DRILLS/EXERCISES, AND RESPONSE TRAINING*Daily

- Attend planning and briefing meetings
- Provide for service and equipment needed for the implementation of operations plans
- Assist in the development of information on equipment and manpower resources for Incident Action Plans
- Establish likely future demand on logistic services
- Arrange approval of logistics services contractors' time sheets
- Maintain log

Stand Down

Provide a copy of any notes or observations made during the operation for use at the post incident meeting

Finance

The Finance Representative oversees all procurement and personnel requirements for the oil spill clean up team, keeping track of all payments, receipts, contracts, etc. as the clean up progresses. Included in these responsibilities is keeping track of how much oil was spilled and how much is picked up, disposed of, sold, recycled, etc.

Responsibilities include financial recordkeeping of the oil spill clean up team and provide all accounting/audit and procurement requirements.

Start Up

- Attend start up incident briefing
- Convey pre-prepared stocks of expense claim forms to Designated Company Representative
- Prepare general ledger for tracking expenses
- Establish bank/cash arrangements
- Coordinate with Petroleum Inspector(s) to establish volume accounting (oil) arrangements
- Ensure that contractors are aware of invoice and audit requirements
- Monitor warehouse inventories with local vendors and merchants
- Set up recordkeeping system for:
 - Contracts
 - Work orders
 - Purchase orders
 - Invoices
 - Correspondence
- Prepare accountant's information report
- Provide cash advance for company employees, as requested
- Ensure necessary manpower resources are available to perform tasks
- Ensure lodging and meal arrangements for personnel are complete

Daily

- Attend all meetings and provide financial update
- Update Accountant's Information Report and Cost to Date Summary
- Process invoices
- Conduct on site audit and check that:
 - Material being charged is either used or in stock
 - Contract labor is working on project
 - Equipment is being gainfully employed
- Maintain log

Periodic

- As required, assist with preparation of contracts and purchase orders, and with expediting material receipts (including customer clearance if needed)

<i>SELF-INSPECTION, DRILLS/EXERCISES, AND RESPONSE TRAINING</i>

Stand Down

- Prepare a copy of any notes or observations made during the operation for use at the post incident meeting
- Prepare cost summary
- Ensure adequate supply of expense forms are held in readiness

Points to Consider

- Contractors, consultants, and vendors may overcharge during emergencies
- Oil spill contractors may charge technician rates for unskilled labor

<i>SELF-INSPECTION, DRILLS/EXERCISES, AND RESPONSE TRAINING</i>

1.8.2.1 QUALIFIED INDIVIDUAL NOTIFICATION DRILL LOGS

Note: This form is also provided in Appendix K to this plan.
(Current records are kept for at least 5 years in the terminal environmental files.)

1. Date Performed:
2. Company:
3. Qualified Individual(s):

QI Name:

Is this person identified in FRP? (Y/N):

Time in which QI or designee responded:

Method used to contact QI (select all that apply): Telephone / Pager / Radio / Other

Other: _____

Person Who Initiated Exercise:

5. Evaluation:
6. Changes to Be Implemented:
7. Time Table for Implementation:
8. Certifying Name & Signature:

*SELF-INSPECTION, DRILLS/EXERCISES, AND RESPONSE TRAINING***1.8.2.2 SPILL MANAGEMENT TEAM TABLETOP DRILL LOG**

Note: This form is also provided in Appendix K to this plan.
(Current records are kept for at least 5 years in the terminal environmental files.)

1. Date Performed:
2. Company:
3. Qualified Individual(s):
4. Emergency Scenario:
 - Exercise or Actual Response (select one):
 - Location of exercise:
 - Time started:
 - Time completed:
 - Response Plan scenario used (select one):
 - Average Most Probable Discharge
 - Maximum Most Probable Discharge
 - Worst Case Discharge
 - Size of (exercise) spill _____ (bbls/gals):
5. Indicate which of the 15 Core Components of the FRP were exercised during this exercise (select all that apply)::

<ol style="list-style-type: none"> 1. Notification 2. Staff Mobilization 3. Ability to operate within system outlined in FRP 4. Discharge control 5. Assessment of Discharge 6. Containment of Discharge 7. Recovery of Spilled Material 8. Protection of Sensitive Areas 	<ol style="list-style-type: none"> 9. Disposal of recovered material/debris 10. Communications 11. Transportation 12. Personnel Support 13. Equipment maintenance support 14. Procurement 15. Documentation
---	--
6. Evaluation:
8. Changes to Be Implemented:
8. Time Table for Implementation:
9. Certifying name and Signature

SELF-INSPECTION, DRILLS/EXERCISES, AND RESPONSE TRAINING

1.8.3 RESPONSE TRAINING

Qualified Individual Training

The following training activities are required of the QI:

- Safety Training consisting of hazard communications, confined space entry, fire extinguisher/fire watch training, personal protective equipment, hazardous energy source control, and emergency notification/emergency evacuation.
- QI Training based on “training elements for qualified individuals” (found in the *Training Reference for Oil Spill Response*, DOT et al) that are applicable to the QI requirements as described in this FRP. To accomplish this, the QI training will be provided by the facility’s OSRO, or by PF&T in-house trainers.
- Each QI for this site will also receive basic oil spill response training from the facility’s OSRO or by PF&T in-house trainers.
- Participation in one SMT TTX each triennial period.
- Annual detailed review of this FRP, general knowledge of spill response strategies and equipment, detailed knowledge of the company’s oil spill response policies, plans, and resources, and detailed knowledge of the functional responsibilities of the incident manager/qualified individual position. Annual review of the FRP shall be documented in the Record of Reviews and Changes in the front of this plan.
- Annual review of relevant portions of the National Contingency Plan (NCP) and applicable Area Contingency Plan (ACP). The OSRO may be requested by contract to assist with this review, and the FRP will be revised as necessary to ensure consistency with these plans.

Response Team Training

Response team members are required to have the appropriate training necessary to serve on a response team during an emergency. Team members will receive training in the following:

Response Plan Review

All response team members should review applicable FRPs at least annually, or whenever their job position or responsibilities change under the plan. A copy of this FRP will be available at all times to the team members at the facility.

HAZWOPER (29 CFR 1910.120)

Federal and state regulations require that response team members maintain up-to-date HAZWOPER training necessary to function in their assigned positions. At a minimum, employees will receive “First Responder Awareness Level” training. All response personnel not employed by PF&T must satisfy the applicable HAZWOPER training requirements of 29 CFR 1910.120.

OSHA HAZWOPER TRAINING REQUIREMENTS		
Responder Classification	Required Training Hours	Refresher
29 CFR 1910.120(q) Emergency Response		
First Responder - Awareness Level	2-4 hrs demonstration of competency	same
First Responder - Operations Level	8 hrs	8 hrs
Hazardous Materials Technician	24 hrs plus competency	8 hrs
Hazardous Materials Specialist	24 hrs plus competency in specialized areas	8 hrs
Incident Commander	24 hrs plus competency	8 hrs
29 CFR 1910.120(e) Clean Up Sites		
General Site Workers	40 hrs / 3 days on the job training	8 hrs
Occasional Workers (Limited Tasks)	24 hrs / 1 day on the job training	8 hrs
General Site Workers (Low Hazard)	24 hrs / 1 day on the job training	8 hrs

<i>SELF-INSPECTION, DRILLS/EXERCISES, AND RESPONSE TRAINING</i>

Supervisors	8 hrs supervisor training	8 hrs
29 CFR 1910.120(p)(7)(8) RCRA TSD Sites		
New Employees	24 hrs	8 hrs
Current Employees*	24 hrs	8 hrs

* Previous work experience and/or training certified as equivalent by employer.

Incident Command System

Response Team members will receive ICS training, and may also receive supplemental training in other, related general topics. A description of ICS principles and ICS diagrams are provided in Section 1.8.2 of this plan and Appendix F to this plan.

Oil Spill Removal Organization(s) and Other Contractors

The OSRO and other response contractors will ensure that all employees assigned to perform response activities for the facility meet company operational and safety training requirements, including OSHA standards for emergency response operations. The OSRO is also responsible by contract to provide training for its personnel on deployment and operation of the types of equipment to be used in response to a spill at this facility. The OSRO may be requested to participate in the annual review of the Facility Response Plan, the Area Contingency Plan, and the National Contingency Plan.

Volunteers

The Company will not use volunteers for emergency incident response, and no Company provisions exist to train them. Volunteers may be used by government response entities, as allowed by applicable policies/procedures.

DOT Required Training

PF&T conducts response training for the following groups of employees:

All Personnel

- Their responsibilities under the response plan
- The name and address of, and the procedure for contacting, the operator on a 24-hour basis
- The name of, and procedures for contacting, the qualified individual on a 24-hour basis

Reporting personnel

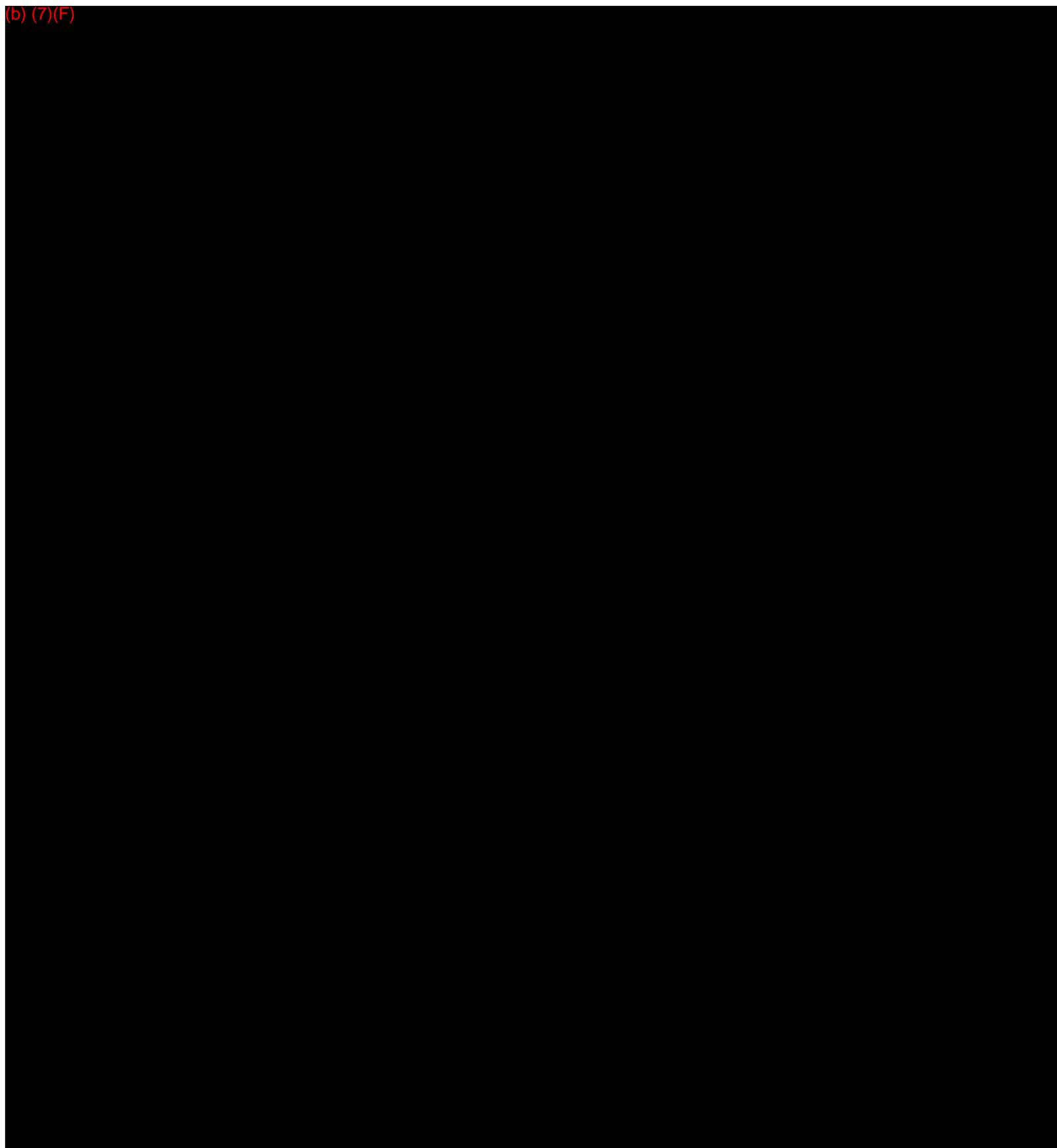
- The content of the information summary of the response plan
- The toll-free telephone number of the National Response Center
- The notification process

Personnel engaging in response activities

- The characteristics and hazards of the oil discharged
- The conditions that are likely to worsen emergencies, including the consequences of facility malfunctions or failures, and the appropriate corrective actions
- The steps necessary to control any accidental discharge of oil and to minimize the potential for fire, explosion, toxicity, or environmental damage
- The proper firefighting procedures and use of equipment, fire suits, and breathing apparatus

Training records are maintained for at least five (5) years in the Terminal Office.

(b) (7)(F)



<i>RESPONSE PLAN COVER SHEET</i>

2.0 **RESPONSE PLAN COVER SHEET**

2.1 **GENERAL INFORMATION**

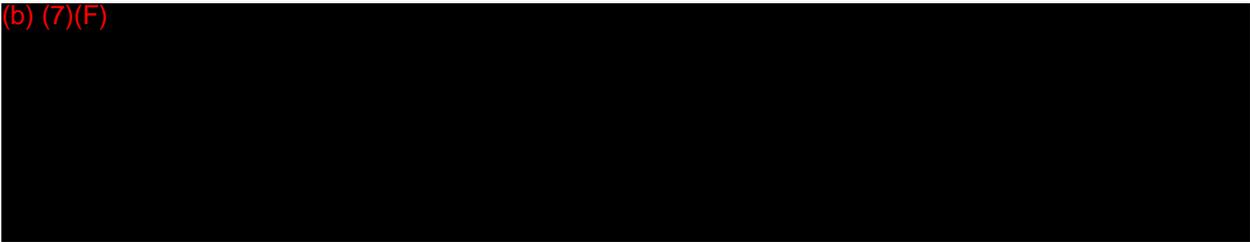
Owner:	Petroleum Fuel & Terminal Company
Operator of Facility:	Petroleum Fuel & Terminal Company
Facility Name:	Baltimore South Terminal
Facility Address:	1622 South Clinton Street Baltimore, MD 21224
Facility Phone Number:	410-342-7800 410-342-7804 (fax)

(b) (7)(F)



Dun & Bradstreet Number:	052619160
NAICS Code:	424710 (SIC Code: 5171) 493190 (SIC Code: 4226)

(b) (7)(F)



Facility Distance to Navigable Water. Mark the appropriate line.

0-1/4 mile 1/4-1/2 mile 1/2-1 mile >1 mile

<i>RESPONSE PLAN COVER SHEET</i>

2.2 **APPLICABILITY OF SUBSTANTIAL HARM CRITERIA**

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

Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and, within any storage area, 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?

Yes No

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 in Appendix C or a comparable formula) such that a discharge from the facility could cause injury to fish and wildlife and sensitive environments?

Yes No

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 in Appendix C or a comparable formula) such that a discharge from the facility would shut down a public drinking water intake?

Yes No

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

<i>RESPONSE PLAN COVER SHEET</i>

2.3 CERTIFICATION

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

Signature: _____ **Date:** _____

Name: Bill Ransom

Title: Terminal Manager

RESPONSE PLAN COVER SHEET

2.3 CERTIFICATION

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

Signature: _____

Bill Ransom

Date: _____

5/31/11

Name: Bill Ransom

Title: Terminal Manager

<i>ACRONYMS AND DEFINITIONS</i>

3.0 ACRONYMS AND DEFINITIONS

3.1 ACRONYMS

AC	Area Committee
ACP	Area Contingency Plan
AMPD	Average Most Probable Discharge
ASTM	American Society of Testing Materials
bbls	Barrels
bpd	Barrels per Day
bph	Barrels per Hour
CDC	Centers for Disease Control
CHRIS	Chemical Hazards Response Information System
COTP	Captain of the Port
CWA	Clean Water Act (also known as the FWPCA–Federal Water Pollution Control Act)
DOC	Department of Commerce
DOD	Department of Defense
DOE	Department of Energy
DOI	Department of the Interior
DOJ	Department of Justice
DOL	Department of Labor
DOS	Department of State
DOT	Department of Transportation
DRAT	District Response Advisory Team
DRG	District Response Group
EPA	Environmental Protection Agency
FEMA	Federal Emergency Management Agency
FOSC	Federal On-Scene Coordinator
FR	Federal Register
FRP	Facility Response Plan
gal	Gallons
gpm	Gallons per Minute
GSA	General Services Administration
HAZMAT	Hazardous Materials
HHS	Department of Health and Human Services
ICW	Intra-Coastal Waterways
LEPC	Local Emergency Planning Committee
MMPD	Maximum Most Probable Discharge
MMS	Minerals Management Service (part of DOI)
NAICS	North American Industrial Classification System
NCP	National Oil and Hazardous Substances Pollution Contingency Plan
NIOSH	National Institute for Occupational Safety and Health
NOAA	National Oceanic and Atmospheric Administration (part of DOC)
NPFC	National Pollution Funds Center
NRC	National Response Center
NRDA	Natural Resource Damage Assessment
NRS	National Response System
NRT	National Response Team
NSF	National Strike Force
NSFCC	National Strike Force Coordination Center
OPA	Oil Pollution Act of 1990
OSC	On-Scene Coordinator
OSHA	Occupational Safety and Health Administration
OSLTF	Oil Spill Liability Trust Fund
OSRO	Oil Spill Removal Organization
OSRP	Oil Spill Response Plan

<i>ACRONYMS AND DEFINITIONS</i>

POLREP	Pollution Report
PIAT	Public Information Assist Team
PREP	National Preparedness for Response Exercise Program
PRP	Potential Responsible Party
RA	Regional Administrator
RCP	Regional Contingency Plan
RCRA	Resource Conservation and Recovery Act
RP	Responsible Party
RRC	Regional Response Centers
RRT	Regional Response Team
RSPA	Research and Special Programs Administration
SARA	Superfund Amendments and Reauthorization Act
SDWA	Safe Drinking Water Act of 1986
SERC	State Emergency Response Commission
SI	Surface Impoundment
SMT	Spill Management Team
SONS	Spill of National Significance
SOSC	State On-Scene Coordinator
SPCC	Spill, Prevention, Control, and Countermeasures
SSC	Scientific Support Coordinator
TTX	Table Top Exercise
EPA	Environmental Protection Agency
USCG	United States Coast Guard
USDA	United States Department of Agriculture
WCD	Worst Case Discharge

ACRONYMS AND DEFINITIONS

3.2 RELEVANT DEFINITIONS

3.2.1 DEFINITIONS AT 40 CFR 112.2, SUPPLEMENTED

Activation means notification by phone or other expeditious manner or, when required, the assembly of some or all appropriate members of the RRT or NRT.

Adverse weather means weather conditions that make it difficult for response equipment and personnel to clean up or remove spilled oil, and that must be considered when identifying response systems and equipment in a response plan for the applicable operating environment. Factors to consider include significant wave height as specified in Appendix E to this part (as appropriate), ice conditions, temperatures, weather-related visibility, and currents within the area in which the systems or equipment is intended to function.

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

Animal fat means a non-petroleum oil, fat, or grease of animal, fish, or marine mammal origin.

Area Committee (AC) as provided for by CWA sections 311(a)(18) and (j)(4), means the entity appointed by the President consisting of members from qualified personnel of federal, state, and local agencies with responsibilities that include preparing an area contingency plan for an area designated by the President.

Area contingency plan (ACP) as provided for by CWA sections 311(a)(19) and (j)(4), means the plan prepared by an Area Committee that is developed to be implemented in conjunction with the NCP and RCP, in part to address removal of a worst case discharge and to mitigate or prevent a substantial threat of such a discharge from a vessel, offshore facility, or onshore facility operating in or near an area designated by the President.

Bioremediation agents means microbiological cultures, enzyme additives, or nutrient additives that are deliberately introduced into an oil discharge and that will significantly increase the rate of biodegradation to mitigate the ABC of the discharge.

Breakout tank means a container used to relieve surges in an oil pipeline system or to receive and store oil transported by a pipeline for reinjection and continued transportation by pipeline.

Bulk storage container means any container used to store oil. These containers are used for purposes including, but not limited to, the storage of oil prior to use, while being used, or prior to further distribution in commerce. Oil-filled electrical, operating, or manufacturing equipment is not a bulk storage container.

Bunkered tank means a container constructed or placed in the ground by cutting the earth and re-covering the container in a manner that breaks the surrounding natural grade, or that lies above grade, and is covered with earth, sand, gravel, asphalt, or other material. A bunkered tank is considered an aboveground storage container for purposes of this part.

Burning agents means those additives that, through physical or chemical means, improve the combustibility of the materials to which they are applied.

Chemical agents means those elements, compounds, or mixtures that coagulate, disperse, dissolve, emulsify, foam, neutralize, precipitate, reduce, solubilize, oxidize, concentrate, congeal, entrap, fix, make the pollutant mass more rigid or viscous, or otherwise facilitate the mitigation of deleterious ABC or the removal of the pollutant from the water. Chemical agents include biological additives, dispersants, sinking agents, miscellaneous oil spill control agents, and burning agents, but do not include sorbents.

Coastal waters for the purposes of classifying the size of discharges, means the waters of the coastal zone except for the Great Lakes and specified ports and harbors on inland rivers.

Coastal zone as defined for the purpose of the NCP, means all United States waters subject to the tide, United States waters of the Great Lakes, specified ports and harbors on inland rivers, waters of the contiguous zone, other waters of the high seas subject to the NCP, and the land surface or land substrata, ground waters, and ambient air proximal to those waters. The term coastal zone delineates an area of federal responsibility for response action. Precise boundaries are determined by EPA/FEDERAL EPA agreements and identified in federal regional contingency plans.

<i>ACRONYMS AND DEFINITIONS</i>

Coast Guard District Response Group (DRG) as provided for by CWA sections 311 (a)(20) and (j)(3), means the entity established by the Secretary of the department in which the FEDERAL EPA is operating, within each FEDERAL EPA district, and shall consist of: The combined FEDERAL EPA personnel and equipment, including marine firefighting equipment, of each port in the district; additional prepositioned response equipment; and a district response advisory team.

Completely buried tank means any container completely below grade and covered with earth, sand, gravel, asphalt, or other material. Containers in vaults, bunkered tanks, or partially buried tanks are considered aboveground storage containers for purposes of this part.

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

Contiguous zone means the zone established by the United States under Article 24 of the Convention of the Territorial Sea and Contiguous Zone, that is contiguous to the territorial sea and that extends nine miles seaward from the outer limit of the territorial area.

Contract or other approved means means:

- (1) A written contractual agreement with an oil spill removal organization that identifies and ensures the availability of the necessary personnel and equipment within appropriate response times; and/or
- (2) A written certification by the owner or operator that the necessary personnel and equipment resources, owned or operated by the facility owner or operator, are available to respond to a discharge within appropriate response times; and/or
- (3) Active membership in a local or regional oil spill removal organization that has identified and ensures adequate access through such membership to necessary personnel and equipment to respond to a discharge within appropriate response times in the specified geographic area; and/or
- (4) Any other specific arrangement approved by the Regional Administrator upon request of the owner or operator.

Discharge as defined by section 311(a)(2) of the CWA, includes, but is not limited to, any spilling, leaking, pumping, pouring, emitting, emptying, or dumping of oil, but excludes discharges in compliance with a permit under section 402 of the CWA, discharges resulting from circumstances identified and reviewed and made a part of the public record with respect to a permit issued or modified under section 402 of the CWA, and subject to a condition in such permit, or continuous or anticipated intermittent discharges from a point source, identified in a permit or permit application under section 402 of the CWA, that are caused by events occurring within the scope of relevant operating or treatment systems. For purposes of the NCP, discharge also means substantial threat of discharge.

Dispersants means those chemical agents that emulsify, disperse, or solubilize oil into the water column or promote the surface spreading of oil slicks to facilitate dispersal of the oil into the water column.

Exclusive economic zone, as defined by OPA section 1001, means the zone established by Presidential Proclamation Numbered 5030, dated March 10, 1983, including the ocean waters of the areas referred to as "Longview special areas" in Article 3(1) of the Agreement between the United States of America and the Union of Soviet Socialist Republics on the Maritime Boundary, signed June 1, 1990.

Facility means any mobile or fixed, onshore or offshore building, property, parcel, lease, structure, installation, equipment, pipe, or pipeline (other than a vessel or a public vessel) used in oil well drilling operations, oil production, oil refining, oil storage, oil gathering, oil processing, oil transfer, oil distribution, and oil waste treatment, or in which oil is used, as described in Appendix A to this part. The boundaries of a facility depend on several site-specific factors, including but not limited to, the ownership or operation of buildings, structures, and equipment on the same site and types of activity at the site. Contiguous or non-contiguous buildings, properties, parcels, leases, structures, installations, pipes, or pipelines under the ownership or operation of the same person may be considered separate facilities. Only this definition governs whether a facility is subject to this part.

Farm means a facility on a tract of land devoted to the production of crops or raising of animals, including fish, which produced and sold, or normally would have produced and sold, \$1,000 or more of agricultural products during a year.

First federal official means the first federal representative of a participating agency of the National Response Team to arrive at the scene of a discharge or a release. This official coordinates activities under the NCP and may initiate, in consultation with the FOSC, any necessary actions until the arrival of the predesignated FOSC. A state with

<i>ACRONYMS AND DEFINITIONS</i>

primary jurisdiction over a site covered by a cooperative agreement will act in the stead of the first federal official for any incident at the site.

Fish and wildlife and sensitive environments means areas that may be identified by either their legal designation or by evaluations of Area Committees (for planning) or members of the Federal On-Scene Coordinator's spill response structure (during responses). These areas may include wetlands, National and State parks, critical habitats for endangered/threatened species, wilderness and natural resource areas, marine sanctuaries and estuarine reserves, conservation areas, preserves, wildlife areas, wildlife refuges, wild and scenic rivers, recreational areas, national forests, Federal and State lands that are research national areas, heritage program areas, land trust areas, and historical and archeological sites and parks. These areas may also include unique habitats such as: aquaculture sites and agricultural surface water intakes, bird nesting areas, critical biological resource areas, designated migratory routes, and designated seasonal habitats.

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

Inland waters, for the purposes of classifying the size of discharges, mean those waters of the United States in the inland zone, waters of the Great Lakes, and specified ports and harbors on inland rivers.

Inland zone means the environment inland of the coastal zone excluding the Great Lakes and specified ports and harbors on inland rivers. The term inland zone delineates an area of federal responsibility for response action. Precise boundaries are determined by EPA/FEDERAL EPA agreements and identified in federal regional contingency plans.

Loading/unloading rack means a fixed structure (such as a platform, gangway) necessary for loading or unloading a tank truck or tank car, which is located at a facility subject to the requirements of this part. A loading/unloading rack includes a loading or unloading arm, and may include any combination of the following: piping assemblages, valves, pumps, shut-off devices, overfill sensors, or personnel safety devices.

Maximum extent practicable means the limitations used to determine oil spill planning resources and response times for on-water recovery, shoreline protection, and cleanup for worst case discharges from onshore non-transportation-related facilities in adverse weather. It considers the planned capability to respond to a worst-case discharge in adverse weather, as contained in a response plan that meets the requirements in 112.20 or in a specific plan approved by the Regional Administrator.

Miscellaneous oil spill control agent is any product, other than a dispersant, sinking agent, surface washing agent, surface collecting agent, bioremediation agent, burning agent, or sorbent that can be used to enhance oil spill cleanup, removal, treatment, or mitigation.

Mobile refueler means a bulk storage container onboard a vehicle or towed, that is designed or used solely to store and transport fuel for transfer into or from an aircraft, motor vehicle, locomotive, vessel, ground service equipment, or other oil storage container.

Motive power container means any onboard bulk storage container used primarily to power the movement of a motor vehicle, or ancillary onboard oil-filled operational equipment. An onboard bulk storage container which is used to store or transfer oil for further distribution is not a motive power container. The definition of motive power container does not include oil drilling or workover equipment, including rigs.

National Pollution Funds Center (NPFC) means the entity established by the Secretary of Transportation whose function is the administration of the Oil Spill Liability Trust Fund (OSLTF). Among the NPFC's duties are: Providing appropriate access to the OSLTF for federal agencies and states for removal actions and for federal trustees to initiate the assessment of natural resource damages; providing appropriate access to the OSLTF; and coordinating cost recovery efforts.

National Response System (NRS) is the mechanism for coordinating response actions by all levels of government in support of the FOSC. The NRS is composed of the NRT, RRTs, FOSC, Area Committees, and Special Teams and related support entities. During oil spill response or a hazardous substance removal action, the NRS functions as an incident command system (ICS) under the direction of the FOSC. Typical of an ICS, the NRS is capable of expanding or contracting to accommodate the response effort required by the size or complexity of the discharge or release.

ACRONYMS AND DEFINITIONS

National Strike Force (NSF) is a special team established by the FEDERAL EPA, including the three FEDERAL EPA Strike Teams, the Public Information Assist Team (PIAT), and the National Strike Force Coordination Center. The NSF is available to assist OSCs in their preparedness and response duties.

National Strike Force Coordination Center (NSFCC), authorized as the National Response Unit by CWA sections 311 (a)(23) and (j)(2), means the entity established by the Secretary of the department in which the FEDERAL EPA is operating at Elizabeth City, Minnesota with responsibilities that include administration of the FEDERAL EPA Strike Teams, maintenance of response equipment inventories and logistic networks, and conducting a national exercise program.

Natural resources means land, fish, wildlife, biota, air, water, ground water, drinking water supplies, and other such resources belonging to, managed by, held in trust by, appertaining to, or otherwise controlled by the United States (including the resources of the exclusive economic zone defined by the Magnuson Fishery Conservation and Management Act of 1976), any state or local government, any foreign government, any Indian tribe, or, if such resources are subject to a trust restriction on alienation, any member of an Indian tribe.

Navigable waters as defined by 40 CFR 110.1, means the waters of the United States, including the territorial seas. The term includes:

- (a) All waters that are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters that are subject to the ebb and flow of the tide;
- (b) Interstate waters, including interstate wetlands;
- (c) All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, and wetlands, the use, degradation, or destruction of which would affect or could affect interstate or foreign commerce including any such waters:
 - (1) That are or could be used by interstate or foreign travelers for recreational or other purposes;
 - (2) From which fish or shellfish are or could be taken and sold in interstate or foreign commerce;
 - (3) That are used or could be used for industrial purposes by industries in interstate commerce;
- (d) All impoundments of waters otherwise defined as navigable waters under this section;
- (e) Tributaries of waters identified in paragraphs (a) through (d) of this definition, including adjacent wetlands; and
- (f) Wetlands adjacent to waters identified in paragraphs (a) through (e) of this definition: Provided, that waste treatment systems (other than cooling ponds meeting the criteria of this paragraph) are not waters of the United States.

Non-petroleum oil means oil of any kind that is not petroleum-based, including but not limited to: Fats, oils, and greases of animal, fish, or marine mammal origin; and vegetable oils, including oils from seeds, nuts, fruits, and kernels.

Offshore facility means any facility of any kind (other than a vessel or public vessel) located in, on, or under any of the navigable waters of the United States, and any facility of any kind that is subject to the jurisdiction of the United States and is located in, on, or under any other waters.

Oil as defined by section 311(a)(1) of the CWA, means oil of any kind or in any form, including, but not limited to, petroleum, fuel oil, sludge, oil refuse, and oil mixed with wastes other than dredged spoil. Oil, as defined by section 1001 of the OPA means oil of any kind or in any form, including, but not limited to, petroleum, fuel oil, sludge, oil refuse, and oil mixed with wastes other than dredged spoil, but does not include petroleum, including crude oil or any fraction thereof, which is specifically listed or designated as a hazardous substance under subparagraphs (A) through (F) of section 101(14) of the Comprehensive Environmental Response, Compensation, and Liability Act (42 U.S.C. 9601) and which is subject to the provisions of that Act.

Oil-filled operational equipment means equipment that includes an oil storage container (or multiple containers) in which the oil is present solely to support the function of the apparatus or the device. Oil-filled operational equipment is not considered a bulk storage container, and does not include oil-filled manufacturing equipment (flow-through process). Examples of oil-filled operational equipment include, but are not limited to, hydraulic systems, lubricating systems (e.g. , those for pumps, compressors and other rotating equipment, including pumpjack lubrication systems), gear boxes, machining coolant systems, heat transfer systems, transformers, circuit breakers, electrical switches, and other systems containing oil solely to enable the operation of the device.

<i>ACRONYMS AND DEFINITIONS</i>

Oil Spill Liability Trust Fund (OSLTF) means the fund established under section 9509 of the Internal Revenue Code of 1986 (26 U.S.C. 9509).

Oil Spill Removal Organization (OSRO) means an entity that provides oil spill response resources, and includes any for-profit or not-for-profit contractor, cooperative, or in-house response resources that have been established in a geographic area to provide required response resources.

On-scene coordinator (FOSC) means the federal official predesignated by EPA or the FEDERAL EPA to coordinate and direct federal responses under subpart D, or the official designated by the lead agency to coordinate and direct removal actions under subpart E of the NCP.

Onshore facility as defined by section 311(a)(10) of the CWA, means any facility (including, but not limited to, motor vehicles and rolling stock) of any kind located in, on, or under any land within the United States other than submerged land.

Owner or operator means any person owning or operating an onshore facility or an offshore facility, and in the case of any abandoned offshore facility, the person who owned or operated or maintained the facility immediately prior to such abandonment.

Partially buried tank means a storage container that is partially inserted or constructed in the ground, but not entirely below grade, and not completely covered with earth, sand, gravel, asphalt, or other material. A partially buried tank is considered an aboveground storage container for purposes of this part.

Permanently closed means any container or facility for which:

- (1) All liquid and sludge has been removed from each container and connecting line; and
- (2) All connecting lines and piping have been disconnected from the container and blanked off, all valves (except for ventilation valves) have been closed and locked, and conspicuous signs have been posted on each container stating that it is a permanently closed container and noting the date of closure.

Person as defined by section 1001 of the OPA, person means an individual, corporation, partnership, association, state, municipality, commission, or political subdivision of a state, or any interstate body.

Petroleum oil means petroleum in any form, including but not limited to crude oil, fuel oil, mineral oil, sludge, oil refuse, and refined products.

Produced water container means a storage container at an oil production facility used to store the produced water after initial oil/water separation, and prior to reinjection, beneficial reuse, discharge, or transfer for disposal.

Production facility means all structures (including but not limited to wells, platforms, or storage facilities), piping (including but not limited to flowlines or intra-facility gathering lines), or equipment (including but not limited to workover equipment, separation equipment, or auxiliary non-transportation-related equipment) used in the production, extraction, recovery, lifting, stabilization, separation or treating of oil (including condensate), or associated storage or measurement, and is located in an oil or gas field, at a facility. This definition governs whether such structures, piping, or equipment are subject to a specific section of this part.

