



**PORT MANATEE TERMINAL AND PIPELINE  
FACILITY RESPONSE PLAN  
AND  
SPILL PREVENTION, CONTROL, AND  
COUNTERMEASURE (SPCC) PLAN**

In Compliance with the Facility Response Plan, Spill Prevention Control and Countermeasure (SPCC) Plan Regulation in 40 CFR 112, U.S. Coast Guard Regulations under 33 CFR 154, and Department of Transportation Regulations under 49 CFR 194

**FACILITY CONTACT PERSON:**

Mary Maxwell  
Environmental Leader

(941) 776-5278 (Office)  
(b) (6) (Home)  
(b) (6) (Mobile)

**FACILITY OPERATOR:**

King-Murray Operating Company LLC,  
c/o Florida Power & Light Co.  
Port Manatee Terminal and Pipeline  
12310 Reeder Road  
Palmetto, FL 34221

*[Intentionally Blank]*

## TABLE OF CONTENTS

<b>RESPONSE PLAN COVER SHEET &amp; GENERAL FACILITY INFORMATION .....</b>	<b>VII</b>
<b>APPLICATION OF SUBSTANTIAL HARM CRITERIA .....</b>	<b>XI</b>
<b>P.E. CERTIFICATION.....</b>	<b>XIII</b>
<b>MANAGEMENT APPROVAL.....</b>	<b>XV</b>
<b>PLAN UPDATING PROCEDURE .....</b>	<b>XVII</b>
<b>SPILL PREVENTION CONTROL AND COUNTERMEASURES COMPLIANCE</b>	
<b>INSPECTION PLAN REVIEW PAGE.....</b>	<b>XIX</b>
<b>FRP &amp; SPCC PLAN TRANSMITTAL AND RECEIPT ACKNOWLEDGEMENT FORM 2 .....</b>	<b>XXI</b>
<b>PLAN UPDATE.....</b>	<b>XXIII</b>
<b>RECORD OF REVISIONS .....</b>	<b>XXIV</b>
<b>CROSS REFERENCE INDEX .....</b>	<b>XXV</b>
<b>SECTION I: INTRODUCTION AND PLAN CONTENT .....</b>	<b>I-1</b>
A. PURPOSE OF PLAN .....	I-1
B. SCOPE .....	I-3
C. POLICY .....	I-3
D. MANAGEMENT COMMITMENT.....	I-4
<b>SECTION II: EMERGENCY RESPONSE ACTION PLAN.....</b>	<b>II-1</b>
<b>SECTION III: FACILITY DESCRIPTION .....</b>	<b>III-1</b>
A. FACILITY LOCATION AND DESCRIPTION.....	III-1
B. WATERFRONT DESCRIPTION .....	III-7
C. ENVIRONMENTAL CONDITIONS.....	III-7
D. METEOROLOGICAL CONDITIONS.....	III-7
<b>SECTION IV: NOTIFICATION / ACTIVATION PROCEDURES .....</b>	<b>IV-1</b>
A. INTERNAL NOTIFICATIONS.....	IV-1
B. EXTERNAL NOTIFICATIONS .....	IV-1
<b>SECTION V: EMERGENCY RESPONSE ORGANIZATION .....</b>	<b>V-1</b>
A. TIERED RESPONSE .....	V-1
B. EMERGENCY RESPONSE ORGANIZATION.....	V-3
C. ONSITE RESPONSE TEAM (ORT).....	V-4
D. CORPORATE RESPONSE TEAM (COSRT) .....	V-7
<b>SECTION VI: DISCHARGE RESPONSE ACTIVITIES.....</b>	<b>VI-1</b>
A. INCIDENT ASSESSMENT .....	VI-1
B. RESPONSE STRATEGY.....	VI-2
C. IDENTIFICATION OF ENVIRONMENTALLY SENSITIVE AREAS.....	VI-7
D. PROTECTION OF ENVIRONMENTALLY SENSITIVE AREAS.....	VI-7
E. WASTE MANAGEMENT.....	VI-8
F. COMMUNICATIONS.....	VI-9
G. COMMAND POST.....	VI-9
H. SITE SECURITY .....	VI-9
I. SURVEILLANCE .....	VI-10
J. EVACUATION PLAN.....	VI-10
K. REPORTS AND DOCUMENTATION .....	VI-14
L. LEAK DETECTION .....	VI-15
M. SOURCE VERIFICATION.....	VI-16
N. SOURCE CONTROL .....	VI-16
O. EMERGENCIES (FIRE) .....	VI-17
P. RESPONSE AND EVALUATION CRITERIA FOR GROUP V PETROLEUM OILS.....	VI-18
<b>SECTION VII: IDENTIFICATION OF ENVIRONMENTALLY SENSITIVE AREAS/RESOURCES VII-1</b>	
A. INTRODUCTION.....	VII-1
B. PROTECTION OF ENVIRONMENTALLY SENSITIVE AREAS/RESOURCES.....	VII-4
C. WILDLIFE PROTECTION .....	VII-8
<b>SECTION VIII: SPILL SCENARIOS.....</b>	<b>VIII-1</b>
A. OVERVIEW .....	VIII-1
B. LEVEL I SPILL SCENARIO.....	VIII-3
C. LEVEL II SPILL SCENARIO .....	VIII-4

D. LEVEL III SPILL SCENARIO .....	VIII-6
<b>SECTION IX: WASTE MANAGEMENT .....</b>	<b>IX-1</b>
A. TRANSFER, STORAGE, AND DISPOSAL OF WASTES .....	IX-1
B. CHARACTERIZATION OF WASTES .....	IX-1
C. OILY LIQUID WASTES .....	IX-1
D. NON-OILY LIQUID WASTES .....	IX-2
E. OILY SOLID/SEMI-SOLID WASTES .....	IX-2
F. NON-OILY SOLID/SEMI-SOLID WASTES .....	IX-2
G. HAZARDOUS WASTES .....	IX-2
H. SEGREGATION OF WASTES .....	IX-2
I. STORAGE AND DISPOSAL PROCEDURES .....	IX-3
J. TRANSPORTATION PROCEDURES .....	IX-9
K. DISPOSAL PROCEDURES .....	IX-9
L. RECYCLING .....	IX-10
M. TREATMENT .....	IX-11
<b>SECTION X: DISCHARGE PREVENTION MEASURES .....</b>	<b>X-1</b>
A. SPCC PLAN COMPONENTS .....	X-1
B. FACILITY'S CONFORMANCE WITH SPCC REQUIREMENTS .....	X-1
C. BULK STORAGE AND NON-BULK STORAGE CONTAINERS .....	X-2
D. FACILITY LOADING & UNLOADING & FACILITY TRANSFER OPERATIONS .....	X-4
E. CONTAINMENT AND DIVERSIONARY STRUCTURES .....	X-5
F. DISCHARGE PREVENTION MEASURES .....	X-7
G. OTHER EFFECTIVE DISCHARGE PREVENTION & CONTAINMENT PROCEDURES .....	X-9
H. FACILITY DRAINAGE .....	X-9
I. DISCHARGE POTENTIAL .....	X-10
J. DISCHARGE REPORTS .....	X-12
K. INTEGRITY TESTING & BRITTLE FRACTURE EVALUATION .....	X-12
L. INSPECTIONS .....	X-14
M. SITE SECURITY .....	X-16
<b>SECTION XI: HAZARD EVALUATION .....</b>	<b>XI-1</b>
A. OVERVIEW .....	XI-1
B. HAZARD IDENTIFICATION .....	XI-1
C. VULNERABILITY ANALYSIS .....	XI-9
D. RISK ANALYSIS .....	XI-25
E. CONTAINMENT AND DRAINAGE PLANNING .....	XI-31
<b>SECTION XII: TRAINING AND DRILLS .....</b>	<b>XII-1</b>
A. DISCHARGE PREVENTION AND RESPONSE TRAINING .....	XII-1
B. CORPORATE RESPONSE TEAM TRAINING .....	XII-2
C. DRILL PROCEDURES .....	XII-2
D. RECORDKEEPING .....	XII-8
<b>SECTION XIII: PLAN REVIEW AND UPDATE PROCEDURES .....</b>	<b>XIII-1</b>

**APPENDICES**

APPENDIX A:	Oil Spill Emergency Response Equipment.....	A-1
APPENDIX B:	Amendments.....	B-1
APPENDIX C:	Inspection Forms .....	C-1
APPENDIX D:	Communications Plan.....	D-1
APPENDIX E:	Site Safety and Health Plan.....	E-1
APPENDIX F:	Media Relations .....	F-1
APPENDIX G:	List of Acronyms, Definitions, and References .....	G-1
APPENDIX H:	Worksheet for Determining Discharge Volumes.....	H-1
APPENDIX I:	Oil Spill Form .....	I-1

## LIST OF FIGURES

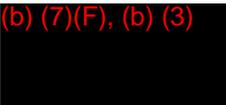
FIGURES	DESCRIPTION	PAGE
II-1	EMERGENCY RESPONSE ACTIONS .....	II-2
II-2	FLOW CHART OF INITIAL DISCOVERY, NOTIFICATION AND EVALUATION OF SPILL .....	II-8
II-3	DECISION TREE FOR SPILL OCCURRING IN OR PREDICTED TO REACH SURFACE WATER .....	II-9
II-4	DECISION TREE FOR SPILLS ON LAND SURFACES.....	II-10
II-5	ONSITE RESPONSE ORGANIZATION .....	II-22
II-6	LOCATION OF EQUIPMENT TANKS AND FUEL OIL STORAGE TANKS.....	II-55
II-7	LOCATION OF OIL FILLED EQUIPMENT .....	II-56
II-8	LOCATION OF OIL SPILL RESPONSE AND COMMUNICATION EQUIPMENT.....	II-57
II-9	FIRE PROTECTION PLAN .....	II-58
II-10A	ENVIRONMENTALLY SENSITIVE AREAS.....	II-59
II-10B	ENVIRONMENTALLY SENSITIVE AREAS FOR 16" MANATEE PIPELINE .....	II-60
II-11	SITE EVACUATION PLAN.....	II-61
II-12	SITE DRAINAGE PLAN .....	II-62
II-13	OIL SPILL DRAINAGE PATHS.....	II-63
II-14A	PORT MANATEE BOOMING STRATEGIES - OVERVIEW.....	II-64
II-14B	PORT MANATEE – VIEW 1 .....	II-65
II-14C	PORT MANATEE – VIEW 2.....	II-66
II-14D	PORT MANATEE – VIEW 3.....	II-67
II-14E	PORT MANATEE – VIEW 4.....	II-68
II-14F	PORT MANATEE – VIEW 5.....	II-69
II-14G	PORT MANATEE – VIEW 6.....	II-70
II-14H	PORT MANATEE – VIEW 7.....	II-71
II-14I	PORT MANATEE – VIEW 8.....	II-72
II-14J	PORT MANATEE – VIEW 9.....	II-73
II-14K	PORT MANATEE – VIEW 10.....	II-74
II-14L	PORT MANATEE – VIEW 11.....	II-75
II-15	COMPREHENSIVE RESPONSE DATA POSTER .....	II-76
II-16	TRANSFER PIPELINE PLAN VIEW .....	II-77
II-17	FUEL OIL VALVE AND PIPING DIAGRAM FOR DISCHARGE ISOLATION (2 SHEETS).....	II-78
III-1	SITE LOCATION .....	III-5
III-2	WIND ROSE.....	III-11
IV-1	SPILL RESPONSE NOTIFICATION FORM .....	IV-2
V-1	PORT MANATEE TERMINAL AND PIPELINE ONSITE RESPONSE TEAM (ORT) ORGANIZATION CHART .....	V-9
V-2	FLORIDA POWER AND LIGHT COMPANY CORPORATE OIL SPILL RESPONSE TEAM (COSRT) ORGANIZATION CHART .....	V-10
VI-1	EXPECTATION DIAGRAM FOR DETERMINING THE POTENTIAL BEHAVIOR OF SPILLED GROUP V OIL .....	VI-26
VII-1	PORT MANATEE TERMINAL AND GENERAL VICINITY.....	VII-3
XI-1	PORT MANATEE TERMINAL AND PIPELINE SIGNIFICANT MATERIALS LOCATION MAP .....	XI-7
XIII-1	EXAMPLE OF A REVISION COVER LETTER .....	XIII-2

## LIST OF TABLES

TABLE	DESCRIPTION	PAGE
II-1	INCIDENT ASSESSMENT CHECKLIST .....	II-5
II-2	QUALIFIED INDIVIDUAL (QI) INFORMATION.....	II-11
II-3	EMERGENCY NOTIFICATION LIST .....	II-12
II-4	COMPANY RESPONSE TEAM TELEPHONE LIST.....	II-19
II-5A	PORT MANATEE TERMINAL AND PIPELINE OIL SPILL RESPONSE EQUIPMENT .....	II-28
II-5B	LIST OF COSRT RESPONSE EQUIPMENT AVAILABLE TO PORT MANATEE TERMINAL .....	II-38
II-6	OIL SPILL LEVEL AND GROUP .....	II-49
II-7	PORT MANATEE TERMINAL AND PIPELINE PETROLEUM BULK STORAGE CONTAINERS .....	II-53
II-8	PORT MANATEE TERMINAL AND PIPELINE NONBULK STORAGE CONTAINERS (OIL FILLED EQUIPMENT).....	II-54
II-9	PORT MANATEE CONTAINMENT UNITS.....	II-55
III-1	MONTHLY MEAN AND EXTREME TEMPERATURES FOR THE PORT MANATEE TERMINAL AND PIPELINE .....	III-9
III-2	MONTHLY PRECIPITATION AND VISIBILITY FOR THE PORT MANATEE TERMINAL AND PIPELINE .....	III-10
VI-1	DETAILED INCIDENT ASSESSMENT FORM .....	VI-5
VI-2	CLEANUP AND RECOVERY TECHNIQUES.....	VI-9
VI-3	EVACUATION PLANS .....	VI-13
VI-4	API GRAVITY OF WATER AS A FUNCTION OF SALINITY AND TEMPERATURE (DEGREES F) .....	VI-21
VI-5	EXPECTED BUOYANCY OF API GRAVITY 10 OIL IN WATER.....	VI-27
VI-6	EXPECTED BUOYANCY OF API GRAVITY 9 OIL IN WATER .....	VI-27
VI-7	EXPECTED BUOYANCY OF API GRAVITY 8 OIL IN WATER .....	VI-28
VI-8	EXPECTED BUOYANCY OF API GRAVITY 7 OIL IN WATER .....	VI-28
VI-9	DETECTION TECHNIQUES FOR GROUP V OILS .....	VI-31
VI-10	CONTAINMENT AND RECOVERY TECHNIQUES FOR GROUP V OILS.....	VI-32
VI-11	GROUP V OIL RESPONSE CONTRACTORS.....	VI-33
VII-1	ADDITIONAL RESPONSE ACTIONS.....	VII-6
VII-2	WATERWAYS THAT MAY REQUIRE PROTECTION WITHIN 12 HOURS .....	VII-7
VII-3	WILDLIFE PROTECTION TECHNIQUES .....	VII-8
IX-1	SHORT TERM STORAGE OPTIONS.....	IX-5
IX-2	FPL WASTE OIL STORAGE CAPACITY .....	IX-5
IX-3	FPL/VENDOR TANK TRUCK CAPACITY .....	IX-5
IX-4	COMPANY APPROVED WASTE TRANSPORTERS.....	IX-7
IX-5	SOIL TREATMENT (THERMAL DESTRUCTION) AND DISPOSAL FACILITIES .....	IX-8
IX-6	GENERIC ANALYTICAL REQUIREMENTS FOR DISPOSAL .....	IX-11
X-1	LISTING OF BULK OIL STORAGE TANKS & CONTAINMENT CAPACITIES.....	X-7
X-2	RELEASE PREDICTIONS .....	X-11
XI-1	PORT MANATEE TERMINAL AND PIPELINE OIL STORAGE TANKS .....	XI-2
XI-2	HAZARD IDENTIFICATION PORT MANATEE TERMINAL AND PIPELINE SURFACE IMPOUNDMENTS.....	XI-3
XI-3	PORT MANATEE TERMINAL AND PIPELINE SIGNIFICANT MATERIALS INVENTORY ..	XI-3
XI-4	SPECIFIED RESPONSE TIME INTERVALS.....	XI-11
XI-5	AREA SCHOOLS .....	XI-12
XI-6	AREA MEDICAL FACILITIES .....	XI-17
XI-7	THREATENED AND ENDANGERED SPECIES IN FLORIDA.....	XI-20
XI-8	ERROR MODES AND EFFECTS ANALYSIS .....	XI-30
XI-9	FAILURE MODES AND EFFECTS ANALYSIS .....	XI-32
XII-1	PREPARATORY TRIENNIAL DRILL SCHEDULE TERMINAL AND PIPELINE DRILLS ....	XII-5
XII-2	DISCHARGE PREVENTION MEETING LOG .....	XII-9

*[Intentionally Blank]*

## RESPONSE PLAN COVER SHEET & GENERAL FACILITY INFORMATION FORM

Facility Name: Port Manatee Terminal and Pipeline  
 Street Address: 12310 Reeder Road  
 Mailing Address: 12310 Reeder Road  
 City: Palmetto  
 County: Manatee  
 State: Florida  
 Zip Code: 34221-8652  
 Telephone Number: (941) 776-5235  
 Facsimile Number: (941) 722-1021  
 Latitude: (b) (7)(F), (b) (3)  
 Longitude:   
 Wellhead Protection Area: Not Applicable  
 Owner: Florida Power and Light Company  
 Power Generation Division  
 P.O. Box 14000 (mailing address)  
 700 Universe Blvd. (street address)  
 Juno Beach, Florida 33408-0420  
  
 Facility Telephone Number: (941) 776-5235  
 Facility Facsimile Number: (941) 722-1021  
 Facility Operator: King-Murray Operating Company LLC.  
 2400 Port West Blvd.  
 West Palm Beach, Florida  
 (561) 844-5084  
  
 Qualified Individual: Paul Plotkin  
 19050 S.R. 62  
 Parrish, Florida 34219-9220  
  
 Telephone Number: (941) 776-5211 (Office)  
 (b) (6)  (Home)  
 (b) (6)  (Mobile)  
  
 Qualified Individual: M. Lunday.  
 (Alternate) 19050 S.R. 62  
 Parrish, Florida 34219-9220  
  
 Telephone Number: (941) 776-5228 (Office)  
 (b) (6)  (Home)  
 (b) (6)  (Mobile)

Qualified Individual:  
 (Alternate) Mary Maxwell  
 19050 S.R. 62  
 Parrish, Florida 34219-9220

Telephone Number: (941) 776-5278 (Office)  
 (b) (6) (Home)  
 (Mobile)

Date of Oil Storage  
 Start-up: 1976

Current Operation: The Port Manatee Terminal and Pipeline is a pumping and storage facility that supplies No. 6 fuel oil to the Manatee Power Plant. The facility consists of storage tanks, oil-fired line heaters, transformers, pumps, an emergency electrical generator, wastewater treatment facilities, a control/administration building, and parking areas.

North American Industrial  
 Classification System  
 (NAICS) Code: 221112

SIC Code: 4911

Dun and Bradstreet  
 Number: 6922371

Date(s) and Type(s) of  
 Substantial Expansion(s): No expansions have occurred since the terminal began operation in 1976.

Date of last update: 12/2012

Largest Oil Storage  
 Tank Capacity: (b) (7)(F), (b) (3)

Maximum Oil Storage  
 Capacity: (b) (7)(F), (b) (3)

Number of Oil Storage  
 Tanks: Four

Worst Case Discharge  
 Amount Facility: (b) (7)(F), (b) (3)

Pipeline Response Zone: The pipeline between the Port Manatee Terminal and the Manatee Plant is a 14-mile long, 16-inch diameter pipeline located in Manatee County, Florida. The pipeline is located within one response zone.

Worst Case Discharge  
 Amount Pipeline: (b) (7)(F), (b) (3)

Orientation to Facility: Southern shoreline of Tampa Bay within Port Manatee.

Facility Distance to Navigable Waters: Mark the appropriate line.

0-1/4 mile    X    1/4-1/2 mile    1/2-1 mile    >1 mile

\_\_\_\_\_

This plan has been validated to be consistent with the National Contingency Plan, the U.S. Coast Guard, and the Environmental Protection Agency's Area Contingency Plans. The most recent review of this plan for consistency was conducted on February, 7, 2013 by Mr. Robert T. Krasnicki.

*[Intentionally Blank]*

## 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 within any aboveground oil storage tank area?

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-III to this appendix or a comparable formula) 1) 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-III to this appendix 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 discharge in an amount greater than or equal to 10,000 gallons within the last 5 years?

Yes  No   
 \_\_\_\_\_

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

Signature: \_\_\_\_\_

Name (Please type or print): \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

*[Intentionally Blank]*

**P.E. CERTIFICATION**

I hereby certify that I have examined the FPL SPCC Plan, and attest that: I am familiar with the requirements of 40 CFR 112; that I or my agent has visited and examined the facility; that the plan has been prepared in accordance with good engineering practices, including consideration of applicable industry standards, and with the requirements of 40 CFR 112; that procedures for required inspections and testing have been established; and that the Plan is adequate for the facility.

Thomas Daniel Joseph

Printed Name of Registered

Professional Engineer

\_\_\_\_\_  
Signature of Registered

Professional Engineer

\_\_\_\_\_  
Date

35332  
\_\_\_\_\_  
Registration

Florida  
\_\_\_\_\_  
State

P. E. SEAL

*[Intentionally Blank]*

## MANAGEMENT APPROVAL

This FRP and SPCC Plan have been prepared by FPL as the owner of the Port Manatee Terminal and Pipeline. The contents of this Plan are designed to facilitate compliance with Florida Power and Light (FPL) Environmental Policy and the prevention and contingency planning requirements of the Spill Prevention Control and Countermeasure (SPCC) Plan regulations.

FPL is committed to the prevention of discharges of oil to navigable waters and the environment, and maintains the highest standards for spill prevention control and countermeasures through regular review, updating, and implementation of this Plan.

The overall purposes of this Plan are to:

- Minimize the potential for a release of oil.
- Maximize the readiness of response personnel.
- Maximize the timeliness and effectiveness of spill response operations.
- Minimize the impact of spilled oil on the land, water and natural resources of the region.

This Plan has the full approval of management with authority to commit the necessary response resources to fully implement the Plan and to expeditiously respond to a release of oil. FPL intends to fully support the provisions of this Plan and will activate this Plan according to the guidelines set forth herein. All personnel with responsibilities covered by this Plan will be expected to become familiar and act in accordance with its provisions.

**Company Representative:**

**Signature:**

---

**Title:**

---

**Date:**

---



---

*[Intentionally Blank]*

## **PLAN UPDATING PROCEDURES**

This FRP and SPCC Plan will be maintained by the terminal's Oil Spill Coordinator. All Plan holders will be encouraged to submit suggestions for corrections to and/or modifications of this Plan directly to the Oil Spill Coordinator.

All revisions to this Plan will be distributed to Plan holders by cover letter (see attached example). The letter will instruct the recipient on which pages to replace (i.e., the old page to be removed and the revised page to be placed in the Plan). Each holder of this Plan will be instructed to incorporate the changed pages and to review them to ensure that he/she maintains an up-to-date and accurate understanding of the provisions of this Plan.

*[Intentionally Blank]*

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

In accordance with 40 CFR 112.5(b), a review and evaluation of this SPCC Plan is conducted at least once every five years. As a result of this review and evaluation, the Port Manatee Terminal and Pipeline will amend the SPCC Plan within six months of the review to include more effective prevention and control technology if such technology has been field-proven at the time of review and will significantly reduce the likelihood of a discharge from the facility. Any technical amendment to the SPCC Plan shall be certified by a Professional Engineer within six months after a change in the facility design, construction, operation, or maintenance occurs which materially affects the facility's potential for the discharge of oil as defined in 40 CFR 112.1(b).

I have completed a review & evaluation of the SPCC Plan for the Port Manatee Terminal and Pipeline. The Plan will be amended or not as indicated below.

	<b>Review Dates</b>	<b>Signature</b>	<b>Plan will be Amended</b>	<b>Plan will Not be Amended</b>
1.	02/02/2011	Kevin W Gordon		X
2.	12/08/2012	Kevin W Gordon		X
3.	02/28/2012	Kevin W Gordon	X	
4.				
5.				
6.				
7.				
8.				

*[Intentionally Blank]*

**To:**

**Date:**

**From:**

**Location:**

**Subject: FRP & SPCC Plan-  
Transmittal and Receipt Acknowledgement  
Form 2 - Controlled Documents(s)**

The following change(s) (see attached page) is issued to the holder of Controlled Copy No. \_\_\_\_ of the FRP & SPCC Plan for the Port Manatee Terminal and Pipeline:

Please acknowledge receipt of the attachment(s) by returning this entire transmittal memorandum within fifteen (15) days, signed and dated, to \_\_\_\_\_, the Oil Spill Coordinator (\_\_\_\_/\_\_\_\_/\_\_\_\_).

-----

Receipt of the above-described attachment(s) is hereby acknowledged. The above attachment(s) has been incorporated into Copy Number \_\_\_\_\_ and obsolete and/or deleted materials have been removed and destroyed.

---

Signature

Date

*[Intentionally Blank]*



## RECORD OF REVISIONS

DATE OF REVISION	DATE REPLACED	PAGES	DESCRIPTION OF REVISION	INITIALS OF PERSON MAKING REVISION
Change 1: 01/2007		All	Reformatted and revised plans to include recent changes in regulations.	
Change 2: 06/2007		See Page xxiii for list of updated pages	Added "qualified facility personnel" to equipment inspection procedures.	DA
Change 3: 06/2007		See Page xxiii for list of updated pages	Modified table II-5A in section II, and table A-1 in appendix A to include min/max quantities on consumables.	DA
Change 4: 08/2008		See Update Page	Administrative Revision	DJG
Change 5: 08/23/2010		See Update Page	Administrative revisions to Table II-5A	KWG
Change 6: 10/18/10		See Update Page	Administrative revisions to Table II-4	KWG
Change 7: 2/2011		See Update Page	5-year Plan review and administrative revisions	KWG
Change 8: 10/2011		See Update Page See	Administrative changes and true-up of response equipment	KWG
Change 9: 01/2012		See Update Page	Administrative Changes throughout the plan.	RTK
Change 10: 12/2012		See Update Pages	Administrative Changes throughout the plan.	KWG
Change 11: 02/2013		See Update Pages	PE Amendment to address secondary containment per EPA letter dated 01/02/2013	KWG
Change 12 7/2013		See Update Pages	Administrative changes to Preface, Section II, Section III & Section IV	

<b>EPA – FACILITY RESPONSE PLAN</b>		
<b>CROSS REFERENCE INDEX</b>		
<b>Rule Citation 40 CFR 112 APP. F</b>	<b>Description of Rule</b>	<b>Location</b>
1.0	Model Facility Specific Response Plan	
1.1	Emergency Response Action Plan	Section II
1.2	Facility Information	Section III
1.3	Emergency Response Information	Section II
1.3.1	Notification	Section II, IV
1.3.2	Response Equipment List	Section II, App A
1.3.3	Response Equipment Testing/Deployment	Section II, X, XII
1.3.4	Personnel	Section II
1.3.5	Evacuation Plan	Section II, VI.J
1.3.6	Qualified Individual's Duties	Section II, V
1.4	Hazard Evaluation	Section XI
1.4.1	Hazard Identification	Section XI
1.4.2	Vulnerability Analyses	Section XI
1.4.3	Analysis for the Potential for an Oil Spill	Section XI
1.4.4	Facility Reportable Oil Spill History	Section XI
1.5	Discharge Scenarios	Section VIII
1.5.1	Small and Medium Discharges	Section VIII & VIII
1.5.2	Worst Case Discharge	Section VIII
1.6	Discharge Detection System	Section X
1.6.1	Discharge Detection by Personnel	Section VI.L, X
1.6.2	Automated Discharge Detection	Section X
1.7	Plan Implementation	Sect. IX & X
1.7.1	Response Resources for Small, Medium, and Worst Case Spills	Sect. VI
1.7.2	Disposal Plans	Section IX
1.7.3	Containment and Drainage Planning	Section X, XI.E
1.8	Self-Inspection, Drills/Exercises, and Response Training	Sect. X & XII
1.8.1	Facility Self Inspection	Sect. X, App C
1.8.1.1	Tank Inspection	Section X
1.8.1.2	Response Equipment Inspection	Section X
1.8.1.3	Secondary Containment Inspection	Section X
1.8.2	Facility Drills/Exercises	Section XII
1.8.2.1	Qualified Individual Notification Drill Logs	Section XII
1.8.2.2	Spill Management Team Tabletop Exercise Logs	Section XII

<b>EPA – FACILITY RESPONSE PLAN</b>		
<b>CROSS REFERENCE INDEX</b>		
<b>Rule Citation 40 CFR 112 APP. F</b>	<b>Description of Rule</b>	<b>Location</b>
1.8.3	Response Training	Section XII
1.8.3.1	Personnel Response Training Log	Section XII
1.8.3.2	Discharge Prevention Meeting Log	Section XII
1.9	Diagrams	Section II
1.10	Security	Section X
2.0	Response Plan Cover Sheet	I
3.0	Acronyms	Appendix G
4.0	References	Appendix G

<b>SPCC PLAN COMPONENTS</b>		
<b>CROSS REFERENCE INDEX</b>		
<b>Rule Citation</b>	<b>Description of Rule</b>	<b>Location</b>
§112.7	General requirements for SPCC Plans for all facilities and all oil types.	Section X
§112.7(a)	General requirements; discussion of facility's conformance with rule requirements; deviations from Plan requirements; facility characteristics that must be described in the Plan; spill reporting information in the Plan; emergency procedures.	Section X
§112.7(b)	Fault analysis.	Section X.I
§112.7(c)	Secondary containment.	Section X.E
§112.7(d)	Contingency planning.	Section IX
§112.7(e)	Inspections, tests, and records.	Section X.L, Appendix C
§112.7(f)	Employee training and discharge prevention procedures.	Section XII
§112.7(g)	Security (excluding oil production facilities).	Section X.M
§112.7(h)	Loading/unloading areas (excluding offshore facilities).	Section X.D
§112.7(i)	Brittle fracture evaluation requirements.	Section X.K
§112.7(j)	Conformance with State requirements.	Section X.G
§112.8	Requirements for onshore facilities (excluding production facilities).	Section IX, X, & XII, Appendix C
§112.8(a)	General and specific requirements.	Section IX, X, & XII, Appendix C
§112.8(b)	Facility drainage.	Section X.H
§112.8(c)	Bulk storage containers.	Section X.C
§112.8(d)	Facility transfer operations, pumping, and facility process.	Section X.D

<b>USCG</b>		
<b>CROSS REFERENCE INDEX</b>		
<b>Rule Citation 33 CFR 154 154.1030</b>	<b>Description of Rule</b>	<b>Location</b>
154.1035	Specific Requirements for Facilities that Could Reasonably be Expected to Cause Significant and Substantial Harm to the Environment	
(a)	Introduction and Plan Content	Section I
(a)(1)	Facility Name and Address	Section III
(a)(2)	Facility's Location	Preface
(a)(3)	Procedures for Contacting Owner or Operator on a 24-hour basis	Table II-2 and IV-8
(a)(4)	Table of Contents	Preface
(a)(5)	Cross-Index	Preface
(a)(6)	A record of changes	Section XIII
(b)	Emergency Response Action Plan	Section II
(b)(1)	Notification Procedures	Section IV
(b)(1)(i)	List of Contacts	Table II-2 & II-3
(b)(1)(ii)	Spill Notification Form	Appendix I
(b)(2)	Facility's Spill Mitigation Procedure	Sect. V & VI
(b)(2)(i)	Spill Scenarios	Section VIII
(b)(2)(ii)	Prioritized Procedures	Section II & VI
(b)(2)(iii)	List of Equipment and Responsibilities of Facility Personnel to Mitigate an Average Most Probable Spill	Section II & VIII, App A
(b)(3)	Facility's Response Activities	Sect. V & VI
(b)(3)(i)	Facility Personnel Responsibility to initiate a response	Section II, IV
(b)(3)(ii)	Responsibility of Qualified Individual	Section II, V
(b)(3)(iii)	Organizational Structure Used to Manage Response Action	Section II
(b)(3)(iv)	Identification of Oil Spill Response Organization	Section II, App A
(b)(4)	Fish and Wildlife and Sensitive Environments	Section VII
(b)(4)(i)	Identification of Areas of Environmental Importance	Section VII
(b)(4)(ii)	Describe Potential Impacts to Environmental Areas and Mitigation	Section VII
(b)(4)(iii)	Identify equipment available from OSRO	Appendix A
(b)(5)	Disposal Plan	Section IX
(c)	Training and Exercises	Section XII
(c)(1)	Training Procedures	Section XII
(c)(2)	Exercise Procedures	Section XII.C
(d)	Plan Review and Update	Section XIII

<b>USCG</b>		
<b>CROSS REFERENCE INDEX</b>		
<b>Rule Citation</b> <b>33 CFR 154</b> <b>154.1030</b>	<b>Description of Rule</b>	<b>Location</b>
(e)	Appendices	
(e) (1)	Facility Specific Information	Sect. II & III, App A & E
(e) (2)	List of Contacts	Section II
(e) (3)	Equipment Lists and Records	Appendix A
(e) (4)	Communications Plan	Appendix D
(e) (5)	Site-specific Safety and Health Plan	Appendix E
(e) (6)	List of Acronyms and Definitions	Appendix G
(e) (7)	A geographic-specific appendix for each zone in which a mobile facility operates	Not applicable

**SECTION I:****INTRODUCTION AND PLAN CONTENT**

---

**A. PURPOSE OF PLAN**

Florida Power and Light Company (FPL) has developed a two-volume Oil Spill Response Plan to address oil spill incidents that may occur at the Port Manatee Terminal and Pipeline located in Manatee County, Florida. Volume One, the Facility Response Plan (FRP), details the response capabilities of facility personnel, while Volume Two, Corporate Response Plan, describes the response capabilities of FPL's Corporate Response Team that has been formed to handle incidents which are beyond the capabilities of facility personnel. This FRP also includes the Spill Prevention, Control, and Countermeasures (SPCC) Plan for the Port Manatee Terminal and Pipeline. The combined FRP has been prepared in accordance with the requirements of USEPA's regulation in 40 CFR 112, USCG's regulation in 33 CFR 154, DOT Regulation in 49 CFR 194, and the Oil Pollution Act of 1990 (OPA 90).

The purpose of the FRP is to:

- Provide guidance and information to the personnel that would be called upon to respond to oil spill incidents that may occur at the Port Manatee Terminal and Pipeline.
- Provide a description of the Port Manatee Terminal and associated pipelines, and local environmental conditions that may influence the movement of spilled oil and/or the efficacy of response operations.
- Provide members of the facility's Onsite Response Team with information on FPL's Emergency Response Organization.
- Provide members of the facility's Onsite Response Team with information on their roles and responsibilities.
- Detail internal and external notification procedures that would be followed during emergency response operations.
- Provide members of the facility's Onsite Response Team with information that would be needed to organize and carry out oil spill response operations.

- Provide information on the local resources that would be available to respond to Level I (small), Level II (medium), or Level III (worst case) incidents.
- Enhance employee knowledge and understanding of the safety and health risks associated with an oil spill.
- Describe the training that members of the Onsite Response Team would receive to ensure they are prepared to carry out their responsibilities during an oil spill incident.

The purpose of the SPCC Plan within the FRP is to:

- Describe existing prevention measures designed to contain or prevent released oil from reaching surface waters.
- Provide a physical description of the facility.
- Describe the facility's oil storage provisions, potential to discharge, secondary containment system, and drainage system.
- Describe tank truck unloading/transfer procedures.
- Detail the facility's inspection procedures.
- Discuss FPL's discharge prevention and response training program to ensure members are prepared to carry out their responsibilities during an oil spill incident.
- Describe site security procedures.

The purpose of the Corporate Response Plan is to:

- Describe the Corporate Response Team established to respond to Level II and Level III incidents at any FPL facility.
- Describe the Incident Command System-based emergency response management system that the Corporate Response Team would use to respond to Level II or III incidents.
- Describe the roles and responsibilities of the members of the Corporate Response Team.
- Detail internal and external notification procedures that would be followed during a Level II or Level III incident.
- Describe the training that members of the Corporate Response Team would receive to ensure that they are prepared to respond and carry out their duties during an oil spill incident.

## **B. SCOPE**

This combined FRP and SPCC Plan covers the prevention practices and response measures that have been established to prevent discharges and to respond to any oil spill incident that may occur at this facility. Site-specific information addressing components of the SPCC portion of this plan is provided primarily in Section X.

## **C. POLICY**

The goal for operations at the Port Manatee Terminal and associated pipelines is **zero** spillage of oil. To achieve this goal, the following oil spill prevention measures are in place:

- Personnel at the Terminal are always alert, checking their own actions and those of personnel on vessels docked at the facility.
- The **Oil Spill Coordinator, OSC/QI** or the **Terminal Operators** do not hesitate to stop all transfer operations the moment there is any doubt as to the safety and/or integrity of those operations.
- The **Oil Spill Coordinator, OSC/QI** and **Terminal Operators** ensure continuous compliance with all applicable laws, rules, regulations, and government agency policies and directives, as well as Company policies and directives.
- The **Oil Spill Coordinator, OSC/QI** and **Terminal Operators** do everything in their power to prevent an accidental spill.
- All equipment used in the transfer of oil is fully functional and maintained in good repair.
- All oil spill response equipment is fully functional and maintained in good repair.
- All communication equipment is fully functional and maintained in good repair.
- All conditions that could result in an oil spill are detected promptly and repaired or corrected immediately.

Although FPL's oil spill prevention procedures reduce the risk of an oil spill incident, they do not fully eliminate the risk that such an incident could occur. For this reason, FPL is prepared to respond to an oil spill using its own resources and the resources of local, state, and national private and public response organizations.

Should an oil spill occur from a Company pipeline connecting the dock to the storage tanks, or any other company-owned facility and enter the waters of the State of Florida, FPL would immediately respond to the incident and initiate control and/or response operations. In situations where a spill occurs away from an FPL facility, FPL would make its equipment and/or manpower available to respond if the responsible party, and/or the U.S. Coast Guard, and/or the Florida Department of Environmental Protection would agree to: (1) hold FPL harmless from responsibility for the spill and/or its cleanup; (2) reimburse FPL for the costs associated with the Company's involvement; and (3) restore or replace all FPL equipment used to its pre-spill condition.

#### ***D. MANAGEMENT COMMITMENT***

The SPCC Plan contained within this FRP is a carefully thought out plan, prepared in accordance with good engineering practices, and has the full approval of management with authority to commit the necessary resources to fully implement the Plan. The SPCC Plan will be implemented as described herein, and it will be reviewed and evaluated in accordance with 40 CFR 112.5 (b). The SPCC Plan will be amended whenever there is a change in facility design, construction, operation, or maintenance which affects the facility's potential to discharge oil to navigable waters. Each amendment will be certified by a registered professional engineer and placed in Appendix B.

The designated facility representative responsible for oil spill discharge prevention is **Paul Plotkin, PGD General Manager**.

The person designated to follow through on FPL commitments for manpower, equipment, and material in the event of a spill is **Mike Lunday, Production Manager**.



**PORT MANATEE TERMINAL AND PIPELINE  
FACILITY RESPONSE PLAN  
EMERGENCY RESPONSE  
ACTION PLAN**

In Compliance with the Facility Response Plan in 40 CFR 112

**FACILITY CONTACT PERSON:**

Mary Maxwell  
Sr. PGD Environmental Specialist

(b) (6) (Cell)

(941) 776-5278 (Office)

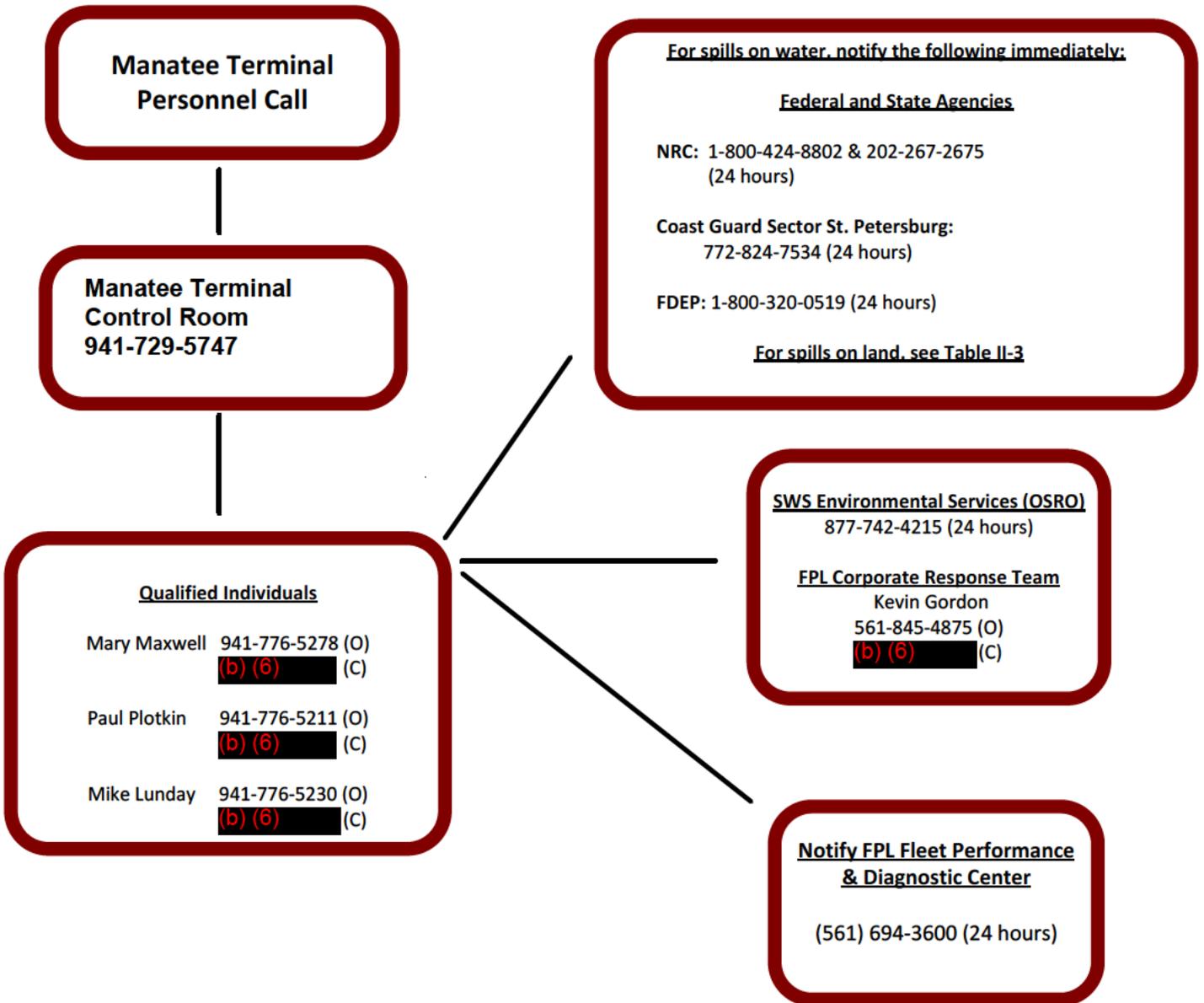
(b) (6) (Home)

**FACILITY OPERATOR:**

King-Murray Operating Company LLC,  
c/o Florida Power & Light Co.  
Port Manatee Terminal and Pipeline  
12310 Reeder Road  
Palmetto, FL 34221

**SECTION II:**

**EMERGENCY RESPONSE ACTION PLAN**



**FIGURE II-1 EMERGENCY RESPONSE ACTIONS**

## PORT MANATEE TERMINAL & PIPELINE FRP EMERGENCY RESPONSE ACTION PLAN

<b>IMMEDIATE ACTIONS CHECKLIST</b>		
<b>INITIAL RESPONSE ACTIONS ON-SITE RESPONSE TEAM</b>	<b>DATE/TIME ACTION TAKEN</b>	<b>PERSON TAKING ACTION</b>
<b>SPILL OBSERVER/FIRST RESPONDER</b>		
<p><b>1. Make an Immediate Assessment of the Incident</b> &amp; take actions to protect life, and ensure safety of personnel. Determine:</p> <ul style="list-style-type: none"> <li>• Type &amp; quantity of material spilled: _____</li> <li>• Location &amp; status of material spilled: (contained/uncontained)</li> <li>• Status of source: (controlled/uncontrolled)</li> <li>• Status of all personnel/injuries:</li> </ul>		
<p><b>2. Stop the Discharge &amp; Shut off Ignition Sources</b>, if safe to do so. (e.g., act quickly to secure pumps, valves, motors, open flames, etc.). If the incident is clearly the result of an operation that the Spill Observer/First Responder can control safely, take immediate steps to correct the operation.</p>		
<p><b>3. Warn Personnel</b> – Alert the control room &amp; all facility personnel at or near the incident scene and the On-Scene Commander (OSC)/QI.</p>		
<b>ON-SCENE COMMANDER (OSC) / QUALIFIED INDIVIDUAL (QI)</b>		
<p><b>4. Isolate &amp; Secure the Incident Scene</b> - Account for all personnel &amp; evacuate nonessential personnel from the area.</p>		
<p><b>5. Direct Termination of Appropriate Facility Operations</b> for the safety of personnel if necessary. Manually close slide gate on each storm water basin. Also, monitor the water level in basins in the event of rain.</p>		
<p><b>6. Complete all Notifications in Table II-3</b>, as appropriate, and call for medical assistance if an injury has occurred.</p>		
<p><b>7. Complete DETAILED INCIDENT ASSESSMENT FORM (Table II-1)</b> on the following pages to understand the nature &amp; scope of the incident. Assign safety officer to identify chemical hazards of product (MSDS) and physical hazards of incident. Monitor site conditions for changes.</p>		
<p><b>8. Determine if Incident is Safe to Respond to</b> based on chemical/physical hazards of product/incident or whether evacuation or sheltering-in-place procedures should be instituted. Coordinate evacuation procedures with port security (if located within a Port) and/or the local Police Department as necessary.</p>		
<p><b>9. Activate all Necessary Response Organizations</b> (i.e., Onsite Response Team; SWS Environmental (OSRO); FPL Corporate Response Team; Fire Department as necessary); <b>(Tables II-3 &amp; II-4)</b></p>		
<p><b>10. Establish Hazard Control Zones</b> (i.e., hot, warm &amp; cold zones) as appropriate &amp; control access to release area. Note: warm &amp; cold zones should be located upwind (Safety Officer responsibility).</p>		
<p><b>11. Define Personal Protective Equipment (PPE)</b> when responding to the incident (Safety Officer responsibility).</p>		
<p><b>12. Direct Onsite Response Team</b> (if safe to do so) to put on proper PPE, contain the discharge, and protect environmentally sensitive areas. This may include berming ahead of spill or deployment of containment and/or absorbent boom. <b>(use Figures II-6 through II-17 within Section II to aid in establishing a detailed plan)</b></p>		
<p><b>13. Initiate Spill Tracking &amp; Surveillance Operations</b> for surface water spills as necessary. Determine location and extent of spill using boats, vehicles, or surveillance aircraft (conducted by CRT). Estimate volume of spill (See spill volume estimation discussion below).</p>		
<p><b>14. Establish Incident Command Post</b> (see next page)</p>		

**PORT MANATEE TERMINAL & PIPELINE FRP EMERGENCY RESPONSE ACTION PLAN**

After the above initial response actions have been completed, establish or verify that the following secondary response actions have been taken to assist the response organization in gaining control of the incident.

<b>SECONDARY ACTIONS CHECKLIST</b>	
<b>SECONDARY RESPONSE ACTIONS ONSITE/CORPORATE RESPONSE TEAM(S)</b>	<b>COMPLETE (YES/NO)</b>
<b>ESTABLISH SITE CONTROL</b>	
Designate On-Scene Commander	
Establish Incident Command Post	
Isolate and Secure the Incident Scene	
Initiate Personnel Protective Actions (e.g., evacuations, shelter-in-place)	
Establish Personnel Accountability System	
Establish an Isolation Zone Marked by a Clearly Defined Isolation Perimeter that is a Safe Distance Around the Incident Scene	
Establish staging area(s)	
Institute a Resource Check-in Procedure to Track Resource Arrivals	
<b>ESTABLISH SITE SAFETY</b>	
Designate Site Safety Officer	
Characterized Chemical, Physical, and Operational Hazards	
Established Hazard Control Zones (Hot, Warm & Cold Zones)	
Identify PPE Requirements	
Set up Decontamination Stations	
Set up First Aid Stations	
Ensure that Emergency Medical Procedures & Response Capabilities are in Place to Handle Injuries	
Conduct Pre-entry Briefing for all Tactical Responders	
Continuously Monitor Site for Changes in Hazards	
Develop Site Specific Safety & Health Plan	
<b>ESTABLISH SITE MANAGEMENT</b>	
Complete DETAILED INCIDENT ASSESSMENT FORM (Table II-1) to Determine Incident Potential/Severity	
Develop Strategic Objectives (What the Response Organization is trying to Achieve)	
Develop Tactical Objectives (How will Response Organization Achieve the Strategic Objectives)	
Break Down Tactical Objectives into Manageable Tasks	
Assign Resources to Tasks	
Monitor Operations	
<b>ESTABLISH COMMUNICATIONS</b>	
Establish Communication Networks as Necessary <ul style="list-style-type: none"> <li>• Tactical Net – Links OSC with Tactical Responders in the field</li> <li>• Support Net – Links Staging Area Manager(s) with Supply unit in the Logistics Section in the Incident Command Post (ICP)</li> <li>• Command Net – Links OSC with Operations Section Chief/Incident Commander in the ICP</li> </ul>	
Define Communication Protocols (i.e., when reports should be received in ICP)	
Prepare Initial Incident Briefing Form (ICS 201)	

**PORT MANATEE TERMINAL & PIPELINE FRP EMERGENCY RESPONSE ACTION PLAN**

<b>TABLE II-1 DETAILED INCIDENT ASSESSMENT FORM</b>
<b>GENERAL INFORMATION</b>
Date of Incident: Time of Incident: _____ The type of product spilled: _____ The estimated amount of product spilled: _____ Source of spill: _____ Status of source: Controlled: ___ Continuing: _____ Unknown: _____ Cause of the spill: _____ Is the spill contained? _____ Shoreline impacts: _____ Status of Response operation: _____ _____ An initial assessment of whether the spilled oil can be contained and cleaned up with onsite equipment, or whether Level II or III equipment is required: _____
<b>SAFETY &amp; HEALTH CONCERNS</b>
The status of all personnel (injuries, etc.): _____ _____
Identification of possible health or fire hazards: _____ _____
<b>ENVIRONMENTAL IMPACTS</b>
Environmentally sensitive areas impacted: _____ _____ Wildlife impacted: _____ _____
<b>ON-SCENE WEATHER &amp; SURFACE WATER CONDITIONS</b>
On-scene weather conditions to include: _____ _____ Current speed and direction: _____ Wind speed and direction: _____ Wave height and direction: _____

## PORT MANATEE TERMINAL & PIPELINE FRP EMERGENCY RESPONSE ACTION PLAN

### Spill Volume Estimating

Early in a spill response, estimation of spill volume is required in order to:

- Report to agencies.
- Determine liquid recovery requirements.
- Determine personnel and equipment requirements.
- Estimate disposal and interim storage requirements.

Some rapid methods to estimate spill size are:

- Transfer operations: Multiply the pumping rate by the elapsed time that the leak was in progress, plus the drainage volume of the line between the two closest valves or isolation points (volume loss = pump rate [bbls/min] x elapsed time [min] + line contents [bbl]).
- Tank overfills: Elapsed time multiplied by the pumping rate.
- Tank volumes are contained in **Table II-7** to estimate spill volumes.
  - Visual assessment of the surface area and thickness; the method may yield unreliable results because:
    - Interpretation of sheen color varies with different observers.
    - Appearance of a slick varies depending upon amount of available sunlight, sea-state, and viewing angle.
    - Different products may behave differently, depending upon their properties.
- For spills on surface water, use the **Oil Thickness Estimations** sheet on page II-7 to determine approximate spill volume.

### Estimating Spill Trajectories

In some cases, oil spill trajectories should be estimated in order to predict direction and speed of the movement. Trajectory calculations provide an estimate of where oil slicks may impact shorelines and other sensitive areas, and also provide an estimate of the most effective location in which to mobilize spill response resources for protection, containment and recovery.

Oil spill trajectories can be estimated using vector addition or with computer programs. Hand calculations typically utilize the following assumptions:

- Oil moves at approximately the same direction and speed as the water currents, unless the winds are strong.
- Wind speed can be multiplied by 0.034 to determine the effect of winds on speed and direction of spill movement.
- The combined effects of winds and currents can be added to estimate spill movement speed and direction.

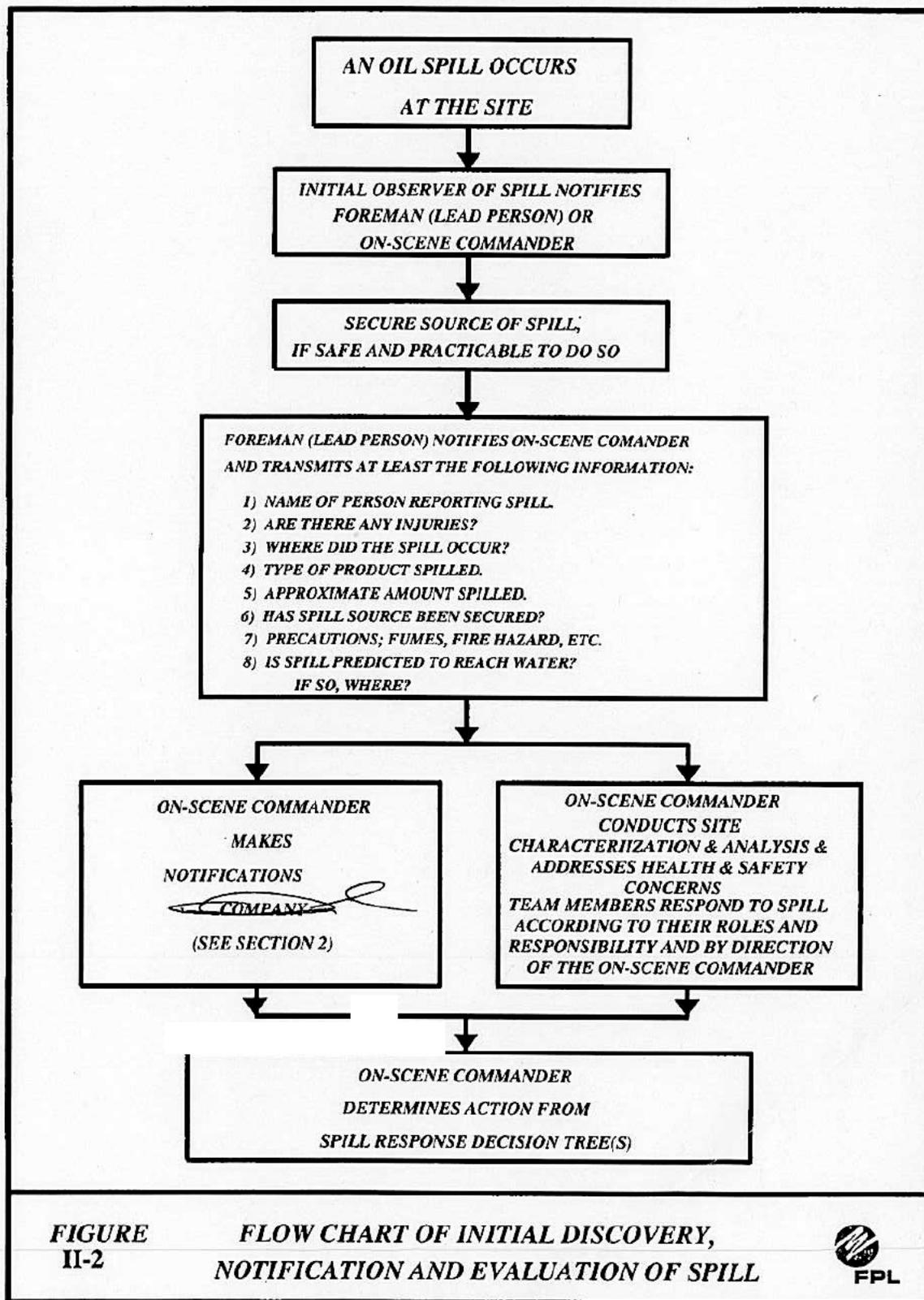
More sophisticated predictions can be obtained from computer programs. Oil spill trajectory services can be obtained from FPL's Corporate Response Team or:

- Applied Science & Associates (401) 789-6224
- National Oceanic and Atmospheric Administration (NOAA) through the Federal On-Scene Commander (FOSC)

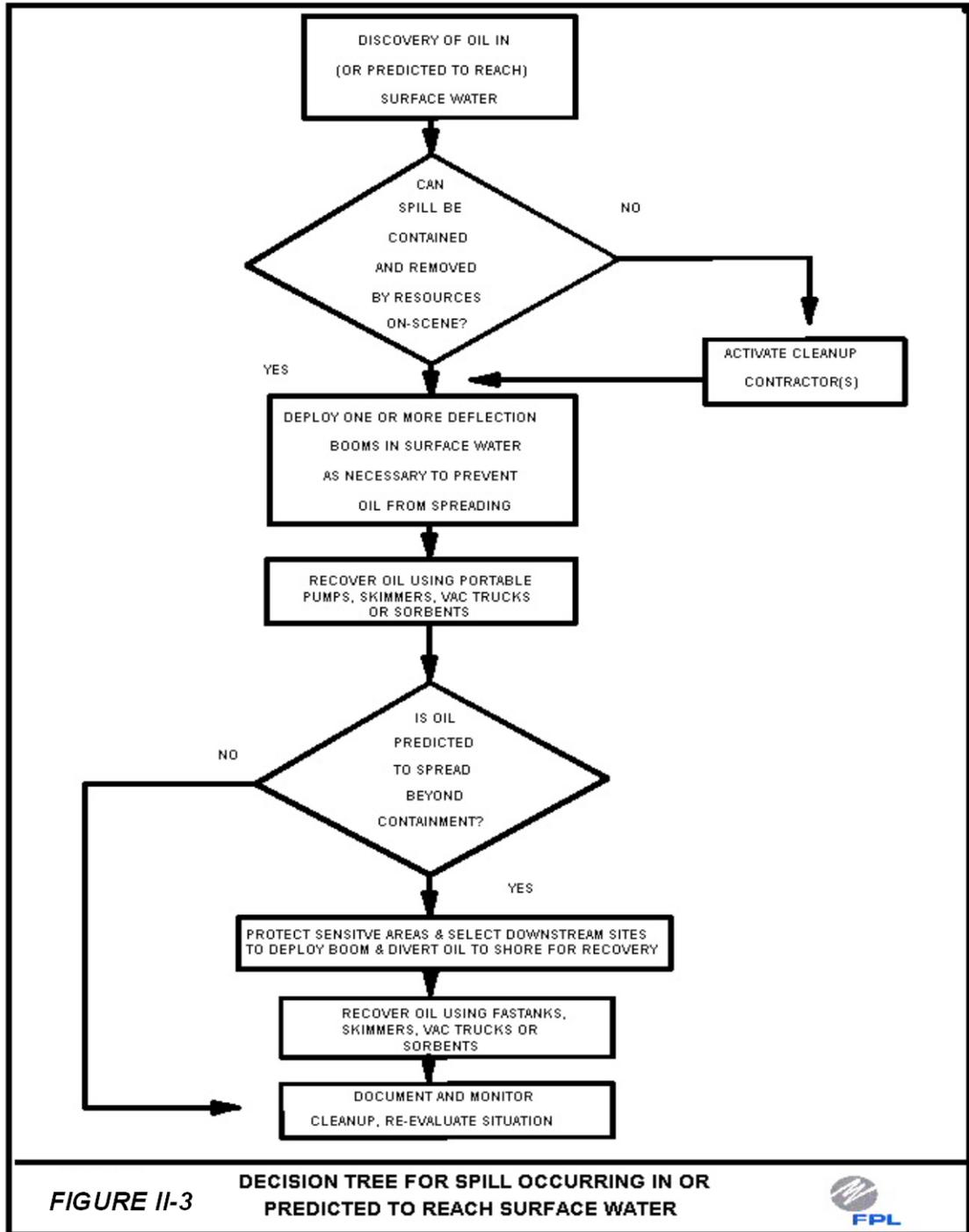
## PORT MANATEE TERMINAL & PIPELINE FRP EMERGENCY RESPONSE ACTION PLAN

<b>OIL THICKNESS ESTIMATIONS</b>		
<b>OIL COLOR</b>	<b>APPROX. FILM THICKNESS</b>	<b>APPROX. QUANTITY OF OIL IN FILM</b>
	<b>INCHES</b>	<b>GALLONS/MILE<sup>2</sup></b>
Barely Visible	0.0000015	25
Silvery	0.000003	50
Slightly colored	0.000006	100
Brightly colored	0.000012	200
Dull	0.00004	666
Dark	0.00008	1,332
Thickness of light oils: 0.0010 inches to 0.00010 inches		
Thickness of heavy oils: 0.10 inches to 0.010 inches		

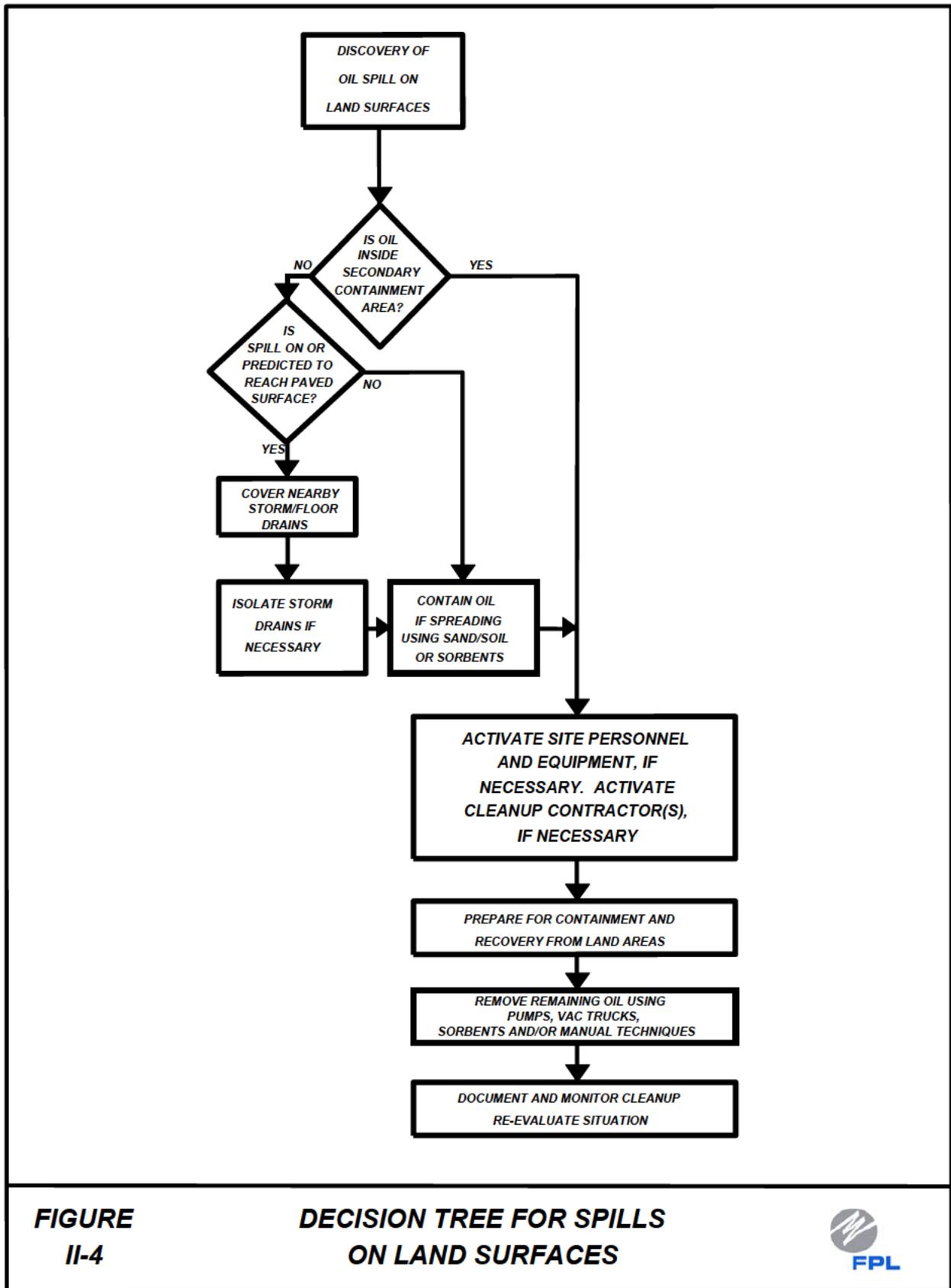
## PORT MANATEE TERMINAL &amp; PIPELINE FRP EMERGENCY RESPONSE ACTION PLAN



PORT MANATEE TERMINAL & PIPELINE FRP EMERGENCY RESPONSE ACTION PLAN



## PORT MANATEE TERMINAL &amp; PIPELINE FRP EMERGENCY RESPONSE ACTION PLAN



## PORT MANATEE TERMINAL & PIPELINE FRP EMERGENCY RESPONSE ACTION PLAN

TABLE II-2 QUALIFIED INDIVIDUAL (QI) INFORMATION			
PRIMARY		ALTERNATE	
<b>Name</b>	Paul Plotkin	Mike Lunday	Mary Maxwell
<b>Position</b>	PGD General Manager	PGD General Manager	Sr. PGD Environmental Specialist
<b>Work Address</b>	19050 S.R. 62 Parrish, FL 34219-9220	19050 S.R. 62 Parrish, FL 34219-9220	19050 S.R. 62 Parrish, FL 34219-9220
<b>Home Address</b>	(b) (6)		
<b>Work Phone No.</b>	(941) 776-5211	(941) 776-5230	(941) 776-5278
<b>Home Phone No.</b>	(b) (6)		
<b>Cell Phone No.</b>	(b) (6)		
<b>Response Time onsite to Tank Area</b>	Less than 5 minutes	Less than 5 minutes	Less than 5 minutes
<b>Response Time to Port Manatee Terminal and Pipeline</b>	30 minutes	30 minutes	40 minutes
<b>Training – Experience</b>	Hazwoper 8 Hour ICS 100/200	Hazwoper 24 Hour ICS 100/200	Hazwoper 40 Hour ICS 100/200