Public vessel as defined by section 311(a)(4) of the CWA, means a vessel owned or bareboat-chartered and operated by the United States, or by a state or political subdivision thereof, or by a foreign nation, except when such vessel is engaged in commerce.

Regional Administrator means the Regional Administrator of the Environmental Protection Agency, in and for the Region in which the facility is located.

Remove or removal as defined by section 311(a)(8) of the CWA, refers to containment and removal of oil or hazardous substances from the water and shorelines or the taking of such other actions as may be necessary to minimize or mitigate damage to the public health or welfare (including, but not limited to, fish, shellfish, wildlife, public and private property, and shorelines and beaches) or to the environment. For the purpose of the NCP, the term also includes monitoring of action to remove a discharge.

Removal costs as defined by section 1001 of the OPA, means the costs of removal that are incurred after a discharge of oil has occurred, or in any case in which there is a substantial threat of a discharge of oil, the costs to prevent, minimize, or mitigate oil pollution from such an incident.

<i>ACRONYMS AND DEFINITIONS</i>

Repair means any work necessary to maintain or restore a container to a condition suitable for safe operation, other than that necessary for ordinary, day-to-day maintenance to maintain the functional integrity of the container and that does not weaken the container.

Responsible party as defined by Section 1001 of the OPA, means the following:

- (a) Vessels. In the case of a vessel, any person owning, operating, or demise chartering the vessel is the responsible party.
- (b) Onshore facilities. In the case of an onshore facility (other than a pipeline), any person owning or operating the facility, except a federal agency, state, municipality, commission, or political subdivision of a state, or any interstate body, that as the owner transfers possession and right to use the property to another person by lease, assignment, or permit.
- (c) Pipelines. In the case of a pipeline, any person owning or operating the pipeline is the responsible party.
- (d) Abandonment. In the case of an abandoned vessel, facility or pipeline, the persons who would have been responsible parties immediately prior to the abandonment of the vessel or facility.

Size classes of discharges refers to the following size classes of oil discharges which are provided as guidance to the FOSC and serve as the criteria for the actions delineated in subpart D of this part. They are not meant to imply associated degrees of hazard to public health or welfare, nor are they a measure of environmental injury. Any oil discharge that poses a substantial threat to public health or welfare or the environment or results in significant public concern shall be classified as a major discharge regardless of the following quantitative measures:

- (a) **Minor discharge** means a discharge to the inland waters of less than 1,000 gallons of oil or a discharge to the coastal waters of less than 10,000 gallons of oil.
- (b) **Medium discharge** means a discharge of 1,000 to 10,000 gallons of oil to the inland waters or a discharge of 10,000 to 100,000 gallons of oil to the coastal waters.
- (c) **Major discharge** means a discharge of more than 10,000 gallons of oil to the inland waters or more than 100,000 gallons of oil to the coastal waters.

Sorbents means essentially inert and insoluble materials that are used to remove oil and hazardous substances from water through adsorption, in which the oil or hazardous substance is attracted to the sorbent surface and then adheres to it; absorption, in which the oil or hazardous substance penetrates the pores of the sorbent material; or a combination of the two. Sorbents are generally manufactured in particulate form for spreading over an oil slick or as sheets, rolls, pillows, or booms.

Specified ports and harbors means those ports and harbor areas on inland rivers, and land areas immediately adjacent to those waters, where the Federal EPA acts as pre-designated on-scene coordinator. Precise locations are determined by EPA regional agreements and identified in Federal Regional Contingency Plans and Area Contingency Plans.

Spill Prevention, Control, and Countermeasure Plan; SPCC Plan, or Plan means the document required by §112.3 that details the equipment, workforce, procedures, and steps to prevent, control, and provide adequate countermeasures to a discharge.

Surface collecting agents means those chemical agents that form a surface film to control the layer thickness of oil.

Surface washing agent is any product that removes oil from solid surfaces, such as beaches and rocks, through a detergency mechanism and does not involve dispersing or solubilizing the oil into the water column.

Storage capacity of a container means the shell capacity of the container.

Tank vessel as defined by section 1001 of the OPA means a vessel that is constructed or adapted to carry, or that carries oil or hazardous material in bulk as cargo or cargo residue, and that: (1) Is a vessel of the United States; (2) operates on the navigable waters; or (3) transfers oil or hazardous material in a place subject to the jurisdiction of the United States.

Threat of discharge. See definitions for discharge.

Transportation-related and non-transportation-related, as applied to an onshore or offshore facility, are defined in the Memorandum of Understanding between the Secretary of Transportation and the Administrator of the Environmental Protection Agency, dated November 24, 1971, (appendix A of this part).

ACRONYMS AND DEFINITIONS

Trustee means an official of a federal natural resources management agency designated in subpart G of the NCP or a designated state official or Indian tribe or, in the case of discharges covered by the OPA, a foreign government official, who may pursue action for damages under section 107(f) of CERCLA or section 1006 of the OPA.

United States means the States, the District of Columbia, the Commonwealth of Puerto Rico, the Commonwealth of the Northern Mariana Islands, Guam, American Samoa, the U.S. Virgin Islands, and the Pacific Island Governments.

Vegetable oil means a non-petroleum oil or fat of vegetable origin, including but not limited to oils and fats derived from plant seeds, nuts, fruits, and kernels.

Vessel as defined by section 101(28) of CERCLA, means every description of watercraft or other artificial contrivance used, or capable of being used, as a means of transportation on water; and, as defined by section 311(a)(3) of the CWA, means every description of watercraft or other artificial contrivance used, or capable of being used, as a means of transportation on water other than a public vessel.

Volunteer means any individual accepted to perform services by the lead agency which has authority to accept volunteer services (examples: See 16 U.S.C. 742f(c)). A volunteer is subject to the provisions of the authorizing statute and the NCP.

Wetlands means those areas that are inundated or saturated by surface or groundwater at a frequency or duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include playa lakes, swamps, marshes, bogs, and similar areas such as sloughs, prairie potholes, wet meadows, prairie river overflows, mudflats, and natural ponds.

Worst case discharge as defined by section 311(a)(24) of the CWA, means, in the case of a vessel, a discharge in adverse weather conditions of its entire cargo, and, in the case of an offshore facility or onshore facility, the largest foreseeable discharge in adverse weather conditions.

3.2.2 DEFINITIONS AT 33 CFR 154.1020

Adverse weather means the weather conditions that will be considered when identifying response systems and equipment in a response plan for the applicable operating environment. Factors to consider include, but are not limited to, significant wave height as specified in §§154.1045, 154.1047, 154.1225, or 154.1325, as appropriate; ice conditions, temperatures, weather-related visibility, and currents within the COTP zone in which the systems or equipment are intended to function.

Animal fat means a non-petroleum oil, fat, or grease derived from animals, and not specifically identified elsewhere in this part.

Average most probable discharge means a discharge of the lesser of 50 barrels or 1 percent of the volume of the worst case discharge.

Captain of the Port (COTP) Zone means a zone specified in 33 CFR part 3 and, where applicable, the seaward extension of that zone to the outer boundary of the exclusive economic zone (EEZ).

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

Dispersant-application platform means the vessel or aircraft outfitted with the dispersant-application equipment acting as the delivery system for the dispersant onto the oil spill.

Dispersant Mission Planner 2 or (DMP2) means an Internet-downloadable application that estimates EDAC for different dispersant response systems. The NSFCC will use DPMP2 for evaluating OSRO dispersant classification levels.

Effective Daily Application Capacity or EDAC means the estimated amount of dispersant that can be applied to a discharge by an application system given the availability of supporting dispersant stockpiles, when operated in accordance with approved standards and within acceptable environmental conditions.

Exclusive economic zone (EEZ) means the zone contiguous to the territorial sea of the United States extending to a distance up to 200 nautical miles from the baseline from which the breadth of the territorial sea is measured.

<i>ACRONYMS AND DEFINITIONS</i>

Facility that could reasonably be expected to cause significant and substantial harm means any MTR facility (including piping and any structures that are used for the transfer of oil between a vessel and a facility) classified as a “significant and substantial harm” facility under §154.1015(c) and §154.1216.

Facility that could reasonably be expected to cause substantial harm means any MTR facility classified as a “substantial harm” facility under §154.1015(b) and §154.1216.

Fish and Wildlife and Sensitive Environment means areas that may be identified by either their legal designation or by Area Committees in the applicable Area Contingency Plan (ACP) (for planning) or by members of the Federal On-Scene Coordinator's spill response structure (during responses). These areas may include: Wetlands, national and state parks, critical habitats for endangered or threatened species, wilderness and natural resource areas, marine sanctuaries and estuarine reserves, conservation areas, preserves, wildlife areas, wildlife refuges, wild and scenic rivers, areas of economic importance, recreational areas, national forests, Federal and state lands that are research areas, heritage program areas, land trust areas, and historical and archaeological sites and parks. These areas may also include unique habitats such as: aquaculture sites and agricultural surface water intakes, bird nesting areas, critical biological resource areas, designated migratory routes, and designated seasonal habitats.

Great Lakes means Lakes Superior, Michigan, Huron, Erie, and Ontario, their connecting and tributary waters, the Saint Lawrence River as far as Saint Regis, and adjacent port areas.

Gulf Coast means, for the purposes of dispersant-application requirements, the region encompassing the following Captain of the Port Zones:

- (1) Corpus Christi, TX.
- (2) Houston/Galveston, TX.
- (3) Port Arthur, TX.
- (4) Morgan City, LA.
- (5) New Orleans, LA.
- (6) Mobile, AL.
- (7) St. Petersburg, FL.

Higher volume port area means the following ports:

- (1) Boston, MA.
- (2) New York, NY.
- (3) Delaware Bay and River to Philadelphia, PA.
- (4) St. Croix, VI.
- (5) Pascagoula, MS.
- (6) Mississippi River from Southwest Pass, LA. to Baton Rouge, LA.
- (7) Louisiana Offshore Oil Port (LOOP), LA.
- (8) Lake Charles, LA.
- (9) Sabine-Neches River, TX.
- (10) Galveston Bay and Houston Ship Channel, TX.
- (11) Corpus Christi, TX.
- (12) Los Angeles/Long Beach harbor, CA.
- (13) San Francisco Bay, San Pablo Bay, Carquinez Strait, and Suisun Bay to Antioch, CA.
- (14) Straits of Juan De Fuca from Port Angeles, WA, to and including Puget Sound, WA.
- (15) Prince William Sound, AK.

<i>ACRONYMS AND DEFINITIONS</i>

Inland area means the area shoreward of the boundary lines defined in 46 CFR part 7, except in the Gulf of Mexico. In the Gulf of Mexico, it means the area shoreward of the lines of demarcation (COLREG lines) defined in §§80.740 through 80.850 of this chapter. The inland area does not include the Great Lakes.

Marine transportation-related facility (MTR facility) means any onshore facility or segment of a complex regulated under section 311(j) of the Federal Water Pollution Control Act (FWPCA) by two or more Federal agencies, including piping and any structure used or intended to be used to transfer oil to or from a vessel, subject to regulation under this part and any deepwater port subject to regulation under part 150 of this chapter. For a facility or segment of a complex regulated by two or more Federal agencies under section 311(j) of the FWPCA, the MTR portion of the complex extends from the facility oil transfer system's connection with the vessel to the first valve inside the secondary containment surrounding tanks in the non-transportation-related portion of the facility or, in the absence of secondary containment, to the valve or manifold adjacent to the tanks comprising the non-transportation-related portion of the facility, unless another location has otherwise been agreed to by the COTP and the appropriate Federal official.

Maximum extent practicable means the planned capability to respond to a worst case discharge in adverse weather, as contained in a response plan that meets the criteria in this subpart or in a specific plan approved by the cognizant COTP.

Maximum most probable discharge means a discharge of the lesser of 1,200 barrels or 10 percent of the volume of a worst case discharge.

Nearshore area means the area extending seaward 12 miles from the boundary lines defined in 46 CFR part 7, except in the Gulf of Mexico. In the Gulf of Mexico, it means the area extending seaward 12 miles from the line of demarcation (COLREG lines) defined in §§80.740–80.850 of this chapter.

Non-persistent or Group I oil means a petroleum-based oil that, at the time of shipment, consists of hydrocarbon fractions—

- (1) At least 50 percent of which by volume, distill at a temperature of 340 degrees C (645 degrees F); and
- (2) At least 95 percent of which by volume, distill at a temperature of 370 degrees C (700 degrees F).

Ocean means the offshore area and nearshore area as defined in this subpart.

Offshore area means the area beyond 12 nautical miles measured from the boundary lines defined in 46 CFR part 7 extending seaward to 50 nautical miles, except in the Gulf of Mexico. In the Gulf of Mexico, it is the area beyond 12 nautical miles of the line of demarcation (COLREG lines) defined in §§80.740–80.850 of this chapter extending seaward to 50 nautical miles.

Oil means oil of any kind or in any form, including, but not limited to, petroleum, fuel oil, sludge, oil refuse, oil mixed with wastes other than dredge spoil.

Oil spill removal organization (OSRO) means an entity that provides response resources.

On-Scene Coordinator (OSC) means the definition in the National Oil and Hazardous Substances Pollution Contingency Plan (40 CFR part 300).

Operating area means Rivers and Canals, Inland, Nearshore, Great Lakes, or Offshore geographic location(s) in which a facility is handling, storing, or transporting oil.

Operating environment means Rivers and Canals, Inland, Great Lakes, or Ocean. These terms are used to define the conditions in which response equipment is designed to function.

Operating in compliance with the plan means operating in compliance with the provisions of this subpart including, ensuring the availability of the response resources by contract or other approved means, and conducting the necessary training and drills.

Operational effectiveness monitoring means monitoring concerned primarily with determining whether the dispersant was properly applied and how the dispersant is affecting the oil.

Other non-petroleum oil means a non-petroleum oil of any kind that is not generally an animal fat or vegetable oil.

Persistent oil means a petroleum-based oil that does not meet the distillation criteria for a non-persistent oil. For the purposes of this subpart, persistent oils are further classified based on specific gravity as follows:

- (1) Group II—specific gravity of less than .85.

ACRONYMS AND DEFINITIONS

- (2) Group III—specific gravity equal to or greater than .85 and less than .95.
- (3) Group IV—specific gravity equal to or greater than .95 and less than or equal to 1.0.
- (4) Group V—specific gravity greater than 1.0.

Pre-authorization for dispersant use means an agreement, adopted by a regional response team in coordination with area committees, which authorizes the use of dispersants at the discretion of the Federal On-Scene Coordinator without the further approval of other Federal or State authorities. These pre-authorization areas are generally limited to particular geographic areas within each region.

Primary dispersant staging site means a site designated within a Captain of the Port zone that has been identified as a forward staging area for dispersant application platforms and the loading of dispersant stockpiles. Primary staging sites are typically the planned locations where platforms load or reload dispersants before departing for application at the site of the discharge and may not be the locations where dispersant stockpiles are stored or application platforms are home-based.

Qualified individual and alternate qualified individual means a person located in the United States who meets the requirements of §154.1026.

Response activities means the containment and removal of oil from the land, water, and shorelines, the temporary storage and disposal of recovered oil, or the taking of other actions as necessary to minimize or mitigate damage to the public health or welfare or the environment.

Response resources means the personnel, equipment, supplies, and other capability necessary to perform the response activities identified in a response plan.

Rivers and canals means a body of water confined within the inland area, including the Intracoastal Waterways and other waterways artificially created for navigation, that has a project depth of 12 feet or less.

Specific gravity means the ratio of the mass of a given volume of liquid at 15 °C (60 °F) to the mass of an equal volume of pure water at the same temperature.

Spill management team means the personnel identified to staff the organizational structure identified in a response plan to manage response plan implementation.

Substantial threat of a discharge means any incident or condition involving a facility that may create a risk of discharge of oil. Such incidents include, but are not limited to storage tank or piping failures, above ground or underground leaks, fires, explosions, flooding, spills contained within the facility, or other similar occurrences.

Tier means the combination of required response resources and the times within which the resources must arrive on scene.

[Note: Tiers are applied in three categories:

- (1) Higher Volume Port Areas,
- (2) Great Lakes, and
- (3) All other operating environments, including rivers and canals, inland, nearshore, and offshore areas.

Appendix C, Table 4 of this part, provides specific guidance on calculating response resources. Sections 154.1045(f) and 154.1135, set forth the required times within which the response resources must arrive on-scene.]

Vegetable oil means a non-petroleum oil or fat derived from plant seeds, nuts, kernels or fruits, and not specifically identified elsewhere in this part.

Worst case discharge means in the case of an onshore facility and deepwater port, the largest foreseeable discharge in adverse weather conditions meeting the requirements of §154.1029.

<i>REFERENCES</i>

4.0 REFERENCES

40 CFR Part 112.20, Facility Response Plans (Final Rule, which establishes requirements for FRP for EPA regulated facilities)

29 CFR Part 1910.120, Hazardous Waste Operations and Emergency Response

40 CFR Part 300, National Oil and Hazardous Substances Pollution Contingency Plan (Final Rule)

CONCAWE. 1982. Methodologies for Hazard Analysis and Risk Assessment in the Petroleum Refining and Storage Industry. Prepared by CONCAWE's Risk Assessment Ad-hoc Group

Developing an Oil Spill Response Exercise Program (A Handbook for the National Preparedness for Response Exercise Program). September 27, 1993 (FEDERAL EPA document)

Incident Command System, Fire Protection Publications, Oklahoma State University, Stillwater, OK

National Preparedness for Response Exercise Program (PREP) Guidelines. U.S. Department of Transportation, Environmental Protection Agency, and Department of the Interior. August, 2002

http://www.au.af.mil/au/awc/awcgate/uscg/prep_gid.pdf

The National Response Team. 1987. Hazardous Materials Emergency Planning Guide. Washington, DC

The National Response Team. 1990. Oil Spill Contingency Planning, National Status: A Report to the President. Washington, DC. U.S. Government Printing Office.

FEDERAL EPA Commandants Notice 16471. 30 September 1992. Establishment of Area Committees and Development of Area Contingency Plans

USEPA, Region 3 Oil and Hazardous Substances Integrated Contingency Plan

USCG & MDE, Upper Chesapeake Estuary Area Contingency Plan

U.S. Department of Housing and Urban Development. 1987. Siting of HUD-Assisted Projects Near Hazardous Facilities: Acceptable Separation Distances from Explosive and Flammable Hazards. Prepared by the Office of Environment and Energy, Environmental Planning Division, Department of Housing and Urban Development. Washington, DC

U.S. DOT, FEMA and U.S. EPA. Handbook of Chemical Hazard Analysis Procedures

U.S. DOT, FEMA and U.S. EPA. Technical Guidance for Hazards Analysis: Emergency Planning for Extremely Hazardous Substances

National Register Information System

<http://www.nr.nps.gov/>

National Wild and Scenic River System, State-By-State List

<http://www.nps.gov/rivers/index.html>

<i>REFERENCES</i>

U.S. Environmental Protection Agency, Envirofacts - Data Warehouse and Application
http://www.epa.gov/enviro/index_java.html

U.S. Fish and Wildlife Service, Endangered Species Program
<http://www.endangered.fws.gov/>

Maryland Department of Natural Resources – Endangered and Threatened Species
http://www.dnr.state.md.us/wildlife/Plants_Wildlife/espaa.asp

National Weather Service
<http://www.weather.gov/climate/index.php?wfo=lsx>

Baltimore Tidal Currents
<http://tidesandcurrents.noaa.gov/currents05/BALTHBR.shtml>

APPENDIX A
OSRO INFORMATION



OSRO, EMERGENCY RESPONSE & ENVIRONMENTAL SERVICES CONTRACT

COMPANY NAME: Petroleum Fuel & Terminal LLC (South) DATE: 3/17/10
 CONTACT NAME: Bill Ransom
 TELEPHONE: 410-342-7800 billransom.pftblt@verizon.net
 FACILITY ADDRESS: 1622 South Clinton, Baltimore MD 21224
 BILLING ADDRESS: Same

This agreement between Petroleum Fuel & Terminal LLC (South) hereafter referred to as the Company and Miller Environmental Group Inc., hereafter referred to as MEG is for Emergency Response & Environmental Services:

- I. MEG agrees to respond to discharges of Oils, Hazardous Substances, and other environmental emergencies involving Company owned facilities that have been authorized in accordance with the terms of this contract. The Company must call MEG's 24 hour emergency response line (800) 394-8606.
- II. MEG shall be on-call to respond with equipment and manpower, 24-hours a day, 365 days a year.
- III. MEG shall work in accordance with local state and federal environmental regulations & statutes.
- IV. MEG shall supply tools, equipment, materials, labor, supervision and other items to respond, dispose or store on-site at the Company's facility, materials released into the environment or released within the Company's premises.
- V. MEG shall if required supply labor, trained in accordance with OSHA and all other applicable safety regulations.
- VI. MEG shall document all site activities related to the sampling, containment, clean up, storage or transportation of released materials. MEG shall prepare and maintain daily job reports and logs pertaining to all activities performed on behalf of the Company.
- VII. The Company shall make available to MEG, any proprietary information on materials involved in the project/incident that could affect a safe and effective response.
- VIII. MEG shall furnish a Certificate of Insurance demonstrating all required coverage for the work performed. Company, at all times, shall maintain care, custody and control of Company's property, including equipment being worked on by MEG.


 Company Initials


 MEG Initials



- IX. The Company shall assist as necessary in providing secure storage space for drums, tanks, roll-off containers or equipment for the storage of materials on-site prior to disposal.
- X. The Company and MEG shall be jointly responsible for interfacing with local state or federal environmental officials. To the extent required by law it is the Company's legal responsibility to report the spill to federal, state and local officials. The Company will hold MEG harmless for spills or other damages as a result of the actions and operations of others outside of MEG's direct control.
- XI. MEG shall obey all Company safety rules and regulations while on Company property. The Company shall provide MEG with a written set of those rules.
- XII. The Company shall pay MEG for work conducted. MEG will provide a written cost estimate for lump sum work when agreed to by both parties. Otherwise, MEG shall supply an itemized bill at the published time and material rates that are in effect at the time when service is provided. Attached is a copy of the current Rate Schedule (2010). Payment terms are Net 10 days from date of invoice and all other terms and conditions as per the current Rate Schedule apply.
- XIII. This agreement is between the Company and MEG. If the Company seeks compensation from its Insurance Company or Protection and Indemnity Club MEG does not release the Company from its obligations under this agreement. Insurance Companies, Protection and Indemnity Clubs, and their third party management representatives arbitrarily select certain services that they will not cover and as such MEG holds the Company responsible for the entire itemized bill.
- XIV. All field notes, photographs, reports and documentation of the service provided shall remain the property of MEG until full payment is received from the Company.
- XV. Unless agreed to by both parties in writing for a specific transaction, no inconsistent or additional term or condition in any Order or other document shall be applicable to transactions within the scope of this Agreement.
- XVI. This agreement is in effect until canceled in writing by either party.

Signature: Bill RansomSignature: George WallacePrinted: BILL RANSOMPrinted: George WallaceTitle: TERMINAL MANAGERTitle: VP Business DevelopmentCompany: PETROLEUM FUEL+TERM.Company: Miller Environmental Group Inc.Date: 3/18/10Date: 3/18/10

Miller Environmental Group
 538 Edwards Ave., Calverton, NY 11933
 (800) 394-8606 (631) 369-4900
 www.millervenv.com

FROM :

FAX NO. :

Feb. 23 2011 09:29AM P2



2010 OSRO PREP Equipment Deployment Documentation

Date	D/S/A	Client	Location	Vessel/Skimmer/ Recovery Type	QTY	BOOM TYPE	QTY
1/4/10	A	NRC/Vane Brothers	Marcus Hook, PA	25' Workboat	1	18"	1500'
3/14/10	S	USCG	Lindenhurst, NY	18' Workboat	1	18"	300'
3/29/10	S	Meridith Management	Jones Beach, NY	27' Work Boat	1	18"	1000'
3/23/10	A	Staten Island Ferry	Staten Island, NY	24' Work Boat	1	18"	400'
4/14/10	A	NRC/Penn Maritime	Smith Point, VA	25' Workboat	1	18"	1500'
4/22/2010	D	Global Companies	Albany, NY	26' Workboat	1	18"	1000'
5/2/2010	A	BP Deepwater Horizon MSRC NRC O'Brien's	Pascagoula, MS Pensacola, FL Panama City, FL	(40) Workboats (10) Skimmers (10) Power Packs (8) Large Workboats (15) Vac Trucks (25) Transfer Pumps (30) Storage Totes (12) Hotsys (4) Decon Barges		18" 24"	20,000' 6,000'
5/3/10	D	PSC/PECO Energy	Philadelphia, PA	25' Workboat Weir Skimmer	1	18"	1000'
5/20/10	S	DNREC	Dover, DE	19' Workboat	1	18"	600'
5/26/10	A	NRC/Vane Brothers	Tangier Sound	25' Workboat	1	18"	1500'
6/21/2010	D	HESS	Rensselaer, NY	26' Workboat	1	18"	300'
6/23/2010	D	MIRANT	West Haverstraw, NY	26' Workboat	1	18"	1000'
7/15/2010	D	DYNEGY	Newburgh, NY	26' Workboat	1	18"	1000'
9/9/2010	D	CSXT	Selkirk, NY	26' Workboat	1	18"	1200'
10/19/10	A	Staten Island Ferry	Staten Island, NY	24' Work Boat	1	18"	400'
10/13/10	D	National Grid	Port Jefferson, NY	27' Workboat	3	18"	2000'
11/2/10	S	BP/Sovereign	Paulsboro, NJ	19' Workboat	1	18"	300'
11/8/2010	S	Entergy	Buchanan, NY	26' Workboat Weir Skimmer	1	18"	500'
11/13/10	S	NRC/Rhea Bouchard	Port Jefferson, NY	26' Work Boat Weir Skimmer	1	18"	500'
11/17/2010	S	Central Hudson	Poughkeepsie, NY	26' Workboat	1	18"	600'
11/20/10	A	NRC/K-Sea	Piney Point, MD	25' Workboat Weir Skimmer	1	18"	1500'
11/28/10	A	NRC/Penn Maritime	Marcus Hook, PA	25' Workboat Weir Skimmer	1	18"	1500'

Miller Environmental Group, Inc.
538 Edwards Ave., Calverton, NY 11933
(800) 394-8606 (631) 369-4900
www.millerenv.com

ACORD CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)

10/28/2010

PRODUCER Graham Company Graham Building Penn Square West Philadelphia, PA 19102	(215) 567-6300	THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW.	
INSURERS AFFORDING COVERAGE		NAIC #	
INSURER A: Chartis Specialty Insurance Company		26883	
INSURER B: Zurich-American Insurance Company		16535	
INSURER C:			
INSURER D:			
INSURER E:			

COVERAGES

THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. AGGREGATE LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSURED	TYPE OF INSURANCE	POLICY NUMBER	POLICY EFFECTIVE DATE (MM/DD/YYYY)	POLICY EXPIRATION DATE (MM/DD/YYYY)	LIMITS	
Miller Environmental Group Inc. 538 Edwards Ave. Calverton, NY 11933-	GENERAL LIABILITY	1530908	10/31/2010	10/31/2011	EACH OCCURRENCE	\$ 1,000,000
	<input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY				DAMAGE TO RENTED PREMISES (Ea occurrence)	\$ 100,000
	<input type="checkbox"/> CLAIMS MADE <input checked="" type="checkbox"/> OCCUR				MED EXP (Any one person)	\$ 10,000
	<input checked="" type="checkbox"/> Pollution Per Occ				PERSONAL & ADV INJURY	\$ 1,000,000
	<input checked="" type="checkbox"/> Prof Claims Made				GENERAL AGGREGATE	\$ 2,000,000
	GEN'L AGGREGATE LIMIT APPLIES PER:				PRODUCTS - COMP/OP AGG	\$ 2,000,000
<input type="checkbox"/> POLICY <input checked="" type="checkbox"/> PROJECT <input type="checkbox"/> LOC						
	AUTOMOBILE LIABILITY	BAP369759200	10/31/2010	10/31/2011	COMBINED SINGLE LIMIT (Ea accident)	\$ 1,000,000
	<input checked="" type="checkbox"/> ANY AUTO				BODILY INJURY (Per person)	\$
	<input type="checkbox"/> ALL OWNED AUTOS				BODILY INJURY (Per accident)	\$
	<input type="checkbox"/> SCHEDULED AUTOS				PROPERTY DAMAGE (Per accident)	\$
<input type="checkbox"/> HIRED AUTOS						
<input type="checkbox"/> NON-OWNED AUTOS						
	GARAGE LIABILITY				AUTO ONLY - EA ACCIDENT	\$
	<input type="checkbox"/> ANY AUTO				OTHER THAN EA ACC	\$
					AUTO ONLY: AGG	\$
	EXCESS/UMBRELLA LIABILITY	1530946	10/31/2010	10/31/2011	EACH OCCURRENCE	\$ 9,000,000
	<input checked="" type="checkbox"/> OCCUR <input type="checkbox"/> CLAIMS MADE				AGGREGATE	\$ 9,000,000
	<input type="checkbox"/> DEDUCTIBLE					\$
	<input type="checkbox"/> RETENTION \$					\$
WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? If yes, describe under SPECIAL PROVISIONS below	WC369759300	10/31/2010	10/31/2011	<input checked="" type="checkbox"/> WC STATUTORY LIMITS	OTHER	
				E.L. EACH ACCIDENT	\$ 1,000,000	
				E.L. DISEASE - EA EMPLOYEE	\$ 1,000,000	
				E.L. DISEASE - POLICY LIMIT	\$ 1,000,000	
OTHER						

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES / EXCLUSIONS ADDED BY ENDORSEMENT / SPECIAL PROVISIONS

Certificate Holder is added as an additional insured on the General Liability if required by written contract.

CERTIFICATE HOLDER Petroleum Fuel & Terminal LLC - South 1622 South Clinton Street Baltimore, MD 21224-	CANCELLATION SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, THE ISSUING INSURER WILL ENDEAVOR TO MAIL 30 DAYS WRITTEN NOTICE TO THE CERTIFICATE HOLDER NAMED TO THE LEFT, BUT FAILURE TO DO SO SHALL IMPOSE NO OBLIGATION OR LIABILITY OF ANY KIND UPON THE INSURER, ITS AGENTS OR REPRESENTATIVES. AUTHORIZED REPRESENTATIVE 
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APPENDIX B
CALCULATIONS/WORKSHEETS

APPENDIX B

40 CFR 112, Appendix D**U. S. Environmental Protection Agency****Part A.: Worst Case Discharge Planning Calculation for Onshore Storage Facilities**

A.1 Single-Tank Facilities	
For facilities containing only one aboveground oil storage tank, the worst case discharge planning volume equals the capacity of the oil storage tank. If adequate secondary containment (sufficiently large to contain the capacity of the aboveground oil storage tank plus sufficient freeboard to allow for precipitation) exists for the oil storage tank, multiply the capacity of the tank by 0.8.	
(1) FINAL WORST CASE VOLUME; (GAL)	NA
(2) Do not proceed further	

A.2 Secondary Containment — Multiple Tank Facilities	
Are all aboveground oil storage tanks or groups of aboveground oil storage tanks at this facility without adequate secondary containment?	No
A.2.1 If the answer is yes, the final worst case discharge planning volume equals the total aboveground oil storage capacity at the facility.	
(1) FINAL WORST CASE VOLUME:	
(2) Do not proceed further.	
A.2.2 If the answer is no, calculate the total aboveground oil storage capacity of tanks without adequate secondary containment. If all aboveground oil storage tanks or groups of aboveground oil storage tanks at the facility have adequate secondary containment, ENTER "0" (zero).	0
A.2.3 Calculate the capacity of the largest single aboveground oil storage tank within an adequate secondary containment area or the combined capacity of a group of aboveground oil storage tanks permanently manifolded together, whichever is greater, plus the volume from question 2. FINAL WORST CASE VOLUME:	(b) (7)(F)

APPENDIX B

40 CFR 112, Appendix E

Attachment E-1

Worksheet to Plan Volume of Response Resources for Worst Case Discharge Group 1 Oils

Part I Background Information

Step A:	Calculate Worst Case Discharge in Barrels (Appendix D)		(b) (A)
Step B:	Oil Group 1 (Table 3 and Section 1.2 of this appendix)		1
Step C:	Operating Area (choose one):		
	X	Nearshore/Inland Great Lakes or Rivers and Canals	
Step D:	Percentage of Oil (Table 2 of this appendix)		
	Percent Lost to Natural Dissipation	Percent Recovered Floating Oil	Percent Oil Onshore
	80 (D1)	10 (D2)	10 (D3)
Step E1:	On-Water Oil Recovery	$\frac{\text{Step (D2)} \times \text{Step (A)}}{100}$	(b) (7)(F)
Step E2:	Shoreline Recovery	$\frac{\text{Step (D3)} \times \text{Step (A)}}{100}$	(E2)
Step F:	Emulsion Factor	(Table 3 of this Appendix)	1.0
Step G:	On-Water Oil Recovery Resource Mobilization Factor (Table 4 of this Appendix)		
	Tier 1	Tier 2	Tier 3
	0.30 (G1)	0.40 (G2)	0.60 (G3)

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

(b) (7)(F)	
------------	--

Part III Shoreline Cleanup Volume

Step (E2) x Step (F)

Part IV On-Water Response Capacity By Operating Area

(Table 5 of this Appendix)

(Amount needed to be contracted for in barrels/day)

Tier 1	Tier 2	Tier 3
1,875 (J1)	3,750 (J2)	7,500 (J3)

Part V On-Water Amount Needed to be Identified, but not Contracted for in Advance (barrels/day)

Tier 1	Tier 2	Tier 3
4,125 Part II Tier 1 – Step (J1)	4,250 Part II Tier 2 – Step (J2)	4,500 Part II Tier 3 – Step (J3)

Note: To convert from barrels/day to gallons/day, multiply the quantities in Parts 2 through 5 by 42 gallons/barrel.