QI duties include the following:

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

## PORT MANATEE TERMINAL & PIPELINE FRP EMERGENCY RESPONSE ACTION PLAN

**Immediate notification is required to the National Response Center for any spill that threatens to enter or enters navigable waters. Do not wait to obtain all information before notifying the NRC.**

<b>TABLE II-3 EMERGENCY NOTIFICATION LIST</b>	
<b>CONTACT</b>	<b>TELEPHONE NUMBER</b>
<b>Federal, State and Local Agencies</b>	
<b>Spills which threaten or enter navigable/state waters require notification to:</b>	
National Response Center (NRC)	(202) 267-2675 (24 hours) (800) 424-8802 (24 hours)
EPA Region IV Spill Hotline	(404) 562-8700
Coast Guard Sector (St. Pete)	(813) 918-2722 (24 hours)
Florida State Department of Environmental Protection (FDEP) – Bureau of Emergency Response (State Warning Point)	(800) 320-0519 (24 hours) (850) 413-9911
<b>ADDITIONAL AGENCY CONTACTS AS NECESSARY</b>	
Local Emergency Planning Committee (LEPC) 8th District	(727) 570-5151
National Marine Fisheries Service Southeast Region (St. Petersburg)	(727) 824-5301
U.S. Department of Interior: U.S. Fish and Wildlife Service Region 4 – Atlanta, Georgia	(404) 763-7959
U.S. Department of Commerce: National Oceanic and Atmospheric Admin. Scientific Support Coordinator Seattle, WA	(206) 526-6311 (24 hours)
U.S. Geological Survey District Office Southeastern Region Tallahassee, FL	(888) 275-8747 (24 hours)
QI (day and evening)	See Qualified Individual Table II-2 (above)
Company Response Team (day and evening)	See Table II-4 (below)
Federal On-Scene Coordinator and/or Regional Response Center (day and evening)	Federal On-Scene Coordinator US Coast Guard Telephone 1-800-424-8802 (National Response Center)
Local response team phone numbers (Fire Department/Cooperatives)	911; phone numbers listed in Table II-3 (below)
Manatee County Department of Public Safety	(941) 748-4501
Manatee County Emergency Management and Communication Division	(941) 749-3505 (24 hours)

## PORT MANATEE TERMINAL & PIPELINE FRP EMERGENCY RESPONSE ACTION PLAN

<b>TABLE II-3 EMERGENCY NOTIFICATION LIST</b>	
<b>CONTACT</b>	<b>TELEPHONE NUMBER</b>
Manatee County Sheriff's Department	(941) 747-3011
Manatee County Fire Department	911
Police	911
Rescue Unit	911
Medical Center	Manatee Memorial Hospital (941) 746-5111
Wastewater Treatment Facilities	<b>City of Bradenton WWTP</b> (941) 708-6350 <b>City of Palmetto WWTP</b> (941) 723-6106 <b>Lake Manatee Recreation Area WWTP</b> (941) 741-3028 <b>Manatee County North Regional WWTP</b> (941) 792-8811 <b>Manatee County Southeast Regional WWTP</b> (941) 792-8811 <b>Manatee County Southwest Regional WWTP</b> (941) 792-8811
Local Water Supply Systems	<b>City of Bradenton WTP</b> (941) 727-6360 <b>Manatee County WTP</b> (941) 746-3020 <b>Palmetto Water Department</b> (941) 723-6106
Weather Report	National Weather Service - Tampa (813) 645-2506

## PORT MANATEE TERMINAL & PIPELINE FRP EMERGENCY RESPONSE ACTION PLAN

<b>TABLE II-3 EMERGENCY NOTIFICATION LIST</b>	
<b>CONTACT</b>	<b>TELEPHONE NUMBER</b>
Local TV/Radio for evacuation notification	<b>AREA RADIO STATIONS</b>
	<b>WJIS Bradenton</b> 88.1 FM (941-753-0401)
	<b>WMNF Tampa</b> 88.5 FM (813-238-8001)
	<b>WUSF Tampa</b> 89.7 FM (813-974-8700)
	<b>WBVM Tampa</b> 90.5 FM (813-289-8040)
	<b>WYUU Safety Harbor</b> 92.5 FM (727-579-1925)
	<b>LOCAL TV STATIONS AND BROADCASTING COMPANIES</b>
	<b>WWSB TV 7 (Sarasota)</b> (941) 923-8840
Primary Oil Spill Response Organization (OSRO)	<b>SWS Environmental Services</b> (877) 742-4215 (24 hours)
Secondary Oil Spill Response Organization (OSRO)	<b>FPL FPDC (Fleet Performance and Diagnostic Center)</b> (866) 375-3732 (toll free) (561) 694-3600 (24 hours)
	<b>Diversified Environmental</b> Gene Russel (800) 786-3256 (toll free) <b>(b) (6)</b> (home) (813) 248-3256 (office) <b>(b) (6)</b> (cell)
	<b>Jacksonville Pollution Control</b> Steve Lamir (904) 355-4164 (24 hours)
	<b>Moran Environmental</b> Tom Hill (800) 359-3740

## PORT MANATEE TERMINAL & PIPELINE FRP EMERGENCY RESPONSE ACTION PLAN

<b>TABLE II-3 EMERGENCY NOTIFICATION LIST</b>	
<b>CONTACT</b>	<b>TELEPHONE NUMBER</b>
Wildlife Contacts	<b>Tri-State Bird Rescue</b> (302) 737-9543  <b>Wildlife Inc.,</b> (941) 778-6324
Local Marinas	<b>O'Neill's Marina</b> 6701 34 <sup>th</sup> Street South Saint Petersburg, FL 33711 (727) 867-2585
Security Services	<b>Allied Barton Corp.</b> Tampa, Florida (813) 620-6621
Surveillance Operations	<b>FPL Aviation</b> <b>Palm Beach International Airport</b> (561) 640-2200  <b>Universal Air Service</b> <b>Orlando, FL</b> (407) 896-2966 (24 hours)  <b>O'Brien's Response Management</b> <b>Aerial Surveillance Specialists</b> (985) 781-0804 (24 hours)

## PORT MANATEE TERMINAL & PIPELINE FRP EMERGENCY RESPONSE ACTION PLAN

SPILL RESPONSE NOTIFICATION FORM			
REPORTING PARTY INFORMATION			
INITIAL NOTIFICATION TO NRC MUST NOT BE DELAYED PENDING COLLECTION OF ALL INFORMATION			
REPORTER'S LAST NAME:	_____	FIRST:	_____ M.I.: _____
PHONE NUMBERS: DAY:	_____	EVENING:	_____ MOBILE : _____
COMPANY:	Florida Power and Light Company		
ORGANIZATION TYPE:	Electric Company		
YOUR POSITION:	_____		
ADDRESS:	12310 REEDER ROAD		
CITY:	PALMETTO	STATE:	FL ZIP: 34221-8652
WERE MATERIALS DISCHARGED? (Y/N):	_____	CONFIDENTIAL (Y/N)	_____
MEETING FEDERAL OBLIGATIONS TO REPORT? (Y/N):	_____	DATE CALLED:	_____
CALLING FOR RESPONSIBLE PARTY? (Y/N):	_____	TIME CALLED:	_____
INCIDENT DESCRIPTION			
SOURCE AND/OR CAUSE OF INCIDENT:	_____		
DATE:	_____	TIME OF INCIDENT:	_____ AM/PM
INCIDENT ADDRESS/LOCATION:	12310 REEDER ROAD		
NEAREST CITY:	PALMETTO	STATE:	FL COUNTY: MANATEE ZIP: 34221-8652
DISTANCE FROM CITY:	_____	UNITS:	MILES DIRECTION FROM CITY: _____
SECTION:	_____	TOWNSHIP:	_____ RANGE : _____
CONTAINER TYPE:	_____	TANK CAPACITY:	_____ UNITS: _____
FACILITY CAPACITY:	(b) (7)(F),	UNITS:	GALLONS
FACILITY LATITUDE:	(b) (7)(F), (b) (3)		
FACILITY LONGITUDE:			

**PORT MANATEE TERMINAL & PIPELINE FRP EMERGENCY RESPONSE ACTION PLAN**

SPILL RESPONSE NOTIFICATION FORM					
MATERIAL RELEASED (CHRIS Code)	RELEASED QUANTITY	UNIT OF MEASURE	MATERIAL RELEASED IN WATER	QUANTITY	UNIT OF MEASURE
RESPONSE ACTION					
ACTIONS TAKEN TO CORRECT, CONTROL OR MITIGATE INCIDENT					
IMPACT					
NUMBER OF INJURIES: _____		NUMBER OF FATALITIES: _____			
WERE THERE EVACUATIONS? (Y/N): _____		NUMBER OF EVACUATIONS: _____			
WAS THERE ANY DAMAGE? (Y/N): _____		DAMAGE IN DOLLARS (APPROX.): _____			
MEDIUM AFFECTED: _____					
DESCRIPTION: _____					
MORE INFORMATION ABOUT MEDIUM: _____					
ANY INFORMATION ABOUT THE INCIDENT NOT RECORDED ELSEWHERE IN THE REPORT: _____					

**PORT MANATEE TERMINAL & PIPELINE FRP EMERGENCY RESPONSE ACTION PLAN**

<b>SPILL RESPONSE NOTIFICATION FORM</b>			
<b>ATMOSPHERIC AND WATER CONDITIONS</b>			
<b>ATMOSPHERIC</b>		<b>WATER</b>	
WIND SPEED: _____ MPH	STATE OF TIDE: _____		
WIND DIRECTION FROM: _____	CURRENT SPEED: _____ KNOTS		
AIR TEMPERATURE: _____ °F	CURRENT DIRECTION FROM: _____		
VISIBILITY: _____ MILES	WAVE HEIGHT: _____ FEET		
RAIN: _____ INCHES	WATER TEMPERATURE: _____ °F		
<b>CALLER NOTIFICATION</b>			
	<b>YES/NO</b>	<b>WHO</b>	<b>TIME/DATE</b>
NATIONAL RESPONSE CENTER (NRC) 1 800 424-8802	_____	_____	_____
U.S. COAST GUARD SECTOR: ST. PETERSBURG	_____	_____	_____
FDEP	_____	_____	_____
STATE WARNING POINT	_____	_____	_____
PRIMARY OSRO (SWS ENVIRONMENTAL)	_____	_____	_____
CRT (CORPORATE RESPONSE TEAM)	_____	_____	_____
FPDC (FLEET PERFORMANCE & DIAGNOSTICS CENTER)	_____	_____	_____
MANATEE COUNTY	_____	_____	_____
AREA EXTERNAL AFFAIRS REPRESENTATIVE	_____	_____	_____
CORPORATE COMMUNICATIONS	_____	_____	_____
OTHERS	_____	_____	_____
<b>On-Scene Commander</b>		<b>Date</b>	

## PORT MANATEE TERMINAL & PIPELINE FRP EMERGENCY RESPONSE ACTION PLAN

<b>TABLE II-4 COMPANY RESPONSE TEAM TELEPHONE LIST</b>				
<b>MANATEE ONSITE RESPONSE TEAM (ORT) ; FPL CORPORATE RESPONSE TEAM (CRT) MANATEE ORT RESPONSE TIME IS LESS THAN 5 MINUTES IF ONSITE FPL CRT NOTIFIED WITHIN 2 HOURS; ONSITE WITHIN 4 HOURS</b>				
POSITION	CONTACT	TELEPHONE NUMBER	TRAINING	RESPONSE TIME FROM OFFSITE
On-Scene Commander/ Qualified Individual  (ORT)	Paul Plotkin	(941) 776-5211 (office) (b) (6) (home) (cell)	Hazwoper 8 Hour ICS 100/200	30 mins
Alternate OSC/QI  (ORT)	Mike Lunday	(941) 776-5230 (office) (b) (6) (home) (cell)	Hazwoper 24 Hour ICS 100/200	30 mins
Alternate OSC/QI  (ORT)	Mary Maxwell	(941) 776-5278 (office) (b) (6) (home) (cell)	Hazwoper 40 Hour ICS 100/200	40 mins
<b>PRIMARY OIL SPILL REMOVAL ORGANIZATION</b>				
<b>SWS Environmental Services</b>		<b>1-877-742-4215 (24 hours)</b>		1 hr
ALL SWS PERSONNEL HAVE 40 HR HAZWOPER TRAINING. IN ADDITION, SWS SUPERVISORS HAVE ICS/NIMS TRAINING. Copies of SWS training records can be obtained at any time from Val Garner, <i>Vice President – SWS Environmental, Health, &amp; Safety</i> . He can be reached by phone at (850) 258-9116, or by email at: <a href="mailto:val.garner@swsenvironmental.com">val.garner@swsenvironmental.com</a>				
<b>TEAM MEMBERS</b>				
Oil Spill Coordinator & Site Safety Officer (ORT)	Rich Sanger	(941) 729-5766 (office) (b) (6) (home) (cell)	Hazwoper 40 Hour ICS 100/200	10 mins
Team Member (ORT)	Bill Hodge	(561) 729-5748 (office) (b) (6) (cell)	Hazwoper 24 Hour	30 mins
Team Member (ORT)	Wade Buice	(941) 729-5747 (office) (b) (6) (home) (cell)	Hazwoper 24 Hour	30 mins

## PORT MANATEE TERMINAL & PIPELINE FRP EMERGENCY RESPONSE ACTION PLAN

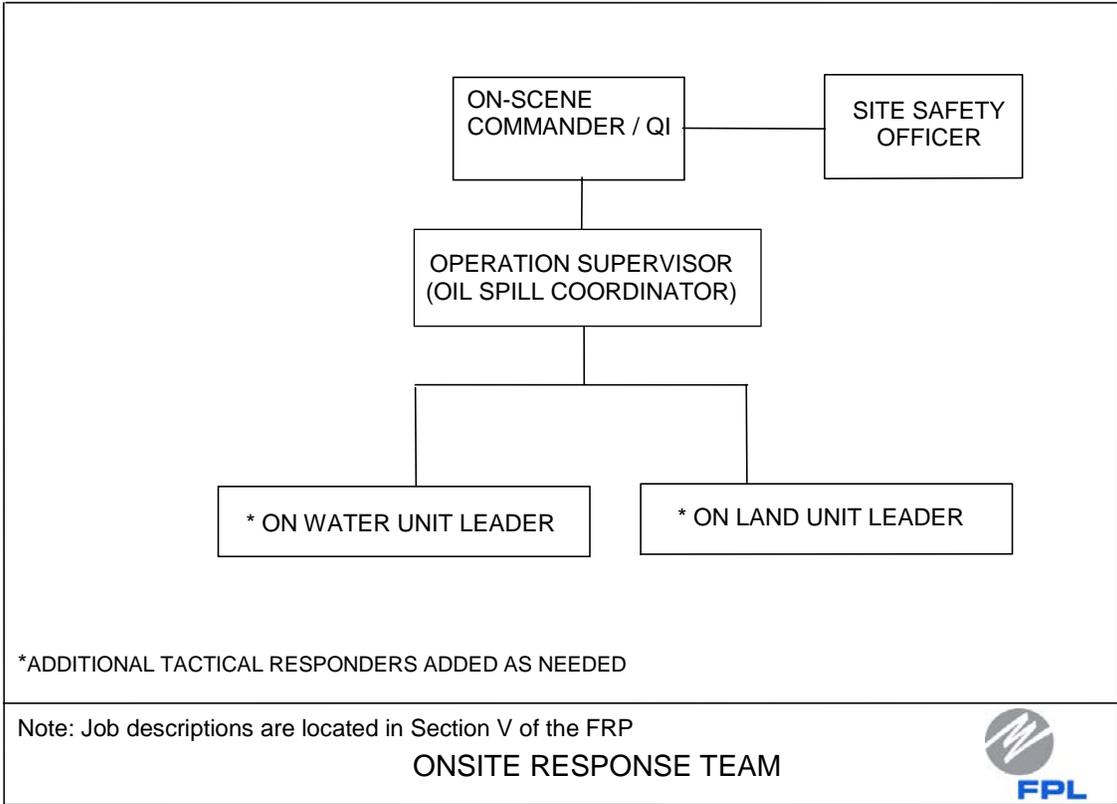
<b>TABLE II-4 COMPANY RESPONSE TEAM TELEPHONE LIST</b>				
Team Member (ORT)	Ricky Byrne	(941) 729-5747 (office) (b) (6) (cell)	Hazwoper 24 Hour (pending)	30 mins
Team Member (ORT)	Steve Whalen	(941) 729-5747 (office) (b) (6) (cell)	Hazwoper 24 Hour	30 mins
Team Member (ORT)	Michael Zeiszler	(941) 729-5767 (office) (b) (6) (cell)	Hazwoper 24 Hour	30 mins
Team Member (ORT)	Eddie Lara	(941) 729-5747 (office) (b) (6) (cell)	Hazwoper 24 Hour	30 mins
Incident Commander (CRT)	Kevin Gordon	(561) 845-4875 (office) (b) (6) (cell)	Hazwoper 40 Hour ICS 100/200/300	4 hrs
Safety Officer (CRT)	Kevin O'Donnell	(561) 691-2860 (office) (b) (6) (cell)	Hazwoper 40 Hour ICS 100/200/300	4 hrs
On Land Unit Leader (CRT)	Ed Preast	(561) 691-2679 (office) (b) (6) (cell)	Hazwoper 40 Hour ICS 100/200/300	4 hrs
On Water Unit Leader (CRT)	Andy Flajole	(561) 691-2766 (office) (b) (6) (cell)	Hazwoper 40 Hour ICS 100/200/300	4 hrs
<b>FPL CORPORATE RESPONSE TEAM (CRT)</b>				
<b>RESPONSE TIME TO PORT MANATEE TERMINAL AND PIPELINE: NOTIFIED WITHIN TWO HOURS, ONSITE WITHIN 2 to 3 HOURS</b>				
NAME	FUNCTION	HOME LOCATION	TELEPHONE NUMBERS	
FP&L Fleet Performance & Diagnostics Center (FPDC)	Staffed 24 hours/day, 7 days/week.	(b) (6)	(866) 375-3732 (toll free; 24 hours) (561) 694-3600 (24 hours)	
Kevin Gordon	Incident Commander / Qualified Individual (QI)	(b) (6)	(561) 845-4875 (office) (b) (6) (cell)	

## PORT MANATEE TERMINAL & PIPELINE FRP EMERGENCY RESPONSE ACTION PLAN

<b>TABLE II-4</b>	
<b>COMPANY RESPONSE TEAM TELEPHONE LIST</b>	
Kirk Flowers	Operations Section Chief (b) (6) (561) 845-4626 (office) (b) (6) (cell)
Mark Jones	Alternate Incident Commander / Qualified Individual (QI) (b) (6) (561) 691-7041 (office) (b) (6) (home) (b) (6) (cell)
Jim Lindsay	Alternate Incident Commander / Qualified Individual (QI) (b) (6) (561) 691-7032 (office) (b) (6) (home) (b) (6) (cell)
To activate the FPL Corporate Response Team, contact any of the above telephone numbers.	
<b>FPL EXTERNAL AFFAIRS</b>	
Rae Dowling	(941) 316-6266 (office) (b) (6) (cell)
<b>CORPORATE COMMUNICATIONS</b>	
Corporate Communications (If spill could attract media attention)	(305) 552-3888 (24 hours)
<b>ENVIRONMENTAL SERVICES</b>	
Mark Jones	(561) 691-7041 (office) (b) (6) (home) (b) (6) (cell)
<b>KING-MURRAY OPERATING COMPANY LLC</b>	
Mike Kordsmeier	(561) 845-3398 (office) (b) (6) (home) (b) (6) (cell)
<b>FUEL INFRASTRUCTURE</b>	
Kevin Gordon	(561) 845-4875 (office) (b) (6) (cell)
<b>TRANSFORMER SPILLS</b>	
Frank Nesbihal	(561) 681-3007 (office) (b) (6) (cell)

**PORT MANATEE TERMINAL & PIPELINE FRP EMERGENCY RESPONSE ACTION PLAN**

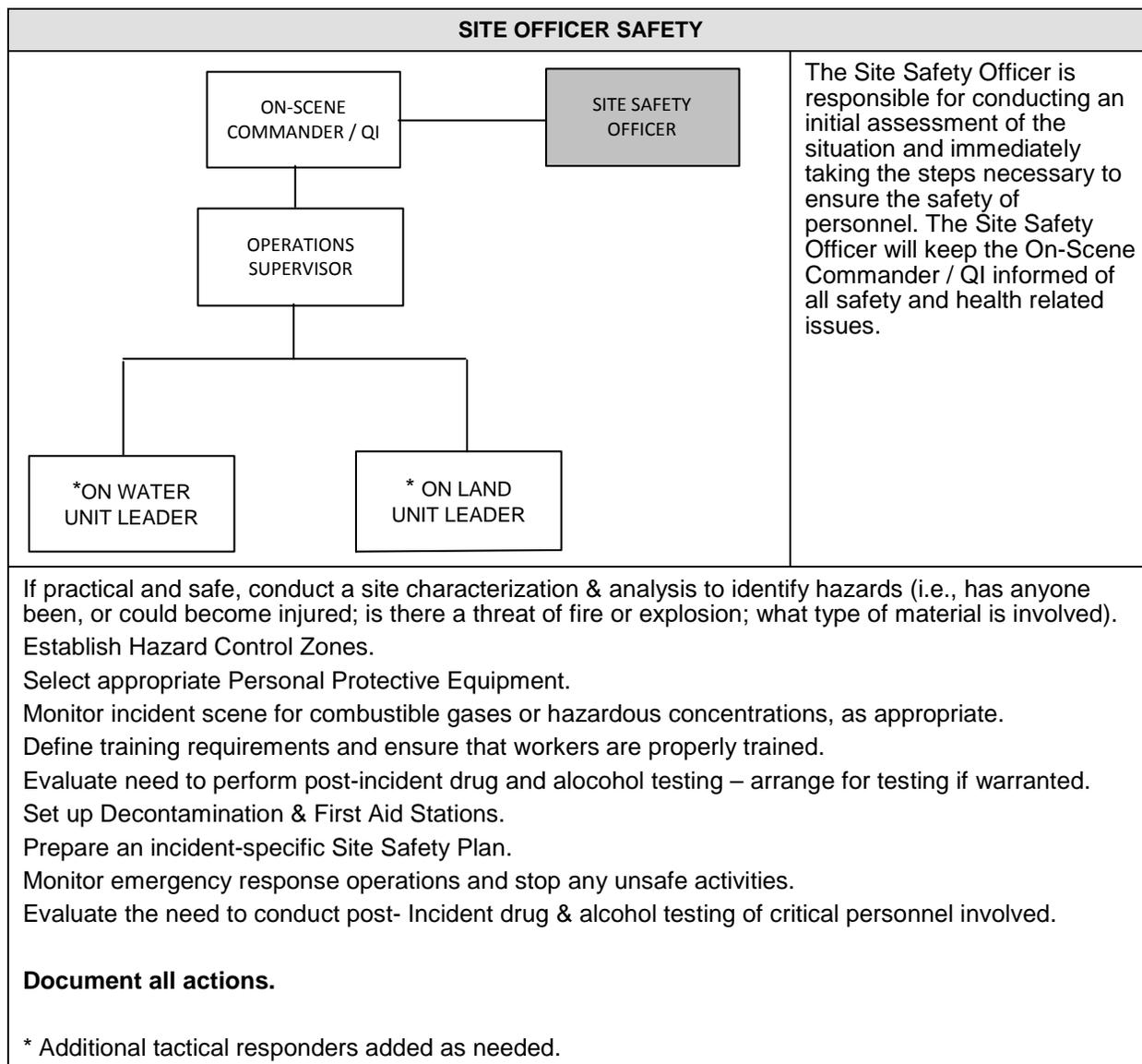
**FIGURE II-5 ONSITE RESPONSE ORGANIZATION**



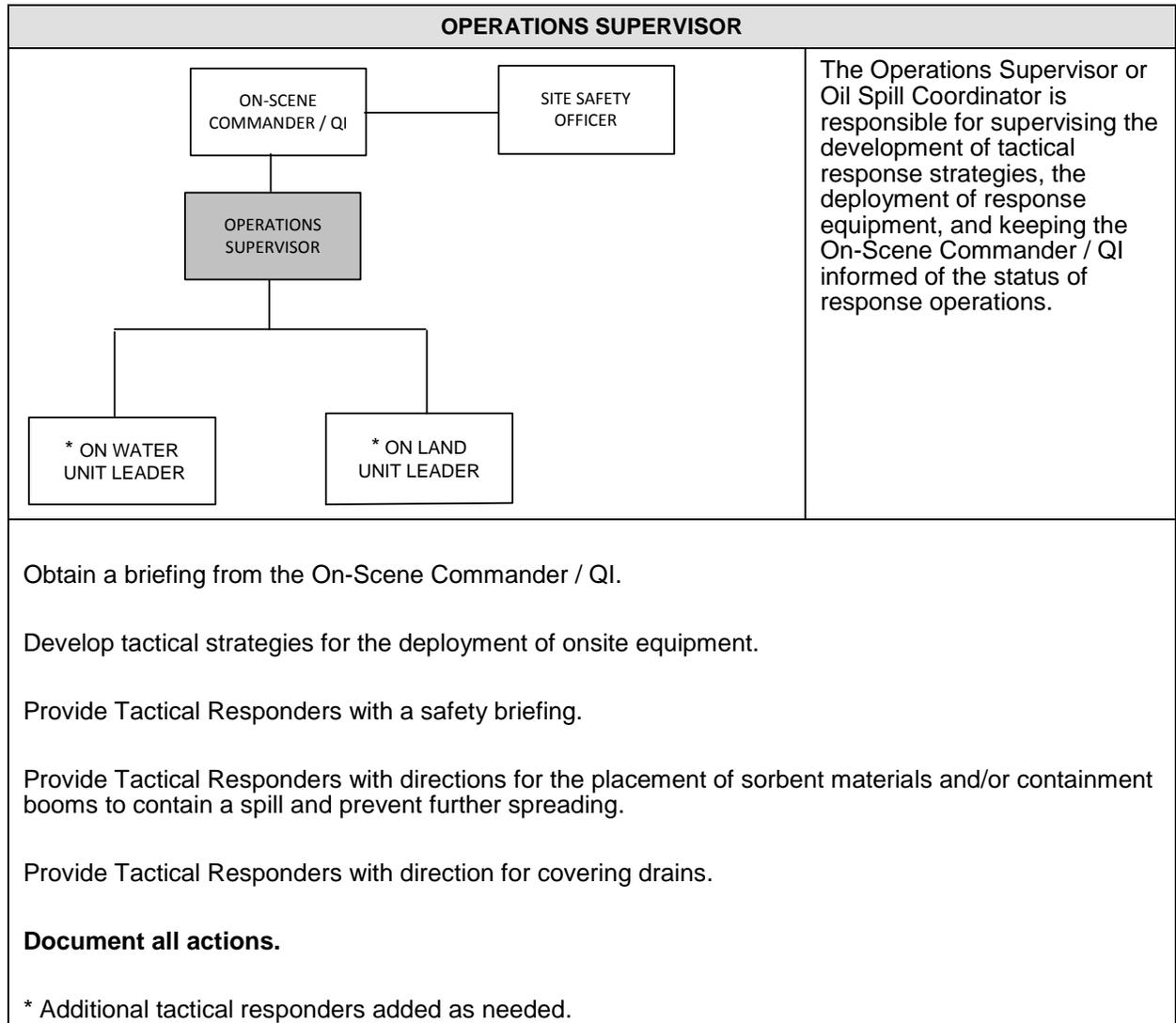
## PORT MANATEE TERMINAL & PIPELINE FRP EMERGENCY RESPONSE ACTION PLAN

ON-SCENE COMMANDER/QUALIFIED INDIVIDUAL	
<pre> graph TD     OSC[ON-SCENE COMMANDER / QI] --- SSO[SITE SAFETY OFFICER]     OSC --- OS[OPERATIONS SUPERVISOR]     OS --- OWUL[* ON WATER UNIT LEADER]     OS --- OLL[* ON LAND UNIT LEADER] </pre>	<p>The On-Scene Commander / QI is responsible for conducting an initial assessment of the situation and immediately taking the steps necessary to ensure the safety of personnel. The On-Scene Commander / QI will identify and control the source (if possible), conduct a detailed incident assessment, initiate and manage response operations, and make internal notifications.</p>
<p>(A) Activate internal alarms and hazard communication systems to notify all facility personnel;</p> <p>(B) Notify all response personnel, as needed;</p> <p>(C) Identify the character, exact source, amount, and extent of the release, as well as the other items needed for notification;</p> <p>(D) Notify and provide necessary information to the appropriate Federal, State, and local authorities with designated response roles, including the National Response Center (NRC), State Emergency Response Commission (SERC), and Local Emergency Planning Committee (LEPC);</p> <p>(E) Assess the interaction of the discharged substance with water and/or other substances stored at the facility and notify response personnel at the scene of that assessment;</p> <p>(F) Assess the possible hazards to human health and the environment due to the release. This assessment must consider both the direct and indirect effects of the release (i.e., the effects of any toxic, irritating, or asphyxiating gases that may be generated, or the effects of any hazardous surface water runoffs from water or chemical agents used to control fire and heat-induced explosion);</p> <p>(G) Assess and implement prompt removal actions to contain and remove the substance released;</p> <p>(H) Coordinate rescue and response actions as previously arranged with all response personnel;</p> <p>(I) Use authority to immediately access company funding to initiate cleanup activities;</p> <p>(J) Direct cleanup activities until properly relieved of this responsibility.</p> <p><b>Document all actions.</b></p> <p>* Additional tactical responders added as needed.</p>	

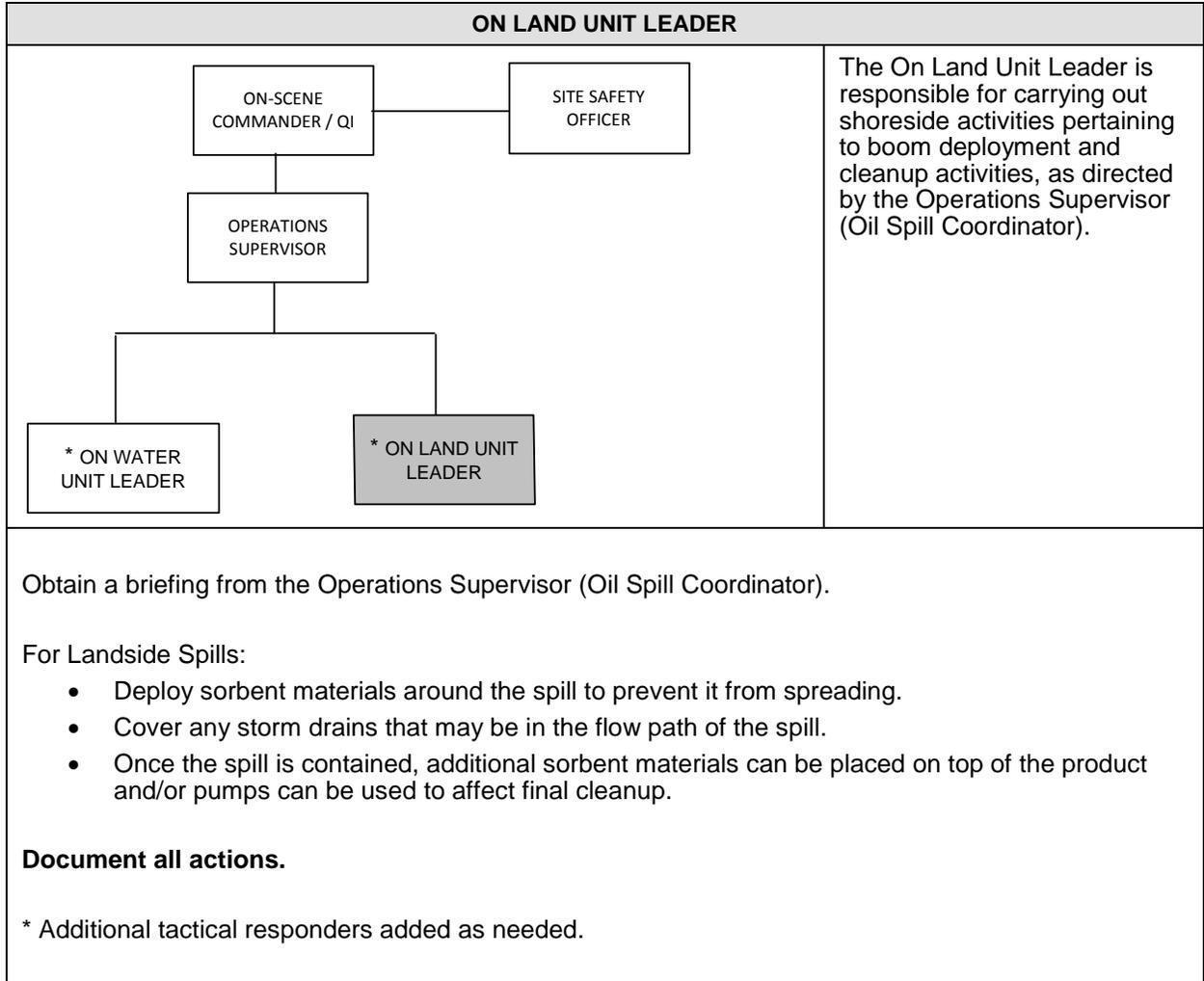
## PORT MANATEE TERMINAL & PIPELINE FRP EMERGENCY RESPONSE ACTION PLAN



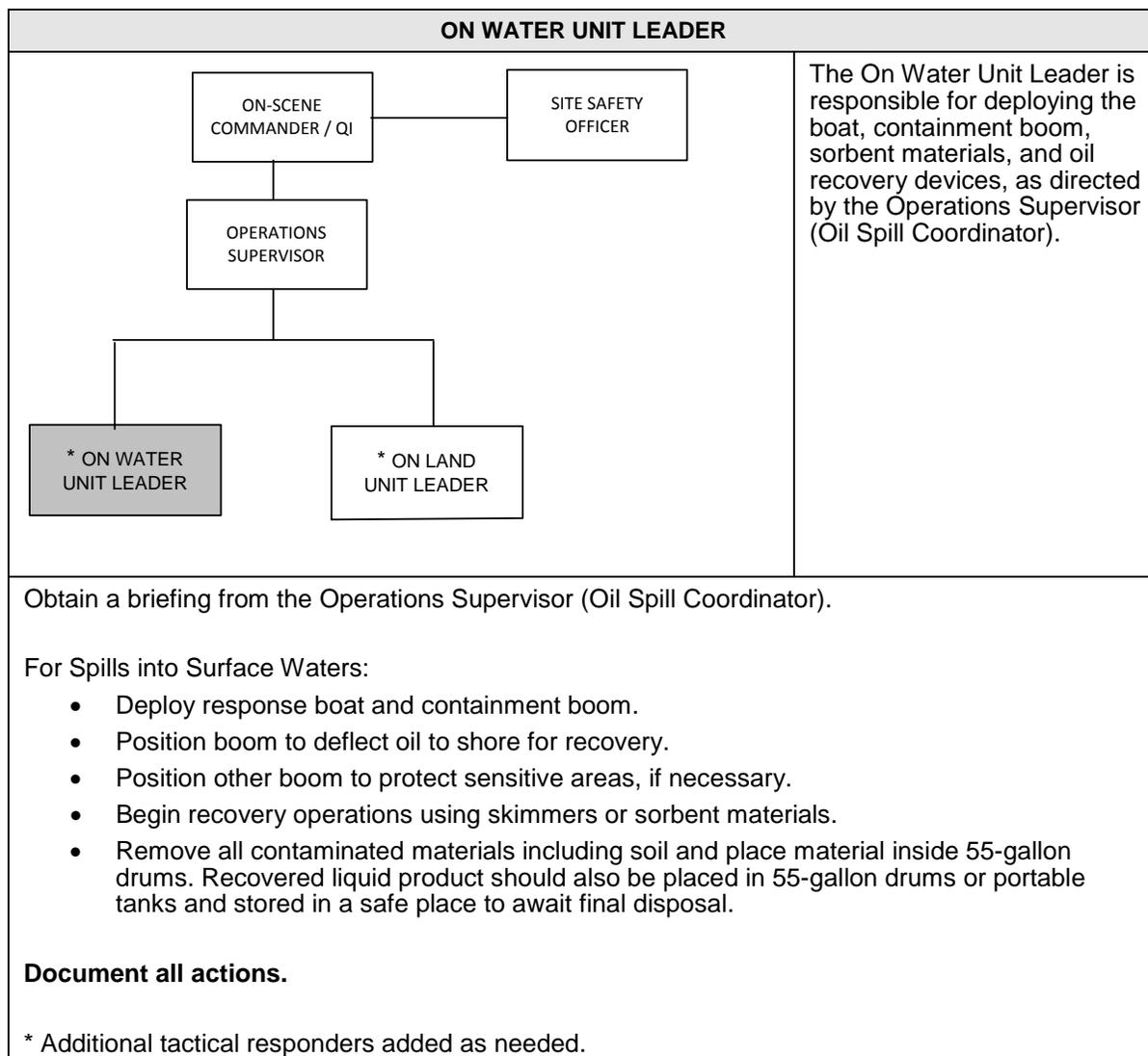
## PORT MANATEE TERMINAL & PIPELINE FRP EMERGENCY RESPONSE ACTION PLAN



## PORT MANATEE TERMINAL & PIPELINE FRP EMERGENCY RESPONSE ACTION PLAN



## PORT MANATEE TERMINAL & PIPELINE FRP EMERGENCY RESPONSE ACTION PLAN



## PORT MANATEE TERMINAL &amp; PIPELINE FRP EMERGENCY RESPONSE ACTION PLAN

Table II-5A

## PORT MANATEE TERMINAL AND PIPELINE OIL SPILL RESPONSE EQUIPMENT

CONTACT: Rich Sanger				EFFECTIVE DAILY RECOVERY RATE (derated): 1,063 BBLS/day				
Phone #: (941) 776-5235 (Office) (b) (6) (Cell)				CONTAINMENT BOOM: 4,300 FT				
TYPE	QTY	MAKE	MODEL	AGE	LOCATION	DESIGN CAPACITY (GPM)	EFFECTIVE DAILY RATE PER 24 HRS (BBLS)	EQUIPMENT DESIGN
<b>CONTAINMENT</b>								
Containment Boom	700 ft			2012	Conex Box #2			6 inch x 12 inch
Containment Boom	2000 ft			1994	Response Trailer (TMT #3)			6 inch x 12 inch
Containment Boom	1600 ft			1994	Boom Reel mounted on trailer			6 inch x 12 inch
<b>RECOVERY</b>								
Portable Generator	1 unit	Master	MGH 5000 DIE	2005	Terminal Shop / Garage			Gasoline; 5200 W
Portable Generator	1 unit	Porter Cable	BS 1525-W	2008	Terminal Shop / Garage			Gasoline; 5250 W
Portable Generator	1 unit	Honda	Northstar 5500	2012	Response Trailer #4 (TMT#4)			Gasoline; 5500 W
Absorbent Pads	20 bags	AB&B		2006	Conex Box #1			24" x 24"
Absorbent Pads	10 bags	AB&B		2006	Conex Box #1			36" x 36"
Absorbent Rolls	10 Rolls	AB&B		2006	Conex Box #1			4' x 150'

## PORT MANATEE TERMINAL &amp; PIPELINE FRP EMERGENCY RESPONSE ACTION PLAN

Table II-5A

## PORT MANATEE TERMINAL AND PIPELINE OIL SPILL RESPONSE EQUIPMENT

CONTACT: Rich Sanger				EFFECTIVE DAILY RECOVERY RATE (derated): 1,063 BBLS/day				
Phone #: (941) 776-5235 (Office) (b) (6) (Cell)				CONTAINMENT BOOM: 4,300 FT				
TYPE	QTY	MAKE	MODEL	AGE	LOCATION	DESIGN CAPACITY (GPM)	EFFECTIVE DAILY RATE PER 24 HRS (BBLS)	EQUIPMENT DESIGN
Oil Dry / Absorbent Clay	5 bags	Typical		2012	Response Trailer #4 (TMT#4)			Each container has 15 gallon capacity
Drum Skimmer System	1 unit	Crucial	1D18H-36	2008	Response Trailer #2 (TMT #2)	35 GPM		Drum Skimmer Hoses & Appurtenances Included
Drum Skimmer System	1 unit	Elastec	n/a	2002	Responst Trailer #1 (TMT#1)	120 GPM		Drum Skimmer Hoses & Appurtenances Included
Fast Tank	1 unit	Crucial	CALF-2500	2012	Response Trailer #1 (TMT#1)	2500 GAL	N/A	Aluminum Frame; 2500 GAL Capacity
Fast Tank	1 unit	Crucial	CALF-2500	2008	Response Trailer #2 (TMT#2)	2500 GAL	N/A	Aluminum Frame; 2500 GAL Capacity
Sausage Boom (5 in.)	25 bags			1994	Conex Box #1			40 ft each pkg
Sausage Boom (8 in.)	25 bags			1994	Conex Box #1			100 per pkg
Oil Snare (pom-poms) on a Rope	20 bags	AB&B		1992	Conex Box #4			1 per bag 50 ft rope; 30 snare per rope
Oil Snare (pom-poms)	40 bags	AB&B		1992	Boom House			25 snares per bag

II-29

## PORT MANATEE TERMINAL &amp; PIPELINE FRP EMERGENCY RESPONSE ACTION PLAN

Table II-5A

## PORT MANATEE TERMINAL AND PIPELINE OIL SPILL RESPONSE EQUIPMENT

CONTACT: Rich Sanger				EFFECTIVE DAILY RECOVERY RATE (derated): 1,063 BBLS/day				
Phone #: (941) 776-5235 (Office) (b) (6) (Cell)				CONTAINMENT BOOM: 4,300 FT				
TYPE	QTY	MAKE	MODEL	AGE	LOCATION	DESIGN CAPACITY (GPM)	EFFECTIVE DAILY RATE PER 24 HRS (BBLS)	EQUIPMENT DESIGN
<b>PUMPS</b>								
Diaphragm Pump	1 unit	Sandpiper	S30	2012	Terminal Shop / Garage	235 GPM		3" camlock fittings w/ suction & discharge hoses
Dewatering Pump	1 unit	Honda	WB30XT	2012	Response Trailer #4 (TMT#4)	275 GPM		Gasoline, 3" camlock fittings w/ suction & discharge hoses G
Trash Pump #1	1 unit	Robin / CHE	DY35/CHE3 239WH	1992	Terminal Shop / Garage			Diesel, 3" camlock fittings w/ suction & discharge hoses
Trash Pump #2	1 unit	Robin / CHE	DY35/CHE3 239WH	1992	Terminal Shop / Garage			Diesel, 3" camlock fittings w/ suction & discharge hoses
Trash Pump #3	1 unit	Honda	WT30X	2012	Response Trailer #1 (TMT#1)	317 GPM		Gasoline, 3" camlock fittings w/ suction & discharge hoses
Trash Pump #4	1 unit	Honda	WB20XT	2012	Response Trailer #1 (TMT#1)	151 GPM		Gasoline, 2" camlock fittings w/ suction & discharge hoses
Trash Pump #5	1 unit	Honda	WB20XT	2012	Response Trailer #1 (TMT#1)	151 GPM		Gasoline, 2" camlock fittings w/ suction & discharge hoses
Trash Pump #6	1 unit	Yanmar / Crucial	L70V-3T	2008	Terminal Shop / Garage			Diesel, 3" camlock fittings w/ suction & discharge hoses

## PORT MANATEE TERMINAL &amp; PIPELINE FRP EMERGENCY RESPONSE ACTION PLAN

Table II-5A

## PORT MANATEE TERMINAL AND PIPELINE OIL SPILL RESPONSE EQUIPMENT

CONTACT: Rich Sanger				EFFECTIVE DAILY RECOVERY RATE (derated): 1,063 BBLs/day				
Phone #: (941) 776-5235 (Office) (b) (6) (Cell)				CONTAINMENT BOOM: 4,300 FT				
TYPE	QTY	MAKE	MODEL	AGE	LOCATION	DESIGN CAPACITY (GPM)	EFFECTIVE DAILY RATE PER 24 HRS (BBLs)	EQUIPMENT DESIGN
<b>TRANSPORTATION</b>								
Boat on Trailer	1 unit	24' Munson			Parking Lot / Yard			150 hp Yamaha V-Max motor
Oil Recovery Barge	1 unit	Munson	VOSS	1993	Parking Lot / Yard	100 BBL		10' x 30', 100 BBL
<b>MISCELLANEOUS</b>								
Anchor w/ Rope & Shackle	20 unit	Typical	N/A	2012	Anchor Storage Shed	N/A	N/A	25 lb Anchor
Oars	2 units	Typical	N/A	2012	Munson Boat	N/A	N/A	Wooden
USCG Throw-Ring with Rope	1 unit	Typical	USCG Approved	2012	Munson Boat Dry-Box (in Terminal Shop / Garage)	N/A	N/A	USCG Approved
Life Jackets	2 units	Standard	USCG Approved	2012	Munson Boat Dry-Box (in Terminal Shop / Garage)	N/A	N/A	USCG Approved
USCG Required Boat Supplies	1 unit	Varies	USCG Approved	2012	Munson Boat Dry-Box (in Terminal Shop / Garage)	N/A	N/A	USCG Approved
Work Gloves	12 pairs			2012	Munson Boat Dry-Box (in Terminal Shop / Garage)			Standard Leather & Cloth
Latex Gloves	50 Pairs			2012	Response Trailer #4 (TMT#4)			Oil resistant rubber
Nitrile Gloves	25 Pairs			2012	Munson Boat Dry-Box (in Terminal Shop / Garage)			Nitrile

## PORT MANATEE TERMINAL &amp; PIPELINE FRP EMERGENCY RESPONSE ACTION PLAN

Table II-5A

## PORT MANATEE TERMINAL AND PIPELINE OIL SPILL RESPONSE EQUIPMENT

CONTACT: Rich Sanger				EFFECTIVE DAILY RECOVERY RATE (derated): 1,063 BBLS/day				
Phone #: (941) 776-5235 (Office) (b) (6) (Cell)				CONTAINMENT BOOM: 4,300 FT				
TYPE	QTY	MAKE	MODEL	AGE	LOCATION	DESIGN CAPACITY (GPM)	EFFECTIVE DAILY RATE PER 24 HRS (BBLS)	EQUIPMENT DESIGN
Sunblock (Cloths/Wipes)	1 box		SPF30	2012	Munson Boat Dry-Box (in Terminal Shop / Garage)			SPF30
Insect Repellent Wipes	1 box		DEET		Munson Boat Dry-Box (in Terminal Shop / Garage)			DEET
Anchor w/ Ropes & Shackle	1 unit	Typical	N/A	2010	Munson Boat	N/A	N/A	25 lb Anchor
Anchor w/ Ropes & Shackles	20 units	Typical	N/A	2012	Anchor Storage Shed	N/A	N/A	25 lb Anchors
Anchor Buoys	20 units	Typical	N/A	2012	Anchor Storage Shed	N/A	N/A	Spherical Flotation
Anchor Buoy Lights	20 units	Typical	N/A	2012	Response Trailer #4 (TMT#4)	N/A	N/A	Waterproof
Oars	2 units	Typical	N/A	2012	Munson Boat	N/A	N/A	Wooden
USCG Throw Ring with Rope	1 unit	Typical	USCG Approved	2012	Munson Boat Dry-Box (in Terminal Shop / Garage)	N/A	N/A	USCG Approved
Life Jackets	2 units	Standard	USCG Approved	2012	Munson Boat Dry-Box (in Terminal Shop / Garage)	N/A	N/A	USCG Approved
USCG Required Boat Supplies	1 unit	Varies	USCG Approved	2012	Munson Boat Dry-Box (in Terminal Shop / Garage)	N/A	N/A	USCG Approved
Work Gloves	12 pairs				Munson Boat Dry-Box (in Terminal Shop / Garage)			Standard Leather & Cloth
Sunblock	1 box				Munson Boat Dry-Box (in			

## PORT MANATEE TERMINAL &amp; PIPELINE FRP EMERGENCY RESPONSE ACTION PLAN

Table II-5A

## PORT MANATEE TERMINAL AND PIPELINE OIL SPILL RESPONSE EQUIPMENT

CONTACT: Rich Sanger				EFFECTIVE DAILY RECOVERY RATE (derated): 1,063 BBLS/day				
Phone #: (941) 776-5235 (Office) (b) (6) (Cell)				CONTAINMENT BOOM: 4,300 FT				
TYPE	QTY	MAKE	MODEL	AGE	LOCATION	DESIGN CAPACITY (GPM)	EFFECTIVE DAILY RATE PER 24 HRS (BBLS)	EQUIPMENT DESIGN
(Cloths/Wipes)					Terminal Shop / Garage)			
Insect Repellent Wipes	1 box				Munson Boat Dry-Box (in Terminal Shop / Garage)			
Life Jackets	12 units	Standard	USCG Approved	2005	Response Trailer #4 (TMT#4)	N/A	N/A	USCG Approved
Nylon Rope	1 spool	Typical	N/A	2012	Response Trailer #1 (TMT #1)	N/A	N/A	1/2 inch dia.; 500 ft
Squeegees	4 units	Typical	N/A	2012	Response Trailer #4 (TMT #4)	N/A	N/A	Rubber w/ Wood Handle
Hard Bristle Push Brooms	4 units	Typical	N/A	2012	Response Trailer #4 (TMT #4)	N/A	N/A	Typical
Hard Bristle Scrub Brushes	2 units	Typical	N/A	2012	Response Trailer #4 (TMT #4)	N/A	N/A	Typical
Wheelbarrow w/ No-Flat Wheel	1 unit	Typical	N/A	2012	Terminal Shop / Garage	N/A	N/A	Typical
Oil Spill Trash Bags	2 boxes	Standard	N/A	2012	Response Trailer #4 (TMT #4)	N/A	N/A	36 in x 60 in x 6ml; 50 bags per box
Contractor Trash Bags	3 boxes			2012	Response Trailer #4 (TMT #4)			24 bags per box
Work Gloves	12 pairs	Typical	N/A	2012	Response Trailer #4 (TMT #4)	N/A	N/A	Standard Leather & Cloth
Latex Gloves	50 pairs	Typical	N/A	2012	Response Trailer #4 (TMT #4)	N/A	N/A	Oil Resistant Rubber

## PORT MANATEE TERMINAL &amp; PIPELINE FRP EMERGENCY RESPONSE ACTION PLAN

Table II-5A

## PORT MANATEE TERMINAL AND PIPELINE OIL SPILL RESPONSE EQUIPMENT

CONTACT: Rich Sanger				EFFECTIVE DAILY RECOVERY RATE (derated): 1,063 BBLS/day				
Phone #: (941) 776-5235 (Office) (b) (6) (Cell)				CONTAINMENT BOOM: 4,300 FT				
TYPE	QTY	MAKE	MODEL	AGE	LOCATION	DESIGN CAPACITY (GPM)	EFFECTIVE DAILY RATE PER 24 HRS (BBLS)	EQUIPMENT DESIGN
Nitrile Gloves	25 pairs			2012	Response Trailer #4 (TMT #4)			Nitrile
Rags	2 bags	Typical	N/A	2008	Response Trailer #4 (TMT #4)	N/A	N/A	60 per bag
Tyvek Suits	3 boxes	Tyvek	N/A	2012	Response Trailer #4 (TMT #4)	N/A	N/A	25 suits per box
Boots (safety toe)	10 pairs	Typical	N/A	2012	Response Trailer #4 (TMT #4)	N/A	N/A	Oil Resistant Rubber
First Aid Kits	2 units	Standard	USCG Approved	2012	Response Trailer #4 (TMT #4)	N/A	N/A	USCG Approved
Sunblock (Cloths/Wipes)	1 box	Typical	SPF 30	2012	Response Trailer #4 (TMT #4)	N/A	N/A	50 wipes per box
Insect Repellent Wipes	1 box	Typical			Response Trailer #4 (TMT #4)	N/A	N/A	50 wipes per box
Shovels (Flat)	4 units	Typical	N/A	2012	Response Trailer #4 (TMT #4)	N/A	N/A	Flat Head w/ Wooden Handle
Shovels (Spade)	4 units	Typical	N/A	2012	Response Trailer #4 (TMT #4)			Spade Head w/ Wooden Handle
Rakes	4 units				Response Trailer #4 (TMT #4)			Steel Head w/ Wooden Handle
Pitch Forks	4 units				Response Trailer #4 (TMT #4)			Steel Head w/ Wooden Handle
Steel Headed Picks	2 units				Response Trailer #4 (TMT #4)			Steel Head w/ fiberglass handle

## PORT MANATEE TERMINAL & PIPELINE FRP EMERGENCY RESPONSE ACTION PLAN

Table II-5A

### PORT MANATEE TERMINAL AND PIPELINE OIL SPILL RESPONSE EQUIPMENT

CONTACT: Rich Sanger				EFFECTIVE DAILY RECOVERY RATE (derated): 1,063 BBLS/day				
Phone #: (941) 776-5235 (Office) (b) (6) (Cell)				CONTAINMENT BOOM: 4,300 FT				
TYPE	QTY	MAKE	MODEL	AGE	LOCATION	DESIGN CAPACITY (GPM)	EFFECTIVE DAILY RATE PER 24 HRS (BBLS)	EQUIPMENT DESIGN
Pump Sprayers	4 units				Response Trailer #4 (TMT #4)			Pump Sprayers for cleanup use
Degreaser	2 units	Zep			Response Trailer #4 (TMT #4)			10 gallons ea.
Buckets	5 units	Typical	N/A	2008	Response Trailer #4 (TMT #4)	5 gallon	N/A	Plastic
Duck Tape	1 case	Typical	N/A	2012	Response Trailer #4 (TMT #4)	N/A	N/A	24 rolls per case
Zip Ties	2 bags	Typical	N/A	2012	Response Trailer #4 (TMT #4)	N/A	N/A	500 per bag
Poly Sheeting (Visqueen)	6 rolls				Response Trailer #4 (TMT #4)			100 ft per roll
<p><b>Notes:</b>  SWS Environmental First Response is the Manatee Terminal's primary OSRO. Their response time to the site is approximately 2 hours.  Other certified OSRO may be called to respond to larger spills. See telephone numbers in Emergency Notification Phone List (Table II-3) of this plan for details of the name of the OSRO's that will respond in the event of an oil spill.  OSRO: Oil Spill Response Organization.  The Terminal uses Channel(s) 1 and/or 2 on their two-way radios for operations and maintenance communication.  Equipment and tanks are inspected periodically: informal inspections are conducted daily and formal recorded inspections are conducted monthly. The spill response equipment is monitored monthly. After the inspection, action items will be reviewed with Terminal Manager and records will be maintained at the Terminal.  Response Equipment List and Location (see Figure II-8).</p>								

## PORT MANATEE TERMINAL & PIPELINE FRP EMERGENCY RESPONSE ACTION PLAN

**Table II-5B lists the CRT response equipment available as of December 20, 2011.**

TABLE II-5B			
LIST OF CRT RESPONSE EQUIPMENT			
Location	Type	Equipment Design	Quantity
Box No. 1	Containment	Boom 36"	900 ft.
Box No. 2	Recovery	Drum Skimmer, 4 head floating	1 unit
	Recovery	Hose 2" discharge w/cam-lock fittings	125 ft
	Recovery	Hydraulic hose/pump	4 units
	Recovery	Drum Skimmer, 2 head floating	1 units
Box No. 3	Recovery	Hose 2" discharge w/cam-lock fittings	425 ft
	Recovery	Drum Skimmer, 2 head floating	1 unit
	Recovery	Drum Skimmer, power packs	4 units
Box No. 4	Recovery	Hose 3" suction w/cam-lock fittings	1050 ft
	Recovery	Lapio pump, w/power pak/200ft hydr. Hose	2 units
Box No. 5	Recovery	Hose 2" suction w/cam-lock fittings	100 ft
	Recovery	Rope Mop Skimmer, Verticale/2-4in. Ropes/power pak/hydr hoses	2 units
Box No. 6	Recovery	Floating Bladder, 2500 gal.	1 unit
	Recovery	Rope Mop Skimmer, Vertical-w/power pak/hydr hoses	2 units
	Recovery	Hose 2" suction w/cam-lock fittings	200 ft
Box No. 7	Recovery	Floating Bladder, 2500 gal.	2 unit

## PORT MANATEE TERMINAL & PIPELINE FRP EMERGENCY RESPONSE ACTION PLAN

TABLE II-5B			
LIST OF CRT RESPONSE EQUIPMENT			
Location	Type	Equipment Design	Quantity
	Recovery	Hose 3" suction w/cam	400 ft
	Recovery	Portable Oil Bladder 2500 gal	1 unit
	Recovery	Hose 4" suction w/cam- lock fittings	100 ft
	Recovery	Hose 2" suction w/cam- lock fittings	350 ft
Box No. 8	Recovery	3" discharge w/cam-lock fittings	2050 ft
Box No. 9	Recovery	Hose 2" discharge w/cam-lock fittings	1700 ft
	Recovery	Hose 4" discharge w/cam-lock fittings	475 ft
	Recovery	Hose 4" suction w/cam- lock fittings	200 ft
Box No. 10	Containment	Boom 18"	500 ft.
	Containment	Boom LAPIO 10'	500 ft.
	Containment	Boom 36"	400 ft.
Box No. 11	Containment	Boom 18"	2000 ft.
Box No. 12	Containment	Boom 18"	1900 ft.
Box No. 13	Containment	Boom 18"	1900 ft.
Box No. 14	Containment	Boom 18"	2000 ft.
Box No. 15	Containment	Boom 18"	2100 ft.
Box No. 16	Containment	Boom 36"	900 ft.
Box No. 17	Containment	Boom 36"	900 ft.
Box No. 19	Containment	Boom 36"	900 ft.
Box No. 20	Miscellaneous	Anchors	48 units
	Miscellaneous	Buoys	72 units
	Miscellaneous	Anchors / Chains / Rope	48 units
Box No. 21	Miscellaneous	Anchors	48 units
	Miscellaneous	Anchors / Chains / Ropes	48 units
	Miscellaneous	Buoys	71 units
Box No. 22	Miscellaneous	Anchors	46 units

## PORT MANATEE TERMINAL & PIPELINE FRP EMERGENCY RESPONSE ACTION PLAN

TABLE II-5B			
LIST OF CRT RESPONSE EQUIPMENT			
Location	Type	Equipment Design	Quantity
	Miscellaneous	Anchors / Chains / Ropes	46 units
	Miscellaneous	Bouys	71 units
Box No. 23	Recovery	Davits for Voss Barge	2 sets
	Recovery	Voss Barge Boom	3 sets
Box No. 24	Consumable	Snare on a Rope	112 bags
	Consumable	Sorbent Boom, 4" x 10"	12 bales
Box No. 25	Consumable	Sorbent Boom, 8" x 10'	76 bales
	Consumable	Sorbent Boom, 6" x 10'	55 bales
Box No. 26	Consumable	Absorbent Pads, 36 in x36 in,	76 bales
	Consumable	Snare	120 bags
	Consumable	Peat Moss	15 bags
	Consumable	Absorbent Pad Roll Large	33 rolls
	Consumable	Absorbent Pad Roll small	5 rolls
Box No. 27	Consumable	Adsorbent Pads, 18 in x 18 in, 100 pads/bale	587 bales
	Consumable	Snare on a Rope	28 bags
Box No. 28	Consumable	Sorbent Boom, 4" x 10'	137 bales
	Consumable	Sorbent Boom, 5" x 10'	108 bales
Trailer No. 9708	Safety	Tyvek Suit, Extra Large	225 units
	Safety	Tyvek Suit, Large	50 units
	Miscellaneous	Anchor Rope	2 units
	Miscellaneous	Cam - Lok 1 1/2 " Male x 1 1/2"Male NPT	10 units
	Miscellaneous	Cam-Lok 1 1/2 " female x 1 1/2 " Male NPT	10 units
	Miscellaneous	Buoys Ball	7 units
	Miscellaneous	Bouys Light	34 units
	Miscellaneous	Bug Spray	3 units (cans )
	Miscellaneous	Boom Pin	173 count
	Tool	Bolt Cutter 48"	6 units

## PORT MANATEE TERMINAL & PIPELINE FRP EMERGENCY RESPONSE ACTION PLAN

TABLE II-5B			
LIST OF CRT RESPONSE EQUIPMENT			
Location	Type	Equipment Design	Quantity
	Tool	Bolt Cutter 18"	4 units
	Miscellaneous	Bladder Valve 3"	2 units
	Miscellaneous	Barracade Lights	7 units
	Miscellaneous	Air Fitting 3/4" Elbow	21 units
	Miscellaneous	Anchor Rope	10 units
	Safety	Air Bottle	8 units
	Pump	Air operated Pumps	3 units
	Miscellaneous	Air Fitting Air King Safty Clip	50 units
	Miscellaneous	Air Fitting 4"female NPT Ball Valve	2 unit
	Miscellaneous	3"x6" nipple NPT	26 units
	Miscellaneous	Air Fitting 3/4"male NPT	20 units
	Miscellaneous	1 1/2"x6" nipple NPT	8 units
	Miscellaneous	Air Fitting 3/4" Female NPT	4 units
	Miscellaneous	Air Fitting 3/4 " Female	23 units
	Miscellaneous	2"x6" nipple NPT	21 units
	Miscellaneous	3/4" NPT nipple	19 units
	Miscellaneous	Anchor shackles	500 units
	Recovery	Portable Tank 2500 gal	1 unit
	Miscellaneous	Tow Bridle, 18"	7 units
	Safety	Respirator, Umbilical	1 unit
	Safety	Respirator, Self Contained	4 units
	Safety	Respirator	12 units
	Safety	Rain Gear Large/Disposable	288 units
	Safety	Rain Gear Trousers	116 units
	Safety	Rain Gear Jackets	125 units
	Miscellaneous	Pump Strainer 3"	6 units
	Miscellaneous	Rope, 3/8" Poly 600'	1 unit
	Miscellaneous	Nylon Velcro Strap	48 units

## PORT MANATEE TERMINAL & PIPELINE FRP EMERGENCY RESPONSE ACTION PLAN

TABLE II-5B			
LIST OF CRT RESPONSE EQUIPMENT			
Location	Type	Equipment Design	Quantity
	Tool	Pipe Wrench 24"	4 units
	Tool	Pipe Vice	1 unit
	Tool	Pipe Threader	3 sets
	Tool	Pipe Reemer	2 units
	Tool	Pipe Cutter	3 units
	Miscellaneous	Power Cord	24 units
	Miscellaneous	Lighted Buoy	4 units
	Miscellaneous	Tow Bridle, 18"	3 units
	Miscellaneous	Tow Bridle, 18" floating	2 units
	Miscellaneous	Oil 2 Cycle	7 pints
	Tool	Squeegee, 24"	13 units
	Miscellaneous	Cam-lok 3" Male x 3" NPT	37 units
	Miscellaneous	Cam-Lok 3" Male x 3" Male	21 units
	Tool	Sledge Hammer, 16lb.	3 units
	Miscellaneous	Rope, 3/4" Nylon 500'	1 unit
	Miscellaneous	Lifting Strap	8 units
	Safety	Tyvek Suit, Medium	100 units
	Safety	Signal Wand	64 units
	Tool	Shovel, Square Point	104 units
	Safety	Safety Glasses	160 pairs
	Safety	Rubber Gloves	51 pairs
	Miscellaneous	Light Stand	4 units
	Miscellaneous	Light Stick	7 units
	Miscellaneous	Rope, 1/2" Poly 600'	5 units
	Safety	Life Vest	64 units
	Miscellaneous	Ball Valve 3"	7 units
	Miscellaneous	4" female T	8 units
	Miscellaneous	Bouy Light	8 units
	Miscellaneous	Cam-Lok 4" cap	28 units

## PORT MANATEE TERMINAL & PIPELINE FRP EMERGENCY RESPONSE ACTION PLAN

TABLE II-5B			
LIST OF CRT RESPONSE EQUIPMENT			
Location	Type	Equipment Design	Quantity
	Miscellaneous	Cam-Lok 4" plug	31 units
	Miscellaneous	Tackle for bolcks	4 units
	Miscellaneous	Blocks	16 units
	Safety	Rubber Boots	107 pair
	Recovery	Dip Net	3 units
	Safety	Fire Extinguisher	8 units
	Recovery	Weir Skimmer, Flex Ray	1 units
	Miscellaneous	Water Cooler, 10 gal	4 units
	Miscellaneous	Visqueen, 6mm x 20' x 100'	10 rolls
	Miscellaneous	Hose Floats	40 units
	Miscellaneous	Cam-Lok 2" Female x 1 1/2" Male	14 units
	Safety	Hard Hat	119 units
	Miscellaneous	Cam-Lok 2" Female x 2" Female	8 Units
	Miscellaneous	Hammer Drill	2 units
	Safety	Gloves	605 pairs
	Safety	Flash Light, Intrinsically Safe	11 units
	Tool	Wrench, chain	4 units
	Recovery	Rope Mop Pulley, FPN 16	2 units
	Miscellaneous	Extension cord- 100' 12 ga.	2 units
	Recovery	Rake	24 units
	Safety	Insect Repellent	24-6oz cans
	Safety	SunScreen	16-4oz cans
	Miscellaneous	Hand Wipes	10 units
	Miscellaneous	Rope, 1/4" 600'	10 units
	Miscellaneous	Rope, 1/2" Nylon 600'	3 units
	Miscellaneous	Rope, 3/8" Nylon 600'	1 units
	Miscellaneous	1 1/2 Ton Shackle	37 units

## PORT MANATEE TERMINAL & PIPELINE FRP EMERGENCY RESPONSE ACTION PLAN

TABLE II-5B			
LIST OF CRT RESPONSE EQUIPMENT			
Location	Type	Equipment Design	Quantity
	Miscellaneous	Ball Valve 4" PVC	4 units
	Miscellaneous	Tite Seal, pipe dope	6 cans
	Miscellaneous	Ball Valve Brass	2 units
	Recovery	Rope Mop Pulley, FP 12	2 units
	Tool	Tool Kit, 104 piece	1 unit
	Safety	Safety Vest	20 units
	Safety	Hand Lights	45 units
	Miscellaneous	4"x6" nipple NPT	10 units
	Miscellaneous	Cam-Lok 3" Male x 2" Male	12 units
	Recovery	Drum Liners, 150 count	2 boxes
	Miscellaneous	Cam-Lok 4" Female x 2" Male	16 units
	Safety	Hard Hat Light	188 units
	Miscellaneous	Cam-Lok 2" Male x 2" Male NPT	38 units
	Miscellaneous	Cam-Lok 1 1/2" Male x 1 1/2" Female NPT	10 units
	Miscellaneous	Cam-Lok 2" Male x 2" Female NPT	25 units
	Miscellaneous	Cam-Lok 2" Male x 1 1/2" Male	15 units
	Miscellaneous	3" plug x 2" female NPT	15 units
	Miscellaneous	4" plug x 3" female NPT	14 units
	Miscellaneous	3" coupling	16 units
	Miscellaneous	Cam-Lok 2" Female x 2" Male	8 units
	Miscellaneous	Cam-Lok 3" Female x 2" Female	3 units
	Miscellaneous	Cam-Lok 1 1/2" x 1 1/2" Female NPT	1 units
	Miscellaneous	Cam-Lok 4" Female x 3" Male NPT	37 units
	Miscellaneous	Cam-Lok 3" Female x 2" Male	6 units

## PORT MANATEE TERMINAL & PIPELINE FRP EMERGENCY RESPONSE ACTION PLAN

TABLE II-5B			
LIST OF CRT RESPONSE EQUIPMENT			
Location	Type	Equipment Design	Quantity
	Miscellaneous	Cam-Lok 3" Female x 3 Male NPT	24 units
	Miscellaneous	Cam-Lok 4" Male x 4" Male NPT	21 units
	Miscellaneous	Cam-Loc 4" Plug	31 units
	Miscellaneous	Cam-Loc 4" Cap	30 units
	Miscellaneous	Cam-Lok 3" Cap	26 units
	Miscellaneous	Cam-Lok 2" Cap	21 units
	Miscellaneous	Cam-Lok 3" Plug	23 units
	Miscellaneous	Cam-Lok 2" Plug	14 units
	Miscellaneous	2" plug x 1 1/2" female NPT	3 units
	Miscellaneous	Cooler/Cup Holder	9 units
	Miscellaneous	2" female T	4 units
	Miscellaneous	Cam-Lok 6" Female x 4" Male	4 units
	Miscellaneous	Cam-Lok 4" Female x 3" Male	2 units
	Miscellaneous	Cam-Lok 6" Male x 4" Female	3 units
	Tool	Chain Saw (electric)	1 unit
	Miscellaneous	Cam-Lok 3" Female x 2" Female NPT	7 units
	Miscellaneous	Cam-Lok 4" Male x 3"	19 units
	Miscellaneous	Cam-Lok 4" Male x 2" Female	19 units
	Miscellaneous	Cam-Lok 3" Male x 2" Female	12 units
	Miscellaneous	Drinking Cups	31 Boxes
	Miscellaneous	Cam-Lok 3" Female x 3" Female	6 units
	Miscellaneous	Cam-Lok 4" Female x 3" Female	13 units
	Miscellaneous	Cam-Lok 4" Female x 3" Female NPT	5 units

## PORT MANATEE TERMINAL & PIPELINE FRP EMERGENCY RESPONSE ACTION PLAN

TABLE II-5B			
LIST OF CRT RESPONSE EQUIPMENT			
Location	Type	Equipment Design	Quantity
	Miscellaneous	4" plug x 2" female NPT	15 units
	Miscellaneous	3" female T	10 units
	Miscellaneous	Cam-Lok 4" Female x 4" Female NPT	10 units
	Miscellaneous	Cam-Lok 3" Female x 3" Female NPT	1 units
Trailer No. 9717	Containment	Boom 18"	3500 ft.
Trailer No. 9722	Containment	Boom 36"	1000 ft.
Trailer No. 9722	Containment	Boom 18"	300 ft.
Trailer No. 9723	Containment	Boom 18"	1900 ft.
OSR Building	Miscellaneous	Cut Thru (degreaser)	3 55 gal. Drums
	Recovery	Voss Barge Arms	2 sets
	Tool	Shovel, Square Point	165 units
	Tool	Welder	1 unit
	Recovery	VOSS Barge	2 units
	Recovery	Response Boat, 13' Seadoo Explorer	1 unit
	Recovery	Response Boat, 24' Carolina Skiff	1 unit
	Miscellaneous	Gas Water Heater	1 unit
	Miscellaneous	Centrifuge, Compact II	1 unit
	Miscellaneous	High Pressure Booster Pump, 1/2hp 7gpm	1 unit
	Recovery	Weir Skimmer, w/diesel power pak/hydr hoses	1 unit
	Consumable	Sorbent Boom, 8" x 10'	122 bales
	Consumable	Snare	90 bags
	Recovery	3" Trash pump	1 unit
	Recovery	3" Diaphragm pump	3 units
	Recovery	2" Peristaltic pump	2 units
	Miscellaneous	Rotair air compressor	1 unit
	Recovery	Vac Unit, skid mounted	1 unit
	Recovery	Portable tank 2500 gal	2 units

**PORT MANATEE TERMINAL & PIPELINE FRP EMERGENCY RESPONSE ACTION PLAN**

<b>TABLE II-5B</b>			
<b>LIST OF CRT RESPONSE EQUIPMENT</b>			
<b>Location</b>	<b>Type</b>	<b>Equipment Design</b>	<b>Quantity</b>
	Recovery	Vac Unit, trailer mounted	1 unit
	Miscellaneous	Pressure washer	1 unit
	Miscellaneous	Command trailer	1 unit

**PORT MANATEE TERMINAL & PIPELINE FRP EMERGENCY RESPONSE ACTION PLAN****Response Equipment, Testing and Deployment**

Facility response equipment is routinely inspected and tested to ensure that all equipment is operational, properly maintained, including appropriate level of inventories, is readily accessible and is immediately available in the event it is needed. Response equipment inspections are conducted during monthly preventative maintenance schedules by the Oil Spill Coordinator (Rich Sanger) and during equipment deployment drills. All equipment is maintained in good operating condition in accordance with manufacturer's recommendations. Any discrepancies noted during the inspection are corrected and the equipment is returned to its normal storage location. Records of equipment maintenance activities and equipment deployment drills are maintained by the site's Oil Spill Coordinator.