APPENDIX B

Worksheet to Plan Volume of Response Resources for Worst Case Discharge Group 2 Oils

Part I Background Information

Step A:	Calculate Worst Case Discharge in Barrels (Appendix D)	(b) (A)									
Step B:	Oil Group 1 (Table 3 and Section 1.2 of this appendix)	2									
Step C:	Operating Area (choose one): <table border="1" style="display: inline-table; margin-right: 10px;"> <tr><td style="width: 50px; height: 20px; text-align: center;">X</td></tr> </table> Nearshore/Inland Great Lakes or Rivers and Canals	X									
X											
Step D:	Percentage of Oil (Table 2 of this appendix)										
	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 33%;">Percent Lost to Natural Dissipation</th> <th style="width: 33%;">Percent Recovered Floating Oil</th> <th style="width: 33%;">Percent Oil Onshore</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">40</td> <td style="text-align: center;">15</td> <td style="text-align: center;">45</td> </tr> <tr> <td style="text-align: center;">(D1)</td> <td style="text-align: center;">(D2)</td> <td style="text-align: center;">(D3)</td> </tr> </tbody> </table>	Percent Lost to Natural Dissipation	Percent Recovered Floating Oil	Percent Oil Onshore	40	15	45	(D1)	(D2)	(D3)	
Percent Lost to Natural Dissipation	Percent Recovered Floating Oil	Percent Oil Onshore									
40	15	45									
(D1)	(D2)	(D3)									
Step E1:	On-Water Oil Recovery $\frac{\text{Step (D2)} \times \text{Step (A)}}{100}$	(b) (7)(F)									
Step E2:	Shoreline Recovery $\frac{\text{Step (D3)} \times \text{Step (A)}}{100}$	(b) (7)(F)									
Step F:	Emulsion Factor (Table 3 of this Appendix)	1.8									
Step G:	On-Water Oil Recovery Resource Mobilization Factor (Table 4 of this Appendix)										
	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 33%;">Tier 1</th> <th style="width: 33%;">Tier 2</th> <th style="width: 33%;">Tier 3</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">0.30</td> <td style="text-align: center;">0.40</td> <td style="text-align: center;">0.60</td> </tr> <tr> <td style="text-align: center;">(G1)</td> <td style="text-align: center;">(G2)</td> <td style="text-align: center;">(G3)</td> </tr> </tbody> </table>	Tier 1	Tier 2	Tier 3	0.30	0.40	0.60	(G1)	(G2)	(G3)	
Tier 1	Tier 2	Tier 3									
0.30	0.40	0.60									
(G1)	(G2)	(G3)									

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

Step	(b) (7)(F)	Step (G3)
------	------------	-----------

Part III Shoreline Cleanup Volume (barrels/day)

Step (E2) x Step (F)

Part IV On-Water Response Capacity By Operating Area

(Table 5 of this Appendix)

(Amount needed to be contracted for in barrels/day)

Tier 1	Tier 2	Tier 3
1,875	3,750	7,500
(J1)	(J2)	(J3)

Part V On-Water Amount Needed to be Identified, but not Contracted for in Advance (barrels/day)

Tier 1	Tier 2	Tier 3
14,325	17,850	24,900
Part II Tier 1 – Step (J1)	Part II Tier 2 – Step (J2)	Part II Tier 3 – Step (J3)

Note: To convert from barrels/day to gallons/day, multiply the quantities in Parts 2 through 5 by 42 gallons/barrel.

<i>APPENDIX B</i>

EPA Tables
40 CFR 112, Appendix C

Table 1 - Manning's Roughness Coefficient for Natural Streams

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

Table 3 – Specified Time Intervals

Operating areas	Substantial harm planning time (hrs)
Higher volume port area	12 hour arrival+3 hour deployment=15 hours.
Great Lakes	24 hour arrival+3 hour deployment=27 hours.
All other rivers and canals, inland, and nearshore areas	24 hour arrival+3 hour deployment=27 hours.

APPENDIX B

EPA Tables

40 CFR 112, Appendix E

5.3 Oil discharge response resources identified in the response plan and available, by contract or other approved means as described in §112.2, to meet the applicable worst case discharge planning volume must be located such that they are capable of arriving at the scene of a discharge within the times specified for the applicable response tier listed as follows	Tier 1 (in hours)	Tier 2 (in hours)	Tier 3 (in hours)
Higher volume port areas	6	30	54
Great Lakes	12	36	60
All other river and canal, inland, and nearshore areas	12	36	60

Table 1 to Appendix E—Response Resource Operating Criteria

Oil Recovery Devices				
Operating environment	Significant wave height ¹			Sea state
Rivers and Canals	≤ 1 foot			1
Inland	≤ 3 feet			2
Great Lakes	≤ 4 feet			2–3
Ocean	≤ 6 feet			3–4
Boom				
Boom property	Use			
	Rivers and canals	Inland	Great Lakes	Ocean
Significant Wave Height ¹	≤ 1	≤ 3	≤ 4	≤ 6
Sea State	1	2	2–3	3–4
Boom height—inches (draft plus freeboard)	6–18	18–42	18–42	≥42
Reserve Buoyancy to Weight Ratio	2:1	2:1	2:1	3:1 to 4:1
Total Tensile Strength—pounds	4,500	15,000–20,000	15,000–20,000	≥20,000
Skirt Fabric Tensile Strength—pounds	200	300	300	500
Skirt Fabric Tear Strength—pounds	100	100	100	125

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

APPENDIX B

Table 2 to Appendix E—Removal Capacity Planning Table for Petroleum Oils

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

Table 3 to Appendix E—Emulsification Factors for Petroleum Oil Groups

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

Table 4 to Appendix E—On-Water Oil Recovery Resource Mobilization Factors

Operating area	Tier 1	Tier 2	Tier 3
Rivers and Canals	0.30	0.40	0.60
Inland/Nearshore Great Lakes	0.15	0.25	0.40

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

<i>APPENDIX B</i>

Table 5 to Appendix E—Response Capability Caps by Operating Area

	Tier 1	Tier 2	Tier 3
February 18, 1993:			
All except Rivers & Canals, Great Lakes	10K bbls/day	20K bbls/day	40K bbls/day.
Great Lakes	5K bbls/day	10K bbls/day	20K bbls/day.
Rivers & Canals	1.5K bbls/day	3.0K bbls/day	6.0K bbls/day.
February 18, 1998:			
All except Rivers & Canals, Great Lakes	12.5K bbls/day	25K bbls/day	50K bbls/day.
Great Lakes	6.35K bbls/day	12.3K bbls/day	25K bbls/day.
Rivers & Canals	1.875K bbls/day	3.75K bbls/day	7.5K bbls/day.
February 18, 2003:			
All except Rivers & Canals, Great Lakes	TBD	TBD	TBD.
Great Lakes	TBD	TBD	TBD.
Rivers & Canals	TBD	TBD	TBD.

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

<i>APPENDIX B</i>

33 CFR 154.1029

United States Coast Guard Worst Case Discharge Planning Calculation for Fixed, MTR, Onshore Facilities

Criteria	Volume (bbls)
1. The loss of the entire capacity of all in-line and break out tank(s) needed for the continuous operation of the pipelines used for the purposes of handling or transporting oil, in bulk, to or from a vessel regardless of the presence of secondary containment	(b) (7)(F)
2. The discharge from all piping carrying oil between the marine transfer manifold and the non-transportation-related portion of the facility. The discharge from each pipe is calculated as follows: The maximum time to discover the release from the pipe in hours, plus the maximum time to shut down flow from the pipe in hours (based on historic discharge data or the best estimate in the absence of historic discharge data for the facility) multiplied by the maximum flow rate expressed in barrels per hour (based on the maximum relief valve setting or maximum system pressure when relief valves are not provided) plus the total line drainage volume expressed in barrels for the pipe between the marine manifold and the non-transportation-related portion of the facility	
Total:	

* Detailed calculations provided on the following page.

APPENDIX B

NVIC-7-92: Encl. (1), Appendix C, Sec. 7, page 46**Work Sheet to Determine Planning Volumes
for Marine-Transportation-Related Facilities****(Note: not for mobile facilities or Group V oils)**

Step 1	Product generic name(s): Gasoline, Ethanol, No. 2 Fuel Oil, Biodiesel, Marine Diesel	
Step 2	Enter total capacity of each in-line and breakout storage tank(s) needed for continuous operation of the pipeline(s) used for handling or storing oil, in bulk, to or from the vessel. See definition in Appendix A, Sec. 5.2 (Change1)	
	Total:	(b) (7)(F)
Step 3	Calculate discharge from all piping carrying oil between the marine transfer manifold and non-transportation-related portion of the facility:	
	3(1) Enter maximum time to discover release from pipe:	
	3(2) Enter maximum time to shut down flow from pipe:	
	3(3) Total time to discover and shut down flow: Add steps 3(1) and Step 3(2)	
	3(4) Enter maximum flow rate:	
	3(5) Determine max discharge from pipe rupture: Multiply Step 3(3) by Step 3(4) [(Time in hours)(flow rate in bbls/hr)]	
Step 4	Calculate line drainage volume	
	4(1) Enter length of pipeline between marina manifold and non-transportation-related portion of facility:	
	4(2) Enter inside diameter of pipe in feet:	
	4(3) Determine area of pipe end in square feet [(Diameter/2) ² (π)]	
	4(4) Volume of pipe in gallons Multiply Step 4(1) by Step 4(3): Divide by 0.1337 ft ³ /gallon:	
	4(5) Determine Volume in barrels: Divide Step 4(4) by 42 gals/barrel	
Step 5	Total worst case spill Add: Step 2: Step 3(5): Step 4(5): Worst case discharge:	

APPENDIX B

40 CFR 112, Appendix E

Attachment E-1

**Worksheet to Plan Volume of Response Resources for Worst Case Discharge
Group 1 Oils**

Part I Background Information

Step A:	Calculate Worst Case Discharge in Barrels (Appendix D)		(b) (A)
Step B:	Oil Group 1 (Table 3 and Section 1.2 of this appendix)		1
Step C:	Operating Area (choose one):		
	X	Nearshore/Inland Great Lakes or Rivers and Canals	
Step D:	Percentage of Oil (Table 2 of this appendix)		
	Percent Lost to Natural Dissipation	Percent Recovered Floating Oil	Percent Oil Onshore
	80 (D1)	10 (D2)	10 (D3)
Step E1:	On-Water Oil Recovery	$\frac{\text{Step (D2)} \times \text{Step (A)}}{100}$	(b) (7)(F)
Step E2:	Shoreline Recovery	$\frac{\text{Step (D3)} \times \text{Step (A)}}{100}$	(E2)
Step F:	Emulsion Factor	(Table 3 of this Appendix)	1.0
Step G:	On-Water Oil Recovery Resource Mobilization Factor (Table 4 of this Appendix)		
	Tier 1	Tier 2	Tier 3
	0.30 (G1)	0.40 (G2)	0.60 (G3)

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

Tier 1	Tier 2	Tier 3
(b) (7)(F)		
Step (E1)		

Part III Shoreline Cleanup Volume (barrels)

Step (E2) x Step (F)

Part IV On-Water Response Capacity By Operating Area

(Table 5 of this Appendix)

(Amount needed to be contracted for in barrels/day)

Tier 1	Tier 2	Tier 3
1,875 (J1)	3,750 (J2)	7,500 (J3)

Part V On-Water Amount Needed to be Identified, but not Contracted for in Advance (barrels/day)

Tier 1	Tier 2	Tier 3
0	0	0
Part II Tier 1 – Step (J1)	Part II Tier 2 – Step (J2)	Part II Tier 3 – Step (J3)

Note: To convert from barrels/day to gallons/day, multiply the quantities in Parts 2 through 5 by 42 gallons/barrel.

APPENDIX B

Worksheet to Plan Volume of Response Resources for Worst Case Discharge Group 2 Oils

Part I Background Information

Step A:	Calculate Worst Case Discharge in Barrels (Appendix D)	(b) (A)									
Step B:	Oil Group 1 (Table 3 and Section 1.2 of this appendix)	2									
Step C:	Operating Area (choose one): <table border="1" style="display: inline-table; vertical-align: middle;"> <tr><td style="text-align: center;">X</td></tr> </table> Nearshore/Inland Great Lakes or Rivers and Canals	X									
X											
Step D:	Percentage of Oil (Table 2 of this appendix)										
	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 33%;">Percent Lost to Natural Dissipation</th> <th style="width: 33%;">Percent Recovered Floating Oil</th> <th style="width: 33%;">Percent Oil Onshore</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">40</td> <td style="text-align: center;">15</td> <td style="text-align: center;">45</td> </tr> <tr> <td style="text-align: center;">(D1)</td> <td style="text-align: center;">(D2)</td> <td style="text-align: center;">(D3)</td> </tr> </tbody> </table>	Percent Lost to Natural Dissipation	Percent Recovered Floating Oil	Percent Oil Onshore	40	15	45	(D1)	(D2)	(D3)	
Percent Lost to Natural Dissipation	Percent Recovered Floating Oil	Percent Oil Onshore									
40	15	45									
(D1)	(D2)	(D3)									
Step E1:	On-Water Oil Recovery $\frac{\text{Step (D2)} \times \text{Step (A)}}{100}$	(b) (7)(F)									
Step E2:	Shoreline Recovery $\frac{\text{Step (D3)} \times \text{Step (A)}}{100}$	(b) (7)(F)									
Step F:	Emulsion Factor (Table 3 of this Appendix)	1.8									
Step G:	On-Water Oil Recovery Resource Mobilization Factor (Table 4 of this Appendix)										
	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 33%;">Tier 1</th> <th style="width: 33%;">Tier 2</th> <th style="width: 33%;">Tier 3</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">0.30</td> <td style="text-align: center;">0.40</td> <td style="text-align: center;">0.60</td> </tr> <tr> <td style="text-align: center;">(G1)</td> <td style="text-align: center;">(G2)</td> <td style="text-align: center;">(G3)</td> </tr> </tbody> </table>	Tier 1	Tier 2	Tier 3	0.30	0.40	0.60	(G1)	(G2)	(G3)	
Tier 1	Tier 2	Tier 3									
0.30	0.40	0.60									
(G1)	(G2)	(G3)									

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

(b) (7)(F)	
Step (E1)	3)

Part III Shoreline Cleanup Volume (barrels)**Part IV On-Water Response Capacity By Operating Area**

(Table 5 of this Appendix)

(Amount needed to be contracted for in barrels/day)

Tier 1	Tier 2	Tier 3
1,875	3,750	7,500
(J1)	(J2)	(J3)

Part V On-Water Amount Needed to be Identified, but not Contracted for in Advance (barrels/day)

Tier 1	Tier 2	Tier 3
0	0	0
Part II Tier 1 – Step (J1)	Part II Tier 2 – Step (J2)	Part II Tier 3 – Step (J3)

Note: To convert from barrels/day to gallons/day, multiply the quantities in Parts 2 through 5 by 42 gallons/barrel.

APPENDIX B

Worksheet to Plan Volume of Response Resources for Worst Case Discharge Group 3 Oils

Part I Background Information

Step A:	Calculate Worst Case Discharge in Barrels (Appendix D)	(b) (7)(F)									
Step B:	Oil Group 1 (Table 3 and Section 1.2 of this appendix)	3									
Step C:	Operating Area (choose one):										
	<table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td style="width: 100px; height: 20px; text-align: center;">X</td> <td style="width: 150px; text-align: left; padding-left: 5px;">Nearshore/Inland Great Lakes or Rivers and Canals</td> </tr> </table>	X	Nearshore/Inland Great Lakes or Rivers and Canals								
X	Nearshore/Inland Great Lakes or Rivers and Canals										
Step D:	Percentage of Oil (Table 2 of this appendix)										
	<table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th style="width: 33%;">Percent Lost to Natural Dissipation</th> <th style="width: 33%;">Percent Recovered Floating Oil</th> <th style="width: 33%;">Percent Oil Onshore</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">20</td> <td style="text-align: center;">15</td> <td style="text-align: center;">65</td> </tr> <tr> <td style="text-align: center;">(D1)</td> <td style="text-align: center;">(D2)</td> <td style="text-align: center;">(D3)</td> </tr> </tbody> </table>	Percent Lost to Natural Dissipation	Percent Recovered Floating Oil	Percent Oil Onshore	20	15	65	(D1)	(D2)	(D3)	
Percent Lost to Natural Dissipation	Percent Recovered Floating Oil	Percent Oil Onshore									
20	15	65									
(D1)	(D2)	(D3)									
Step E1:	On-Water Oil Recovery	(b) (7)(F)									
	$\frac{\text{Step (D2)} \times \text{Step (A)}}{100}$										
Step E2:	Shoreline Recovery	(b) (7)(F)									
	$\frac{\text{Step (D3)} \times \text{Step (A)}}{100}$										
Step F:	Emulsion Factor (Table 3 of this Appendix)	2.0									
Step G:	On-Water Oil Recovery Resource Mobilization Factor (Table 4 of this Appendix)										
	<table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th style="width: 33%;">Tier 1</th> <th style="width: 33%;">Tier 2</th> <th style="width: 33%;">Tier 3</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">0.30</td> <td style="text-align: center;">0.40</td> <td style="text-align: center;">0.60</td> </tr> <tr> <td style="text-align: center;">(G1)</td> <td style="text-align: center;">(G2)</td> <td style="text-align: center;">(G3)</td> </tr> </tbody> </table>	Tier 1	Tier 2	Tier 3	0.30	0.40	0.60	(G1)	(G2)	(G3)	
Tier 1	Tier 2	Tier 3									
0.30	0.40	0.60									
(G1)	(G2)	(G3)									

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

Step (E1)	(b) (7)(F)	
		(G3)

Part III Shoreline Cleanup Volume (barrels)**Part IV On-Water Response Capacity By Operating Area**

(Table 5 of this Appendix)

(Amount needed to be contracted for in barrels/day)

Tier 1	Tier 2	Tier 3
1,875	3,750	7,500
(J1)	(J2)	(J3)

Part V On-Water Amount Needed to be Identified, but not Contracted for in Advance (barrels/day)

Tier 1	Tier 2	Tier 3
0	0	0
Part II Tier 1 – Step (J1)	Part II Tier 2 – Step (J2)	Part II Tier 3 – Step (J3)

Note: To convert from barrels/day to gallons/day, multiply the quantities in Parts 2 through 5 by 42 gallons/barrel.

APPENDIX B

USCG Tables

33 CFR 154, Appendix C

Table 1—Response Resource Operating Criteria Oil Recovery Devices

Operating environment	Significant wave height ¹	Sea State			
Rivers and Canals	≤1 Foot	1			
Inland	≤3 feet	2			
Great Lakes	≤4 feet	2–3			
Ocean	≤6 feet	3–4			

BOOM				
Boom property	Use			
	Rivers and canals	Inland	Great Lakes	Ocean
Significant Wave Height ¹	≤1	≤3	≤4	≤6
Sea State	1	2	2–3	3–4
Boom height—in. (draft plus freeboard)	6–18	18–42	18–42	≤42
Reserve Buoyancy to Weight Ratio	2:1	2:1	2:1	3:1 to 4:1
Total Tensile Strength—lbs.	4,500	15–20,000	15–20,000	≤20,000
Skirt Fabric Tensile Strength—lbs	200	300	300	500
Skirt Fabric Tear Strength—lbs	100	100	100	125

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

APPENDIX B

Table 2—Removal Capacity Planning Table

Spill location	Rivers and canals			Nearshore/inland Great Lakes			Offshore		
	3 Days			4 Days			6 Days		
Sustainability of on-water oil recovery	% Natural dissipation	% Recovered floating oil	% Oil on shore	% Natural dissipation	% Recovered floating oil	% Oil on shore	% Natural dissipation	% Recovered floating oil	% Oil on shore
1 Non-persistent oils	80	10	10	80	20	10	95	5	/
2 Light crudes	40	15	45	50	50	30	75	25	5
3 Medium crudes and fuels	20	15	65	30	50	50	60	40	20
4 Heavy crudes and fuels	5	20	75	10	50	70	50	40	30

Table 3—Emulsification Factors for Petroleum Oil Groups

Non-Persistent Oil:	
Group I	1.0
Persistent Oil:	
Group II	1.8
Group III	2.0
Group IV	1.4

<i>APPENDIX B</i>

Table 4—On Water Oil Recovery Resource Mobilization Factors

Operating Area	Tier 1	Tier 2	Tier 3
Rivers & Canals	.30	.40	.60
Inland/Nearshore/Great Lakes	.15	.25	.40
Offshore	.10	.165	.21

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

Table 5—Response Capability Caps by Operating Area

	Tier 1	Tier 2	Tier 3
February 18, 1993:			
All except rivers and canals, Great Lakes	10K bbls/day	20K bbls/day	40K bbls/day/
Great Lakes	5K bbls/day	10K bbls/day	20K bbls/day.
Rivers and canals	1,500 bbls/day	3,000 bbls/day	6,000 bbls/day.
February 18, 1998:			
All except rivers and canals, Great Lakes	12.5K bbls/day	25K bbls/day	50K bbls/day.
Great Lakes	6.25K bbls/day	12.3K bbls/day	25K bbls/day.
Rivers and canals	1,875 bbls/day	3,750 bbls/day	7,500 bbls/day.
February 18, 2003:			
All except rivers & canals & Great Lakes	12.5K bbls/day	25K bbls/day	50K bbls/day.
Great Lakes	6.25K bbls/day	12.3K bbls/day	25K bbls/day.
Rivers & canals	1,875 bbls/day	3,750 bbls/day	7,500 bbls/day.

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

TBD=To be determined.

<i>APPENDIX B</i>

49 CFR 149.105

United States Department of Transportation Worst Case Discharge Planning Calculation for Onshore Oil Pipelines

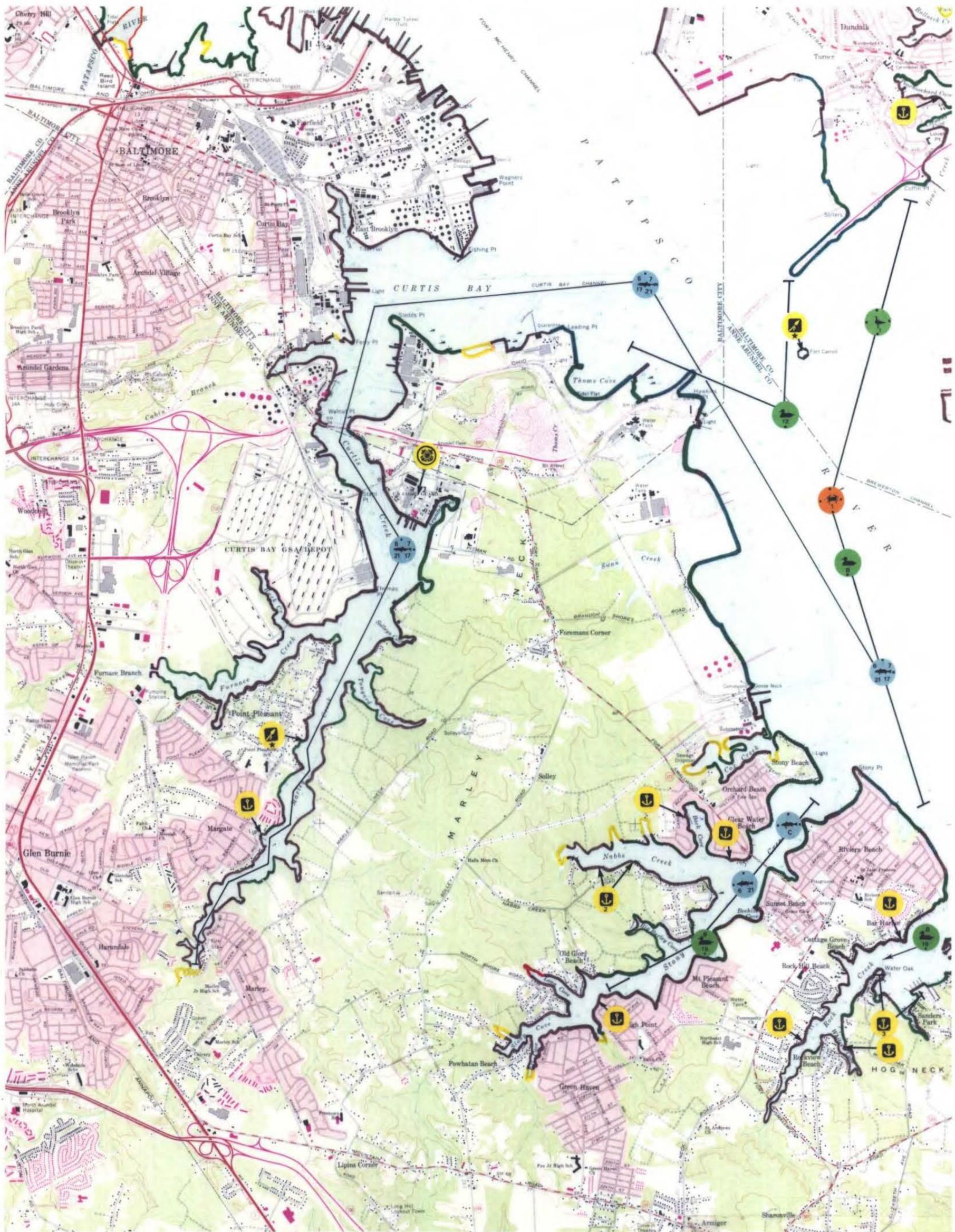
Criteria	Volume (bbls)
The worst case discharge is the largest volume, in barrels (cubic meters), of the following:	
(1) The pipeline's maximum release time in hours, plus the maximum shutdown response time in hours (based on historic discharge data or in the absence of such historic data, the operator's best estimate), multiplied by the maximum flow rate expressed in barrels per hour (based on the maximum daily capacity of the pipeline), plus the largest line drainage volume after shutdown of the line section(s) in the response zone expressed in barrels (cubic meters); or	(b) (7)(F)
(2) The largest foreseeable discharge for the line section(s) within a response zone, expressed in barrels (cubic meters), based on the maximum historic discharge, if one exists, adjusted for any subsequent corrective or preventive action taken; or	NA
(3) If the response zone contains one or more breakout tanks, the capacity of the single largest tank or battery of tanks within a single secondary containment system, adjusted for the capacity or size of the secondary containment system, expressed in barrels (cubic meters).	NA

Detailed Calculation for Pipeline Worst Case Discharge Volume	
1. The pipeline's maximum release time:	(b) (7)(F)
2. Maximum shutdown response time:	(b) (7)(F)
3. Total shutdown time (add 1 and 2):	(b) (7)(F)
4. Maximum flow rate:	(b) (7)(F)
5. Maximum release volume (multiply 3 and 4):	(b) (7)(F)
5. Largest line drainage volume after shutdown of the line section(s) in the response zone:	(b) (7)(F)
6. Worst case discharge volume (add 5 and 6):	(b) (7)(F)

APPENDIX C

ENVIRONMENTAL SENSITIVITY INDEX /
NAVIGATION CHARTS

ENVIRONMENTAL SENSITIVITY INDEX
UPPER CHESAPEAKE ESTUARY AREA



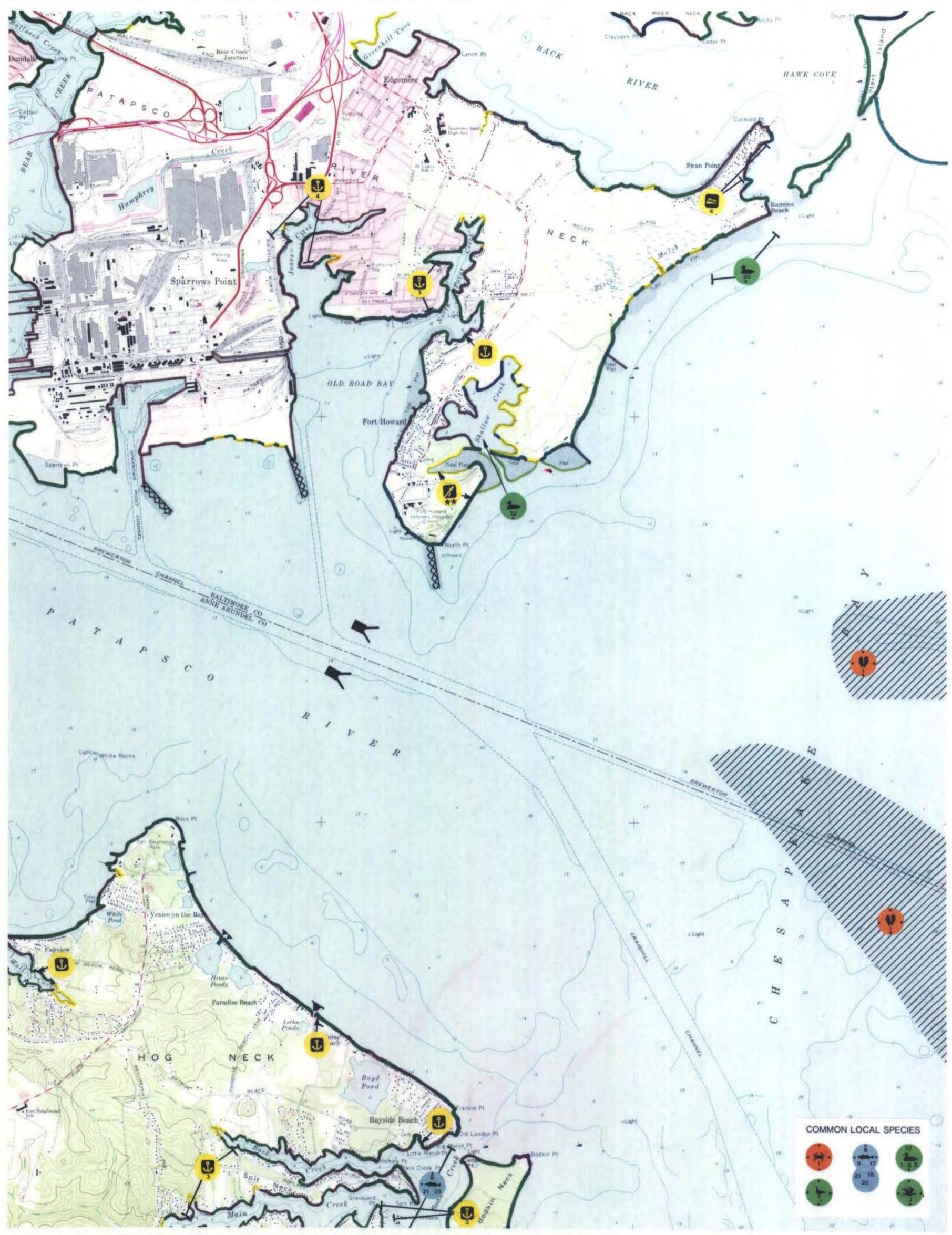
SOCIOECONOMIC FEATURES MAP LOCATION MARINAS BOAT RAMPS PARKS AND PUBLIC BEACHES SKIMMER LOCATION BOOM LOCATION CLOSURE BY INFILLING RESIDENTIAL BULKHEADING ARCHAEOLOGICAL SITE RESERVES, PRESERVES, REFUGES AND ECOLOGICAL AREAS COAST GUARD FACILITY STAGING AREA		ENVIRONMENTAL SENSITIVITY INDEX 1 SEAWALLS, PIERS, CONSOLIDATED SHORE AND WAVECUT PLATFORMS 2 EXPOSED FINE SAND BEACHES 3 SHELTERED FINE SAND BEACHES 4 COARSE SAND BEACHES 5 EXPOSED TIDAL FLATS 6 RIPRAP STRUCTURES 7 SUPRATIDAL MARSHES PARTIALLY PROTECTED BY ELEVATION 8 FRESH WATER MARSHES AND SWAMPS 9 SHELTERED TIDAL FLATS 10 FRINGING INTERTIDAL MARSHES 11 EXTENSIVE INTERTIDAL MARSHES		OIL SENSITIVE WILDLIFE RAPTORS WADING BIRDS DIVING BIRDS SHORE BIRDS WATERFOWL GULLS AND TERNS OYSTERS CLAMS CRABS SHRIMP TURTLES ANADROMOUS AND ESTUARINE FISH NURSERY THREATENED OR ENDANGERED SPECIES SUBMERGED AQUATIC VEGETATION SHELLFISH BEDS		KEY TO WILDLIFE MARKERS COLOR - TYPE OF ORGANISM SYMBOL - ECOLOGICAL TYPE DOT - SEASONS NUMBER - SPECIES SUMMER (JJA) SPRING (JJA) WINTER (DJF) FALL (SON) POINT LOCALITY RANGE AREA	
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ESI MAP NUMBER 45

Funded By:
 Hazardous Materials Response Project
 National Oceanic and Atmospheric Administration
 Seattle, Washington
 for the specific purpose of Oil Spill Response

Prepared By:
 College of William and Mary
 Virginia Institute of Marine Science
 Gloucester Point, Virginia
 23062

N



COMMON LOCAL SPECIES

SOCIOECONOMIC FEATURES

ENVIRONMENTAL SENSITIVITY INDEX

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OIL SENSITIVE WILDLIFE

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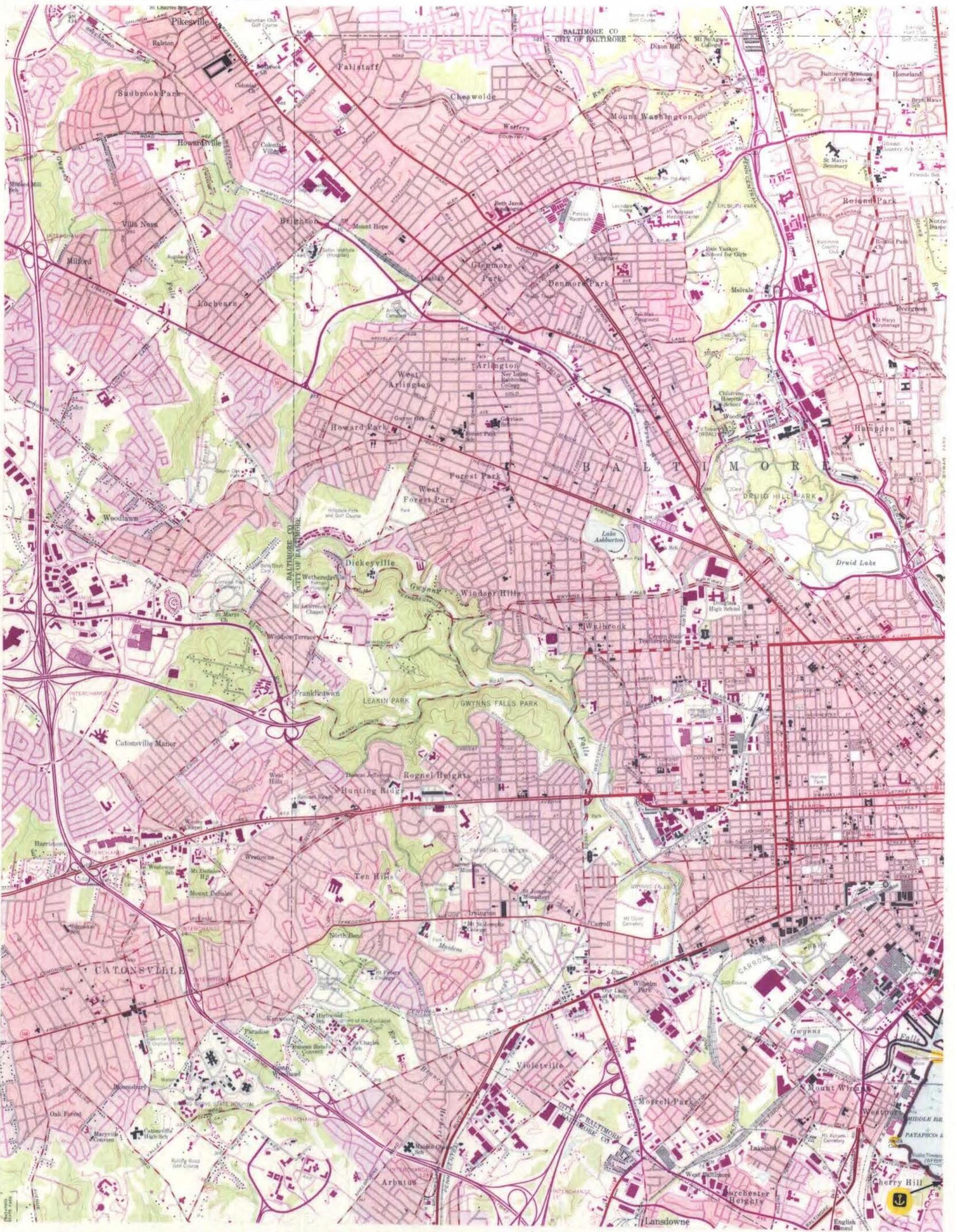
KEY TO WILDLIFE MARKERS