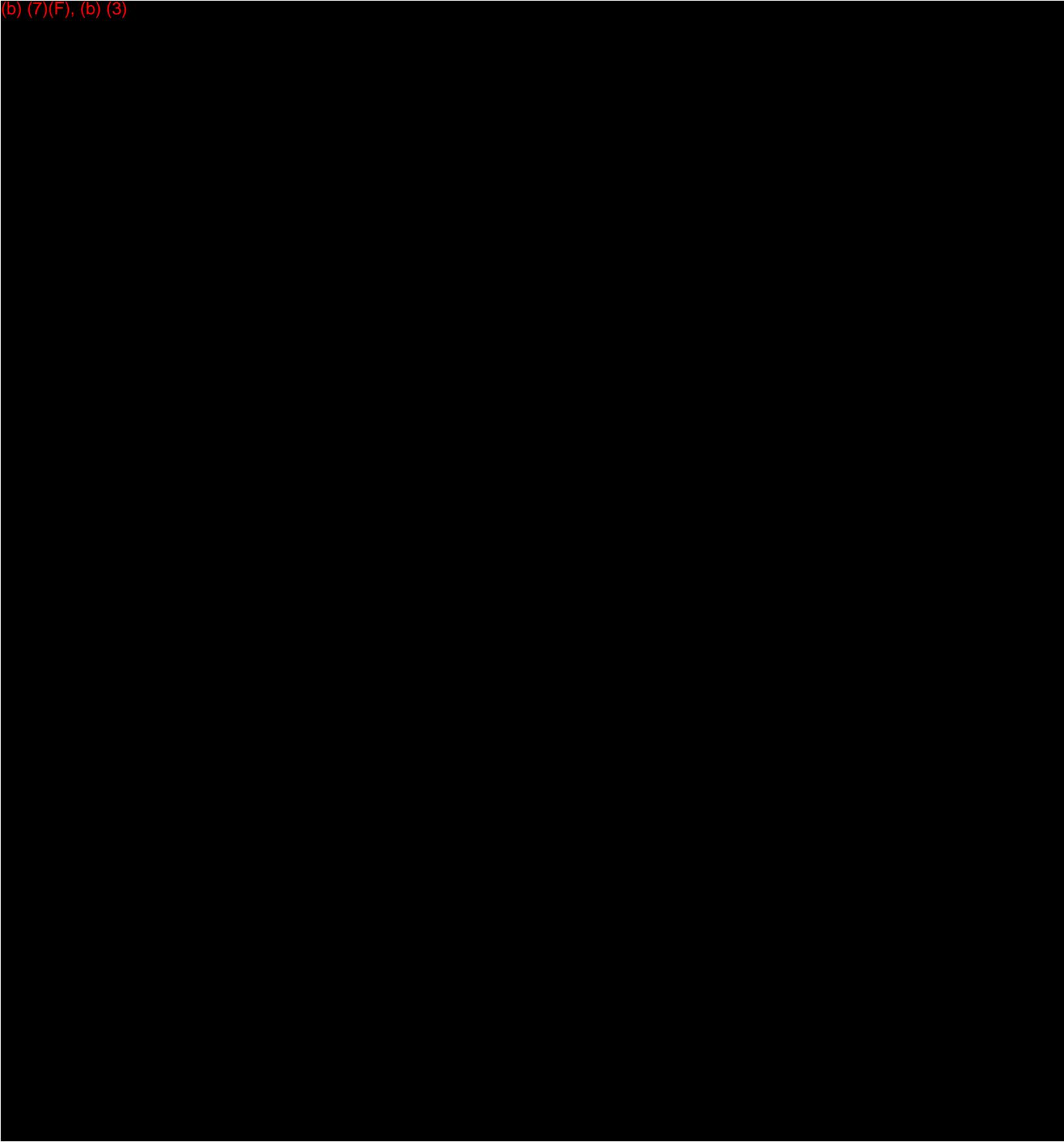
## PORT MANATEE TERMINAL & PIPELINE FRP EMERGENCY RESPONSE ACTION PLAN

TABLE II-6		
OIL SPILL LEVEL AND GROUP		
LEVEL	VOLUME	OIL GROUP
Level I (Small Case Discharge)	50 barrels (2,100 gallons)	Group III and IV
Level II (Medium Case Discharge)	857 barrels (36,000 gallons)	Group IV
Level III (Worst Case Discharge)	(b) (7)(F), (b) (3)	

**PORT MANATEE TERMINAL & PIPELINE FRP EMERGENCY RESPONSE ACTION PLAN**

Evacuation Plan

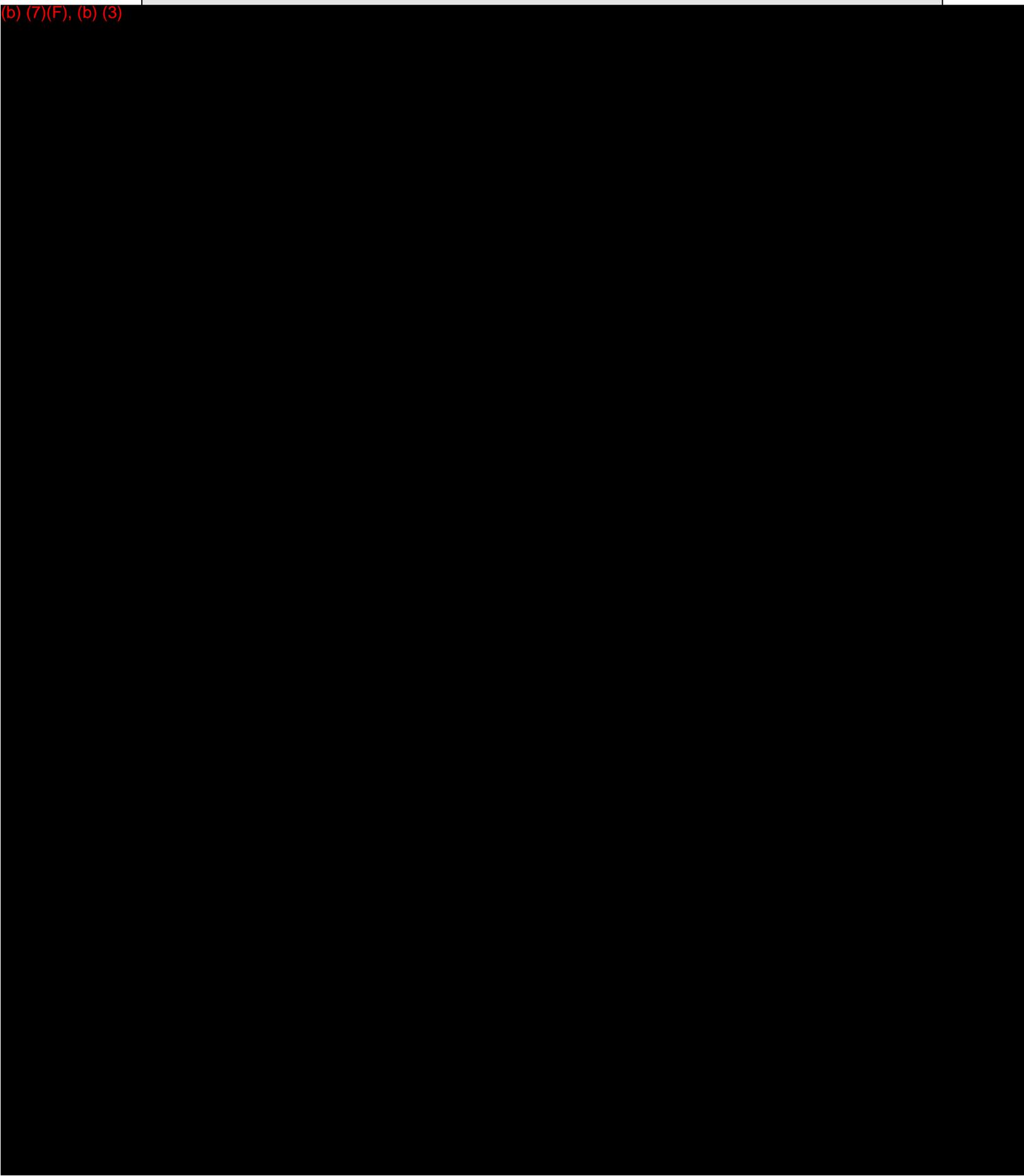
(b) (7)(F), (b) (3)



**PORT MANATEE TERMINAL & PIPELINE FRP EMERGENCY RESPONSE ACTION PLAN**

**EVACUATION PLANS**

(b) (7)(F), (b) (3)



## PORT MANATEE TERMINAL & PIPELINE FRP EMERGENCY RESPONSE ACTION PLAN

### RESPONSE ACTIONS

Securing the source is an extremely important step in spill response actions. However, a source should only be secured if it can be performed safely and poses no threat to human health. The Oil Spill Coordinator will direct the spill response procedures. A facility piping diagram (see Figure II-17) can be used to identify appropriate valves to close. The areas of source include: the truck unloading area, pipeline, and fuel oil tanks. Steps taken to secure the source include the following:

- **Land Spills** – Make every effort to contain the spill so as to limit the affected area.
- **Transfer Equipment** – If a manifold fails, shut down upstream pumps, close upstream valves. If a hose failure is encountered shut down upstream pumps, close upstream valves and drain hose into secondary containment, if feasible.
- **Tank Overflow** – If the source of the spill is identified as a tank leaking or overflowing, shut down pump operations and close fill line valve.
- **Tank Failure** – If the source of the spill is identified as a catastrophic tank failure (i.e., collapse) and safety conditions permit, contain the oil within the secondary containment area and shut down all valves associated with the tank. If this is not possible, utilize earth-moving equipment to create temporary berms to prevent the spill from spreading.
- **Piping Rupture** – If the source originates from a pipeline (low pressure), shut down pumps, close pipeline block valves on both side of the spill, and drain blocked section of line. If the source originates from a pipeline (high pressure), shut down pumps, close pipeline block valves on both sides of the spill, construct or obtain temporary containment, and bleed pressure from the pipeline into containment.
- **Equipment Failure** – For equipment failures, upstream valves will be closed and the appropriate lines or vessels will be drained or, if pressurized, will be bled down into containment structures.
- **Explosion or Fire** – (1) Notify local fire authorities; (2) Control or disperse vapors; (3) Cool heated structures; (4) Divert/control runoff; (5) Recover product(s). Appropriately trained personnel will secure the sources of discharge by appropriate means and deploy containment and control equipment to contain the spilled material. The Oil Spill Coordinator will implement other response activities as needed.

## PORT MANATEE TERMINAL & PIPELINE FRP EMERGENCY RESPONSE ACTION PLAN

TABLE II-7						
PORT MANATEE TERMINAL AND PIPELINE PETROLEUM BULK STORAGE CONTAINERS						
TANK ID	TYPE	CONTENTS	CAPACITY	SECONDARY CONTAINMENT TYPE	SECONDARY CONTAINMENT (CAPACITY)	EQUIPMENT START UP YEAR
T1	Fuel Oil Storage Tank A	No. 6 Fuel Oil	(b) (7)(F), (b) (3)	Earthen Berm	(b) (7)(F), (b) (3)	1976
T2	Fuel Oil Storage Tank B	No. 6 Fuel Oil		Earthen Berm		1976
T3	Heater Fuel Tank	No. 2 Fuel Oil and/or Mineral Oil		Concrete Containment		1976
T4	Purge Oil Tank	No. 6 Fuel Oil		Earthen Berm		1976
T5	Emergency Generator Tank	Diesel		Within Building		1976
Notes: G stands for Gallons, B stands for Barrels Locations are indicated on Figure II-6.						

## PORT MANATEE TERMINAL & PIPELINE FRP EMERGENCY RESPONSE ACTION PLAN

TABLE II-8						
PORT MANATEE TERMINAL AND PIPELINE NONBULK STORAGE CONTAINERS (OIL FILLED EQUIPMENT)						
TANK ID	TYPE	CONTENTS	CAPACITY	SECONDARY CONTAINMENT TYPE	SECONDARY CONTAINMENT (CAPACITY)	EQUIPMENT START UP YEAR
X1	High Voltage Transformer	Mineral Oil	(b) (7)(F), (b) (3)	Concrete Curbing with Rock Filled Area	(b) (7)(F), (b) (3)	1976
X2	High Voltage Transformer	Mineral Oil		Concrete Curbing with Rock Filled Area		1976
X3	High Voltage Transformer	Mineral Oil		Concrete Curbing with Rock Filled Area		1976
X4	CP Rectifier	Mineral Oil		Earthen Berm		1976
X5	CP Rectifier	Mineral Oil		Earthen Berm		1976
X6	Distribution Transformer	Mineral Oil		Concrete Curbing with Rock Filled Area		1976
Notes: G stands for Gallons, B stands for Barrels Locations are indicated on Figure II-7.						

## PORT MANATEE TERMINAL & PIPELINE FRP EMERGENCY RESPONSE ACTION PLAN

TABLE II-9 PORT MANATEE CONTAINMENT UNITS			
ID	TYPE	CONTENTS	CAPACITY
T6	Oil Water Separator	Fuel Oil	(b) (7)(F), (b) (3)
T7	Truck Unloading Area	Fuel Oil	
<p>Notes:</p> <p>G stand for gallons</p> <p>gpm stands for gallons per minute</p> <p>Locations are indicated on Figures II-6 and II-7.</p>			

**PORT MANATEE TERMINAL & PIPELINE FRP EMERGENCY RESPONSE ACTION PLAN**

[Intentionally Blank]

**PORT MANATEE TERMINAL & PIPELINE FRP EMERGENCY RESPONSE ACTION PLAN**

Insert

**FIGURE II-6 LOCATION OF EQUIPMENT TANKS, FUEL OIL STORAGE TANKS, AND FUEL TRANSFER LINES**

## PORT MANATEE TERMINAL & PIPELINE FRP EMERGENCY RESPONSE ACTION PLAN

Insert

FIGURE II-7 LOCATION OF OIL FILLED EQUIPMENT

**PORT MANATEE TERMINAL & PIPELINE FRP EMERGENCY RESPONSE ACTION PLAN**

INSERT

FIGURE II-8 LOCATION OF OIL SPILL RESPONSE AND COMMUNICATION EQUIPMENT

## PORT MANATEE TERMINAL & PIPELINE FRP EMERGENCY RESPONSE ACTION PLAN

Insert

FIGURE II-9 FIRE PROTECTION PLAN

## PORT MANATEE TERMINAL & PIPELINE FRP EMERGENCY RESPONSE ACTION PLAN

Insert

FIGURE II-10A ENVIRONMENTALLY SENSITIVE AREAS

## PORT MANATEE TERMINAL & PIPELINE FRP EMERGENCY RESPONSE ACTION PLAN

Insert

FIGURE II-10B ENVIRONMENTALLY SENSITIVE AREAS FOR 16" MANATEE PIPELINE

## PORT MANATEE TERMINAL & PIPELINE FRP EMERGENCY RESPONSE ACTION PLAN

Insert

FIGURE II-11 SITE EVACUATION PLAN

## PORT MANATEE TERMINAL & PIPELINE FRP EMERGENCY RESPONSE ACTION PLAN

Insert

FIGURE II-12 SITE DRAINAGE PLAN

## PORT MANATEE TERMINAL & PIPELINE FRP EMERGENCY RESPONSE ACTION PLAN

Insert

FIGURE II-13 OIL SPILL DRAINAGE PATHS

## PORT MANATEE TERMINAL & PIPELINE FRP EMERGENCY RESPONSE ACTION PLAN

Insert

FIGURE II-14A BOOMING STRATEGIES OVERVIEW

## PORT MANATEE TERMINAL & PIPELINE FRP EMERGENCY RESPONSE ACTION PLAN

Insert

FIGURE II-14B PORT MANATEE VIEW 1

## PORT MANATEE TERMINAL & PIPELINE FRP EMERGENCY RESPONSE ACTION PLAN

FIGURE II-14C PORT MANATEE VIEW 2

## PORT MANATEE TERMINAL & PIPELINE FRP EMERGENCY RESPONSE ACTION PLAN

FIGURE II-14D PORT MANATEE VIEW 3

## PORT MANATEE TERMINAL & PIPELINE FRP EMERGENCY RESPONSE ACTION PLAN

FIGURE II-14E PORT MANATEE VIEW 4

## PORT MANATEE TERMINAL & PIPELINE FRP EMERGENCY RESPONSE ACTION PLAN

FIGURE II-14F PORT MANATEE VIEW 5

## PORT MANATEE TERMINAL & PIPELINE FRP EMERGENCY RESPONSE ACTION PLAN

FIGURE II-14G PORT MANATEE VIEW 6

## PORT MANATEE TERMINAL & PIPELINE FRP EMERGENCY RESPONSE ACTION PLAN

FIGURE II-14H PORT MANATEE VIEW 7

## PORT MANATEE TERMINAL & PIPELINE FRP EMERGENCY RESPONSE ACTION PLAN

FIGURE II-14I PORT MANATEE VIEW 8

## PORT MANATEE TERMINAL & PIPELINE FRP EMERGENCY RESPONSE ACTION PLAN

FIGURE II-14J PORT MANATEE VIEW 9

**PORT MANATEE TERMINAL & PIPELINE FRP EMERGENCY RESPONSE ACTION PLAN**

FIGURE II-14K PORT MANATEE VIEW 10

## PORT MANATEE TERMINAL & PIPELINE FRP EMERGENCY RESPONSE ACTION PLAN

FIGURE II-14L PORT MANATEE VIEW 11

## PORT MANATEE TERMINAL & PIPELINE FRP EMERGENCY RESPONSE ACTION PLAN

Insert

FIGURE II-15 COMPREHENSIVE RESPONSE DATA POSTER

## PORT MANATEE TERMINAL & PIPELINE FRP EMERGENCY RESPONSE ACTION PLAN

Insert

FIGURE II-16 TRANSFER PIPELINE PLAN VIEW

**PORT MANATEE TERMINAL & PIPELINE FRP EMERGENCY RESPONSE ACTION PLAN**

Insert

**FIGURE II-17 FUEL OIL VALVE AND PIPING DIAGRAM FOR DISCHARGE ISOLATION**

**SECTION III:****FACILITY DESCRIPTION**

---

**A. FACILITY LOCATION AND DESCRIPTION****Facility Name and Location**

The Port Manatee Terminal and Pipeline is part of the Manatee Fuel Supply System which is a combination of pumping units, pipelines and a storage facility for supplying No. 6 fuel oil to the Manatee Plant. The terminal is located on Florida's west coast in Manatee County. The terminal is located on the south shore of Tampa Bay within Port Manatee.

Figure III-1 illustrates the site location.

The latitude and longitude of the facility are:

- Latitude: (b) (7)(F), (b) (3)
- Longitude: [REDACTED]

The address and telephone number of the facility is:

Port Manatee Terminal  
12310 Reeder Road  
Palmetto, Florida 34221  
Phone: (941) 722-1163

**Nearest Navigable Waterway**

The nearest navigable waterway is: **The Tampa Bay.**

The distance to the nearest waterway/wetland is: **The Terminal is located adjacent to the Tampa Bay.**

## Facility Layout

The Port Manatee Terminal currently consists of the following:

- Control/Administration building and parking areas
- Wastewater Treatment Facilities
- Emergency Electrical Generator
- High Voltage Transformers
- CP Rectifiers
- Oil-fired Line Heaters
- Storage Tanks
- Pumps

See Figure III-1 for site location.

Port Manatee Terminal stores a significant amount of oil for use in operating the Manatee Plant. The types of oil stored on Terminal property are No. 6 fuel oil, No. 2 fuel oil, and mineral oil.

There are two (2) bulk storage tanks, a purge tank, and a heater fuel oil tank, all of which are aboveground at the Port Manatee Terminal.

A 14-mile, 16-inch (outside diameter) pipeline connects the Port Manatee Terminal to the Manatee Power Plant. The pipeline is designed to deliver No. 6 fuel oil to the Manatee Plant. Three 300-horsepower rotary-screw-type pumps are used to move the fuel at a design pressure of 325 psi. The pipeline is located in one response zone within Manatee County, and it crosses no navigable water bodies. Even though the pipeline does not cross a navigable water body, for safety reasons, FPL has developed contingency planning for a worst-case discharge as required under 49 CFR 194 for the entire response zone.

## PIPELINE RESPONSE ZONE DESCRIPTION

The pipeline from the Port Manatee Terminal, located in Port Manatee along the southern shoreline of Tampa Bay, to the Manatee Power Plant, located north of State Route 62 in Manatee County, Florida, is a 14 mile, 16-inch buried pipeline. The pipeline does not cross any surface waters. The pipeline route does, however, pass between the drainage basins for the Little Manatee River, located north of the pipeline route, and the Manatee River, located south of the pipeline route. Large spills not contained on the uplands could flow through drainage routes into the tributaries of these rivers.

(b) (3), (b) (7)(F)

Figures II-10A and II-10B show potentially affected waterbodies within a five (5) mile radius of the pipeline; and sensitive areas along the pipeline route. Also see Figure II-16, a plan view of the pipeline route.

*[Intentionally Blank]*

Insert

FIGURE III-1 SITE LOCATION

*[Intentionally Blank]*

**B. WATERFRONT DESCRIPTION**

The Port Manatee Terminal typically uses berth #9 or #10 within Port Manatee, a bulk-headed port facility on the south side of Tampa bay. The terminal can handle one tanker or barge at a time. At the present time, vessels with a maximum draft of 38.0 feet are allowed at this facility. The largest vessel that calls on the Port Manatee Terminal is approximately 850 feet long and carries about 300,000 barrels of oil. The fuel oil is delivered to the terminal and is pumped mainly through underground pipelines to two shoreside, above ground fuel oil storage tanks. After receipt of a delivery, the fuel oil is transferred via pipeline to the FPL Manatee Plant.

**C. ENVIRONMENTAL CONDITIONS**

As has been stated, the fuel oil unloading facility is located at Berths #9 and #10 on the south side of Port Manatee. The fuel oil terminal is located approximately 1 mile southeast of the offloading facility. The 14-mile underground pipeline connects Port Manatee Terminal to Manatee Plant, located on Parrish Lake, north of State Route 62, 5 miles east of Parrish Florida.

**D. METEOROLOGICAL CONDITIONS****Winds**

A five-year annual wind rose for the Tampa International Airport (1982 - 1986) is presented in Figure III-2. The Tampa data are the most representative wind direction and wind frequency data available for the Port Manatee Terminal and Pipeline. In the figure, the length of each directional vector indicates the total percentage of time in which that wind direction occurs. The width of the vector indicates the frequency of occurrence of the wind speed class for each respective direction. The Tampa wind direction frequencies are mostly dominant from the eastern and northeastern quadrant with the greatest frequencies occurring for east (14 percent), and east-northeast (12 percent).

## Temperatures

The temperature means and extremes for the Tampa International Airport (1951-1991), are presented in Table III-1. The Tampa data are the most representative temperature data available for the Port Manatee Terminal and Pipeline. The mean annual temperature of 72.0°F varies from a monthly high of 82.2°F in July and August to a monthly low of 59.8°F in January. The average diurnal maximum varies from 90.3°F in August to a low of 70.0° in January. The average diurnal minimum varies from a maximum of 74.2°F in July to a minimum of 49.5°F in January. The extreme maximum temperature recorded from the period 1948 through 1991 is 99°F while the minimum temperature recorded during the same period is 18°F. The temperature extremes at the site are moderated by the site's proximity to the coast.

## Precipitation

The monthly precipitation means and extremes for the Tampa International Airport (1951-1991) are presented in Table III-2. The Tampa data are the most representative precipitation data available for the Port Manatee Terminal and Pipeline. All of the measured precipitation is in the form of rain. Peninsula Florida cities display a distinctive wet and dry season. The wet season at the site begins in May and ends in October. Precipitation during the wet season is usually 60 to 70 percent in the form of short-lived thunderstorms. The normal monthly precipitation for the Terminal site varies from a peak of 7.64 inches in August to minimum of 1.87 inches in November. The annual mean precipitation is 46.73 inches. The maximum monthly and daily rainfall amounts (1947 - 1991) are 20.59 and 12.11 inches, respectively.

## Visibility

Occurrence of heavy fog does not occur frequently. The average number of days per month with heavy fog occurrences (visibility less than or equal to 0.25 mile) range from a maximum of 2.8 in January to 0.1 in July. The average number of heavy fog occurrences per year is 21.9 days which is presented in Table III-2.

<b>TABLE III-1</b>					
<b>MONTHLY MEAN AND EXTREME TEMPERATURES FOR THE PORT MANATEE TERMINAL AND PIPELINE</b>					
<b>Month</b>	<b>Mean Temperatures<sup>a</sup> (°F)</b>			<b>Extreme Temperatures<sup>b</sup> (°F)</b>	
	<b>Average</b>	<b>Maximum</b>	<b>Minimum</b>	<b>Maximum</b>	<b>Minimum</b>
January	59.8	70.0	49.5	85	21
February	60.8	71.0	50.4	88	24
April	66.2	76.2	56.1	91	29
April	71.6	81.9	61.1	93	40
May	77.1	87.1	67.2	98	49
June	80.9	89.5	72.3	99	53
July	82.2	90.0	74.2	97	63
August	82.2	90.3	74.2	98	67
September	80.9	88.9	72.8	96	57
October	74.5	83.7	65.1	94	40
November	66.7	76.9	56.4	90	23
December	61.3	71.6	50.9	86	18
Annual	72.0	81.4	62.5	99	18
a: Tampa International Airport, FL 1951-1980 b: Tampa International Airport, FL 1948-1991					

<b>TABLE III-2 MONTHLY PRECIPITATION AND VISIBILITY FOR THE PORT MANATEE TERMINAL AND PIPELINE</b>				
<b>Month</b>	<b>Precipitation (inches)</b>			<b>Number of Days with Visibility ≤ ¼ Mile<sup>b</sup></b>
	<b>Mean<sup>a</sup></b>	<b>Extreme<sup>b</sup></b>		
		<b>Monthly</b>	<b>Daily</b>	
January	2.17	8.02	3.29	5.8
February	3.04	7.95	3.68	3.0
March	3.46	12.64	5.20	2.8
April	1.82	6.59	3.70	1.1
May	3.38	17.64	11.84	0.5
June	5.29	13.75	5.53	0.3
July	7.35	20.59	12.11	0.1
August	7.64	18.59	5.37	0.3
September	6.23	13.98	4.99	0.3
October	2.34	7.36	2.93	1.1
November	1.87	6.12	4.48	2.8
December	2.14	6.66	3.29	4.1
Annual	46.73	20.59	12.11	21.9
a: Tampa International Airport, FL 1951-1980 b: Tampa International Airport, FL 1947-1991				

Insert

**FIGURE III-2 WIND ROSE**

*[Intentionally Blank]*

## **SECTION IV: NOTIFICATION / ACTIVATION PROCEDURES**

---

### **A. INTERNAL NOTIFICATIONS**

Depending on the size of the incident, the OSC/QI or alternate from the Manatee Plant will activate the Onsite Response Team (ORT) and notify the appropriate additional response resources listed in Table II-4. For any size incident, the OSC/QI will notify a Corporate Response Team (CRT) designee, and the Juno Power Generation Environmental Representative.

### **B. EXTERNAL NOTIFICATIONS**

FPL has developed an external notification procedure to ensure that the Company will make and complete all required government agency notifications in a timely fashion. In the event of a spill, the **OSC/QI** or **Alternate** will immediately complete the Spill Response Notification Form (Figure IV-1), consult the Emergency Notification List in Table II-3, and make the required notifications.

Follow-up notifications will be provided to the appropriate agencies as incident information becomes available. Additional follow-up reports will be provided as deemed appropriate or as requested by agency personnel.

FIGURE IV-1 SPILL RESPONSE NOTIFICATION FORM			
PORT MANATEE TERMINAL AND PIPELINE			
REPORTING PARTY INFORMATION			
INITIAL NOTIFICATION TO NRC MUST NOT BE DELAYED			
PENDING COLLECTION OF ALL INFORMATION			
REPORTER'S LAST NAME:	_____	FIRST:	_____ M.I.: _____
PHONE NUMBERS: DAY:	_____	EVENING:	_____ MOBILE: _____
COMPANY:	FLORIDA POWER AND LIGHT COMPANY		
ORGANIZATION TYPE:	ELECTRIC COMPANY		
YOUR POSITION:	_____		
ADDRESS:	12310 REEDER ROAD		
CITY:	PALMETTO	STATE:	FL ZIP: 34221
WERE MATERIALS DISCHARGED? (Y/N):	_____	CONFIDENTIAL (Y/N)	_____
MEETING FEDERAL OBLIGATIONS TO REPORT? (Y/N):	_____	DATE CALLED:	_____
CALLING FOR RESPONSIBLE PARTY? (Y/N):	_____	TIME CALLED:	_____
INCIDENT DESCRIPTION			
SOURCE AND/OR CAUSE OF INCIDENT:	_____		
DATE:	_____	TIME OF INCIDENT:	_____ AM/PM
INCIDENT ADDRESS/LOCATION:	12310 REEDER ROAD		
NEAREST CITY:	PALMETTO	STATE:	FL COUNTY: MANATEE ZIP: 34221
DISTANCE FROM CITY:	_____	UNITS:	MILES DIRECTION FROM CITY: _____
SECTION:	_____	TOWNSHIP:	_____ RANGE: _____
CONTAINER TYPE:	_____	TANK CAPACITY:	_____ UNITS: _____
FACILITY CAPACITY:	(b) (7)(F),	UNITS:	GALLONS
FACILITY LATITUDE:	(b) (7)(F), (b) (3)		
FACILITY LONGITUDE:	_____		

## FIGURE IV-1 SPILL RESPONSE NOTIFICATION FORM



SPILL RESPONSE NOTIFICATION FORM				
Material Released	Quantity Released	Unit of Measure	Material Released in Water	Unit of Quantity
RESPONSE ACTION				
Actions Taken to Correct, Control or Mitigate Incident				
_____				
_____				
_____				
_____				
IMPACT				
Number of Injuries _____ Number of Fatalities _____				
Were there Evacuations? _____ (Y/N) Number of Evacuations _____				
Was there any Damage? _____ (Y/N) Damage Estimate in Dollars (approx.) _____				
Medium Affected _____				
Description _____				
_____				
More Information about Medium _____				
Any information about the incident not recorded elsewhere in the report: _____				
_____				
_____				
ATMOSPHERIC AND WATER CONDITIONS				
ATMOSPHERIC			WATER	
Wind Speed: _____ mph			State of Tide: _____	
Wind Direction From: _____			Current Speed: _____ knots	
Air Temperature: _____ °F			Current Direction From: _____	
Visibility: _____ miles			Wave Height: _____ feet	
Precipitation: _____			Water Temperature: _____ °F	

FIGURE IV-1 SPILL RESPONSE NOTIFICATION FORM			
			
PORT MANATEE TERMINAL AND PIPELINE			
CALLER NOTIFICATIONS			
	Yes/No	Who	Time/Date
National Response Center (NRC) 1-800 424-8802			
Coast Guard Sector St. Pete			
State Warning Point			
FDEP			
Manatee County			
CRT			
Response Contractor			
Environmental Services			
Area External Affairs Rep.			
Corporate Communication			
Others			
<b>On-Scene Commander</b>		<b>Date</b>	

**SECTION V:****EMERGENCY RESPONSE ORGANIZATION**

---

**A. TIERED RESPONSE**

(b) (7)(F), (b) (3)



Response resources that will be available to respond to oil spill incidents at the Port Manatee Terminal have been organized to reflect three levels of incidents: Level I (small), Level II or (medium), and Level III (worst case). For the purposes of this Manual, the three levels of incidents are defined as follows (Note: discharge calculations are provided in Appendix H):

**Level I** – A Level I, or “small,” incident is defined as the Average Most Possible Discharge (AMPD) of the lesser of 50 barrels or one percent of the volume of the worst case discharge. A Level I, or “small”, discharge at the Port Manatee Terminal would be 50 barrels (2,100 gallons) of mineral oil, No. 2 fuel oil, or No. 6 fuel oil.

**Level II** – A Level II, or “medium,” incident at a non-transportation related facility is defined as the lesser of 36,000 gallons or 10 percent of the volume of the worst case discharge at the facility. The Level II or “medium” discharge that may occur from a storage tank at the Port Manatee Terminal is 36,000 gallons (857 barrels) of mineral oil, No. 2 fuel oil, or No. 6 fuel oil.

A Level II or “medium” incident at an onshore marine transportation-related facility is defined as the lesser of 1,200 barrels or 10 percent of the volume of the worst case discharge. The Level II or “medium” discharge that may occur at the Port Manatee Terminal is 50,400 gallons (1,200 barrels).

In order to approximate the "maximum most probable discharge" from the dock lines, it is assumed that it would take 30 minutes to discover the release and 5 minutes to terminate transfer operations and close the valve(s); however, it is likely that it would take less time to bring the source under control. (b) (7)(F), (b) (3)

**Level III** – A Level III or "worst case" incident at a non-transportation-related facility can be defined as 100 percent of the volume of the largest tank within secondary containment. (b) (7)(F), (b) (3)

(b) (7)(F), (b) (3) Discharge calculations are provided in Appendix H.

A Level III or "worst case" incident at an onshore marine transportation-related facility is defined as the largest foreseeable discharge in adverse weather conditions meeting the following criteria.

Not less than, where applicable, the loss of the entire capacity of all in-line and breakout storage tank(s) needed for the continuous operation of the pipeline(s) used for the purpose of handling or transporting oil, in bulk, to or from a vessel regardless of the presence of secondary containment; plus 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 "worst case" discharge from the pipelines at the Port Manatee Terminal would most likely result from a structural failure on the unloading hoses during visual transfer operations. Although the threat of such a discharge is mitigated by the presence of clearly marked, quick closure valves on the dock lines, such a failure

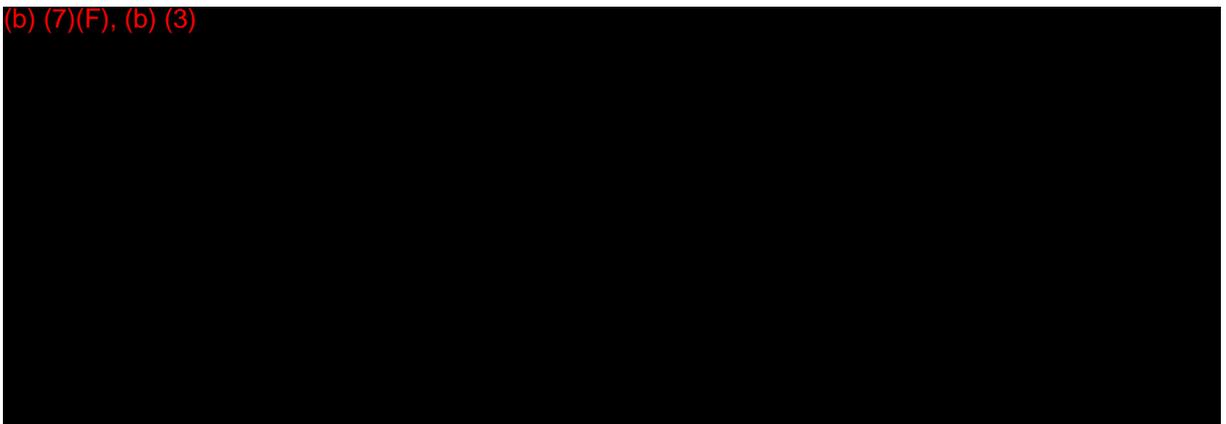
could result in the loss of a significant amount of oil to the water prior to the termination of transfer operations and the activation of the valve(s).

(b) (7)(F), (b) (3)



The pipeline between Port Manatee Terminal and the Manatee Plant consists of an approximately 14 mile long, 16 inch diameter pipeline which delivers No. 6 fuel oil. The capacity of the pipeline is approximately 779,772 gallons (18,566 barrels). The worst case discharge from the Department of Transportation regulated pipeline would most likely result from a corrosion related failure which would be detected by pressure loss in the pipeline. Block valves located at each end and approximately the midpoint in the pipeline would be closed to mitigate the release.

(b) (7)(F), (b) (3)



## **B. EMERGENCY RESPONSE ORGANIZATION**

The Manatee Terminal uses FPL's Corporate Response Team (CRT) along with the primary OSRO and the secondary OSRO if necessary to provide response resources for each of the three levels of incidents. Contact information for the OSRO's are listed in Table II-3 of the Plan.

FPL has developed an Incident Command System (ICS)-compatible Emergency Response Organization. The ICS approach has been adopted because it provides a structure that is:

- Designed to ensure that FPL would be capable of performing the functions necessary to respond to an incident in an automatic, immediate, comprehensive, and coordinated fashion.
- Modular in nature so that it can be activated and deactivated according to need.
- Hierarchical in nature so that there is a clear chain of command.
- Matrix in nature to enhance communications.
- Designed to recognize and address the demands of the "external" world without diminishing "internal" emergency response management capabilities.
- Flexible.

FPL has established an Emergency Response Organization to address the three levels of incidents described in Part A of this Section. The Organization consists of two independent but interrelated teams, the ORT and the CRT.

### ***C. ONSITE RESPONSE TEAM (ORT)***

The Port Manatee Terminal and Pipeline has its own ORT (see Section IV-A). Each ORT is comprised of a limited number of facility personnel who are trained and prepared to respond to Level I (small) incidents, and to initiate response operations for Level II and Level III (medium to worst case) incidents. The ORT has access to the Oil Spill Removal Organization's (OSRO) (i.e., contractor) response resources. With these resources, an ORT is capable of handling the vast majority of a facility's incidents, which are minor in nature (i.e., Level I incidents).

The primary responsibilities of an ORT are to:

- Ensure that tactical response operations are carried out in a safe, well-organized, and effective fashion.
- Size up the incident and its potential to identify the problem(s) to be addressed by the ORT.
- Develop solution(s) to the problem(s).

- Break the work to be done to affect the solution(s) down into manageable task(s).
- Secure and assign necessary tactical response resources, including equipment and/or personnel from the contracted OSRO.
- Continuously assess the incident to determine the adequacy of tactical response operations and the need for assistance from the CRT.
- Interact, as appropriate, with CRT.

Each ORT is led by an On-Scene Commander who would also serve as the Qualified Individual (QI) and who operates out of a Field Command Post (FCP) located at or near the incident scene (note: a FCP normally is a truck or an open-air area where the On-Scene Commander / QI positions him/herself to direct at-the-scene tactical response operations). By necessity, the balance of the ORT organization is flexible in nature so that it can be adjusted to address incident-specific functions. In general, however, the balance of the ORT would consist of a Site Safety Officer, Operations Supervisor, On Water Unit Leader, and On Land Unit Leader. The members of the ORT would rely on this document to provide them with guidance on their duties and responsibilities. The Manatee Terminal uses FPL's Corporate Response Team (CRT) along with the primary OSRO and the secondary OSRO if necessary to provide response resources for each of the three levels of incidents. Contact information for the OSROs are listed in Table II-3 of the Plan.

An ORT organization chart that reflects the functions cited above is presented in Figure V-1. In addition, job descriptions for each member of the ORT are presented at the end of this section.

### **Roles and Responsibilities of Onsite Response Team**

The ORT using onsite equipment, the primary OSRO equipment and the secondary OSRO's equipment (FPL's CRT equipment) would be responsible for responding to all Level I, Level II, and Level III incidents at the facility. FPL's CRT also would serve as the Spill Management Team for all Level II and Level III incidents.

The ORT is assisted by a QI who also serves as the On-Scene Commander. The On-Scene Commander / QI or Alternate is available on a 24-hour basis, speaks fluent English, is familiar with the implementation of the response plan and is trained in his/her responsibilities. The On-Scene Commander / QI has been granted full authority to implement removal actions. The On-Scene Commander / QI receives a minimum of 24 hours of training in accordance with Occupational Safety and Health Administration (OSHA) requirements of 29 CFR 1910.120 and participates in the drill and exercise program in accordance with federal and state regulations as required under OSHA. The On-Scene / QI has full written authority to perform the following duties:

- Activate internal alarms and hazard communication systems to notify all facility personnel;
- Notify and provide the necessary information to the appropriate federal, state, and local authorities including the National Response Center (NRC), State Emergency Response Commission (SERC), and the Local Emergency Planning Committee (LEPC);
- Activate and engage in contracting with oil spill removal organizations;
- Establish immediate contact with the Federal On-Scene Commander (FOSC);
- Act as liaison with the FOSC;
- Obligate, either directly or through prearranged contracts, funds necessary to carry out required or directed response activities;
- Assess the possible hazards to human health and the environment due to the release and implement prompt removal actions to contain and remove the substance(s) released; and
- Direct cleanup activities until properly relieved of this responsibility.

The roles and responsibilities for the members of the ORT are presented at the end of this section. The members of the ORT are as follows:

- On-Scene Commander / QI
- Site Safety Officer
- Oil Spill Coordinator
- On Water Unit Leader

- On Land Unit Leader

During a Level III or WCD incident, the CRT may have to be expanded to include the additional functions depicted in Figure V-2. The primary OSRO will provide personnel and equipment to meet worst case discharge requirements. However, FPL is the secondary OSRO and has access to significant quantities of internal response resources including personnel that are capable of meeting current WCD planning requirements. The Corporate Plan contains a list of FPL's response equipment and identifies additional contractor equipment and resources available to respond to a WCD incident.

#### ***D. CORPORATE RESPONSE TEAM (CRT)***

The CRT is operations-oriented. It has little, if any, capacity to deal with incidents that:

- Include injuries or deaths and attendant Human Resources issues and concerns.
- Disrupt normal operations over an extended period of time.
- Generate active interest at the Corporate level within government agencies, and among the public.
- Involve legal and/or regulatory issues.
- Require the acquisition of response resources beyond those available at or in the vicinity of the affected facility.
- Place unusual demands on communications / IT equipment.
- Necessitate repetitive short and/or long term planning.
- Create social, environmental, and/or economic impacts that must be assessed and remediated.
- Result in complex financial and risk management transactions.

Incidents that take on any or all of the dimensions cited above will trigger the activation of all or a portion of FPL's CRT. The CRT consists of Company personnel drawn from FPL.

The CRT is led by an On-Scene Commander / QI who operates out of an Incident Command Post (ICP) that normally is set up at a location away from the FCP. When the CRT is activated, the CRT is initially assimilated into, and becomes the part of the

Operations Section of, the CRT. Level II and III incidents will require the activation of the CRT. During long-term events, ORT members will be replaced by other CRT members.

The CRT is organized to carry out the following major functions: Command, Operations, Planning, Environmental, Logistics, and Finance. The Command function is strategic in nature (note: at-the-scene commander remains with the ORT On-Scene Commander / QI). It generates Strategic Objectives, determines response priorities, and ensures that response operations are carried out in a safe fashion, interacts with Company management, government agencies and the public, and handles legal matters. The members of the CRT would rely on this document and the Corporate Response Plan to provide them with guidance on their roles and responsibilities.

A CRT organization chart that depicts the relationship between the CRT, ORT, and federal, state, and local authorities is presented in Figure V-2. A roster of the Port Manatee Terminal ORT is provided in Table II-4.

During a Level III or WCD incident, the CRT may have to be expanded to include the additional functions depicted in Figure V-2. The primary OSRO will provide personnel and equipment to meet worst Case Discharge requirements. However, FPL is the secondary OSRO and has access to significant quantities of internal response resources that are capable of meeting current WCD planning requirements. The Corporate Plan contains a list of FPL's response equipment and identifies additional contractor equipment and resources available to respond to a WCD incident.

## **Training**

The On-Scene Commander / QI has demonstrated knowledge of the requirements listed by the DOT, EPA, and USCG. The On-Scene Commander / QI has twenty-four hours of On-Scene Commander training, proven experience in specific competencies, and annual refresher training. Annually the onsite response personnel complete the eight hour refresher training and specific members have proven experience in specific competencies.

FIGURE V-1 PORT MANATEE TERMINAL ONSITE RESPONSE TEAM (ORT) ORGANIZATION CHART

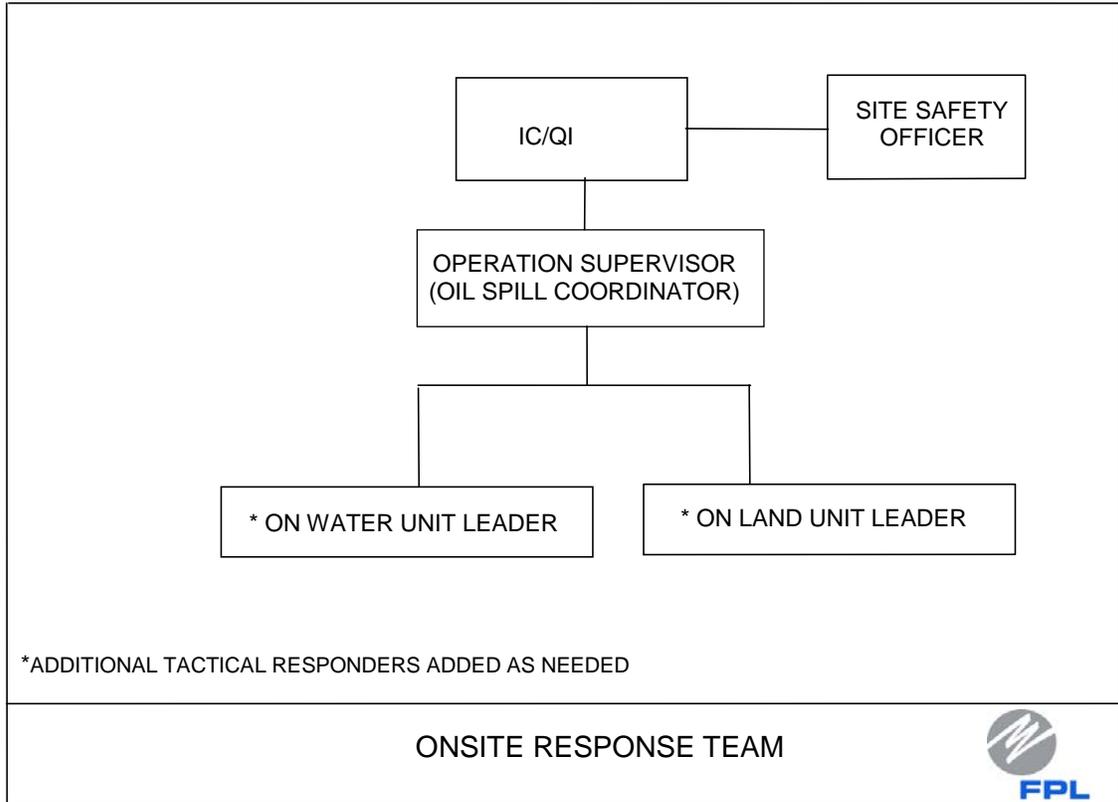
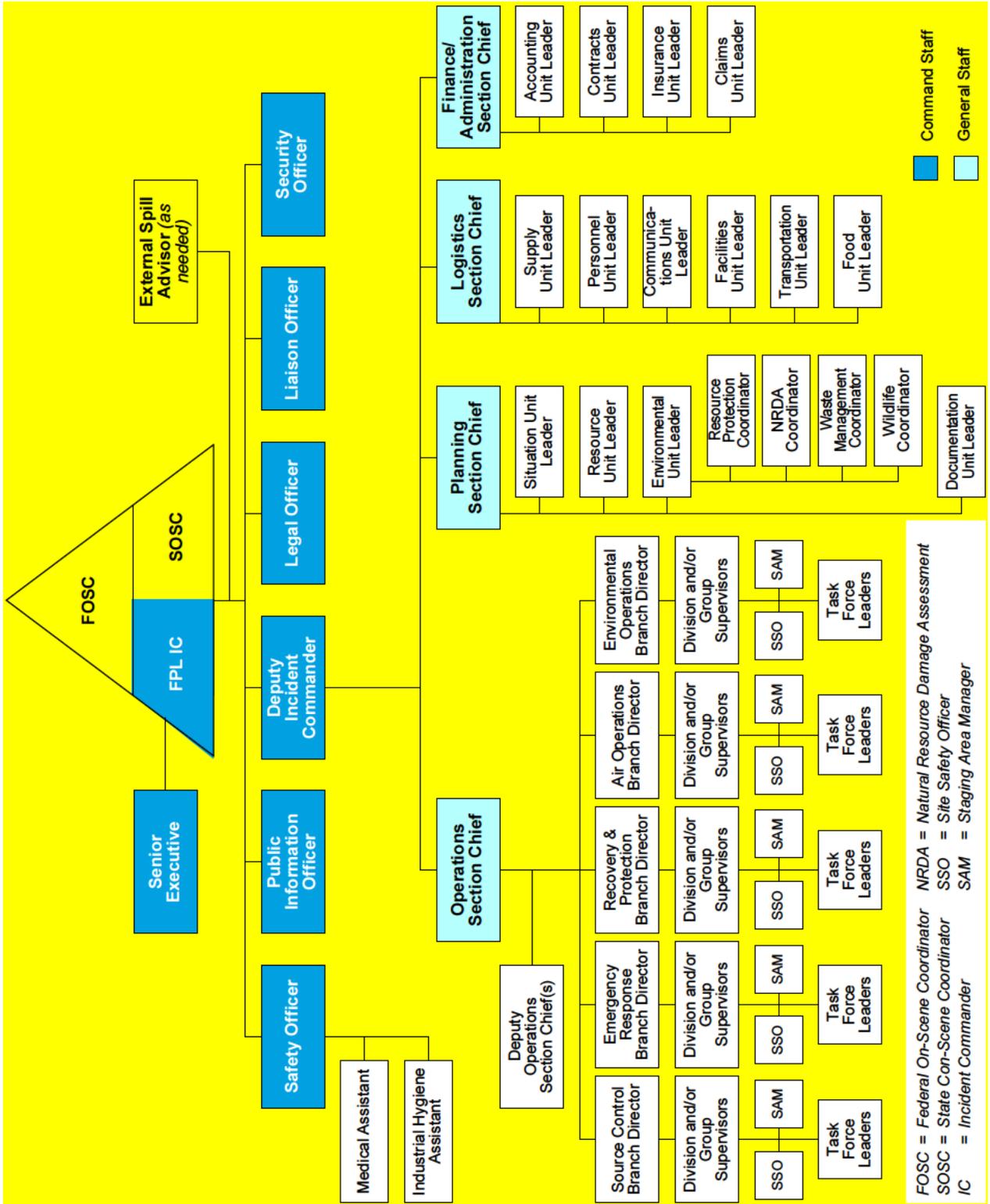
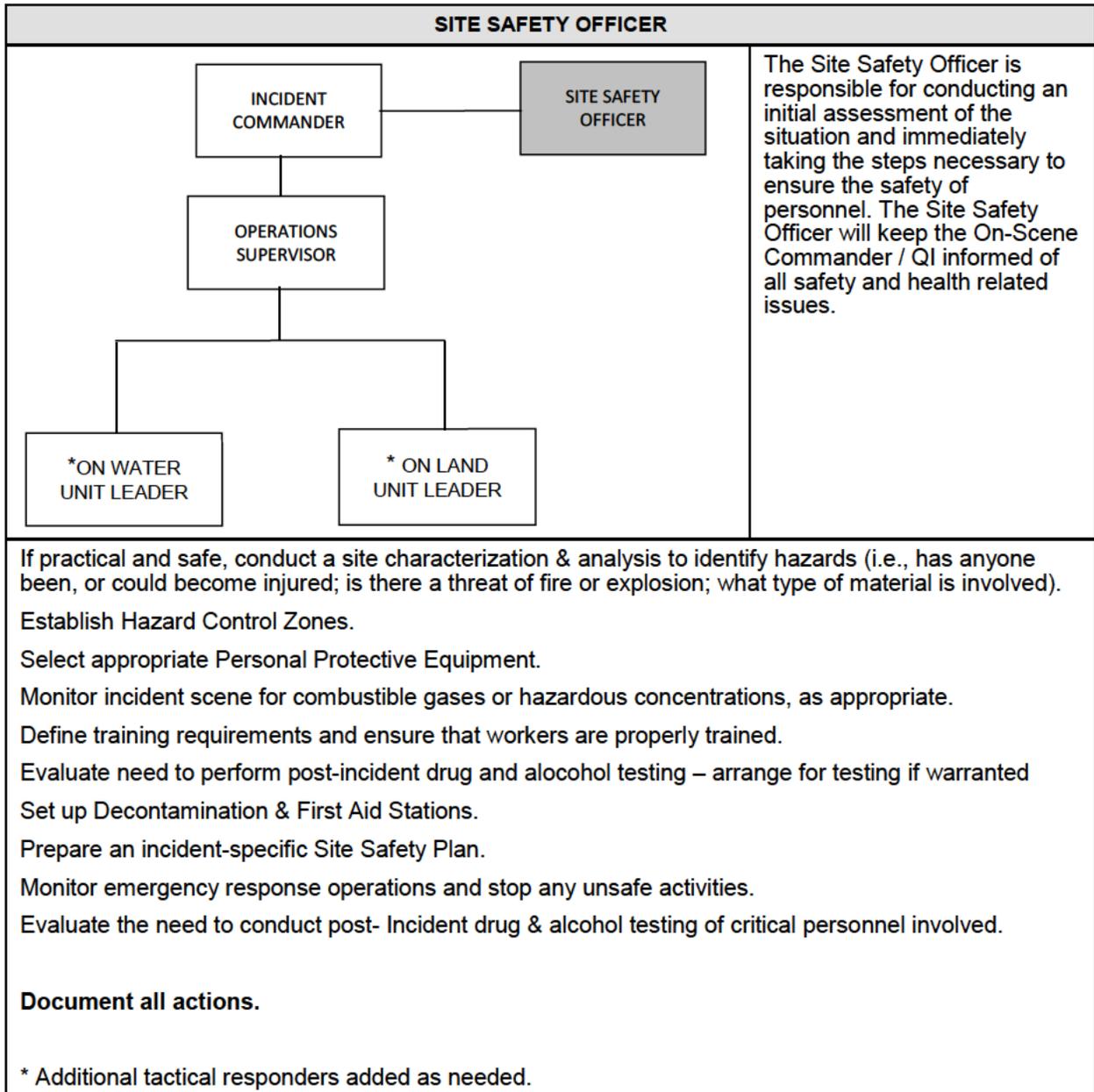
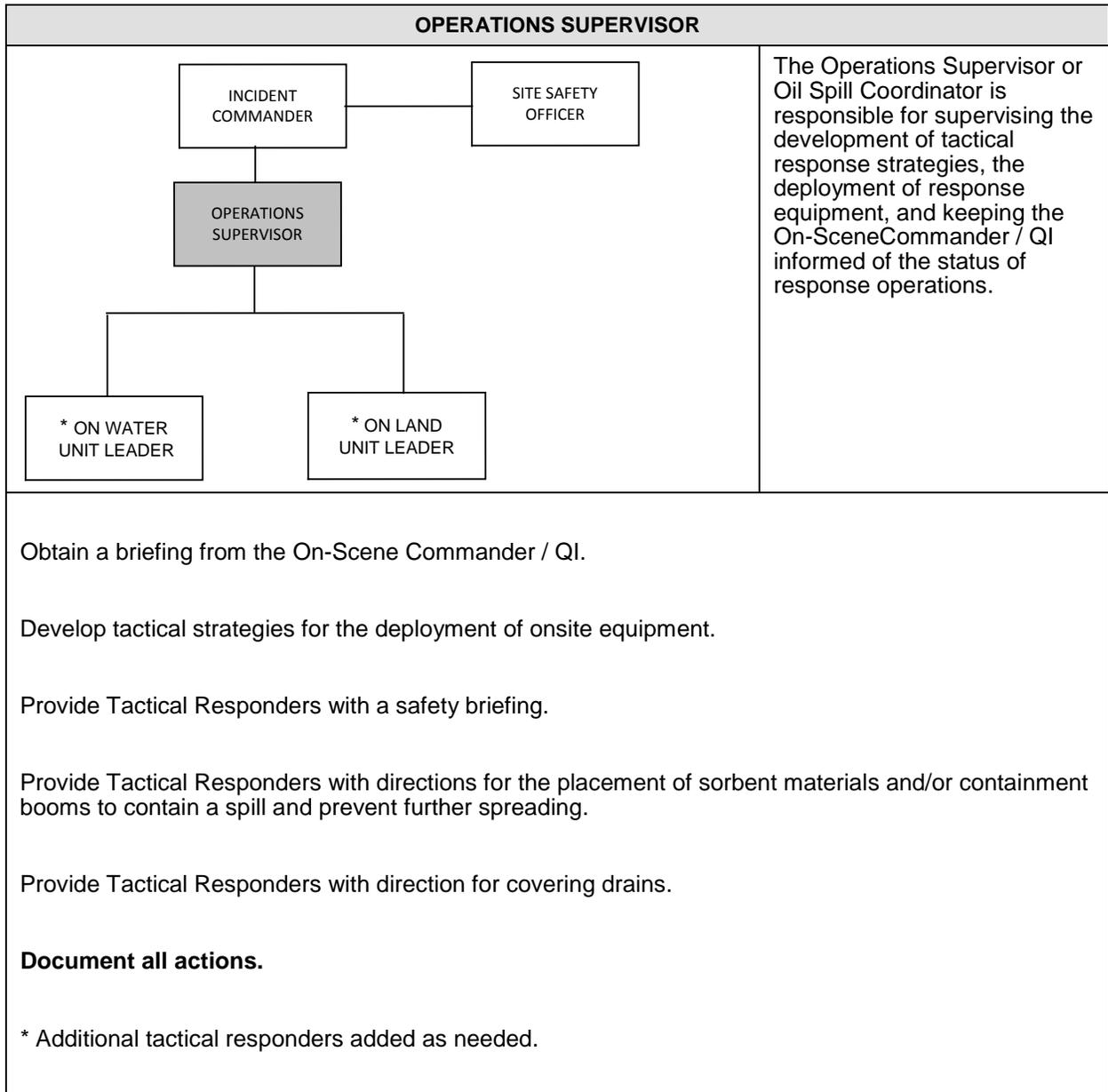


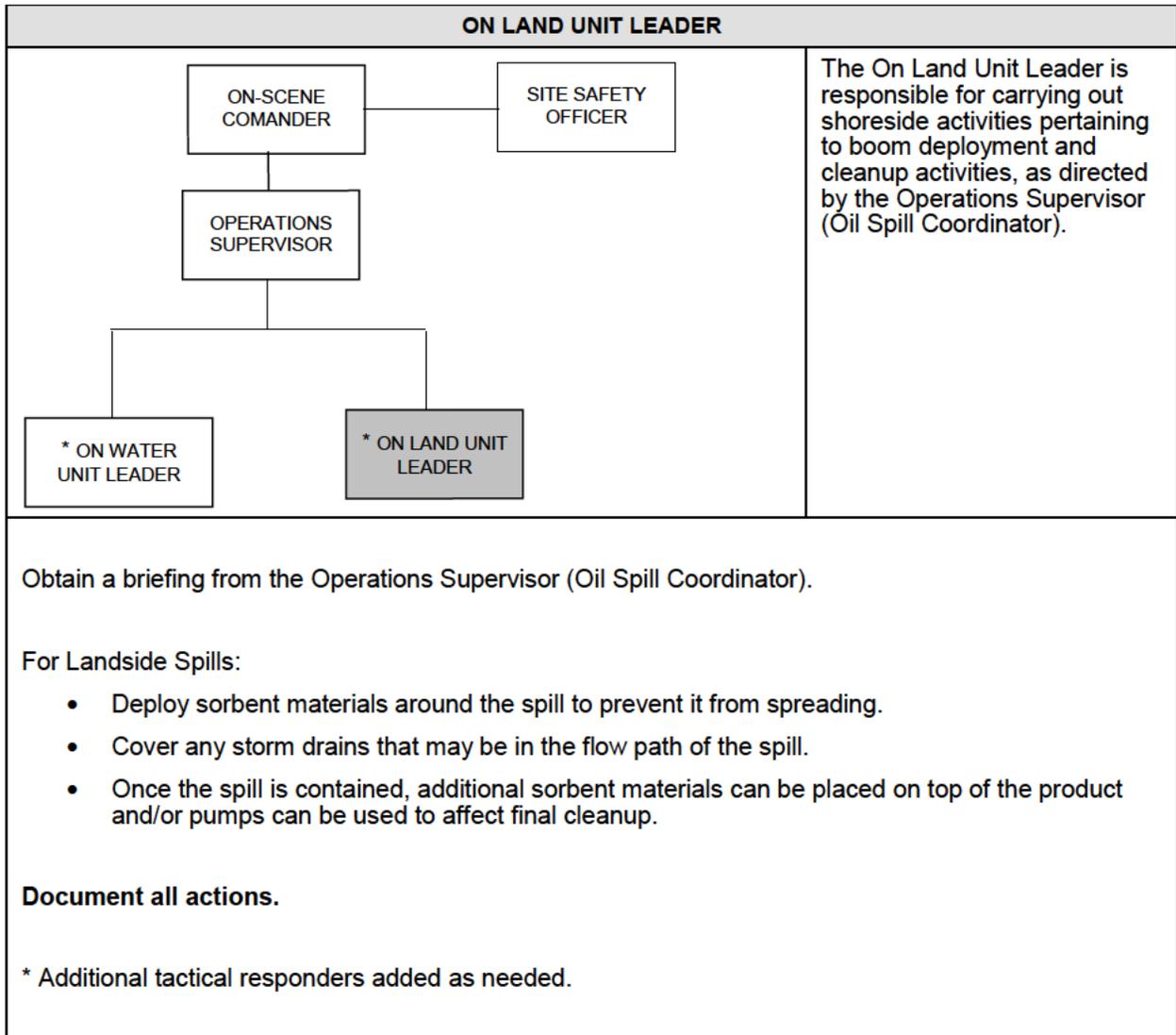
Figure V-2 FLORIDA POWER AND LIGHT COMPANY CORPORATE RESPONSE TEAM (CRT) ORGANIZATION CHART

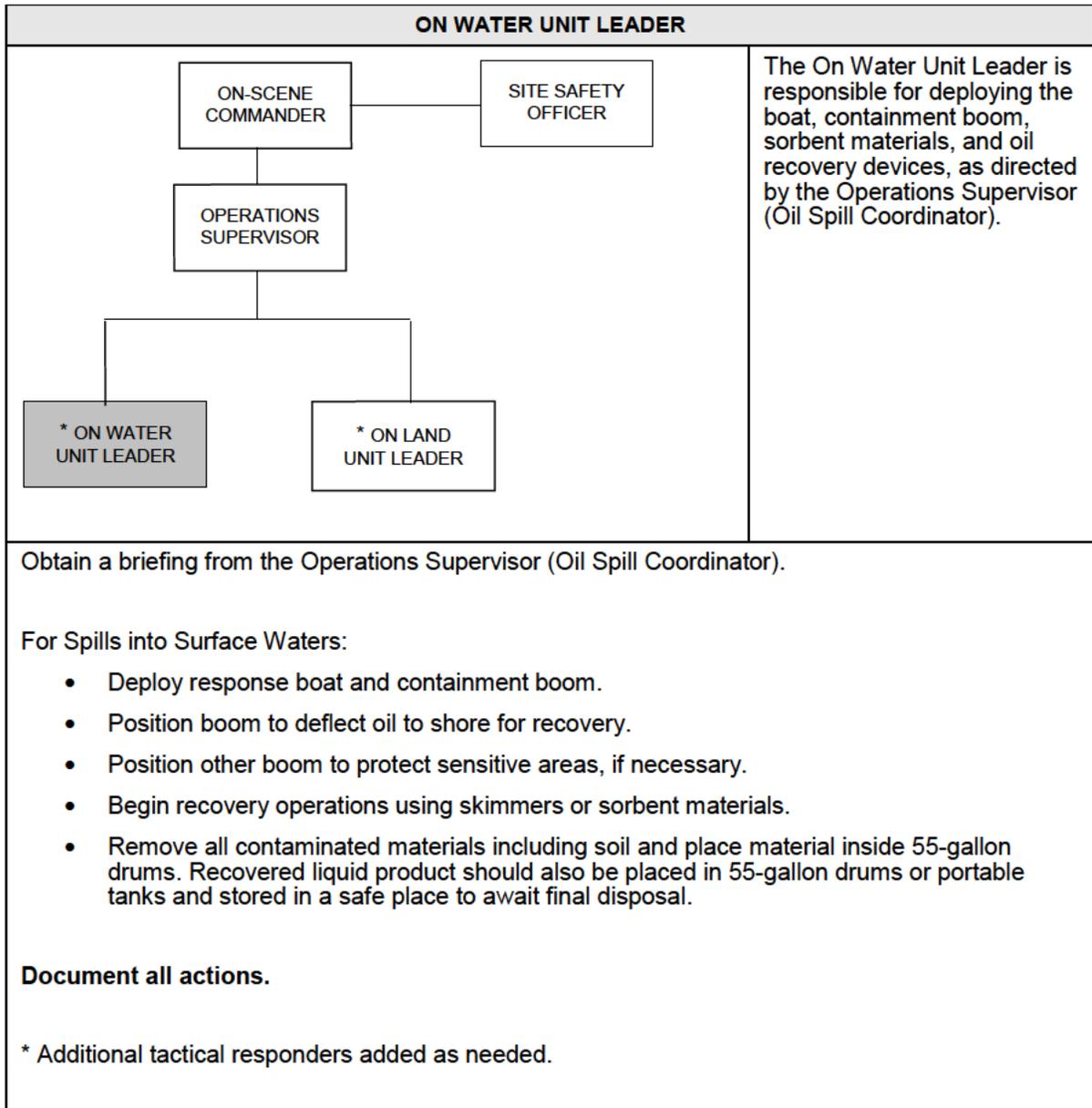


<b>ON-SCENE COMMANDER/QUALIFIED INDIVIDUAL</b>	
<pre> graph TD     IC[INCIDENT COMMANDER] --- SSO[SITE SAFETY OFFICER]     IC --- OS[OPERATIONS SUPERVISOR]     OS --- OWUL[* ON WATER UNIT LEADER]     OS --- OLL[* ON LAND UNIT LEADER] </pre>	<p>The On-Scene Commander / QI is responsible for conducting an initial assessment of the situation and immediately taking the steps necessary to ensure the safety of personnel. The On-Scene Commander / QI will identify and control the source (if possible), conduct a detailed incident assessment, initiate and manage response operations, and make internal notifications.</p>
<p>(A) Activate internal alarms and hazard communication systems to notify all facility personnel;</p> <p>(B) Notify all response personnel, as needed;</p> <p>(C) Identify the character, exact source, amount, and extent of the release, as well as the other items needed for notification;</p> <p>(D) Notify and provide necessary information to the appropriate Federal, State, and local authorities with designated response roles, including the National Response Center (NRC), State Emergency Response Commission (SERC), and Local Emergency Planning Committee (LEPC);</p> <p>(E) Assess the interaction of the discharged substance with water and/or other substances stored at the facility and notify response personnel at the scene of that assessment;</p> <p>(F) Assess the possible hazards to human health and the environment due to the release. This assessment must consider both the direct and indirect effects of the release (i.e., the effects of any toxic, irritating, or asphyxiating gases that may be generated, or the effects of any hazardous surface water runoffs from water or chemical agents used to control fire and heat-induced explosion);</p> <p>(G) Assess and implement prompt removal actions to contain and remove the substance released;</p> <p>(H) Coordinate rescue and response actions as previously arranged with all response personnel;</p> <p>(I) Use authority to immediately access company funding to initiate cleanup activities;</p> <p>(J) Direct cleanup activities until properly relieved of this responsibility.</p> <p><b>Document all actions.</b></p> <p>* Additional tactical responders added as needed.</p>	









*[Intentionally Blank]*

**SECTION VI:****DISCHARGE RESPONSE ACTIVITIES**

---

**A. INCIDENT ASSESSMENT**

At the outset of an incident, the **Spill Observer** would perform an immediate assessment of the situation and take steps to ensure the safety of his/her co-workers and, if possible, to identify and secure the source. As quickly as possible, the **Spill Observer** would assume the role of, or notify the **On-Scene Commander / QI**. Upon arrival at the spill scene, the **On-Scene Commander /QI** would receive an initial briefing from the **Spill Observer**, activate the ORT, perform a Site Characterization and Analysis, and initiate response operations.

As soon as possible, the **On-Scene Commander /QI** would perform a more detailed assessment of the situation to determine as much information as possible. Table VI-1 presents a checklist of information that would assist in assessing the situation. Upon completion of this assessment, the **On-Scene Commander /QI** would classify the spill and make the appropriate notifications.

While the importance of responding rapidly to an oil spill incident is a recognized priority within FPL, personnel safety would always be accorded the highest priority during response operations. To ensure personnel safety, the following guidelines would be observed:

- Deployment of equipment would not be attempted prior to conducting a Site Characterization and Analysis.
- Deployment of equipment would not be initiated until all personnel involved in deployment operations are wearing the required protective clothing.
- Containment operations would be suspended or terminated when unsafe operating conditions arise.

The **On-Scene Commander /QI** would, to the extent possible, identify all hazardous substances or conditions present at the site before committing manpower to onsite response operations. Hazardous substances present (types, location, and amounts) would be identified, and response personnel would be briefed on their type, amount,

and location. A more detailed discussion of onsite safety is provided in Appendix E. This Appendix also includes the appropriate Material Safety Data Sheets (MSDS).

## **B. RESPONSE STRATEGY**

The Port Manatee Terminal and Pipeline onsite response strategy involves using onsite personnel and the utilization of OSRO equipment and personnel to contain and clean up Level I (small), Level II (medium) and Level III (worst case) spills. Section IV of the Plan lists the contact information for the OSRO. In the event of a Level II or Level III spill, the focus of initial response operations would be geared toward controlling the source of the spill and limiting the spread of the spill. Although the OSRO has the capability of responding to Level I, Level II, and Level III spills, Section II of this plan also lists additional oil spill response contractors who can be called, should it become necessary to enhance response operations.

In the event of a Level I or II spill, the **On-Scene Commander /QI** can use the decision trees (Figures II-2, II-3, and II-4) to aid in determining the appropriate spill response actions. These decision trees provide basic spill response guidance depending on spill location and whether or not preventive countermeasures have contained the oil from being released to pervious surfaces or surface waters. In general, response actions should include:

**1. Make an Immediate Assessment of the Incident & take actions to protect life, and ensure safety of personnel.** Determine:

- Type & quantity of material spilled: \_\_\_\_\_
- Location & status of material spilled: (contained/uncontained)
- Status of source: (controlled/uncontrolled)

Status of all personnel/injuries: \_\_\_\_\_

**2. Stop the Discharge & Shutoff Ignition Sources**, if safe to do so. (e.g., act quickly to secure pumps, valves, motors, open flames, etc.). If the incident is clearly the result of an operation that the Spill Observer/First Responder can control safely, take immediate steps to correct the operation.

**3. Warn Personnel** – Alert the control room & all facility personnel at or near the incident scene and the On-Scene Commander (OSC)/QI.

4. **Isolate & Secure the Incident Scene** - Account for all personnel & evacuate nonessential personnel from the area.
5. **Direct Termination of Appropriate Facility Operations** for the safety of personnel if necessary.
6. **Complete all Notifications in Table II-3**, as appropriate, and call for medical assistance if an injury has occurred.
7. **Complete DETAILED ASSESSMENT FORM (Table II-1)** on the following pages to understand the nature & scope of the incident. Assign safety officer to identify chemical hazards of product (MSDS) and physical hazards of incident. Monitor site conditions for changes.
8. **Determine if Incident is Safe to Respond to** based on chemical/physical hazards of product/incident or whether evacuation or sheltering-in-place procedures should be instituted. Coordinate evacuation procedures with port security (if located within a Port) and/or the local Police Department as necessary.
9. **Activate all Necessary Response Organizations** (i.e., Onsite Response Team; SWS Environmental (OSRO); FPL Corporate Response Team; Fire Department as necessary)(**Tables II-3 & II-4**)
10. **Establish Hazard Control Zones** (i.e., hot, warm & cold zones) as appropriate & control access to release area. Note: warm & cold zones should be located upwind (Safety Officer responsibility).
11. **Define Personal Protective Equipment (PPE)** when responding to the incident (Safety Officer responsibility).
12. **Direct Onsite Response Team** (if safe to do so) to put on proper PPE, contain the discharge, and protect environmentally sensitive areas. This may include berming ahead of spill or deployment of containment and/or absorbent boom. (**See Figures II-8 through II-15** within Section II to establish a detailed plan.)
13. **Initiate Spill Tracking & Surveillance Operations** for surface water spills as necessary. Determine location and extent of spill using boats, vehicles, or

surveillance aircraft (conducted by CRT). Estimate volume of spill (See spill volume estimation discussion below).

**14. Establish Incident Command Post;** post and complete ICS 201 Form and Status Boards.

In the event of a Level I oil spill incident, and as soon as conditions permit, sorbent materials could be deployed and dikes could be built to create temporary berms to contain the spill until the primary OSRO arrives on-scene. Response resources required by the EPA for a small discharge include deploying 1,000 feet of containment boom within one hour. For example, if a Level I oil spill occurred at the barge unloading docks at the Port Manatee Terminal, a containment boom is deployed between the ship or barge and the pier and additional booms could be used to surround the vessel, if needed (These booms remain in place at all times when transfer operations are in place.) Appendix A lists FPL's available daily recovery capacities for a worst case discharge.

<b>RESPONSE RESOURCES REQUIRED FOR SMALL SPILLS</b>		
<b>Resource</b>	<b>Required Amount</b>	<b>Available Amount</b>
Containment Boom	1,000 feet within 1 hour	5,850 feet on site
Oil Recovery Capacity	2,100 gpd	4,110 gpd
Temporary Storage Capacity	4,200 gpd	1,425,100 gallons

A Level II or Level III oil spill would also require the use of the primary OSRO with additional resources (i.e., personnel and equipment) to be provide by the listed secondary OSRO (i.e. FPL's CRT) in Tables II-3 and IV-2. In a Level II or Level III incident (spills that are beyond the capability of the ORT), all or some of FPL's Corporate Response Team (CRT) would be activated to respond to the emergency depending on the size and severity of the discharge. The ORT would attempt to contain the spilled oil while awaiting assistance. After arrival on-scene, FPL's CRT would serve as the Company's Spill Management Team. CRT would be made up of personnel from either FPL Juno Beach staff and / or other FPL facilities.

Oil recovery devices identified to meet the Level II discharge volume planning criteria (36,000 gallons) are capable of arriving within 12 hours to contain and collect an oil spill. The equipment is capable of operating in a river/canal environment and withstanding significant wave height of 1 foot. The effective daily recovery capacity for oil recovery devices is equal to 5 percent of the planning volume, or 18,000 gallons per day. The available daily temporary on-scene storage capacity at the Port Manatee Terminal is equal to 36,000 gallons. Containment boom is available at the Port Manatee Terminal in sufficient volume to provide for control and containment of the discharge and for the protection of fish, wildlife, and sensitive environments.

(b) (7)(F), (b) (3)

The resource recovery of this discharge will take into consideration the loss of oil from evaporation, natural dissipation, and the potential deposition of oil on the shoreline, as well as the potential increase in oil from emulsification. Appendix H presents the on-water recovery volume for the three tiers of mobilization.

<b>TABLE VI-1</b>	
<b>DETAILED INCIDENT ASSESSMENT FORM</b>	
<b>GENERAL INFORMATION</b>	
Date of Incident: _____	Time of Incident: _____
The type of product spilled: _____	
The estimated amount of product spilled: _____	
Source of spill: _____	
Status of source: Controlled: _____ Continuing: _____ Unknown: _____	
Cause of the spill: _____	
Is the spill contained? _____	
Shoreline impacts: _____	
Status of Response operation: _____	
An initial assessment of whether the spilled oil can be contained and cleaned up with onsite equipment, or whether Level II equipment is required: _____	
<b>SAFETY &amp; HEALTH CONCERNS</b>	
The status of all personnel (injuries, etc.): _____	
Identification of possible health or fire hazards: _____	

TABLE VI-1
DETAILED INCIDENT ASSESSMENT FORM
ENVIRONMENTAL IMPACTS
Environmentally sensitive areas impacted: _____ _____
Wildlife impacted: _____ _____
ON-SCENE WEATHER & SURFACE WATER CONDITIONS
On-scene weather conditions to include: _____
State of tide: _____
Current speed and direction: _____
Wind speed and direction: _____
Sea state in wave height and direction: _____

### Containment Booming on Water

The primary objective of booming an oil spill is to prevent the oil from spreading and to herd the oil to a collection point where it can be recovered. If a spill is slow moving and remains at the site, a boom (primary) can be deployed to surround the oil. If oil is drifting away from the site, boom can be deployed in advance of the movement of the slick. An additional boom (secondary) may be deployed downcurrent of any previously deployed boom to capture any oil that may spread outside of or move under or over the primary boom.

Level II and Level III oil spill incidents could require protection of sensitive surrounding areas. Areas to be protected would be dependent on such things as weather and water conditions at the time of the incident as well as the quantity of oil spilled. Various booming techniques could be used to contain the spilled oil and to protect the surrounding sensitive areas. These booming techniques are described below:

**Exclusion Booming** involving the use of containment and/or sorbent booms to close off and prevent oil from entering sensitive areas could be implemented. Multiple layers of boom may be required to effectively protect areas.

**Diversions Booming** entails the use of containment or sorbent boom to direct the flow of oil away from a sensitive area or toward a preferred collection point.

Deployment configurations vary depending upon the strength of currents, the location of collection points, the presence and configuration of land forms, water flow patterns, the type and length of boom available, the availability of anchors, and time.

**Entrapment Booming** involving the use of containment and/or sorbent boom could be utilized to close off impacted areas containing temporarily immobilized oil, and prevent resuspended, mobile oil from moving toward unaffected sensitive areas.

**Nearshore Trapping** would involve the use of shallow draft vessels to deploy containment boom and move through thick patches of mobile oil approaching sensitive shoreline areas. Contained oil would be held offshore until it could be recovered by skimming devices.

**Dynamic Skimming** involving the use of shallow draft skimming vessels that move through mobile oil approaching sensitive shoreline areas could be used. Lengths of boom could be deployed from or out in front of skimming vessels to concentrate oil toward recovery devices.

**Passive Collection** would involve the use of sorbent boom materials that could be deployed along beach faces, across narrow channels leading to sensitive areas, in front of vegetated, waterfront areas, or in front of or within difficult to clean spaces (i.e., rocky areas) to both exclude oil from and capture oil as it moves through the materials toward a sensitive area. Sorbent materials are replaced when oiled.

### **Cleanup and Recovery**

A variety of cleanup and recovery equipment and techniques are available to remove oil from the water depending upon:

- The type of oil spilled.
- The surface water conditions.
- The presence of debris.
- The degree of weathering that the oil has undergone.

Table VI-2 lists and describes recovery techniques that could be used to remove spilled oil at the Port Manatee Terminal and Pipeline and surrounding areas in the event of an oil spill incident.

### **C. IDENTIFICATION OF ENVIRONMENTALLY SENSITIVE AREAS**

Environmentally sensitive areas are identified in Section VII.

### **D. PROTECTION OF ENVIRONMENTALLY SENSITIVE AREAS**

The protection of environmental sensitive areas, including specific booming strategy techniques is discussed in detail in Section VII.

<b>TABLE VI-2</b>	
<b>CLEANUP AND RECOVERY TECHNIQUES</b>	
<b>TECHNIQUE</b>	<b>DESCRIPTION</b>
Non-oily Debris Removal	Involves the removal of un-oiled debris from beach faces before the arrival of spilled oil. The debris can be moved above the mean high water mark or collected for onsite (i.e., burning) or remote site disposal.
Oily Debris Removal	Involves the removal of small sized, oily debris by hand or with hand tools and their placement in storage containers. Large debris may be cleaned in place or reduced in size (e.g., with a hand or chain saw) for placement in storage containers.
Passive Collection	Involves the use of sorbent materials deployed to capture oil as it moves onto a shoreline area.
Manual Recovery	Involves the use of hand tools and sorbent materials to remove surface oil in lightly oiled areas, environmentally sensitive areas, and areas with poor accessibility to heavy equipment. In areas where oil forms small pools, small pumps, vacuum devices, buckets, or sorbent materials are used to remove heavier concentrations of oil.
Mechanical Recovery	Involves the use of heavy equipment (e.g., graders, bulldozers, front-end loaders, and beach cleaners) to remove oil from heavily oiled substrates (e.g., sand) areas that can support the use of wheeled or tracked equipment.
Cold Water Deluge	Involves pumping cold water through a header system deployed above the mean high water mark to suspend and wash fresh oil from an oiled surface and transport the oil to a collection point.
Cold Water Flush	Involves pumping cold water through hand held, pressure regulated sprayers to: (1) loosen fresh oil and to suspend loosened oil in a cold water deluge that transports the oil to a collection point; or (2) to herd oil on a water surface toward a collection point.
Warm Water Flush	Involves pumping warm water through hand held, pressure regulated sprayers to loosen slightly weathered oil and to suspend the loosened oil in a cold water deluge that transports the oil to a collection area.
Hot Water Flush	Involves pumping hot water through hand held, pressure regulated sprayers to loosen very weathered oil and suspend the loosened oil in a cold water deluge that transports the oil to a collection area.

Sump Collection and Recovery	Involves using booms or water spray to direct spilled oil toward natural or excavated sump where the oil will collect for removal by a recovery device.
Bioremediation	Involves using introduced or fertilizing naturally occurring oil eating bacteria on a contaminated beach to remove oil.
Natural Recovery	Involves relying on natural cleaning or degradation processes to remove oil from a contaminated area.

## ***E. WASTE MANAGEMENT***

The transfer, storage, and disposal of wastes are important aspects of any response. Because of the complexity of waste management issues, this topic is addressed in detail in Section IX.

## ***F. COMMUNICATIONS***

### **General**

Emergency communications would cover two separate functions. First, it would handle both internal and external notifications. Second, it would facilitate the management of response operations. A communications network would be established that would link the command post to all field operations as necessary. Portable communication equipment, including cellular phones and hand held radios would be distributed to key response personnel.

### **Radios**

In the event of an oil spill, Terminal radios would be used as the initial source of communication equipment; however, if this system becomes inadequate due to the size or location of the incident, additional resources would be procured as necessary.

## ***G. COMMAND POST***

Should it become necessary to establish a formal Command Post, one will be setup within the Terminal's control room or within the Port's cruise ship terminal.

## ***H. SITE SECURITY***

(b) (7)(F), (b) (3)

## ***I. SURVEILLANCE***

The **On-Scene Commander /QI** would use trained aerial observers to determine:

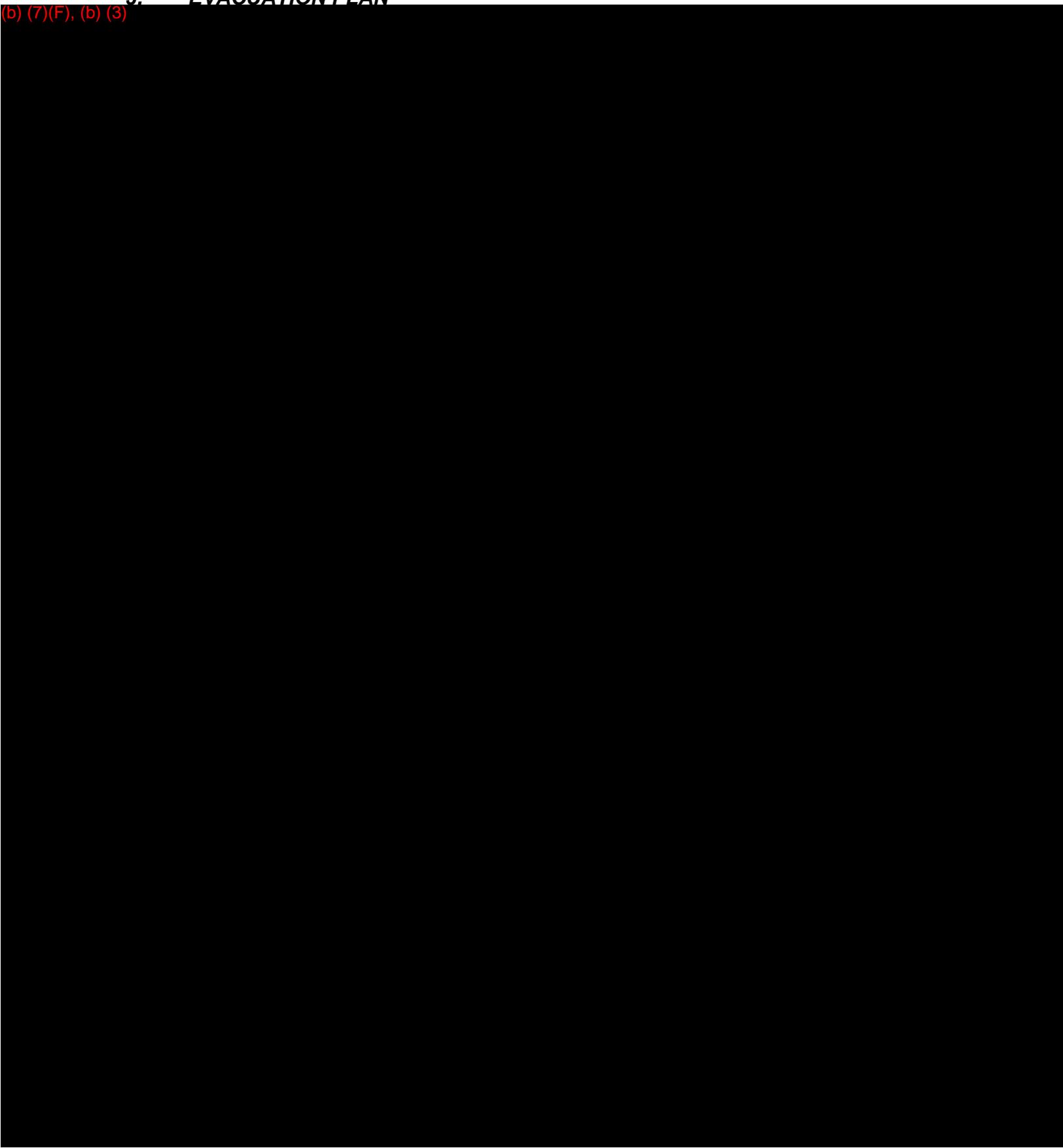
- Spill location;
- Spill characteristics (slick size, thickness & quantity);
- Areas of heaviest oil concentrations;
- The direction of spill movement, if any;
- The aerial extent of the affected area;
- The position of the spill in relation to unaffected environmentally and/or economically sensitive areas;
- The location of wildlife; and
- The location of response equipment.

The **On-Scene Commander /QI** may also use surveillance information to keep track of spill response resources and to place response resources in optimum positions for containment, recovery, and ecosystem protection operations depending on the size of the incident. Moreover, those conducting surveillance may take videotapes and/or photographs for documentation purposes.

In the event of a Level II or Level III oil spill, surveillance operations initially would be carried out from a helicopter that would be obtained through FPL's Corporate Aviation Department.

**J. EVACUATION PLAN**

(b) (7)(F), (b) (3)

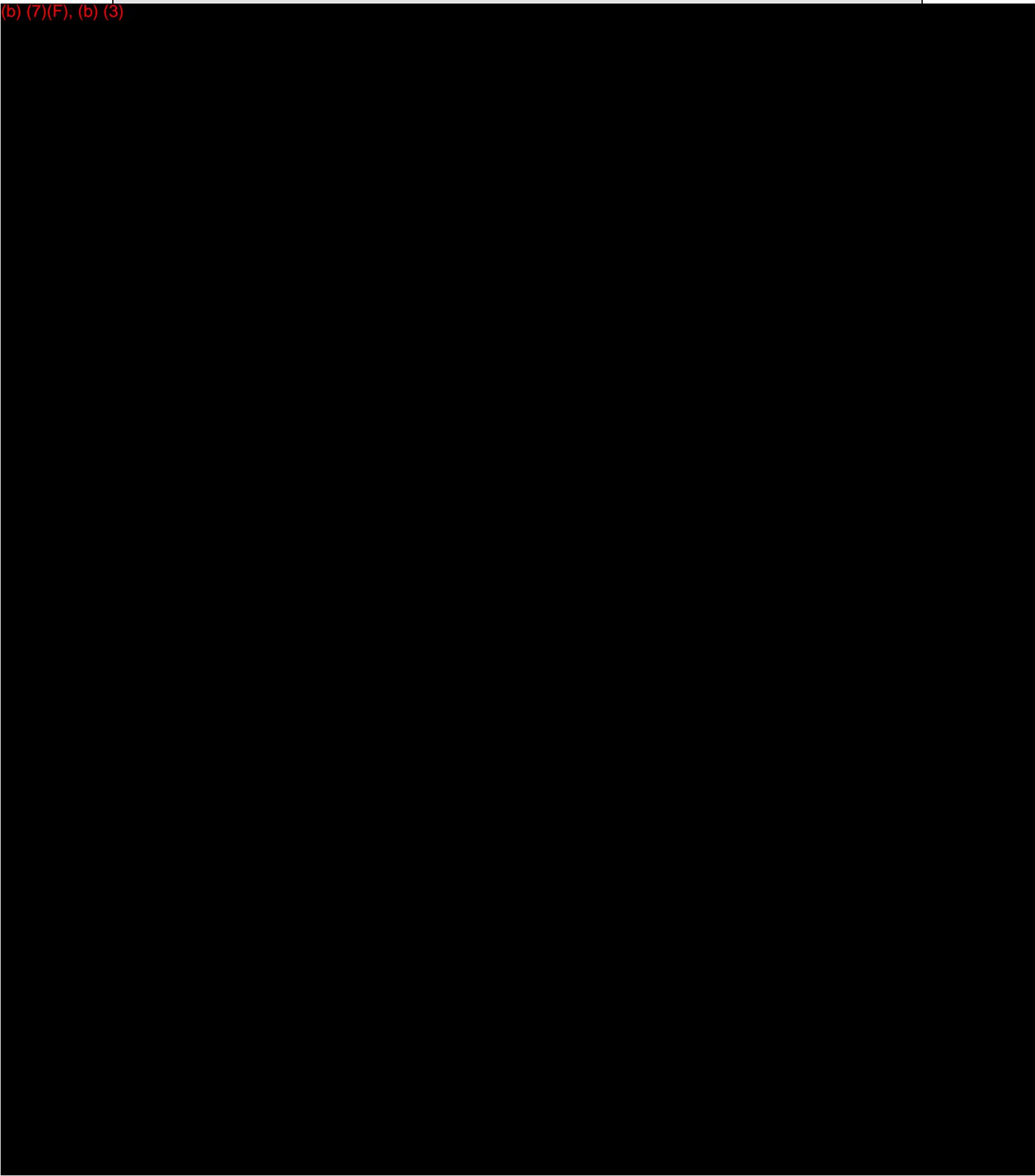




**TABLE VI-3**

**EVACUATION PLANS**

(b) (7)(F), (b) (3)



## **K. REPORTS AND DOCUMENTATION**

Incident documentation is a critical response function and would begin at the start and continue through completion of response operations. Documentation will be used to:

- Monitor response operations;
- Develop plans and requests for government agency approvals;
- Substantiate decisions made during response operations;
- Plot progress throughout the response effort;
- Track equipment, manpower, materials, and supplies;
- Assess claims;
- Audit expenditures; and
- Prepare a history of the response effort.

Complete and accurate documentation is essential, particularly if the spill and/or the response effort results in subsequent litigation. Documentation of the response efforts may take many forms including:

- Logbooks, meeting notes, and telephone logs;
- Forms;
- Environmental and technical data recorded during response operations;
- Aircraft logs;
- Video tapes and still photography;
- Press releases; and
- News broadcasts and published reports.

Although it is difficult to take time out during an emergency to document activities, and most notably to maintain a daily log and telephone log, it would be imperative that all FPL response personnel participate fully in the documentation process. An incident file system would be established at the start of the spill and copies of the file index would be distributed to appropriate response personnel. The files would be maintained and stored in a convenient secure location.

All documentation, including video tapes, photographs, and slides, would be handled as confidential information. Their release would have to be authorized by FPL. In addition,

if outside contractors are hired to assist in documentation, it would be imperative that the contractual agreements ensure control and ownership of all documentation with FPL.

#### **L. LEAK DETECTION**

Transfer operations at the Port Manatee Terminal occur mainly through aboveground pipelines. The pipelines are inspected at least monthly for the following items:

- Flange joints;
- Expansion joints;
- Valve glands and bodies;
- Pipeline supports;
- Exposed metal surfaces; and
- Oil leaks of any type.

Measures taken to prevent oil spills during transfer operations include:

- Operator inspection of valves;
- Verbal warning to all vehicular traffic operating in pipeline areas; and
- Only trained personnel are authorized for the transfer.

The tank truck unloading procedures meet the minimum requirements and regulation established by the Department of Transportation (DOT). No. 2 fuel oil, and diesel can be unloaded by tank truck at the Port Manatee Terminal. Trained personnel conduct the unloading procedures.

Spill prevention techniques provide for:

- Setting up a barrier to prevent a truck from leaving before the completion of unloading;
- Checking tank drains and connections before departing; and
- Using closure devices on stormwater spillways near the diesel truck unloading area.

In the event of oil spillage, the **Oil Spill Coordinator** would be notified. Procedures detailed in the emergency response action plan (Section II) will be followed.

#### **M. SOURCE VERIFICATION**

For Tanks A and B, source verification would be accomplished by determining which tank is involved and the characteristics of the spilled product. No. 2 fuel oil and mineral oil is stored only in the heater fuel tank, diesel is stored in the emergency generator tank, and No. 6 fuel oil is stored in the large storage tank and the purge tank. Figure II-6 identifies the location and type of products stored in each tank. Tables II-8 and II-9 indicate the type and volume of petroleum product stored in each piece of equipment or storage tank. At the Port Manatee Terminal, source verification would be accomplished by determining which tank is involved and the characteristics of the spilled product. In general, No. 2 fuel oil, lube oil, and diesel fuel are clear to amber; and No. 6 fuel is dark in color.

At the dock and within the 14-mile pipeline between the terminal and plant, source verification would be aided by the fact that only one type of fuel oil, No. 6, is transferred. Thus, terminal personnel would be aware of the type of fuel oil being transferred. Only No. 6 oil is transported in the pipelines.

The quantity of oil spilled may be difficult to determine, particularly at the outset of an incident. If a discharge comes from the tank, an estimate would be developed by taking the last recorded gauge reading and subtracting it from the current gauge reading.

In the event of a spill from the pipeline, an estimate of spillage would be determined by estimating the length of time of the discharge and multiplying it by the pumping rate at the time of the incident.

#### **N. SOURCE CONTROL**

Securing the source is an extremely important step in spill response actions. However, a source should only be secured if it can be performed safely and poses no threat to human health. The oil spill coordinator will direct the spill response procedures. A facility piping diagram (see Figure II-17) can be used to identify appropriate valves to

close. The areas of source include: truck unloading area, pipeline, and fuel oil tanks. Steps taken to secure the source include the following:

- **Land Spills** – Make every effort to contain the spill so as to limit the affected area.
- **Transfer Equipment** – If a manifold fails, shut down upstream pumps, close upstream valves. If a hose failure is encountered shut down upstream pumps, close upstream valves and drain hose into secondary containment, if feasible.
- **Tank Overflow** – If the source of the spill is identified as a tank leaking or overflowing, shut down pump operations and close fill line valve.
- **Tank Failure** – If the source of the spill is identified as a catastrophic tank failure (i.e., collapse) and safety conditions permit, contain the oil within the secondary containment area and shut down all valves associated with the tank. If this is not possible, utilize earth-moving equipment to create temporary berms to prevent the spill from spreading.
- **Piping Rupture** – If the source originates from a pipeline (low pressure), shut down pumps, close pipeline block valves on both side of the spill, and drain blocked section of line. If the source originates from a pipeline (high pressure), shut down pumps, close pipeline block valves on both sides of the spill, construct or obtain temporary containment, and bleed pressure from the pipeline into containment.
- **Equipment Failure** – For equipment failures, upstream valves will be closed and the appropriate lines or vessels will be drained or, if pressurized, will be bled down into containment structures.
- **Explosion or Fire** – (1) Notify local fire authorities; (2) Control or disperse vapors; (3) Cool heated structures; (4) Divert/control runoff; (5) Recover product(s). Appropriately trained personnel will secure the sources of discharge by appropriate means and deploy containment and control equipment to contain the spilled material. The Oil Spill Coordinator will implement other response activities as needed.

## **O. EMERGENCIES (FIRE)**

In the event of a fire, the **Vessel Operator** would be notified to shut down pumping operations and the **Dock Operator** would close all valves to the shore pipeline, immediately notify the **On-Scene Commander/ QI**, and proceed to fight the fire with dry chemical extinguishers. The **On-Scene Commander / QI** would immediately contact the appropriate agency representatives.

Fire protection for the facility consists of alarms installed through the Port Manatee Terminal. Portable fire extinguishers are also provided in accordance with National Fire Protection Association (NFPA).

Figure II-9 provides a site fire protection diagram indicating the location of the site fire protection system. Appendix A contains a list of all fire extinguishers and their location at the Port Manatee Terminal. These extinguishers are applicable for all flammable liquids and electrical fires. Instructions for use are located on the extinguishers, and in addition, Terminal personnel have been instructed on the proper use of this equipment.

In an emergency situation, the **On-Scene Commander** /QI is responsible for contacting local emergency response agencies such as the police department, fire department, hospital, and ambulance as deemed necessary. If equipment containing oil, such as transformers, should be involved in a fire, the **On-Scene Commander** should work closely with the fire department to control the amount of water being placed on the fire so as not to exceed the secondary containment capacity. Should the containment capacity be exceeded, then appropriate actions, such as building temporary dikes, should be taken to prevent oily water from reaching surface waters.

## ***P. RESPONSE AND EVALUATION CRITERIA FOR GROUP V PETROLEUM OILS***

### **Background**

The Terminal may, at times, receive shipments of Group V petroleum oils. These cargos are covered by a specific section of Federal Regulations because of their particular physical characteristics and behavior when spilled. Group V oil shipments to this facility will normally consist of Low API gravity oils, commonly referred to as LAPIO.

### **Properties of Group V (LAPIO) Oils**

Low API Gravity Oil (LAPIO) is defined as a heavy petroleum oil, like No. 6 fuel oil, with an API gravity of 10 or lower. Oils with an API gravity of 10 constitute the accepted "line of demarcation" between oils that float on fresh water at 60° F and oils that do not float in fresh water at 60° F. The API gravity range for Group V / LAPIO extends from a high value of 10 down to a low value of 0 and is a relative indicator of the product's density and buoyancy in water. These API gravity values, 10 to 0 are roughly equivalent to the

traditional Specific Gravity values of 1.0 up to 1.08, and include the lower gravity ranges for No. 6 fuel oil.

Group V / LAPIO oils have chemical and physical properties quite similar to the chemical and physical properties of conventional fuel oil. However, Group V oils also have a few distinct characteristics. Group V oils tend to be heavier and more viscous than conventional fuel oil, and this characteristic makes this product less likely to spread when spilled. LAPIO oils also exhibit higher flash points than conventional fuel oil making them generally safer to handle from a fire hazard standpoint. Specific safety information about Group V / LAPIO oil products and their hazards can be found on the material safety data sheet (MSDS) for No. 6 fuel oil located in Appendix A. This MSDS clearly describes the normal characteristics of these products.

### **Characteristics for Spilled Group V Oils**

US Coast Guard Regulations define Group V oil as an oil having a specific gravity of 1.0 or higher. This value range is equal to an API gravity of 10 or lower. The API gravity values are a strong indicator of product density, which has a significant effect in determining how these oils will behave if spilled on water. For example, a spill of 10 API gravity oil at 60° F into 60° F fresh water should float at or just below the surface of the water because the density of the water and oil are the same. Alternatively, a 9.5 API gravity oil in the same water will tend to sink in calm water or suspend in the water column in moving water. Likewise, the lower the API gravity is below 10, the greater will be the tendency of the Group V oil to sink in 60° F fresh-water. Due to differences in densities of these products, a spill of Group V oil onto surface water will behave in one of the following four ways:

- the spilled oil may float
- the spilled oil may sink
- the spilled oil may become neutrally buoyant (entrained), or
- the spilled oil may separate, with some sinking, floating, and/or entraining

In addition to knowing the API Gravity of the oil, personnel should be aware of the API equivalent gravity of the water into which the oil may be spilled. The API gravity is directly related to density, and is principally determined by salinity and temperature.

Table VI-4 provides API gravity values for water salinity and temperature conditions that may be encountered at this facility.

Table VI-4 illustrates the relationship between salinity, temperature and API gravity. Comparing the API gravity of the oil with the expected API gravity of the water will provide an initial indication of the oil's buoyancy in water, hence its tendency to float or sink. The question arises as to how much difference there must be between the API gravity of the oil and the API gravity of the water to exhibit floating or sinking behavior. In practice, the differentiation is somewhat arbitrary, but observations in laboratory experiments indicate a difference of 1.0 API gravities should produce a definitive behavior. In a rather simplistic sense, the relationship between API gravities of oil and water, buoyancy of the oil, and overall behavior of spilled oil can be characterized as follows:

- If the API gravity of the oil is higher than the API gravity of the water by a value of 1.0 or more, the oil will exhibit a definite positive buoyancy and float.
- If the API gravity of the oil falls into a range that is equal to, lower or higher than the API gravity of the water by a value up to 0.99, the oil can be considered neutrally buoyant. It may rise, entrain in the water column, or sink depending on other factors like currents, turbulence, or sediment.
- If the API gravity of the oil is lower than the API gravity of the water by a value of 1.0 or more, the oil will exhibit definitive negative buoyancy and not float on the water surface.

TABLE VI-4								
API GRAVITY OF WATER AS A FUNCTION OF SALINITY AND TEMPERATURE (DEGREES F)								
Salinity	Temp 40 °	Temp 50 °	Temp 60 °	Temp 70 °	Temp 80 °	Temp 90 °	Temp 100 °	Temp 110 °
0 ppt	10.04	10.10	10.14	10.28	10.48	10.71	10.94	11.17
5 ppt	9.44	9.49	9.59	9.74	9.94	10.17	10.40	10.63
10 ppt	8.88	8.95	9.05	9.21	9.42	9.64	9.86	10.08
15 ppt	8.33	8.41	8.52	8.69	8.90	9.13	9.36	9.60
20 ppt	7.79	7.87	7.99	8.17	8.38	8.63	8.88	9.13
25 ppt	7.25	7.33	7.47	7.65	7.86	8.10	8.34	8.58
30 ppt	6.71	6.81	6.95	7.13	7.35	7.59	7.83	8.07
35 ppt	6.17	6.28	6.43	6.62	6.84	7.08	7.32	7.56

Information about expected buoyancy is important but other considerations must also be carefully considered. A specific Group V product can exhibit various behavior patterns depending on the characteristics of the surrounding environment. The first step in developing an overall strategy to respond to Group V spills is to understand, to the maximum extent possible, the environmental parameters of the adjacent water body, and how these parameters may vary on a seasonal or daily basis.

In addition to temperature and salinity, important physical parameters of interest for an adjacent water body include:

- Current Velocity
- Sediment Loading, and
- Stratification

As shown above, **temperature and salinity** are perhaps the most important parameters as they determine the density of the water which in turn provides an API gravity value. Temperature and salinity can vary in the water column with depth and will often be different at the surface and the bottom, with warmer, fresh water at the surface (higher API gravity), and colder, more saline water near the bottom (lower API gravity). Temperature and salinity will generally vary on a seasonal basis, but may vary over the course of a few days particularly with heavy rainfall. Temperature and salinity characteristics of the water adjacent to a facility can be determined by direct measurement, or by accessing water quality data compiled by federal and state agencies.

A third **important environmental parameter** affecting the behavior of Group V oil is the **current velocity (speed and direction)** encountered in the adjacent water body. The current velocity will vary in the horizontal direction (velocity often greater at the center of the water body) and in the vertical direction (generally greater at the surface than on the bottom). Current speed and direction will determine the entrainment and transport of a Group V oil at the surface and below the surface. It is therefore helpful to know the seasonal and tidal variations in current velocity in the adjacent water body. These data can be obtained from direct measurements or previous hydrographic and water quality surveys.

Another **important water quality parameter** that can modify Group V oil behavior is **sediment loading**. As the API gravity of a Group V oil is often very near that of the water it enters, and accumulation of sediment particles by the oil can lower its API gravity to the point that it sinks. This phenomenon has been observed in a number of spills. The amount of sediment in the water column will vary with seasonal conditions (e.g. amount of rainfall which washes sediment from the land into rivers and coastal areas), but can also vary within the course of days as with a heavy rainfall or high wind and wave conditions which suspend sediment from the bottom. Data on sediment loading are not as readily available as temperature, salinity and velocity data; and the rate at which the oil will accumulate sediment depends on a number of complex processes. Therefore qualitative assessments of sediment loading (high, medium, or low) are probably sufficient for predicting Group V oil sedimentation and sinking potential. However, conditions of greatest concern are those where sand becomes incorporated into the oil rather than silt or clay.

Finally, understanding the **vertical density structure** of the water column in the adjacent water body is important as a highly stratified structure may cause the oil to sink to a level where the density changes rapidly and remain there, possibly being transported with the current at this level. Evidence of stratification can be found in previous survey results, but confirmation of the stratification and location of the transition depth can best be determined by on-site use of a portable temperature and salinity meter.

Understanding the impact of the local marine environment on Group V / LAPIO oils, it is appropriate to review in a broad sense how spilled oil might behave. Group V / LAPIO might initially float, lose light ends to evaporation and then sink. Some portions of the LAPIO might sink and then rise as a result of heating by the sun or separation of sediment from the oil, while other portions may separate with some portions sinking, some floating, and some remaining in the water column.

### **Behaviors of Spilled Group V Oils**

As indicated in the previous section, there are three basic behaviors for Group V oils which are determined by the API gravity of the oil with respect to that of water: floating,

sinking, or neutral buoyancy. A fourth pattern observed in some Group V oils is separating and fractionating, which is the un-mixing of the oil into heavier oil and lighter cutter stock. The following sections are intended to provide some insight on the various behaviors of spilled Group V oil.

**Floating Group V / LAPIO:** There is no specific experience to report concerning the cleanup of floating LAPIO. It is believed, however, that floating LAPIO might behave in a similar manner to waxy crude oils which are difficult to clean up since they tend to be very viscous, do not adhere well to surfaces normally used to collect oil and are extremely resistant to chemical dispersants.

Temperature also greatly affects the behavior of this type of oil when spilled. A change of 5° C can cause this waxy oil to go from a near solid gel to a fairly mobile fluid, especially if this oil were subject to both warming from the receiving body of water and turbulent wave action. In addition, spilled waxy oils do not form a contiguous film, but tend to separate into mats, droplets, or globules. Group V spills affected by evaporation may exhibit these same properties.

**Sunk Group V / LAPIO:** If LAPIO sinks to the bottom, it can be expected to flow along bottom contours being pushed by currents until it reaches a depression or a barrier. If the viscosity or pour point of the LAPIO is high enough and the water temperature is cold enough, the oil might stay in place and not flow. Warm weather, however, might reverse this by raising the temperature of the sunken LAPIO enough to cause the oil to become mobile.

**Neutral Buoyancy Group V / LAPIO:** Neutrally buoyant LAPIO has unusual characteristics. As water temperature declines at night or during periods of cold weather, LAPIO can sink. When exposed to the heat of the sun, LAPIO may tend to rise and float. In brackish estuarine water, LAPIO may initially sink and then float when it moves into areas of higher salinity. LAPIO can also partially sink below the surface, and then be carried away in a variety of unknown directions by underwater currents. In this situation, it could also become trapped between thermally stratified or salinity stratified layers.

**Separating Group V / LAPIO:** Group V oils are a blend of residual oils and “cutter stock” which is generally a light distillate, combined in a proportion that meets a specific need. However, the mixture may not be entirely homogeneous, due to settling of the components during transport and storage. Once spilled, further changes occur as the lighter ends evaporate. First, the blend could partially “un-mix”, forming different API gravities. Some components of the residual oil (the asphaltenes) can precipitate out when the cutter stock is lost, changing the API gravity and physical properties of the spilled oil. This un-mixing or separation process can be accelerated with turbulent mixing which can break the oil into patches, globules, and droplets, all of which may have a slightly different API Gravity. As the globules and droplets become smaller, they will be more easily entrained in currents and vertical turbulence. The result is that some portions of the oil may float on the surface, some may sink, and some may behave as neutrally buoyant oil and be entrained in the water column. This may occur even though the quoted API Gravity of the oil indicated that it would definitely float or sink.

Although the dynamics controlling this behavior are poorly understood, it has been readily observed in actual spills and laboratory tests. It is more likely to occur in oils that are at the neutral buoyancy point, and which are dispersed by waves and currents. It will become more evident the longer the oil is in the water. The onset of this behavior pattern is difficult to predict; it is best detected by direct observation. Once it occurs it will clearly become a complicating factor for further containment and cleanup of the spill.

**Land Spills:** In most circumstances, LAPIO spills on land will be analogous to conventional fuel oil spills. LAPIO's higher viscosity and higher pour point will mean slower flow of spilled or leaking oil. LAPIO is also less likely to soak into the ground and will be somewhat quicker to form a semi-solid mass. Care should be taken to prevent land spills from reaching surface waters.

Figure VI-1 is an expectation diagram for determining the potential behavior of Spilled Group V (LAPIO) oils. The following tables are general behavior expectation charts and are provided for general reference in understanding what may happen to a spilled oil having an API Gravity of 10 down to 7. It is important to remember there is a full spectrum of API gravity values within that range and the best approach is to actually determine the API gravity of the oil and the adjacent water body.

**FIGURE VI-1** EXPECTATION DIAGRAM FOR DETERMINING THE POTENTIAL BEHAVIOR OF SPILLED GROUP V OIL

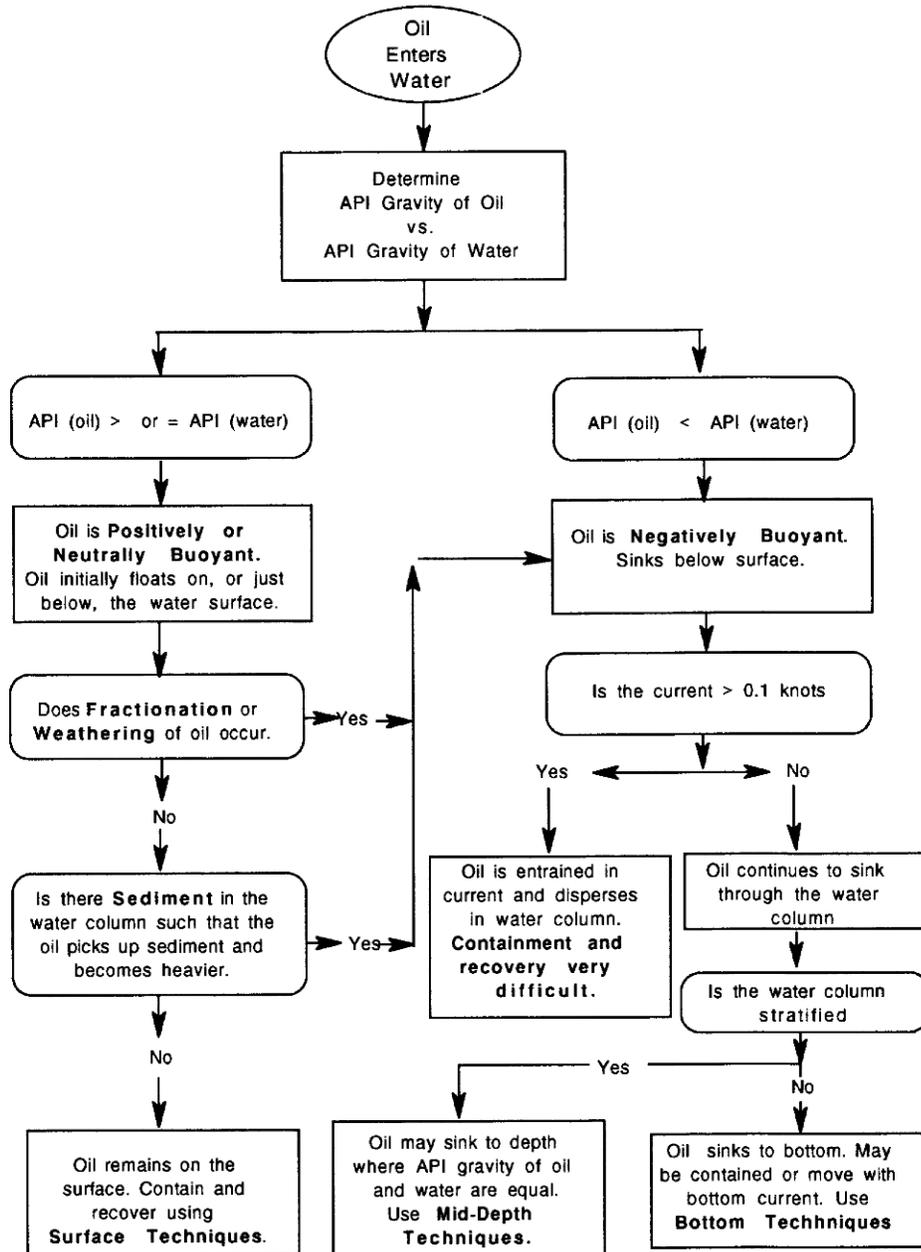


TABLE VI-5								
EXPECTED BUOYANCY OF API GRAVITY 10 OIL IN WATER								
H <sub>2</sub> O Salinity	Temp 40 °	Temp 50 °	Temp 60 °	Temp 70 °	Temp 80 °	Temp 90 °	Temp 100 °	Temp 110 °
0 ppt			Sinks					
5 ppt								
10 ppt	Floats							Sinks
15 ppt								
20 ppt								
25 ppt								
30 ppt								
35 ppt								
Key:		Floats		Neutral		Sinks		

TABLE VI-6									
EXPECTED BUOYANCY OF API GRAVITY 9 OIL IN WATER									
H <sub>2</sub> O Salinity	Temp 40 °	Temp 50 °	Temp 60 °	Temp 70 °	Temp 80 °	Temp 90 °	Temp 100 °	Temp 110 °	
0 ppt	Sinks								
5 ppt									
10 ppt				Sinks					
15 ppt									
20 ppt	Floats							Sinks	
25 ppt									
30 ppt									
35 ppt									
Key:		Floats		Neutral		Sinks			

TABLE VI-7								
EXPECTED BUOYANCY OF API GRAVITY 8 OIL IN WATER								
H <sub>2</sub> O Salinity	Temp 40 °	Temp 50 °	Temp 60 °	Temp 70 °	Temp 80 °	Temp 90 °	Temp 100 °	Temp 110 °
0 ppt	[Blue]							
5 ppt								
10 ppt								
15 ppt								
20 ppt	[White]	[White]	[White]	[Blue]				
25 ppt	[White]	[White]	[White]					
30 ppt	[Grid]	[Grid]	[Grid]					
35 ppt	[Grid]	[Grid]	[Grid]					
Key:	Floats	[Grid]	Neutral	[White]	Sinks	[Blue]	[White]	[White]

TABLE VI-8											
EXPECTED BUOYANCY OF API GRAVITY 7 OIL IN WATER											
H <sub>2</sub> O Salinity	Temp 40 °	Temp 50 °	Temp 60 °	Temp 70 °	Temp 80 °	Temp 90 °	Temp 100 °	Temp 110 °			
0 ppt	[Blue]										
5 ppt											
10 ppt											
15 ppt											
20 ppt											
25 ppt	[Blue]			[Blue]							
30 ppt									[White]	[White]	[White]
35 ppt									[White]	[White]	[White]
Key:	Floats	[Grid]	Neutral	[White]	Sinks	[Blue]	[White]	[White]			

## Facility Considerations

**Site Characterization:** The following section identifies important information concerning site characteristics of surface waters and the environmental setting surrounding the facility.

**Characterization of Water Bodies:** Each water body has certain site-specific physical and chemical characteristics that could affect the movement of spilled oil and the application of particular technology to control or remove these products. When evaluating response strategies, it is important to obtain data on the specific water body which may be the recipient of a spill as these data can contribute to estimating spill behavior and potential environmental impact. This area is not tidally influenced and would mean that the Group V oil would probably be easily contained.

**Characterization of Environmental Settings:** The identification of environmentally sensitive areas and resources surrounding the facility are identified in Section VII. Included in this section is a sensitivity map and a list of sites which may require protection in the event of a spill. Refer to Section II.4 for more detailed information.

## Response Strategies for Group V Oils

Tables VI-9 and VI-10 contain response equipment that may aid the Spill Responder in conducting an assessment of the incident and in determining an appropriate response strategy. Table VI-9 describes various detection techniques while Table VI-10 provides various containment and recovery options depending on the location and depth of the oil. If a spill of **Group V / LAPIO remains floating**, response strategies may consist of conventional techniques. Containment boom or dredge curtain can be used to surround a spill or deployed downstream to herd the oil to a collection device. Conventional recovery devices may also be effective. The Company owns several different types of skimmers which are available for use at any Company facility. These include Rope Mop, Weir, Disc and Drum skimmers. The Company also owns a high capacity vacuum system, high capacity pumping systems, four barges (100-barrel capacity each) and has access to numerous vacuum trucks.

If a spill of **Group V / LAPIO sinks**, goes subsurface or disperses, response strategy may consist of a detailed incident assessment. This assessment can be used to determine whether identified impacts of the spill are significant to warrant a response. The assessment can be conducted using divers and equipment such as an Integrated Video Mapping System (IVMS). The IVMS is an on-line computer database that integrates video data with positioning data, allowing the operator to identify exactly where video data are being collected. By following a pre-planned inspection and survey plan, the location and aerial coverage of the spill can be precisely identified and mapped. Survey track and video observations are logged directly into the computer database and simultaneously mapped into a Geographical Information System (GIS) program. Both the aerial coverage, potential impact on biological resources present and qualitative observations of the amount of product (thickness of layer on bottom) can be identified and recorded on videotape. From this assessment, it can be determined whether a response to the spill is needed and feasible or whether no action is necessary. If a response is warranted, a deep-skirted boom may be used to try and contain the oil if conditions allow. Recovery can consist of employing vacuum units, suction dredges, submersible pumps, or clamshell dredges as appropriate. Recovered oil will be stored in portable tanks, barges, dredge scows or aboveground storage tanks. These containment devices are either owned by the Company or have been identified as being available through Letters of Agreement with various contractors. A list of Company owned equipment is located in Appendix A of this plan and the Corporate Plan. Contractor resources are also located in Appendix A of the Corporate Plan.