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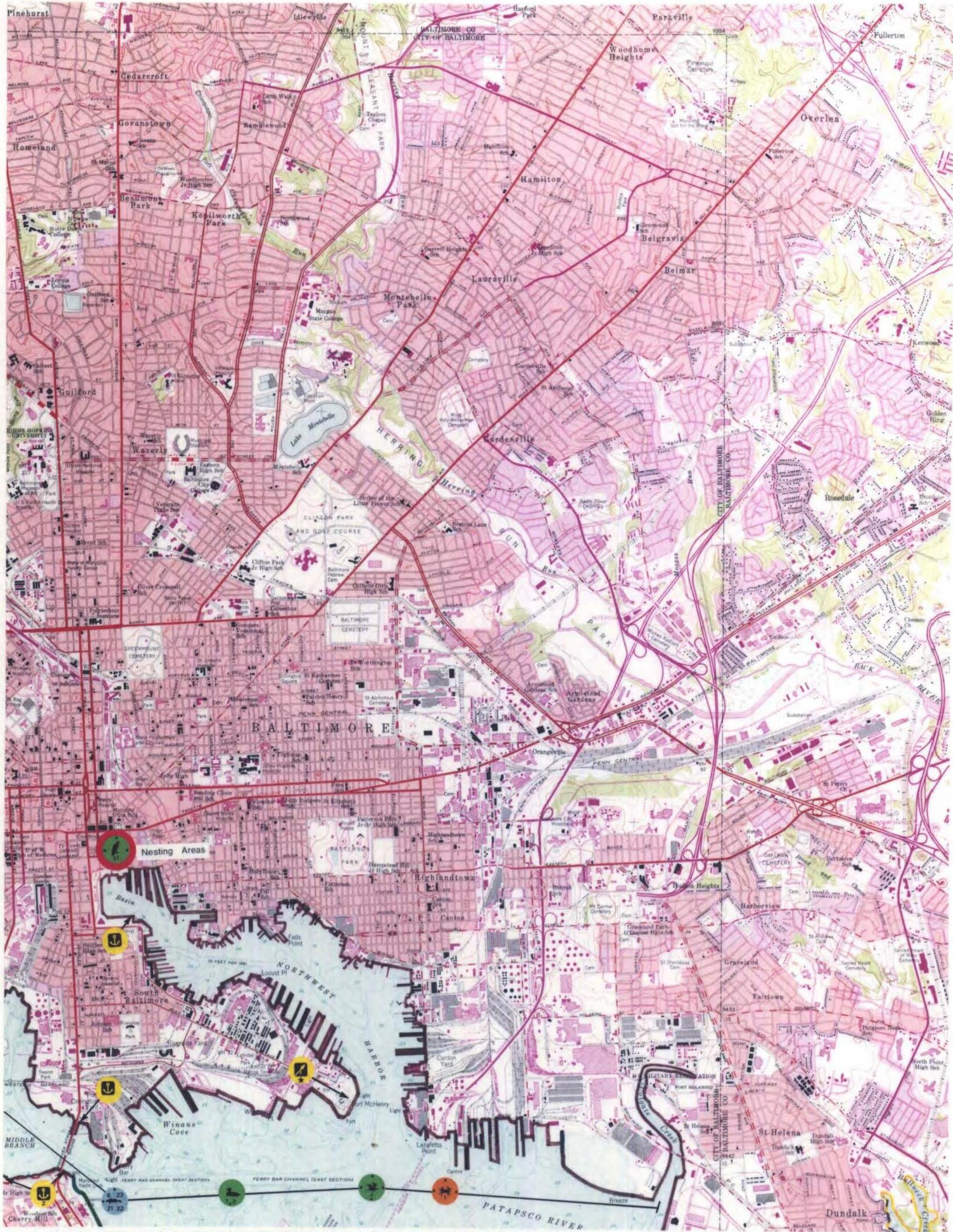
ESI MAP NUMBER 46

Funded By:
 Hazardous Materials Response Project
 National Oceanic and Atmospheric Administration
 Seattle, Washington

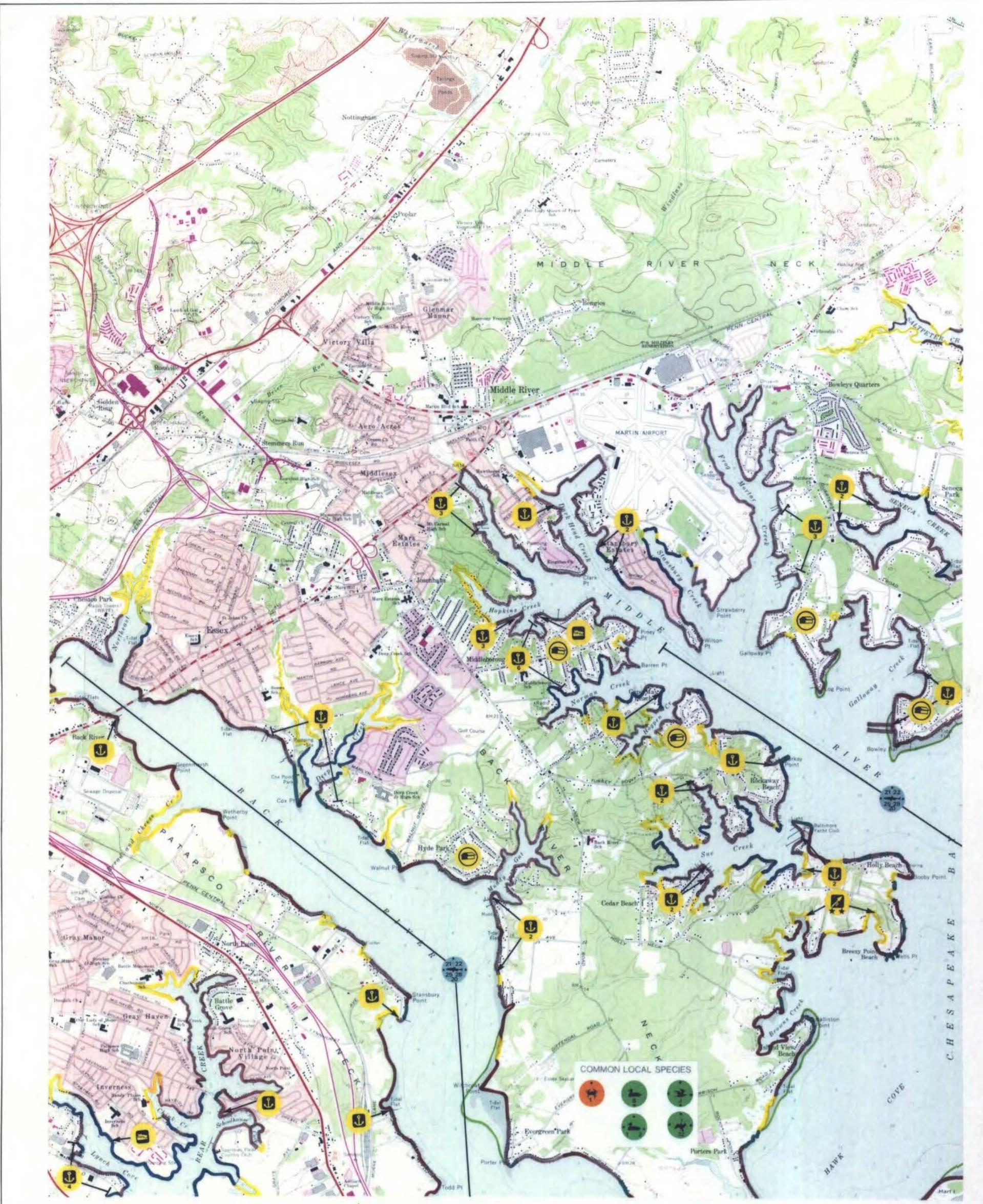
Prepared By:
 College of William and Mary
 Virginia Institute of Marine Science
 Gloucester Point, Virginia
 23062



SOCIOECONOMIC FEATURES MAP LOCATION MARINAS BOAT RAMPS PARKS AND PUBLIC BEACHES PROTECTION METHODS SKIMMER LOCATION BOOM LOCATION CLOSURE BY INFILLING RESIDENTIAL BULKHEADING ARCHAEOLOGICAL SITE RESERVES, PRESERVES, REFUGES AND ECOLOGICAL AREAS COAST GUARD FACILITY STAGING AREA		ENVIRONMENTAL SENSITIVITY INDEX 1 SEAWALLS, PIERS, CONSOLIDATED SHORE AND WAVECUT PLATFORMS 2 EXPOSED FINE SAND BEACHES 3 SHELTERED FINE SAND BEACHES 4 COARSE SAND BEACHES 5 EXPOSED TIDAL FLATS 6 RIPRAP STRUCTURES 7 SUPRATIDAL MARSHES PARTIALLY PROTECTED BY ELEVATION 8 FRESH WATER MARSHES AND SWAMPS 9 SHELTERED TIDAL FLATS 10 FRINGING INTERTIDAL MARSHES 11 EXTENSIVE INTERTIDAL MARSHES		OIL SENSITIVE WILDLIFE RAPTORS WADING BIRDS DIVING BIRDS SHORE BIRDS WATERFOWL GULLS AND TERNS OYSTERS CLAMS CRABS SHRIMP TURTLES ANADROMOUS AND ESTUARINE FISH NURSERY THREATENED OR ENDANGERED SPECIES SUBMERGED AQUATIC VEGETATION SHELLFISH BEDS		KEY TO WILDLIFE MARKERS COLOR = TYPE OF ORGANISM SYMBOL = ECOLOGICAL TYPE DOT = SEASONS NUMBER = SPECIES SPRING (JJA) WINTER (DJF) SUMMER (JJA) FALL (SON) POINT LOCALITY RANGE AREA	
		ESI MAP NUMBER 47		Funded By: Hazardous Materials Response Project National Oceanic and Atmospheric Administration Seattle, Washington Prepared By: College of William and Mary Virginia Institute of Marine Science Gloucester Point, Virginia 23062			



SOCIOECONOMIC FEATURES <ul style="list-style-type: none"> MARINAS BOAT RAMPS PARKS AND PUBLIC BEACHES RESIDENTIAL BULKHEADING ARCHAEOLOGICAL SITE RESERVES, PRESERVES, REFUGES AND ECOLOGICAL AREAS 		ENVIRONMENTAL SENSITIVITY INDEX <ul style="list-style-type: none"> 1 SEAWALLS, PIERS, CONSOLIDATED SHORE AND WAVECUT PLATFORMS 2 EXPOSED FINE SAND BEACHES 3 SHELTERED FINE SAND BEACHES 4 COARSE SAND BEACHES 5 EXPOSED TIDAL FLATS 6 RIPRAP STRUCTURES 7 SUPRATIDAL MARSHES PARTIALLY PROTECTED BY ELEVATION 8 FRESH WATER MARSHES AND SWAMPS 9 SHELTERED TIDAL FLATS 10 FRINGING INTERTIDAL MARSHES 11 EXTENSIVE INTERTIDAL MARSHES 		OIL SENSITIVE WILDLIFE <ul style="list-style-type: none"> RAPTORS WADING BIRDS DIVING BIRDS SHORE BIRDS WATERFOWL GULLS AND TERNS OYSTERS CLAMS CRABS SHRIMP TURTLES ANADROMOUS AND ESTUARINE FISH NURSERY 		KEY TO WILDLIFE MARKERS <ul style="list-style-type: none"> COLOR - TYPE OF ORGANISM SYMBOL - ECOLOGICAL TYPE DOT - SEASONS NUMBER - SPECIES THREATENED OR ENDANGERED SPECIES SUBMERGED AQUATIC VEGETATION SHELLFISH BEDS POINT LOCALITY RANGE AREA 	
PROTECTION METHODS <ul style="list-style-type: none"> SKIMMER LOCATION BOOM LOCATION CLOSURE BY INFILLING COAST GUARD FACILITY STAGING AREA 				ESIMAP NUMBER 48 <p>Funded By: Hazardous Materials Response Project National Oceanic and Atmospheric Administration Seattle, Washington for the specific purpose of Oil Spill Response.</p> <p>Prepared By: College of William and Mary Virginia Institute of Marine Science Gloucester Point, Virginia 23062</p>			



<p>MAP LOCATION</p>	<p>SOCIOECONOMIC FEATURES</p> <ul style="list-style-type: none"> MARINAS BOAT RAMPS PARKS AND PUBLIC BEACHES RESIDENTIAL BULKHEADING ARCHAEOLOGICAL SITE RESERVES, PRESERVES, REFUGES AND ECOLOGICAL AREAS 	<p>ENVIRONMENTAL SENSITIVITY INDEX</p> <ol style="list-style-type: none"> SEAWALLS, PIERS, CONSOLIDATED SHORE AND WAYCUT PLATFORMS EXPOSED FINE SAND BEACHES SHELTERED FINE SAND BEACHES COARSE SAND BEACHES EXPOSED TIDAL FLATS RIPRAP STRUCTURES SUPRATIDAL MARSHES PARTIALLY PROTECTED BY ELEVATION FRESH WATER MARSHES AND SWAMPS SHELTERED TIDAL FLATS FRINGING INTERTIDAL MARSHES EXTENSIVE INTERTIDAL MARSHES 	<p>OIL SENSITIVE WILDLIFE</p> <ul style="list-style-type: none"> RAPTORS WADING BIRDS DIVING BIRDS SHORE BIRDS WATERFOWL GULLS AND TERNS OYSTERS CLAMS CRABS SHRIMP TURTLES ANADROMOUS AND ESTUARINE FISH NURSERY THREATENED OR ENDANGERED SPECIES SUBMERGED AQUATIC VEGETATION SHELLFISH BEDS 	<p>KEY TO WILDLIFE MARKERS</p> <p>COLOR = TYPE OF ORGANISM SYMBOL = ECOLOGICAL TYPE DOT = SEASONS NUMBER = SPECIES</p> <p>SUMMER (JJJA) SPRING (MAM) FALL (SON) WINTER (DJFI)</p> <p>POINT LOCALITY RANGE AREA</p>
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ESI MAP NUMBER 49

Funded By: Hazardous Materials Response Project, National Oceanic and Atmospheric Administration, Seattle, Washington for the specific purpose of Oil Spill Response

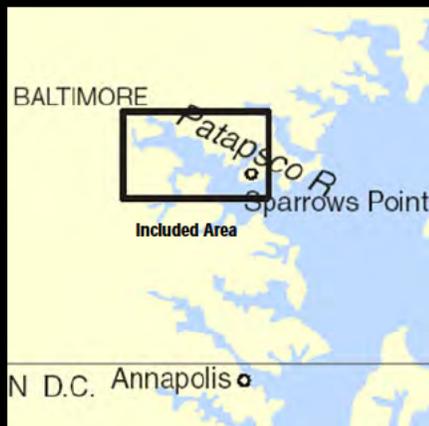
Prepared By: College of William and Mary, Virginia Institute of Marine Science, Gloucester Point, Virginia 23062

NAVIGATION CHARTS
BALTIMORE HARBOR

BookletChartTM

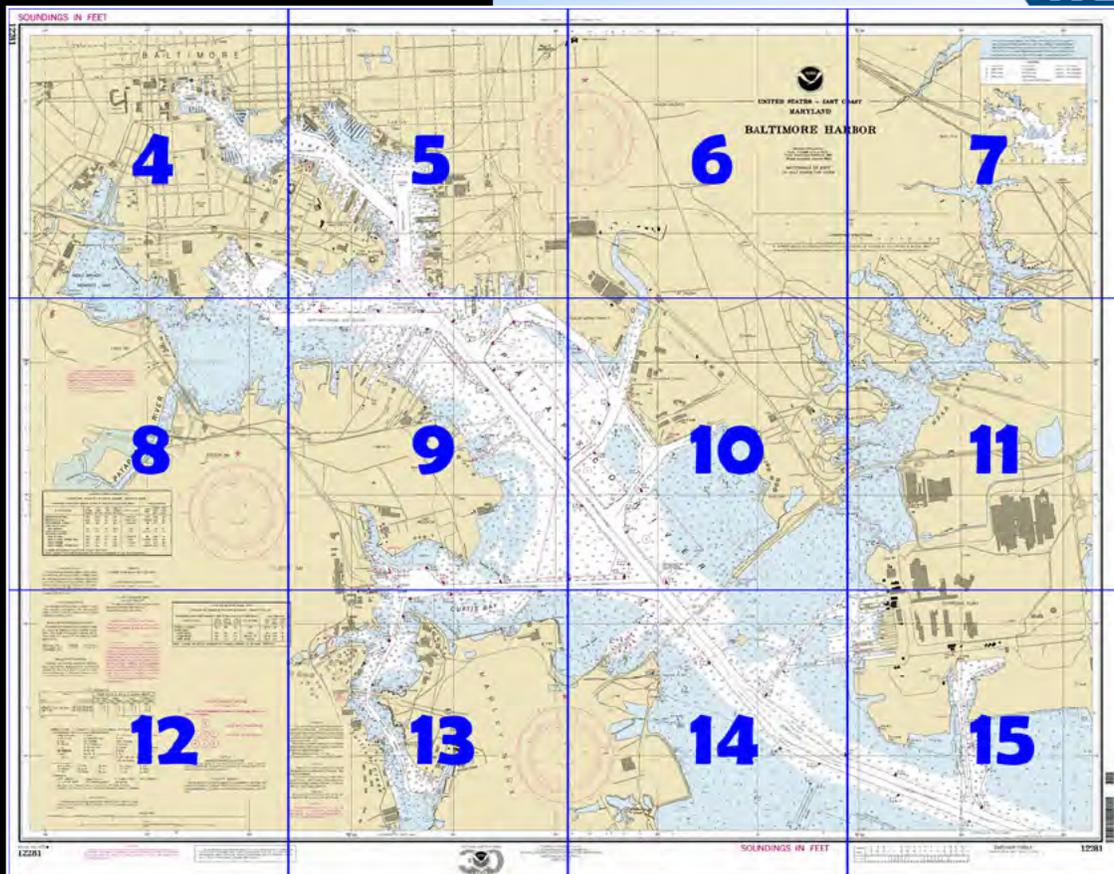
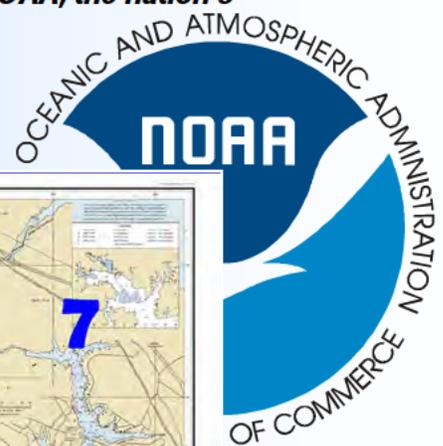
Baltimore Harbor

(NOAA Chart 12281)

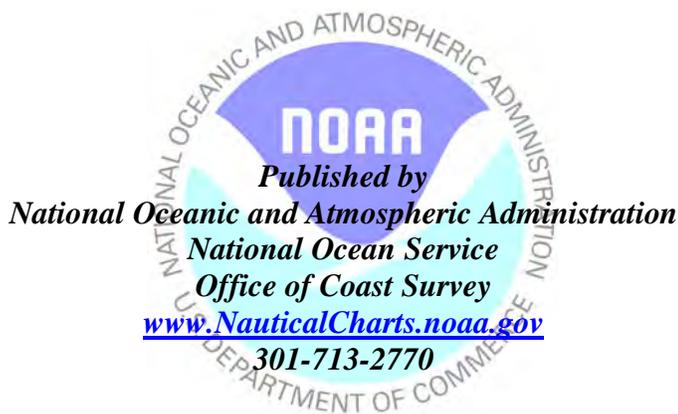


A reduced scale NOAA nautical chart for small boaters. When possible, use the full size NOAA chart for navigation.

- Complete, reduced scale nautical chart**
- Print at home for free**
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- Up to date with all Notices to Mariners**
- United States Coast Pilot excerpts**
- Compiled by NOAA, the nation's chartmaker.**



Home Edition (not for resale)



What are Nautical Charts?

Nautical charts are a fundamental tool of marine navigation. They show water depths, obstructions, buoys, other aids to navigation, and much more. The information is shown in a way that promotes safe and efficient navigation. Chart carriage is mandatory on the commercial ships that carry America's commerce. They are also used on every Navy and Coast Guard ship, fishing and passenger vessels, and are widely carried by recreational boaters.

What is a BookletChart™?

This BookletChart is made to help recreational boaters locate themselves on the water. It has been reduced in scale for convenience, but otherwise contains all the information of the full-scale nautical chart. The bar scales have also been reduced, and are accurate when used to measure distances in this BookletChart. Whenever possible, use the official, full scale NOAA nautical chart for navigation. Nautical chart sales agents are listed at: <http://www.NauticalCharts.noaa.gov>.

The charts and bar scales in this BookletChart have been reduced to **75%** of original scale, and are printed at the new scale of **1:106,667**.

This BookletChart does NOT fulfill chart carriage requirements for regulated commercial vessels under Titles 33 and 44 of the Code of Federal Regulations.

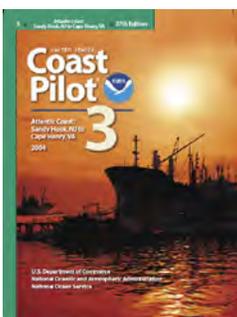
Notice to Mariners Correction Status

This BookletChart has been updated for all chart corrections published in the U.S. Coast Guard Local Notice to Mariners, the National Geospatial Intelligence Agency (formerly NIMA) Weekly Notice to Mariners, and, where applicable, the Canadian Coast Guard Notice to Mariners. Additional chart corrections have been made by NOAA in advance of their publication in a Notice to Mariners. The last Notices to Mariners applied were:

Coast Guard Local Notice to Mariners: **27/05 dated July 5, 2005**

NGA Weekly Notice to Mariners: **28/05 dated July 9, 2005**

Canadian Coast Guard Notice to Mariners: **Not Applicable**



[Coast Pilot 3, Chapter 15 excerpts]

(33) Currents in the harbor are 0.8 knot on the flood and ebb. In May 1981, strong currents were reported in the vicinity of Fort Carroll and Brewerton Angle on the change of tides. (123) **Bear Creek** has channel depths of 8 feet or more almost to the head. Rocks, covered 2 feet and marked by a daybeacon, are 550 yards southeast of Sollers Point. Numerous piles and obstructions are in the entrance to the creek between Coffin Point and Lloyd Point.

(124) **Peachorchard Cove** has depths of 7 feet for 0.4 mile to within 0.1 mile of its head.

(125) The railroad bridge 0.9 mile above the fixed bridge has clearance of 8 feet.

(126) **Lynch Cove** has general midchannel depths of 8 feet or more for 0.6 mile, thence shoaling to 1 foot to the head 0.8 mile above the entrance.

(127) There are small-craft facilities in Lynch Cove.

(128) **Schoolhouse Cove** has depths of 7 feet to near the head. A yacht club is on the east side of Bear Creek below Schoolhouse Cove.

(129) The bridge over Bear Creek above Schoolhouse Cove a clearance of 12 feet.

(130) A 6 m.p.h. **speed limit** is enforced in Bear Creek above Lynch Cove on Saturdays, Sundays, and holidays.

(132) **Hawkins Point**. There are many obstructions surrounding the point. A dredged and marked 33-foot channel leads to a 720-foot-long cargo pier 0.4 mile northwestward of the point.

(137) **Curtis Creek**. The creek is buoyed at critical points. 17 feet could be carried at midchannel to Arundel Cove.

(138) **Cabin Branch** has depths of 17 feet or more to within 0.1 mile of a fixed bridge 0.4 mile above the entrance.

(142) **Arundel Cove**. The Coast Guard yard is on the north side of the cove. A highway bridge 0.4 mile above the entrance to the cove has a clearance of 6 feet.

(143) A depth of 13 feet can be carried up Curtis Creek from Arundel Cove to the forks 2.3 miles above the entrance. **Furnace Creek**, the west fork had depths of 11 feet or more for 0.8 mile, then shoals gradually to 4 feet at the highway bridge 0.4 mile farther up; the bridge has a clearance of 8 feet. **Marley Creek**, the middle fork had a controlling depth of 5 feet for 1.6 miles, thence 3½ feet to the fixed bridge 0.4 mile farther up; the bridge has a clearance of 9 feet.

(147) **Colgate Creek** has a controlling depth of 2 feet. A depth of 24 feet can be carried to the Western Electric Wharf by using Dundalk West Channel.

(148) The highway bridge 0.3 mile above the entrance has a clearance of 8 feet. The railroad bridge 0.8 mile above the entrance has a clearance of 5 feet; the swing span is inoperative and remains in a closed position.

(156) Depths of 5 to 8 feet are at the outer ends of piers at the boatyards northwest of Ferry Bar. Gasoline, diesel fuel, slips, and marine supplies are available.

(164) **Inner Harbor** has a marina on the south side with depths of 12 feet or more at the slips. Berths, electricity, gasoline, diesel fuel and some marine supplies are available.

(165) A 6-knot **speed limit** is enforced in Inner Harbor.

Boating in Commercial Harbors

When boating in commercial harbors where big ships and tugs operate, remember:

- Be cautious around commercial cargo piers. Ships, tugs or barges may be maneuvering in the vicinity and sudden propeller wash or wakes from these vessels can be extremely dangerous to small craft.
- Stay out of the main ship channel if your draft permits.
- Designate someone on your boat to keep watch for ship movements.
- Don't pass close to ships leaving piers – you don't know what's on the other side of them, and their turbulence can cause you problems
- Don't forget harbor speed limits – you're responsible for your wake.

Red and Green Buoys

You should usually keep to the right side of a channel just as in driving a car. Channels are defined by the **red** and **green** buoys or day markers on either side. When coming into a restricted area or smaller body of water (returning from sea) **red** buoys and day markers should be kept on your right (starboard) side and **green** markers on your left (port) side. Reverse this when leaving the lesser body of water and returning to sea.

Table of Chart Notes

Corrected through NM Nov. 20/04
Corrected through LNM Nov. 9/04

HEIGHTS

Heights in feet above Mean High Water.

SUPPLEMENTAL INFORMATION

Consult U.S. Coast Pilot 3 for important supplemental information.

RADAR REFLECTORS

Radar reflectors have been placed on many floating aids to navigation. Individual radar reflector identification on these aids has been omitted from this chart.

PLANE COORDINATE GRID

(based on NAD 1927)

The Maryland State Grid is indicated on this chart at 10,000 foot intervals thus: $\begin{matrix} - & + \\ + & - \end{matrix}$
The last three digits are omitted.

NOAA WEATHER RADIO BROADCASTS

The NOAA Weather Radio stations listed below provide continuous weather broadcasts. The reception range is typically 20 to 40 nautical miles from the antenna site, but can be as much as 100 nautical miles for stations at high elevations.

Baltimore, MD	KEC-83	162.40 MHz
Sudlersville, MD	WXX-97	162.50 MHz
Washington, DC	KHB-36	162.55 MHz
(Manassas, VA)		

SMALL CRAFT WARNINGS

During the boating season small-craft warnings will be displayed from sunrise to sunset on Maryland Marine Police Cruisers while underway in Maryland waters of the Chesapeake Bay and tributaries.

HORIZONTAL DATUM

The horizontal reference datum of this chart is North American Datum of 1983 (NAD 83), which for charting purposes is considered equivalent to the World Geodetic System 1984 (WGS 84). Geographic positions referred to the North American Datum of 1927 must be corrected an average of 0.387' northward and 1.128' eastward to agree with this chart.

CAUTION

Improved channels shown by broken lines are subject to shoaling, particularly at the edges.

CAUTION

Temporary changes or defects in aids to navigation are not indicated on this chart. See Local Notice to Mariners.

During some winter months or when endangered by ice, certain aids to navigation are replaced by other types or removed. For details see U.S. Coast Guard Light List.

CAUTION

SUBMARINE PIPELINES AND CABLES

Charted submarine pipelines and submarine cables and submarine pipeline and cable areas are shown as:



Additional (uncharted) submarine pipelines and submarine cables may exist within the area of this chart. Not all submarine pipelines and submarine cables are required to be buried, and those that were originally buried may have become exposed. Mariners should use extreme caution when operating vessels in depths of water comparable to their draft in areas where pipelines and cables may exist, and when anchoring, dragging, or trawling.

Covered wells may be marked by lighted or unlighted buoys.

WARNING

The prudent mariner will not rely solely on any single aid to navigation, particularly on floating aids. See U.S. Coast Guard Light List and U.S. Coast Pilot for details.

CAUTION

Limitations on the use of radio signals as aids to marine navigation can be found in the U.S. Coast Guard Light Lists and National Geospatial-Intelligence Agency Publication 117. Radio direction-finder bearings to commercial broadcasting stations are subject to error and should be used with caution.
Station positions are shown thus:
⊙ (Accurate location) ⊙ (Approximate location)

ACKNOWLEDGMENT

The National Ocean Service acknowledges the exceptional cooperation received from members of the Patapsco River Power Squadron, District 5, United States Power Squadrons, for continually providing essential information for revising this chart.

NOTE A

Navigation regulations are published in Chapter 2, U.S. Coast Pilot 3. Additions or revisions to Chapter 2 are published in the Notice to Mariners. Information concerning the regulations may be obtained at the Office of the Commander, 6th Coast Guard District in Portsmouth, Virginia or at the Office of the District Engineer, Corps of Engineers in Baltimore, Maryland.
Refer to charted regular or section numbers.

ANCHORAGE AREAS

110.158 (see note A)

Limits and assigned numbers of anchorage areas are shown in this diagram.



GENERAL ANCHORAGES

DEAD SHIP ANCHORAGE

Additional information can be obtained at nauticalcharts.noaa.gov.

SOURCE DIAGRAM

The outlined areas represent the limits of the most recent hydrographic survey information that has been evaluated for charting. Surveys have been banded in this diagram by date and type of survey. Channels maintained by the U.S. Army Corps of Engineers are periodically resurveyed and are not shown on this diagram. Refer to Chapter 1, United States Coast Pilot.

POLLUTION REPORTS

Report all spills of oil and hazardous substances to the National Response Center via 1-800-424-8802 (toll free), or to the nearest U.S. Coast Guard facility if telephone communication is impossible (33 CFR 153).

CAUTION

BASCULE BRIDGE CLEARANCES

For bascule bridges whose spans do not open to a full upright or vertical position, unlimited vertical clearance is not available for the entire charted horizontal clearance.

AUTHORITIES

Hydrography and topography by the National Ocean Service, Coast Survey, with additional data from the Corps of Engineers and U.S. Coast Guard.

CAUTION

This chart has been corrected from the Notice to Mariners (NM) published weekly by the National Geospatial-Intelligence Agency and the Local Notice to Mariners (LNM) issued periodically by each U.S. Coast Guard district to the dates shown in the lower left hand corner.

This nautical chart has been designed to promote safe navigation. The National Ocean Service encourages users to submit corrections, additions, or comments for improving this chart to the Chief, Marine Chart Division (N/CSD), National Ocean Service, NOAA, Silver Spring, Maryland 20910-3282.

ABBREVIATIONS (For complete list of Symbols and Abbreviations, see Chart No. 1.)

AERO aeronautical	G green	Mo morse code	R TR radio tower
A alternating	IO interrupted quick	N nun	Rot rotating
B black	iso isophase	OBSC obscured	s seconds
Bn beacon	LT HO lighthouse	Oc occulting	SEC sector
C can	M nautical mile	Or orange	St M statute miles
DIA diaphone	m minutes	Q quick	VO very quick
F fixed	MICRO TR microwave tower	R red	W white
Fl flashing	Mkr marker	Ra Rn radar reflector	WHIS whistle
		Rn Rn radiobeacon	Y yellow

Bottom characteristics:

Bld boulders	Co coral	gy gray	Oys oysters	sc scif
bk broken	G gravel	h hard	Rk rock	Sh shells
Cy clay	Gs grass	M mud	S sand	sy sticky

Miscellaneous:

AUTH authorized	Obstr obstruction	PD position doubtful	Subm submerged
ED existence doubtful	PA position approximate	Rep reported	
Wreck rock, obstruction, or shoal swept clear to the depth indicated.			
(2) Rocks that cover and uncover, with heights in feet above datum of soundings.			