TABLE VI-9		
DETECTION TECHNIQUES FOR GROUP V OILS		
OIL LOCATION	DEPTH OF OIL	DETECTION TECHNIQUE
On Surface	0 – 1 meter +/-	<ul style="list-style-type: none"> <li>• Visual (aircraft)</li> <li>• Photobathymetric Tech.</li> </ul>
Near neutral Buoyancy (suspended in water column)	0 – 3 meters +/-	<ul style="list-style-type: none"> <li>• Visual (diver)</li> <li>• Sonar</li> <li>• Visual (video mapping, remote camera)</li> <li>• Water Column Sampling</li> <li>• In-Situ Detectors</li> </ul>
Negative Buoyancy (sinks to bottom)	0 – 1 meter +/-  0 – 3 meters +/-  No depth restriction	<ul style="list-style-type: none"> <li>• Visual (aircraft)</li> <li>• Photobathymetric Tech.</li> <li>• Visual (diver)</li> <li>• Geophysical</li> <li>• Sonar</li> <li>• Side-Scan Sonar</li> <li>• Enhanced Acoustic</li> <li>• Grab Samples</li> <li>• Bottom Trawls</li> <li>• Visual (video mapping, remote camera)</li> <li>• In-Situ Detectors</li> </ul>

<b>TABLE VI-10</b>			
<b>CONTAINMENT AND RECOVERY TECHNIQUES FOR GROUP V OILS</b>			
<b>OIL LOCATION</b>	<b>DEPTH OF OIL</b>	<b>RECOVERY TECHNIQUE</b>	<b>NOTES</b>
Neutrally buoyant (suspended) oil	0 – 2 meters +/-	Permeable barriers	Construct wire mesh, netting, and sorbent materials.
		Manual recovery	Use seines (large vertical hanging nets suspended from floaters and weighted down at bottom) and dip nets.
	Variable depths	Midwater trawls/ Vertical nets	Use vertical nets if viscosity is greater than 10,000 centistokes (cs); protect areas with moored vertical nets if oil viscosity is greater than 40,000 cs; use trawls at over 40,000 cs at relatively low tow speed.
		Pumping systems	Use locally where oil is concentrated as in depressions; requires oil/water separation of large volumes of collected material; not practical for recovery of large areas of oil or for oil dispersed throughout water column.
	Onshore recovery	Use conventional shoreline recovery techniques for oil entrained in the water column that eventually re-floats and deposits on shoreline.	
Sunken oil (pumpable)	0 – 5 meters +/-	Mud cat	Use with concentrated oil in large volume; must be able to dislodge and pump sunken oil.
	0 – 15 meters +/-	Dustpan/cutter-head dredge	
	0 – 20 meters +/-	Hopper dredge	
	0 – 30 meters +/-	Handheld dredge	
	0 – 40 meters +/-	Oozer dredge	
	Variable depths	Vacuum systems Progressive cavity pumps Air lift pumps	Use only if oil is not highly viscous or solid unless first slurried; do not use centrifugal force, which breaks up globules and causes emulsification
Sunken oil (not pumpable)	0 – 5 meters +/-	Mud cat	
	0 – 15 meters +/-	Cutter-head dredge	
	0 – 30 meters +/-	Manual (divers)	Use when oil is irregularly distributed over large areas or site conditions preclude use of other techniques.
	Variable depths	Bottom trawls Clamshells Robotic systems	Use for recovery of viscous oil and solids; do not use on cohesive oil mats; difficult to use when solids accumulate in nets, retarding flow of water through trawl.

<b>Table VI-11 – Group V Response Contractors</b>				
Full Service Contractors with Submersible Pumping Capability				
<b>Company Name</b>	<b>Phone Number</b>	<b>Location</b>	<b>Description of Services</b>	
John E. McCausland, Inc	(904) 358-1975	Jacksonville, FL	Emergency response team and submersible pumps	
Southern Waste Services	(800) 852-8878	St. Petersburg, FL	Transportable oil/water separators.	
Diversified Environmental Services	(813) 248-3256 Gene Russel	Tampa, FL	Transportable oil/water separators.	
Marine Pollution Control	(313) 849-2333	Detroit, MI	Has equipment pre-staged in Tampa, FL.	
Lightering, Storage and Recovery Barges				
<b>Company Name</b>	<b>Phone Number</b>	<b>Location</b>	<b>Services</b>	
			Tugs	Lightering Barges
TransMontaigne	(954) 525-4261	Ft. Lauderdale, FL	X	X
New Star Energy	(904) 355-9675	Jacksonville, FL		X
Cross State Towing Company	(904) 745-1603	Jacksonville, FL		X
Sunstate Marine	(904) 284-7171	Jacksonville, FL		X
Dredging Equipment				
<b>Company Name</b>	<b>Phone Number</b>	<b>Location</b>	<b>Description of Services</b>	
Bull Dredging, Inc.	(904) 246-1121	Jacksonville, FL	Suction cutter dredges with related submersible pumping systems.	
Great Lakes Dredge and Dock Company	(904) 284-1999	Green Cove Springs, FL	Dredges and associated attendant plant.	
Hendry Corporation	(813) 831-1211	Tampa, FL	Various dredging equipment.	
Diving Contractors				
<b>Company Name</b>	<b>Phone Number</b>	<b>Location</b>	<b>Description of Services</b>	
			Divers	Divers
Logan Divers, Inc.	(904) 731-0000	Jacksonville, FL	X	X
Sea Tow South	(800) 732-7745	Tampa, FL	X	X
Industrial Divers Corp.	(954) 523-2906 (954) 931-9245	Ft. Lauderdale, FL	X	
Detection and Mapping Services				
<b>Company Name</b>	<b>Phone Number</b>	<b>Location</b>	<b>Description of Services</b>	
Arc Surveying & Mapping, Inc.	(904) 384-8377	Jacksonville, FL	Underwater detection and mapping.	
Temporary Emergency Storage Tanks				
<b>Company Name</b>	<b>Phone Number</b>	<b>Location</b>		
Modu Tanks, Inc.	(800) 245-6964	Long Island, NY		
Baker Tanks	(281) 470-1387	LaPorte, TX		
Oil Water Separator Systems				
<b>Company Name</b>	<b>Phone Number</b>	<b>Location</b>		
Hyde Marine Products, Inc.	(800) 422-7266	Pittsburgh, PA		

*[Intentionally Blank]*

## SECTION VII: IDENTIFICATION OF ENVIRONMENTALLY SENSITIVE AREAS/RESOURCES

---

### A. INTRODUCTION

Based on worst case discharges of persistent oil, the planning distance method for oil transport on tidal influenced waters is **15 miles**.

Port Manatee is located on the south shore of Tampa Bay, the largest estuary in Florida, between Cockroach Bay and Bishop Harbor (see Figure VII-1). Using the accepted geographic subdivisions of Tampa Bay, Port Manatee is located on the dividing line between middle and lower Tampa Bay. The extensive estuarine habitats within Tampa Bay include mangrove forests, oyster reefs, salt marshes, and sea grass meadows. Figure VII-1 is a general vicinity map and Figures II-10A/II-10B are maps of the sensitive habitats around the port; Appendix I is a map of the environmentally sensitive habitats along the pipeline route. Tampa Bay includes four state Aquatic Preserves--Boca Ciega Bay, Cockroach Bay, Pinellas County, and Terra Ceia--and three National Wildlife Refuges--Egmont Key, Passage Key, and Pinellas (six mangrove islands, including Tarpon Key, in Boca Ciega Bay).

- The Port Manatee Terminal is located less than 1 mile south of Cockroach Bay State Aquatic Preserve.
- Terra Ceia State Aquatic Preserve is located 5 miles south of the Port Manatee Terminal.
- Pinellas County State Aquatic Preserves are located 3 miles west of the Port Manatee Terminal.
- Boca Ciega Bay State Aquatic Preserve is located 10 miles west of the Port Manatee Terminal.
- Fort Desoto State Park is located 8 miles west of the Port Manatee Terminal.
- Pinellas National Wildlife Refuge and Wilderness Area are located 8 miles west of the Port Manatee Terminal.

- Egmont Key National Wildlife Refuge is located 12 miles southwest of the Port Manatee Terminal.
- Passage Key National Wildlife Refuge is located 12 miles southwest of the Port Manatee Terminal.

In the event of an oil spill that may impact (an) aquatic preserve(s) and/or (a) state park(s), the **Oil Spill Coordinator** would contact:

Ft. Desoto Park Office

(727) 893-9185.

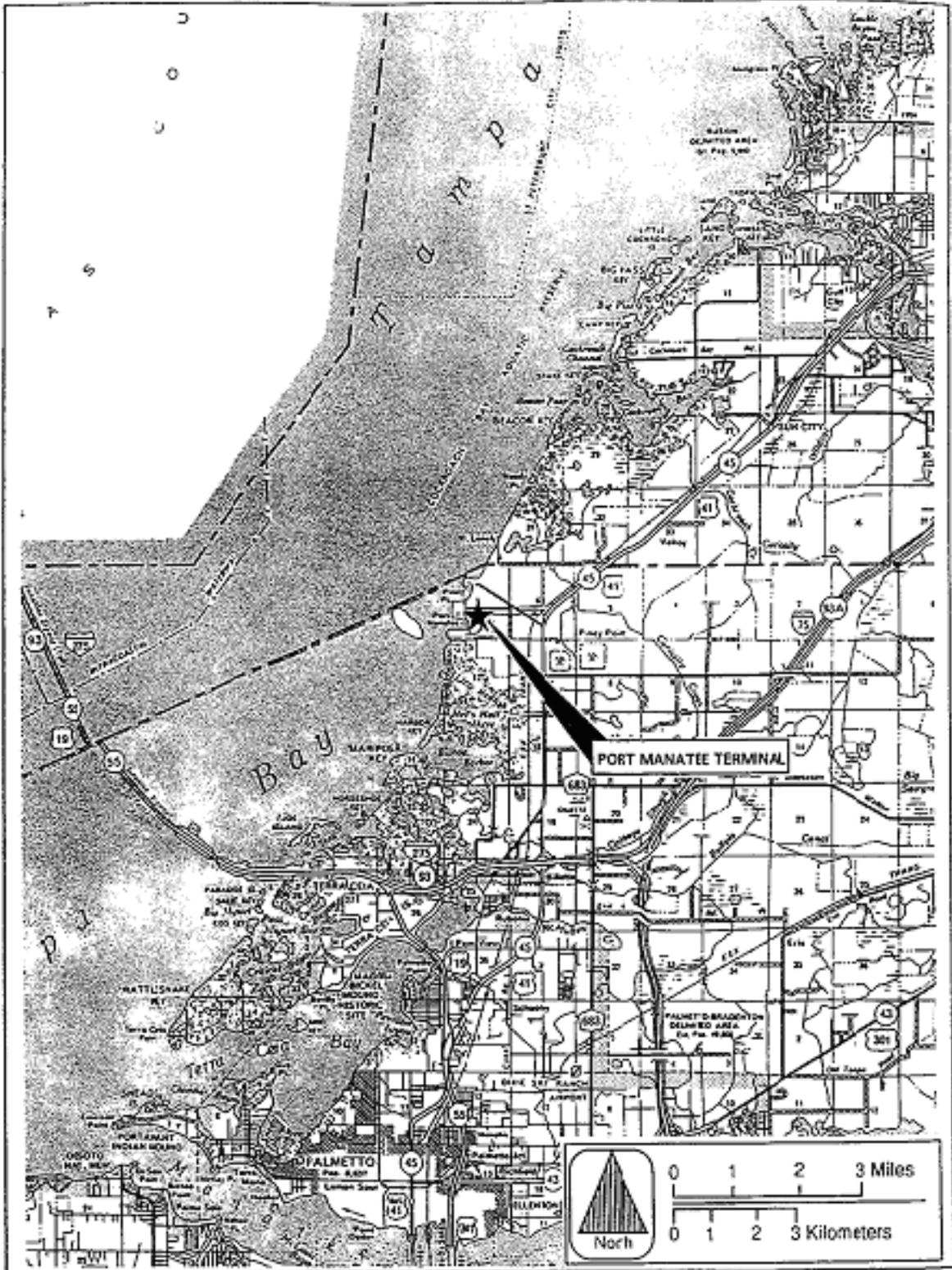
In the event of an oil spill that may impact (a) National Wildlife Refuge(s), the **Oil Spill Coordinator** would contact:

Michael Lusk at (352) 563-2088 (located in Homosassa Springs).

Marinas in the area, their location in relation to the terminal, their manager, and the manager's telephone number are:

NAME	LOCATION	MANAGER	TELEPHONE NUMBER
Snead Island Boat Works	approximately 8 miles south of the Port	Gary Alderman	(941) 722-2400
Lauderdale Marina	approximately 8.5 miles north of the Port	Mike Merrick	(941) 645-6286

FIGURE VII-1 PORT MANATEE TERMINAL AND GENERAL VICINITY



## **Endangered Species**

These parks and docks are important to protect from oil spills since they may be the habitat for endangered or threatened species. Table VII-1 lists the species on the Federally threatened or endangered species list in the state of Florida and may be found in the vicinity of the Port Manatee Terminal.

### ***B. PROTECTION OF ENVIRONMENTALLY SENSITIVE AREAS/RESOURCES***

Spilled oil will spread depending on the wind direction and tidal conditions prevailing at the time of the spill. Figure II-15 indicates possible oil slick trajectories. In the event of a worst case spill at the Port Manatee Terminal, Table VII-1 lists sites that may require protection within the first six hours under the conditions listed. Table VII-2 lists sites that may require protection within the first 12 hours after an oil spill depending on the prevailing wind direction and tidal conditions at the time. Protection of these listed sites are considered basic initial response strategies. Additional equipment which may be needed to protect these areas is located in Appendix A. Depending on the conditions and situations at the time, additional and different sites may require booming utilizing additional response equipment and booming strategies.

The U.S. Fish and Wildlife Service with input from the scientific and conservation community has established a hierarchy of protection of environmental sensitive areas. The priority list is as follows:

- Water for Human Consumption
- Endangered or Threatened Species and their habitat
- National Estuarine Research Reserve
- National Wilderness Areas
- National Wildlife Refuges
- National Parks, Monuments, and Seashores
- State Wildlife Refuges and Game Management Areas
- Local or Private Wildlife Refuges

- Seasonal Breeding, Spawning and Nesting Areas
- Salt Marshes
- Brackish Marshes
- Freshwater Marshes
- Commercial and Recreational Fisheries and Management Areas
- National Historic Register Sites
- State Parks
- Public Beaches, Parks, Recreational Areas and Facilities
- Private Beaches, Recreational Areas and Facilities
- Industrial Water Supply
- Other Tourist/Recreational Areas
- Agricultural Land
- Other Undeveloped Land
- Industrial Facilities
- Other Developed Land

<b>TABLE VII-1</b>				
<b>ADDITIONAL RESPONSE ACTIONS</b>				
<b>WATERWAYS THAT MAY REQUIRE PROTECTION WITHIN 6 HOURS</b>				
<b>CONDITIONS: WIND FROM THE SOUTHEAST FORCING THE SPILL NORTHWARD ALONG THE SHORELINE.</b>				
<b>WATERWAY</b>	<b>LOCATION</b>	<b>BOOM/DEPLOYMENT/ STAGING</b>	<b>ANCHOR SYSTEMS</b>	<b>BOOM LIGHTS</b>
Piney Point	approximately 2,500 feet north of the Port	+3,000 feet of boom could be used to divert the spill oil to the shoreline in this area and prevent the spill from moving north toward Cockroach Bay. Deployment could occur from the shoreline using boats from the Port area.	30	30
Moody Point	approximately 2.5 miles north of the Port	2,000 feet of boom could be used to protect the wetlands in this area. Deployment could occur from the Port area.	20	10
<b>CONDITIONS: Winds from the north forcing the spill southward along the shoreline.</b>				
Redfish Creek	approximately 0.5 miles south of the Port area	2,000 feet of boom could be used to protect the entrance to the wetlands within this area. Deployment could occur from the Port area.	20	10
Little Redfish Creek	approximately 0.75 miles south of the Port area	2,000 feet of boom could be used to protect the entrance to wetlands within this area. Deployment could occur from the Port area.	20	10
Bishop Harbor	approximately 2 miles south of the Port area	2,000 feet of boom could be placed across the entrance to the Harbor to protect the wetlands within the area. Deployment could occur from the Port area or the public docks with Bishop Harbor	20	20

<b>TABLE VII-2</b>				
<b>ADDITIONAL RESPONSE ACTIONS</b>				
<b>WATERWAYS THAT MAY REQUIRE PROTECTION WITHIN 12 HOURS</b>				
<b>CONDITIONS: SPILL FROM MAIN FUEL OIL STORAGE.</b>				
<b>WATERWAY</b>	<b>LOCATION</b>	<b>BOOM/DEPLOYMENT/ STAGING</b>	<b>ANCHOR SYSTEMS</b>	<b>BOOM LIGHTS</b>
Cockroach Bay	approximately 4 miles north of the Port area	+6,000 feet of boom could be used to exclude oil from the wetlands within the area. Deployment could occur from the boat ramps within Cockroach Bay and from the Port area.	60	+30
Little Cockroach Bay	approximately 5 to 7 miles north of the Port area	Approximately 10,000 feet of boom could be used to exclude oil from the wetlands within this area. Deployment could occur from the boat ramps with Cockroach Bay or at E.G. Simmons Park.	+50	+50
Entrance to the Little Manatee River	approximately 7 miles north of the Port area	Approximately 3,000 feet of boom could be used to exclude oil from this area. Deployment could occur from boat ramps at E.G. Simmons Park.	30	30
Wetlands in the Mariposa Key, Clambar Bay, Horseshoe Key, Two Brothers Island, Joe Bay, and Joe Island area	approximately 2 to 4 miles south of the Port area	Approximately 15,000 feet of boom could be used to exclude oil from the extensive wetlands in this area. Deployment could occur from the Bishop Harbor area and the Sunshine Skyway Causeway area. Diversion booming could be used to collect oil along the causeway for collection in that area.	+75	+75
Note: See Figure II-10 for Locations of Environmentally Sensitive Areas. See also Section VII and Figure II-8 for information on specific booming strategies.				

For additional information, consult the United States Coast Guard (USCG) Sector St. Pete Contingency Plan.

Figure II-8 shows specific booming strategy techniques that could be used in the event of a spill.

### C. **WILDLIFE PROTECTION**

During conduct of ground and shoreline protection and clean-up operations, efforts would be made to minimize disruptions to wildlife. Table VII-3 presents techniques that could be utilized to protect wildlife that may be threatened by an oil spill incident.

<b>TABLE VII-3</b>	
<b>WILDLIFE PROTECTION TECHNIQUES</b>	
<b>TECHNIQUE</b>	<b>DESCRIPTION</b>
Chumming	Involves the distribution of food to lure birds away from an area affected by an oil spill. Food is dumped into the water from a vessel positioned near the spill site. Once the birds have gathered near the vessel, chumming continues as the vessel moves toward an unaffected area.
Hazing	Involves the use of scare-away guns and/or helicopter overflights to prevent birds from landing on a potentially affected area, or to divert birds from marshes, wetlands, refuges, and other sensitive areas.
Translocation	Involves the transfer of animals to an area unaffected by the spill. Animals are captured and moved to a habitat that fulfills their survival needs, but is of sufficient distance from the spill to discourage their return.

Efforts would be made to protect and to rescue affected wildlife. The following agencies can be contacted for assistance:

#### **Tri-Sate Bird Rescue**

(302) 737-9543

**SECTION VIII:****SPILL SCENARIOS**

---

**A. OVERVIEW**

Spill response scenarios provide chronological and summary records of emergency responses to hypothetical emergency situations. Each scenario attempts to address many of the actions that might occur in an actual spill incident. Scenarios are designed to give team members an opportunity to practice their skills. Additionally, team members can relate to the duties and responsibilities of other team members. This interaction should help team members to understand their overall role in an actual spill response.

Scenarios are based on sets of circumstances that may or may not occur in the same sequences or combinations in an actual spill incident. While helpful in providing response personnel and regulators with an understanding of the major activities involved in a response effort, these hypothetical spill and response scenarios may not reflect the actual circumstances surrounding, or actions taken during an incident. Since the actual spill circumstances are unpredictable and the response effort must be tailored to these circumstances, the specific response actions taken during an incident would be unique. Consequently, these spill and response scenarios are intended to serve as planning or training tools, rather than depictions of expected spill response actions or performance guarantees.

Based on the facility's normal operations and the probability of an incident occurring, three different scenarios have been developed:

- Level I – a small or average most probable discharge
- Level II – a medium or maximum most probable discharge
- Level III – the worst case discharge

The risks of a major spill at the facility that would reach surface waters are associated with the potential occurrence of a storage tank failure (hurricane-related), pipeline failure, or the collision of a vessel with the dock or another vessel. The consequences of an accident involving the vessels prior to unloading or after loading are the responsibility of the vessel, and therefore beyond the scope of this plan. Should such an incident occur at the Port Manatee Terminal and Pipeline, FPL personnel would

respond to the incident as appropriate and / or utilize the services of the Oil Spill Removal Organization (OSRO).

At present, the quantities of oil described in Section X are used to describe the three levels of incidents that may occur at the Port Manatee Terminal and Pipeline. The worst case spill incident is based upon the contents of the pipelines and storage tanks at the facility. The occurrence of a level III incident at the facility resulting in a large release of fuel into the water is unlikely, because of the policies, practices, and procedures described in Section X of this plan. Because of these facts, plausible scenarios have been developed which have a conceivable possibility of occurrence. Actions taken during any major spill incident would be similar with variations according to the conditions (e.g., weather, available equipment and personnel) existing during the response. Response to any major spill incident would involve the activation and mobilization of all available resources. The scenarios will partially incorporate the following operations at the Port Manatee Terminal and Pipeline, additional scenarios for this terminal will be generated during tabletop drills and other exercises:

- Unloading of oil
- Facility maintenance
- Facility piping
- Pumping stations and sumps
- Oil storage tanks
- Age of facility and components
- Refueling vehicles.

Scenarios will consider factors in the following areas, as appropriate:

- incident description (size of discharge, material discharged, direction of discharge, location of discharge)
- environmental conditions (weather or aquatic conditions)
- proximity to down gradient wells, waterways, and drinking water intakes
- proximity to fish and wildlife and sensitive environments
- likelihood of discharge moving offsite
- immediate response actions
- management

- probability of a chain reaction of failure
- incident command
- monitoring
- containment and recovery
- storage and disposal
- response equipment and management
- public relations.

## **B. LEVEL I SPILL SCENARIO**

### *Incident Description*

A barge was unloading No. 6 fuel oil at 0700 on 21 July when the hose ruptured. The Dock Operator immediately radioed the Terminal Operator to shut down the pumps and terminated transfer operations by manually closing the shutoff valve. The incident resulted in the release of less than 5 barrels (210 gallons). The oil sprayed onto the dock. Some of the oil remains on the dock; however, the larger percentage goes into the water around the dock.

### *Environmental Conditions*

At the time of the incident, winds are light (less than 5 miles per hour) out of the southeast. The winds increase to 10 miles per hour out of the southeast during the day. Air temperature range from 85°F to 93°F; water temperatures are approximately 85°F. The tide is ebbing (high tide at 0330; low tide at 1024).

### *Response Actions*

<b>TIME</b>	<b>EVENT</b>
0703	The Dock Operator and Terminal Operator ensure that all valves are closed and flow of oil has stopped. An assessment is made that approximately 3 to 4 barrels (126 to 168 gallons) of oil is in the water. Assistance is required for cleanup. All of the oil is trapped by the containment boom placed between the dock and the barge prior to transfer.
0705	The OSC/QI makes the necessary internal contacts to ensure that sufficient backup terminal personnel are available for response. Available personnel also contact the Corporate Response Team (CRT), the Manatee Plant, and the necessary external contacts (National Response Center, Coast Guard, LEPC, and FDEP).
0715	The Dock Operator with the assistance of the barge crew is able to put additional boom into

TIME	EVENT
	place between the dock and the boat to further ensure that the oil is contained within that area.
0745	Additional terminal and plant personnel begin to arrive. The OSC/QI decides that the primary response contractor will be required to at least remove the oiled equipment. The primary response contractor is called.
0800	Terminal, plant, and barge personnel begin cleanup using available sweeps, snares, absorbent boom, and skimmers into an inflatable tank.
1030	Response contractor arrives and assists with the final stages of the on water cleanup. Their assistance will be used for equipment recovery and removal of oiled cleanup debris and the oil water mixture in the inflatable tank(s).
1200	The Oil Spill Coordinator has remained in contact with the CRT; however, one member of the team arrives to observe the final stages of site remediation. The FDEP personnel arrive to inspect the site.

Complete site remediation requires an additional two days. The waste hauler is responsible for the transport and disposal of oiled debris and equipment and removal of the oil/water. If necessary, the CRT coordinates press releases and contact with the local media. The US fish and wildlife service is contacted to check on the status of fish and wildlife. (b) (7)(F), (b) (3)

Containment booms are used to protect environmental sensitive areas as discussed in Section VII.

The probability of this event causing a chain reaction of failures is very low since a rupture in the piping would not cause a rupture of the tank. The likelihood of the discharge moving offsite is low since booms can easily be put in place prior to the oil moving offsite.

### **C. LEVEL II SPILL SCENARIO**

#### **Incident at Pipeline**

##### *Incident Description*

At 1000 hours on 12 October, a barge is unloading No. 6 fuel oil at the Manatee Facility dock when the dock line ruptures. Unloading operations are occurring during a passing weather front so that weather conditions include strong winds and rain. The vessel operator stepped away from the pumping operations and almost 3 minutes pass before the operator is alerted and operations are shutdown. Approximately 700 barrels (29,400 gallons) of No. 6 fuel oil is spilled onto the dock and into the water.

### *Environmental Conditions*

The winds are strong (35 miles per hour, gusting to 45 miles per hour) out of the northwest. Skies are cloudy with a strong, steady rain; the air temperature is approximately 65°F; and the water temperature is 72°F. The tide is incoming - low tide was at 0610 hours. The next high tide is at 1230 hours.

### *Response Actions*

TIME	EVENT
1003	The Vessel Operator, Dock Operator, and Pump Operator affect a shutdown of fuel unloading operations and close the pipeline shutoff valve stopping all flow of oil. An initial assessment is immediately conducted. The Dock Operator informs the OSC/QI of the situation indicating that a large quantity of oil has entered the water.
1010	The OSC/QI makes the necessary internal contacts to ensure that sufficient backup terminal personnel are available for response. Available personnel also contact the Qualified Individual, the Corporate Response Team (CRT), the Manatee Plant, the Port Authority and the necessary external contacts (National Response Center, Coast Guard, LEPC, and FDEP). The primary response contractor is contacted to provide additional personnel and materials for the response and cleanup. The sheriff's department is called to assist in securing the site during response and cleanup operations. The oil is trapped within the Port basin with the incoming tide. The strong wind and the incoming tide are holding the oil against the south wall of the Port basin; however, the oil is beginning to spread.
1045	Additional terminal, port, and plant personnel arrive and assist in the deployment of available boom across the entrance to the Port and within the Port to confine the oil to the south side of the Port.
1100	Terminal and plant personnel begin cleanup of the oil using the equipment available at the terminal, port, and plant. The OSC/QI contacts the CRT concerning the potential for oiled seabirds. The CRT contacts a wildlife rescue and rehabilitation organization to mobilize for wildlife cleanup.
1330	The response contractor arrives to assist in further entrapment of the oil around the vessel and dock area and removal of the oil that has been contained within that area.
1400	CRT members arrive and overview the cleanup. A press release is prepared for the local media. Approximately 30,000 gallons of No. 6 fuel was spilled at the facility. All 30,000 gallons has been contained within the port area. Cleanup of that area is underway.
1430	The response contractor and available FPL personnel continue the cleanup using vacuum trucks and skimmers. State and local regulators arrive to monitor the situation and meet with the Oil Spill Coordinator and CRT team members.

Port area cleanup continues for 3 days following the initial response. The wildlife rescue and rehabilitation team arrive on day two to rescue and cleanup any oiled seabirds. Surveillance by the CRT team members continues for that period to monitor the progress of the cleanup. The US fish and wildlife service is contacted to check on the status of fish and wildlife. (b) (7)(F), (b) (3)

that will be affected. There is no impact to fish or sensitive areas since the oil is contained within the port.

Oil transfer operations are resumed two days after the spill as the spill is confined to the southeast corner of the port.

The probability of this event causing a chain reaction of failures is very low since the rupture of a pipeline would not make a rupture of the tank, or other oil storage areas more likely.

#### **D. LEVEL III SPILL SCENARIO**

##### **Incident Description**

At 0400 hours on 24 August, the south Tampa Bay area sustained a direct hit by a hurricane. Winds reached 150 miles per hour with gusts up to 190 miles per hour. Storm surge within Tampa Bay was 8 to 10 feet above sea level. The Manatee area and all personnel at the facility were evacuated prior to the arrival of the storm.

Personnel are allowed to inspect the Port area at approximately 0700 hours. Damage to the terminal is extensive. The most severe damage resulted from flying debris which pierced one of the No. 6 fuel oil storage tanks releasing approximately 500,000 barrels (21,000,000 gallons) of a No. 6 fuel oil into the containment area. Winds have blown the mixture around the site and coated the tanks and buildings. The rain and storm surge have nearly filled the containment area and caused the release of a significant quantity of spilled oil mixture. The release is estimated at approximately 20,000 barrels (840,000 gallons).

##### *Environmental Conditions*

The hurricane passes within a matter of hours traveling from southwest inland toward the northeast. After the storm passes weather conditions gradually return to a normal weather pattern of clear skies, winds from the southeast at approximately 12 miles per hour. Air temperature is 86°F; water temperature is 85°F. High tide is at 0733; low tide is at 1616.

##### *Response Actions*

Because of the unique nature of this type of incident and lack of available personnel at the facility to respond to this size and type of incident, the response to this scenario will

be described as actions within a phased response. This incident will require the implementation of the Corporate Response Team (CRT) and the Incident Command System (ICS). A general time line will be described.

TIME	EVENT
Day 1 0700	<p><b>Initial Assessment –</b></p> <p>The OSC/QI is allowed on the site to make an initial assessment. The secondary containment area is filled with an oil water mixture. Release of oil from this area has stopped. The terminal site and surrounding area is covered with oil and oil has flowed into the wetlands west of the facility.</p>
Day 1 0710	<p><b>Required Notifications –</b></p> <p>All required external notifications (National Response Center, Coast Guard, FDEP, and LEPC) are made. The OSC/QI makes all of the necessary internal notifications to mobilize available terminal and Manatee plant personnel, the Qualified Individual, the CRT, and the Port Authority. The Oil Spill Coordinator also contacts the local sheriff's department to keep all traffic except that related to the response effort away from the terminal area.</p>
Day 1 0730	<p>The CRT immediately begins to mobilize to the area. Based on the information from the initial assessment, CRT team members mobilize FPL's pre-staged response equipment to the site, mobilize response contractors, arrange for a helicopter for site surveillance, and arrange for site security.</p>
Day 1 0800	<p><b>Initial Response –</b></p> <p>Additional terminal and plant personnel begin to arrive. They are assigned the tasks of checking and inventorying available response equipment and general facility equipment. Personnel check to ensure that flow from the containment area has stopped. Drainage pathways to the water are investigated. Plans are made to mobilize equipment needed to block the pathways.</p>
Day 1 1100	<p><b>Response Initiation Phase - Detailed Assessments –</b></p> <p>Members of the CRT arrive at the site. The command center is setup at the Port Authority building within the Port area.</p> <p>CRT begins detailed assessments of the spill site. One CRT member meets the helicopter and begins an overflight of the area. Most of the oil is trapped within the Redfish Creek and Little Redfish Creek area. The potential for movement of the oil out of this area is great as the storm surge and flood waters recede after the storm.</p>

TIME	EVENT
Day 1 1300	<p><b>General Plan Development Phase - Initial Incident Briefing Meeting</b></p> <p>The Incident Commander calls a meeting of the Command Staff after the detailed assessments are performed. He is apprised of the status of the spill through detailed assessment reports. The cleanup priorities are:</p> <ul style="list-style-type: none"> <li>• ensure the safety of personnel at the site;</li> <li>• contain and begin cleanup of oil in the Redfish Creek and Little Redfish Creek area (i.e., some damage has already occurred within a sensitive wetland area; further damage should be minimized);</li> <li>• protect environmentally and socially sensitive areas;</li> <li>• begin to cleanup the oil on the site ground;</li> <li>• begin to cleanup oil and water within the secondary containment area;</li> <li>• repair the tanks; and</li> <li>• keep the public informed.</li> </ul> <p>The following immediate response priorities are identified.</p> <ul style="list-style-type: none"> <li>• All personnel are to receive safety briefing and be issued appropriate safety equipment.</li> </ul>
Day 1	<p><b>Initial Tactical Operations Planning Meeting</b></p> <p>The Operations Section Chief holds a meeting with the Command Staff, Section Chiefs, and the assigned area directors. During this meeting, they determine the equipment required to achieve the strategic objectives and response priorities for the next operational period.</p> <ul style="list-style-type: none"> <li>• A minimum of 15,000 feet of boom is required to boom sensitive resources and marinas and to begin to contain oil for recovery. Associated anchors, chain, lines, etc. are required. Five thousand feet of absorbent boom, miscellaneous absorbents, sweeps, etc. are also required.</li> <li>• A minimum of six vessels are required to assist in boom deployment in these areas.</li> <li>• Skimmers are required to be used from the shoreline and boats/barges.</li> <li>• Communications equipment is required for each vessel and base station</li> <li>• The helicopter is required for continued surveillance.</li> <li>• Five vacuum trucks.</li> <li>• Two shallow water skimming vessels and other vessels to assist in containment are required to begin recovery operations.</li> </ul> <p>Approximately 60 people (30 FPL, 4 terminal, and 28 contract) are required for the nearshore/onshore activities. All personnel must have required HAZWOPER training.</p>
Day 1	<p>The Initial Tactical Operations Planning Meeting results in a list of activities which need to be conducted over the course of the response. The manpower, equipment, and resources required for these activities must be developed over the next 24 to 48 hours. These activities include:</p> <ul style="list-style-type: none"> <li>• continued high capacity recovery, particularly within accessible pooling areas within the wetlands and in the containment area;</li> <li>• trajectory analysis in case the oil escapes the wetland areas and enters Tampa Bay;</li> <li>• recovered oil storage;</li> <li>• continued containment and recovery in the wetland area and nearshore areas;</li> <li>• support infrastructure (e.g., food, lodging, water, sanitation facilities, transportation, etc.)</li> <li>• sensitive area identification and characterization;</li> <li>• wildlife hazing, capture, and rehabilitation;</li> <li>• waste handling and disposal;</li> <li>• vessel/equipment cleaning;</li> <li>• Natural Resource Damage Assessment surveys;</li> <li>• eventual site restoration, including the ability to store and transfer oil to the Manatee plant;</li> <li>• eventual demobilization.</li> </ul>
Day 1	The planning Section Chief compiles the information from the Initial Tactical Operations

TIME	EVENT
	<p>Planning Meeting and prepares the General Plan. The General Plan is a dynamic plan which will be revised and updated throughout the response effort to reflect the changes in the spill and input from the Command Staff and regulatory authorities.</p>
Day 2	<p><b>Initial Planning Meeting –</b></p> <p>A meeting is held to discuss the current status of response operations, discuss and approve the General Plan, and issue division/group assignments for the next operational period.</p> <p>The incoming tide during the night has resulted in a spread of the oil in the Little Redfish Creek and Bishop Harbor area. Additional boom needs to be mobilized to these areas to trap the oil and minimize damage to sensitive areas. The overall plan is to attempt to confine the oil within the oiled wetland area and attempt recovery within the wetlands and as the oil exits the wetlands.</p> <p>A number of plans are identified that need to be prepared including:</p> <ul style="list-style-type: none"> <li>• a communications plan;</li> <li>• a medical plan;</li> <li>• a waste disposal plan;</li> <li>• a containment area cleanup plan;</li> <li>• a facility cleanup plan, including returning the facility to operational condition as soon as possible; and</li> <li>• a nearshore and wetland area cleanup plan.</li> </ul> <p>The Planning Section Chief prepares the Initial Incident Action Plan from the meeting information. This plan defines the strategic objectives and response priorities and division/group assignments for the next operational phase.</p>
Day 2	<p><b>Initial Incident Briefing Meeting –</b></p> <p>The Command Staff are briefed on the Initial Planning Meeting and the Initial Incident Action Plan.</p>
Day 2	<p><b>Plan Implementation Phase –</b></p> <p>The field personnel conduct response operations in accordance with the Initial Action Plan which has been prepared by activity through the night and into the morning of Day 2. The Planning Section Chief is beginning a new Action Plan based upon continuing input from the Command Staff, field management, and responsible agencies.</p>
Day 2	<p><b>Command Staff Meeting –</b></p> <p>The Incident Commander conducts a Command Staff Meeting to brief the staff on the status of the incident and describe the strategic objectives. Topics receiving particular attention include:</p> <ul style="list-style-type: none"> <li>• wildlife capture and rehabilitation;</li> <li>• sensitive area protection and cleanup;</li> <li>• availability of additional equipment and personnel; and</li> <li>• trajectory modeling, if necessary.</li> </ul>
Day 2	<p><b>Unified Command Meeting –</b></p> <p>A meeting is held with representatives of the federal state, and local agencies and representatives of FPL to explain and discuss the status of the incident, FPL's proposed course of action, and strategic objectives and response priorities. The Initial Incident Action Plan is distributed and discussed.</p> <p>State and local agencies express a concern toward cleanup in the wetland areas. The agencies agree to work with the Operations Section Chief and The Environmental Section Chief to further develop appropriate protection and cleanup techniques. All parties agree to FPL's proposed strategic objectives and response priorities.</p>
Day 2	<p><b>Tactical Operations Planning Meeting –</b></p>

TIME	EVENT
	<p>To complete the initial planning cycle and begin the daily planning cycle, a meeting is held to define specific activities that will be undertaken to achieve the strategic objectives and response priorities. Appropriate protection/response techniques are selected for areas which have been impacted or are predicted to be impacted during the immediate and future operational periods. Additional manpower, equipment, and resource requirements are predicted. The major response areas still are within and surrounding the Redfish Creek and Little Redfish Creek area and at the facility site.</p> <p>Within these areas, additional personnel, boom (and associated line and anchors), boats, and cleanup equipment are required to protect sensitive areas and force the oil into collection areas for recovery and cleanup.</p> <p>At the facility site, the containment area needs to be drained so that site remediation can begin.</p> <p>Tactical Operation Plans and draft Division/Group Assignments are compiled based upon the field activities planned for the next operational period and distributed to appropriate members of the response organization. Each person is required to review the plans for personnel, equipment, etc. as requirements for the next operational period.</p>
Day 2	<p><b>Planning Meeting -</b></p> <p>A meeting is held to discuss the progress of implementation of the Initial Action Plan and the strategic objectives and response priorities within the proposed tactical operation plans for the next operational period.</p> <p>The Operations Section Chief reports that surveillance and trajectories continue to indicate that the oil has been trapped within the wetland area. Some oil continues to come out of the area with each tidal cycle. Protection and containment has been effective; however, collection points for recovery need to be developed. Approximately 5,000 barrels of oil/water have been recovered in nearshore operations. The Environmental Section Chief reports that wildlife cleaning and rehabilitation facility has been set up within the Port area. The state and environmental section personnel are working with volunteers to clean captured birds.</p> <p>The Division/Group Assignment Forms are compiled and the Planning Section Chief begins to compile the Incident Action Plan to reflect the activities to be conducted to achieve strategic objectives and response priorities.</p>
Day 3	<p><b>Briefing Meeting –</b></p> <p>A briefing meeting is held to discuss the status of the incident and response operations. Division/Group Assignments for the next operational period are discussed along with safety and environmental considerations.</p> <p>The Logistics Section Chief reports that sufficient quantities of personnel and equipment are arriving. Arrangements have been made for expanding accommodations, food, water, and sanitation for the personnel at various locations around the Port. The security firm has arrived to replace the local police in security duties. Handling oil debris and fluid is a problem. A temporary staging area for oil debris is being designed and constructed. Considerations are being given to transfer of fuel oil to the Manatee Plant as soon as possible to open capacity in the existing tanks for oil/water storage.</p> <p>The Environmental Section Chief reports that the agencies are sending personnel to view aspects of the response and cleanup. The Natural Resource Damage Assessment (NRDA) contractor has been selected. The environmental section and agencies will work with the NRDA contractor. The Planning Section Chief reviews Division/Group Assignments. The Incident Action Plan is completed and distributed for the next operational period.</p>

## **Continued Response and Related Activities**

For the duration of the incident response, the same Daily Planning Cycle was conducted so that field response operations are implemented while the Command Staff develops plans to achieve the strategic objectives and response priorities (as agreed upon during Unified Command Meetings) for the next operational period. As new issues and impacts arise, they are incorporated into the response priorities and addressed during subsequent operational periods.

The Corporate Communications Officer prepares a daily press release from the situation status reports prepared by the command staff. The Corporate Communications Officer and Legal Officer begin to field complaints and claims.

The spill response requires approximately 16 days. The wetland areas around Redfish Creek and Little Redfish Creek will have to be monitored for viability and potentially have to be restored if the damage from the oil is permanent. Facility site remediation and cleanup continues for approximately four months. The facility is fully operational within 21 days.

{Intentionally Blank}

**SECTION IX:****WASTE MANAGEMENT**

---

**A. TRANSFER, STORAGE, AND DISPOSAL OF WASTES**

Depending on the size of an oil spill, the various quantities of waste materials generated would range from oil spill clean-up wastes to miscellaneous wastes from ancillary activities. These wastes can vary from oily debris and sorbent materials to domestic wastes, used batteries, and sorbents. All of these wastes would need to be classified, segregated, and separately transported from the site, and treated and/or disposed of at (an) approved disposal site(s). The **Oil Spill Coordinator** would be responsible for managing waste disposal operations for Level I (small) spills. Disposal operations related to larger spills will be managed by the Oil Spill Coordinator working closely with the CRT.

**B. CHARACTERIZATION OF WASTES**

Both liquid and solid or semi-solid wastes will be generated during response operations. These wastes may further be characterized as oily or non-oily wastes. In addition, some hazardous wastes may also be generated. A summary of the types of response operations that are likely to generate these waste streams is provided below.

**C. OILY LIQUID WASTES**

Oily liquid wastes (i.e., oily water and emulsions) that would be handled, stored, and disposed of during response operations are very similar to those generated during routine Terminal operations. The largest volume of oily liquid wastes would be produced by offshore recovery operations (e.g., through the use of skimmers and/or vacuum devices). In addition, oily water and emulsions would be generated by vessel, vehicle, and aircraft operations (e.g., spent motor oils, lubricants, etc.), vessel and equipment cleaning operations, the storage area storm water collection systems, and wildlife cleaning and rehabilitation operations.

**D. NON-OILY LIQUID WASTES**

Response operations would also produce non-oily liquid wastes. If oil recovered offshore goes through a separation process, the wastewater produced may be of a quality that meets federal and state standards to be considered a non-oily liquid waste. Water quality testing would be required to make this determination. In addition, water and other non-oily liquid wastes would be generated by the storage area and stormwater collection systems, vessel and equipment cleaning (i.e., water contaminated with cleaning agents), wildlife cleaning and rehabilitation operations (i.e., water contaminated with animal wastes), and office and field operations (i.e., sewage).

**E. OILY SOLID/SEMI-SOLID WASTES**

Oily solid/semi-solid wastes which would be generated by containment and recovery operations include damaged or worn-out booms, uncleanable equipment, used sorbent materials, saturated soils, contaminated beach sands, and other debris. In addition, wildlife capture, cleaning, and rehabilitation operations would produce oiled carcasses, and oil-soaked sorbent materials.

**F. NON-OILY SOLID/SEMI-SOLID WASTES**

Non-oily solid/semi-solid wastes would be generated by office and field operations (i.e., domestic waste refuse). Vessel, vehicle, and aircraft operations would also generate solid wastes. Wildlife capture, cleaning, and rehabilitation operations would produce both medical wastes and food wastes.

**G. HAZARDOUS WASTES**

Small amounts of hazardous wastes could be generated by various aspects of response operations. For example, vessel, vehicle, and aircraft operations may result in used batteries waste and may require the use of solvents, both of which may be hazardous wastes when disposed.

**H. SEGREGATION OF WASTES**

A system for managing the segregation of wastes generated during response operations would be established in the field. Wastes would be segregated according

to type at the time of cleanup to facilitate disposal. Segregation techniques would ensure that:

- Personnel can readily identify waste materials present in their work areas;
- Personnel can readily identify waste materials that they are handling;
- Appropriate wastes are transported in proper containment units;
- Appropriate wastes are shipped to proper temporary storage areas; and
- Appropriate wastes are shipped to proper disposal facilities.

Waste segregation techniques that would be employed include: designating specific containers to handle specific wastes; labeling containers; using color-coded poly bags; and/or designating specific areas for the temporary placement of specific wastes.

#### ***I. STORAGE AND DISPOSAL PROCEDURES***

During an oil spill incident, the volume of oil that can be recovered and dealt with effectively would depend upon the storage capacity available. Storage methods that would be employed would depend upon:

- The type and volume of material to be contained;
- The type of contaminants present, if any;
- The duration of storage;
- The environmental setting;
- Access;
- The time of year; and
- The proximity to human settlements.

Waste generated for Level I oil spills would temporarily be stored at the Port Manatee Terminal. Typical short-term storage options are summarized in Table IX-1. The majority of these options can be used either on land or on water. Storage containers, such as bags or drums, would be clearly marked, labeled, and/or color-coded to indicate the type of material/waste contained and/or the ultimate disposal

option. The following is a brief description of the potential wastes that may be generated and the disposal options available.

### **Recovered Product**

FPL owns several recovery barges that would be utilized to recover oily water in the event of a spill. The recovery barges have a storage capacity of 100 barrels. Recovered oil waste would then be pumped into onsite oil water separator(s). The recovered fuel will be stored onsite in available storage tanks.

Table IX-2 lists the available storage capacity at FPL facilities. Table IX-3 lists available FPL/Vendor tank trucks. FPL tank trucks are capable of transporting up to 2,062 barrels of waste oil and recovered product. This recovered product could potentially be trucked to other FPL facilities and potentially utilized as a source of fuel.

### **Contaminated Soil**

Contaminated soil would be placed in a bermed area underlain by Visquene, a plastic liner. This bermed area would be constructed onsite and would also be covered with Visquene. Representative soil samples of the contaminated soil would be collected and submitted to a laboratory for the analyses. Upon receipt of analyses, this soil would be transported to Rinker Materials for thermal treatment. Additional company-approved waste transporters, identified in Table IX-4, would be used as back-up waste transporters for large volumes of contaminated soil.

### **Contaminated Equipment and Materials**

Contaminated equipment that may be generated includes drums, tank parts, valves, and shovels. If catastrophic failure of the tanks is involved, and tank parts and valves need to be disposed of, the parts would be steam cleaned and stored onsite on Visquene. The minimal water generated during steam cleaning processes would be routed through the onsite oil water separator. Shovels would be steam cleaned and reused. Drums used to contain contaminated equipment/materials would be disposed of in similar fashion to the most recent contents of the drum (i.e., if the drum last contained waste oil, it would be disposed of as an empty waste-oil drum).

TABLE IX-1					
SHORT TERM STORAGE OPTIONS					
CONTAINER	ONSHORE	OFFSHORE	SOLIDS	LIQUIDS	NOTES
Barrels	•	•	•	•	May require handling devices.
Tank Trucks	•	•		•	Consider road access onshore. Barge mounted offshore.
Dump/Flat Trucks	•		•		Require impermeable liner and cover. Consider flammability of vapors at mufflers.
Barges		•	•	•	Liquids only in tanks. Consider venting of tanks.
Oil Storage Tanks	•	•		•	Consider problems of large volumes of water in oil.
Bladders	•	•		•	May require special hoses or pumps for oil transfer.
Pits	•	•	•	•	Liner(s) required.
Frac Tanks	•				Consider road access.

TABLE IX-2			
FPL WASTE OIL STORAGE CAPACITY			
FRAC TANK LOCATION	TANK NUMBER	TANK CAPACITY (BARRELS)	TOTAL CAPACITY OVERFLOW POINT (BARRELS)
Putnam Plant	D	(b) (7)(F), (b) (3)	(b) (7)(F), (b) (3)
Putnam Plant	F		
Manatee Terminal	Purge Oil		
TOTAL QUANTITY (BARRELS)			

TABLE IX-3			
FPL/VENDOR TANK TRUCK CAPACITY			
FPL DEPARTMENT	NUMBER	VOLUME/TRUCK (GALLONS)	TOTAL VOLUME (GALLONS)
FPL Fleet Services	8	(b) (7)(F), (b) (3)	(b) (7)(F), (b) (3)
FPL Fleet Services	1		
FPL Fleet Services	2		
FPL Fleet Services	1		
TOTAL	12		
FPL has access to additional tank trucks owned by various vendors if needed. Contact Fleet Services for assistance.			

## **Personnel Protective Equipment**

Personnel protective equipment that may be generated during spill containment and cleanup include spent respirator cartridges, Tyvex suits, coveralls, etc. Spent personnel protective equipment would be stored in 55-gallon drums. These drums would be clearly marked, sampled and stored onsite. Upon receipt of the analytical results, these wastes would be sent to one of the destruction facilities identified in Table IX-5, or to a licensed landfill, if thermal treatment is not an option.

TABLE IX-4					
COMPANY APPROVED WASTE TRANSPORTERS					
COMPANY NAME	PHONE NUMBER	METHOD OF TRANSPORT	WASTE TYPE		
			HAZARDOUS		
				OIL/OILY WATER	SOLID WASTE
Clark Environmental	(800) 276-2187	Vacuum Trucks Dump Trailers	X	X	X
Clean Harbors	(863) 533-6111	Vacuum Trucks Tanker Trucks	X	X	X
Diversified Environmental Services	(800) 786-3256	Vacuum Trucks		X	X
JAM Environmental Services	(954) 788-3711	Vacuum Trucks Box Truck		X	
Perma Fix Environmental	(954) 583-3795	Tanker Truck	X	X	
FCC Environmental	(800) 282-9585	Bulk Trailers Vacuum Trucks Dump Trucks		X	X
SWS	(866) 797-3447	Vacuum Trucks Tanker Trucks Drum Trucks Box Trucks	X	X	X
World Petroleum	(954) 327-0724	Tanker Truck		X	

TABLE IX-5					
SOIL TREATMENT (THERMAL DESTRUCTION) AND DISPOSAL FACILITIES					
COMPANY NAME	PHONE NUMBER	WASTE TYPE			
		LANDFILL/ THERMAL DESTRUCTION PETROLEUM CONTAMINATED SOILS	OILY DEBRIS	OILY WATER	SORBENT MATERIAL
CEMEX 1200 N.W. 137 <sup>th</sup> Ave. Miami, FL 33182	(305) 221-7645	Thermal Destruction	Yes	Yes	Yes
Clark Environmental Mulberry, FL	(800) 276-2187	Thermal Destruction	Yes	Yes	Yes
Waste Management, Inc. Pompano Beach, FL 33073	(954) 974-7500	Non Haz Landfill	No	No	Yes
Waste Management, Inc. Medley	(305) 883-7670	Non Haz Landfill	No	No	Yes

## **Decontamination Solutions**

Anticipated decontamination solutions would include waste generated from steam cleaning operations, isopropyl alcohol, etc. Liquid generated from steam cleaning operations would be routed through the oil water separator. Spent isopropyl alcohol would be collected in plastic containers and labeled. Large quantities of spent isopropyl alcohol would be stored in labeled 55-gallon drums. An analytical sample would be collected and analyzed. Upon receipt of the analytical results, a determination would be made as to whether the waste is hazardous or non-hazardous. For hazardous waste, a manifest for hazardous waste transportation and disposal would be filled out and signed by the generator and transporter. A copy of this would be sent to FDEP. FDEP would enter the manifest into their system. Non-hazardous waste would be transported and disposed of at a licensed non-hazardous disposal facility.

## **Adsorbents**

Spent adsorbents generated would be placed in 55-gallon drums or roll-offs. Representative analytical samples would be collected and analyzed and upon receipt of the analytical results, these adsorbents would be transported to any one of the thermal destruction facilities identified in Table IX-5.

## **Spent Chemicals**

Spent chemicals, cleaning agents for wildlife cleaning and rehabilitation operations, and other related activities would be contained in 55-gallon drums. The types of wastes will be segregated, e.g., wildlife cleaning and rehabilitation wastes in one set of drums, spent motor oils and lubricants in another set of drums, etc. Analytical analyses will be conducted on these separate sets of waste, and based on the analytical results, these wastes will be disposed of accordingly. Based on the analytical results, these wastes will be transported to a licensed disposal facility.

**J. TRANSPORTATION PROCEDURES**

Hazardous waste would only be transported by company-qualified, fully licensed hazardous waste transporters. Non-hazardous wastes would be transported by licensed non-hazardous waste transporters.

**K. DISPOSAL PROCEDURES**

The prerequisite to most disposal companies accepting waste (whether thermally treated or land-filled) is analytical analyses, which should be conducted by a NELAP (National Environmental Laboratory Accreditation Program) lab.. Table IX-6 describes the generic analytical requirements for disposal.

A number of options exist for disposal of wastes resulting from an oil spill. Whether an option is appropriate would be dependent upon the following characteristics of the waste targeted for disposal:

- Solid or liquid.
- Oily or non-oily.
- Hazardous versus non-hazardous. (Note: some waste testing may be required.)

Clean up and disposal of petroleum and petroleum contaminated soils will be conducted in accordance with the requirements in CH 62-770 or CH 62-780 as appropriate.

<b>TABLE IX-6</b>	
<b>GENERIC ANALYTICAL REQUIREMENTS FOR DISPOSAL</b>	
<b>WASTE OILS-WASTE FUELS</b>	
<ol style="list-style-type: none"> <li>1. 601</li> <li>2. 602</li> <li>3. 8 RCRA Metals Totals (Arsenic, Barium, Cadmium, Chromium, Lead,</li> <li>4. Mercury, Selenium, Silver).</li> <li>5. Total Halogens</li> <li>6. Percent Water (%)</li> <li>7. Flash Point (°F)</li> <li>8. Percent Solids (%)</li> </ol>	
<b>OILY WASTE WATERS</b>	
<ol style="list-style-type: none"> <li>1. 601</li> <li>2. 602</li> <li>3. RCRA Metals (Total)</li> <li>4. Arsenic, Barium, Cadmium, Chromium, Lead, Mercury, Silver, Selenium.</li> <li>5. Total Chlorides</li> <li>6. Total Organic Carbon (TOC)</li> <li>7. Percent Solids (%)</li> </ol>	
<b>CONTAMINATED SOILS/SLUDGES</b>	
<ol style="list-style-type: none"> <li>1. VOH (Volatile Organic Halocarbons) – 8010</li> <li>2. VOA (Volatile Organic Aromatics) – 8020</li> <li>3. TRPH (Total Recoverable Petroleum Hydrocarbons) – 9073</li> <li>4. Total Metals (Arsenic, Barium, Cadmium, Chromium, Lead, Mercury, Selenium, Silver)</li> <li>5. Total Organic Halides - 9056, 9252, 9253</li> <li>6. Soils contaminated with used oil, hydraulic oil, or mineral oil shall be analyzed for PCB by EPA methods.</li> <li>7. Percent Solids (%)</li> </ol>	

## **L. RECYCLING**

This technique would entail removing water from the oil and blending the oil with uncontaminated oil. For Level I oil spills at the Port Manatee Terminal, oily water would be treated onsite by the oil/water separator. The oil would be sent to other facilities for use and the solid waste would be stored in drums until shipment to an appropriate waste disposal site could be performed.

## **M. TREATMENT**

The State of Florida has no permitted land disposal facilities designed to accommodate hazardous wastes or significant petroleum contaminated residues.

The State of Florida proposes that residue from coastal cleanup be staged in the contaminated area on synthetic, flexible membrane, liner material until (a) disposal option(s) can be agreed upon. The State's guidance is that thermal destruction of residue, in most cases, would be the most cost-effective option. Thermal destruction would be carried out by:

- Municipal solid waste combustors;
- Stationary thermal treatment facilities; and
- Mobile incinerators.

The following factors would determine which facilities or a combination thereof would be utilized:

- Location of spill;
- Product spilled;
- Quantity of oil that comes ashore;
- Type(s) of coastal environment(s) impacted; and
- Type(s) of residue(s) to be disposed of and how contaminated the material is.

The State recommends the following:

- Heavily contaminated residue such as sorbent pads, seaweed, and debris should go to solid waste combustors. With operating temperatures approaching 1800°F, these facilities can blend the residue in with the solid waste and effectively destroy it. As a side benefit, most of these facilities recover energy in the form of steam or electricity so that some resource recovery is accomplished in the process. These facilities cannot, however, handle residue containing a great deal of sand or soil. Fine-grained materials would fall through the grates in the combustor burner and foul machinery at the Terminal.
- Contaminated soils should be disposed of at one of the thermal treatment facilities located in the state. These facilities are either rotary kilns or asphalt dryers and are designed to process fine-grained materials. Depending on their intended primary use such as cement

production, clay processing, or asphalt drying, they operate at varying temperatures and have different throughput capacities. The choice of which to use will depend on location, how contaminated the soils are, and the capacity of the facility. Soils greatly contaminated with heavy petroleum should go to treatment facilities with higher operating temperatures. Once the soil is treated to the standards established by Department of Environmental Protection, it can be sold as clean fill. In the event that the total halogen content is too high and incineration is not an option, contaminated soil will be disposed of at a state-approved landfill.

**SECTION X:****DISCHARGE PREVENTION MEASURES**

---

**A. SPCC PLAN COMPONENTS**

This section addresses the Spill Prevention, Control and Countermeasure (SPCC) plan components for the Port Manatee Terminal and Pipeline. The facility information presented in this section is summarized below:

- Facility's conformance with the SPCC requirements;
- Bulk storage and non-bulk storage containers;
- Containment and diversionary structures;
- Facility tank truck loading & unloading & facility transfer operations;
- Discharge potential;
- Discharge prevention measures;
- Other effective discharge prevention & containment procedures;
- Facility Drainage;
- Discharge Potential;
- Integrity testing & brittle fracture evaluation;
- Inspections;
- Site security;
- Site specific drawings.

**B. FACILITY'S CONFORMANCE WITH SPCC REQUIREMENTS**

The facility is required to conform to the general requirements for all SPCC facilities, under 40 CFR 112.7(c) through (j). During 2003, an analysis was performed at the Port Manatee Terminal to assess the requirements of the revised SPCC rule as published on July 17, 2002 with the Terminal's existing spill prevention and control measures. As a result of that analysis certain facility upgrades have been identified for implementation as provided in the Table below.

Description of Modification	Planned Implementation Date
Added additional concrete curbing at the truck unloading area to provide proper containment volume.	Completed
Added a normally open slide gate on the outlet of Stormwater Basin #2, to better manage a potential oil spill during dry seasons when the basin may be empty.	Completed
Add a normally open slide gate on the north end of the culvert which empties into the south side of Stormwater Basin #2, to better manage a potential oil spill during dry seasons when the basin may be empty.	Completed
Add a normally open slide gate on the outlet of Stormwater Basin #1, to better manage a potential oil spill during dry seasons when the basin may be empty.	Completed
Add an oil/water separator capable of filtering out low API oil.	Completed
Add curbing around the oil/water separator wastewater treatment area.	Completed
For the curbed areas that drain to oil/water sumps, check capacity and raise the curbed areas as needed considering the requirements of the stormwater pollution prevention plan.	Completed
For the drain line from the Purge Tank secondary containment area, add a normally closed valve that is easily readable and accessible to operating personnel.	Completed
Seal the space between the pipe sleeves and the pipeline at the wall penetrations in the concrete pits. This applies to the 4-10" transfer line that are run between hose pits and 30" valve pits	Completed

Other than the upgrades identified above, this SPCC Plan conforms to the requirements contained in 40 CFR 112. If alternate spill prevention, control or countermeasures are used at this facility, the alternate measure(s) will be discussed in the appropriate section(s) that follow.

### **C. BULK STORAGE AND NON-BULK STORAGE CONTAINERS**

#### **Bulk Storage Containers**

The Port Manatee Terminal has three storage tanks storing No. 6 fuel oil, one storage tank containing No. 2 oil or mineral oil and one tank containing diesel fuel. A listing of all storage containers, their contents and capacities are provided in Table II-7. Figure II-6 provides the location of these bulk containers. (b) (7)(F), (b) (3)

The Port Manatee Terminal has two large No. 6 fuel oil storage tanks, which

are each contained within earthen dikes. (b) (7)(F), (b) (3)

The heater fuel tank is provided with concrete secondary containment.

(b) (3), (b) (7)(F)

(b) (3), (b) (7)(F)

### Non-Bulk Storage Containers

Non bulk storage containers consist of (b) (3), (b) (7)(F). The locations are indicated on Figure II-7.

### Throughput Analysis

The Terminal's transformers, turbine lube oil systems and hydraulic systems serve as operational equipment and as such do not use or consume oil. Therefore, there is no daily throughput for these products. The expected average daily throughput of the petroleum products contained onsite is provided below:

PETROLEUM PRODUCT	DAILY THROUGHPUT (GAL)
No. 6 Fuel Oil	924,000
No. 2 Fuel Oil	1
Mineral Oil	300

#### ***D. FACILITY LOADING & UNLOADING & FACILITY TRANSFER OPERATIONS***

##### **Vessel/Pipeline Transfer Operations**

No. 6 fuel oil is delivered to the Manatee Plant by a 14-mile; 16-inch underground pipeline from the Port Manatee Terminal. Using the ship's unloading pumps, the oil is pumped into one of two large fuel oil storage tanks at the Port Manatee Terminal where the oil is stored and later transferred to the Manatee Plant.

##### **Tank Truck Unloading Operations**

The tank truck unloading procedures at the Port Manatee Terminal and Pipeline meet the minimum requirements and regulations established by the Department of Transportation (DOT). Fuel transfer operations occur through aboveground unloading hoses. The hoses are designed to minimize abrasion during transfer operations.

There is one tank truck unloading area for unloading mineral oil, No. 2 and No. 6 fuel oils. See Figure II-6 for its location. The area is paved and curbed with a gravity drain line to an oily water sump. The sump pump is manually operated and discharges to an oily water separator surge basin. A warning sign is provided to remind the truck driver to inspect his truck for proper uncoupling, outlet closures and elimination of leakage before departure. Either the driver or an operator is in constant attendance during all unloading operations.

At the Port Manatee Terminal, the tank truck unloading area is provided with a curbed secondary containment area designed to contain the largest compartment of a tank truck which delivers fuel to the site.

To prevent vehicles from departing before disconnection of flexible or fixed oil transfer lines, spill prevention techniques provide for:

- The setting up of barriers or warning signs to prevent a truck from leaving before the completion of unloading.
- Placing wheel chocks on truck tires to prevent vehicle movement during unloading.
- Closely inspecting lowermost drain & all outlets for discharges
- Ensuring truck drains/outlets are tightened, adjusted or replaced as needed

Measures taken to prevent spills prior to, during, and after unloading include:

- Prior to unloading: Oil levels are verified, connections are rechecked, and hoses are examined for integrity. Signs are posted warning all vehicular traffic operating in transfer area to use caution.
- During unloading: Only trained personnel authorized to conduct the transfer are used. The transfer and pumping system is continually monitored for leaks and the oil level in the receiving container is frequently monitored to prevent overfilling.
- After unloading: The transfer hose is properly drained and disconnected and all tank truck drains and connections are checked for proper closure prior to departure.

## ***E. CONTAINMENT AND DIVERSIONARY STRUCTURES***

The Port Manatee Terminal and Pipeline is operated seven days a week, 24-hours per day. Operators conduct frequent inspections of all oil storage and transfer areas and are available to respond immediately to any potential or actual release of oil. The terminal also stores a significant amount of oil spill response equipment which is also immediately available for use should it be needed. To control spills, the Terminal employs the following containment and diversionary structures, which are sufficiently impervious to prevent oil spills from reaching navigable waters. These prevention and containment measures are described below.

### **Containment Structures at Port Manatee Terminal and Pipeline**

An earthen berm secondary containment system surrounds the entire tank area containing the bulk oil storage tanks A and B and Purge Oil Tank. The berms are constructed of compacted soils and are sufficiently impervious to contain a spill of No. 6 fuel oil due to the high viscosity of this product and FPL's rapid response capability.

Certain drains and storm water discharge points are also provided with containment or diversionary structures.

**Tanks A & B:** An earthen berm secondary containment system surrounds these two No. 6 oil tanks. The berms are constructed of compacted soils and are sufficiently impervious to contain a spill of No. 6 fuel oil due to the high viscosity of this product and FPL's rapid response capability. An intermediate dike wall between the tanks is constructed with a spillway allowing the two tanks to share the entire containment volume. This results in providing a containment capacity equal to 153% of the largest tank.

**Purge Oil Tank:** An earthen berm secondary containment system surrounds this No. 6 oil tank. The secondary containment capacity is equal to 110% of the tank volume.

**Heater Fuel Tank:** This light oil storage tank secondary containment system is constructed with concrete retaining walls and concrete area paving making it sufficiently impervious to contain No. 2 fuel oil and/or mineral oil. The secondary containment capacity is equal to 121% of the tank volume.

**Emergency Generator:** This tank is located inside a building. The tank has a local level indicator.

TABLE X-1				
LISTING OF BULK OIL STORAGE TANKS & CONTAINMENT CAPACITIES				
Bulk Storage Container (location)	Type of Oil	Volume of Container (gals)	Capacity of Secondary Containment (gals)	Description of Containment
Tank A	No. 6 Fuel Oil	(b) (7)(F), (b) (3)		Earthen Dike
Tank B	No. 6 Fuel Oil			Earthen Dike
Purge Oil Tank	No. 6 Fuel Oil			Earthen Dike
Heater Fuel Tank	No. 2 Fuel Oil and/or Mineral Oil			Concrete Containment
Emergency Generator Tank	Diesel Fuel			Containment Provided by building

### Transformer Protection Systems

Most transformers and breakers are protected by relays that are capable of clearing faults before serious structural damage to the equipment can result. In addition, the danger of pressure building up inside a tank to the point of rupture is virtually eliminated by the addition of mechanical pressure relief devices. These devices are spring-loaded diaphragms mounted directly on the transformer tank that remains sealed during normal operations. If pressure begins to build in the tank for any reason, this pressure pushes open the relief device, which has been calibrated to open only upon reaching a certain pressure (6 PSI), and relieves excess pressure and the resultant strain on the tank. Low oil level alarms give an indication that immediate action is necessary. In such cases, personnel investigate the situation as quickly as possible.

### F. DISCHARGE PREVENTION MEASURES

The Port Manatee Terminal and Pipeline employs the following prevention and containment measures to reduce the likelihood of a release of oil from occurring from

any of the bulk storage or non-bulk storage containers located at the Terminal. These prevention measures are summarized below:

- High/low liquid level alarms are located on tanks A and B which will sound in the control center to alert operations personnel when the level inside the tank reaches a predetermined level.
- Secondary containment has been constructed around all of the bulk storage tanks at the Terminal.
- Transfer lines have been equipped with closure valves which isolate the pipeline in short segments.
- Pipeline supports have been designed to minimize abrasion and corrosion.
- Regular inspection procedures have been instituted to detect problems before they cause an oil spill incident (see Appendix C).
- Warning signs to advise all vehicular traffic operating in pipeline areas to use caution.
- Terminal personnel have been trained to use standard procedures during off loading operations.
- Overflow protection is provided by means of a "pie pan" in the overflow pipe. Upon tripping of the pipe pan, two manually reset solenoid valves on the fuel oil transfer valve will trip and close the fuel oil stop valve. This in turn stops the pump.
- Tank trucks are inspected prior to unloading and after receipt.
- Specific supplies of oil spill response equipment have been selected, purchased, and stored at the Port Manatee Terminal for immediate use.
- Aboveground tanks at the Terminal are visually inspected monthly by operating personnel for signs of deterioration or leaks.
- Containment is provided for certain terminal drains and storm water discharge points.
- Valves are routinely inspected by terminal personnel.
- Only trained personnel are used in the transfer operations.
- Drain valves on tanks at the Terminal are locked in closed position.
- Starter controls on all oil pumps at the Terminal are located inside the fenced perimeter of the terminal and are accessible only to authorized personnel.
- A chain link security fence surrounds the entire site to meet safety and security requirements.

- All entrance gates at the terminal remain closed and the Terminal is manned 24 hours per day, 365 days per year.
- Adequate lighting has been installed at the terminal to permit surveillance of each facility.
- The terminal has an in-house team of oil spill response personnel.

## **G. OTHER EFFECTIVE DISCHARGE PREVENTION & CONTAINMENT PROCEDURES**

### **State of Florida Storage Tank Regulation**

The State of Florida has promulgated a rule governing the construction, operation and maintenance of aboveground and underground storage tank systems. The intent of the rule is to minimize the occurrence and environmental risk of releases from these tank systems by requiring the installation of overfill prevention, secondary containment, release prevention barriers, and release detection systems as discussed in Section X.C above. The rule also requires that inspections be performed of storage tank systems including their components. A more detailed discussion on inspections is provided in Section X.L below.

### **H. FACILITY DRAINAGE**

Figure II-12 contains specific drainage drawings of the facility, which depict the lines of natural drainage. This figure also indicate potential spill pathways, which can be useful in preventing the spread of a release should one occur.

The No. 6 fuel oil earthen berm areas, containing Tank A and B, does not have drain valves thereby providing the most positive means of retaining a spill or excessive leakage. Storm water collecting inside earthen berm is depleted by percolation, evaporation or by means of a manually controlled pump.

The heater fuel tank concrete berm area is provided with a manually operated sump pump to remove storm water accumulation. An operator is in attendance during these periods of time. Drainage from the concrete berm area is pumped to the surge basin if any evidence of contamination is present. If no contamination is found the discharge is pumped to the Tank B containment area. Contaminated discharges are further treated at the oily water separator. Contaminants are removed from the water and pumped

back to a No. 6 oil storage tank. The remaining water gravity flows from the separator to a manually controlled effluent sump. After a final effluent inspection is made and all contaminants eliminated, the effluent is pumped to the north retention pond via a concrete lined ditch.

All major oil handling equipment, including pumps, strainers, meters, launcher/receiver barrels and truck unloading area are located on concrete paved and curbed areas which gravity drain to an oily water sump. The oily water sump pumps are manually operated and discharge to the oily water separator surge basin. As with the heater fuel tank concrete diked area, this material is processed and ultimately discharged to the north retention basin.

General site drainage flows to two (2) outfall retention ponds located on the west side of the property. The outfall retention ponds are equipped with a weir to contain oil that is lighter than water. The outfall retention ponds discharge to a port property drainage ditch along the west property boundary. In the event oil escapes the retention pond, the drainage ditch will be dammed up to provide additional containment.

The risks of a major spill at the facility that would reach surface waters are associated with the potential occurrence of a hurricane related storage tank failure, or a pipeline failure. Potential oil spill drainage paths are described in Figure II-13. The occurrence of a Level III incident reaching surface waters, however, is unlikely, because of the secondary containment and facility drainage systems which exist at the facility and because of the policies, practices, and procedures described in Section VII of this plan.

### ***I. DISCHARGE POTENTIAL***

The Port Manatee Terminal stores significant quantities of oil which creates a potential for a release due to equipment failure (i.e., tank overflow, rupture, or leakage). Table X-2 lists the storage tanks and identifies their capacities and the types of oil normally stored. This table also identifies the secondary containment structure for each tank. All of the fuel oil storage tanks are provided with secondary containment structures to prevent, in the event of equipment failure, the spill from reaching navigable water. Figure II-13 depicts the potential flow-paths due to equipment failure.

## Release Predictions (assuming no secondary containment or diversionary structures)

### 1. Postulated Failure of Bulk Oil Storage Tanks A and B:

Figure II-13 illustrates that spilled fuel oil would either be contained within secondary containment or flow outward on property or nearby drainage ditch. A release rate could vary substantially from a small release of 1 gallon per minute to an instantaneous release of the entire tanks' contents (see Table X-1 for storage tank capacities).

2. Release predictions for other sources of oil in the Terminal are provided in Table X-2.

TABLE X-2				
RELEASE PREDICTIONS				
SOURCE	TYPE OF FAILURE	VOLUME	RATE	DIRECTION OF FLOW
Purge Oil Tank	Overfill, weld seam, corrosion, gasket, Dresser coupling	(b) (3), (b) (7)(F)	Seepage to 37,000 bbl/hr	Contained within secondary containment or flow towards drainage ditch to east
Heater Fuel Tank	Overfill, weld seam, corrosion, gasket	(b) (3), (b) (7)(F)	Seepage to 5,000 bbl/hr	Contained within secondary containment or flow towards drainage ditch to east
CP Rectifier (2)	Corrosion, mechanical damage	(b) (3), (b) (7)(F)	Seepage to 186 gal/hr	Contained within tank A & B Secondary Containment
High Voltage Transformer East	Corrosion, mechanical damage	(b) (3), (b) (7)(F)	Seepage to 266 gal/hr	East toward drainage ditch
High Voltage Transformer West	Corrosion, mechanical damage	(b) (3), (b) (7)(F)	Seepage to 820 gal/hr	Spread out in all directions
Emergency Generator	Overfill, corrosion, mechanical damage	(b) (3), (b) (7)(F)	Seepage to 100 gal/hr	Spread out within building
Tanker Truck Unloading Rack	Hose, mechanical connections	(b) (3), (b) (7)(F)	Seepage to 3700 gal/hr	Contained within secondary containment area
Pumps, strainers, meters, prover, launcher/receiver barrels	Seals, gaskets	(b) (3), (b) (7)(F)	Seepage to 100 gal/hr	Contained within curbed area or drain to oily water sump

## **J. DISCHARGE REPORTS**

Should the facility experience a reportable oil spill (i.e. to “navigable waters”), a spill report form is prepared, according to the format presented in Appendix I. The spill report provides a description of the incident including date, time, and cause of the spill. The report also addresses corrective actions taken as well as measures necessary to prevent a recurrence. Copies of any future spill reports will be incorporated into this plan in Appendix I. A report of an incident will be submitted to the EPA Region IV Regional Administrator and the State of Florida Bureau of Emergency Response if any of the following criteria are met:

- Should the facility discharge more than 1,000 U.S. gallons of oil in a single discharge to navigable waters; or
- More than 42 U.S. gallons of oil in each of two discharges to navigable waters occurs within any twelve-month period.

## **K. INTEGRITY TESTING & BRITTLE FRACTURE EVALUATION**

### **Storage Tanks**

American Petroleum Institute (API) Standard 653, titled “*Tank Inspection, Repair, Alteration and Reconstruction*” is used to conduct internal and external integrity testing and brittle fracture analysis of the oil storage tanks at Port Manatee Terminal. All secondary containment areas will contain the entire contents of the largest tank with an allowance for accumulation of precipitation. Each tank was hydrostatically tested for leakage and foundation strength on installation. Routine visual inspections for leaks, cracking, corrosion, coating failures, foundation condition, etc. are conducted on a monthly basis as described in the Appendix C Inspections Forms. Internal and external inspections are performed in accordance with recommendations contained in API-653 utilizing a third party contractor.

Each field-erected tank will also undergo an external inspection in accordance with API 653 every five years in addition to a monthly visual inspection as described in the next section. Internal inspections are scheduled not to exceed every 20 years. A history of

the external and internal inspections conducted on these tanks is provided below along with the next required inspection date for Port Manatee Terminal:

Tank Number	External Inspection		Internal Inspection	
	Last	Next	Last	Next
Tank A	2012	2017	2012	2032
Tank B	2012	2017	1997	2017
No. 2 Oil Tank	2009	2014	1999	2019
Purge Oil Tank	2012	2017	1997	2017

The Port Manatee Terminal AST's have been exposed to the post construction hydrostatic test without failure, they have been exposed to the maximum fill level and coldest operating temperature, and based on the subtropical climate and operating temperature of the fuels stored it would be unlikely that a tank would see a shell temperature that could cause brittle fracture. Additionally, all of the Port Manatee Terminal AST's have received their baseline API 653 inspections and are certified to operate for the current product service. There is no change of product service planned for any of the tanks based on the fuel consumption requirements of the facilities they serve. Therefore, based on the API 653 standard and the current service of the Port Manatee Terminal AST's, the tanks are not likely at risk of brittle fracture.

The facility typically does not perform field repairs on the aboveground tanks/containers that reduce their integrity. The tanks and containers are structurally sound and generally do not require field repairs.

Integrity testing will not be performed on double-wall aboveground shop fabricated tanks, drums, or totes. Drums and totes will have a service life of less than 10 years and therefore will not require integrity testing. The single wall emergency generator tank will be internally inspected every 20 years.

## **Piping Systems**

Inspection of the piping will occur on a monthly basis. Inspection forms are in Appendix C.

### ***L. INSPECTIONS***

#### **Storage Tanks and Piping**

The bulk storage tanks, associated piping, and other containers and drums containing oil, and their secondary containment areas are visually inspected monthly for the following items as may be appropriate:

- Container foundation
- Container shell condition
- Tank level control and alarm system
- Piping flange or expansion joints
- Piping valve glands and bodies
- Piping supports
- Piping condition
- Oil leaks of any type
- Locking of valves
- Condition of secondary containment
- The presence of oil sheen and excessive rainwater in secondary containment systems

All substantial discrepancies will be reported immediately to the appropriate supervisor. If any tank discrepancies are found, facility operations that are associated with the tank will be shut down and any equipment that would be affected would be secured. The discrepancies would be repaired.

#### **Oil-Filled Electrical Equipment**

The transformers are scheduled on a regular basis to be inspected for the following items:

- Oil levels
- Oil gauges

- Oil leaks of any type
- Transformer tank pressure
- Alarm system
- Transformer temperatures
- Moisture conditions

### **Inspection of Facility Oil Spill Response Equipment**

Facility response equipment is routinely inspected and tested to ensure that all equipment is operational, properly maintained, including appropriate level of inventories, is readily accessible and is immediately available in the event it is needed. Response equipment inspections are conducted during monthly preventative maintenance schedules by the primary OSRO and during equipment deployment drills. All equipment is maintained in good operating condition in accordance with manufacturer's recommendations. Any discrepancies noted during the inspection are corrected and the equipment is returned to its normal storage location. Records of equipment maintenance activities and equipment deployment drills are maintained by the site's oil spill coordinator.

### **Inspections and Records**

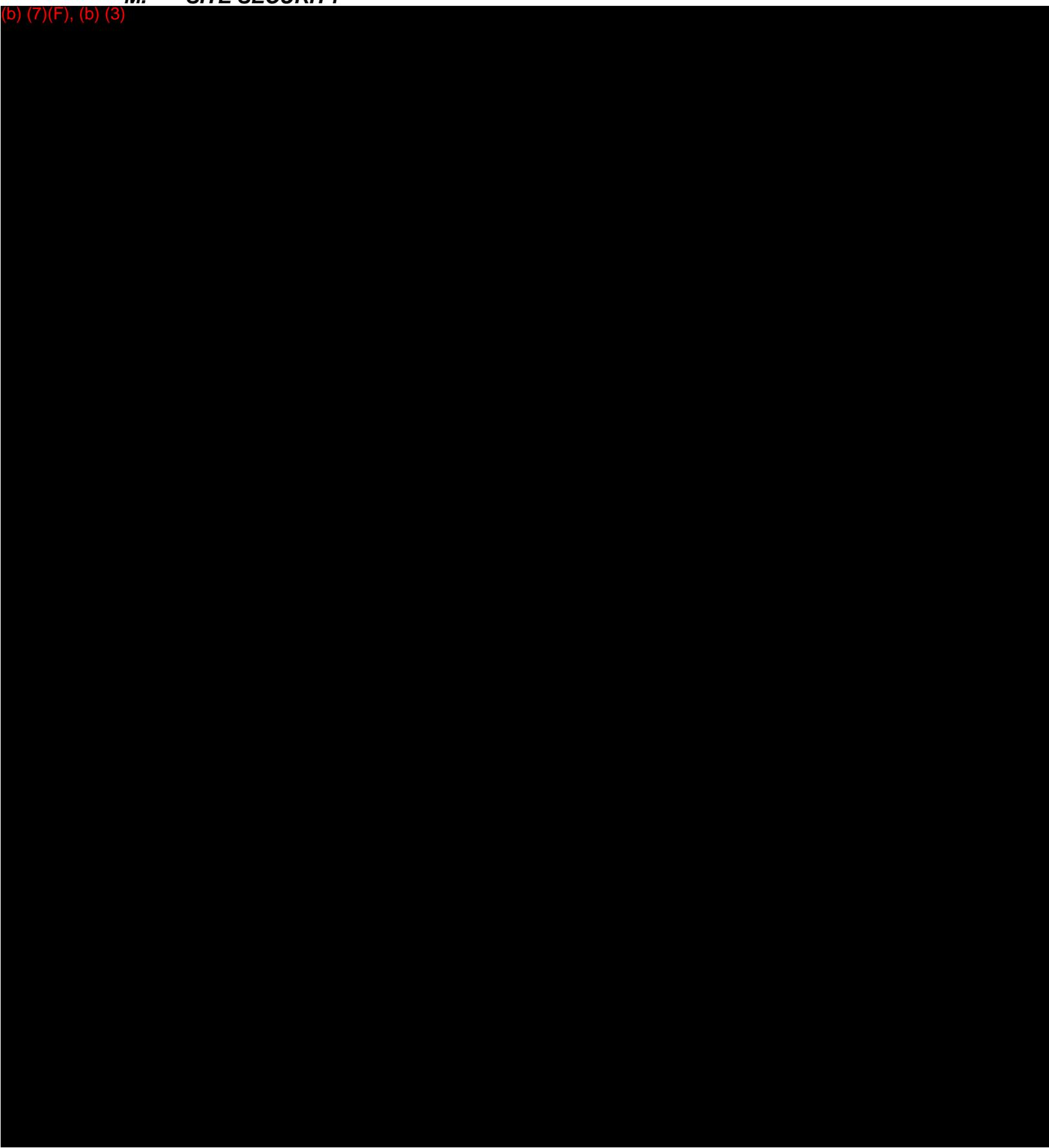
A strict inventory control of all products contained in containers and all electrical equipment is maintained. Transformer operation is monitored from a remote location to determine their operational status. If a transformer fails, the incident would be registered at the Terminal control room and Terminal operations would investigate for any release of oil. Secondary containment areas are also inspected for leaks or accumulated oil.

Visual inspections of storage tanks, containers, and electrical equipment are conducted as a part of the regular facility inspection program. These inspections follow written guidelines and are documented in inspection logs. Copies of these inspection procedures and record forms are presented in Appendix C of this Plan. These

inspection records are maintained for a minimum of 3 years and are available from the Environmental Specialist.

**M. SITE SECURITY**

(b) (7)(F), (b) (3)





*[Intentionally Blank]*

**SECTION XI:****HAZARD EVALUATION**

---

**A. OVERVIEW**

A Hazard Evaluation is an analysis of a facility's operation to determine where releases could potentially occur. The information obtained from the analysis can be used to provide a basis to set priorities for contingency planning and the development of specific response actions to potential releases. In addition, the Hazard Evaluation serves to identify areas where improvements may prevent releases from occurring.

The Hazard Evaluation consists of three basic components:

1. Hazard Identification
2. Vulnerability Analysis
3. Risk Analysis

The area surrounding the Port Manatee Terminal is under tidal influence. Based on worst case discharges of persistent oil, the planning distance for tidal influenced navigable water is 15 miles from the facility down current during ebb (low) tide and to the point of maximum tidal influence or 15 miles, whichever is less, during flood tide (40 CFR 112 Appendix C 4.1). Therefore, maps and other resources were used to identify environmentally sensitive areas within a radius of 15 miles of the Port Manatee Terminal.

**B. HAZARD IDENTIFICATION**

The Hazard Identification component provides information on the facility operations that have potential to cause damage from a release of oil. This information can be used to correct potential spill related conditions, thereby reducing the severity of discharge impacts that may occur in the future. This section includes information as may be appropriate on oil storage tanks, loading and unloading of tank trucks and vessels, containment volume analysis, and throughput variability analysis.

Hazard Identifications of the oil storage tanks at the Port Manatee Terminal are included in Table XI-1. Hazard identification for surface impoundments is included in Table XI-2. These tables contain information on the type of product stored, quantity stored, maximum tank capacity, type of tank, year built, and any failure modes which have occurred. Figure XI-1 and Table XI-3 indicate hazardous materials storage locations at the Terminal.

TABLE XI-1					
PORT MANATEE TERMINAL AND PIPELINE OIL STORAGE TANKS					
TANK	SUBSTANCE STORED	AVERAGE QUANTITY STORED (GAL)	TANK TYPE/YEAR	MAXIMUM CAPACITY (GAL)	FAILURE/ CAUSE
Tank A	No. 6 Fuel Oil	(b) (7)(F), (b) (3)	AST/FR 10/76	(b) (7)(F), (b) (3)	NONE
Tank B	No. 6 Fuel Oil		AST/FR 10/76		NONE
Purge Oil Tank	No. 6 Fuel Oil		AST/FR 10/76		NONE
Heater Fuel Tank	No. 2 Fuel Oil /Mineral Oil		AST/FR 10/76		NONE
Note: AST = Aboveground Storage Tank FR = Fixed Roof SF = Shop Fabricated					

TABLE XI-2					
HAZARD IDENTIFICATION PORT MANATEE TERMINAL AND PIPELINE SURFACE IMPOUNDMENTS					
SI NO.	SUBSTANCE STORED	QUANTITY STORED (GAL)	SURFACE AREA/YEAR	MAXIMUM CAPACITY (GAL)	FAILURE/ CAUSE
Basin 1	Storm Water	(b) (7)(F), (b) (3)	1976	(b) (7)(F), (b) (3)	None
Basin 2	Storm Water		1976		None
Surge Basin	Oily Water		1976		None

TABLE XI-3			
PORT MANATEE TERMINAL AND PIPELINE SIGNIFICANT MATERIALS INVENTORY			
LOCATION	MATERIAL	MAXIMUM QUANTITY	UNITS
Paint Shed	Assorted paint & coatings	56	Gallons
Terminal	No. 6 fuel oil	1,000,000	Barrels
Terminal	Purge Oil	37,000	Barrels
Terminal	Mineral Oil*	5,000	Barrels
Terminal	Diesel fuel*	5,000	Barrels

\*Tank contents interchangeable. Mineral oil and diesel stored in same tank as heater fuel.

### Facility Operations Which May Result in a Discharge

Facility operations, which may result in a spill at the Terminal, would include inter-tank transfer operations, maintenance activities on piping and storage tanks, the transferring of fuel from the storage tank to the generating units, and barge and tank truck unloading operations.

### Barge Unloading Operation

The Port Manatee Terminal handles one product by vessel: No. 6 fuel oil. The product is typically delivered by vessels which are not owned by FPL. Shipments of No. 6 oil are delivered on average one time per week and contain on average approximately 136,113 barrels. No. 6 fuel oil is then shipped to FPL's Manatee Plant from the Port Manatee Terminal via a 14 mile 16" O.D. pipeline.

Vessel transfer procedures are described in Section X of this plan.

### **Tank Truck Unloading Operation**

The Port Manatee Terminal has heaters used to heat No. 6 oil stored in tanks A and B. The heaters are necessary to maintain the appropriate oil temperature during storage and for transport to the Manatee Plant. The heaters are fueled with diesel fuel or mineral oil which is delivered to the site as needed in tank trucks. These Heaters may also be fired using Natural Gas supplied by local distribution company.

Spill prevention techniques at the Port Manatee Terminal include setting up barriers to prevent a truck from leaving before the completion of unloading and the checking of tank drains and connections prior to departure. Additionally, hoses are visually inspected and all appropriate valves are opened prior to transferring product.

### **Inter-Tank Transfers**

In 1993 three transfer operations occurred between storage tanks to blend oil. Each transfer included approximately 50,000 barrels of No. 6 oil. Oil is also transferred from storage tanks via pipeline to the Manatee Plant. Approximately 25 transfers occur per year of various amounts.

Facility personnel follow specified procedures when taking oil storage and transfer system equipment out of service for maintenance activities. These procedures are followed to ensure the safe repair of equipment while preventing spills from occurring. During maintenance activities, oil storage components are isolated and or drained as may be necessary before any work is started. In addition, the oil transfer piping and storage tanks are inspected both during transfer operations and during other routine inspections. Spill prevention policies, practices and procedures are described in detail in Section X of this plan.

### **Secondary Containment Volume Analysis**

There are three storage tank secondary containment systems and two storm water containment basins at the Port Manatee Terminal. Tanks T1 and T2 are located within a common containment system. Tanks T3 and T4 have individual containment

systems. Table X-1 lists the secondary containment systems and their associated volume.

### **Throughput Analysis**

Section X.C provides approximate daily throughput quantities of petroleum products at the Port Manatee Terminal and Pipeline. A change in daily throughput either positive or negative would not increase the potential for a release of stored product.

{Intentionally Blank}

insert

## FIGURE XI-1 PORT MANATEE TERMINAL SIGNIFICANT MATERIALS LOCATION MAP

### VULNERABILITY ANALYSIS

In accordance with regulations published under 40 CFR Part 112 of the Oil Pollution Act of 1990 (OPA 90) and Section 311 of the Clean Water Act, the Environmental Protection Agency (EPA) requires operators or owners of all non-transportation onshore facilities to prepare a Facility Response Plan (FRP) in the event of a release. The purpose of the FRP is to develop a plan of response for facilities whose location represents a risk to nearby or adjacent navigable waterways or shorelines. The FRP is then submitted to the EPA Regional Administrator for review and approval.

This Vulnerability Analysis (VA) was prepared for the Port Manatee Terminal and Pipeline, a Florida Power & Light (FPL) facility, located in Parrish, Florida. The VA addresses the potential effects from an oil release, discussing the risks to human health, property, and the environment. The resources at risk can include drinking water intakes, schools, residential or business areas, endangered flora and fauna, recreational areas, or sensitive environments. The VA focuses on two objectives: a) calculating the planning distance after oil is released from the terminal into a body of water and b) identifying the resources at risk located within the planning distance.

The planning distance was calculated using an EPA approved formula, which incorporates velocity of the navigable water and response time of personnel traveling to the affected areas. The resources at risk were identified using a Geographic Information System (GIS) to evaluate High Consequence Areas (HCAs) and data from the Environmental Sensitivity Index (ESI) for Tampa Bay, Florida. HCAs were mapped by the Office of Pipeline Safety (OPS) and made available to industry to support the Pipeline Integrity Management Program. HCAs include:

- Drinking Water Unusually Sensitive Areas (DW USAs)
- Ecological Unusually Sensitive Areas (ECO USAs)

- Highly Populated Areas (HPAs)
- Other Populated Areas (OPAs)
- Commercially Navigable Waters (Navwat)

ESI data include ecological or human-use areas of concern, such as threatened or endangered species, marinas and boat ramps, and wildlife areas.

A visual on-screen assessment using digital HCA and ESI data was conducted to identify resources that may be within the spill trajectory of oil released into the Tampa Bay. The resources at risk were then characterized for potential impacts from a discharge based on the oil type, resource type, and location of the resource. The VA documents the methodology used to calculate the planning distance and discusses potential impacts for resources within that distance for oil spill planning and response.

## **Methods**

### *Planning Distances*

The planning distance is 15 miles from the facility down current during ebb tide and to the point of maximum tidal influence or 15 miles, whichever is less, during flood tide for a persistent oil discharge into tidal influenced waters as stated by 40 CFR Part 112.

The time allowing for the arrival of response personnel and resources at the scene of discharge was estimated to be 27 hours. This accounts for a 24-hour arrival time and a 3-hour deployment delay. Time estimates were based on EPA specified time intervals for different operating area (Table XI-4).

<b>TABLE XI-4</b>	
<b>SPECIFIED RESPONSE TIME INTERVALS</b>	
<b>Operating Areas</b>	<b>Substantial Harm Planning Time (hours)</b>
Higher volume port areas	12 hour arrival + 3 hour deployment = 15 hours
Great Lakes	24 hour arrival + 3 hour deployment = 27 hours
All other rivers, canals; inland and nearshore areas	24 hour arrival + 3 hour deployment = 27 hours

### **Water Intakes**

(b) (7)(F), (b) (3)

### Schools

Table XI-5 lists all of the schools within 15 miles of the Port Manatee Terminal.

TABLE XI-5

(b) (3), (b) (7)(F)

TABLE XI-5

(b) (3), (b) (7)(F)

TABLE XI-5

(b) (3), (b) (7)(F)



TABLE XI-5

(b) (3), (b) (7)(F)



TABLE XI-5

(b) (3), (b) (7)(F)



TABLE XI-5

(b) (3), (b) (7)(F)

Any evacuation efforts for these schools, should evacuation become necessary, will be coordinated with the appropriate local emergency assistance agencies (police department, fire department, etc.).

### Medical Facilities

Table XI-6 lists all of the medical facilities within 15 miles of the Port Manatee Terminal.

TABLE XI-6

(b) (3), (b) (7)(F)

## **Residential Areas**

There are no residential areas near the Port Manatee Terminal.

## **Businesses**

There are businesses near the Port Manatee Terminal.

## **Transportation Routes (Air, Land, and Water)**

The transportation routes that could be impacted from a spill or a fire at the facility include Interstate 75. Any evacuation efforts necessary for these areas will be coordinated with the local emergency agencies (police department, fire department, etc.) and other agencies as the situation demands.

## **Wetlands and Other Sensitive Areas**

The shoreline within the port area is made up of exposed or sheltered seawalls. Intertidal habitats surrounding the port area include sandy beaches, mangroves, and salt marsh habitat. Sensitive, low-energy intertidal habitats exist both north and south of the port area with Cockroach Bay and Bishop Harbor.

The oil will have very little impact on the exposed seawalls. The oil will not readily adhere to the impermeable surface and there is a relatively low density of attached flora and fauna on these structures.

On the sheltered seawalls, the oil will not readily adhere, but there is a potential for higher densities of attached flora and fauna. The oil may result in mortality and sublethal effects to these intertidal and subtidal communities of fouling organisms.

On the sandy beaches, the oil will probably form a band at the high tide line, and may penetrate 30 to 40 cm (12 to 16 in) into the beach sediment.

The most sensitive intertidal habitats are the mangrove and saltmarsh habitat located adjacent to the port area. Mangrove swamps or forests within Tampa Bay are composed of three species red mangrove, black mangrove, and white

mangrove. The latitude of Tampa Bay is near the northern limit of mangroves and low-temperature stress is common for the mangroves in this area. Two salt marsh plant species are found in the area, smooth cordgrass and black needlerush. Smooth cordgrass is considered a pioneer or successional species for mangrove establishment or reestablishment (e.g., following cold stress) within the bay. Black needlerush marshes are found in less saline tributary habitats around the bay.

If the oil is allowed to enter these habitats, it may become stranded by tides and trapped within these systems increasing the exposure of the habitat. The current state of knowledge on the impacts of oil in mangrove habitats can be summarized as follows.

- Mangrove mortality is highest among propagules, seedlings, and juvenile trees, presumably due to their proximity to the oil spill surface, and the potential for heavy oiling.
- The reported rapid mortality of immature and mature mangrove trees following a spill is probably due to mechanical suffocation and the cessation of gas exchange through the roots.
- Both delayed mortality and delayed expression of stress symptoms may occur over a one- to two-year period (or longer) following an oil spill for reasons that are not clearly understood, but which may be related to the persistence of toxic aromatic compounds in the sediments. Standing crop and production of mangroves was found to be affected in heavily oiled areas within Boca Ciega Bay two years after the 1993 oil spill in Tampa Bay.
- Mortality and acute damage, as well as long-term chronic stress, can be correlated with the topographic location of the accumulation of oil, and the subsequent effectiveness of tidal flushing of oiled surfaces.
- Transformation and the continual release of oil and oil fractions from sediments via "bleedwater" into near shore estuarine environments can occur over a period of years following a spill.

Saltmarsh habitats have been demonstrated to be somewhat more tolerant of oiling than mangrove habitats; however, oiling can significantly affect the fish and wildlife communities associated with the saltmarsh. Saltmarshes provide habitat for adult

and juvenile fish, invertebrates, and birds. These communities can be altered by the inundation of oil, oil removal techniques, and bioremediation methods.

### Lakes and Streams

There are no lakes near the Port Manatee Terminal. There are two river systems: the Little Manatee River and the Manatee River which discharge into Tampa Bay. These rivers are located approximately 6.5 miles north and 7.5 miles south of Port Manatee respectively.

### Threatened and Endangered Species and Other Wildlife

Parks and marinas listed in Table II-3 are important to protect from oil spills since they may be the habitat for endangered or threatened species. Table XI-7 lists the species on the Federally threatened or endangered species list in the state of Florida and may be found in the vicinity of the Port Manatee Terminal.

TABLE XI-7		
THREATENED AND ENDANGERED SPECIES IN FLORIDA		
STATUS	COMMON NAME	SCIENTIFIC NAME
<b>ANIMALS (46 Different Species)</b>		
E	Sturgeon, shortnose	<i>(Acipenser brevirostrum)</i>
E	Three-ridge, fat	<i>(Amblema neislerii)</i>
E	Sparrow, Cape Sable seaside	<i>(Ammodramus maritimus mirabilis)</i>
E	Sparrow, Florida grasshopper	<i>(Ammodramus savannarum floridanus)</i>
E	Whale, right	<i>(Balaena glacialis (incl. australis))</i>
E	Whale, finback	<i>(Balaenoptera physalus)</i>
E	Wolf, red	<i>(Canis rufus)</i>
E	Sea turtle, green	<i>(Chelonia mydas)</i>
E	Crocodile, American	<i>(Crocodylus acutus)</i>
E	Sea turtle, leatherback	<i>(Dermochelys coriacea)</i>
E	Sea turtle, hawksbill	<i>(Eretmochelys imbricata)</i>
E	Darter, Okaloosa	<i>(Etheostoma okaloosae)</i>
E	Butterfly, Schaus swallowtail	<i>(Heraclides aristodemus ponceanus)</i>
E	Pocketbook, shinyrayed	<i>(Lampsilis subangulata)</i>
E	Sea turtle, Kemp's ridley	<i>(Lepidochelys kempii)</i>
E	Moccasinshell, Gulf	<i>(Medionidus penicillatus)</i>
E	Moccasinshell, Ochlockonee	<i>(Medionidus simpsonianus)</i>

TABLE XI-7		
THREATENED AND ENDANGERED SPECIES IN FLORIDA		
STATUS	COMMON NAME	SCIENTIFIC NAME
E	Whale, humpback	<i>(Megaptera novaeangliae)</i>
E	Vole, Florida salt marsh	<i>(Microtus pennsylvanicus dukecampbelli)</i>
E	Seal, Caribbean monk	<i>(Monachus tropicalis)</i>
E	Stork, wood	<i>(Mycteria americana)</i>
E	Bat, gray	<i>(Myotis grisescens)</i>
E	Woodrat, Key Largo	<i>(Neotoma floridana smalli)</i>
E	Deer, key	<i>(Odocoileus virginianus clavium)</i>
E	Rice rat	<i>(Oryzomys palustris natator)</i>
E	Mouse, Key Largo cotton	<i>(Peromyscus gossypinus allapaticola)</i>
E	Mouse, Choctawhatchee beach	<i>(Peromyscus polionotus allophrys)</i>
E	Mouse, St. Andrew beach	<i>(Peromyscus polionotus peninsularis)</i>
E	Mouse, Anastasia Island beach	<i>(Peromyscus polionotus phasma)</i>
E	Mouse, Perdido Key beach	<i>(Peromyscus polionotus trissyllepsis)</i>
E	Woodpecker, red-cockaded	<i>(Picoides borealis)</i>
E	Pigtoe, oval	<i>(Pleurobema pyriforme)</i>
E	Panther, Florida	<i>(Puma (=Felis) concolor coryi)</i>
E	Kite, Everglade snail	<i>(Rostrhamus sociabilis plumbeus)</i>
E	Rabbit, Lower Keys marsh	<i>(Sylvilagus palustris hefneri)</i>
E	Manatee, West Indian	<i>(Trichechus manatus)</i>
T	Sturgeon, gulf	<i>(Acipenser oxyrinchus desotoi)</i>
T	Salamander, flatwoods	<i>(Ambystoma cingulatum)</i>
T	Jay, Florida scrub	<i>(Aphelocoma coerulescens)</i>
T	Sea turtle, loggerhead	<i>(Caretta caretta)</i>
T	Plover, piping	<i>(Charadrius melodus)</i>
T	Sea turtle, green	<i>(Chelonia mydas)</i>
T	Snake, eastern indigo	<i>(DryAprilon corais couperi)</i>
T	Slabshell, Chipola	<i>(Elliptio chipolaensis)</i>
T	Bankclimber, purple	<i>(Elliptoideus sloatianus)</i>
T	Skink, bluetail mole	<i>(Eumeces egregius lividus)</i>
T	Eagle, bald	<i>(Haliaeetus leucocephalus)</i>
T	Skink, sand	<i>(Neoseps reynoldsi)</i>
T	Snake, Atlantic salt marsh	<i>(Nerodia clarkii taeniata)</i>
T	Snail, Stock Island tree	<i>(Orthalicus reses (not incl. nesodryas))</i>
T	Shrimp, Squirrel Chimney Cave	<i>(Palaemonetes cummingi)</i>
T	Mouse, southeastern beach	<i>(Peromyscus polionotus niveiventris)</i>

TABLE XI-7		
THREATENED AND ENDANGERED SPECIES IN FLORIDA		
STATUS	COMMON NAME	SCIENTIFIC NAME
T	Caracara, Audubon's crested	<i>(Polyborus plancus audubonii)</i>
T	Tern, roseate	<i>(Sterna dougallii dougallii)</i>

TABLE XI-7		
THREATENED AND ENDANGERED SPECIES IN FLORIDA		
STATUS	COMMON NAME	SCIENTIFIC NAME
<b>PLANTS (54 Different Species)</b>		
E	Lead-plant, Crenulate	<i>(Amorpha crenulata)</i>
E	Pawpaw, four-petal	<i>(Asimina tetramera)</i>
T	Bonamia, Florida	<i>(Bonamia grandiflora)</i>
E	Bellflower, Brooksville	<i>(Campanula robinsiae)</i>
E	Prickly-apple, fragrant	<i>(Cereus eriophorus var. fragrans)</i>
E	Spurge, deltoide	<i>(Chamaesyce deltoidea ssp. deltoidea)</i>
T	Spurge, Garber's	<i>(Chamaesyce garberi)</i>
E	Fringe-tree, pygmy	<i>(Chionanthus pygmaeus)</i>
E	Aster, Florida golden	<i>(Chrysopsis floridana)</i>
E	Cladonia, Florida perforate	<i>(Cladonia perforata)</i>
T	Pigeon wings	<i>(Clitoria fragrans)</i>
E	Rosemary, short-leaved	<i>(Conradina brevifolia)</i>
E	Rosemary, Etonia	<i>(Conradina etonia)</i>
E	Rosemary, Apalachicola	<i>(Conradina glabra)</i>
E	Harebells, Avon Park	<i>(Crotalaria avonensis)</i>
E	Gourd, Okeechobee	<i>(Cucurbita okeechobeensis ssp. okeechobeensis)</i>
E	Pawpaw, beautiful	<i>(Deeringothamnus pulchellus)</i>
E	Pawpaw, Rugel's	<i>(Deeringothamnus rugelii)</i>
E	Mint, Garrett's	<i>(Dicerandra christmanii)</i>
E	Mint, longspurred	<i>(Dicerandra cornutissima)</i>
E	Mint, scrub	<i>(Dicerandra frutescens)</i>
E	Mint, Lakela's	<i>(Dicerandra immaculata)</i>
T	Buckwheat, scrub	<i>(Eriogonum longifolium var. gnaphalifolium)</i>
E	Snakeroot	<i>(Eryngium cuneifolium)</i>
T	Spurge, telephus	<i>(Euphorbia telephioides)</i>
E	Milkpea, Small's	<i>(Galactia smallii)</i>
T	Seagrass, Johnson's	<i>(Halophila johnsonii)</i>
E	Beauty, Harper's	<i>(Harperocallis flava)</i>
E	Hypericum, highlands scrub	<i>(Hypericum cumulicola)</i>
E	Jacquemontia, beach	<i>(Jacquemontia reclinata)</i>
E	Water-willow, Cooley's	<i>(Justicia cooleyi)</i>
E	Blazingstar, scrub	<i>(Liatris ohlingerae)</i>

TABLE XI-7		
THREATENED AND ENDANGERED SPECIES IN FLORIDA		
STATUS	COMMON NAME	SCIENTIFIC NAME
E	Lupine, scrub	<i>(Lupinus aridorum)</i>
T	Birds-in-a-nest, white	<i>(Macbridea alba)</i>
E	Beargrass, Britton's	<i>(Nolina brittoniana)</i>
T	Whitlow-wort, papery	<i>(Paronychia chartacea)</i>
E	Cactus, Key tree	<i>(Pilosocereus robinii)</i>
T	Butterwort, Godfrey's	<i>(Pinguicula ionantha)</i>
E	Polygala, Lewton's	<i>(Polygala lewtonii)</i>
E	Polygala, tiny	<i>(Polygala smallii)</i>
E	Wireweed	<i>(Polygonella basiramia)</i>
E	Sandlace	<i>(Polygonella myriophylla)</i>
E	Plum, scrub	<i>(Prunus geniculata)</i>
E	Rhododendron, Chapman	<i>(Rhododendron chapmanii)</i>
T	Gooseberry, Miccosukee	<i>(Ribes echinellum)</i>
E	Chaffseed, American	<i>(Schwalbea americana)</i>
T	Skullcap, Florida	<i>(Scutellaria floridana)</i>
E	Campion, fringed	<i>(Silene polypetala)</i>
E	Pinkroot, gentian	<i>(Spigelia gentianoides)</i>
E	Meadowrue, Cooley's	<i>(Thalictrum cooleyi)</i>
E	Torreya, Florida	<i>(Torreya taxifolia)</i>
E	Warea, wide-leaf	<i>(Warea amplexifolia)</i>
E	Mustard, Carter's	<i>(Warea carteri)</i>
E	Ziziphus, Florida	<i>(Ziziphus celata)</i>
Notes: T indicates federally threatened species. E indicates federally endangered species. Species were listed on Federally threatened and endangered species list for the state of Florida as of May 28, 2004.		

### Local Wildlife

Much of the shoreline immediately surrounding the port, including the spoil island, is sandy beach; however, subtidal seagrass beds are located immediately offshore of the port. Extensive mangrove forests are located at Moody Point to the north and in Redfish Creek, Little Redfish Creek, and Bishop Harbor to the south. Submerged

clam beds (*Mercenaria campechiensis*) surround and include the port area and intertidal/subtidal oyster beds (*Crassostrea virginica*) are found around the port.

Several recreational and commercial fish and fisheries are dependent on these habitats in Tampa Bay. These include the blue crab (*Callinectes sapidus*), pink shrimp (*Penaeus duorarum*), black drum (*Pogonias cromis*), catfish (*Arius felis*, *Bagre marinus*), cobia (*Rachycentron canadum*), gag grouper (*Mycteroperca microlepis*), mullet (mainly, *Mugil cephalus*), seatrout (*Cynoscion arenarius*, *C. nebulosus*), snook (*Centropomus undecimalis*), and tarpon (*Megalops atlanticus*).

The estuarine and coastal habitats around the fuel terminal provide nesting and foraging habitat for shorebirds, wading birds, and raptors. The spoil island offshore of the port supports a breeding colony of shorebirds, predominately laughing gulls (*Larus atricilla*). No wading bird colonies exist within the survey area.

Larger organisms using the nearshore waters within Tampa Bay include the loggerhead sea turtle (*Caretta caretta*) and the bottlenose dolphin (*Tursiops truncatus*).

### **Recreational Areas**

Tampa Bay includes four state Aquatic Preserves: Boca Ciega Bay, Cockroach Bay, Pinellas County, and Terra Ceia; and three National Wildlife Refuges: Egmont Key, Passage Key, and Pinellas (six mangrove islands, including Tarpon Key, in Boca Ciega Bay). Figure II-10 identifies other shorelines that may be of concern.

### **Utilities**

There are eight utility companies located near the Port Manatee Terminal.

Manatee County North Regional WWTP (8 miles)  
8500 69th Street East  
Palmetto, FL  
(941) 792-8811

Manatee County Southeast Regional WWTP (15 miles)  
3331 Lena Road  
Bradenton, FL  
(941) 792-8811

Manatee County Southwest Regional WWTP (15 miles)  
5101 65th Street West  
Bradenton, FL  
(941) 792-8811

City of Bradenton WWTP (12 miles)  
1810 First Street West  
Bradenton, FL  
(941) 727-6360

City of Palmetto WWTP (10 miles)  
1310 28th Avenue West  
Palmetto, FL  
(941) 723-4570

Lake Manatee Recreation Area WWTP (12 miles)  
2007 SR 64  
Bradenton, FL  
(941) 741-3028

City of Bradenton WTP  
(941) 727-6360

Manatee County WTP (15 miles)  
17915 Waterline Road  
Bradenton, FL 34212  
(941) 746-3020

### **C. RISK ANALYSIS**

A risk analysis was performed of the Port Manatee Terminal and Pipeline using reliability techniques consisting of a Failure Modes & Effects Analysis (FMEA) and

an Error Modes & Effects Analysis (EMEA) to identify potential equipment failures modes and operator errors that could result in spills. These analyses examined the fuel oil unloading system and the onsite storage tanks. The EMEA is presented in Tables XI-8 and the FMEA is presented in Tables XI-9. FMEA and EMEA are both inductive logic tools, which paint pictures of the system being analyzed from the equipment failure (FMEA) and operator error (EMEA) perspectives. FMEA's, which include the equipment components, and EMEA's which include activities or steps in the system operations, are developed using a seven-step process. One of the crucial areas of the analysis is the criticality assessment. The components (FMEA) or activities (EMEA) receiving the highest ranking in the criticality assessment become the priority areas for potential improvements or change. The results of the analyses identify potential countermeasures for spill prevention, which are evaluated for implementation based on their effectiveness and relative costs.

## Spill History

This section briefly describes the reportable spill history at the Port Manatee Terminal and Pipeline

INCIDENT DESCRIPTION	
Date of discharge	May 28, 1990
Cause of discharge	Connecting hose to manifold on barge. Shore side valve opened before hose was fully connected, causing spill.
Materials discharged	No. 6 oil
Amount discharged (Gallons)	150 gallons
Amount reached Navigable Waters	145 gallons
Effectiveness of secondary containment	Oil overflowed barge manifold containment area
Clean-up actions taken	Tampa Bay Marine Services provided cleanup services along with terminal operator (Gulf Interstate)
Steps to reduce recurrence	Reviewed proper unloading procedures with all operators
Capacity of tank(s)/containment from which spill occurred	Containment on barge unknown
Enforcement actions	Case dismissed by USCG
Effectiveness of monitoring equipment	N.A.
Description of how spill detected	Spill detected by shore side operator

XI-25

<b>INCIDENT DESCRIPTION</b>	
Date of discharge	September 18, 2006
Cause of discharge	Two pin-hole leaks in a section of 12 inch diameter piping located in a valve pit at berth 10.5 within Port Manatee.
Materials discharged	No. 6 fuel oil
Amount discharged (Gallons)	900 gallons
Amount reached Navigable Waters	900 gallons
Effectiveness of secondary containment	Spill overflowed valve pit
Clean-up actions taken	Using FPL's Corporate Response Team and FPL's primary OSRO, 15,000 feet of containment and sorbent boom was used to contain the spill within the Port area and protect the shoreline north of the Port. Vacuum trucks and drum skimmers were also used to remove oil from within the boomed areas and from the valve pit. Additional remedial activities were conducted of contaminated soils adjacent to the valve pit.
Steps to reduce recurrence	The section of the pipeline in valve pit was cut, capped, and removed from service. The remaining underground section of the purge oil line was cut and separated from the main pipeline. The line was also cleaned, capped, grouted, and abandoned in place.
Capacity of tank(s)/containment from which spill occurred	N.A.
Enforcement actions	Received Natural Resource Damage Assessment in the amount of \$15,865.
Effectiveness of monitoring equipment	N.A.
Description of how spill detected	Visual detection

### **Vulnerability of Facility from a Nature Disaster**

The Port Manatee Terminal and Pipeline is subject to a number of severe weather conditions, including flooding, tornadoes, winds, heavy rains, and hurricanes. These natural phenomena present the potential for extensive damage in and around the facility. However, the Terminal is designed to minimize impacts from such events and the facility has emergency procedures in place.

### **Tank Ages**

The risk of tank rupture from the storage tanks is low since the tanks are inspected regularly. Inspection dates are in Section X.K. Tables II-8 and II-9 report tank ages.

## TABLE XI-8 ERROR MODES & EFFECTS ANALYSIS

JAN 1993

### PORTMANATEE TERMINAL--FUEL OIL UNLOADING SYSTEM

PROCESS FUNCTION: FUEL OIL LOADING & UNLOADING OPERATION

PROCESS LEVEL: OPERATION ASSOCIATED WITH LOADING & UNLOADING

ACTIVITY	OPERATION TASK	OPERATION ERROR	CAUSE OF ERROR	COMPONENT INVOLVED	ULT MATE FAILURE	TIME OF FAILURE	CRITICALITY ASSESSMENT				INSTANT RESPONSE
							PROBABILITY OF OCCURRENCE		RESULT OF FAILURE	OIL SPILLS WHERE	
							(1)	(1)	(1)	(2)	
PRIOR TO UNLOADING	(b) (3), (b) (7)(F)			OIL N P PELINE GUSHES OUT	DURING CONNE- CTION	MODE- RATE 5	LARGE SP LL 4	DECK OR WATER 4	80	CLOSE DOCK VALVE	
PRIOR TO UNLOADING				A FLANGE MAY LEAK	WHEN PUMPS ARE STARTED	LOW 3	SMALL LEAK 2	UP-LAND 2	12	STOP PUMPS CONTA N SPILL	
PRIOR TO UNLOADING				TANK OVER FLOWS	DURING UNLO- ADING	MODE- RATE 5	LARGE SP LL 4	NS DE D KE 1	20	STOP PUMPS CONTA N SPILL	
PRIOR TO UNLOADING				CUTS, GOUGES, OR RUPTURE	DURING HOOKUP	MODE- RATE 4	SMALL SP LL 3	DECK, DOCK, OR WATER 4	48	MOVE HOSE BACK ON DOCK	
UNLOADING				CUTS, GOUGES, OR RUPTURE	DURING UNLO- ADING	MODE- RATE 4	LARGE SP LL 4	DECK, DOCK, OR WATER 4	64	STOP PUMPS	
COMPLETION OF UNLOADING				OPEN HOSE DRAINS	DURING DISCON- NECTION	MODE- RATE 4	SMALL SP LL 3	DECK, DOCK, OR WATER 3	36	SWING HOSE INSIDE CURBING	
COMPLETION OF UNLOADING				GASKET LEAKS	DURING DISCON- NECTION	MODE- RATE 5	SMALL LEAK 2	DECK, DOCK, OR WATER 3	30	SWING HOSE INSIDE CURBING	
COMPLETION OF UNLOADING				OPEN HOSE DRAINS	DURING VALVE PIT DISCON- NECTION	MODE- RATE 5	SMALL SP LL 2	VALVE PIT & DOCK 2	20	CONTA N SPILL ON DOCK	

(1) RISK NUMBERS SELECTED FOR EACH ITEM, FROM 1 TO 5, WITH 5 AS THE HIGHEST

(3) IMPROPER TRA N NG, NOT FOLLOWING PROCEDURES

(2) HAZARD RANKING DETERM NED BY MULT PLY NG NUMBERS OF THREE PREVIOUS COLUMNS

## TABLE XI-8 (CONT.) ERROR MODES & EFFECTS ANALYSIS

SYSTEM FUNCTION: FUEL OIL TRANSFER  
OPERATION

SEP 1993

**FUEL OIL TRANSFER FROM PORT MANATEE  
TERMINAL TO MANATEE PLANT**

INDENTURE LEVEL: TRANSFER AND  
STORAGE OPERATION

ACTIVITY	OPERATION TASK	OPERATION ERROR	CAUSE OF ERROR	COMPONENT INVOLVED	ULTIMATE FAILURE	TIME OF FAILURE	CRITICALITY ASSESSMENT				INSTANT RESPONSE
							PROBABILITY OF OCCURRENCE	RESULT OF FAILURE	OIL SPILLS WHERE	HAZ. RANK	
							(1)	(1)	(1)	(2)	
PRIOR TO RECEIVING OIL	(b) (3), (b) (7)(F)					DURING RECEIPT	VERY LOW 2	OVERFLOW/ SPILL	SPILLS ON LAND 3	6	ISOLATE TANK, CONTAIN SPILL
PRIOR TO RECEIVING OIL						WHEN PUMPS ARE STARTED	VERY LOW 2	SMALL LEAK	SPILLS ON LAND 2	4	STOP PUMPS, CONTAIN SPILL
START OF TRANSFERRING OIL						WHEN PUMPS ARE STARTED	VERY LOW 2	SMALL LEAK	SPILLS ON LAND 2	4	STOP PUMPS, CONTAIN SPILL
TRANSFERRING OIL						DURING TRANSFER	VERY LOW 2	SMALL LEAK	SPILLS ON LAND 2	4	STOP PUMPS, CONTAIN SPILL
TRANSFERRING OIL						DURING RECEIPT	VERY LOW 2	OVERFLOW/ SPILL	SPILLS ON LAND 3	6	ISOLATE TANK, CONTAIN SPILL
TRANSFERRING OIL						DURING RECEIPT	LOW 3	OVERFLOW/ SPILL	SPILLS ON LAND 3	9	ISOLATE TANK, CONTAIN SPILL
START OF PIGGING OPERATION						DURING TRANSFER	LOW 3	SMALL LEAK	SPILLS ON LAND 2	6	CLOSE VALVE, CONTAIN SPILL

(1) RISK NUMBERS SELECTED FOR EACH ITEM, FROM 1 TO 5, WITH 5 AS THE HIGHEST

(2) HAZARD RANKING DETERMINED BY MULTIPLYING NUMBERS OF THREE PREVIOUS COLUMNS

## TABLE XI-9 FAILURE MODES & EFFECTS ANALYSIS

SYSTEM FUNCTION: FUEL OIL LOADING & OPERATION

JAN 1991

PORT MANATEE TERMINAL--FUEL OIL UNLOADING SYSTEM

INDENTURE LEVEL: LOADING & UNLOADING COMPONENTS

COMPONENT	FAILURE MODE	PROBABLE CAUSE	ADVANCE DETECTION	CRITICALITY ASSESSMENT				INSTANT RESPONSE			
				FREQUENCY OF FAILURE		RESULT OF FAILURE	OIL SPILLS WHERE		HAZ. RANK		
			(1)	(2)		(2)	(2)	(3)			
UNLOADING HOSE	(b) (3), (b) (7)(F)	(b) (3), (b) (7)(F)	(b) (3), (b) (7)(F)	LOW	3	MODERATE WITH PUMPS ON	4	DECK, DOCK, OR WATER	4	48	STOP PUMPS CONTAINMENT SPILL
UNLOADING HOSE				LOW	3	LARGE WITH PUMPS ON	5	DECK, DOCK, OR WATER	4	60	STOP PUMPS CONTAINMENT SPILL
UNLOADING HOSE				LOW	3	SMALL WITH PUMPS OFF	3	DECK, DOCK, OR WATER	4	36	CONTAINMENT SPILL
UNLOADING HOSE				LOW	3	LARGE WITH PUMPS ON	5	WATER	5	75	STOP PUMPS CONTAINMENT SPILL
UNLOADING HOSE				LOW	3	SMALL WITH PUMPS ON	3	DECK, DOCK, OR WATER	4	36	STOP PUMPS CONTAINMENT SPILL
ROTARY ELBOW				LOW	3	SMALL WITH PUMPS ON	3	VALVE PIT & DOCK	1	9	STOP PUMPS CLEAN UP SPILL
VALVE PIT FLANGE CONNECTIONS				FREQUENT	5	SMALL WITH PUMPS ON	3	VALVE PIT, DOCK, OR WATER	3	45	STOP PUMPS CLEAN UP SPILL
PIPELINE VALVE PIT TO STORAGE TANKS				VERY LOW	2	SMALL TO LARGE	3	ON LAND	2	12	STOP PUMPS CONTAINMENT SPILL
PIT VALVE & EXPOSES ELBOW ABOVE PIT				MODERATE	4	SMALL	3	VALVE PIT	1	12	CONTAINMENT SPILL
IDLE UNLOADING HOSE				MODERATE	4	SMALL	3	DOCK	2	24	CONTAINMENT SPILL

(1) THESE ARE THE DETECTION METHODS CURRENTLY IN USE AT THE SITE

(3) HAZARD RANKING DETERMINED BY MULTIPLYING NUMBERS OF THREE PREVIOUS COLUMNS

(2) RISK NUMBERS SELECTED FOR EACH ITEM, FROM 1 TO 5, WITH 5 AS THE HIGHEST





## TABLE XI-9 (CONT.) FAILURE MODES & EFFECTS ANALYSIS

SYSTEM FUNCTION: FUEL OIL LOADING & OPERATION

JUL 1993

### FUEL OIL TRANSFER FROM PORT MANATEE TERMINAL TO MANATEE PLANT

INDENTURE LEVEL: LOADING & UNLOADING COMPONENTS

COMPONENT	FAILURE MODE	PROBABLE CAUSE	ADVANCE DETECTION	CRITICALITY ASSESSMENT				INSTANT RESPONSE			
				FREQUENCY OF FAILURE	RESULT OF FAILURE	OIL SPILLS WHERE	HAZARD RANKING				
(1)				(2)	(2)	(2)	(3)				
(b) (3), (b) (7)(F)				VERY LOW	2	SMALL LEAK	2	DRAINS ON LAND	2	8	ISOLATE TANK, CONTAIN SPILLS
				VERY LOW	2	OVERFLOW/ SPILL	3	SPILLS ON LAND	2	12	ISOLATE TANK, CONTAIN SPILLS
				VERY LOW	2	SPILL	3	SPILLS ON LAND	5	30	CONTAIN SPILLS
				LOW	3	LEAK	2	DRAINS ON LAND	2	12	STOP PUMPS, CONTAIN SPILLS
				VERY LOW	2	SMALL WITH PUMP ON	2	SPILLS ON LAND	1	4	STOP PUMPS, CONTAIN SPILLS
				VERY LOW	1	SMALL WITH PUMP ON	3	SPILLS ON LAND	1	3	STOP PUMPS, CONTAIN SPILLS
				LOW	3	SMALL LEAK	3	UNDERGROUND	4	36	STOP PUMPS, CONTAIN SPILLS
				VERY LOW	2	SPILL	4	UNDERGROUND	5	40	STOP PUMPS, CONTAIN SPILLS

#### **D. CONTAINMENT AND DRAINAGE PLANNING**

The risks of a major spill at the facility that would reach surface waters are associated with the potential occurrence of a hurricane related storage tank failure, a pipeline failure, or the collision of a vessel with the dock. The consequences of an accident involving the vessel are the responsibility of the vessel personnel however, FPL personnel would assist as appropriate. Potential oil spill drainage pathways are described in the site drainage diagram (Figure II-13). The occurrence of a Level III incident reaching surface waters however, is unlikely, because of the secondary containment and facility drainage systems which exists at the facility and because of the policies, practices, and procedures described in Section VII of this plan.

The terminal drainage system consists of both a stormwater collection system and an oily-water treatment system. The storm water collection system consists of two separate basins. Basin #1 receives stormwater from the north half of the site while Basin #2 receives stormwater from the south half of the site. The effluent from each stormwater basin is routed through a double inverted weir oil-water separator prior to being discharged to a shallow ditch on the east side of Reeder Road.

(b) (3), (b) (7)(F)

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] in. (b) (3), (b) (7)(F)

[REDACTED]

[REDACTED] The separator has an internal oil chamber where skimmed oil is collected for pumping back into the fuel oil storage tanks. The treated water flows by gravity from the separator into the effluent collection sump. A pump in the effluent sump pumps the remaining water to a concrete lined ditch, which drains to Stormwater Basin #1. A listing of the capacities of each sump pump provided in the Table below.

**Sump Pump Capacities**

<b>Sump Number</b>	<b>Capacity (Gallons Per Minute)</b>
1270-A	135 GPM
1270-B	135 GPM
1270-C	135 GPM
1241-D	100 GPM
1241-E	100 GPM
1241-F	300 GPM
1241-H	100 GPM
1241-G	100 GPM

**SECTION XII:****TRAINING AND DRILLS**

---

**A. DISCHARGE PREVENTION AND RESPONSE TRAINING**

Florida Power and Light provides discharge prevention and response training to all of its oil handling and oil spill response personnel. In addition, new employees are promptly trained upon being hired. The training of personnel in the prevention of oil spills and the prompt and effective response to an oil spill incident are important aspects of the overall oil spill prevention and response preparedness program. The training is intended to assure that all oil-handling employees and members of the Onsite Response Team (ORT) clearly understand the importance of oil spill prevention and the contents of this Facility Response Plan (FRP) and their respective roles and responsibilities within the scope of the Plan. The training is designed to prepare Response Team members in carrying out their job responsibilities in a prompt and efficient fashion should an incident occur. Monthly safety meetings are also held to improve awareness in these areas. Specific topics included in the training program are described below.

Discharge prevention training topics include:

- Operating & maintenance of all equipment to prevent oil discharges.
- Overview of applicable state and federal laws, rules, and regulations.
- General facility operations.
- Contents of the SPCC Plan.

Discharge response training topics include:

- Incident Command System (ICS)
- Spill reporting procedures
- Spill containment procedures
- Spill recovery procedures
- Roles and responsibilities of the ORT

- Storage of waste materials
- OSHA HAZWOPER training

Discharge prevention briefings are held annually to ensure adequate understanding of the SPCC Plan; to provide a description of any known discharges, failures, any malfunctioning components; and to ensure that any recently developed precautionary measures and appropriate personnel are properly instructed in the operation and maintenance of all equipment to prevent oil discharges.

All personnel, including volunteers and casual laborers, who respond to an oil spill in any capacity would receive training by FPL's Industrial Hygiene Unit Leader which is in compliance with 29 CFR 1910, Subpart L and 29 CFR 1910.12(q). Volunteers, participating in mitigating the effects of an oil spill, may be used as deemed appropriate by the FOSC. Typically, volunteers would be assigned to tasks that have minimal safety risks, such as beach surveillance, logistic support, or wildlife rehabilitation. In addition, responders would be informed of the physical and health hazards of the substances they handle, the measures to protect themselves from these hazards, and the use and location of Material Safety Data Sheets (29 CFR 1910.1200).

#### ***B. CORPORATE RESPONSE TEAM TRAINING***

All Corporate Response Team (CRT) members participate in eight hours of initial ICS training. In addition, certain members complete a 40-hour OSHA HAZWOPER training program while other members receive specialty training such as wildlife rehabilitation or shoreline cleanup and assessment. Details of the CRT training are provided in the Corporate Plan.

#### ***C. DRILL PROCEDURES***

FPL has elected to implement the National Preparedness for Response Exercise Program (PREP) to satisfy exercise requirements under the Oil Pollution Act of 1990 (OPA-90). The PREP is a unified, federal effort which incorporates the exercise requirements of the U.S. Coast Guard (USCG), the U.S. Environmental Protection

Agency (USEPA) and the Department of Transportation (DOT) Pipeline and Hazardous Material Safety Administration.

### **PREP Implementation**

The drill year will commence on January 1 and conclude on December 31 of each year. The Corporate Oil Spill Coordinator is responsible for conducting and scheduling drills for the CRT in accordance with the Prep schedule in Table XII-1. The Terminal Oil Spill Coordinator is responsible for conducting and scheduling drills for the ORT in accordance with the Prep schedule in Table XII-1.

### **Internal and External Exercises**

The PREP Guidelines consist of both internal and external exercises. Internal exercises are those conducted wholly within FPL. The internal exercises test the various components of each facility's response plan and the Corporate Plan to ensure that all plans are adequate to meet spill response needs within FPL. The internal exercises include:

- QI Drills;
- Spill Management Team Tabletop Exercises;
- Equipment Deployment Exercises; and
- Emergency Procedures Exercises (optional).

All internal exercises will be self-evaluated and self-certified. Under the PREP guidelines the facility is responsible for addressing any issues that arise from evaluation of the exercises and for making changes to the response plan necessary to ensure the highest level of preparedness.

The external exercises go outside of FPL's organization to test the interaction of FPL's entire response plan (Facilities and Corporate Plan) with the response community (Government Agencies, Contractors, etc.). External exercises will consist of Area Exercises, which are intended to exercise area contingency plans prepared under OPA-90 by the USCG (for coastal areas) and USEPA (for inland areas), and Government-Initiated Unannounced Exercises. The goal of PREP is to conduct 20 Area Exercises per year nationwide, 60 within a triennial cycle. Six of

the 20 annual exercises will be led by the government, and 14 will be industry-led. Government-led exercises commenced in 1994 and industry-led exercises commenced in 1995. All Area Exercises will be developed and monitored by an "exercise design team" comprising representatives from federal, state and local government, and industry.

Triennial Drills (every three years) must include the following exercises:

<b>TABLE XII-1</b>				
<b>DRILLS CONDUCTED BY FACILITY</b>				
<b>ONSITE RESPONSE TEAM (ORT) and/or CONTRACTED OIL SPILL REMOVAL ORGANIZATION (OSRO)</b>				
<b>DRILL TYPE</b>	<b>FREQUENCY</b>	<b>DRILLS/ 3 YR.PERIOD</b>	<b>AGENCY</b>	<b>INITIATING AUTHORITY</b>
QI Notification By ORT	Quarterly	12	EPA, USCG, PHMSA	Facility ORT
Unannounced Exercises By ORT	Annual	3 <sup>(1)</sup>	EPA, USCG	Facility ORT
Equipment Deployment By ORT/OSRO	Annual	3	EPA, USCG PHMSA	Facility ORT
Exercise Entire Response Plan By ORT/OSRO	All Components Every 3 YRS	1 <sup>(5)</sup>	EPA, USCG, PHMSA	Facility ORT
<b>DRILLS CONDUCTED BY CORPORATE</b>				
<b>Oil SPILL MANAGEMENT TEAM (CRT)</b>				
Tabletop Exercise	Annual	3 <sup>(3)</sup>	EPA, USCG	Corporate SMT
Exercise Entire Response Plan	All Components Every 3 YRS	1 <sup>(5)</sup>	EPA, USCG, PHMSA	Corporate SMT
<b>AGENCY INITIATED DRILLS</b>				
<b>DRILL TYPE</b>	<b>FREQUENCY</b>	<b>ADVANCED NOTICE</b>	<b>INITIATING AUTHORITY</b>	<b>RESPONSE TEAM AFFECTED</b>
Unannounced Tabletop Exercise	Annually, If Selected	10 <sup>(2,4)</sup> Days Prior	PHMSA	CRT
Unannounced Equipment Deployment	Annually, If Selected	None <sup>(4)</sup>	EPA, USCG	Facility ORT/OSRO
Area Exercise	Triennially, If Selected	Advanced Notice <sup>(2)</sup> Provided	EPA, USCG, FPL	Facility ORT/OSRO and/or CRT
<p>Notes:</p> <p>(1) Unannounced drills can include any of the following:</p> <ul style="list-style-type: none"> <li>• Emergency Procedures Exercise</li> <li>• Spill Management Team Tabletop Exercise</li> <li>• Equipment Deployment Exercise</li> <li>• Actual Spill Event</li> </ul> <p>(2) 20 Exercises total nationwide per year (6 Government led and 14 Industry led)</p> <p>(3) One drill must include a worst case discharge scenario</p> <p>(4) Not required to participate in another federal government initialed drill until 36 months have passed</p>				

In meeting the equipment deployment requirement, it is not necessary that every piece of equipment identified in the plan be deployed and operated. Only a representative sample of each type of equipment need be deployed and operated, but that must include a minimum of 1,000 feet of each type of boom in inventory and one of each type of skimming system (equipment necessary to respond to the average most probable discharge).