TIDAL INFORMATION

Name	Place (LAT/LONG)	Height referred to datum of soundings (MLLW)			
		Mean High Water	Mean High Water	Mean Low Water	Extreme Low Water
		feet	feet	feet	feet
Fort Carroll	(39°13'N/76°31'W)	1.6	1.3	0.2	-5.0
Baltimore, Fort McHenry	(39°16'N/76°35'W)	1.7	1.4	0.2	-5.0
Fells Point	(39°17'N/76°35'W)	1.8	1.5	0.3	-5.0

(Oct 2003)

CURTIS BAY AND CREEK CHANNEL DEPTHS

TABULATED FROM SURVEYS BY THE CORPS OF ENGINEERS - SURVEYS TO NOV 2000

NAME OF CHANNEL	CONTROLLING DEPTHS FROM SEAWARD IN FEET AT MEAN LOWER LOW WATER (MLLW)			DATE OF SURVEY	PROJECT DIMENSIONS		
	LEFT OUTSIDE QUARTER	MIDDLE CHANNEL	RIGHT OUTSIDE QUARTER		WIDTH (FEET)	LENGTH (MILES)	DEPTH (FEET)
CURTIS BAY CHANNEL	48.7	49.9	48.2	11-00	400-1275	1.96	50
CURTIS CREEK							
LOWER REACH	34.4	35.8	35.3	11-00	200	0.54	35
MIDDLE REACH	19.3	20.7	17.8	8-99; 7-11-00	200-380	1.09	22
UPPER REACH	18.4	17.0	18.5	8-99; 8-00	200-100	0.55	22

NOTE - CONSULT THE CORPS OF ENGINEERS FOR CHANGES SUBSEQUENT TO THE ABOVE INFORMATION

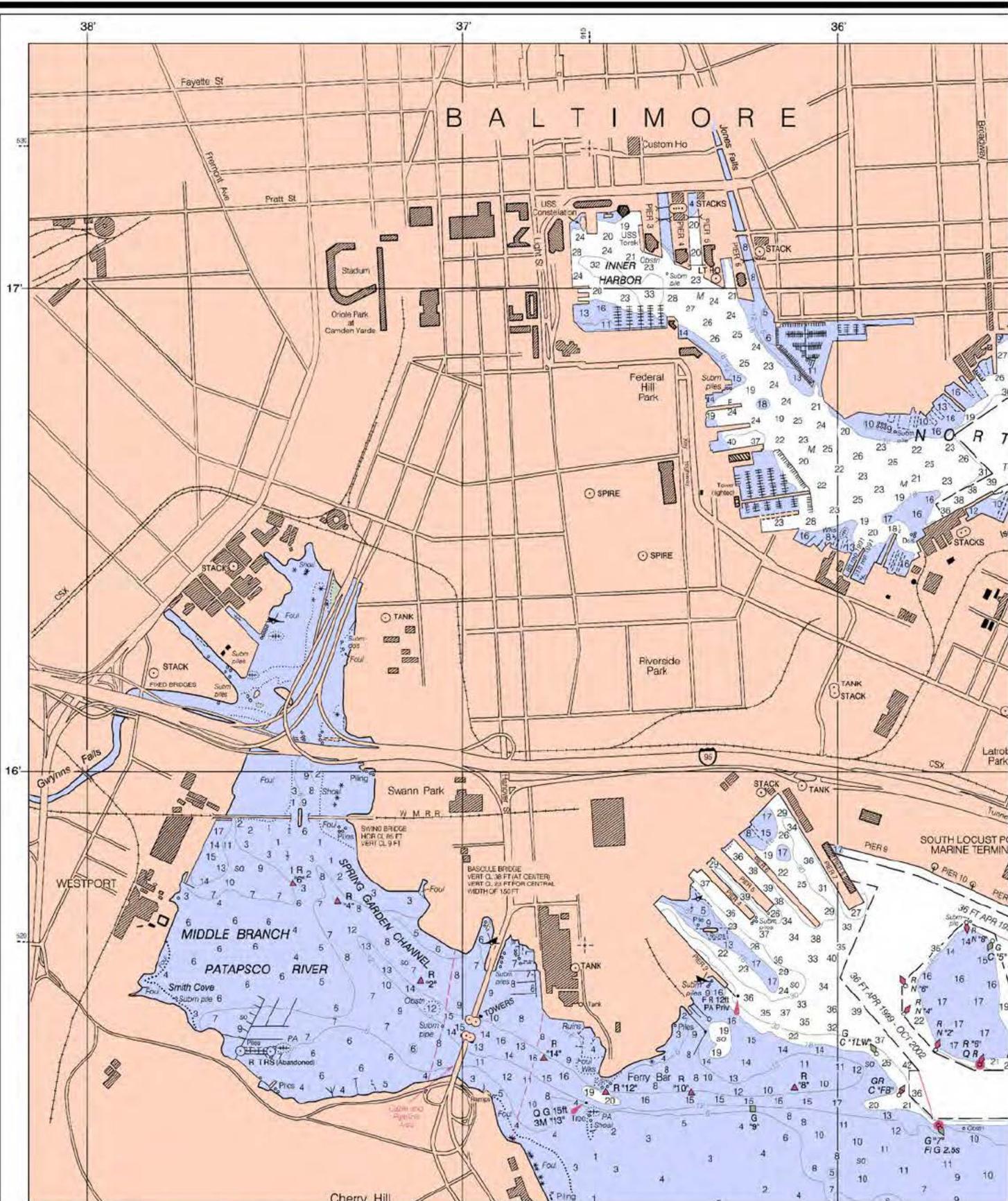
BALTIMORE HARBOR CHANNEL DEPTHS

TABULATED FROM SURVEYS BY THE CORPS OF ENGINEERS - SURVEYS TO AUG 2003

NAME OF CHANNEL	CONTROLLING DEPTHS FROM SEAWARD IN FEET AT MEAN LOWER LOW WATER (MLLW)				DATE OF SURVEY	PROJECT DIMENSIONS		
	LEFT OUTSIDE QUARTER	LEFT INSIDE QUARTER	RIGHT INSIDE QUARTER	RIGHT OUTSIDE QUARTER		WIDTH (FEET)	LENGTH (MILES)	DEPTH (FEET)
BREWERTON CHANNEL	48.2	50.8	50.5	48.7	8-00; 1-01	700	3.08	30
BREWERTON ANGLE	447.5	50.1	49.4	48.4	15-00; 1-2-01	700-1460	0.79	30
FORT MCHENRY CHANNEL	47.4	50.0	50.3	50.3	4-8-93	700	3.77	30
TURNING BASIN								
FERRY BAR CHANNEL	50.0	50.0	49.0	50.6	8-03	1200	0.20	30
EAST SECTION	34.2	35.5	35.3	35.1	15-00; 0-5-00	600	1.55	42
CURTIS BAY CHANNEL	48.7	49.9	49.9	48.2	11-00	400-1275	1.96	50
NORTHWEST HARBOR								
EAST CHANNEL	43.1	45.5	45.5	44.0	3-4-83	600	0.98	48
EAST CHANNEL TURNING BASIN	44.4	48.2	48.5	46.1	3-03	800-950	0.16	40
WEST CHANNEL	38.0	40.3	40.1	37.2	11-12-00; 3-03	600	0.57	40
WEST CHANNEL TURNING BASIN	38.5	38.2	37.1	37.0	11-00	600-1068	0.28	40

A. EXCEPT FOR SHOALING TO 34.4 FT AT 39°12'16.8" N 76°31'03.1" W
B. EXCEPT FOR SHOALING TO 34.0 FT AT 39°15'20.9" N 76°35'48.9" W
NOTE - CONSULT THE CORPS OF ENGINEERS FOR CHANGES SUBSEQUENT TO THE ABOVE INFORMATION

12281



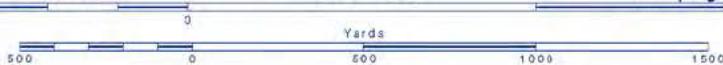
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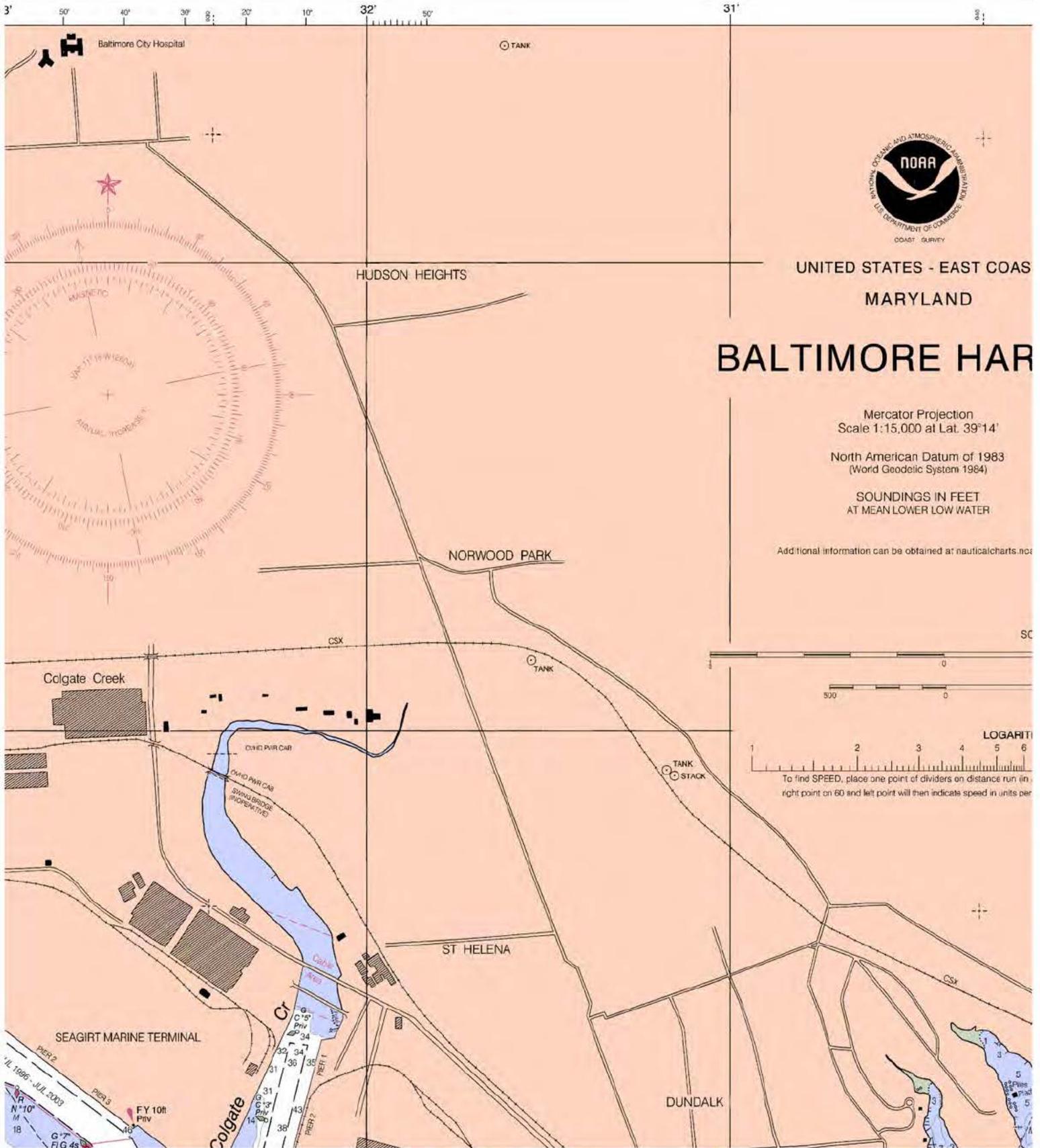


Printed at reduced scale

SCALE 1:15,000

See page 2





UNITED STATES - EAST COAST
MARYLAND

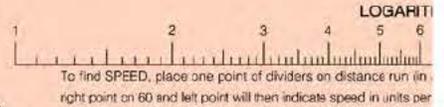
BALTIMORE HARBOR

Mercator Projection
Scale 1:15,000 at Lat. 39°14'

North American Datum of 1983
(World Geodetic System 1984)

SOUNDINGS IN FEET
AT MEAN LOWER LOW WATER

Additional information can be obtained at: nauticalcharts.noaa.gov



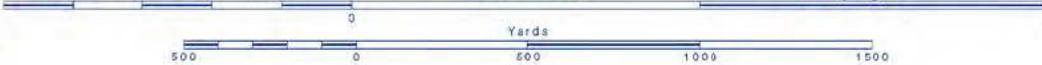
6

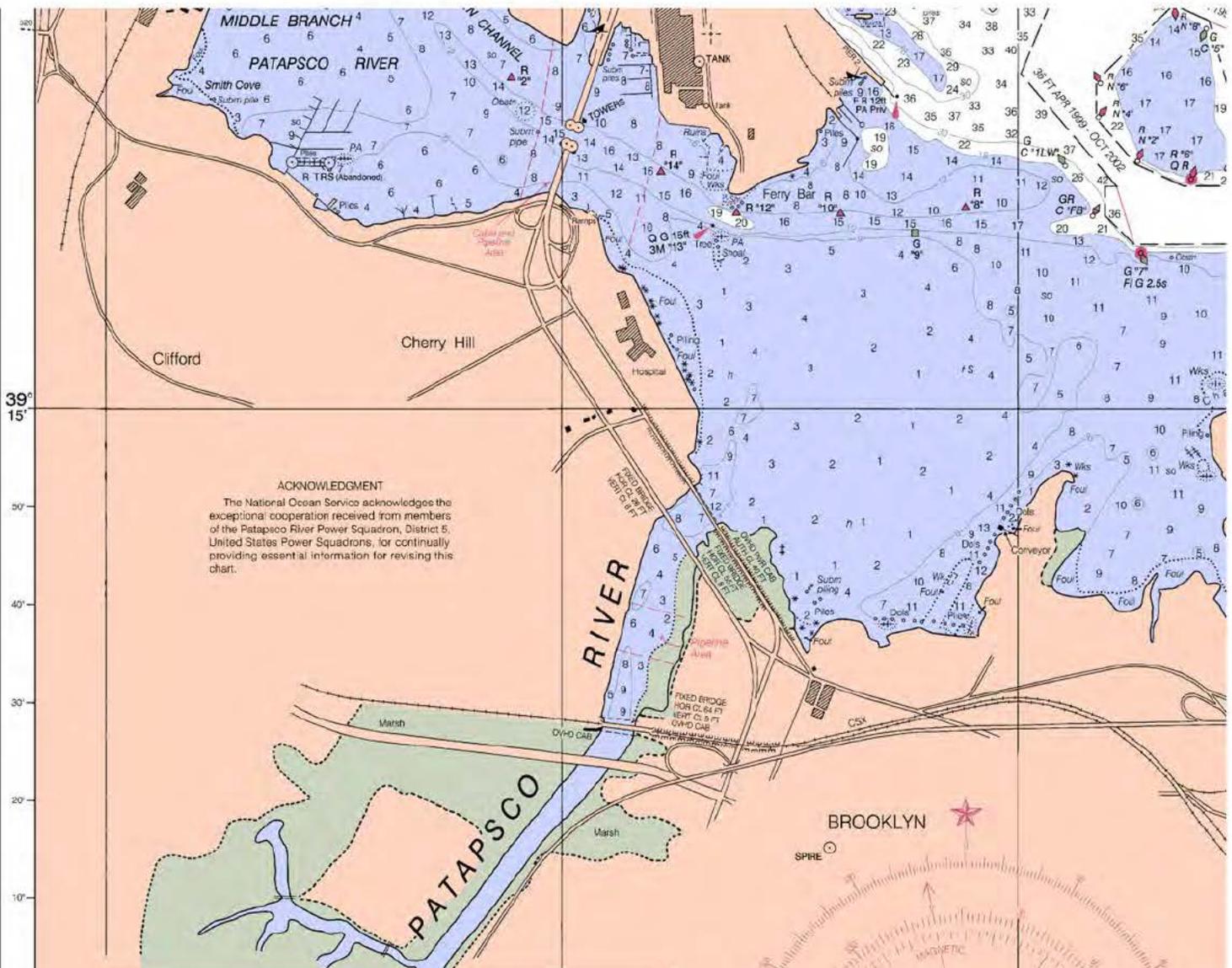


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SCALE 1:15,000
Nautical Miles

See page 2





ACKNOWLEDGMENT
 The National Ocean Service acknowledges the exceptional cooperation received from members of the Patapsco River Power Squadron, District 5, United States Power Squadrons, for continually providing essential information for revising this chart.

BALTIMORE HARBOR CHANNEL DEPTHS
 TABULATED FROM SURVEYS BY THE CORPS OF ENGINEERS - SURVEYS TO AUG 2003

NAME OF CHANNEL	CONTROLLING DEPTHS FROM SEAWARD IN FEET AT MEAN LOWER LOW WATER (MLLW)				DATE OF SURVEY	PROJECT DIMENSIONS		
	LEFT OUTSIDE QUARTER	LEFT INSIDE QUARTER	RIGHT INSIDE QUARTER	RIGHT OUTSIDE QUARTER		WIDTH (FEET)	LENGTH (NAUT. MILES)	DEPTH (FEET)
BREWERTON CHANNEL	48.2	50.8	50.5	48.7	8-90; 1-01	706	3.05	50
BREWERTON ANGLE	A47.5	50.1	49.4	48.4	10-00; 1-2-01	700-1480	0.79	50
FORT MCHENRY CHANNEL	47.4	50.0	50.3	50.3	4,5,8-03	706	3.77	50
TURNING BASIN	50.8	50.8	49.9	50.6	8-95	1200	0.20	50
FERRY BAR CHANNEL	34.2	35.6	35.3	26.1	10-00; 3-6-03	806	1.23	42
EAST SECTION	48.7	49.9	49.9	48.2	11-00	400-1275	1.96	50
CURTIS BAY CHANNEL	43.1	45.5	45.5	44.0	3,4,8-03	806	0.99	49
NORTHWEST HARBOR	44.4	48.2	48.5	40.1	3-03	600-950	0.16	49
EAST CHANNEL	39.0	40.3	40.1	37.2	11,12-00; 3-03	806	0.57	40
EAST CHANNEL TURNING BASIN	38.5	38.2	37.1	37.0	11-00	600-1608	0.26	40

A. EXCEPT FOR SHOALING TO 34.4 FT AT 39° 12' 16.5" N 76° 31' 50.1" W
 B. EXCEPT FOR SHOALING TO 34.0 FT AT 39° 15' 30.5" N 76° 35' 48.5" W
 NOTE - CONSULT THE CORPS OF ENGINEERS FOR CHANGES SUBSEQUENT TO THE ABOVE INFORMATION

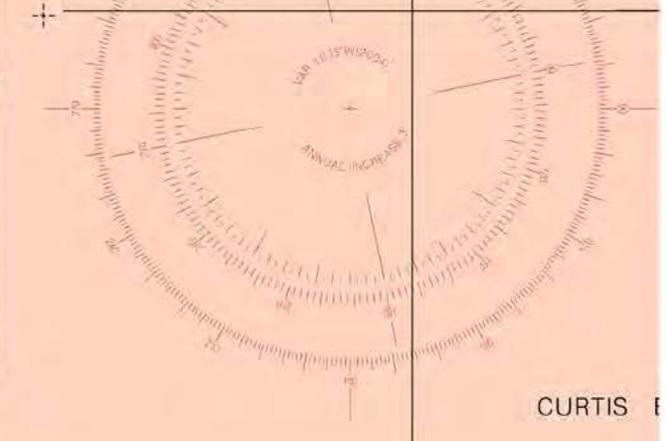
HORIZONTAL DATUM
 The horizontal reference datum of this chart is North American Datum of 1983 (NAD 83), which for charting purposes is considered equivalent to the World Geodetic System 1984 (WGS 84). Geographic positions referred to the North American Datum of 1927 must be corrected an average of 0.337" northward and 1.128" eastward to agree with this chart.

HEIGHTS
 Heights in feet above Mean High Water.

SUPPLEMENTAL INFORMATION
 Consult U.S. Coast Plot 3 for important supplemental information.

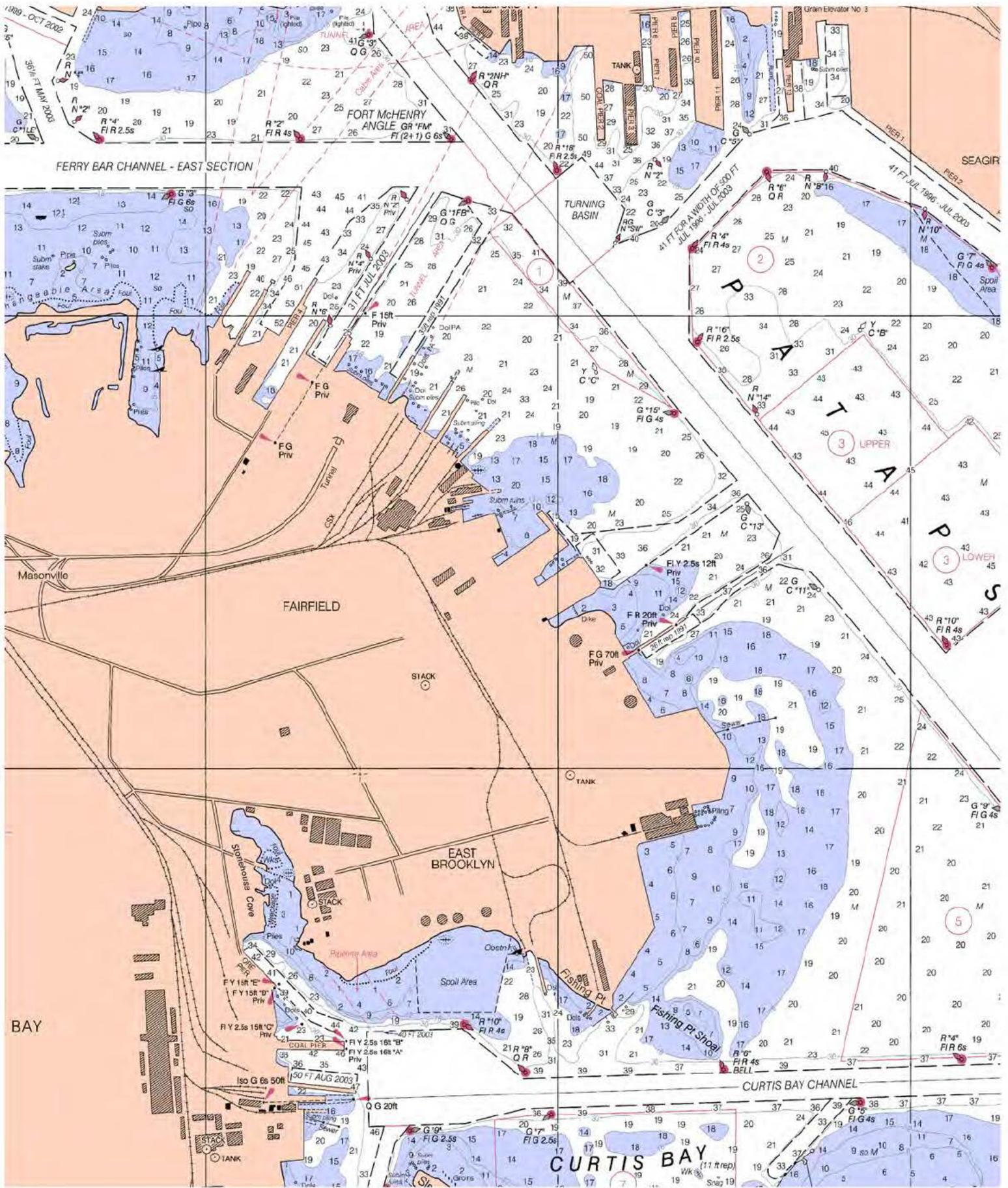
RADAR REFLECTORS
 Radar reflectors have been placed on many floating aids to navigation. Individual radar reflector identification on these aids has been omitted from this chart.

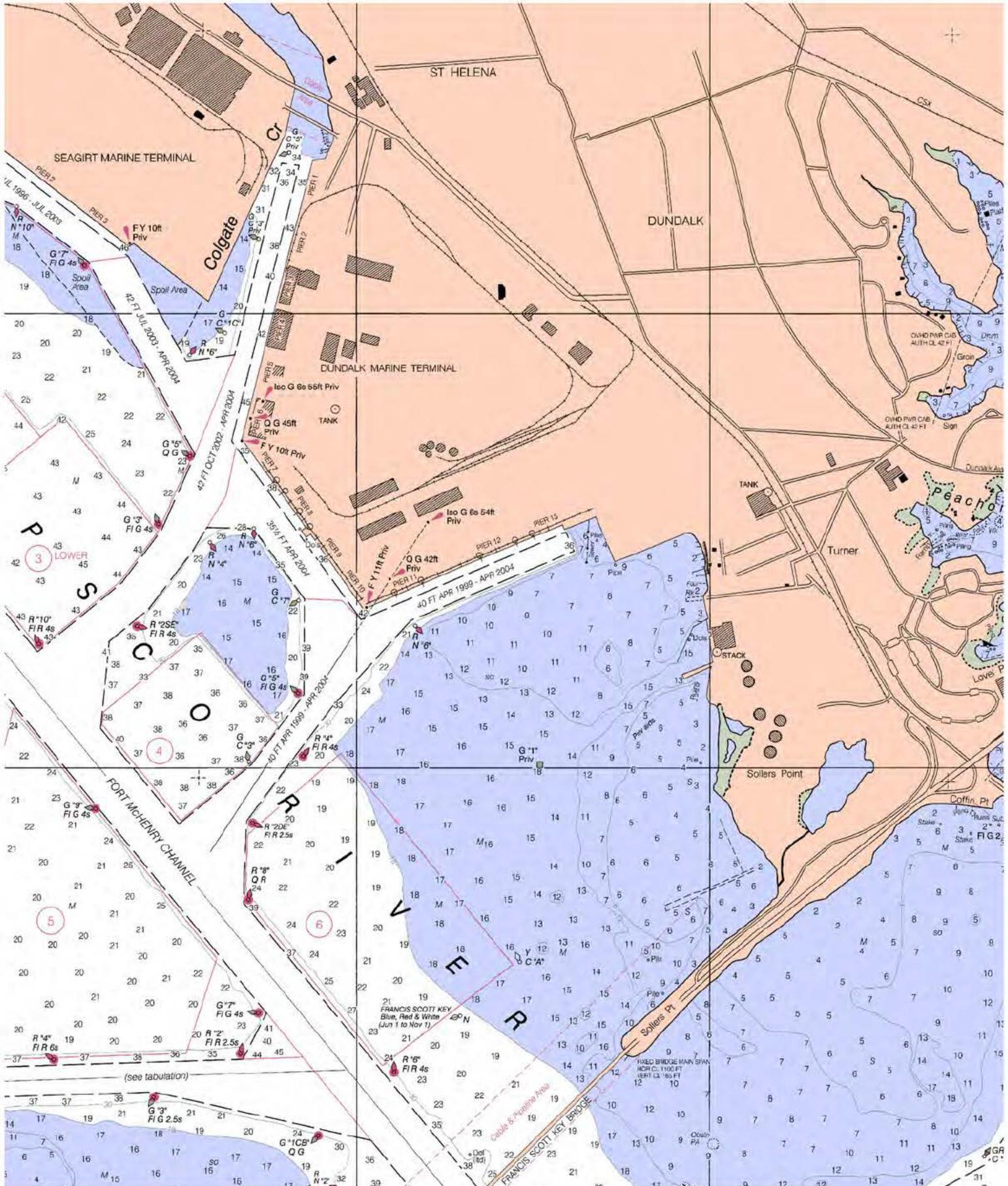
PLANE COORDINATE GRID
 (based on NAD 1927)
 The Maryland State Grid is indicated on this chart at 10,000 foot intervals thus:
 The last three digits are omitted.



CURTIS BAY AND CREEK CHANNEL DEPTHS
 TABULATED FROM SURVEYS BY THE CORPS OF ENGINEERS - SURVEYS TO NOV 2000

NAME OF CHANNEL	CONTROLLING DEPTHS FROM SEAWARD IN FEET AT MEAN LOWER LOW WATER (MLLW)			DATE OF SURVEY	PROJECT DIMENSIONS		
	LEFT OUTSIDE QUARTER	MIDDLE HALF OF CHANNEL	RIGHT OUTSIDE QUARTER		WIDTH (FEET)	LENGTH (NAUT. MILES)	DEPTH (FEET)
CURTIS BAY CHANNEL	48.7	49.9	48.2	11-00	400-1275	1.96	50
CURTIS CREEK LOWER REACH	34.4	35.6	35.3	11-00	200	0.54	35





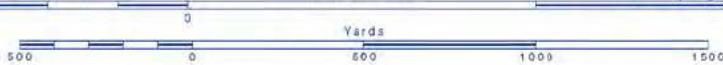
10

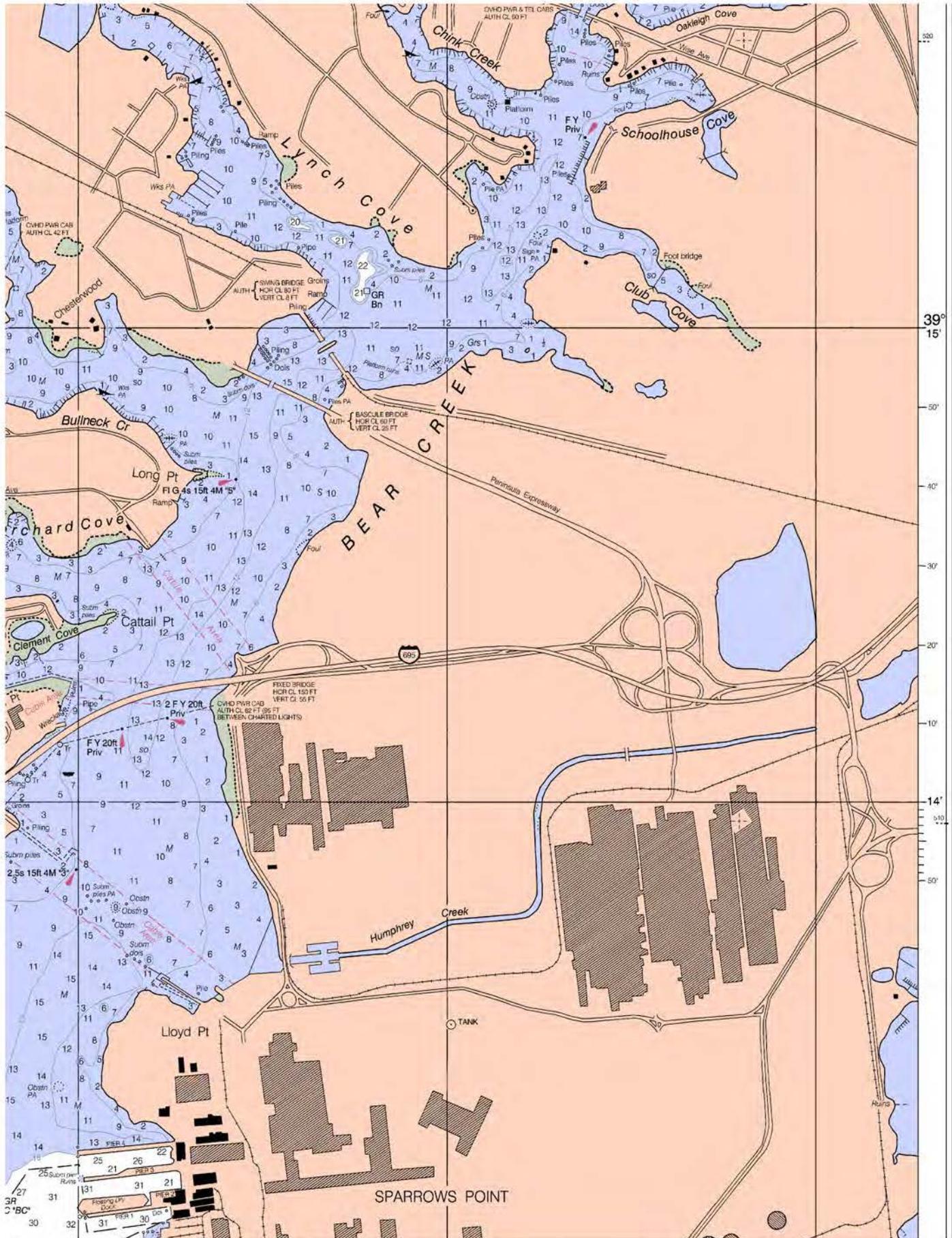


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SCALE 1:15,000
Nautical Mile

See page 2





NORTHWEST BAYOUR	43.1	45.5	45.5	44.0	3,443-09	806	0.99	49
EAST CHANNEL	44.1	45.2	48.5	46.1	3-43	600-650	0.16	49
WEST CHANNEL	39.5	40.3	40.1	37.2	11,112-02; 3-03	806	0.57	43
WEST CHANNEL TURNING BASIN	38.5	38.2	37.1	37.0	11-00	600-1686	0.26	40

A. EXCEPT FOR SHOALING TO 34.4 FT AT 39° 12' 16.5" N 76° 31' 00.1" W
 B. EXCEPT FOR SHOALING TO 34.0 FT AT 39° 15' 20.5" N 76° 35' 48.8" W
 NOTE - CONSULT THE CORPS OF ENGINEERS FOR CHANGES SUBSEQUENT TO THE ABOVE INFORMATION

HORIZONTAL DATUM

The horizontal reference datum of this chart is North American Datum of 1983 (NAD 83), which for charting purposes is considered equivalent to the World Geodetic System 1984 (WGS 84). Geographic positions referred to the North American Datum of 1927 must be corrected an average of 0.397" northward and 1.128" eastward to agree with this chart.

RADAR REFLECTORS

Radar reflectors have been placed on many floating aids to navigation. Individual radar reflector identification on these aids has been omitted from this chart.

NOAA WEATHER RADIO BROADCASTS

The NOAA Weather Radio stations listed below provide continuous weather broadcasts. The reception range is typically 26 to 40 nautical miles from the antenna site, but can be as much as 100 nautical miles for stations at high elevations.

Baltimore, MD	KEC-83	162.40 MHz
Sudlersville, MD	WXK-97	162.59 MHz
Washington, DC	KHB-36	162.55 MHz
(Manassas, VA)		

SMALL CRAFT WARNINGS

During the boating season small-craft warnings will be displayed from sunrise to sunset on Maryland Marine Police Cruisers while underway in Maryland waters of the Chesapeake Bay and tributaries.

HEIGHTS

Heights in feet above Mean High Water.

SUPPLEMENTAL INFORMATION

Consult U.S. Coast Pilot 3 for important supplemental information.

PLANE COORDINATE GRID

(based on NAD 1927)
 The Maryland State Grid is indicated on this chart at 10,000 foot intervals thus:
 The last three digits are omitted.

CAUTION - SUBMARINE PIPELINES AND CABLES

Charted submarine pipelines and submarine cables and submarine pipeline and cable areas are shown as follows:



Additional uncharted submarine pipelines and submarine cables may exist within the area of this chart. Not all submarine pipelines and submarine cables are required to be buried, and those that were originally buried may have become exposed. Mariners should use extreme caution when operating vessels in depths of water comparable to their draft in areas where pipelines and cables may exist, and when anchoring, dragging, or trawling. Coverdalls may be marked by lighted or unlighted buoys.

CURTIS BAY AND CREEK CHANNEL DEPTHS

TABULATED FROM SURVEYS BY THE CORPS OF ENGINEERS - SURVEYS TO NOV 2000

NAME OF CHANNEL	CONTROLLING DEPTHS FROM SEAWARD IN FEET AT MEAN LOWER LOW WATER (MLLW)			DATE OF SURVEY	PROJECT DIMENSIONS		
	LEFT OUTSIDE QUARTER	MIDDLE HALF OF CHANNEL	RIGHT OUTSIDE QUARTER		WIDTH (FEET)	LENGTH (NAUT. MILES)	DEPTH (FEET)
CURTIS BAY CHANNEL	48.7	49.5	48.2	11-00	400-1275	1.96	50
CURTIS CREEK							
LOWER REACH	34.4	35.6	35.3	11-00	200	0.54	35
MIDDLE REACH	19.3	20.7	17.6	8-99; 7,5,11-00	200-380	1.09	22
UPPER REACH	18.4	17.0	13.5	8-99; 8-00	200-100	0.55	22

NOTE - CONSULT THE CORPS OF ENGINEERS FOR CHANGES SUBSEQUENT TO THE ABOVE INFORMATION

NOTE A

Navigation regulations are published in Chapter 2, U.S. Coast Pilot 3. Additions or revisions to Chapter 2 are published in the Notice to Mariners. Information concerning the regulations may be obtained at the Office of the Commander, 5th Coast Guard District, in Portsmouth, Virginia or at the Office of the District Engineer, Corps of Engineers in Baltimore, Maryland.
 Refer to charted regulation section numbers.