In addition to the above drill requirements, each facility response team and CRT will be required to exercise all components of their entire response plan every three years. These plan components do not have to be exercised all at once, but can be exercised in segments over the three-year triennial period.

The following Corporate and Facility Response Plan Components must be exercised at least once every three years.

### **Organizational Design**

- 1) Notifications
- 2) Staff/Response Team Mobilization
- 3) Ability to operate within the response management system described in the 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 Materials and Contaminated Debris

### **Response Support**

- 10) Communications
- 11) Transportation
- 12) Personnel Support
- 13) Equipment Maintenance and Support

- 14) Procurement
- 15) Documentation

The CRT will be responsible for exercising and documenting all of the response plan components (1-3 & 10-15). The CRT will also exercise and document plan components 10, 11, 12 and 14 for each facility team. Each facility On-site Team will be responsible for documenting components four through nine.

### **Drill Credit**

Credit can be taken for responses to real spill events and participation in area exercises as long as all objectives of the drill are met and properly documented.

### **Proper Drill Documentation**

To properly document PREP drills, Drill Documentation Forms are provided at the end of this section for each type of facility or corporate-initiated exercise. Specific documentation forms are not provided for agency-initiated Area Exercises or agency-initiated Unannounced Drills. These exercises should be documented on one or more of the forms provided as appropriate. Additionally, the Corporate Plan contains Response Management Forms, which should also be used when appropriate to document drill objectives. Copies of these forms are provided in the Corporate Plan. Drill Documentation Forms must be completed to verify that the objectives of the exercise have been met, that the drill has been completed, and that the effectiveness of the plan has been evaluated based on exercise performance. Finally, each Drill Documentation Form must be signed by a responsible individual such as the On-Scene Commander /QI, Oil Spill Coordinator, or Training Supervisor. Completion of the Drill Documentation Forms should constitute Self-Evaluation and Self-Certification as required under the PREP Guidelines.

It will be the responsibility of the facility oil spill coordinator to evaluate any "Lessons Learned" during the exercises and to implement those lessons deemed appropriate in a timely manner. In addition, the facility oil spill coordinator will revise the

Response Plan to address any "Lessons Learned" if such revision(s) will enhance the response team's preparedness.

#### ***D. RECORDKEEPING***

##### **Training Records**

The Terminal Oil Spill Coordinator will maintain records sufficient to document training of its response team personnel and maintain them at the facility for as long as the member remains a part of the facility response team. These records would be made available for agency inspection upon request. The Corporate Oil Spill Coordinator will maintain records for the CRT sufficient to document training of its personnel for as long as the member remains a part of the CRT. These records would be available for agency inspection upon request. Discharge Prevention meetings will be conducted on a regular basis and maintained at the facility for a period of five years. Table XII-2 is a sample of a discharge prevention meeting log. Also, an oil spill prevention and response training documentation sheet is provided at the very end of this section.

##### **Drill Records**

The Terminal Oil Spill Coordinator would ensure that records sufficient to document drills for its facility personnel are maintained for five years following completion of drills. Similarly, the Corporate Oil Spill Coordinator would ensure that records sufficient to document the drills of its CRT are maintained for five years. Drill records would be made available for inspection upon request by agency personnel.



## Drill Documentation Forms

Drill Documentation Forms are provided on the following pages.

<b>EQUIPMENT DEPLOYMENT DRILL DOCUMENTATION FORM</b>
<b>SECTION I: DRILL INFORMATION</b>
FACILITY NAME: _____ PREPARED BY: _____ DATE OF DRILL: _____ TIME DRILL STARTED: _____ TIME DRILL COMPLETED: _____ CHECK WHETHER THIS IS A FACILITY DRILL, A CORPORATE DRILL OR BOTH. ALSO CHECK WHETHER DRILL IS ANNOUNCED OR UNANNOUNCED.  FACILITY: _____ CORPORATE: _____ ANNOUNCED: _____ UNANNOUNCED: _____  IS DRILL IN CONJUNCTION WITH OTHER EXERCISE? _____ YES NO IF YES, WHAT TYPE OF DRILL _____ IS THIS AN EXERCISE OR ACTUAL RESPONSE? _____ ATTACH DRILL SCENARIO(S) IF APPROPRIATE
<b>SECTION II: DRILL OBJECTIVES</b>
CHECK EACH OBJECTIVE DEMONSTRATED DURING THE DRILL _____ DEMONSTRATE ABILITY OF RESPONSE TEAM TO ORGANIZE IN ACCORDANCE WITH THE RESPONSE PLAN _____ ENSURE EQUIPMENT IS IN PROPER WORKING ORDER _____ DEMONSTRATE ABILITY OF RESPONSE PERSONNEL TO DEPLOY AND OPERATE EQUIPMENT  USE THE INITIAL INCIDENT BRIEFING FORM IN APPENDIX C TO ASSIST IN DOCUMENTING APPROPRIATE DRILL INFORMATION.  THE FOLLOWING EQUIPMENT MUST BE DEPLOYED. 1000 FEET OF EACH TYPE OF BOOM IN INVENTORY AND ONE OF EACH TYPE OF SKIMMING SYSTEM.  DESCRIBE GOALS OF EXERCISE (ATTACH LIST OF EQUIPMENT DEPLOYED AND BOOMING STRATEGIES):  _____ _____  LIST EACH TYPE OF EQUIPMENT DEPLOYED, WHERE IT WAS DEPLOYED AND OPERATIONAL STATUS. EQUIPMENT TYPE LOCATION OPERATIONAL LIST NO. OF SUPPORT PERSONNEL  _____ _____ _____

<b>EQUIPMENT DEPLOYMENT DRILL DOCUMENTATION FORM</b>	
<b>SECTION III: DRILL EVALUATION &amp; RESULTS</b>	
THE FOLLOWING QUESTIONS WILL BE COMPLETED BY THE DRILL EVALUATOR (A NO ANSWER REQUIRES A COMMENT)	
1. DID RESPONSE TEAM ORGANIZE AND IMPLEMENT THE INCIDENT COMMAND SYSTEM?	
YES    NO	
2. DID THE RESPONSE TEAM DEMONSTRATE THEIR ABILITY TO DEPLOY AND OPERATE THE EQUIPMENT IN ITS INTENDED OPERATING ENVIRONMENT?	
YES    NO	
3. DID THE EQUIPMENT OPERATE PROPERLY?	
YES    NO	
EVALUATOR'S SUMMARY (PROVIDE COMMENTS RELATIVE TO OBJECTIVES, LESSONS LEARNED, ISSUES REQUIRING RESOLUTION, ETC.)	
COMMENTS CAN BE PROVIDED BELOW OR AS AN ATTACHMENT:	
NAME OF EVALUATOR:	
<b>SECTION IV: DRILL CERTIFICATION</b>	
I CERTIFY THAT THE DRILL WAS COMPLETED, THAT THE RESPONSE PLAN OBJECTIVES AS INDICATED IN SECTION II WERE EXERCISED AND THAT THE DRILL WAS EVALUATED IN ACCORDANCE WITH THE PREP GUIDELINES.	
PRINT NAME	PRINT TITLE
SIGNATURE	DATE

**EMERGENCY PROCEDURES EXERCISE DOCUMENTATION FORM (OPTIONAL)****SECTION I: DRILL INFORMATION**

FACILITY NAME: \_\_\_\_\_

PREPARED BY: \_\_\_\_\_ TIME DRILL STARTED: \_\_\_\_\_

DATE OF DRILL: \_\_\_\_\_ TIME DRILL COMPLETED: \_\_\_\_\_

CHECK WHETHER THIS IS A FACILITY DRILL, A CORPORATE DRILL OR BOTH. ALSO CHECK WHETHER DRILL IS ANNOUNCED OR UNANNOUNCED.

FACILITY: \_\_\_\_\_ CORPORATE: \_\_\_\_\_

ANNOUNCED: \_\_\_\_\_ UNANNOUNCED: \_\_\_\_\_

IS DRILL IN CONJUNCTION WITH OTHER EXERCISE?

YES NO

IF YES, WHAT TYPE OF DRILL

IS THIS AN EXERCISE OR ACTUAL RESPONSE?

CHECK TYPE OF EMERGENCY PROCEDURES EXERCISE

\_\_\_\_\_ TRANSFER EQUIPMENT FAILURE (PUMPS, HOSES, VALVES, MANIFOLD, ETC.)

\_\_\_\_\_ TANK OVERFLOW

\_\_\_\_\_ TANK FAILURE

\_\_\_\_\_ PIPING RUPTURE

\_\_\_\_\_ EXPLOSION OR FIRE

\_\_\_\_\_ OTHER DESCRIBE \_\_\_\_\_

ATTACH DRILL SCENARIO(S) IF APPROPRIATE

**SECTION II: DRILL OBJECTIVES**

CHECK EACH OBJECTIVE DEMONSTRATED DURING THE DRILL

\_\_\_\_\_ EXERCISE FACILITY'S EMERGENCY PROCEDURES TO ONE OR MORE OF THE ABOVE EMERGENCIES TO ENSURE PERSONNEL KNOWLEDGE OF ACTIONS TO BE TAKEN TO MITIGATE A SPILL (CAN BE A WALK-THROUGH OF EMERGENCY PROCEDURES).

\_\_\_\_\_ EXERCISE SHOULD INVOLVE ONE OR MORE SECTIONS OF EMERGENCY PROCEDURES FOR SPILL MITIGATION (EXERCISE SHOULD INVOLVE A SIMULATION OF RESPONSE TO AN OIL SPILL). Note: FACILITY SHOULD ENSURE THAT SPILL MITIGATION PROCEDURES FOR ALL CONTINGENCES ARE ADESSSED AT SOME TIME.

USE THE CORPORATE PLAN RESPONSE MANAGEMENT FORMS TO ASSIST IN DOCUMENTING APPROPRIATE DRILL INFORMATION

DESCRIBE EXERCISE: \_\_\_\_\_

**SECTION III: DRILL EVALUATION & RESULTS**

COMPLETE ONLY THE QUESTIONS THAT APPLY. QUESTIONS WILL BE COMPLETED BY THE DRILL EVALUATOR (A NO ANSWER REQUIRES A COMMENT)

1. WERE APPROPRIATE INTERNAL AND EXTERNAL NOTIFICATIONS CONDUCTED?

YES NO \_\_\_\_\_

2. DID RESPONSE TEAM MOBILIZE TO THE SITE WITHIN A REASONABLE TIME?

YES NO \_\_\_\_\_

**EMERGENCY PROCEDURES EXERCISE DOCUMENTATION FORM (OPTIONAL)**

3. DID THE INCIDENT COMMAND SYSTEM FUNCTION SUCCESSFULLY DURING THE RESPONSE?

YES NO \_\_\_\_\_

4. HOW DID THE RESPONSE TEAM DEMONSTRATE EMERGENCY SHUTDOWN AND DISCHARGE CONTROL?

YES NO \_\_\_\_\_

5. WAS A DETAILED ASSESSMENT OF THE DISCHARGE CONDUCTED?

YES NO \_\_\_\_\_

6. WAS ADEQUATE DISCHARGE CONTAINMENT DEMONSTRATED?

YES NO \_\_\_\_\_

7. WAS RECOVERY OF SPILLED MATERIAL DEMONSTRATED?

YES NO \_\_\_\_\_

8. WERE CONTAINMENT BOOMS PROPERLY PLACED TO PROTECT ECONOMICALLY/ENVIRONMENTALLY SENSITIVE AREAS?

YES NO \_\_\_\_\_

9. WERE EMERGENCY PROCEDURES PROPERLY DEMONSTRATED?

YES NO \_\_\_\_\_

**EVALUATOR'S SUMMARY (PROVIDE COMMENTS RELATIVE TO OBJECTIVES, LESSONS LEARNED, ISSUES REQUIRING RESOLUTION, ETC.) COMMENTS CAN BE PROVIDED BELOW OR AS AN ATTACHMENT.**

NAME OF EVALUATOR:

**SECTION IV: DRILL CERTIFICATION**

I CERTIFY THAT THE DRILL WAS COMPLETED, THAT THE RESPONSE PLAN OBJECTIVES AS INDICATED IN SECTION II WERE EXERCISED AND THAT THE DRILL WAS EVALUATED IN ACCORDANCE WITH THE PREP GUIDELINES.

\_\_\_\_\_  
PRINT NAME

\_\_\_\_\_  
PRINT TITLE

\_\_\_\_\_  
SIGNATURE

\_\_\_\_\_  
DATE

<b>ON-SCENE COMMANDER/QI NOTIFICATION DRILL DOCUMENTATION FORM</b>	
<b>SECTION I: DRILL INFORMATION</b>	
FACILITY NAME: _____ PREPARED BY: _____	
TIME DRILL STARTED: _____	
TIME DRILL COMPLETED: _____	
DATE OF DRILL: _____	
IS DRILL IN CONJUNCTION WITH OTHER EXERCISE?      YES      NO	
IF YES, WHAT TYPE OF DRILL _____	
IS THIS AN EXERCISE OR ACTUAL RESPONSE? _____	
<b>SECTION II: DRILL OBJECTIVES</b>	
CHECK EACH OBJECTIVE DEMONSTRATED DURING THE DRILL.	
DEMONSTRATE THE ACCESSIBILITY AND NOTIFICATION CAPABILITY OF THE:	
_____ QUALIFIED INDIVIDUAL	
_____ MEMBERS OF THE RESPONSE TEAM (OPTIONAL)	
LIST PERSONNEL CONTACTED ON THE ATTACHED SHEET	
DESCRIBE NOTIFICATION PROCEDURE _____	
<b>SECTION III: DRILL EVALUATION &amp; RESULTS</b>	
THE FOLLOWING QUESTIONS WILL BE COMPLETED BY THE DRILL EVALUATOR (A NO ANSWER REQUIRES A COMMENT)	
1. WAS CONTACT MADE WITH THE ON-SCENE COMMANDER/QI OR ALTERNATE WITHIN A REASONABLE PERIOD OF TIME?	
YES    NO	
2. WAS CONTACT MADE WITH THE MAJORITY OF THE RESPONSE TEAM WITHIN A REASONABLE PERIOD OF TIME (OPTIONAL)?	
YES    NO	
EVALUATOR'S SUMMARY (PROVIDE COMMENTS RELATIVE TO OBJECTIVES, LESSONS LEARNED, ISSUES REQUIRING RESOLUTION, ETC.)	
COMMENTS CAN BE PROVIDED BELOW OR AS AN ATTACHMENT:	
Changes to be implemented: _____	
Time table for implementation: _____	
NAME OF EVALUATOR: _____	
<b>ON-SCENE COMMANDER/QI NOTIFICATION DRILL DOCUMENTATION FORM</b>	
<b>SECTION IV: DRILL CERTIFICATION</b>	
I CERTIFY THAT THE DRILL WAS COMPLETED, THAT THE RESPONSE PLAN OBJECTIVES AS INDICATED IN SECTION II WERE EXERCISED AND THAT THE DRILL WAS EVALUATED IN ACCORDANCE WITH THE PREP GUIDELINES.	
_____	_____
PRINT NAME	PRINT TITLE
_____	_____
SIGNATURE	DATE



<b>SPILL MANAGEMENT TEAM TABLETOP EXERCISE DOCUMENTATION FORM</b>	
<b>SECTION I: DRILL INFORMATION</b>	
FACILITY NAME: _____ QUALIFIED INDIVIDUAL: _____	
PREPARED BY: _____	TIME DRILL STARTED: _____
DATE OF DRILL: _____	TIME DRILL COMPLETED: _____
IS DRILL IN CONJUNCTION WITH OTHER EXERCISE?	
	YES    NO
IF YES, WHAT TYPE OF DRILL IS THIS AN EXERCISE OR ACTUAL RESPONSE?	
RESPONSE PLAN SCENARIO USED (CHECK ONE):	
_____ AVERAGE MOST PROBABLE DISCHARGE	
_____ MAXIMUM MOST PROBABLE DISCHARGE	
_____ WORST CASE DISCHARGE	
SIZE OF (SIMULATED) SPILL _____ BBLs/GALS	
ATTACH COPY OF DRILL SCENARIO	
<b>SECTION II: DRILL OBJECTIVES</b>	
CHECK EACH OBJECTIVE DEMONSTRATED DURING THE DRILL	
_____ DEMONSTRATE ABILITY OF RESPONSE TEAM TO ORGANIZE IN ACCORDANCE WITH THE RESPONSE PLAN	
_____ ENSURE EQUIPMENT IS IN PROPER WORKING ORDER	
_____ DEMONSTRATE ABILITY OF RESPONSE PERSONNEL TO DEPLOY AND OPERATE EQUIPMENT	
USE THE INITIAL INCIDENT BRIEFING FORM IN APPENDIX C TO ASSIST IN DOCUMENTING APPROPRIATE DRILL INFORMATION.	
THE FOLLOWING EQUIPMENT MUST BE DEPLOYED. 1000 FEET OF EACH TYPE OF BOOM IN INVENTORY AND ONE OF EACH TYPE OF SKIMMING SYSTEM.	
DESCRIBE GOALS OF EXERCISE (ATTACH LIST OF EQUIPMENT DEPLOYED AND BOOMING STRATEGIES):	
_____	
_____	
LIST EACH TYPE OF EQUIPMENT DEPLOYED, WHERE IT WAS DEPLOYED AND OPERATIONAL STATUS.	
EQUIPMENT TYPE    LOCATION    OPERATIONAL    LIST NO. OF SUPPORT PERSONNEL	
_____	
_____	
_____	
_____ CHE	

**SECTION III: DRILL EVALUATION & RESULTS**

THE FOLLOWING QUESTIONS WILL BE COMPLETED BY THE DRILL EVALUATOR.  
DESCRIBE HOW THE FOLLOWING OBJECTIVES WERE EXERCISED:

1. TEAM'S KNOWLEDGE OF THE RESPONSE PLAN:
  
2. CONDUCTING APPROPRIATE INTERNAL AND EXTERNAL NOTIFICATIONS:
  
3. USE OF COMMUNICATIONS SYSTEM IN SUPPORT OF RESPONSE OPERATIONS:

4. TEAM'S ABILITY TO ACCESS FPL, AGENCY AND CONTRACTED OIL SPILL REMOVAL ORGANIZATIONS (IF APPLICABLE):

5. TEAM'S ABILITY TO COORDINATE SPILL RESPONSE WITH ON-SCENE COMMANDER, AND STATE AGENCIES (IF APPLICABLE):

6. TEAM'S ABILITY TO ACCESS SENSITIVE SITE AND RESOURCE INFORMATION IN THE AREA CONTINGENCY PLAN:

EVALUATOR'S SUMMARY (PROVIDE COMMENTS RELATIVE TO OBJECTIVES, LESSONS LEARNED, ISSUES REQUIRING RESOLUTION, ETC.)

COMMENTS CAN BE PROVIDED BELOW OR AS AN ATTACHMENT:

**Changes to be implemented:  
Time table for implementation:**

NAME OF EVALUATOR: \_\_\_\_\_

**SECTION IV: DRILL CERTIFICATION**

**I CERTIFY THAT THE DRILL WAS COMPLETED, THAT THE RESPONSE PLAN OBJECTIVES AS INDICATED IN SECTION II WERE EXERCISED AND THAT THE DRILL WAS EVALUATED IN ACCORDANCE WITH THE PREP GUIDELINES.**

\_\_\_\_\_  
PRINT NAME

\_\_\_\_\_  
PRINT TITLE

\_\_\_\_\_  
SIGNATURE

\_\_\_\_\_  
DATE

<b>EXERCISE ENTIRE RESPONSE PLAN DOCUMENTATION FORM</b>	
<b>SECTION I: DRILL INFORMATION</b>	
FACILITY NAME:	
PREPARED BY:	
DATE OF DRILL:	
CHECK WHETHER THIS DOCUMENTATION IS IN SUPPORT OF A FACILITY PLAN OR THE CORPORATE PLAN OR BOTH.	
FACILITY: _____	CORPORATE:
<b>SECTION II: DRILL OBJECTIVES</b>	
INDICATE THE DATE EACH OBJECTIVE WAS DEMONSTRATED DURING THE TRIENNIAL PERIOD	
_____ DATE	OBJECTIVES (FACILITY & CORPORATE TEAM)
ORGANIZATIONAL DESIGN	
_____	CONDUCT NOTIFICATIONS
_____	MOBILIZE RESPONSE TEAM
_____	IMPLEMENT UNIFIED COMMAND/RESPONSE MGT. SYSTEM
OPERATIONAL RESPONSE	
_____	STOP DISCHARGE FROM OCCURRING (DISCHARGE CONTROL)
_____	CONDUCT AN ASSESSMENT OF DISCHARGE
_____	DEMONSTRATE DISCHARGE CONTAINMENT
_____	CONDUCT RECOVERY OF SPILLING MATERIAL
_____	DEMONSTRATE PROTECTION OF ECONOMICALLY/ ENVIRONMENTALLY SENSITIVE AREAS
_____	DEMONSTRATE DISPOSAL OF RECOVERED PRODUCT
RESPONSE SUPPORT	
_____	DEMONSTRATE ABILITY TO MAINTAIN/SUPPORT ALL EQUIPMENT
_____	DOCUMENT OPERATIONAL AND SUPPORT ASPECTS OF RESPONSE
(CORPORATE TEAM ONLY)	
_____	ESTABLISH INTERNAL/EXTERNAL COMMUNICATION SYSTEMS
_____	DEMONSTRATE MULTI-MODE TRANSPORTATION SUPPORT
_____	DEMONSTRATE ABILITY TO PROVIDE PERSONNEL SUPPORT
_____	DEMONSTRATE PROCUREMENT OF RESOURCES
USE THE CORPORATE PLAN RESPONSE MANAGEMENT FORMS TO ASSIST IN DOCUMENTING APPROPRIATE DRILL INFORMATION	

**SECTION III: DRILL EVALUATION & RESULTS**

**THE FOLLOWING QUESTIONS WILL BE COMPLETED BY THE DRILL EVALUATOR (A NO ANSWER REQUIRES A COMMENT)**

1. WERE APPROPRIATE INTERNAL AND EXTERNAL NOTIFICATIONS CONDUCTED?

YES NO

2. DID RESPONSE TEAM MOBILIZE TO THE SITE WITHIN A REASONABLE TIME?

YES NO

3. DID THE INCIDENT COMMAND SYSTEM FUNCTION SUCCESSFULLY DURING THE RESPONSE?

YES NO

4. HOW DID THE RESPONSE TEAM DEMONSTRATE DISCHARGE CONTROL?

5. WAS A DETAILED ASSESSMENT OF THE DISCHARGE CONDUCTED?

YES NO

6. WAS ADEQUATE DISCHARGE CONTAINMENT DEMONSTRATED?

YES NO

7. WAS RECOVERY OF SPILLED MATERIAL DEMONSTRATED?

YES NO

8. WERE CONTAINMENT BOOMS PROPERLY PLACED TO PROTECT ECONOMICALLY/  
ENVIRONMENTALLY SENSITIVE AREAS?

YES NO

9. WAS PROPER DISPOSAL OF RECOVERED PRODUCT DEMONSTRATED?

YES NO

10. IS EQUIPMENT PROPERLY MAINTAINED?

YES NO

11. WAS ADEQUATE DOCUMENTATION OF DRILL EVENTS CONDUCTED?

YES NO

12. DID THE COMMUNICATION SYSTEM ADEQUATELY SUPPORT RESPONSE OPERATIONS?

YES NO

13. WERE TRANSPORTATION SUPPORT NEEDS MET?

YES NO

14. WAS ADEQUATE PERSONNEL PROVIDED TO STAFF THE RESPONSE ORGANIZATION?

YES NO

15. HOW DID THE TEAM DEMONSTRATE PROCUREMENT OF RESOURCES?

EVALUATOR'S SUMMARY (PROVIDE COMMENTS RELATIVE TO OBJECTIVES, LESSONS LEARNED, ISSUES REQUIRING RESOLUTION, ETC.)

COMMENTS CAN BE PROVIDED BELOW OR AS AN ATTACHMENT:

**SECTION IV: DRILL CERTIFICATION**

I CERTIFY THAT THE DRILL WAS COMPLETED, THAT THE RESPONSE PLAN OBJECTIVES AS INDICATED IN SECTION II WERE EXERCISED AND THAT THE DRILL WAS EVALUATED IN ACCORDANCE WITH THE PREP GUIDELINES.

\_\_\_\_\_  
PRINT NAME

\_\_\_\_\_  
PRINT TITLE

\_\_\_\_\_  
SIGNATURE

\_\_\_\_\_  
DATE



*[Intentionally Blank]*

**SECTION XIII:****PLAN REVIEW AND UPDATE PROCEDURES**

The Port Manatee Terminal and Pipeline Facility Response Plan will be reviewed and updated (if necessary) a minimum of once per year. This is in addition to the SPCC requirements that require a review and evaluation every five years. In addition, if new or different operating conditions occur or if information is discovered which may substantially affect the implementation of the plan or materially affect the response to a worst case discharge, the plan will be revised within 30 days. Examples of such changes in operating conditions include:

- Applicable regulations are revised;
- Plans fail in an emergency;
- A change in the facility's configuration that materially alters the information included in the response plan occurs [i.e., extension/ replacement of existing pipeline, construction of new storage tank(s) or pipeline(s)];
- The type of oil (oil group) handled, stored, or transferred that materially alters the required response resources changes;
- A change in the name(s) and/or capabilities of the oil spill removal organization occurs;
- A material change in the capabilities of the oil spill removal organization(s) that provide equipment and personnel to respond to discharges of oil;
- A material change in the facility's spill prevention and response equipment or emergency response procedures;
- Any other changes that materially affect the implementation of the response plan; and
- When required by the EPA Regional Administrator.

The plan will also be evaluated after each incident and revised within 30 days, if necessary. Reviews, updates, and maintenance of the plan will be the responsibility of the facility **Oil Spill Coordinator**. All plan holders will be encouraged to submit suggestions for corrections to and/or modifications of this plan directly to the **Oil Spill Coordinator** for plan corrections and distribution.

All revisions to this plan will be distributed to plan holders by cover letter (see Figure XIII-1). The letter and the attached update sheet will instruct the recipient as to which pages to

replace (i.e., the old page should be removed and replaced with the revised page). Each holder of this plan will be instructed to incorporate the changed pages and to review them to ensure that he/she maintains an up-to-date and accurate understanding of the provisions of this plan. Revisions and updates should be recorded by the plan holder on the Record of Revisions page located at the front of the plan.

**FIGURE XIII-1 EXAMPLE OF A REVISION COVER LETTER**

To: \_\_\_\_\_ Date: \_\_\_\_\_  
 From: \_\_\_\_\_ Location: GPA/JB  
 Subject: Response Plan – Transmittal  
 and Receipt Acknowledgement  
 Form 2 – Controlled Document(s)

The following change(s) is issued to the holder of Controlled Copy No. \_\_\_\_\_  
 of the Oil Spill Response Plan for the: \_\_\_\_\_  
 \_\_\_\_\_

Please acknowledge receipt of the attachment(s) by returning this entire transmittal memorandum within fifteen (15) days, signed and dated, to GPA Document Management (GPA/JB).

Receipt of the above-described attachment(s) is hereby acknowledged. The above attachment(s) has been incorporated into Copy No. \_\_\_\_\_ and obsolete and/or deleted materials have been removed and destroyed.

\_\_\_\_\_  
 Signature

\_\_\_\_\_  
 Date

[Intentionally blank]

**APPENDIX A**  
**OIL SPILL EMERGENCY RESPONSE EQUIPMENT**

*[Intentionally Blank]*

**A.1 ORT Response Equipment**

Table A-1 lists the available Oil Spill Response Equipment at the Port Manatee Terminal.

Table A-1								
PORT MANATEE TERMINAL AND PIPELINE OIL SPILL RESPONSE EQUIPMENT								
CONTACT: Rich Sanger				EFFECTIVE DAILY RECOVERY RATE (derated): 1,063 BBLs/day				
Phone #: (941) 776-5235 (Office) (b) (6) (Cell)				CONTAINMENT BOOM: 4,300 FT				
TYPE	QTY	MAKE	MODEL	AGE	LOCATION	DESIGN CAPACITY (GPM)	EFFECTIVE DAILY RATE PER 24 HRS (BBLs)	EQUIPMENT DESIGN
CONTAINMENT								
Containment Boom	700 ft			2012	Conex Box #2			6 inch x 12 inch
Containment Boom	2000 ft			1994	Response Trailer #1 (TMT #3)			6 inch x 12 inch
Containment Boom	1600 ft			1994	Boom Reel mounted on trailer			6 inch x 12 inch
RECOVERY								
Portable Generator	1 unit	Master	MGH 5000 DIE	2005	Terminal Shop / Garage			Gasoline; 5200 W
Portable Generator	1 unit	Porter Cable	BS 1525-W	2008	Terminal Shop / Garage			Gasoline; 5250 W
Portable Generator	1 unit	Honda	Northstar 5500	2012	Response Trailer #4 (TMT#4)			Gasoline; 5500 W
Absorbent Pads	20 bags	AB&B		2006	Conex Box #1			24" x 24"
Absorbent Pads	10 bags	AB&B		2006	Conex Box #1			36" x 36"
Absorbent Rolls	10 Rolls	AB&B		2006	Conex Box #1			4' x 150'
Oil Dry / Absorbent Clay	5 bags	Typical		2012	Response Trailer #4 (TMT#4)			Each container has 15 gallon capacity

Table A-1

**PORT MANATEE TERMINAL AND PIPELINE OIL SPILL RESPONSE EQUIPMENT**

CONTACT: Rich Sanger				EFFECTIVE DAILY RECOVERY RATE (derated): 1,063 BBLs/day				
Phone #: (941) 776-5235 (Office) (b) (6) (Cell)				CONTAINMENT BOOM: 4,300 FT				
TYPE	QTY	MAKE	MODEL	AGE	LOCATION	DESIGN CAPACITY (GPM)	EFFECTIVE DAILY RATE PER 24 HRS (BBLs)	EQUIPMENT DESIGN
Drum Skimmer System	1 unit	Crucial	1D18H-36	2008	Response Trailer #2 (TMT #2)	35 GPM		Drum Skimmer Hoses & Appurtenances Included
Drum Skimmer System	1 unit	Elastec	n/a	2002	Responst Trailer #1 (TMT#1)	120 GPM		Drum Skimmer Hoses & Appurtenances Included
Fast Tank	1 unit	Crucial	CALF-2500	2012	Response Trailer #1 (TMT#1)	2500 GAL	N/A	Aluminum Frame; 2500 GAL Capacity
Fast Tank	1 unit	Crucial	CALF-2500	2008	Response Trailer #2 (TMT#2)	2500 GAL	N/A	Aluminum Frame; 2500 GAL Capacity
Sausage Boom (5 in.)	25 bags			1994	Conex Box #1			40 ft each pkg
Sausage Boom (8 in.)	25 bags			1994	Conex Box #1			100 per pkg
Oil Snare (pom-poms) on a Rope	20 bags	AB&B		1992	Boom House			1 per bag 50 ft rope; 30 snare per rope
Oil Snare (pom-poms)	40 bags	AB&B		1992	Boom House			25 snares per bag
<b>PUMPS</b>								
Diaphragm Pump	1 unit	Sandpiper	S30	2012	Terminal Shop / Garage	235 GPM		3" camlock fittings w/ suction & discharge hoses

Table A-1

### PORT MANATEE TERMINAL AND PIPELINE OIL SPILL RESPONSE EQUIPMENT

CONTACT: Rich Sanger				EFFECTIVE DAILY RECOVERY RATE (derated): 1,063 BBLs/day				
Phone #: (941) 776-5235 (Office) (b) (6) (Cell)				CONTAINMENT BOOM: 4,300 FT				
TYPE	QTY	MAKE	MODEL	AGE	LOCATION	DESIGN CAPACITY (GPM)	EFFECTIVE DAILY RATE PER 24 HRS (BBLs)	EQUIPMENT DESIGN
Dewatering Pump	1 unit	Honda	WB30XT	2012	Response Trailer #4 (TMT#4)	275 GPM		Gasoline, 3" camlock fittings w/ suction & discharge hoses G
Trash Pump #1	1 unit	Robin / CHE	DY35/CHE3 239WH	1992	Terminal Shop / Garage			Diesel, 3" camlock fittings w/ suction & discharge hoses
Trash Pump #2	1 unit	Robin / CHE	DY35/CHE3 239WH	1992	Terminal Shop / Garage			Diesel, 3" camlock fittings w/ suction & discharge hoses
Trash Pump #3	1 unit	Honda	WT30X	2012	Response Trailer #1 (TMT#1)	317 GPM		Gasoline, 3" camlock fittings w/ suction & discharge hoses
Trash Pump #4	1 unit	Honda	WB20XT	2012	Response Trailer #1 (TMT#1)	151 GPM		Gasoline,, 2" camlock fittings w/ suction & discharge hoses
Trash Pump #5	1 unit	Honda	WB20XT	2012	Response Trailer #1 (TMT#1)	151 GPM		Gasoline,, 2" camlock fittings w/ suction & discharge hoses
Trash Pump #6	1 unit	Yanmar / Crucial	L70V-3T	2008	Terminal Shop / Garage			Diesel, 3" camlock fittings w/ suction & discharge hoses

TRANSPORTATION

Table A-1

**PORT MANATEE TERMINAL AND PIPELINE OIL SPILL RESPONSE EQUIPMENT**

CONTACT: Rich Sanger				EFFECTIVE DAILY RECOVERY RATE (derated): 1,063 BBLs/day				
Phone #: (941) 776-5235 (Office) (b) (6) (Cell)				CONTAINMENT BOOM: 4,300 FT				
TYPE	QTY	MAKE	MODEL	AGE	LOCATION	DESIGN CAPACITY (GPM)	EFFECTIVE DAILY RATE PER 24 HRS (BBLs)	EQUIPMENT DESIGN
Boat on Trailer	1 unit	24' Munson			Parking Lot / Yard			150 hp Yamaha V-Max motor
Oil Recovery Barge	1 unit	Munson	VOSS	1993	Parking Lot / Yard	100 BBL		10' x 30', 100 BBL
MISCELLANEOUS								
Anchor w/ Rope & Shackle	20 unit	Typical	N/A	2012	Anchor Storage Shed	N/A	N/A	25 lb Anchor
Oars	2 units	Typical	N/A	2012	Munson Boat	N/A	N/A	Wooden
USCG Throw-Ring with Rope	1 unit	Typical	USCG Approved	2012	Munson Boat Dry-Box (in Terminal Shop / Garage)	N/A	N/A	USCG Approved
Life Jackets	2 units	Standard	USCG Approved	2012	Munson Boat Dry-Box (in Terminal Shop / Garage)	N/A	N/A	USCG Approved
USCG Required Boat Supplies	1 unit	Varies	USCG Approved	2012	Munson Boat Dry-Box (in Terminal Shop / Garage)	N/A	N/A	USCG Approved
Work Gloves	12 pairs			2012	Munson Boat Dry-Box (in Terminal Shop / Garage)			Standard Leather & Cloth
Latex Gloves	50 Pairs			2012	Response Trailer #4 (TMT#4)			Oil resistant rubber
Nitrile Gloves	25 Pairs			2012	Munson Boat Dry-Box (in Terminal Shop / Garage)			Nitrile
Sunblock (Cloths/Wipes)	1 box		SPF30	2012	Munson Boat Dry-Box (in Terminal Shop / Garage)			SPF30
MISCELLANEOUS								
Insect Repellent Wipes	1 box		DEET		Munson Boat Dry-Box (in Terminal Shop / Garage)			DEET
Anchor w/ Ropes & Shackle	1 unit	Typical	N/A	2010	Munson Boat	N/A	N/A	25 lb Anchor

Table A-1

**PORT MANATEE TERMINAL AND PIPELINE OIL SPILL RESPONSE EQUIPMENT**

CONTACT: Rich Sanger				EFFECTIVE DAILY RECOVERY RATE (derated): 1,063 BBLs/day				
Phone #: (941) 776-5235 (Office) (b) (6) (Cell)				CONTAINMENT BOOM: 4,300 FT				
TYPE	QTY	MAKE	MODEL	AGE	LOCATION	DESIGN CAPACITY (GPM)	EFFECTIVE DAILY RATE PER 24 HRS (BBLs)	EQUIPMENT DESIGN
Anchor w/ Ropes & Shackles	20 units	Typical	N/A	2012	Anchor Storage Shed	N/A	N/A	25 lb Anchors
Anchor Buoys	20 units	Typical	N/A	2012	Anchor Storage Shed	N/A	N/A	Spherical Flotation
Anchor Buoy Lights	20 units	Typical	N/A	2012	Response Trailer #4 (TMT#4)	N/A	N/A	Waterproof
Oars	2 units	Typical	N/A	2012	Munson Boat	N/A	N/A	Wooden
USCG Throw Ring with Rope	1 unit	Typical	USCG Approved	2012	Munson Boat Dry-Box (in Terminal Shop / Garage)	N/A	N/A	USCG Approved
Life Jackets	2 units	Standard	USCG Approved	2012	Munson Boat Dry-Box (in Terminal Shop / Garage)	N/A	N/A	USCG Approved
USCG Required Boat Supplies	1 unit	Varies	USCG Approved	2012	Munson Boat Dry-Box (in Terminal Shop / Garage)	N/A	N/A	USCG Approved
Work Gloves	12 pairs				Munson Boat Dry-Box (in Terminal Shop / Garage)			Standard Leather & Cloth
Sunblock (Cloths/Wipes)	1 box				Munson Boat Dry-Box (in Terminal Shop / Garage)			
Insect Repellent Wipes	1 box				Munson Boat Dry-Box (in Terminal Shop / Garage)			
Life Jackets	12 units	Standard	USCG Approved	2005	Response Trailer #4 (TMT#4)	N/A	N/A	USCG Approved
Nylon Rope	1 spool	Typical	N/A	2012	Response Trailer #1 (TMT #1)	N/A	N/A	1/2 inch dia.; 500 ft
Squeegees	4 units	Typical	N/A	2012	Response Trailer #4 (TMT #4)	N/A	N/A	Rubber w/ Wood Handle
Hard Bristle Push Brooms	4 units	Typical	N/A	2012	Response Trailer #4 (TMT #4)	N/A	N/A	Typical

Table A-1

### PORT MANATEE TERMINAL AND PIPELINE OIL SPILL RESPONSE EQUIPMENT

CONTACT: Rich Sanger				EFFECTIVE DAILY RECOVERY RATE (derated): 1,063 BBLs/day				
Phone #: (941) 776-5235 (Office) (b) (6) (Cell)				CONTAINMENT BOOM: 4,300 FT				
TYPE	QTY	MAKE	MODEL	AGE	LOCATION	DESIGN CAPACITY (GPM)	EFFECTIVE DAILY RATE PER 24 HRS (BBLs)	EQUIPMENT DESIGN
Hard Bristle Scrub Brushes	2 units	Typical	N/A	2012	Response Trailer #4 (TMT #4)	N/A	N/A	Typical
Wheelbarrow w/ No-Flat Wheel	1 unit	Typical	N/A	2012	Terminal Shop / Garage	N/A	N/A	Typical
Oil Spill Trash Bags	2 boxes	Standard	N/A	2012	Response Trailer #4 (TMT #4)	N/A	N/A	36 in x 60 in x 6ml; 50 bags per box
Contractor Trash Bags	3 boxes			2012	Response Trailer #4 (TMT #4)			24 bags per box
Work Gloves	12 pairs	Typical	N/A	2012	Response Trailer #4 (TMT #4)	N/A	N/A	Standard Leather & Cloth
Latex Gloves	50 pairs	Typical	N/A	2012	Response Trailer #4 (TMT #4)	N/A	N/A	Oil Resistant Rubber
Nitrile Gloves	25 pairs			2012	Response Trailer #4 (TMT #4)			Nitrile
Rags	2 bags	Typical	N/A	2008	Response Trailer #4 (TMT #4)	N/A	N/A	60 per bag
Tyvek Suits	3 boxes	Tyvek	N/A	2012	Response Trailer #4 (TMT #4)	N/A	N/A	25 suits per box
Boots (safety toe)	10 pairs	Typical	N/A	2012	Response Trailer #4 (TMT #4)	N/A	N/A	Oil Resistant Rubber
First Aid Kits	2 units	Standard	USCG Approved	2012	Response Trailer #4 (TMT #4)	N/A	N/A	USCG Approved
Sunblock (Cloths/Wipes)	1 box	Typical	SPF 30	2012	Response Trailer #4 (TMT #4)	N/A	N/A	50 wipes per box
Insect Repellent Wipes	1 box	Typical			Response Trailer #4 (TMT #4)	N/A	N/A	50 wipes per box
Shovels (Flat)	4 units	Typical	N/A	2012	Response Trailer #4 (TMT #4)	N/A	N/A	Flat Head w/ Wooden Handle
Shovels (Spade)	4 units	Typical	N/A	2012	Response Trailer #4 (TMT #4)			Spade Head w/ Wooden Handle

Table A-1

**PORT MANATEE TERMINAL AND PIPELINE OIL SPILL RESPONSE EQUIPMENT**

CONTACT:	Rich Sanger	EFFECTIVE DAILY RECOVERY RATE (derated):	1,063 BBLs/day
Phone #:	(941) 776-5235 (Office) (b) (6) (Cell)	CONTAINMENT BOOM:	4,300 FT

TYPE	QTY	MAKE	MODEL	AGE	LOCATION	DESIGN CAPACITY (GPM)	EFFECTIVE DAILY RATE PER 24 HRS (BBLs)	EQUIPMENT DESIGN
Rakes	4 units				Response Trailer #4 (TMT #4)			Steel Head w/ Wooden Handle
Pitch Forks	4 units				Response Trailer #4 (TMT #4)			
Steel Headed Picks	2 units				Response Trailer #4 (TMT #4)			Steel Head w/ fiberglass handle
Pump Sprayers	4 units				Response Trailer #4 (TMT #4)			Pump Sprayers for cleanup use
Degreaser	2 units	Zep			Response Trailer #4 (TMT #4)			10 gallons ea.
Buckets	5 units	Typical	N/A	2008	Response Trailer #4 (TMT #4)	3 gallon	N/A	Plastic
Duck Tape	1 case	Typical	N/A	2012	Response Trailer #4 (TMT #4)	N/A	N/A	24 rolls per case
Zip Ties	2 bags	Typical	N/A	2012	Response Trailer #4 (TMT #4)	N/A	N/A	500 per bag
Poly Sheeting (Visqueen)	6 rolls				Response Trailer #4 (TMT #4)			100 ft per roll

**Notes:**

SWS Environmental First Response is the Manatee Terminal's primary OSRO. Their response time to the site is approximately 2 hours.

Other certified OSRO may be called to respond to larger spills. See telephone numbers in Emergency Notification Phone List (Table II-3) of this plan for details of the name of the OSRO's that will respond in the event of an oil spill.

OSRO: Oil Spill Response Organization.

The Terminal uses Channel(s) 1 and/or 2 on their two-way radios for operations and maintenance communication.

Equipment and tanks are inspected periodically: informal inspections are conducted daily and formal recorded inspections are conducted monthly. The spill response equipment is monitored monthly. After the inspection, action items will be reviewed with Terminal Manager and records will be maintained at the Terminal.

Response Equipment List and Location (see Figure II-8).



## A.2 CRT Response Equipment

Refer to Appendix C of the corporate plan for Level II and Level III (worst case discharge equipment)

Table A.2 lists the CORST response equipment available as of December 20, 2011.

TABLE A.2			
LIST OF COSRT RESPONSE EQUIPMENT			
Location	Type	Equipment Design	Quantity
Box No. 1	Containment	Boom 36"	900 ft.
Box No. 2	Recovery	Drum Skimmer, 4 head floating	1 unit
	Recovery	Hose 2" discharge w/cam-lock fittings	125 ft
	Recovery	Hydraulic hose/pump	4 units
	Recovery	Drum Skimmer, 2 head floating	1 units
Box No. 3	Recovery	Hose 2" discharge w/cam-lock fittings	425 ft
	Recovery	Drum Skimmer, 2 head floating	1 unit
	Recovery	Drum Skimmer, power packs	4 units
Box No. 4	Recovery	Hose 3" suction w/cam-lock fittings	1050 ft
	Recovery	Lapio pump, w/power pak/200ft hydr. Hose	2 units
Box No. 5	Recovery	Hose 2" suction w/cam-lock fittings	100 ft
	Recovery	Rope Mop Skimmer, Verticale/2-4in. Ropes/power pak/hydr hoses	2 units
Box No. 6	Recovery	Floating Bladder, 2500 gal.	1 unit
	Recovery	Rope Mop Skimmer, Vertical-w/power pak/hydr hoses	2 units
	Recovery	Hose 2" suction w/cam-lock fittings	200 ft
Box No. 7	Recovery	Floating Bladder, 2500 gal.	2 unit
	Recovery	Hose 3" suction w/cam	400 ft

<b>TABLE A.2</b>			
<b>LIST OF COSRT RESPONSE EQUIPMENT</b>			
<b>Location</b>	<b>Type</b>	<b>Equipment Design</b>	<b>Quantity</b>
	Recovery	Portable Oil Bladder 2500 gal	1 unit
	Recovery	Hose 4" suction w/cam- lock fittings	100 ft
	Recovery	Hose 2" suction w/cam- lock fittings	350 ft
Box No. 8	Recovery	3" discharge w/cam-lock fittings	2050 ft
Box No. 9	Recovery	Hose 2" discharge w/cam-lock fittings	1700 ft
	Recovery	Hose 4" discharge w/cam-lock fittings	475 ft
	Recovery	Hose 4" suction w/cam- lock fittings	200 ft
Box No. 10	Containment	Boom 18"	500 ft.
	Containment	Boom LAPIO 10'	500 ft.
	Containment	Boom 36"	400 ft.
Box No. 11	Containment	Boom 18"	2000 ft.
Box No. 12	Containment	Boom 18"	1900 ft.
Box No. 13	Containment	Boom 18"	1900 ft.
Box No. 14	Containment	Boom 18"	2000 ft.
Box No. 15	Containment	Boom 18"	2100 ft.
Box No. 16	Containment	Boom 36"	900 ft.
Box No. 17	Containment	Boom 36"	900 ft.
Box No. 19	Containment	Boom 36"	900 ft.
Box No. 20	Miscellaneous	Anchors	48 units
	Miscellaneous	Buoys	72 units
	Miscellaneous	Anchors / Chains / Rope	48 units
Box No. 21	Miscellaneous	Anchors	48 units
	Miscellaneous	Anchors / Chains / Ropes	48 units
	Miscellaneous	Buoys	71 units
Box No. 22	Miscellaneous	Anchors	46 units
	Miscellaneous	Anchors / Chains / Ropes	46 units
	Miscellaneous	Buoys	71 units
Box No. 23	Recovery	Davits for Voss Barge	2 sets

<b>TABLE A.2</b>			
<b>LIST OF COSRT RESPONSE EQUIPMENT</b>			
<b>Location</b>	<b>Type</b>	<b>Equipment Design</b>	<b>Quantity</b>
	Recovery	Voss Barge Boom	3 sets
Box No. 24	Consumable	Snare on a Rope	112 bags
	Consumable	Sorbent Boom, 4" x 10"	12 bales
Box No. 25	Consumable	Sorbent Boom, 8" x 10'	76 bales
	Consumable	Sorbent Boom, 6" x 10'	55 bales
Box No. 26	Consumable	Absorbent Pads, 36 in x36 in,	76 bales
	Consumable	Snare	120 bags
	Consumable	Peat Moss	15 bags
	Consumable	Absorbent Pad Roll Large	33 rolls
	Consumable	Absorbent Pad Roll small	5 rolls
Box No. 27	Consumable	Adsorbent Pads, 18 in x 18 in, 100 pads/bale	587 bales
	Consumable	Snare on a Rope	28 bags
Box No. 28	Consumable	Sorbent Boom, 4" x 10'	137 bales
	Consumable	Sorbent Boom, 5" x 10'	108 bales
Trailer No. 9708	Safety	Tyvek Suit, Extra Large	225 units
	Safety	Tyvek Suit, Large	50 units
	Miscellaneous	Anchor Rope	2 units
	Miscellaneous	Cam - Lok 1 1/2 " Male x 1 1/2"Male NPT	10 units
	Miscellaneous	Cam-Lok 1 1/2 " female x 1 1/2 " Male NPT	10 units
	Miscellaneous	Buoys Ball	7 units
	Miscellaneous	Bouys Light	34 units
	Miscellaneous	Bug Spray	3 units (cans )
	Miscellaneous	Boom Pin	173 count
	Tool	Bolt Cutter 48"	6 units
	Tool	Bolt Cutter 18"	4 units
	Miscellaneous	Bladder Valve 3"	2 units
	Miscellaneous	Barracade Lights	7 units
	Miscellaneous	Air Fitting 3/4" Elbow	21 units
	Miscellaneous	Anchor Rope	10 units

TABLE A.2

## LIST OF COSRT RESPONSE EQUIPMENT

Location	Type	Equipment Design	Quantity
	Safety	Air Bottle	8 units
	Pump	Air operated Pumps	3 units
	Miscellaneous	Air Fitting Air King Safty Clip	50 units
	Miscellaneous	Air Fitting 4"female NPT Ball Valve	2 unit
	Miscellaneous	3"x6" nipple NPT	26 units
	Miscellaneous	Air Fitting 3/4"male NPT	20 units
	Miscellaneous	1 1/2"x6" nipple NPT	8 units
	Miscellaneous	Air Fitting 3/4" Female NPT	4 units
	Miscellaneous	Air Fitting 3/4 " Female	23 units
	Miscellaneous	2"x6" nipple NPT	21 units
	Miscellaneous	3/4" NPT nipple	19 units
	Miscellaneous	Anchor shackles	500 units
	Recovery	Portable Tank 2500 gal	1 unit
	Miscellaneous	Tow Bridle, 18"	7 units
	Safety	Respirator, Umbilical	1 unit
	Safety	Respirator, Self Contained	4 units
	Safety	Respirator	12 units
	Safety	Rain Gear Large/Disposable	288 units
	Safety	Rain Gear Trousers	116 units
	Safety	Rain Gear Jackets	125 units
	Miscellaneous	Pump Strainer 3"	6 units
	Miscellaneous	Rope, 3/8" Poly 600'	1 unit
	Miscellaneous	Nylon Velcro Strap	48 units
	Tool	Pipe Wrench 24"	4 units
	Tool	Pipe Vice	1 unit
	Tool	Pipe Threader	3 sets
	Tool	Pipe Reemer	2 units
	Tool	Pipe Cutter	3 units
	Miscellaneous	Power Cord	24 units
	Miscellaneous	Lighted Buoy	4 units

<b>TABLE A.2</b>			
<b>LIST OF COSRT RESPONSE EQUIPMENT</b>			
<b>Location</b>	<b>Type</b>	<b>Equipment Design</b>	<b>Quantity</b>
	Miscellaneous	Tow Bridle, 18"	3 units
	Miscellaneous	Tow Bridle, 18" floating	2 units
	Miscellaneous	Oil 2 Cycle	7 pints
	Tool	Squeegee, 24"	13 units
	Miscellaneous	Cam-lok 3" Male x 3" NPT	37 units
	Miscellaneous	Cam-Lok 3" Male x 3" Male	21 units
	Tool	Sledge Hammer, 16lb.	3 units
	Miscellaneous	Rope, 3/4" Nylon 500'	1 unit
	Miscellaneous	Lifting Strap	8 units
	Safety	Tyvek Suit, Medium	100 units
	Safety	Signal Wand	64 units
	Tool	Shovel, Square Point	104 units
	Safety	Safety Glasses	160 pairs
	Safety	Rubber Gloves	51 pairs
	Miscellaneous	Light Stand	4 units
	Miscellaneous	Light Stick	7 units
	Miscellaneous	Rope, 1/2" Poly 600'	5 units
	Safety	Life Vest	64 units
	Miscellaneous	Ball Valve 3"	7 units
	Miscellaneous	4" female T	8 units
	Miscellaneous	Bouy Light	8 units
	Miscellaneous	Cam-Lok 4" cap	28 units
	Miscellaneous	Cam-Lok 4" plug	31 units
	Miscellaneous	Tackle for bolcks	4 units
	Miscellaneous	Blocks	16 units
	Safety	Rubber Boots	107 pair
	Recovery	Dip Net	3 units
	Safety	Fire Extinguisher	8 units
	Recovery	Weir Skimmer, Flex Ray	1 units
	Miscellaneous	Water Cooler, 10 gal	4 units
	Miscellaneous	Visqueen, 6mm x 20' x 100'	10 rolls

<b>TABLE A.2</b>			
<b>LIST OF COSRT RESPONSE EQUIPMENT</b>			
<b>Location</b>	<b>Type</b>	<b>Equipment Design</b>	<b>Quantity</b>
	Miscellaneous	Hose Floats	40 units
	Miscellaneous	Cam-Lok 2" Female x 1 1/2" Male	14 units
	Safety	Hard Hat	119 units
	Miscellaneous	Cam-Lok 2" Female x 2" Female	8 Units
	Miscellaneous	Hammer Drill	2 units
	Safety	Gloves	605 pairs
	Safety	Flash Light, Intrinsically Safe	11 units
	Tool	Wrench, chain	4 units
	Recovery	Rope Mop Pulley, FPN 16	2 units
	Miscellaneous	Extension cord- 100' 12 ga.	2 units
	Recovery	Rake	24 units
	Safety	Insect Repellent	24-6oz cans
	Safety	SunScreen	16-4oz cans
	Miscellaneous	Hand Wipes	10 units
	Miscellaneous	Rope, 1/4" 600'	10 units
	Miscellaneous	Rope, 1/2" Nylon 600'	3 units
	Miscellaneous	Rope, 3/8" Nylon 600'	1 units
	Miscellaneous	1 1/2 Ton Shackle	37 units
	Miscellaneous	Ball Valve 4" PVC	4 units
	Miscellaneous	Tite Seal, pipe dope	6 cans
	Miscellaneous	Ball Valve Brass	2 units
	Recovery	Rope Mop Pulley, FP 12	2 units
	Tool	Tool Kit, 104 piece	1 unit
	Safety	Safety Vest	20 units
	Safety	Hand Lights	45 units
	Miscellaneous	4"x6" nipple NPT	10 units
	Miscellaneous	Cam-Lok 3" Male x 2" Male	12 units
	Recovery	Drum Liners, 150 count	2 boxes

<b>TABLE A.2</b>			
<b>LIST OF COSRT RESPONSE EQUIPMENT</b>			
<b>Location</b>	<b>Type</b>	<b>Equipment Design</b>	<b>Quantity</b>
	Miscellaneous	Cam-Lok 4" Female x 2" Male	16 units
	Safety	Hard Hat Light	188 units
	Miscellaneous	Cam-Lok 2" Male x 2" Male NPT	38 units
	Miscellaneous	Cam-Lok 1 1/2" Male x 1 1/2" Female NPT	10 units
	Miscellaneous	Cam-Lok 2" Male x 2" Female NPT	25 units
	Miscellaneous	Cam-Lok 2" Male x 1 1/2" Male	15 units
	Miscellaneous	3" plug x 2" female NPT	15 units
	Miscellaneous	4" plug x 3" female NPT	14 units
	Miscellaneous	3" coupling	16 units
	Miscellaneous	Cam-Lok 2" Female x 2" Male	8 units
	Miscellaneous	Cam-Lok 3" Female x 2" Female	3 units
	Miscellaneous	Cam-Lok 1 1/2" x 1 1/2" Female NPT	1 units
	Miscellaneous	Cam-Lok 4" Female x 3" Male NPT	37 units
	Miscellaneous	Cam-Lok 3" Female x 2" Male	6 units
	Miscellaneous	Cam-Lok 3" Female x 3 Male NPT	24 units
	Miscellaneous	Cam-Lok 4" Male x 4" Male NPT	21 units
	Miscellaneous	Cam-Loc 4" Plug	31 units
	Miscellaneous	Cam-Loc 4" Cap	30 units
	Miscellaneous	Cam-Lok 3" Cap	26 units
	Miscellaneous	Cam-Lok 2" Cap	21 units
	Miscellaneous	Cam-Lok 3" Plug	23 units
	Miscellaneous	Cam-Lok 2" Plug	14 units
	Miscellaneous	2" plug x 1 1/2" female NPT	3 units
	Miscellaneous	Cooler/Cup Holder	9 units

<b>TABLE A.2</b>			
<b>LIST OF COSRT RESPONSE EQUIPMENT</b>			
<b>Location</b>	<b>Type</b>	<b>Equipment Design</b>	<b>Quantity</b>
	Miscellaneous	2" female T	4 units
	Miscellaneous	Cam-Lok 6" Female x 4" Male	4 units
	Miscellaneous	Cam-Lok 4" Female x 3" Male	2 units
	Miscellaneous	Cam-Lok 6" Male x 4" Female	3 units
	Tool	Chain Saw (electric)	1 unit
	Miscellaneous	Cam-Lok 3" Female x 2" Female NPT	7 units
	Miscellaneous	Cam-Lok 4" Male x 3"	19 units
	Miscellaneous	Cam-Lok 4" Male x 2" Female	19 units
	Miscellaneous	Cam-Lok 3" Male x 2" Female	12 units
	Miscellaneous	Drinking Cups	31 Boxes
	Miscellaneous	Cam-Lok 3" Female x 3" Female	6 units
	Miscellaneous	Cam-Lok 4" Female x 3" Female	13 units
	Miscellaneous	Cam-Lok 4" Female x 3" Female NPT	5 units
	Miscellaneous	4" plug x 2" female NPT	15 units
	Miscellaneous	3" female T	10 units
	Miscellaneous	Cam-Lok 4" Female x 4" Female NPT	10 units
	Miscellaneous	Cam-Lok 3" Female x 3" Female NPT	1 units
Trailer No. 9717	Containment	Boom 18"	3500 ft.
Trailer No. 9722	Containment	Boom 36"	1000 ft.
Trailer No. 9722	Containment	Boom 18"	300 ft.
Trailer No. 9723	Containment	Boom 18"	1900 ft.
OSR Building	Miscellaneous	Cut Thru (degreaser)	3 55 gal. Drums
	Recovery	Voss Barge Arms	2 sets
	Tool	Shovel, Square Point	165 units
	Tool	Welder	1 unit
	Recovery	VOSS Barge	2 units



*[Intentionally Blank]*

**APPENDIX B**  
**AMENDMENTS**

*[Intentionally Blank]*

**INSERT AMENDMENTS**

**APPENDIX C**  
**INSPECTION FORMS**

**[Intentionally Blank]**

## **FLORIDA POWER AND LIGHT COMPANY CONTAINER INSPECTION REPORTS**

The largest volume of petroleum products used at the FPL Plants and Terminals is received in bulk, and stored in large-capacity, aboveground storage tanks. Other oils, additives, solvents, and lubricants are typically received in 55-gallon drums or smaller containers. As part of the Spill Prevention, Control, and Countermeasures (SPCC) requirements, scheduled inspection of all containers is important to prevent a potential spill. Therefore, the following inspection procedures have been formulated:

1. When a full drum of oil is trucked, unloaded, and moved to the storage site (drum rack) inside the plant/terminal, it shall be inspected for leaks and shipment damage (dents) by all employees who handle it.
2. A visual inspection of all drum storage areas and drum racks shall be conducted weekly. Braces and supports shall be inspected for cracks or failures. The surrounding areas shall also be inspected to verify that no drums are slowly leaking and that any spilled oil has been cleaned up. The hazardous-waste coordinator shall maintain a record of such inspections. Sample inspection logs follow.

TASK: INSPECTION OF PRODUCT DISPENSING AREA-1X/WK

Legend: Y=yes, N=no

Month \_\_\_\_\_

Inspection Items	WEEK			
	1	2	3	4
Are drum bungs and tops secured?				
Are incompatible products stored separately?				
Are drums in good condition?				
Is aisle space available?				
Are warning signs posted?				
Are drums labeled with vendor name, product content, appropriate hazard warnings?				
Are in-use flammable product drums grounded?				
Is the storage area protected from rain?				
Is general housekeeping in order?				
For inside stoarge of chemicals, is ventilation sufficient?				
Inspected by:				
Date:				

TASK: INSPECTION OF WASTE STORAGE FOR DISPOSAL AREA-ONCE EVERY 7 DAYS

Legend: Y=yes, N=no

Month \_\_\_\_\_

Inspection Items	WEEK			
	1	2	3	4
Are drum bungs and tops secured?				
is unknown waste sampled, and stored separately?				
Are incompatible wastes stored separately?				
Are drums in good condition? (no dents, bulges,leaks,rusted?)				
Is aisle space available?				
Are warning signs posted?				
Are drums labeled with hazardous waste label? Accumulation start or sample date?				
Are flammable waste drums grounded?				
Have all drums been stored for less than 60 days?				
Has the area been inspected in the last 7 days?				
Is the storage area protected from rain?				
Is spill equipment available?				
Is a fire extinguisher available?				
Is general housekeeping in order?				
Are ignitable and reactive wastes stored > 50ft inside property line?				
Are all waste accumulated in D.O.T. approved containers?				
Is waste stored in bulk quantities secured?				
Does inventory of spill equip. match quantities specified in contingency plan?				
Are braces and supports on drum racks free of cracks and failures?				
Inspected by:				
Date:				

TASK: INSPECTION OF SATELLITE ACCUMULATION AREA-1X/WK

Legend: Y=yes, N=no

Month \_\_\_\_\_

Inspection Items	WEEK			
	1	2	3	4
Are all drums marked with waste type?				
Are all drums locked?				
Are drums in good condition?(not leaking, not badly rusted,not bulging or dented?)				
Do drums have containment?				
Are warning signs posted?				
Are incompatible wastes separated?				
Are drums with flammable liquids grounded?				
Are flammable waste products grounded?				
Is waste accumulated in D.O.T. approved containers?				
Is general housekeeping in order?				
Inspected by:				
Date:				

TASK: INSPECTION OF SURFACE IMPOUNDMENT AREA-1X/WK

Legend: Y=yes, N=no

Month \_\_\_\_\_

Inspection Items	WEEK			
	1	2	3	4
Are all fences and gates surrounding the impound secure and intact?				
Does each basin have at least two feet of freeboard?				
Is the level of solids in the basins used for the collection of solids acceptable?				
Are all basins free of oil and/or oil sheen?				
Are the surrounding grounds mowed to assist inspection?				
Are the surrounding ground and dikes free of erosion?				
Are pumps operating satisfactorily( ie no packing leaks)?				
If mixers are present are they operational?				
Is general housekeeping in order? (no rags trash etc)				
Are basins and dikes free from severe erosion or other signs of deterioration?				
Inspected by:				
Date:				

**FLORIDA POWER AND LIGHT COMPANY**  
**STORAGE TANK AND PIPING INSPECTION PROCEDURE**

All storage tanks, piping, joints, valve glands and bodies, pipeline supports, metal surfaces, and other aboveground equipment and facilities for transporting or holding oil will be visually checked by each employee as he pursues his daily work. Any and all discrepancies will be reported immediately to the appropriate supervisor.

A detailed and specific visual check of each storage tank system (as indicated above) will be made monthly and records of these inspections will be maintained at the facility. An example storage tank and piping inspection record is attached.