ANCHORAGE AREAS

110 15B (see note A)

Limits and assigned numbers of anchorage areas are shown in magenta.



GENERAL ANCHORAGES

DEAD SHIP ANCHORAGE

TIDAL INFORMATION

Name	Place (LAT/LONG)	Height referred to datum of soundings (MLLW)			
		Mean High Water	Mean High Water	Mean Low Water	Extreme Low Water
Fort Carroll	(39° 13' N / 76° 31' W)	1.6	1.3	0.2	-5.0
Baltimore, Fort McHenry	(39° 16' N / 76° 35' W)	1.7	1.4	0.2	-5.0
Fells Point	(39° 17' N / 76° 35' W)	1.8	1.5	0.3	-5.0

(Oct. 2003)

ABBREVIATIONS (For complete list of Symbols and Abbreviations, see Chart No. 1.)

Aids to Navigation (lights are white unless otherwise indicated):

AERO aeronautical	G green	Mo morse code	R TR radio tower
Ai alternating	Q interrupted quick	N nun	Ra rotating
B black	Is isophase	OBSC obscured	s seconds
Bn beacon	LT LD lighthouse	OC occulting	SEC sector
C can	M nautical mile	Or orange	St M statute miles
DA diaphone	m minutes	O quick	VO very quick
F fixed	MICRO TR microwave tower	R red	W white
Fl flashing	Mk marker	Ra Rf radar reflector	WHIS whist
		R Rn radiobeacon	Y yellow

Bottom characteristics:

Bds boulders	Co coral	Gy gray	Oys oysters	so soft
Br broken	G gravit	h hard	Ri rock	Sh shells
Cy clay	Grs grass	M mud	S sand	sl sticky

Miscellaneous:

AUTH authorized	Obstr obstruction	PD position doubtful	Subm submerged
ED existence doubtful	PA position approximate	Rep reported	

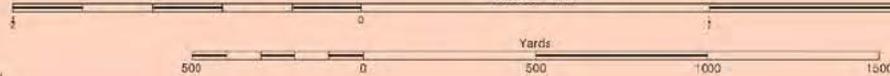
Wreck, rock, obstruction, or shoal swept clear to the depth indicated.
 (2) Rocks that cover and uncover, with heights in feet above datum of soundings.

CAUTION
BASCULE BRIDGE CLEARANCES
 For bascule bridges whose spars do not open to a full upright or vertical position, unlimited vertical clearance is not available for the entire charted horizontal clearance.

POLLUTION REPORTS
 Report all spills of oil and hazardous substances to the National Response Center via 1-800-424-8802 (toll free), or to the nearest U.S. Coast Guard facility if telephone communication is impossible (33 CFR 153).

AUTHORITIES
 Hydrography and topography by the National Ocean Service, Coast Survey, with additional data from the Corps of Engineers and U.S. Coast Guard.

SCALE 1:15,000
 Nautical Miles



50th Ed., Nov. /04 ■ Corrected through NM Nov. 20/04
 Corrected through LNM Nov. 9/04

12281

CAUTION

This chart has been corrected from the Notice to Mariners (NM) published weekly by the National Geospatial-Intelligence Agency and the Local Notice to Mariners (LNM) issued periodically by each U.S. Coast Guard district to the dates shown in the lower left hand corner.

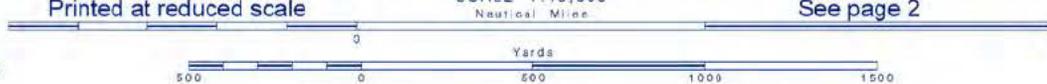
This nautical chart has been designed to promote safe navigation. Ocean Service encourages users to submit corrections, additions, improving this chart to the Chief, Marine Chart Division (N/CS2), Service, NOAA, Silver Spring, Maryland 20910-3282.

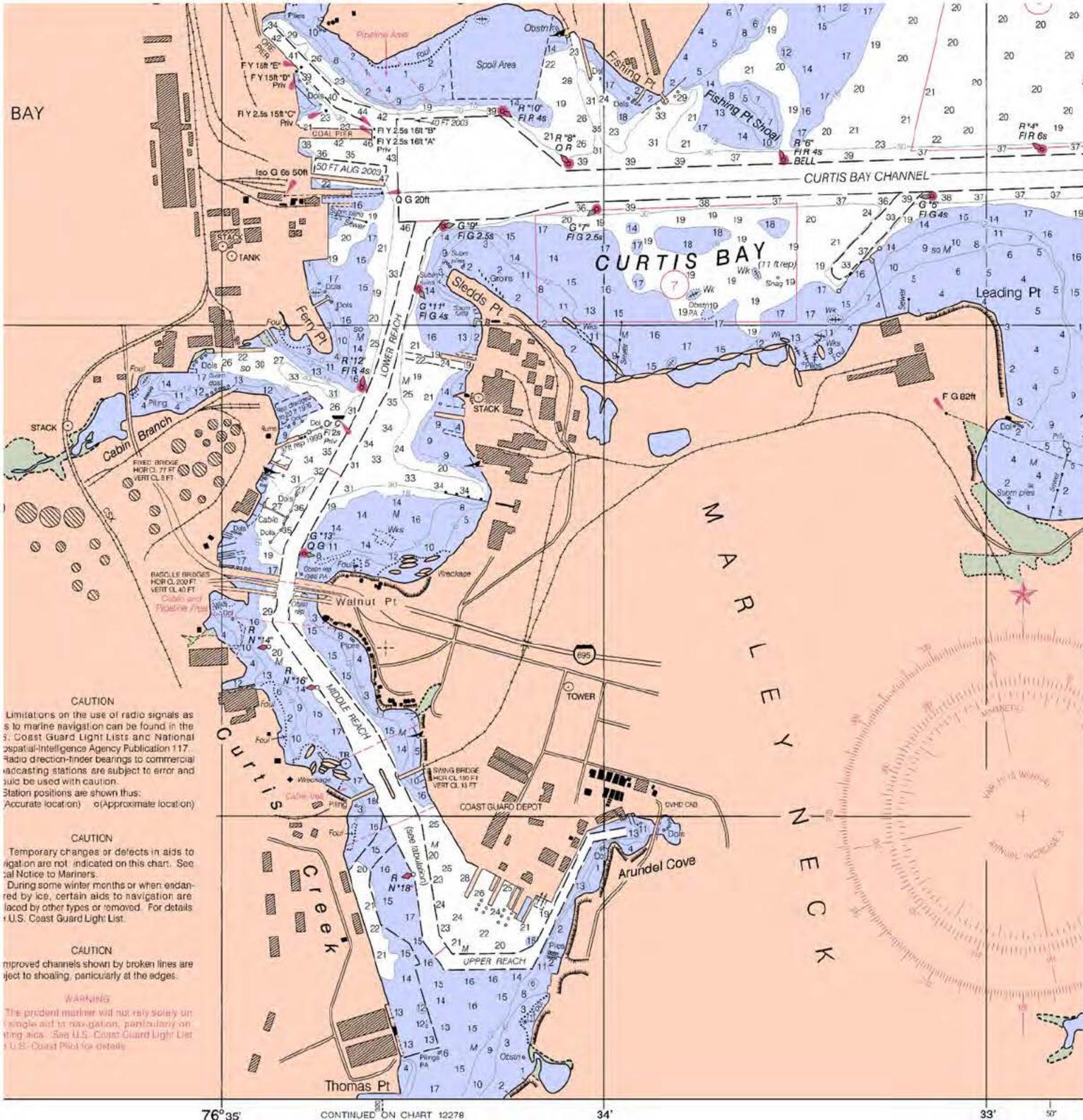


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SCALE 1:15,000

See page 2





CAUTION
 Limitations on the use of radio signals as aids to marine navigation can be found in the U.S. Coast Guard Light Lists and National Geospatial-Intelligence Agency Publication 117. Radio direction-finder bearings to commercial broadcasting stations are subject to error and should be used with caution.
 Station positions are shown thus:
 Accurate location) (Approximate location)

CAUTION
 Temporary changes or defects in aids to navigation are not indicated on this chart. See Local Notice to Mariners.
 During some winter months or when endangered by ice, certain aids to navigation are replaced by other types or removed. For details see U.S. Coast Guard Light List.

CAUTION
 Improved channels shown by broken lines are subject to shoaling, particularly at the edges.

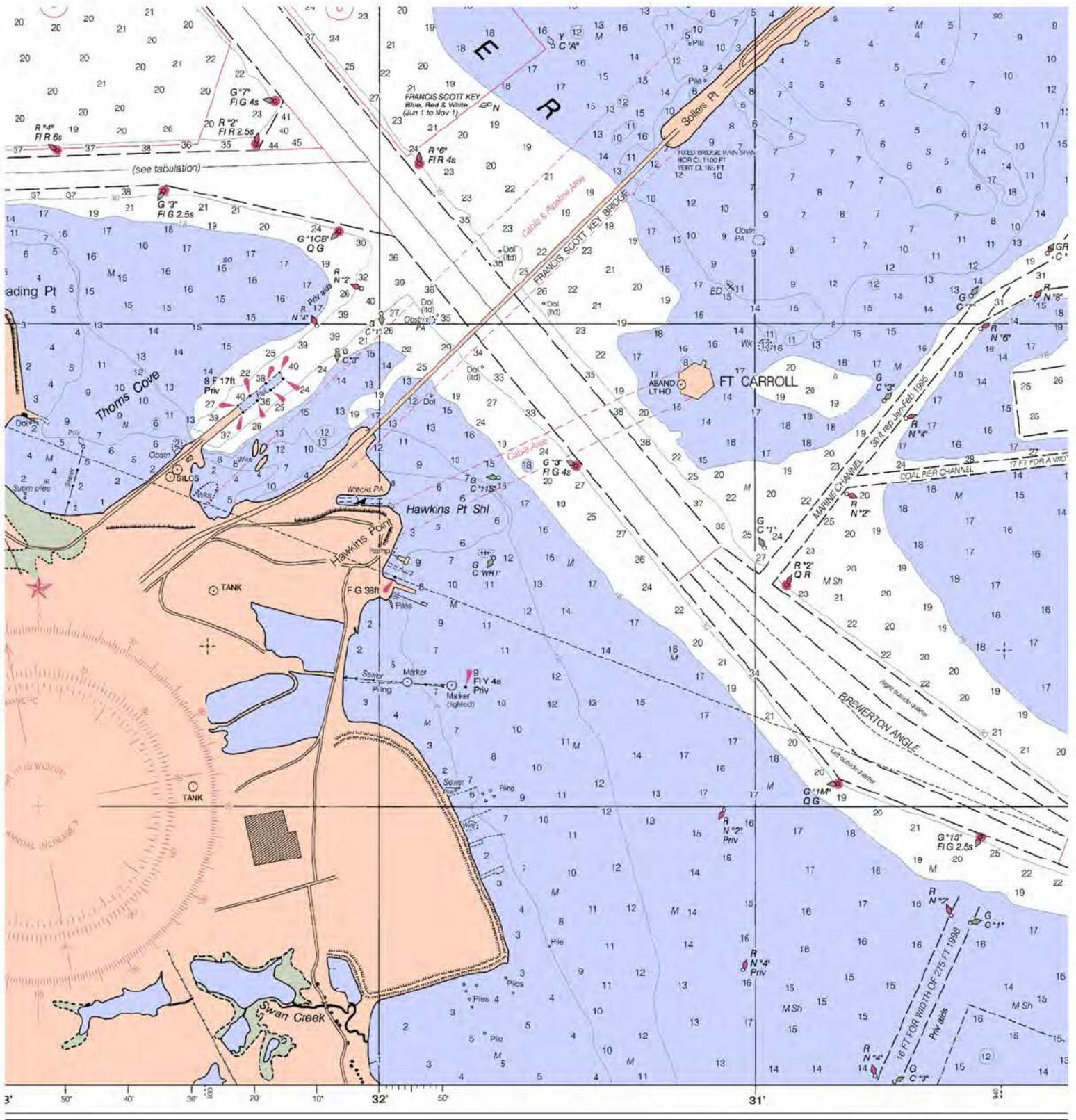
WARNING
 The prudent mariner will not rely solely on a single aid to navigation, particularly on floating aids. See U.S. Coast Guard Light List and U.S. Coast Pilot for details.

76°35' CONTINUED ON CHART 12278 34' 33' 50'

ation. The National
 s, or comments for
 2), National Ocean

PRINT-ON-DEMAND CHARTS
 NOAA and its partner, OceanGrafix, offer this chart updated weekly by NOAA for Notices to Mariners and critical corrections. Charts are printed when ordered using Print-on-Demand technology. New Editions are available 5-8 weeks before their release as traditional NOAA charts. Ask your chart agent about Print-on-Demand charts or contact NOAA at 1-800-584-4683. <http://NauticalCharts.gov>, help@NauticalCharts.gov, or OceanGrafix at 1-877-56CHART. <http://OceanGrafix.com>, or help@OceanGrafix.com.

Published at Washington, D.C.
 U.S. DEPARTMENT OF COMMERCE
 NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
 NATIONAL OCEAN SERVICE
 COAST SURVEY



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 NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
 U.S. COAST AND GEODETIC SURVEY

SOUNDINGS IN FEET

14



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SCALE 1:15,000
 Nautical Miles

See page 2



EMERGENCY INFORMATION

VHF Marine Radio channels for use on the waterways:

Channel 6 – Intership safety communications.

Channel 9 – Communications between boats and ship-to-coast.

Channel 13 – Navigation purposes at bridges, locks, harbors.

Channel 16 – Emergency, distress and safety calls to Coast Guard and others, and to initiate calls to other vessels. Contact the other vessel, agree to another channel, and then switch.

Channel 22 – Calls between the Coast Guard and the public. Severe weather warnings, hazards to navigation and safety warnings are broadcast here.

Channels 68, 69, 71, 72 & 78 – Recreational boat channels.

Distress Call Procedures

1. Make sure radio is on.
2. Select Channel 16.
3. Press/Hold the transmit button.
4. Clearly say: "MAYDAY, MAYDAY, MAYDAY."
5. Also give: Vessel Name and/or Description; Position and/or Location; Nature of Emergency; Number of People on Board.
6. Release transmit button.
7. Wait for 10 seconds – If no response Repeat MAYDAY Call.

HAVE ALL PERSONS PUT ON LIFE JACKETS !!

Mobile Phones – Call 911 for water rescue.

Coast Guard Search & Rescue – 800-418-7314/410-576-2525

Coast Guard Annapolis – 410-267-8108

Coast Guard Little Creek – 757-464-9371/9372

Maryland Natural Resources Police – 410-260-8888

NOAA Weather Radio – 162.400 MHz, 162.425 MHz, 162.450 MHz, 162.475 MHz, 162.500 MHz, 162.525 MHz, 162.550 MHz.

Getting and Giving Help – Signal other boaters using visual distress signals (flares, orange flag, lights, arm signals); whistles; horns; and on your VHF radio. You are required by law to help boaters in trouble. Respond to distress signals, but do not endanger yourself.

NOAA CHARTING PUBLICATIONS

Official NOAA Nautical Charts – NOAA surveys and charts the national and territorial waters of the U.S., including the Great Lakes, producing over 1,000 traditional nautical charts covering 3.4 million square nautical miles. Carriage of official NOAA charts is mandatory on the commercial ships that carry our commerce. They are used on every Navy and Coast Guard ship, fishing and passenger vessels, and are widely carried by recreational boaters. NOAA charts are available from official chart agents listed at: www.NauticalCharts.NOAA.gov.

Official Electronic Navigational Charts® (ENCs) – ENCs are digital files of each chart's features and their attributes for use in computer-based navigation systems. ENCs comply with standards of the International Hydrographic Organization. ENCs and their updates are available for free from NOAA at: www.NauticalCharts.NOAA.gov.

Official Raster Navigational Charts (RNCs) – RNCs are georeferenced digital pictures of NOAA's charts that are suitable for use in computer-based navigation systems. RNCs comply with standards of the International Hydrographic Organization. RNCs and their updates are available for free from NOAA at: www.NauticalCharts.NOAA.gov.

Official BookletCharts™ – BookletCharts™ are reduced scale NOAA charts printed in page-sized pieces. The "home edition" can be downloaded from NOAA for free and printed. The "professional edition", containing additional boating, safety, and educational edition is available for NOAA chart agents or over the Internet.

Official PocketCharts™ – PocketCharts™ are for beginning recreational boaters to use for planning and locating, but not for real navigation. Measuring a convenient 13" by 19", they have a 1/3 scale chart on one side, and safety, boating, and educational information on the reverse. They can be purchased at retail outlets and on the Internet.

Official U.S. Coast Pilot® – The Coast Pilots are 9 text volumes containing information important to navigators such as channel descriptions, port facilities, anchorages, bridge and cable clearances, currents, prominent features, weather, dangers, and Federal Regulations. They supplement the charts and are available from official NOAA chart agents or downloaded for free at: www.NauticalCharts.NOAA.gov.

Official Print-on-Demand Nautical Charts – These full-scale NOAA charts are updated each week by NOAA for all Notice to Mariner corrections. They have additional information added in the margin to supplement the chart. Print on Demand charts meet all federal chart carriage regulations for charts and updating. Produced under a public/private partnership between NOAA and OceanGrafix, LLC, suppliers of these premium charts are listed at www.OceanGrafix.com.

Official Chart No. 1, Nautical Chart Symbols – This reference publication depicts basic chart elements and explains nautical chart symbols and abbreviations. Download it for free at: www.NauticalCharts.NOAA.gov.

Coast Survey Navigation Managers – These ambassadors to the maritime community maintain a regional presence for NOAA and help identify the challenges facing marine transportation and boating. They are listed at <http://nauticalcharts.noaa.gov/nsd/reps.htm>.

Internet sites: www.NauticalCharts.NOAA.gov, www.NOAA.gov, www.TidesandCurrents.NOAA.gov, www.NOS.NOAA.gov.



NOAA, the Nation's Chartmaker

APPENDIX D

WELLHEAD PROTECTION AREA DETERMINATION



Maryland Department of the Environment
 Water Supply Program
 1800 Washington Blvd. STE 450
 Baltimore, MD 21230-1708
 Phone: (410) 537-3702/Fax: (410) 537-3157

FAX

To: CHRIS DOWD From: *Marianne Lyons*
 Fax: 410-309-1180 Pages: 1
 Phone: 804-239-3800 Date: 3/21/2011
 Re: Wellhead Protection Areas

Petroleum Fuel Terminal Baltimore South
 Terminal located at 1622 South Clinton Street
 Baltimore, MD 21224 is not located in
 any Wellhead Protection Area.



APPENDIX E
ENDANGERED SPECIES LIST

**STATE RARE, ENDANGRED, & THREATENED
SPECIES**

BALTIMORE CITY COUNTY, MARYLAND

**Current and Historical Rare, Threatened, and Endangered Species
Of Baltimore City, Maryland***

April 2010

Maryland Department of Natural Resources
Wildlife and Heritage Service

<u>Scientific Name</u>	<u>Common Name</u>	<u>Global Rank</u>	<u>State Rank</u>	<u>State Status</u>	<u>Federal Status</u>
Animals					
Falco peregrinus anatum	American Peregrine Falcon	G4T4	S2	I	
Gallinula chloropus	Common Moorhen	G5	S2B	I	
Haliaeetus leucocephalus	Bald Eagle	G5	S3B		
Lophodytes cucullatus	Hooded Merganser	G5	S1B		
Plants					
Bromus latiglumis	Broad-glumed Brome	G5	S1	E	
Calopogon tuberosus	Grass-pink	G5	S1	E	
Coptis trifolia	Goldthread	G5	S1	E	
Euphorbia purpurea	Darlington's Spurge	G3	S1	E	
Gentiana villosa	Striped Gentian	G4	S1	E	
Parthenium integrifolium	American Feverfew	G5	S1	E	
Platanthera blephariglottis	White Fringed Orchid	G4G5	S2	T	
Pycnanthemum pycnanthemoides	Southern Mountain-mint	G5	SH		X
Quercus macrocarpa	Mossy-cup Oak	G5	S1		
Ranunculus pensylvanicus	Bristly Crowfoot	G5	SH		X
Salix humilis var. tristis	Dwarf Prairie Willow	G4G5	S1		
Solidago speciosa	Showy Goldenrod	G5	S2	T	
Tofieldia racemosa	Coastal False Asphodel	G5	SX		X

* This report represents a compilation of information in the Wildlife and Heritage Service's Biological and Conservation Data system as of the date on the report. It does not include species considered to be "watchlist" or more common species.

FEDERAL ENDANGERED & THREATENED SPECIES
MARYLAND



Species Reports

Listings and occurrences for Maryland

Notes:

- This report shows the listed species associated in some way with this state.
- This list does not include experimental populations and similarity of appearance listings.
- This list includes non-nesting sea turtles and whales in State/Territory coastal waters.
- This list includes species or populations under the sole jurisdiction of the National Marine Fisheries Service.
- Click on the highlighted scientific names below to view a Species Profile for each listing.

Summary of Animals listings

Animal species listed in this state and that occur in this state (17 species)

Status	Species
E	Bat, Indiana (Myotis sodalis)
E	Darter, Maryland (Etheostoma sellare)
T	Plover, piping except Great Lakes watershed (Charadrius melodus)
T	Sea turtle, green except where endangered (Chelonia mydas)
E	Sea turtle, hawksbill (Eretmochelys imbricata)
E	Sea turtle, Kemp's ridley (Lepidochelys kempi)
E	Sea turtle, leatherback (Dermochelys coriacea)
T	Sea turtle, loggerhead (Caretta caretta)
E	Squirrel, Delmarva Peninsula fox Entire, except Sussex Co., DE (Sciurus niger cinereus)
E	Sturgeon, shortnose (Acipenser brevirostrum)
T	Tiger beetle, northeastern beach (Cicindela dorsalis dorsalis)
T	Tiger beetle, Puritan (Cicindela puritana)
T	Turtle, bog (=Muhlenberg) northern (Clemmys muhlenbergii)
E	Wedgemussel, dwarf (Alasmidonta heterodon)
E	Whale, finback (Balaenoptera physalus)
E	Whale, humpback (Megaptera novaeangliae)
E	Whale, right (Balaena glacialis (incl. australis))

Animal species listed in this state that do not occur in this state (3 species)

Status	Species
E	Beetle, American burying (Nicrophorus americanus)
E	Beetle, American burying (Nicrophorus americanus)
E	Beetle, American burying (Nicrophorus americanus)

- | | |
|---|---|
| E | Puma (=cougar), eastern (Puma (=Felis) concolor couguar) |
| E | Wolf, gray Lower 48 States, except where delisted and where EXPN. Mexico. (Canis lupus) |

Summary of Plant listings

Plant species listed in this state and that occur in this state (7 species)

Status	Species
T	Amaranth, seabeach (Amaranthus pumilus)
E	Bulrush, Northeastern (Scirpus ancistrochaetus)
E	Dropwort, Canby's (Oxypolis canbyi)
E	Gerardia, sandplain (Agalinis acuta)
E	Harperella (Ptilimnium nodosum)
T	Joint-vetch, sensitive (Aeschynomene virginica)
T	Pink, swamp (Helonias bullata)

Plant species listed in this state that do not occur in this state (3 species)

Status	Species
E	Chaffseed, American (Schwalbea americana)
E	Coneflower, smooth (Echinacea laevigata)
T	Pogonia, small whorled (Isotria medeoloides)

Last updated: August 4, 2010

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APPENDIX F

INCIDENT COMMAND JOB DESCRIPTIONS

<i>APPENDIX F</i>

**DISTRIBUTION
INCIDENT COMMAND
JOB DESCRIPTION**

Position: *INCIDENT COMMANDER*

Scope of Responsibility:

- Initial Responder (person discovering the spill) acts as Incident Commander until relieved by Qualified Individual (QI). Person discovering spill is responsible for initially completing the Initial Site Assessment (ICS-201-2). This form should be given to the Planning Chief.
- Responsible for activating response personnel, directing response operations, making notifications, and for reporting the progress and the plans of the response operations to the Unified Command and company management.

Job Duties:

- INITIAL RESPONSE:**
- Mobilize local responders to ready standby
 - Ensure that the safety of response personnel is accorded the highest priority in all aspects and phases of response
- "EMERGENCY"**
- Assess the incident. Work with Safety Officer and use Fire Department/Hazmat to complete Site Safety and Control Analysis (ICS-201-3).
 - Eliminate ignition sources
 - Report nature and location
 - Secure the source
 - Minimize the threat
 - Establish response organization (ICS-201-4).
 - Notify upline management
 - Begin clean-up
 - Complete Summary of Current Actions (ICS-201-1)
 - Ensure completion of Initial Incident Briefing document (ICS201)
 - Conduct initial briefing with response team
 - Document all actions and activities
-
- ONGOING RESPONSE:**
- Establish objectives and response priorities (Complete ICS-202)
 - Ensure that response personnel have the equipment, materials, and supplies necessary to carry out their duties in a safe, effective, and efficient fashion
- TRANSITION TO
"POST-EMERGENCY"**
- Support the Public Information Officer
 - Ensure development of the Incident Action Plan (IAP)
 - Review the IAP with the Unified Command and obtain concurrence
 - Conduct daily briefing meetings
 - Ensure adequate records are maintained.
 - Complete response organization chart (ICS-204)

<i>APPENDIX F</i>

**DISTRIBUTION
INCIDENT COMMAND
JOB DESCRIPTION**

Position: *OPERATIONS SECTION CHIEF*

Scope of Responsibility:

- Responsible for the management and supervision of all containment, recovery, shoreline protection and cleanup, aerial surveillance, and waste disposal operations that occur during response operations.

Job Duties:

- INITIAL RESPONSE:**
- Obtain initial briefing.
 - Make personal safety the highest priority throughout the response operations

- "EMERGENCY"**
- Supervise on land, on-water, near-shore, and shoreline response operations.
 - Work with Safety Officer and use Fire Department/Hazmat to complete Site Safety and Control Analysis (**ICS-201-3**). Provide to Planning Chief, as needed.
 - Document all actions and activities.

-
- ONGOING RESPONSE:**
- Ensure safety of field personnel
 - Work with Planning and Logistics personnel to develop an Incident Action Plan for response operations.

- TRANSITION TO
"POST-EMERGENCY"**
- Provide Logistics Chief with a detailed list of personnel, equipment, material, and supply needs for day to day operations.
 - Provide information and make recommendations to the IC and Planning Chief
 - Serve as field contact person for government agencies
 - Work with Public Affairs to assist in preparation or review of information to be released to the media, government agencies, and/or the public
 - Ensure adequate records are maintained.

<i>APPENDIX F</i>

**DISTRIBUTION
INCIDENT COMMAND
JOB DESCRIPTION**

Position: *LOGISTICS SECTION CHIEF*

Scope of Responsibility:

- Responsible for coordinating all air, marine, and land transportation services; and the procurement of equipment, materials, and supplies.

Job Duties:

- INITIAL RESPONSE:**
- Obtain initial briefing.
 - Set up Command Center.
- "EMERGENCY"**
- Ensure that all services are provided in a manner that maximizes personnel safety and health.
 - Complete Resource Summary (**ICS-201-5**). Provide to Planning Chief, as needed.
 - Document all actions and activities.
-
- ONGOING RESPONSE:**
- Work with IC and Planning Chief to develop an Incident Action Plan for response operations.
 - Work with the Operations Section Chief to identify and ensure timely and efficient provision of field support services.
- TRANSITION TO
"POST-EMERGENCY"**
- If requested by the IC, secure an "800" telephone number for the public to call regarding problems and claims.
 - Ensure adequate records are maintained.

<i>APPENDIX F</i>

**DISTRIBUTION
INCIDENT COMMAND
JOB DESCRIPTION**

Position: *PLANNING SECTION CHIEF*

Scope of Responsibility:

- Responsible for coordinating the development and prioritizing the response activities by collecting and evaluating information about the spill trajectory and areas impacted and status of resources available in consultation with regulatory agencies.

Job Duties:

- INITIAL RESPONSE:**
- Obtain initial briefing.
 - Ensure that all plans are developed to maximize personnel safety and health.
- "EMERGENCY"**
- Interface with the FOSC and regulatory agencies to gain consensus on objectives and response priorities.
 - Obtain information on the size, location, direction, type, or potential impact of spill.
 - Complete Spill Notification Form (**ICS-201-6**).
 - Prepare Initial Incident Briefing (**ICS-201**) package for IC, as requested.
 - Document all actions and activities.

-
- ONGOING RESPONSE:**
- Interface with the IC and the Operations Section Chief to develop consensus on operations strategy to implement priority concerns jointly developed with FOSC and regulatory agencies.

- TRANSITION TO
"POST-EMERGENCY"**
- Work with Logistics Section Chief to ensure adequate resources are available for operations
 - Supervise the preparation of the Incident Action Plan
 - Develop a meeting schedule with the Unified Command.
 - Respond to request for information from government agencies
 - Assist in the preparation or review of information to be released
 - Ensure that company and/or contract personnel are available to provide technical advice on any and all aspects of response operations
 - Ensure adequate records are maintained

<i>APPENDIX F</i>

DISTRIBUTION INCIDENT COMMAND JOB DESCRIPTION

Position: *SAFETY OFFICER*

Scope of Responsibility:

- Responsible for coordinating the development of the Site Safety and Control Analysis (**ICS-201-3**) and the Site Safety & Health Plan, advising on safe practices and procedures to be followed during the conduct of response operations, and visit all areas of the response operation to monitor personnel activities.

Job Duties:

- INITIAL RESPONSE:**
- Obtain initial briefing.
 - Make personal safety the highest priority throughout the response operations.

- "EMERGENCY"**
- Use Fire Department/Hazmat to complete the Site Safety and Control Analysis (**ICS-201-3**). Provide to Planning Chief, as requested.
 - Document all actions and activities.

-
- ONGOING RESPONSE:**
- Issue appropriate safety guidelines to be observed during response operations, addressing chemical/physical hazards associated with response.

- TRANSITION TO
"POST-EMERGENCY"**
- Work on the publication of safety reminders.
 - Work with medical responders to establish first aid stations in field.
 - Investigate accidents that occur.
 - Maintain a record of all accidents/injuries.
 - Serve as a liaison with government safety officials.
 - Monitor field operations to ensure safety compliance and advise Operations Chief immediately should it be necessary to halt any activity. (**Safety Officer has the authority to halt any activities which are against legal or company requirements or pose hazardous conditions to response personnel.**)
 - Prepare the Site Safety & Health Plan (maintained under separate cover) and provide to Planning Chief.
 - Ensure adequate records are maintained.

<i>APPENDIX F</i>

DISTRIBUTION INCIDENT COMMAND JOB DESCRIPTION

Position: *FINANCE SECTION CHIEF*

Scope of Responsibility:

- Responsible for overseeing all of the financial and cost analysis aspects of the incident and for supervising members of the Finance/Administration Section.
- During the initial stages of an incident, the Incident Commander will assume the role of the Finance Section Chief.

Job Duties:

INITIAL RESPONSE:

- Obtain initial briefing
- Attend planning meetings to gather information on overall strategy.

"EMERGENCY"

- Determine resource needs.
- Develop an operating plan for Finance/Administration function on incident.
- Prepare work objectives for section staff.
- Document all actions and activities.

ONGOING RESPONSE:

- Inform Unified Command when Section is fully operational
- Prepare and post Financial Section organization
- Facilitate preparation of guidelines, procedures, forms and data management systems necessary to account for expenditures made during response operations
- Ensure that all personnel time records are maintained
- Meet with agency representatives as required.
- Provide input in all planning sessions on financial and cost analysis matters.

**TRANSITION TO
"POST-EMERGENCY"**

- Ensure all obligation documents initiated at the incident are properly prepared and completed.
- Approve all obligation documents
- Brief agencies on all incident related business management issues needing attention and follow-up prior to leaving incident.
- Provide Unified Command with regular financial reports
- Document all actions
- Ensure adequate records are maintained.

<i>APPENDIX F</i>

**DISTRIBUTION
INCIDENT COMMAND
JOB DESCRIPTION**

Position: *PUBLIC INFORMATION OFFICER*

Scope of Responsibility:

- Responsible for developing and releasing information about the incident to the news media, to incident personnel, and to other appropriate agencies and organizations.
- The PIO is part of the Command Group. Assistants of the PIO will be located in the Joint Information Center (JIC).

Job Duties:

INITIAL RESPONSE:

- Obtain initial briefing
- Determine from the Incident Commander if there are any limits on information release.

"EMERGENCY"

- Develop material for use in media briefings.
- Obtain Incident Commander approval for media releases.

ONGOING RESPONSE:

- Inform media and conduct media briefings.
- Arrange for tours and other interviews or briefings that may be required.
- Obtain media information that may be useful to incident planning.
- Maintain current information summaries and/or displays on the incident and provide information on status of incident to assigned personnel.

**TRANSITION TO
"POST-EMERGENCY"**

- Maintain Unit/Activity
- Proactively work with media.
- Obtain Unified Command approval for media releases.

APPENDIX G

INCIDENT SPECIFIC CHECKLIST

<i>APPENDIX G</i>

FIRST COMPANY PERSON NOTIFIED/ON SCENE

- _____ Follow the appropriate "*Oil Spill Response – Immediate Actions*" in Section 1.7.1.2.
- _____ Notify **Terminal Management** of the incident.
- _____ Utilize local emergency services as necessary (police, fire, medical).
- _____ Notify the Operations Control Center, as appropriate.

TERMINAL MANAGEMENT

- _____ **Evaluate the Severity**, Potential Impact, Safety Concerns, and Response Requirements based on the initial data provided by the first person on scene.
- _____ Assume the role of **Incident Commander**.
- _____ **Confirm safety** aspects at site, including need for personal protective equipment, sources of ignition, and potential need for evacuation.
- _____ Activate **local response personnel and primary response contractors**, as the situation demands.
- _____ Coordinate/perform **activation of additional spill response contractors**, as the situation demands (telephone reference is provided in Section 1.3.1).
- _____ Notify the **LTO** and/or **Senior Management**.
- _____ Coordinate/perform **regulatory agency notification**, as the situation demands (notification procedures and telephone references are provided in Section 1.3.1).
- _____ Proceed to spill site and **coordinate response and clean-up operations**.
- _____ Direct containment, dispersion, and/or clean-up operations in accordance with any product specific response considerations.

LOCAL RESPONSE PERSONNEL

- _____ Assigned personnel will immediately respond to a discharge from the facility, as the situation demands.
- _____ Perform response/clean-up operations as directed or coordinated by the Incident Commander.
- _____ Assist as directed at the spill site.

<i>APPENDIX G</i>

SPECIFIC INCIDENT RESPONSE CHECKLIST

Remember, Without Exception, Personnel Safety Is First Priority. Excessive Exposure To The Vapor And Liquid Stages Of The Spilled Product Should Be Avoided.

INITIAL RESPONSE

- _____ Take appropriate personal protective measures.
- _____ Call for medical assistance if an injury has occurred.
- _____ Check wind direction before investigating incidents where vapor cloud is a possibility.
- _____ Utilize LEL meter when you conduct an initial investigation to determine what has been released and the source.
- _____ Do not investigate on your own, take a buddy.
- _____ If you discover explosive / flammable vapors during your initial investigation or if vapors are a possibility, make sure you inform the 911 operator that police and other emergency responders should NOT use flares to control traffic.
- _____ When you evacuate the Terminal because of toxic or explosive vapors, make sure that you take the ICP, response checklists, cell phones, radios, etc. with you to the gathering point. Develop a “kit” / “go bag” / evacuation bag to take with you when you evacuate the facility. (The evacuation bag should contain items that you would need to run a response for the first several hours from a location other than the Terminal building.)
- _____ At the evacuation gathering point, take a head count to determine if anyone is missing.
- _____ If possible, block access to the hot zone and/or entire Terminal (use vehicles, caution tape, traffic cones, etc.).
- _____ Restrict access to the spill site and adjacent area as the situation demands. Take any other steps necessary to minimize any threat to health and safety.
- _____ Verify the type of product and quantity released (Material Safety Data Sheets are retained separately at the facility).
- _____ Advise personnel in the area of any potential threat and/or initiate evacuation procedures.
- _____ Use testing and sampling equipment to determine potential safety hazards, as the situation demands.
- _____ Identify/Isolate the source and minimize the loss of product, from a safe distance.
- _____ Take necessary fire response actions.
- _____ Eliminate possible sources of ignition in the near vicinity of the spill.
- _____ Notify Terminal Management of the incident.

INITIAL RESPONSE

<i>APPENDIX G</i>

SPECIFIC INCIDENT RESPONSE CHECKLIST (Cont'd)

LINE BREAK OR LEAK

- _____ Shut down pumping equipment.
- _____ Close upstream and downstream block valves.
- _____ Utilize Combustible Gas Indicator, O₂ meter, proper colormetric indicator and other air sampling measurements to assure that areas are safe to enter for continued response operations.
- _____ Mitigate spreading of the product, as the situation demands. Potential containment strategies include:
 - Earthen dike/berm
 - Ditching
 - Spreading sorbent material over the spill
- _____ Prevent the spill from entering the waterways, sewer, etc. to the greatest extent possible, from a safe distance.
- _____ If located within containment area, ensure that drainage valve(s) is “closed”.
- _____ Drain the line section, as the situation demands.
- _____ Make all necessary repairs.
- _____ Return the line/rack to service when repairs are complete.
- _____ Clean up spilled product to eliminate any possible environmental problems. Be alert for underground cables.
- _____ Inform local operators such as utilities, telephone company, railway.
- _____ If the spill escapes the containment area, review the location of socio-economic and environmentally sensitive areas identified in the Environmental Sensitivity/Worst Case Discharge Diagram (Figure 5) in Section 1.9 of this plan. Determine which of these may be threatened by the spill and direct the response operation to these locations. Initiate protection and recovery actions.
- _____ Complete follow-up and written reporting, as the situation demands.

LEAKS / SPILLS

<i>APPENDIX G</i>

SPECIFIC INCIDENT RESPONSE CHECKLIST (Cont'd)

STORAGE TANK LEAK

- ____ Shut down all tank battery product movement operations and isolate the tank.
- ____ Initiate Confined Space Entry procedures, as applicable.
- ____ Ensure that the containment area drainage valve(s) is “closed”.
- ____ If near tank bottom, consider filling tank with water and maintain water bottom to suspend the discharge.
- ____ Utilize Combustible Gas Indicator, O₂ meter, proper colorimetric indicator and other air sampling measurements to assure that areas are safe to enter for continued response operations.
- ____ Block drainage of spilled material from traveling off-site.
- ____ Stop all traffic in hazardous area (inside and outside of property boundaries), as the situation demands.
- ____ Remove product from containment area (at a sump or in a low area) with an explosion proof pump, oil skimmer, and/or vacuum truck w/ skimmer attachments.
- ____ If applicable, process remaining product through the separator system.
- ____ Empty tank as soon as possible.
- ____ Make all necessary repairs. Return the line/tank to service when repairs are complete and tested.
- ____ Clean up product spill to eliminate any possible environmental problems. Be alert for underground cables.
- ____ Inform local operators such as utilities, telephone company, railway.
- ____ If necessary, call one (1) of the approved waste removal companies to remove the remaining sludge and residue from the containment area. Contact the Company’s Hazardous Waste Coordinator, if necessary, to remove waste from the facility for disposal.
- ____ If the spill escapes the containment area, review the location of socio-economic and environmentally sensitive areas identified in the Environmental Sensitivity/Worst Case Discharge Diagram (Figure 5) in Section 1.9 of this plan and the ACP. Determine which of these may be threatened by the spill and direct the response to these locations. Initiate protection and recovery actions.
- ____ Complete follow-up and written reporting, as the situation demands.

LEAKS / SPILLS

<i>APPENDIX G</i>

SPECIFIC INCIDENT RESPONSE CHECKLIST (Cont'd)

LEAK OR SPILL AT THE TRUCK RACK

- ____ Evacuate personnel from the truck rack area, as the situation demands.
- ____ Shut down all loading operations, pump motors and loading valves.
- ____ Guard against all source of ignition.
- ____ Stop all traffic from entering rack or hazardous area.
- ____ If a line leak, close off riser valves and/or tank valves.
- ____ Clean area with sorbent material, flush (with water) all remaining product into the separator system.
- ____ Resume truck loading operations as directed by Terminal Management.

TRUCK LEAKS/SPILLS OUTSIDE TERMINAL

- ____ Notify local fire and police departments.
- ____ Keep all traffic away from the area.
- ____ Notify Terminal Management of the incident with the following information:
 - Location of spill.
 - Size of spill.
 - Product type.
 - Present situation.
 - If assistance/equipment is required for cleanup.
- ____ If product spilled on highway and/or service station driveway, clean area with sorbent material, vacuum truck, or other clean-up equipment as available; wash down (Fire Department with water) all remaining product as the situation demands. If product entered sewer system, advise the local Fire Department.

LEAKS / SPILLS

<i>APPENDIX G</i>

SPECIFIC INCIDENT RESPONSE CHECKLIST (Cont'd)

EXPLOSIONS AND/OR FIRE

- ____ Shut down facility operations and mitigate fuel sources, as the situation demands.
- ____ Utilize applicable facility firefighting capability after conducting safety assessment of the area.
- ____ Notify local fire department(s), as the situation demands (telephone references for Fire Departments are provided in Section 1.3.1).
- ____ Evacuate area, as the situation demands.

INDIVIDUAL DISCOVERING THE FIRE - (All Employees)

- ____ Notify the Lead Terminal Operator or the supervisor on duty.
- ____ Return to the scene of the fire and, if practical (not beyond incipient stage), attempt to extinguish same with the nearest fire equipment available.
- ____ In the event the fire is too large for an individual to fight alone, the individual sounding the alarm or making the phone call should stand by at a safe distance to direct the fire department to the scene of the fire and keep personnel and vehicles from entering the danger area.
- ____ Alert all terminal areas of the exact location and extent of the fire.
- ____ Instruct all drivers to discontinue loading, disconnect loading arms, and tell all drivers present to stand by their trucks and wait for instructions to remove same to safe area.
- ____ Shut off pumps.
- ____ Close loading rack valves and stand by truck loading rack for instructions.
- ____ If product is being received from pipelines, notify the appropriate pipeline personnel of the fire and request that the pipeline be shut down. The tank which is receiving product from the pipeline must not be closed until assurance is received that the pipeline is down, unless that tank is involved in the fire.
- ____ After confirmation has been received that pipelines have been shut down, close the pipeline header valves.
- ____ Drivers with trucks in the terminal, stand by truck for instructions on where to move vehicles. Others report to the office and await further instructions.
- ____ One driver will be detailed to control traffic on streets adjacent to the terminal.

FIRE / EXPLOSIONS

<i>APPENDIX G</i>

SPECIFIC INCIDENT RESPONSE CHECKLIST (Cont'd)

EXPLOSIONS AND/OR FIRE (Cont'd)

- ____ Shut off power at the electrical panel to any vapor recovery units.
- ____ Press the emergency shut off for any vapor recovery units.
- ____ Close valves for the tanks in the tank farm.

INDIVIDUAL DISCOVERING THE FIRE (in the absence of Supervision)

- ____ In the event of fire in the absence of a member of supervision or the Terminal Operator, any Company employee on duty is designated as the individual in charge.
- ____ The individual discovering the fire will adhere to the instructions issued for the normal operation.
- ____ Ensure that the fire department has been notified.
- ____ Alert all terminal areas of the exact location and extent of the fire.
- ____ Enlist the aid of the drivers to assist wherever possible.
- ____ Ensure supervision is notified by telephone (refer to Section 1.3.1).
- ____ Shut down the pipeline if running and proceed to close tank valves.
- ____ Prior to the arrival of a member of supervision, the individual will remain in charge and will direct the fire department to the scene of the fire.

All personnel are reminded that outsiders other than emergency services will not be allowed in the terminal during the time of an emergency, and that no statements will be issued to the media or other interested parties except by designated Terminal Management. Be courteous with media representatives and direct them to the designated spokesman.

FIRE / EXPLOSIONS

APPENDIX G

SPECIFIC INCIDENT RESPONSE CHECKLIST (Cont'd)

VAPOR CLOUD

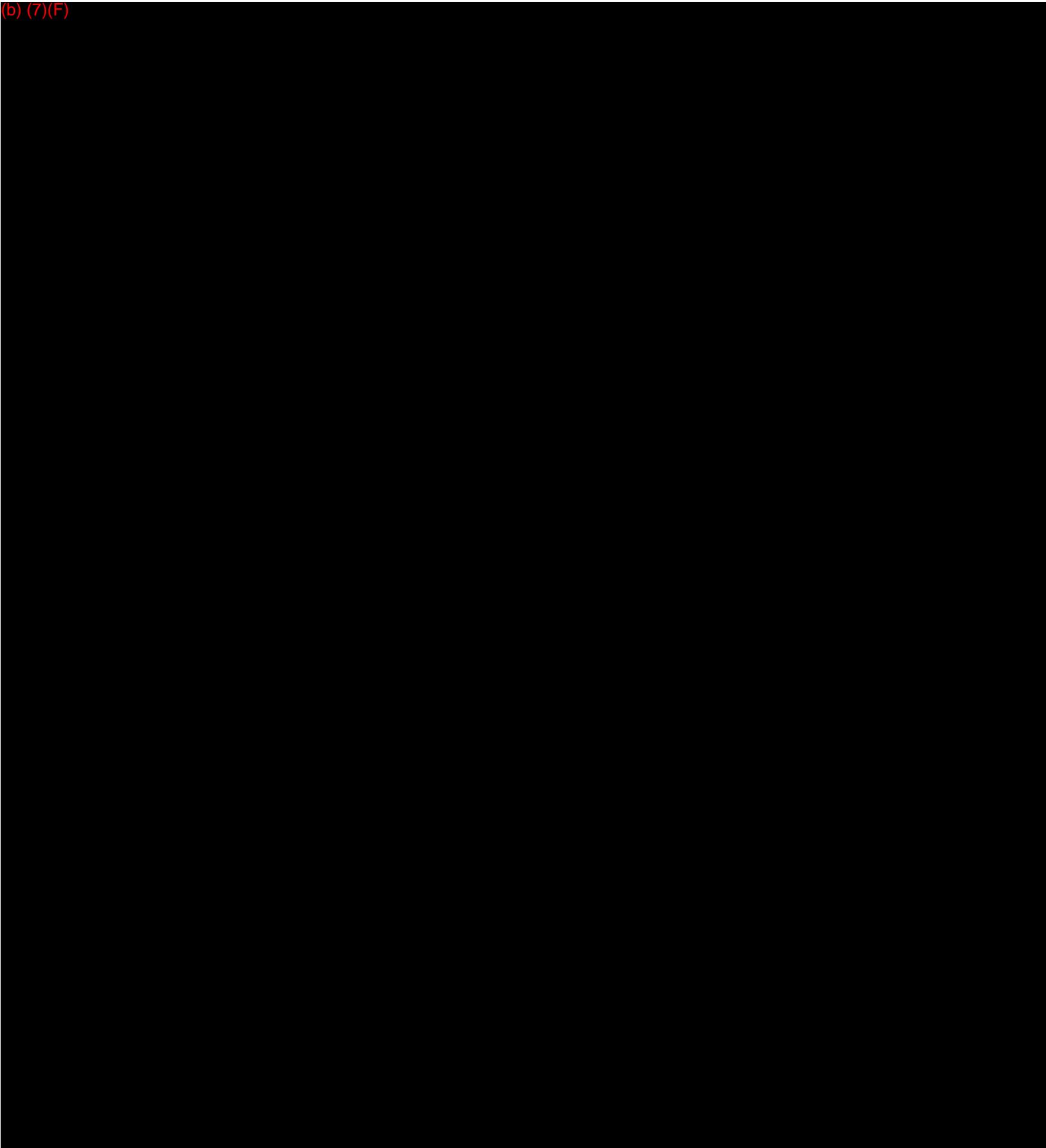
(from a massive spill, line rupture, etc)

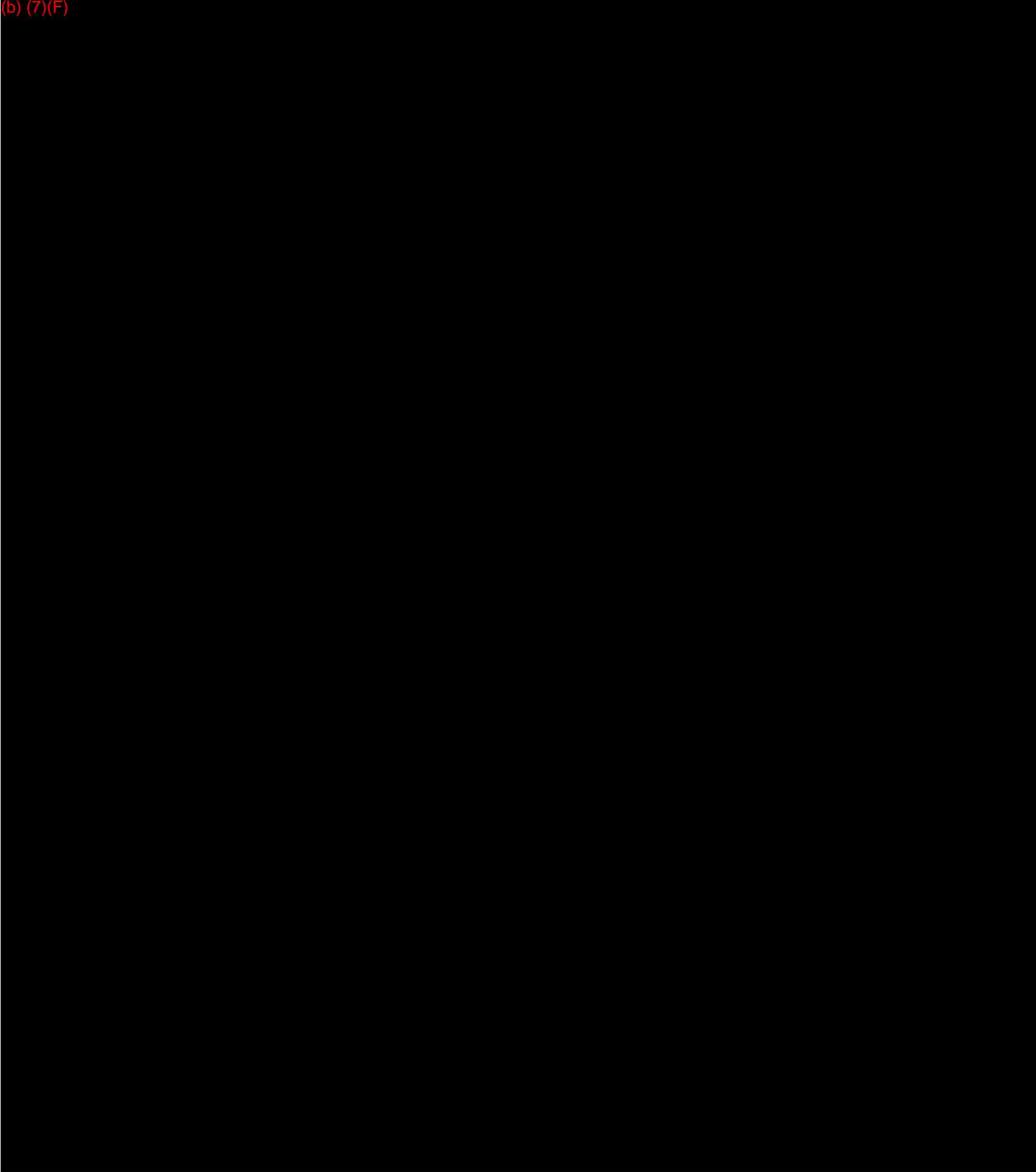
- ____ The person who discovers the vapor cloud will sound the alarm and notify the supervisor on duty and vacate the area.
- ____ **Remember: the only proper action in the presence of a vapor cloud is to get away from it. Do not shut off electrical equipment.**
- ____ All personnel will report to the evacuation gathering point for roll call and further instructions.
- ____ After all personnel have been accounted for, the Terminal Operator will initiate the following actions as deemed necessary:
 1. Shut down pipeline.
 2. Evacuation of adjacent property.
 3. Only the fire department will be permitted to enter the terminal.
- ____ Contact the appropriate agencies and potentially affected neighbors.

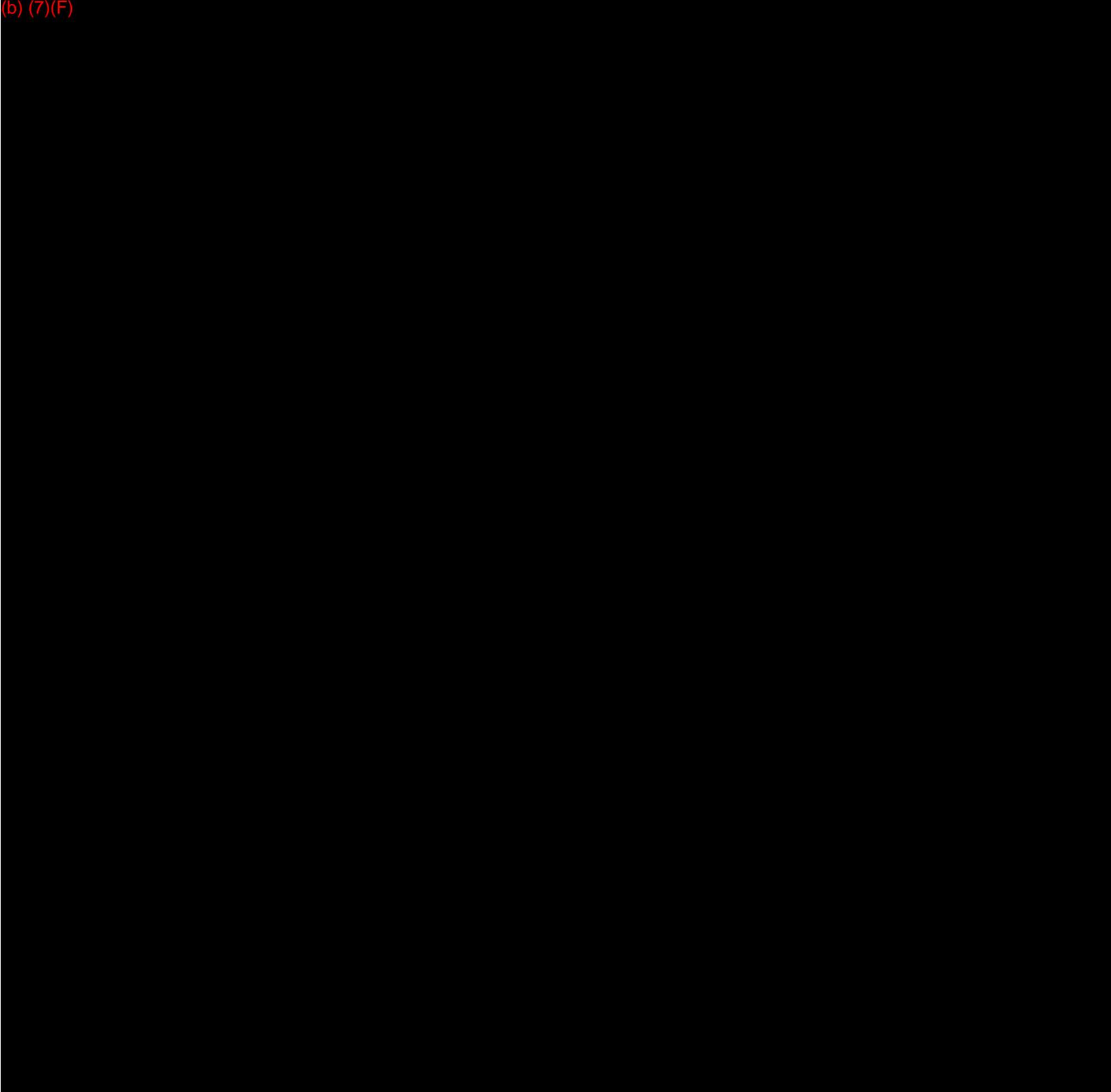
VAPOR CLOUD

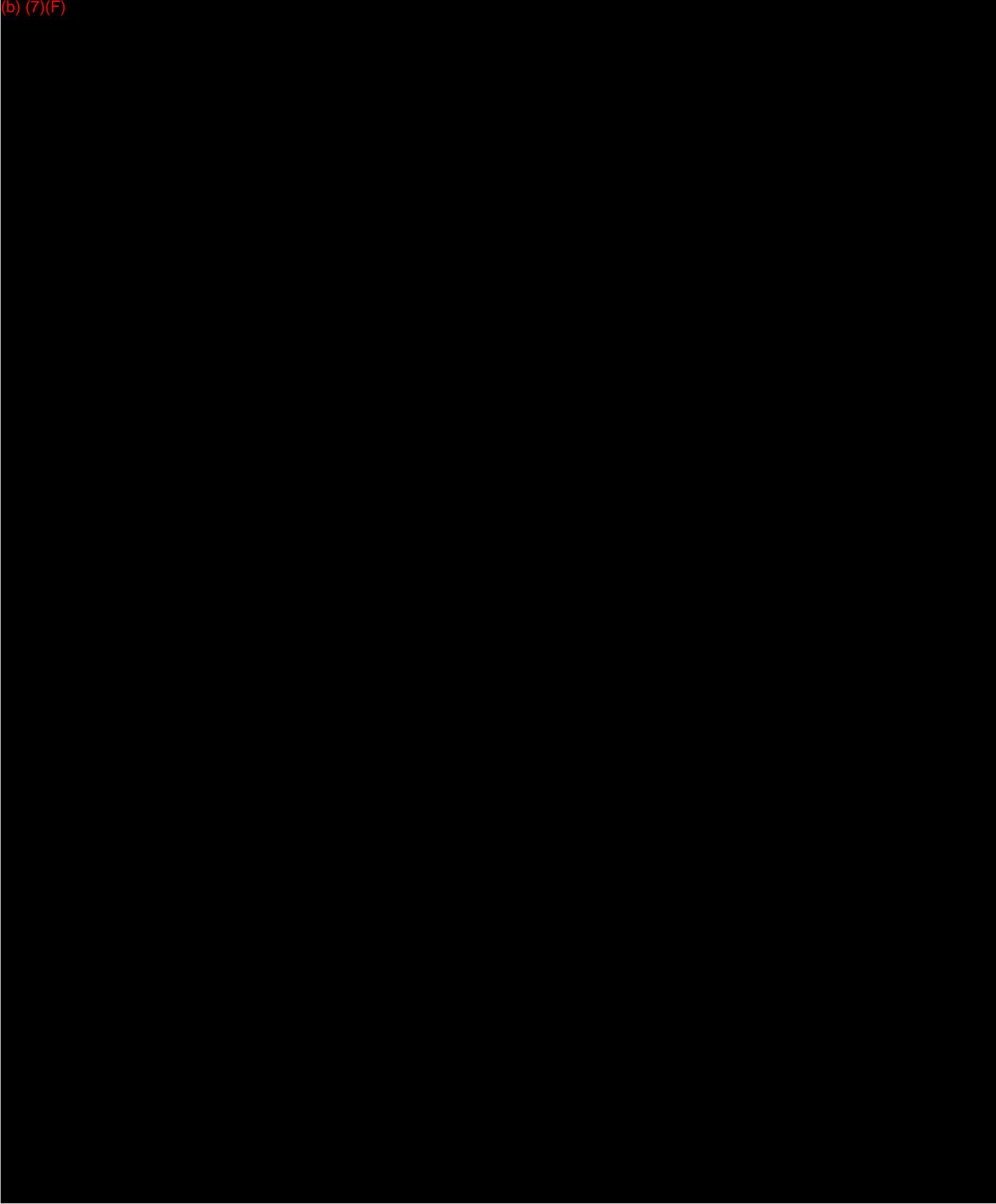
APPENDIX G

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<i>APPENDIX G</i>

SPECIFIC INCIDENT RESPONSE CHECKLIST (Cont'd)

NATURAL DISASTER (Tornado and Severe Storms)

Although many disasters cannot be prevented or predicted, preparation can significantly reduce losses. In the event of a severe weather condition or a natural disaster, the Terminal Operator will be the emergency coordinator.

- Be Aware of Changing Weather Conditions
 1. Tornado watch - conditions are right for the formation of a tornado.
 2. Tornado warning - a tornado has been sighted but is not in the area at this time.
 3. Tornado alert - a tornado has been sighted in the immediate area - take cover immediately.

- If Severe Weather Conditions Threaten
 1. Sound fire alarm.
 2. Alert terminal personnel of condition.
 3. If time permits, all personnel should assemble in an inside room in the Terminal Office for shelter.
 4. If time does not permit, seek shelter in low level area away from glass.
 5. Make certain terminal personnel are aware of the condition.
 6. Stay in shelter until "**all clear**" has been issued.

- Immediately After the Storm
 1. Account for all personnel.
 2. Survey for damages to terminal property.
 3. Initiate team for any repairs if needed (i.e. high tank alarms, lighting, etc.).
 4. Refer to this Plan for additional response guidance regarding fires, spills, etc., as needed.

NATURAL DISASTER

APPENDIX G

FLAMMABLE LIQUIDS (Non-Polar/Water-Immiscible)

The following information is intended to provide the initial responder(s) with data that may be useful in making quick decisions and executing prompt response actions. The information is intended for guideline purposes only.

PRODUCTS Diesel Gasoline

HAZARD IDENTIFICATION / RECOGNITION

**GUIDE
NO.
128**

DANGERS

- HIGHLY FLAMMABLE: Will be easily ignited by heat, sparks or flames.
- Vapors may form explosive mixtures with air.
- Vapors may travel to source of ignition and flash back.
- Most vapors are heavier than air. They will spread along ground and collect in low or confined areas (sewers, basements, tanks).
- Vapor explosion hazard indoors, outdoors or in sewers.
- Those substances designated with a "P" may polymerize explosively when heated or involved in a fire.
- Runoff to sewer may create fire or explosion hazard.
- Containers may explode when heated.
- Many liquids are lighter than water.
- Substance may be transported hot.

HEALTH

- Move victim to fresh air. Call 911 or emergency medical service.
- Apply artificial respiration if victim is not breathing. Administer oxygen if breathing is difficult.
- Remove and isolate contaminated clothing and shoes.
- In case of contact with substance, immediately flush skin or eyes with running water for at least 20 minutes.
- Wash skin with soap and water.
- Keep victim warm and quiet.
- Ensure that medical personnel are aware of the material(s) involved, and take precautions.

PUBLIC SAFETY

- Isolate spill or leak area immediately for at least 25 to 50 meters (80 to 160 feet) in all directions.
- Keep unauthorized personnel away.
- Stay upwind.
- Keep out of low areas.
- Ventilate closed spaces before entering.

EVACUATION

Large Spill

- Consider initial downwind evacuation for at least 300 meters (1,000 feet).

Fire

- If tank, rail car or tank truck is involved in a fire, ISOLATE for 800 meters (1/2 mile) in all directions; also, consider initial evacuation for 800 meters (1/2 mile) in all directions.

Information provided by the Emergency Response Guidebook 2000.

<i>APPENDIX G</i>

DOCUMENTATION OF INITIAL RESPONSE ACTIONS

It is difficult, particularly during the first few minutes of an initial response operation to think about the importance of documentation. A log should be maintained which documents the history of the events and communications that occur during the response. When recording this information, it is important to remember that the log may become instrumental in legal proceedings, therefore:

- Record only facts, do not speculate.
- Do not criticize the efforts and/or methods of other people/operations.
- Do not speculate on the cause of the spill.
- Do not skip lines between entries or make erasures. If an error is made, draw a line through it, add the correct entry above or below it, and initial the change.
- Record the recommendations, instructions, and actions taken by government/ regulatory officials.
- Document conversations (telephone or in person) with government/regulatory officials.
- Request that government/regulatory officials document and sign their recommendations or orders (especially if company personnel do not agree with the suggestions, instructions, or actions).

OIL CONTAINMENT, RECOVERY AND DISPOSAL

After initial response has been taken to stop further spillage and notifications made to the required agencies, the company will begin spill containment, recovery, and disposal operations.

The Incident Commander will assess the size and hazards of the spill. The type of product, the location of the spill, and the predicted movement of the spill will be considered.

Based on this assessment, additional clean-up personnel and equipment will be dispatched to the site and deployed to control and contain the spill. Boom may be deployed in waterways to contain the spill and to protect socio-economic and environmentally sensitive areas. Booms may also be used in waterways to deflect or guide the spill to locations where it can more effectively be cleaned up using skimmers, vacuum trucks, or sorbent material. Clean-up equipment and material will be used in the manner most effective for rapid and complete clean-up of all spilled product.

Response and cleanup will continue until all recoverable product is removed, the environment is returned to its pre-spill state, and the unified command of the Company's Incident Commander and the On-Scene Coordinators determine that further response and cleanup is no longer necessary.

SAFETY AWARENESS

It is the corporate policy of the Company to provide a safe workplace for all workers. All employees and contractors are responsible for maintaining the safety and health of all workers at the facility and the response operations.

- Prior to engaging in any spill response activity:
- All employees/contractors must have received orientation from the company's Safety Plan.
- All contractor response personnel must be in compliance with OSHA training requirements.
- All other personnel will have completed appropriate training for their position as outlined in Section 4.0.
- No employee/contractor shall engage in activities, which place them at risk without the appropriate protective equipment and training.

General Response Safety

All company and contractor personnel are expected to comply with the Site Safety and Health Plan for each spill incident.

- Any concern regarding health or safety issues should be immediately addressed.
- The First Responder must consider the spill site as dangerous and the local atmosphere explosive until air monitoring procedures prove that the area is safe.
- The First Responder must exit the area against or across the wind if possible and must also evacuate others who are working in the area.
- All injuries, no matter how minor, must be reported to the Terminal Operator in a timely manner.

<i>APPENDIX G</i>

- Prior to entering a spill area, a qualified person must perform an initial safety and health evaluation of the site.

Air Monitoring

A Safety Monitor shall be designated who is trained in the operation of air monitoring equipment. The Incident Commander must ensure that Safety Monitors are trained and that their equipment is maintained and ready for use.

- The air monitoring equipment shall be activated and checked at the location in which it is stored.
- Air monitoring measurements which are to be made prior to entry into the spill area include:
 - Lower Explosive Limit (LEL)
 - Oxygen content
 - Benzene level
- LEL readings above 10% require immediate evacuation of the area and elimination of ignition sources.
- Oxygen readings below 19.5% require the use of air supplied respiratory protection.
- After assuring that there are no hazards relating to explosion or oxygen depletion, sampling for benzene shall dictate the appropriate respiratory devices to be used by persons entering the area as follows:

Benzene

- 0.50 PPM or less, none required
- 0.50 to 1.0 PPM, half face air purifying
- to 50.0 PPM, full face air purifying
- 50.0 PPM or greater, pressure demand SCBA

The Incident Commander is responsible for industrial hygiene monitoring in the post discovery period.

Decontamination

Through training programs, terminal personnel know and understand the importance of the removal of hazardous substances from their person if they are contaminated. Within the terminal, eyewash stations and, in some cases, safety showers are located strategically to quickly remove gross contamination of harmful agents, including gasoline. Personnel must immediately shower and remove any clothing which is wet or otherwise contaminated. Showers in the change room are to be used for thorough cleansing. Persons should inspect themselves thoroughly before donning a fresh change of clothing. Employees who become saturated with gasoline should supply a urine sample (for the benzene standard's phenol test) at the end of their shift.

Contaminated clothing should be allowed to dry, protected from an ignition source, then laundered before wearing again. Contaminated personal protective equipment must be washed and sanitized before re-using. The washing of contaminated equipment is performed in a "contained area" to assure that the disposal of the wash water can be handled properly.

Establishing "Exclusion - Hot", "Decontamination - Decon", and "Support - Safe" zones are required to prevent the removal of contaminants from the containment area as well as unauthorized entry into contaminated areas.

- Regardless of the decontamination facilities available, all efforts to minimize personnel exposure should be taken.
- Decontamination facilities should be positioned prior to employee/ contractor entrance to areas where the potential for exposure to contamination exists. The appropriate Material Safety Data Sheets (MSDS) are available to aid health professionals treating the injured parties. MSDS are separately maintained at the facility.
- Decontamination facilities should be designed to prevent further contamination of the environment and should have a temporary storage area for items that will be reused in the contaminated area.
- Particular attention should be paid to personal hygiene prior to eating, drinking, or smoking.
- Additional information regarding decontamination requirements can be found in the Terminal Manual.

<i>APPENDIX G</i>

Personal Protective Equipment (PPE)

The following represents OSHA/EPA designated PPE levels for responding to emergencies, post emergency cleanup sites, and/or Temporary Storage and Disposal (TSD) sites. The responder's PPE should be chosen based on his/her level of training and assigned job duties.

Personal Protective Equipment (PPE)	
<p><u>LEVEL A</u></p> <ul style="list-style-type: none"> ● Self Contained Breathing Apparatus (SCBA) (worn inside suit) ● Encapsulated Chemical Protective Suit ● Chemical Protective Gloves ● Chemical Protective Boots ● Hard Hat 	<p><u>LEVEL B</u></p> <ul style="list-style-type: none"> ● SCBA (worn outside suit) ● Chemical Protective Suit w/Hood ● Chemical Protective Boots ● Chemical Protective Gloves ● Hard Hat
<p><u>LEVEL C</u></p> <ul style="list-style-type: none"> ● Air Purifying Respirator (APR) ● APR ½ Face / Full Face ● Hard Hat ● Glasses (worn with ½ face APR) ● Chemical Protective Boots ● Chemical Protective Gloves ● Chemical Protective Suit/Tyvek) 	<p><u>LEVEL D</u></p> <ul style="list-style-type: none"> ● Hard Hat ● Safety Glasses ● Work Uniform / Clothes ● Leather Gloves ● Safety Boots ● Nomex
<p><u>MODIFIED LEVEL C</u> Same as Level C except no APR requirements.</p>	

EMERGENCY MEDICAL TREATMENT AND FIRST AID

The terminal has arrangements for medical emergencies and first aid. The local contract physician's name, address, and phone number are posted on the terminal bulletin board. For medical advice and consultation on matters of terminal health, both the local doctor and the Company's Corporate Medical Department are available. The terminal has an arrangement with a local ambulance service and hospital for the transportation and care of injured employees. This information can also be found on the terminal bulletin board.

On-site emergency medical response requires the same rapid assessment of the patient as any other situation, but requires the responders to be aware of other considerations that may affect the way they handle the patient. These considerations include the following:

- The potential for contamination of the patient, responders, and equipment should be addressed. Responders should arrange to treat all patients AFTER the injured party has been decontaminated according to the Site Safety and Health Plan.
- Site personnel should make the initial assessment of the patient and determine the severity of the injury/illness.
- If the treatment needed is critical care or "life saving" treatment, rapid decontamination of the injured/ill party should be started. Refer to the Site Safety and Health Plan for steps to be taken in an "abbreviated" decontamination for medical treatment.
- The need for full decontamination should be carefully weighed against the need for prompt medical treatment.
- The ambulance responding to medical emergencies shall be contacted as soon as possible and instructed exactly where to respond when needed and the nature of the contaminant. Telephone reference is provided in Section 1.3.1 of this plan.
- MSDS information will be available from the Incident Commander and should be provided to medical personnel to alert them of decontamination requirements.
- If emergency medical treatment is needed, the Incident Commander will request assistance from trained medical personnel.

APPENDIX H
COMMUNICATIONS PLAN

COMMUNICATIONS PLAN

One key to effective response in any emergency situation is adequate two-way communications among operational levels all the way from the Company Response Center down to the worker at the emergency site. It is the responsibility of the on-scene Commander, through his communications Coordinator, or contracted services to provide an adequate communications system. This can best be accomplished by systematic planning prior to an emergency so that each requirement will be met smoothly and efficiently when the demand arises. The following outline presents a basic approach for organizing an emergency communication system. The details of the plan will have to be provided at the regional level to suit the peculiar local requirements.

The on-scene Commander should assign a specific person to be Communications supervisor and provide him with a detailed job description.

U. S. Coast Guard Frequencies

157.075 MHz Simplex

This is strictly a Coast Guard net, to communicate with the Coast Guard for coordination and keeping them informed.

Frequencies

CH	Frequency MHz	Use
16	156.800	Calling: Distress
13	156.650	Navigation
21		Coast Guard
22	157.000	Coast Guard
23	157.150	Coast Guard
81		Restricted Usage
82		Restricted Usage
83		Restricted Usage

U.S. VHF Marine Radio Channels and Frequencies

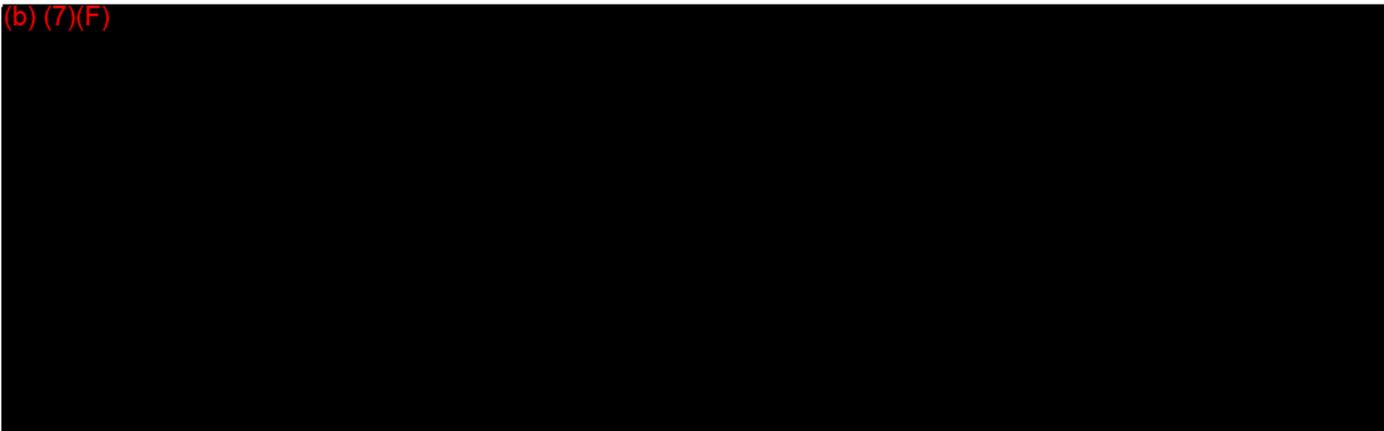
23-Feb-04

Channel Number	Ship Transmit MHz	Ship Receive MHz	Use
01A	156.050	156.050	Port Operations and Commercial, VTS. Available only in New Orleans/Lower Mississippi area.
05A	156.250	156.250	Port Operations or VTS in the Houston, New Orleans and Seattle areas.
6	156.300	156.300	Intership Safety
07A	156.350	156.350	Commercial
8	156.400	156.400	Commercial (Intership only)
9	156.450	156.450	Boater Calling. Commercial and Non-Commercial.
10	156.500	156.500	Commercial
11	156.550	156.550	Commercial. VTS in selected areas.
12	156.600	156.600	Port Operations. VTS in selected areas.
13	156.650	156.650	Intership Navigation Safety (Bridge-to-bridge). Ships >20m length maintain a listening watch on this channel in US waters.
14	156.700	156.700	Port Operations. VTS in selected areas.
15	--	156.750	Environmental (Receive only). Used by Class C EPIRBs.
16	156.800	156.800	International Distress, Safety and Calling. Ships required to carry radio, USCG, and most coast stations maintain a listening watch on this channel.
17	156.850	156.850	State Control
18A	156.900	156.900	Commercial
19A	156.950	156.950	Commercial
20	157.000	161.600	Port Operations (duplex)
20A	157.000	157.000	Port Operations
21A	157.050	157.050	U.S. Coast Guard only
22A	157.100	157.100	Coast Guard Liaison and Maritime Safety Information Broadcasts. Broadcasts announced on channel 16.
23A	157.150	157.150	U.S. Coast Guard only
24	157.200	161.800	Public Correspondence (Marine Operator)
25	157.250	161.850	Public Correspondence (Marine Operator)
26	157.300	161.900	Public Correspondence (Marine Operator)
27	157.350	161.950	Public Correspondence (Marine Operator)
28	157.400	162.000	Public Correspondence (Marine Operator)
63A	156.175	156.175	Port Operations and Commercial, VTS. Available only in New Orleans/Lower Mississippi area.
65A	156.275	156.275	Port Operations
66A	156.325	156.325	Port Operations
67	156.375	156.375	Commercial. Used for Bridge-to-bridge communications in lower Mississippi River. Intership only.
68	156.425	156.425	Non-Commercial
69	156.475	156.475	Non-Commercial
70	156.525	156.525	Digital Selective Calling (voice communications not allowed)
71	156.575	156.575	Non-Commercial
72	156.625	156.625	Non-Commercial (Intership only)
73	156.675	156.675	Port Operations
74	156.725	156.725	Port Operations
77	156.875	156.875	Port Operations (Intership only)
78A	156.925	156.925	Non-Commercial
79A	156.975	156.975	Commercial. Non-Commercial in Great Lakes only
80A	157.025	157.025	Commercial. Non-Commercial in Great Lakes only
81A	157.075	157.075	U.S. Government only - Environmental protection operations.
82A	157.125	157.125	U.S. Government only
83A	157.175	157.175	U.S. Coast Guard only
84	157.225	161.825	Public Correspondence (Marine Operator)
85	157.275	161.875	Public Correspondence (Marine Operator)
86	157.325	161.925	Public Correspondence (Marine Operator)
87A	157.375	157.375	Public Correspondence (Marine Operator)
88A	157.425	157.425	Commercial, Intership only.
AIS 1	161.975	161.975	Automatic Identification System (AIS)
AIS 2	162.025	162.025	Automatic Identification System (AIS)

Each contractor working on a spill should file with the Communication Supervisor a list of equipment requirements for each most-probable-site. Thus, on notification of an emergency, the Terminal Manager need only indicate to the communication supervisor the site of the emergency and make minor modifications in the requirements dictated by the magnitude and peculiarities of the situation. The Communication Supervisor can then initiate distribution of equipment, based on his records, as most expedient method without excessively distracting the Terminal Manager on details.

Contact should be made with the local telephone company to plan the type and quantity of equipment which might be used and to set up procedures for quick installation of phone equipment in the on-scene Commander's Headquarters and any Field Command Posts which may be anticipated.

(b) (7)(F)



Equipment Maintenance

A communications supervisor or contractor should set up arrangements with the nearest office of a qualified communications firm for providing equipment installation, maintenance, and battery charging for portable instruments.

Radio Operating Procedures

The communications person should provide personnel with instruction for proper radio operating procedures. Radio communication is greatly enhanced by the use of certain established operating procedures. Standard FCC and military procedures are complex; but, the following few fundamentals should suffice for use in a short-term emergency situation.

Typical Needs

1. Response Center

Telephone, radio and fax systems necessary to provide quick and positive disaster notification to the Terminal Manager and the Response Center and all members of the Response Team on a 24-hour basis.

2. On-scene Commanders Headquarter

Multiple telephone trunk lines.

Telephone switchboard connecting OSC Headquarters with Field Command Posts.

Radio link to Field Command Posts and all mobile units.

3. Field Command Posts

Multiple telephone lines from Headquarters switchboard.

Radio link to all mobile units.

4. On-Site Operations

Mobile Units (in vehicles and walkie-talkie).

Repeater stations as required to reach around radio obstructions and for great distances.

5. Typical Sequence of Events

Notification by OSC of disaster location and magnitude.

- * Determine magnitude of equipment need.
- * Notify Telecommunications person of location and needs.
- * Initiate prearranged use of local equipment.
- * Notify phone company of needs.
- * Notify local contractor for radio installation and maintenance.
- * Coordinate installation of equipment.
- * Maintain daily control over assignment and maintenance of all units.
- * As disaster comes under control decrease amount of equipment.
- * At end of emergency:
 - * Repair damaged equipment
 - * Replace lost equipment
 - * Return all equipment

APPENDIX I

SITE-SPECIFIC SAFETY AND HEALTH PLAN

SITE-SPECIFIC SAFETY AND HEALTH PLAN

It is Petroleum Fuel & Terminal Company's corporate policy to provide a safe workplace. All employees and contractors are responsible for maintaining the safety and health of all workers in any PF&T oil spill clean-up operation.

IN ALL SITUATIONS...SAFETY FIRST!

Employee and Contractor Orientation

Prior to engaging in any spill response activity, all employees/contractors must have received appropriate training in handling hazardous materials. No employee/contractor shall engage in activities which place him/her at risk without the appropriate protective equipment.

Site Control

Site control is to be established as soon as practical. Establish "Exclusion", "Decontamination", and "Support" zones as required. The activities required during responses to environmental incidents involving hazardous substances may contribute to the movement of materials (contaminants) from the site to unaffected areas. Response personnel working and equipment used around the substances may become contaminated and carry the material into clean areas. Material may become airborne because of its volatility, or the disturbance of contaminated soil may cause to become wind blown. To minimize the transfer of hazardous substances from the site, due to site activities, contamination control procedures are needed. Two general methods are used: establishing site work zones and removing contaminants from people and equipment.

ZONE 1: EXCLUSION ZONE

This zone, the innermost of three concentric areas, is the zone where contamination does or could occur. All people entering the Exclusion Zone must wear prescribed levels of protective gear. An entry and exit checkpoint must be established at the periphery of the Exclusion Zone to regulate the flow of personnel and equipment into and out of the zone and to verify that the procedures established to enter and exit are followed.

The outer boundary of Zone 1, the Hotline, is initially established by visually surveying the immediate environs of the site and determining where the hazardous substances involved are located; where any drainage, leachate, or spilled material is; and whether any discolorations are visible. Guidance in determining the boundaries is also provided by data from the initial site survey indicating the presence of organic or inorganic vapors/gases or particulates in the air, combustible gases, and the results of any water or soil samples.

Additional factors that should be considered include the distances needed to prevent fire or an explosion from affecting personnel outside the zone, the physical area necessary to conduct site operations, and the potential for contaminants to be blown from the area. Once the Hotline has been determined, it should be physically secured, fenced, or well defined by landmarks. During subsequent site operations, the boundary may be modified and adjusted as more information becomes available.

All personnel within the Exclusion Zone must wear the required level of protective gear. Personal protective equipment is designated on the basis of site specific conditions, including the type of work to be done and the hazards that might be encountered. Frequently, within the Exclusion Zone, different levels of protection are justified. Subareas are specified and conspicuously marked as to whether Level A, B, C, or D protection is required. The level of protection is determined by the measured concentration of substances in the air, the potential for contamination, and the known or suspected presence of highly toxic substances.

Different levels of protection in the Exclusion Zone might also be designated by job assignment. For example, collecting samples from open containers might require Level B protection, while for walk through monitoring Level C protection might be sufficient. The assignment, when appropriate, of different levels of protection within the Exclusion Zone generally make for a more flexible, effective, and less costly operation, while still maintaining a high degree of safety.

ZONE 2: DECONTAMINATION ZONE

Between the Exclusion Zone and the Support Zone is the Decontamination Zone, which provides a transition between contaminated and clean zone. Zone 2 serves as a buffer to further reduce the probability of the clean zone becoming contaminated or being affected by other existing hazards. It provides additional assurance that the physical transfer of contaminating substances on people, equipment, or in the air is limited through a combination of decontamination, distance between the Exclusion Zone and the Support Zone, air dilution, zone restrictions, and work functions.

Initially, the Decontamination Zone is considered to be a noncontaminated area. At the boundary between the Exclusion and Decontamination Zones, decontamination stations are established--one for personnel and one for heavy equipment. Depending on the size of the operation, more than two stations may be necessary. Exit from the Exclusion Zone is through a decontamination station.

As operations proceed, the area around the decontamination station may become contaminated, but to a much lesser degree than the Exclusion Zone. On a relative basis, the amount of contaminants should decrease from the Hotline to the Support Zone due to the distance involved and the decontamination procedures used.

The boundary between the Support Zone and the Decontamination Zone, called the Contamination Control Line, separated the possibly low contamination area from the clean Support Zone. Access to the Decontamination Zone from the Support Zone is through a control point. Personnel entering there would wear the prescribed personal protective equipment, if required, for working in the Decontamination Zone.

SUPPORT ZONE

The Support Zone, the outermost part of the site, is considered to be a non-contaminated or clean area. Support Equipment (command post, equipment trailer, etc.) is located in the zone; traffic is restricted to authorized response personnel. Since normal work clothes are appropriate within this zone, potentially contaminated personnel clothing, equipment, and samples are not permitted but are left in the

Decontamination Zone until they are decontaminated. The location of the command post and other support facilities in the Support Zone depends on accessibility, wind direction, and resources.

Safety Plan

Operations during spills shall be conducted in accordance with Petroleum Fuel & Terminal's Site Specific Safety and Health Plan.

General Response Safety

Prior to exposure to contaminants, positive identification of the contaminant must be gained. Until positive identification is made, no entry in less than "Level B" protective devices shall be allowed.

Protective Clothing

Level A ensemble consists of:

- * Pressure demand (positive pressure), full face SCBA or airline unit with escape SCBA.
- * Fully encapsulated chemical resistant suit.
- * Inner chemical resistant gloves.
- * Chemical resistant safety shoes/boots.
- * Full time two way communications.

Level B ensemble consists of:

- * Pressure demand (positive pressure), full face SCBA or airline unit with escape SCBA.
- * Chemical resistant clothing such as overalls and long sleeved jacket, hooded one or two piece chemical splash suit, or disposable chemical resistant clothing.
- * Inner and outer chemical resistant gloves.
- * Chemical resistant safety shoes and boots.
- * Hard Hat.
- * Two way radio communications.

Level C ensemble consists of:

- * Full facepiece, air purifying respirator with appropriate canister or cartridges.
- * Chemical resistant clothing such as overalls and long sleeved jacket, hooded one or two piece chemical

splash suit, or disposable chemical resistant clothing.

- * Inner and outer chemical resistant gloves.
- * Chemical resistant safety shoes and boots.
- * Hard hat.

Level D ensemble consists of:

- * Coveralls.
- * Safety shoes.
- * Safety glasses or chemical splash goggles.
- * Hard hat.

Note: Level D is appropriate only if there is NO KNOWN OR SUSPECTED hazardous air contaminants and NO POTENTIAL for skin contact with hazardous materials!

After identifying contaminant(s) select appropriate protective devices based on the hazard.

No employee/contractor shall conduct any operations in areas not directly visible to other personnel. Operations requiring entry to such areas shall be conducted using the "Buddy-System" and the site supervisor shall be notified. Any personnel conducting operations in such areas will establish and maintain communications with their supervisor for the duration of such activities.

An employee alarm system shall be installed to notify employees/contractors of an emergency, work stoppage, or any other condition requiring site wide notification.

Spill conditions may change rapidly, continual monitoring of conditions is required.

Attempt to anticipate changes, for example:

- * Fuel spilled during extremely cold weather may not generate vapors in quantities that will support combustion. Even a slight warming trend could cause concentrations of vapors which are flammable. Be aware of conditions affecting safety at all times.
- * Wind changes could cause harmful accumulations of vapors to occur in previously safe areas. Downwind, low lying areas should be particularly suspect. All

personnel should remember that sense of smell is not an adequate indicatin of the presence of harmful gases or vapors.

Ambient temperatures can substantially affect work conditions and worker safety. All personnel shall remain alert to changing conditions affecting their safety. Some examples of temperature concerns are:

- * Heat Stress - Operations requiring protective clothing require constant surveillance to ensure personnel are not affected adversely by high temperatures or humidity. Work/rest regimens should be adjusted to accommodate temperature extremes. Signs and symptoms of Heat Stress (in order or increasing severity are: heat rash, cramps, heat exhaustion, and heat stroke.
- * Heat Rash - Not only a nuisance, but can effect the body's ability to tolerate heat. Treat with drying lotions and keep area clean.
- * Heat Cramps - Generally occur after prolonged exposure to high temperatures coupled with profuse sweating, and inadequate replacement of salt.
- * Heat Exhaustion - Signs include dizziness, profuse sweating, cool moist skin.
- * Heat Stroke - An extremely serious medical condition! Symptoms may include dizziness, nausea, severe headaches, hot dry skin, high body temperature. If cooling of the victims body is not begun immediately, irreversible damage or death may result.

During each break or rest period, all workers are encouraged to remove protective clothing to facilitate cooling as needed.

Appropriate supplies of electrolyte replacing fluids and water must be readily available for all personnel. Fluids should be taken regularly while conduction operations in protective clothing. Sense of thirst does not serve as adequate indicator of the need for fluids.

Any concern regarding health or safety issues should be addressed.

All injuries, no matter how minor, must be reported to a supervisor.

Hypothermia

If properly protected, cold temperatures pose no problems for response personnel. Hypothermia occurs when the body loses heat faster than it can produce it.

The onset of hypothermia is indicated by: involuntary shivering, stinging sensation on skin, and speech difficulty. Further heat loss results in forgetfulness and loss of motor skills, leading to collapse and finally death.

Protective Clothing - No one type of clothing is best for all weather conditions. "Layered" clothing is generally the best approach to protecting against cold climates. Numerous layers of relatively light clothing with an outer shell of windproof material maintain body temperature much better than a single heavy garment.

Victims of hypothermia should be treated immediately. Affected persons should be warmed using blankets or warm water as available.

Any concern regarding health or safety issues should be addressed.

All injuries, no matter how minor, must be reported to a PF&T supervisor in a timely fashion.

Water Safety

All personnel performing tasks on any dock, pier, or boat must wear an approved personal flotation device (PFD) for the duration of those tasks.

- * In the event that any person falls into the water:
 - * Stop the operation and sound the "man overboard" alarm immediately.
 - * Approach the person from downstream or downwind.
 - * Shut off engine when close.

- * Use boarding ladder if possible. If no ladder is available, use area of lowest freeboard.
- * Keep boat balanced.
- * Do not go into the water to help unless the person is unconscious.
- * Bring the person on board stomach to gunnel.
- * During boom deployment operations, the following safety practices should be considered:
 - * Adequate radio communications between the boat operator and personnel at the boom storage site is imperative to allow the operator to be informed immediately of any problems that may cause injuries to personnel or damage to boom.
 - * Stay clear of tow lines as they may exhibit a whipping action if they break. The tow line should be attached to the tow vessel in such a way that it can be cast loose if necessary. Always have a knife on board in the event that it becomes necessary to free the boom from the boat due to strong currents, entanglement, or other factors.
 - * Avoid tying the tow line to an off-center cleat as it can cause difficult steering or the vessel to take on water.
 - * When taking up slack on the tow line ensure that all personnel stay clear to avoid the potential of getting limb tangled in the line. Never allow anyone to hold a tow line during boom deployment.
 - * Pull the boom at a reasonable, steady speed. Excessive speed can exert strain on the vessel, boat, and boom.
 - * Insure that the boat has sufficient strength for existing currents, winds, and length of boom being towed.
 - * When deploying anchors, do not hold them by the shank or flukes.

- * Ensure that the following safety equipment is on board to boat:

- * Life Preservers, spare paddles
- * Extra towing rope (100 ft.)
- * Flashlight, horn, knife
- * Bailing apparatus, spotlight
- * Anchor, radio, life ring

Respiratory Protection

During response operations, all workers shall observe and follow the contractors Site Respiratory Protection Program.

Only NIOSH approved devices shall be used.

Personnel having any facial characteristics which prevent obtaining an effective seal with respirator (including facial hair) shall not be allowed entry into areas which do, or may require the use of respirators per OSHA 29 CFR 1910.134.

Emergency Medical Treatment

The following information should be posted at all clean-up sites:

All requests for emergency and life saving treatment are to be made through (Organization Name).

Telephone Number:
 Radio Channel (if approved):
 Nearest Medical Facility:
 Address:
 Telephone:
 Contact:

MINOR EMERGENCY TREATMENT

Facility:
 Address:
 Phone:
 Contact:

The ambulance service/department which will be expected to respond to medical emergencies shall be contacted as soon as possible and instructed exactly where to respond when needed and the nature of the contaminant. MSDS information should be provided as available and medical personnel should be aware of decontamination requirements.

Decontamination

Decontamination facilities shall be designed to allow effective, efficient removal and containment of contaminants. Decontamination facilities must be in place prior to employee/contractor entrance to areas where potential for exposure to contaminants exists.

REGARLDESS OF THE DECONTAMINATION FACILITIES, ALL EFFORTS TO MINIMIZE PERSONNEL EXPOSURE SHOULD BE TAKEN.

A separate decontamination area should be established to allow only for emergency decontamination of personnel requiring life saving medical attention. Appropriate MSDS's shall be stored at this area at all times and be provided to health professionals involved in the care of injured workers.

Decontamination facilities shall be designed to prevent further contamination of the environment and allow efficient movement of workers through the area.

Incorporated into the decontamination area will be a "tool drop" area to serve as a temporary storage area for items that will be reused in the contaminated area such as rakes, shovels, brooms, etc.

APPENDIX J

MATERIAL SAFETY DATA SHEETS

(Maintained at Facility with HazCom Plan – Kept to satisfy Section 1.3.5 of this plan)

APPENDIX K

**FACILITY SELF-INSPECTION, DRILLS/EXERCISES,
AND RESPONSE TRAINING FORMS**

FACILITY SELF-INSPECTION FORMS

Petroleum Fuel and Terminal

*1622 South Clinton Street
Baltimore, Maryland 21224*

Daily Terminal Inspections

Date: _____

LOCATION OF INSPECTION	ACTIONS TAKEN TO CORRECT PROBLEMS – IF ANY	TIME OF INSPECTION	INSPECTORS NAME
**** Dock Facility **** **** Inspect each shift ****			
Oil / Separators 001, 002, 003, 004			
Loading Rack			
Security- (Fences, Gates, Camera's, Locks, Lighting) *** SEE BELOW ***	*** SEE BELOW ***		
Gulf Field & Small Field			
(7, 8, 9) & (15, 18) Fields			
(16, 17) & (19, 20) Fields Including Hot Oil Tank Level			
Loop Area			
Leak Detection Ports 16 & 17 Tanks' Underground Casings	12" Casing:	Test Method (Circle One)	Testing Results
		Visual, Smell MSA Meter	
	14" Casing:	Test Method (Circle One)	Testing Results
		Visual, Smell MSA Meter	

ALL INSPECTIONS ARE ONCE PER DAY EXCEPT FOR THE DOCK!!!!

****** SECURITY INSPECTIONS MUST BE DONE 2X'S PER SHIFT UNTIL FURTHER NOTICE ******

APPENDIX K

MONTHLY INSPECTION CHECKLIST

Place a checkmark for each piece of equipment, if acceptable; if unacceptable mark space with * and explain in comments section at bottom of form		Tank #20-1		Tank #10-2		Tank #5-3		Tank #10-4		Tank #5-10		Tank #80-13		Tank #80-5		Tank #30-6			
1.	Tank/Containers – Check for:																		
a.	Drip marks																		
b.	Discoloration of tanks																		
c.	Puddles containing oil																		
d.	Corrosion																		
e.	Cracks																		
f.	Localized dead vegetation																		
g.	Vegetation obstructing inspection																		
h.	Oil at Release Prevention Barrier (RPB) or in leak detection system																		
2.	Foundations/Supports – Check for:																		
a.	Cracking or deterioration of support																		
b.	Discoloration or corrosion																		
c.	Puddles containing oil																		
d.	Settlement																		
e.	Gaps between tank & foundation/support																		
f.	Damage caused by vegetation roots																		
g.	Vegetation obstructing inspection																		
3.	Piping – Check for:																		
a.	Droplets of oil																		
b.	Discoloration																		
c.	Corrosion																		
d.	Pipes bowing between supports																		
e.	Evidence of oil seepage from valve stems, flanges, seals																		
f.	Localized dead vegetation near piping																		
4.	Secondary Containment – Dike, Berm, or Containment Structure																		
a.	Standing water (does area need to be drained to maintain capacity?)																		
b.	If yes, indicate the date the valve is opened and	O	-	O	-	O	-	O	-	O	-	O	-	O	-	O	-	O	-
c.	the date the valve is closed:																		
d.	Status of dike drain valve and valve lock (where appropriate)																		

APPENDIX K

MONTHLY INSPECTION CHECKLIST

Place a checkmark for each piece of equipment, if acceptable; if unacceptable mark space with * and explain in comments section at bottom of form		Tank #30-12		Tank #54-11		Tank #54-8		Tank #54-9		Tank #34-7		Tank #175-19		Tank #175-20		Tank #200-16		
1.	Tank/Containers – Check for:																	
a.	Drip marks																	
b.	Discoloration of tanks																	
c.	Puddles containing oil																	
d.	Corrosion																	
e.	Cracks																	
f.	Localized dead vegetation																	
g.	Vegetation obstructing inspection																	
h.	Oil at Release Prevention Barrier (RPB) or in leak detection system																	
2.	Foundations/Supports – Check for:																	
a.	Cracking or deterioration of support																	
b.	Discoloration or corrosion																	
c.	Puddles containing oil																	
d.	Settlement																	
e.	Gaps between tank & foundation/support																	
f.	Damage caused by vegetation roots																	
g.	Vegetation obstructing inspection																	
3.	Piping – Check for:																	
a.	Droplets of oil																	
b.	Discoloration																	
c.	Corrosion																	
d.	Pipes bowing between supports																	
e.	Evidence of oil seepage from valve stems, flanges, seals																	
f.	Localized dead vegetation near piping																	
4.	Secondary Containment – Dike, Berm, or Containment Structure																	
a.	Standing water (does area need to be drained to maintain capacity?)																	
b.	If yes, indicate the date the valve is opened and	O	-	O	-	O	-	O	-	O	-	O	-	O	-	O	-	O
c.	the date the valve is closed:																	
d.	Status of dike drain valve and valve lock (where																	

APPENDIX K

MONTHLY INSPECTION CHECKLIST

Place a checkmark for each piece of equipment, if acceptable; if unacceptable mark space with * and explain in comments section at bottom of form		Tank #195-17		Tank #175-15		Tank #175-18		Misc. Containers		Transfer Areas					
1.	Tank/Containers – Check for:														
a.	Drip marks														
b.	Discoloration of tanks														
c.	Puddles containing oil														
d.	Corrosion														
e.	Cracks														
f.	Localized dead vegetation														
g.	Vegetation obstructing inspection														
h.	Oil at Release Prevention Barrier (RPB) or in leak detection system														
2.	Foundations/Supports – Check for:														
a.	Cracking or deterioration of support														
b.	Discoloration or corrosion														
c.	Puddles containing oil														
d.	Settlement														
e.	Gaps between tank & foundation/support														
f.	Damage caused by vegetation roots														
g.	Vegetation obstructing inspection														
3.	Piping – Check for:														
a.	Droplets of oil														
b.	Discoloration														
c.	Corrosion														
d.	Pipes bowing between supports														
e.	Evidence of oil seepage from valve stems, flanges, seals														
f.	Localized dead vegetation near piping														
4.	Secondary Containment – Dike, Berm, or Containment Structure														
a.	Standing water (does area need to be drained to maintain capacity?)														
b.	If yes, indicate the date the valve is opened and	O	-	O	-	O	-	O	-	O	-	O	-	O	-
c.	the date the valve is closed:														
d.	Status of dike drain valve and valve lock (where appropriate)														

APPENDIX K

RESPONSE EQUIPMENT INSPECTION LOG

Item	Inventory Present	Storage Location	Accessibility	Operational Status	Last Test Date	Frequency of Testing	Date Purchased	Expected Replacement
Skimmers / Pumps								
None								
Boom								
6" diameter x 12" skirt, 22-oz PVC fabric								
Chemicals Stored (Dispersants listed on EPA's NCP Product Schedule)								
None								
Dispersant Dispensing Equipment								
None								
Sorbents								
6"/8"/10" absorbent boom								
Absorbent pads								
Sand								
Hand Tools (Hand tools at terminal is not dedicated to emergency response)								
Shovels, rakes, etc.								
Communication Equipment (Communication equipment at terminal are not dedicated to emergency response)								
Handheld radios								
Mobile-phone								
Fire Fighting and Personal Protective Equipment								
Various								
Other (e.g., Heavy Equipment, Boats, and Motors)								
20-ft boat with 115-hp outboard motor								
12-ft aluminum rowboat with 8-hp outboard motor								
3,500-watt generator								
Inspector Signature: _____							Date: _____	

<i>APPENDIX K</i>

SECONDARY CONTAINMENT INSPECTION LOG

Checklist Item	Satisfactory? (yes/no)	Comments (provide if item does not meet inspection standards)				
Dike, Berm, or Containment Structure						
Standing water (does area need to be drained to maintain capacity?)						
If yes, indicate the date the valve is opened and the date the valve is closed:	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; text-align: center;">Opened</td> <td style="width: 50%; text-align: center;">Closed</td> </tr> <tr> <td style="height: 20px;"></td> <td style="height: 20px;"></td> </tr> </table>	Opened	Closed			
Opened	Closed					
Status of dike drain valve and valve lock (where appropriate)						
Permeability of dike (holes)						
Debris/containers inside containment area						
Erosion of dike if earthen						
Permeability of floor of area (cracks, holes)						
Status of pipes, inlets, drainage beneath tanks, etc.						
Secondary Containment – Other						
Cracks						
Discoloration						
Standing water or oil						
Corrosion						
Valve conditions						
Retention Areas or Drainage Areas						
Erosion						
Available capacity						
Presence of oil						
Debris inside containment area						
Stressed vegetation						
Inspector Signature: _____		Date: _____				

DRILLS/EXERCISES FORMS

APPENDIX K

QUALIFIED INDIVIDUAL NOTIFICATION DRILL LOGS

(From Section 1.8.2.1 of plan)

(Current records are kept for at least 5 years in the terminal environmental files.)

- 1. Date Performed:
- 2. Company:
- 3. Qualified Individual(s):

 QI Name:

 Is this person identified in FRP (Y/N):

 Time in which QI or designee responded:

 Method used to contact QI (select all that apply):
 Other: _____

 Telephone / Pager / Radio / Other

 Person Who Initiated Exercise:

- 5. Evaluation:
- 6. Changes to Be Implemented:
- 7. Time Table for Implementation:
- 8. Certifying Name & Signature:

<i>APPENDIX K</i>

SPILL MANAGEMENT TEAM TABLETOP DRILL LOG

(From Section 1.8.2.2 of plan)

(Current records are kept for at least 5 years in the terminal environmental files.)

1. Date Performed:
2. Company:
3. Qualified Individual(s):
4. Emergency Scenario:
 - Exercise or Actual Response (select one):
 - Location of exercise:
 - Time started:
 - Time completed:
 - Response Plan scenario used (select one):
 - Average Most Probable Discharge
 - Maximum Most Probable Discharge
 - Worst Case Discharge
 - Size of (exercise) spill _____ (bbls/gals):
5. Indicate which of the 15 Core Components of the FRP were exercised during this exercise (select all that apply)::

- | | |
|---|--|
| <ol style="list-style-type: none"> 1. Notification 2. Staff Mobilization 3. Ability to operate within system outlined in FRP 4. Discharge control 5. Assessment of Discharge 6. Containment of Discharge 7. Recovery of Spilled Material 8. Protection of Sensitive Areas | <ol style="list-style-type: none"> 9. Disposal of recovered material/debris 10. Communications 11. Transportation 12. Personnel Support 13. Equipment maintenance support 14. Procurement 15. Documentation |
|---|--|

6. Evaluation:

8. Changes to Be Implemented:

8. Time Table for Implementation:

9. Certifying name and Signature

RESPONSE TRAINING FORMS

<i>APPENDIX K</i>

DISCHARGE PREVENTION MEETINGS LOGS

(From Section 1.8.3.1 of plan)

DISCHARGE PREVENTION MEETING LOG				
Date	Attendees	Subject/Issue Identified	Required Action	Implement- ation Date