### FPL - STORAGE TANK AND PIPING INSPECTION RECORD

MONTHLY INSPECTION (not to exceed 35 days)	DATE: _____						
INSPECTION ITEMS LEGEND: Y = YES, N = NO	TANK #	TANK #	TANK #	TANK #	TANK #	TANK #	TANK #
<b>PIPING COMPONENTS</b>							
Is the piping & components (valves, pumps, flanges, etc.) free of leaks, ruptures, or corrosion?							
Is the piping properly aligned and are supports/foundations and piping in good condition?							
<b>SECONDARY CONTAINMENT SYSTEM</b>							
Is the secondary containment system in good condition & free of oil or sheen & excessive rainwater?							
For double bottom or double-walled tanks, is the interstitial space free of product?							
<b>STORAGE TANK COMPONENTS</b>							
Are the level controls, alarms, and in-line equipment operating properly?							
Is the tank free of leaks, shell distortions, corrosion, cracks, wetting, discoloration, blistering or signs of settlement?							
Is the tank exterior coating (paint) in good condition?							
Is the tank foundation/supports in good condition?							

**Comments:** \_\_\_\_\_  
 \_\_\_\_\_

**SIGNATURE OF INSPECTOR OR SUPERVISOR:** \_\_\_\_\_

**FLORIDA POWER AND LIGHT COMPANY  
INSPECTION PROCEDURE  
DIKE DRAINAGE**

All storage tank dike field areas will be inspected weekly for water collection and after each rainfall event. Collection of water at the drainpipe inlet or diked area low point of a depth greater than 1 foot will necessitate drainage. Prior to drainage, the water will be carefully inspected for an oil sheen, which is defined as an iridescent appearance on the surface. If a sheen is observed, it will be reported to the oil spill coordinator for appropriate action prior to drainage. Action taken by the coordinator will be noted in the record. If there is not a sheen, the valve will be fully opened or the pump started. The dike field area will be checked periodically during the time it takes to drain the area. When empty, the valve will be immediately closed or the pump stopped. Appropriate record entries will be completed as shown on the example form on the next page.



**FLORIDA POWER AND LIGHT COMPANY**  
**API STANDARD 653 STORAGE TANK INSPECTION PROCEDURE**

All field-erected aboveground storage tanks are inspected in accordance with API Standard 653. This standard covers carbon and low alloy steel tanks built to API Standard 650 and its predecessor 12C. This standard provides recommended practices for the maintenance inspection, repair, alteration, relocation, and reconstruction of such tanks.

As part of the API 653 evaluation, a detailed report documenting the condition of each tank is provided and an appropriate re-inspection interval is established based on the API 653 Standard. Any necessary repairs are made prior to the tank being returned to service.

**APPENDIX D**  
**COMMUNICATIONS PLAN**

[Intentionally Blank]

## APPENDIX D: COMMUNICATIONS PLAN

### D.1 GENERAL

In the event of a Level I incident, adequate communications systems are available at the site. If necessary, additional resources can be provided by FPL's Telecommunications and Technology Department. In the event of a level II or III incident, a communications network will be established by Telecommunications and Technology that will link the command post(s) to all field operations (e.g., land, sea and air) to facilitate operations. This network will include land mobile radio, cellular telephone, and conventional telephone service as appropriate.

Table D-1 provides telephone numbers of Telecommunications Department personnel who are available to assist any FPL facility should the need arise. Figure D-1 identifies the Radio Supervisors by region and indicates various radio shop locations within the FPL system.

### D.2 LAND MOBILE RADIO

Handheld radios will be issued to members of the Onsite Response Team and Corporate Response Team, as appropriate, by the Communications Unit Leader. Radio communications will be established in the VHF band.

FPL's plant radio communications infrastructure utilizes power utility band conventional VHF systems at all the fossil plants with the exception of PFL, which uses a conventional UHF system, and PTF, which shares PTN's 900 MHz trunking system. The FPL VHF plant radio communications infrastructure will be used for response operations where practical and available.

**Table D-1**  
**TELECOMMUNICATIONS PHONE NUMBERS**

NAME	LOCATION	PHONE NUMBER	FPL TELPAGE PAGER NUMBER
Dave Gutierrez	State Wide Operations	(b) (7)(F), (b) (3) (305) 863-4010 Miami Office (561) 640-2479 WPB Office	(b) (7)(F), (b) (3)

### **D.3 CELLULAR TELEPHONE**

Telecommunications maintains a ready-for-service stock of cellular telephones available for any type emergency. During a level II or III response, cellular telephones will be used to augment communications depending on the number of stationary telephones at the site.

Cellular telephones may also be used in response operations; however, land mobile radio will be established as the primary communications method between members of the Onsite Response Team.

### **D.4 WIRELINE TELEPHONES**

Additional telephone lines will be established at the facility depending on the number of Corporate Response Team personnel mobilized to the site. The Communications Unit Leader will oversee the establishment of wireline telephone services if/as required.

### **D.5 EMERGENCY RESPONSE VEHICLE**

Telecommunications will provide an Emergency Response Vehicle (ERV) with support equipment to be used as a communications command post. This ERV can be fully deployed to anywhere within FPL's service territory within 6 hours from notification. It is fully equipped with complete land mobile radio, cellular telephone, and wireline telephone subsystems as well as programmable and tunable radio equipment for communications with outside agencies.

#### **D.5.1 EMERGENCY RESPONSE VEHICLE SPECIFICATIONS**

Florida Power & Light's Emergency Response Vehicle (ERV) is a 34' Bluebird motor home that has been outfitted as a fully contained communications command post. Its capabilities include:

##### **Living Accommodations:**

- Kitchenette, Including electric range, microwave, refrigerator, ice maker.
- Dining Table, seats 4.
- Sofa, seats 3.
- 2 worktable/desk positions.
- Bathroom, including toilet, lavatory & shower.
- 2 Convertible beds.

##### **Power:**

- Self contained - 15 KW diesel generator
- 120 & 240 VAC

**Radio Capabilities:**

- VHF LOW/VHF HIGH/UHF programmable base station, capable of being programmed for use with FPL's system or multiple "Foreign" systems, such as: Municipal, county, state & federal agencies, the military, other utilities, amateur radio operators, etc.
- Various radio repeater facilities as required, including: VHF and UHF FM repeaters configured on various FPL frequencies and containing "autopatch" telephone interconnect capabilities.
- Programmable multi-frequency VHF and UHF hand-held radios. These radios can be programmed at the site at a moment's notice for communications within FPL as well as with outside agencies.
- Paging capabilities including alphanumeric or digital pagers via a transmitter and an independent terminal. Access is made through phone lines or local AlphaMate alphanumeric terminal.
- High Frequency Automatic Link Establishment (HF/ALE) equipment capable of medium to long range communications with the General Office and other entities with HF/ALE capability such as the Nuclear Regulatory Commission (NRC).

**Telephone Capabilities:**

- A 16 line electronic telephone system which provides access to the Public Switched Telephone Network (PSTN) and FPL's Intelligent Tandem Network (ITN). This access can be made through any combination of 960 MHz links, cellular telephone, and direct wireline connections.
- A portable VSAT telephone system for telephone connection via satellite. This system will be used when connections to the PSTN or FPL's ITN are not available, practical, or reliable.
- Hand-held and portable cellular telephone equipment
- FAX machine
- Television Capabilities:
- Self-contained Television Receive-only (TVRO) satellite antenna system for CNN, The Weather Channel, etc.

**Computing Capabilities:**

(b) (7)(F), (b) (3)

**D.5.2 CONSTRUCTION/TOW VEHICLE**

This vehicle is capable of towing any of the trailers described below. It contains a concrete saw, a large drill press, and all of the large tools and hardware necessary for erection of towers as well as a portable AC generator.

### **D.5.3 MOBILE REPEATER TRAILER**

The mobile repeater trailer has outdoor weatherproof cabinets used to mount various configurations of radio equipment used with deployable radio systems. This trailer also carries a 6 KW propane generator. It weighs 1,500 lbs, its overall length is 20', and uses a standard 2" pintle hook to attach to the towing vehicle.

### **D.5.4 MATERIAL/WORK TRAILER**

The material/work trailer is a 8' H, 8' W, 16' D enclosed trailer. It can be used as a lockable material shelter and/or small radio maintenance shop. This trailer weighs 4,500 lbs, its overall length is 30', and it uses a standard 2 5/16" pintle hook to attach to the towing vehicle.

### **D.5.5 SELF-STANDING TOWER TRAILER (2 ea.)**

The self-standing tower trailer is a fully self-contained radio site. It is self-powered (batteries & 6 KW propane generator) and features a 100' self-erecting unguyed antenna support structure capable of supporting a wind load of 14 sq.ft. of antennas in 70 Mph winds. The tower supports omnidirectional and positionable directional antennas. Positioning of the directional antennas is done via an electronically controlled ring rotator capable of 360' rotation. This system's purpose is to provide radio coverage over a range of 30 miles. It can be set up as a myriad of configurations, including as a free-standing repeater site, a voting receiver site, a telephone link, etc.

The weight of the crank-up tower trailer is 5 tons. Its overall length is 35'. It uses a standard 2 5/16" pintle hook to connect to the towing vehicle.

### **D.5.6 GUYED TOWER TRAILER**

The guyed tower trailer holds a disassembled 200' ROHN #45G galvanized tower and all the necessary hardware to erect a structure capable of supporting a moderate number of antennas & feedlines for an extended period. The tower takes approximately 1 day to erect. This trailer weighs 2 tons, is 30' long overall, and uses a standard 2" pintle hook to attach to the towing vehicle.

### **D.5.7 GUYED/CRANK-UP TOWER TRAILER**

The guyed/crank-up tower trailer holds a crank-up & guyed 100' aluminum tower and all the necessary hardware to erect a structure capable of supporting a moderate number of antennas & feedlines for an extended period. This trailer also includes a small equipment shelter and a 5 KW AC generator. The tower takes approximately 3 hours to erect. This trailer weighs 2,700 lbs, is 30' long overall, and uses a standard 2" pintle hook to attach to the towing vehicle.

**D.5.8 50 KW DIESEL GENERATOR TRAILER (4 ea.)**

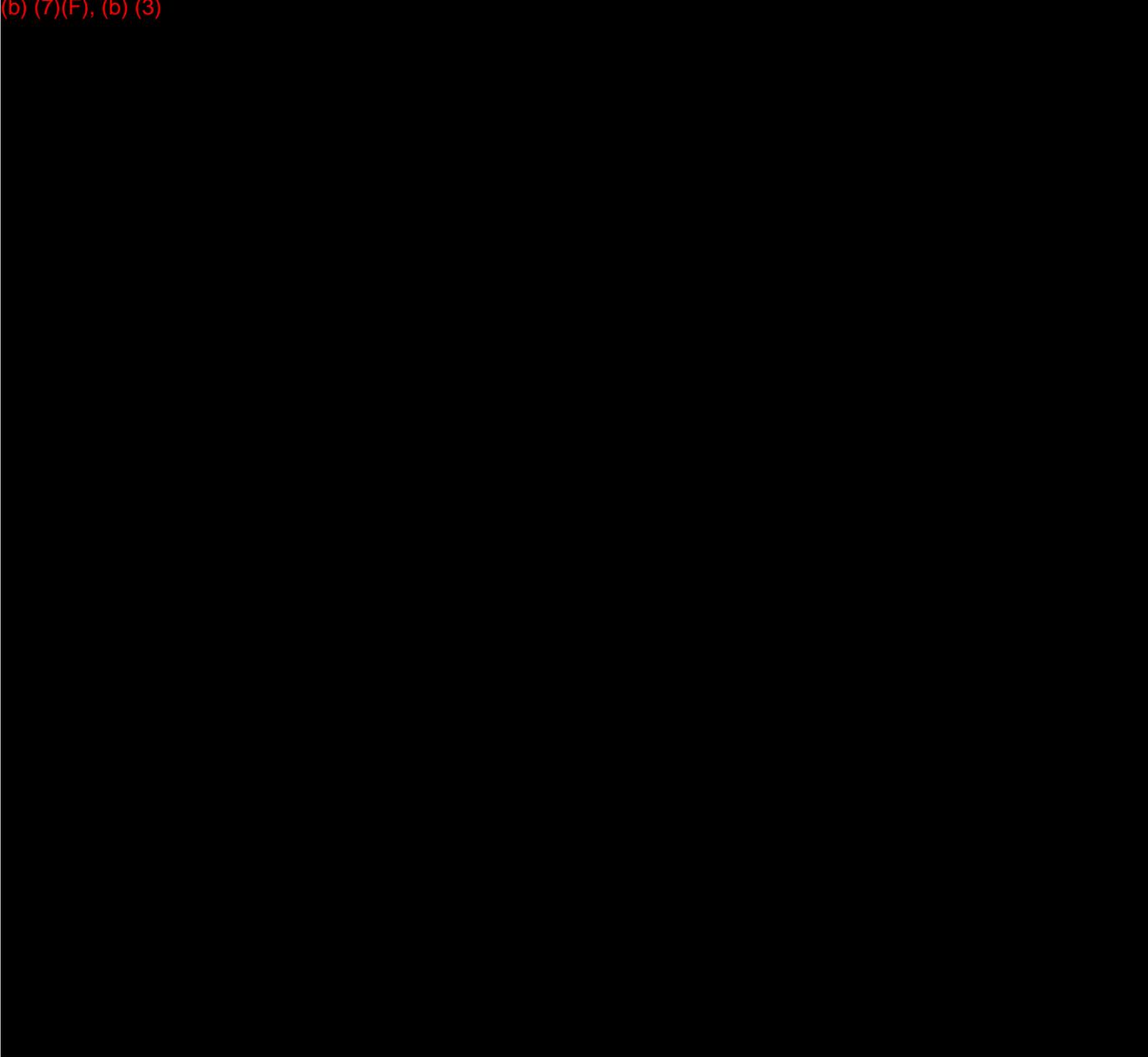
The 50 KW diesel generator trailer holds an electric start 50 KW diesel generator and uses a standard 2" pintle hook to attach to the towing vehicle. It weighs 2 tons and is 15' long overall. It can be towed by the ERV and used as a remote (attached by a cable 200' long) source of power for extended periods as necessary.

**D.5.9 CABLE REEL TRAILER**

The cable reel trailer is capable of holding various transmission line, AC power, and guy wire reels required for deployable radio systems. It uses a standard 2" pintle hook to attach to the towing vehicle. It weighs 1 ton and its overall length is 10'.

**PGBU UHF and VHF PLANT RADIO SYSTEM - PORTABLE PROGRAMMING/INVENTORY**

(b) (7)(F), (b) (3)



**APPENDIX E**  
**SITE SAFETY AND HEALTH PLAN**

Intentionally Blank

## APPENDIX E: SITE SAFETY AND HEALTH PLAN

### E.1 GENERAL

Personnel safety would be **the number one priority throughout the conduct of response operations**. Members of FPL's response organization would be expected to read and be thoroughly familiar with the contents of this plan. In addition, they would be expected to follow the safety and health guidelines summarized in this plan whenever they are engaged in response operations.

The ultimate responsibility for safety rests with the members of the Onsite Response Team. At all times, they would keep the following safety cycle in mind:

- **DECIDE** to work safely.
- **THINK** about possible unsafe acts.
- **STOP** if they observe unsafe conditions.
- **ACT** to do their job safely.

At the same time, they would watch out for their fellow workers. Whenever possible, they would adopt the buddy system.

### E.2 CHAIN OF COMMAND

Overall responsibility for dealing with safety and health considerations before and during response operations would rest with the **Oil Spill Coordinator**. The **Oil Spill Coordinator's** safety and health related duties would include:

- Ensuring that all members of the Onsite Response Team have received the necessary level of HAZWOPER training;
- Ensuring that all FPL safety policies, practices, and procedures are known and strictly adhered to during the conduct of response operations;
- Assisting in coordination of personnel exposure monitoring;
- Ensuring that there is an adequate supply of protective clothing and equipment for all personnel involved in response operations and that personal protective equipment is properly utilized throughout operations;

- Determining where first aid stations will be located, arranging for qualified staffing at these stations, seeing that adequate first aid supplies are available, and assuring that the locations of first aid stations are clearly posted;
- Ensuring that decontamination stations are established and that all personnel are decontaminated before leaving their work stations;
- Maintaining regular communications with emergency medical teams and first aid stations;
- If necessary, establishing a safety and health awareness training program for contract personnel involved in response operations;
- Issuing Safety and Health Bulletins, as appropriate;
- Maintaining a record of all job-related injuries, including their cause, nature, and any corrective actions taken; and
- Serving as the principal point of contact for state and federal safety and health personnel assigned to monitor response operations.

The Corporate Response Teams (CRT) oil spill response equipment would be deployed, operated, and retrieved by the members of the Onsite Response Team. The Onsite Response Team would be lead by the **Oil Spill Coordinator** who would be responsible for supervising response operations and ensuring that the operations are carried out in a safe and healthful fashion. In carrying out his responsibilities, the **Oil Spill Coordinator** would:

- Conduct a Site Characterization and Analysis to determine whether response operations can be initiated and carried out in a safe fashion.
- Ensure that members of the Onsite Response Team are aware of and take all appropriate actions to protect themselves from situations that pose a threat to their safety and health.
- Ensure that members of the Onsite Response Team have access to and wear appropriate protective clothing throughout the conduct of response operations.
- Ensure that members of the Onsite Response Team go through appropriate decontamination procedures during breaks and at the end of each shift.

- Suspend any activity that poses a threat to personnel safety and health that cannot be avoided or mitigated through the use of protective clothing or the adoption of a safe operating procedure.

Members of the Onsite Response Team would be expected to know who the **Oil Spill Coordinator** is and immediately notify the **Oil Spill Coordinator** if:

- They observe an unsafe condition or act;
- They are ill or injured; or
- They observe someone else who is ill or injured.

Also, if they are unsure whether it is safe to proceed with an action or whether a situation poses a health risk to them or their fellow workers, they would be instructed to ask the **Oil Spill Coordinator** before they proceed with an action.

### **E.3 DUTIES AND RESPONSIBILITIES**

Members of the Onsite Response Team would be called upon to assist in the deployment, utilization and recovery of containment boom, skimmers, sorbent materials, and/or recovered oil and/or oily debris storage systems. These activities would include the handling of equipment, lines, and/or hoses, and/or the operation of winches, pumps, generators, cranes, small vessels, and/or vehicles. During the conduct of these operations, personnel may be exposed to chemical and/or physical hazards such as:

- Inhalation of vapors from the spilled oil;
- Irritation of the skin from contact with spilled oil;
- Elevated or lowered body temperature due to exposure to high or low air or water temperatures;
- Exhaustion from long hours of demanding work;
- Stress from pressure, particularly in the initial stage of response operations;
- Back injuries due to lifting heavy loads improperly;
- Cuts, bruises, sprains, and strains; and
- Excessive noise.

To eliminate or reduce these hazards to the maximum extent possible, it would be imperative that personnel follow the procedures prescribed in the following sections of this plan.

#### **E.4 SITE CHARACTERIZATION AND ANALYSIS**

The commitment of manpower resources to response operations would not be made until a site characterization and analysis has been completed. The **Oil Spill Coordinator** would be responsible for organizing and supervising the conduct of the characterization and analysis. The activities that would be conducted during a site characterization include:

- Performing a preliminary evaluation;
- Conducting monitoring operations, if necessary;
- Identifying chemical and physical hazards;
- Identifying risks;
- Identifying personal protective equipment requirements; and
- Communicating information on hazards to response personnel.

Each of these activities is elaborated upon below.

##### **a. Preliminary Evaluation**

Prior to site entry by the Onsite Response Team, the **Oil Spill Coordinator** would perform a preliminary evaluation of the site characteristics in order to aid in the selection of appropriate personnel protection methods. If necessary, the **Oil Spill Coordinator** would use direct-reading instruments and/or other rapid determination methods to determine if there is:

- An inhalation hazard that is immediately dangerous to life and health (IDLH);
- An explosive atmosphere; or
- Any other IDLH hazards.

### **b. Monitoring**

If the preliminary evaluation indicates the potential for IDLH conditions, the site characterization process would be expanded to include an air monitoring program with direct reading instruments. An ongoing air monitoring program would be implemented to provide supplementary information on potential air contaminants and to allow for revisions in personal protective equipment requirements.

### **c. Hazards Identification**

Based on the results of the preliminary evaluation, the **Oil Spill Coordinator** would select the appropriate level of personal protective equipment and enter the site to perform a thorough site characterization to determine whether chemical and/or physical hazards are present at the site. Hazards identified during the site characterization would include those based on:

- Location and size of the area affected;
- Topography and substrate composition (e.g., rocks, gravel, sand, vegetation);
- Weather conditions (e.g., temperature, humidity, precipitation);
- Potential response methods and equipment; and
- Identification of product spilled.

### **d. Risk Identification**

Once the presence and concentrations of specific safety and health hazards have been identified, the **Oil Spill Coordinator** would identify the risks associated with these hazards and incorporate this information into the hazard communication program.

### **e. Personal Protective Equipment**

Based on the results of the site characterization process, the appropriate level of personal protective equipment would be selected for use by response personnel. As response operations progress, the **Oil Spill Coordinator** would determine whether

modifications to personal protective equipment requirements are warranted due to changes in worker exposure to chemical and/or physical hazards.

#### **f. Hazards Communication**

Chemical and physical hazards identified during the site characterization process would be documented for inclusion in safety briefings on hazard communications that would be given to response personnel before they enter the site.

### **E.5 CHEMICAL HAZARDS**

The following petroleum products are handled at Port Manatee Terminal:

- No. 6 fuel oil
- No. 2 fuel oil
- Diesel fuel
- Mineral oil

Table E-1 provides general information on these products, and Appendix A contains Chemical Data and Material Safety Data Sheets for this product. General safety and health guidelines to be observed when working on a spill involving these products are provided below.

#### **a. General Protection Guidelines**

These oils have a high flash point; however, they are combustible when exposed to heat or an open flame. If any of these products are involved in a spill:

- Secure all open flames; no smoking;
- Do not use open lights;
- Put on necessary protective clothing; and
- Secure the area.

**b. Treatment of Inhalation Problems**

No. 2 fuel oil can cause inhalation problems. Respiratory protective equipment may be needed, particularly in the early stage of response operations. No. 6 fuel oil should not require respiratory protective equipment in well ventilated areas. In confined spaces, self-contained breathing apparatus may be required.

**TABLE E-1  
DESCRIPTIVE INFORMATION ON  
OIL HANDLED AT  
PORT MANATEE TERMINAL**

NAME	APPEARANCE	ODOR	HAZARDS
No. 2 Fuel Oil/ Diesel Fuel	Clear to Light Amber	Mild Petroleum	<ul style="list-style-type: none"> <li>• Combustible. May be Ignited By Heat or an Open Flame.</li> <li>• Avoid inhalation.</li> <li>• Irritating to Skin and Eyes; Avoid Contact.</li> <li>• Avoid Ingestion.</li> </ul>
No. 6 Fuel Oil	Viscous Dark Liquid	Sulfur	<ul style="list-style-type: none"> <li>• Combustible. May be Ignited By Heat or an Open Flame.</li> <li>• Avoid inhalation.</li> <li>• Irritating to Skin and Eyes; Avoid Contact.</li> <li>• Avoid Ingestion.</li> </ul>
Mineral Oil	Colorless to Light Brown	Motor Oil- Like Odor	<ul style="list-style-type: none"> <li>• Combustible. May be Ignited By Heat or an Open Flame.</li> <li>• Avoid inhalation.</li> <li>• Irritating to Skin and Eyes; Avoid Contact.</li> <li>• Avoid Ingestion.</li> </ul>

If respiratory equipment is required, the Oil Spill Coordinator, or his designee, would contact:

Grainer Industrial Supply  
6685 Whitfield Industrial Avenue  
Sarasota, FL 34243  
(941) 753-3904

Signs and symptoms of oil inhalation are dizziness, drowsiness, headaches, nausea, vomiting, and loss of coordination. If a person is overcome by vapors:

- Do not attempt to rescue the person without wearing a self-contained breathing apparatus (SCBA);
- Remove the victim to a fresh air area;
- If the victim is not breathing, administer artificial respiration; and
- Summon medical assistance by dialing 911.

#### **c. Treatment of Skin Contact**

Impervious gloves and other protective clothing should be worn to protect the skin from contact with oil. Skin that comes into contact with oil may become irritated. Prolonged or related exposures may cause a skin rash called dermatitis. If oil penetrates clothing, the clothing should be removed and washed. An exposed skin area should be washed with water and a mild soap.

Goggles should be worn to protect eyes from exposure to oil if a splash hazard exists. If eyes are exposed to oil, they should be flushed with large quantities of clear water for 15 minutes.

#### **d. Treatment of Ingestion Problems**

Adherence to strict personal hygiene and decontamination procedures should be followed at all times. Oil ingestion can cause severe discomfort and nausea. If oil enters the mouth, it should be rinsed with water until the taste disappears. Vomiting should be avoided because it may cause oil to be aspirated into the lungs. Medical assistance should be sought if oil is swallowed.

## **E.6 PHYSICAL HAZARDS**

### **a. Hypothermia**

Although unlikely, wintertime air and water temperatures may be low enough to expose the body to rapid heat loss and a cooling of the body's core temperature. In cold water, the body will lose heat many times faster than in the air. Even outside of the water, wet clothing will conduct heat away from the body much faster than dry clothing. Rapid heat loss can cause loss of consciousness and, if not checked, death. To protect against hypothermia, personnel should wear proper protective clothing. If clothing becomes wet, personnel should move to a protected, preferably warm area until their clothes dry or can be changed out for dry clothes.

### **b. Dehydration and Heat Stress**

Oil spill response operations can involve strenuous activities that can, even in relatively cool weather, lead to excessive sweating. This is particularly true when a person wears protective clothing that may reduce the body's ability to discard excess heat. This situation may lead to dehydration, heat rash, heat cramps, heat exhaustion, and possible heat stroke. When a person begins to feel light headed or sluggish, they should take time to sit down, preferably in a shaded area, and re-hydrate their body by drinking plenty of non-caffeinated, non-alcoholic fluids.

### **c. Noise**

Oil spill response operations may require the use of generators, pumps, compressors, engines, and other equipment that can generate high levels of noise. Short-term exposure to extremely loud noise and/or long-term exposure to low level noise can cause hearing loss. Personnel assigned to a high noise area should wear proper hearing protection.

### **d. Lifting hazards**

During response operations, there may be several instances when personnel would be called on to lift and/or carry a heavy load, sometimes over rough or unstable terrain. When doing so, personnel should be instructed to observe the following rules:

- **Test the load** - before attempting to lift a load, test it to make sure it can be moved safely;
- **Plan the move** - check the travel path to make sure it is clear;
- **Use a wide, balanced stance with one foot ahead of the other;**
- **Keep the back in its normal arched position while lifting** - bend at the knees or hips to distribute the forces more evenly;
- **Bring the load as close to the body as possible** - do not let the back become the fulcrum;
- **Keep the head and shoulders up** - maintain the arch in the lower back;
- **Tighten the stomach muscles** - this unloads the spine and puts the weight on the stomach;
- **Lift with the legs and stand up in a smooth, even motion** - use leg strength to lift, straightening the knees and hips;
- **Move the feet to change direction** - do not twist at the waist, as this will stress the supporting structures of the back; and
- **Communicate with a buddy if they are involved in the lift** - this reduces the likelihood of sudden or jerking movements.

#### **e. Slips, Trips, and Falls**

Oily surfaces are extremely slippery. Even when wearing slip-resistant boots, it may be hazardous to walk through an oily area. Also, the decks of ships, the scene of shoreline protection and/or clean-up operations, and equipment staging areas can contain numerous obstacles. When personnel are engaged in response operations, they should:

- Be on the lookout for oily surfaces;
- When on a boat, use handrails and safety lines;
- Be aware of where they are and what is going on around them;
- Before engaging in an activity, look around them and make sure there is nothing in their way; and
- Never engage in horseplay.

## **f. Personal Protective Equipment**

The primary objective of personal protective equipment is to prevent the skin from coming into contact with oil. When working offshore, the equipment would be likely to include a rain slicker, rubber gloves, rubber boots, and a hard hat. Duct tape should be wrapped around the wrists and ankles to seal the rain slicker to the gloves and boots and prevent the migration of oil up the arms and legs.

Onshore, a light weight, disposal suit and cloth gloves can be worn, particularly in warm to hot weather. These items do not provide the same degree of protection; however, they can be changed if they become heavily oiled.

When personnel are engaged in an activity where oil can splash into the eyes, or they are using or are around equipment that produces flying objects, they should wear safety glasses. If they wear contact lenses, they should wear tight fitting goggles.

## **E.7 BOAT AND WATER SAFETY**

When personnel are boarding a boat, they should:

- Know who the vessel captain is - he/she has the ultimate authority over their actions on the boat;
- Know who their supervisor is - he/she knows what their duties are and can answer any safety or health questions that they have;
- Become familiar with the layout of the boat;
- Know where emergency equipment, like fire extinguishers, life jackets, life rings, and life rafts, is stored;
- Know how to use emergency equipment; and
- Do not board a vessel without a U.S. Coast Guard approved personal flotation device - wear the device properly.

While personnel are onboard the boat, they should:

- Watch out for slippery deck surfaces, especially if they are covered or stained with oil - use sorbent pads to clean up oil and/or to improve traction

along walkways;

- Watch out for erratic boat motions in rough seas - use safety lines when they are working on the deck;
- Avoid taking medicines for seasickness - they may make them drowsy;
- Do not become distracted by the task at hand - know where they are and what is going on around them; and
- Be aware of ropes and lines on deck - keep clear of lines being deployed.

If personnel fall overboard in cold water, they should:

- Orientate themselves to floating hazards in the area;
- Move away from hazards if in danger; otherwise stay put until rescued;
- Look for a flotation aid thrown from a vessel;
- Avoid unnecessary movement of arms and legs;
- Float as still as possible, with legs together, elbows close to sides, and arms folded across the front of life jacket;
- Try to keep head and neck out of water; and
- Do not panic.

If personnel observe someone fall overboard, they should:

- Not take their eyes off the victim;
- Point to the victim with their arm while they raise the alarm; notify others by calling "man overboard"; and
- Throw a flotation aid to the victim; do not throw device at victim, but near enough to victim that victim can easily swim to device.

If a victim is semiconscious or unconscious, personnel should:

- Check for breathing and heart beat - administer CPR, if necessary;

- Move the victim to a warm environment;
- Remove the victim's clothes - do not massage the skin;
- Insulate the victim from further heat loss - wrap the victim in a blanket;
- Do not attempt aggressive warming;
- Gentle re-warming can be attempted by placing a bottle filled with warm water next to the victim's head, neck, arm pits, or groin; and
- Do not give the victim anything to eat or drink, and **never** offer alcohol.

## E.8 VEHICLE SAFETY

Personnel called upon to operate a vehicle should:

- Always carry a valid driver's license;
- Wear a seat belt;
- Obey all of the rules of the road, including posted speed limits;
- Practice defensive driving by looking out for other vehicles, heavy equipment, and pedestrians; and
- **Never** engage in horseplay.

Pedestrians should always be on the lookout for moving vehicles.

## E.9 AIRCRAFT SAFETY

Personnel on an aircraft would be subject to security procedures normally used by all U.S. carriers.

When personnel are approaching an aircraft, they should:

- Look for the pilot to give them a hand signal when it is safe to approach the aircraft;
- Identify objects extending from the exterior of the aircraft (antennas, hoses,

bottles, floats); and

- Not approach the aircraft until it has come to a complete stop, the engines have been shut down, wheels chocked, and wing markers in place.

When personnel approach a helicopter, they should:

- Always walk toward the helicopter from the front;
- **Never** walk toward or around the rear of a helicopter, even when it is in idle;
- Wear a hard hat, and use their hand to secure it to their head;
- If their hard hat blows off, do not chase it; wait for the helicopter to take off or shutdown before retrieving the hat;
- Step only on indicated step areas; and
- Wear ear protection, if available.

When personnel are onboard an aircraft, they should:

- Weigh in and report their weight to the pilot;
- Obey all signs, including "No Smoking";
- Understand the aircraft safety features as described by the pilot; locate all emergency exits and read instructions for accessing the exits; and
- Remain seated and wear their seat belt at all times.

## **E.10 EQUIPMENT SAFETY**

The key to equipment safety is to know how to operate a piece of equipment properly **before** using the equipment. Personnel who are unsure how to use a piece of equipment should ask their supervisor. Also, they should:

- Keep alert around moving equipment - understand and follow the signals of the equipment operator;
- When operating equipment, be sure to wear the proper safety equipment - safety glasses, hearing protection, hard hat, etc;

- When operating equipment, do not wear loose clothing or rings;
- Familiarize themselves with the equipment - know any safety features and how to shut equipment down if a problem arises;
- Make sure all engine and electrically driven equipment is in proper operating condition, including ground wires;
- Do not operate electrical equipment while standing in water;
- When working around equipment, wear the proper safety equipment, keep alert, and move away if they sense that the equipment poses a threat to their safety and/or health; and
- **Never** engage in horseplay while using or working around equipment.

### **E.11 PERSONAL HYGIENE**

Good personal hygiene practices are essential to maintaining a state of health during oil spill response operations. Personnel should remember that working with oil and oily wastes is dirty work, and not allow the nature of the work to lead them to forsake basic personal hygiene considerations. The following guidelines are recommended for all members of the Onsite Response Team:

- Take a daily shower, including hair shampoo, before reporting to work;
- While showering, check for unusual rashes, cuts, infections, etc;
- Report any unusual condition to their supervisor;
- On sunny days, apply protective sun screen to exposed skin areas;
- Use a barrier cream on hands before putting on protective gloves;
- If skin becomes contaminated with oil, report to a decontamination area and wash the affected area thoroughly with soap and water;
- If oil gets into their eyes, report to a decontamination area and rinse their eyes for at least 15 minutes with clear water. Report the incident to their supervisor;
- If they are injured or become ill at the work site, report the injury or illness to their supervisor without delay;
- Do not touch food or a glass containing liquid that they intend to drink with

oily gloves or hands;

- Do not track oil into "clean" areas; and
- Do not litter while on the work site.

## **E.12 DECONTAMINATION**

One or more decontamination areas would be set up during response operations. These areas would be used only for decontamination at the work site; they would not serve as a substitute for personal hygiene at home.

Decontamination areas would be designed to protect personnel health and to prevent the spread of contamination into "clean" areas. In the field, it may not be possible for personnel to remove all of their contaminated clothes each time they take a break from work. It would be essential, however, that they clean their hands and faces to avoid inadvertently ingesting oil or spreading oil to otherwise protected parts of their bodies. In the field, they would be provided with:

- Soap, water, paper towels, waterless hand cleaner, and/or other materials for washing their hands and face;
- An impermeable surface to sit on;
- Refuse containers; and
- An eyewash station.

At the end of a shift, personnel would be required to go through full decontamination. Normally, they would report to a "dirty" zone where they would remove all oiled protective clothing. They would do this carefully to avoid contaminating clean clothing. Next, they would move to the "transition" zone where they would remove work clothes and clean themselves to remove all traces of oil. Finally, they would proceed to the "clean" zone to put on clean clothing and leave for home. Clothes that are contaminated with oil would be left at the site for cleaning. Clothes would be disposed of that cannot be properly cleaned. Therefore, it is important that personnel bring an extra set of clean work clothes with them when they report to the site.



**MATERIAL SAFETY DATA SHEET**  
**No. 6 Fuel Oil MSDS No. 9907**

**1. CHEMICAL PRODUCT and COMPANY INFORMATION** (rev. Jan-98)

**Amerada Hess Corporation**  
**1 Hess Plaza**  
**Woodbridge, NJ 07095-0961**

**EMERGENCY TELEPHONE NUMBER (24 hrs): CHEMTREC (800) 424-9300**

**COMPANY CONTACT (business hours):** Corporate Safety (732) 750-6000

**SYNONYMS:** #6 Fuel Oil; 6 Oil; Bunker C; Bunkers; High Sulfur Residual Fuel Oil; Low Sulfur Residual Fuel Oil; Residual Fuel Oil See Section 16 for abbreviations and acronyms.

**2. COMPOSITION and INFORMATION ON INGREDIENTS** (rev. Jan-98)

**INGREDIENT NAME EXPOSURE LIMITS**

**CONCENTRATION**

**PERCENT BY WEIGHT**

Fuel Oil, Residual

CAS NUMBER: 68476-33-5

OSHA PEL-TWA: 5 mg/m<sup>3</sup> as mineral oil mist

ACGIH TLV-TWA: 5 mg/m<sup>3</sup> as mineral oil mist\*

\*1997 NOIC: sum of 15 NTP-listed polynuclear

Aromatic hydrocarbons 0.005 mg/m<sup>3</sup>, A1

100

Hydrogen Sulfide (H<sub>2</sub>S)

CAS NUMBER: 7783-06-4

OSHA PEL-Ceiling/Peak: 20 / 50 ppm

ACGIH TLV-TWA/STEL: 10 / 15 ppm

< trace - see below >

A complex combination of heavy (high boiling point) petroleum hydrocarbons. The amount of sulfur varies with product specification and does not affect the health and safety properties as outlined in this Material Safety Data Sheet.

Hydrogen Sulfide (H<sub>2</sub>S) may be present in trace quantities (by weight), but may accumulate to toxic concentrations such as in tank headspace. The presence of H<sub>2</sub>S is highly variable, unpredictable and does not correlate with sulfur content. Studies with similar products have shown that 1 ppm H<sub>2</sub>S by weight in liquid may produce 100 ppm or more H<sub>2</sub>S in the vapor headspace of the storage tank .

**3. HAZARDS IDENTIFICATION** (rev. Jan-98; Tox-98)

**EMERGENCY OVERVIEW CAUTION!**

**COMBUSTIBLE LIQUID - SLIGHT TO MODERATE IRRITANT - EFFECTS CENTRAL NERVOUS SYSTEM - HARMFUL OR FATAL IF SWALLOWED**

Moderate fire hazard. Avoid breathing vapors or mists. May cause dizziness and drowsiness. May cause moderate eye irritation and skin irritation. Long-term, repeated exposure may cause skin cancer. Hot liquid may cause thermal burns. If ingested, do NOT induce vomiting, as this may cause chemical pneumonia (fluid in the lungs).

HYDROGEN SULFIDE (toxic gas) may accumulate in tank vapor space. High concentration may cause immediate unconsciousness - death may result unless victim is promptly and successfully resuscitated.

Hydrogen sulfide causes eye irritation.

**EYES**

Contact with eyes may cause mild to moderate irritation.

**SKIN**

May cause skin irritation with prolonged or repeated contact. Practically non-toxic if absorbed following acute (single) exposure. May cause dermal sensitization. Liquid may be hot (typically 110 - 120 °F) which could cause 1st, 2nd, or 3rd degree thermal burns.

NFPA 704 (Section 16)

**INGESTION**

This material has a low order of acute toxicity. If large quantities are ingested, nausea, vomiting and diarrhea may result. Ingestion may also cause effects similar to inhalation of the product. Aspiration may result in chemical pneumonia (fluid in the lungs), severe lung damage, respiratory failure and even death.

**INHALATION**

Because of its low vapor pressure, this product presents a minimal inhalation hazard at ambient temperature. Upon heating, fumes may be evolved. Inhalation of fumes or mist may result in respiratory tract irritation and central nervous system (brain) effects may include headache, dizziness, loss of balance and coordination, unconsciousness, coma, respiratory failure, and death.

**WARNING:** the burning of any hydrocarbon as a fuel in an area without adequate ventilation may result in hazardous levels of combustion products, including carbon monoxide, and inadequate oxygen levels, which may cause unconsciousness, suffocation, and death.

**WARNING:** Irritating and toxic hydrogen sulfide gas may be found in confined vapor spaces. Greater than 15 - 20 ppm continuous exposure can cause mucous membrane and respiratory tract irritation. 50 – 500 ppm can cause headache, nausea, and dizziness, loss of reasoning and balance, difficulty in breathing, fluid in the lungs, and possible loss of consciousness. Greater than 500 ppm can cause rapid or immediate unconsciousness due to respiratory paralysis and death by suffocation unless the victim is removed from exposure and successfully resuscitated. The "rotten egg" odor of hydrogen sulfide is not a reliable indicator for warning of exposure, since olfactory fatigue (loss of smell) readily occurs, especially at concentrations above 50 ppm. At high concentrations, the victim may not even recognize the odor before becoming unconscious.

**CHRONIC and CARCINOGENICITY**

Similar products produced skin cancer and systemic toxicity in laboratory animals following repeated applications. The significance of these results to human exposures has not been determined – see Section 11, Toxicological Information.

**MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE**

Irritation from skin exposure may aggravate existing open wounds, skin disorders, and dermatitis (rash).

**FUEL OIL COMBUSTION ASH**

Trace amounts of nickel, vanadium, and other metals in slurry oil can become concentrated in the oxide form in combustion ash deposits. Vanadium is a toxic metal affecting a number of organ systems. Nickel is a suspect human carcinogen (lung, nasal, sinus), an eye, nose, and throat irritant, and can cause allergic skin reaction in some individuals. See Section 7 for appropriate work practices.

**4. FIRST AID MEASURES** (rev. Jan-98; Tox-98)**EYES**

In case of contact with eyes, immediately flush with clean, low-pressure water for at least 15 min.

Hold eyelids open to ensure adequate flushing. Seek medical attention.

### **SKIN**

Remove contaminated clothing. Wash contaminated areas thoroughly with soap and water or waterless hand cleanser. Obtain medical attention if irritation or redness develops. Thermal burns require immediate medical attention depending on the severity and the area of the body burned.

### **INGESTION**

DO NOT INDUCE VOMITING. Do not give liquids. Obtain immediate medical attention. If spontaneous vomiting occurs, lean victim forward to reduce the risk of aspiration. Monitor for breathing difficulties. Small amounts of material which enter the mouth should be rinsed out until the taste is dissipated.

### **INHALATION**

Remove person to fresh air. If person is not breathing provide artificial respiration. If necessary, provide additional oxygen once breathing is restored if trained to do so. Seek medical attention immediately.

## **5. FIRE FIGHTING MEASURES (rev. Oct-96)**

### **FLAMMABLE PROPERTIES:**

FLASH POINT: > 150 °F (>65.5 °C) (minimum) ASTM D-93

AUTOIGNITION TEMPERATURE: > 765 °F (>407 °C)

OSHA/NFPA FLAMMABILITY CLASS: 3A (COMBUSTIBLE)

LOWER EXPLOSIVE LIMIT (%): N/D

UPPER EXPLOSIVE LIMIT (%): N/D

### **FIRE AND EXPLOSION HAZARDS**

Vapors may be ignited rapidly when exposed to heat, spark, open flame or other source of ignition. When mixed with air and exposed to an ignition source, flammable vapors can burn in the open or explode in confined spaces. Being heavier than air, vapors may travel long distances to an ignition source and flash back. Runoff to sewer may cause fire or explosion hazard.

**CAUTION:** flammable vapor production at ambient temperature in the open is expected to be minimal unless the oil is heated above its flash point. However, industry experience indicates that light hydrocarbon vapors can build up in the headspace of storage tanks at temperatures below the flash point of the oil, presenting a flammability and explosion hazard. Tank headspaces should be regarded a potentially flammable, since the oil's flash point can not be regarded as a reliable indicator of the potential flammability in tank headspaces.

### **EXTINGUISHING MEDIA**

SMALL FIRES: Any extinguisher suitable for Class B fires, dry chemical, CO<sub>2</sub>, water spray, fire fighting foam, or Halon.

LARGE FIRES: Water spray, fog or fire fighting foam. Water may be ineffective for fighting the fire, but may be used to cool fire-exposed containers.

### **FIRE FIGHTING INSTRUCTIONS**

Small fires in the incipient (beginning) stage may typically be extinguished using handheld portable fire extinguishers and other fire fighting equipment.

Firefighting activities that may result in potential exposure to high heat, smoke or toxic by-products of combustion should require NIOSH/MSHA- approved pressure-demand self-contained breathing apparatus with full facepiece and full protective clothing. Isolate area around container involved in fire. Cool tanks, shells, and containers exposed to fire and

excessive heat with water. For massive fires the use of unmanned hose holders or monitor nozzles may be advantageous to further minimize personnel exposure. Major fires may require withdrawal, allowing the tank to burn. Large storage tank fires typically require specially trained personnel and equipment to extinguish the fire, often including the need for properly applied fire fighting foam.

See Section 16 for the NFPA 704 Hazard Rating.

## **6. ACCIDENTAL RELEASE MEASURES** (rev. Jan-98)

### **ACTIVATE FACILITY'S SPILL CONTINGENCY OR EMERGENCY RESPONSE PLAN.**

Evacuate nonessential personnel and remove or secure all ignition sources. Consider wind direction; stay upwind and uphill, if possible. Evaluate the direction of product travel, diking, sewers, etc. to confirm spill areas. Carefully contain and stop the source of the spill, if safe to do so. Protect bodies of water by diking, absorbents, or absorbent boom, if possible. Do not flush down sewer or drainage systems, unless system is designed and permitted to handle such material. The use of fire fighting foam may be useful in certain situations to reduce vapors. Take up with sand or other oil absorbing materials. Carefully shovel, scoop or sweep up into a waste container for reclamation or disposal. Response and clean-up crews must be properly trained and must utilize proper protective equipment.

## **7. HANDLING and STORAGE** (rev. Jan-98)

### **HANDLING PRECAUTIONS**

Product is generally transported and stored hot (typical 110 - 120 °F). Handle as a combustible liquid. Keep away from heat, sparks, and open flame! Electrical equipment should be approved for classified area. Bond and ground containers during product transfer to reduce the possibility of static-initiated fire or explosion.

### **STORAGE PRECAUTIONS**

Keep away from flame, sparks, excessive temperatures and open flame. Use approved vented containers. Keep containers closed and clearly labeled. Empty product containers or vessels may contain explosive vapors. Do not pressurize, cut, heat, weld or expose such containers to sources of ignition. Store in a well-ventilated area. This storage area should comply with NFPA 30 "Flammable and Combustible Liquid Code". Avoid storage near incompatible materials. The cleaning of tanks previously containing this product should follow API Recommended Practice (RP) 2013 "Cleaning Mobile Tanks In Flammable and Combustible Liquid Service" and API RP 2015 "Cleaning Petroleum Storage Tanks". Hydrogen sulfide may accumulate in tanks and bulk transport compartments. Consider appropriate respiratory protection (see Section 8). Stand upwind. Avoid vapors when opening hatches and dome covers. Confined spaces should be ventilated prior to entry.

### **WORK/HYGIENIC PRACTICES**

Emergency eye wash capability should be available in the near proximity to operations presenting a potential splash exposure. Use good personal hygiene practices. Avoid repeated and/or prolonged skin exposure. Wash hands before eating, drinking, smoking, or using toilet facilities. Do not use as a cleaning solvent on the skin. Do not use gasoline or solvents (naphtha, kerosene, etc.) for washing this product from exposed skin areas. Waterless hand cleaners are effective. Promptly remove contaminated clothing and launder before reuse. Use care when laundering to prevent the formation of flammable vapors which could ignite via washer or dryer. Consider the need to discard contaminated leather shoes and gloves.

### **OTHER/GENERAL PROTECTION**

Petroleum industry experience indicates that a program providing for good personal hygiene, proper use of personal protective equipment, and minimizing the repeated and prolonged

exposure to liquids and fumes, as outlined in this MSDS, is effective in reducing or eliminating the carcinogenic risk of high boiling aromatic oils (polynuclear aromatic hydrocarbons) to humans.

### **FUEL OIL ASH PRODUCTS**

Personnel exposed to ash should wear appropriate protective clothing (example, DuPont Tyvek®), wash skin thoroughly, launder contaminated clothing separately, and wear respiratory protection approved for use against toxic metal dusts (such as HEPA filter cartridges). Wetted-down combustion ash may evolve toxic hydrogen sulfide (H<sub>2</sub>S) - confined spaces should be tested for H<sub>2</sub>S prior to entry if ash is wetted.

## **8. EXPOSURE CONTROLS and PERSONAL PROTECTION (rev. Jan-98)**

### **ENGINEERING CONTROLS**

Use adequate ventilation to keep vapor concentrations of this product below occupational exposure and flammability limits, particularly in confined spaces.

### **EYE/FACE PROTECTION**

Safety glasses or goggles are recommended where there is a possibility of splashing or spraying

### **SKIN PROTECTION**

Gloves constructed of nitrile, neoprene, or PVC are recommended. Chemical protective clothing such as of E.I. DuPont Tyvek QC®, Saranex®, TyChem® or equivalent recommended based on degree of exposure. Note: The resistance of specific material may vary from product to product as well as with degree of exposure. Consult manufacturer specifications for further information

### **RESPIRATORY PROTECTION**

If a hydrogen sulfide hazard is present (that is, exposure potential above H<sub>2</sub>S permissible exposure limit), use a positive-pressure SCBA or Type C supplied air respirator with escape bottle. Where it has been determined that there is no hydrogen sulfide exposure hazard (that is, exposure potential below H<sub>2</sub>S permissible exposure limit), a NIOSH/MSHA-approved air-purifying respirator with organic vapor cartridges or canister may be permissible under certain circumstances where airborne concentrations are or may be expected to exceed exposure limits or for odor or irritation. Protection provided by air-purifying respirators is limited. Refer to OSHA 29 CFR 1910.134, ANSI Z88.2-1992, NIOSH Respirator Decision Logic, and the manufacturer for additional guidance on respiratory protection selection.

Use a positive pressure, air-supplied respirator if there is a potential for uncontrolled release, exposure levels are not known, in oxygen-deficient atmospheres, or any other circumstance where an air-purifying respirator may not provide adequate protection.

## **9. PHYSICAL and CHEMICAL PROPERTIES (rev. Jan-01)**

### **APPEARANCE**

Black, viscous liquid

### **ODOR**

Heavy, petroleum/asphalt-type odor

Hydrogen sulfide (H<sub>2</sub>S) has a rotten egg "sulfurous" odor. This odor should not be used as a warning property of toxic levels because H<sub>2</sub>S can overwhelm and deaden the sense of smell. Also, the odor of H<sub>2</sub>S in heavy oils can easily be masked by the petroleum-like odor of the oil. Therefore, the smell of H<sub>2</sub>S should not be used as an indicator of a hazardous condition - a H<sub>2</sub>S meter or colorimetric indicating tubes are typically used to determine the concentration of H<sub>2</sub>S.

### **BASIC PHYSICAL PROPERTIES**

BOILING RANGE: > 500 °F (> 260 °C)  
 VAPOR PRESSURE: <0.1 psia @ 70 °F (21 °C)  
 VAPOR DENSITY (air = 1): NA  
 SPECIFIC GRAVITY (H<sub>2</sub>O = 1): 0.876 – 1.000 (API 30.0 – 10.0)  
 PERCENT VOLATILES: Negligible  
 EVAPORATION RATE: negligible  
 SOLUBILITY (H<sub>2</sub>O): negligible

#### 10. STABILITY and REACTIVITY (rev. Jan-94)

**STABILITY:** Stable. Hazardous polymerization will not occur.

#### CONDITIONS TO AVOID and INCOMPATIBLE MATERIALS

Avoid high temperatures, open flames, sparks, welding, smoking and other ignition sources. Keep away from strong oxidizers.

#### HAZARDOUS DECOMPOSITION PRODUCTS:

Carbon monoxide, carbon dioxide and non-combusted hydrocarbons (smoke).

#### 11. TOXICOLOGICAL PROPERTIES (rev. Jan-98)

##### ACUTE TOXICITY

Acute dermal LD50 (rabbits): > 5 ml/kg Acute oral LD50 (rats): 5.1 ml/kg  
 Primary dermal irritation: slightly irritating (rabbits) Draize eye irritation: mildly irritating (rabbits)  
 Guinea pig sensitization: mildly sensitizing

##### CHRONIC EFFECTS AND CARCINOGENICITY

Carcinogenicity: **OSHA:** NO **IARC:** 2B (animal) **NTP:** YES **ACGIH:** 1997 NOIC: A1

This material contains polynuclear aromatic hydrocarbons (PNAs), some of which are animal carcinogens. Studies have shown that similar products produce skin tumors in laboratory animals following repeated applications without washing or removal. The significance of this finding to human exposure has not been determined. Other studies with active skin carcinogens have shown that washing the animal's skin with soap and water between applications reduced tumor formation. The presence of carcinogenic PNAs indicates that precautions should be taken to minimize repeated and prolonged inhalation of fumes or mists.

##### MUTAGENICITY (genetic effects)

Materials of similar composition have been positive in mutagenicity studies.

#### 12. ECOLOGICAL INFORMATION (rev. Jan-98)

Keep out of sewers, drainage and waterways. Report spills and releases, as applicable, under Federal and State regulations.

#### 13. DISPOSAL CONSIDERATIONS (rev. Jan-98)

Consult federal, state and local waste regulations to determine appropriate disposal options. Combustion ash may be a characteristic hazardous waste.

#### 14. TRANSPORTATION INFORMATION (rev. Jan-98)

PROPER SHIPPING NAME: Combustible liquid, n.o.s. (No. 6 Fuel Oil)  
 HAZARD CLASS and PACKING GROUP: Combustible Liquid , PG III  
 DOT IDENTIFICATION NUMBER: NA 1993  
 DOT SHIPPING LABEL: None

#### 15. REGULATORY INFORMATION (rev. Feb-01)

**U.S. FEDERAL, STATE and LOCAL REGULATORY INFORMATION**

This product and its constituents listed herein are on the EPA TSCA Inventory. Any spill or uncontrolled release of this product, including any substantial threat of release, may be subject to federal, state and/or local reporting requirements. This product and/or its constituents may also be subject to other regulations at the state and/or local level. Consult those regulations applicable to your facility/operation.

**CLEAN WATER ACT (OIL SPILLS)**

Any spill or release of this product to "navigable waters" (essentially any surface water, including certain wetlands) or adjoining shorelines sufficient to cause a visible sheen or deposit of a sludge or emulsion must be reported immediately to the National Response Center (1-800-424-8802) or, if not practical, the U.S. Coast Guard with follow-up to the National Response Center, as required by U.S. Federal Law. Also contact appropriate state and local regulatory agencies as required.

**CERCLA SECTION 103 and SARA SECTION 304 (RELEASE TO THE ENVIRONMENT)**

The CERCLA definition of hazardous substances contains a "petroleum exclusion" clause which exempts crude oil, refined, and unrefined petroleum products and any indigenous components of such. However, other federal reporting requirements (e.g., SARA Section 304 as well as the Clean Water Act if the spill occurs on navigable waters) may still apply.

**SARA SECTION 311/312 - HAZARD CLASSES**

ACUTE HEALTH CHRONIC HEALTH FIRE SUDDEN RELEASE OF PRESSURE REACTIVE

X X X -- --

**SARA SECTION 313 - SUPPLIER NOTIFICATION**

This product may contain listed chemicals below the *de minimis* levels which therefore are not subject to the supplier notification requirements of Section 313 of the Emergency Planning and Community Right-To-Know Act (EPCRA) of 1986 and of 40 CFR 372. If you may be required to report releases of chemicals listed in 40 CFR 372.28, you may contact Amerada Hess Corporate Safety if you require additional information regarding this product.

**CANADIAN REGULATORY INFORMATION (WHMIS)**

Class B, Division 3 (Combustible Liquid)

**16. OTHER INFORMATION** (rev. Feb-01)

**NFPA® HAZARD RATING** HEALTH: 0 Negligible

FIRE: 2 Moderate

REACTIVITY: 0 Negligible

**HMIS® HAZARD RATING** HEALTH: 1\* Slight

FIRE: 2 Moderate

REACTIVITY: 0 Negligible

\*Chronic

**SPECIAL HAZARDS:** Container vapor space may contain hydrogen sulfide (poison gas).

**SUPERSEDES MSDS DATED:** 01/05/01

**ABBREVIATIONS:**

AP = Approximately < = Less than > = Greater than

N/A = Not Applicable N/D = Not Determined ppm = parts per million

**ACRONYMS:**

ACGIH American Conference of Governmental Industrial Hygienists

AIHA American Industrial Hygiene Association

ANSI American National Standards Institute (212)642-4900

API American Petroleum Institute (202)682-8000  
CERCLA Comprehensive Emergency Response, Compensation, and Liability Act  
DOT U.S. Department of Transportation [General info: (800)467-4922]  
EPA U.S. Environmental Protection Agency  
HMIS Hazardous Materials Information System  
IARC International Agency For Research On Cancer  
MSHA Mine Safety and Health Administration  
NFPA National Fire Protection Association (617)770-3000  
NIOSH National Institute of Occupational Safety and Health  
NOIC Notice of Intended Change (proposed change to ACGIH TLV)  
NTP National Toxicology Program  
OPA Oil Pollution Act of 1990  
OSHA U.S. Occupational Safety & Health Administration  
PEL Permissible Exposure Limit (OSHA)  
RCRA Resource Conservation and Recovery Act  
REL Recommended Exposure Limit (NIOSH)  
SARA Superfund Amendments and  
Reauthorization Act of 1986 Title III  
SCBA Self-Contained Breathing Apparatus  
SPCC Spill Prevention, Control, and Countermeasures  
STEL Short-Term Exposure Limit (generally 15 minutes)  
TLV Threshold Limit Value (ACGIH)  
TSCA Toxic Substances Control Act  
TWA Time Weighted Average (8 hr.)  
WEEL Workplace Environmental Exposure Level (AIHA)  
WHMIS Canadian Workplace Hazardous

#### Materials Information System

##### **DISCLAIMER OF EXPRESSED AND IMPLIED WARRANTIES**

Information presented herein has been compiled from sources considered to be dependable, and is accurate and reliable to the best of our knowledge and belief, but is not guaranteed to be so. Since conditions of use are beyond our control, we make no warranties, expressed or implied, except those that may be contained in our written contract of sale or acknowledgment. Vendor assumes no responsibility for injury to vendee or third persons proximately caused by the material if reasonable safety procedures are not adhered to as stipulated in the data sheet. Additionally, vendor assumes no responsibility for injury to vendee or third persons proximately caused by abnormal use of the material, even if reasonable safety procedures are followed. Furthermore, vendee assumes the risk in their use of the material.

## Material Safety Data Sheet for Mineral Oil

CrossTrans 106, 206 & 306 Page 1 of 5

Revised: 10-30-00

MSDS #: crostran

### 1. PRODUCT AND COMPANY IDENTIFICATION

**Product Identifier:** CrossTrans 106, 206 & 306

**General Uses:** Electrical Insulating Oil.

**Product Description:** Amber Liquid, Hydrocarbon Odor.

#### MANUFACTURER: EMERGENCY TELEPHONE NUMBERS

Cross Oil Refining & Marketing, Inc.

484 East Sixth Street **(870) 725-3611, Ext.163 [USA]**

Smackover, Arkansas 71762

MSDS prepared by: Clark B. Smith (870) 725-3611, Ext. 128

### 2. COMPOSITION INFORMATION

% Vol.

**CHEMICAL FAMILY:** Petroleum Hydrocarbon **Common Name:** Naphthenic Oil 99.7 to 99.92%  
Antioxidant 0.3 to 0.08%

**HAZARDOUS INGREDIENTS:** None Known **Exposure Limits(Oil Mist):TWA**

ACGIH,TLV (ppm) 5

**CAS#:** Grades < 100 SUS @ 100 F 64742-53-6 OSHA,PELS (ppm) 5

128-39-2 NIOSH, TWA (ppm) 5

### 3. HAZARDS IDENTIFICATION

#### EMERGENCY OVERVIEW:

Clear light to dark amber liquid. Mild hydrocarbon odor. Can burn in a fire.

#### POTENTIAL HEALTH EFFECTS:

**INHALATION:** Will not produce vapors unless heated to temperatures of ~300 °F.

**EYE CONTACT:** Irritating, but will not permanently injure eye tissue.

**SKIN CONTACT:** Prolonged or repeated contact may cause skin irritation.

**INGESTION:** Small amounts (tablespoonful) swallowed are not likely to cause injury. Larger amounts may cause nausea and vomiting. Consult a physician promptly.

**CHRONIC (CANCER) INFORMATION:** IARC Monographs state that when laboratory animals are exposed to severely hydrotreated oils, such as these product(s), there is insufficient evidence for cancer. Thus, these oils are **Unlabeled** in accordance with 29 CFR 1910.1200.

### 4. FIRST AID MEASURES

**EYE CONTACT:** Flush eyes with plenty of water for several minutes. Get medical attention if eye irritation persists.

**SKIN:** Wash skin with plenty of soap and water for several minutes. Get medical attention if skin irritation develops or persists.

**INGESTION:** If more than several mouthfuls have been swallowed, give two glasses of water (16 Oz.). Get medical attention.

**INHALATION:** If irritation, headache, nausea, or drowsiness occurs, remove to fresh air. Get medical attention if breathing becomes difficult or symptoms persist.

### 5. FIRE FIGHTING MEASURES

Flash Point, °C (Method) See Section 9 (COC)

Ignition Temp.°F Not Determined

Flammability Limits (%) Not Determined

### **RECOMMENDED FIRE EXTINGUISHING AGENTS AND SPECIAL PROCEDURES**

According to NFPA Guide, use water spray, dry chemical, foam, or carbon dioxide. Water or foam may cause frothing. Use water to cool fire exposed containers. If a leak or spill has not ignited, use water spray to disperse the vapors and to provide protection for persons attempting to stop the leak.

**UNUSUAL OR EXPLOSIVE HAZARDS:** None

### **6. ACCIDENTAL RELEASE MEASURES**

Notify the appropriate authorities immediately. Contain spill, if possible. Avoid breathing vapor. Use self-contained

breathing apparatus or supplied air for large spills or in confined areas. Wipe up or use suitable absorbent material and shovel into appropriate container for disposal. Prevent entry into sewers or waterways. Avoid contact with skin, eyes or clothing.

### **7. HANDLING AND STORAGE**

**PRECAUTIONS:** Minimum feasible handling temperatures should be maintained. Periods of exposure to high temperature should be minimized. Water contamination should be avoided.

### **8. EXPOSURE CONTROLS/ PERSONAL PROTECTION**

#### **PROTECTIVE EQUIPMENT**

**EYE/FACE PROTECTION:** Chemical-type goggles or face shield recommended to prevent eye exposure.

**SKIN PROTECTION:** Workers should wash exposed skin several times daily with soap and water. Soiled clothing should be laundered or dry-cleaned at least weekly.

**RESPIRATORY PROTECTION:** Airborne concentrations should be kept to lowest levels. If vapor is generated, use respirator approved by OSHA or NIOSH as appropriate. Supplied air respiratory protection should be used for cleaning large spills or upon entry into tanks, vessels, or other confined spaces. See Exposure Limit below.

**VENTILATION:** Must be adequate to meet exposure limits below.

**EXPOSURE LIMIT (TOTAL PRODUCT)**

5 mg/m<sup>3</sup> for mineral oil mist over an 8 hour daily exposure (ACGIH).

### **9. PHYSICAL AND CHEMICAL PROPERTIES**

**APPEARANCE:** Bright, clear liquid. Mineral odor.

**% VOC:** 100 (Can be totally burned)

**FREEZING POINT:** Not applicable

**VAPOR PRESSURE:** Insignificant @ atmospheric pressure

**pH:** Not available

**SOLUBILITY IN WATER:** Insoluble

**VAPOR DENSITY (Air=1):** 1+

**VISCOSITY, FLASH, °C SPECIFIC GRAVITY @ 15°C BOILING**

**GRADE cSt @ 40 °C (COC) GRAVITY (IP-346) POINT, °F**

106 & 206 9.58 152 .896 1.5 288+

306 10.33 150 .891 1.5 288+

### **10. STABILITY AND REACTIVITY**

This material reacts violently with strong oxidizers.

Evolves toxic levels of carbon monoxide, carbon dioxide irritating aldehydes and ketones when heated to combustion.

Hazardous polymerization does not occur.

---

## 11. TOXICOLOGICAL INFORMATION

### TOXICOLOGICAL INFORMATION (ANIMAL TOXICITY DATA)

Median Lethal Dose (LD50 LC50) (Species)

Oral: Believed to be >5g/kg (rat); practically non-toxic

Inhalation: Not Determined

Dermal: Believed to be >3 g/kg (rat); practically non-toxic.

Irritation Index: Estimation of Irritation (Species).

Skin: Believed to be <0.5/8.0 (rabbit); no appreciable effect

Eyes: Believed to be <15/110 (rabbit); no appreciable effect

Sensitization: Not Available

Other: None

The International Agency for Research on Cancer (IARC), one of the Occupational Safety and Health Association's (OSHA) authorities for establishing carcinogenic potential, has specifically evaluated Naphthenic Oils. IARC found that Mildly Hydrotreated (Hydrofinished) Naphthenic Oils are carcinogenic to laboratory animals. **IARC has NOT found Severely Hydrotreated Naphthenic Oils to be carcinogenic. These products are classified as Severely (Not Mildly) Hydrotreated under both IARC and OSHA definitions.**

One refiner reports that a lifetime dermal application of this type oil produced skin masses on mice, which correlated with the skin irritation response levels of individual test animals. Additional studies attribute these masses to a weak promotional activity. These studies also showed that this product is not a mutagen, not a tumor initiator, and not a complete chemical carcinogen. Under normal anticipated conditions of use, this product should not present a risk to human health.

## 12. ECOLOGICAL INFORMATION

No data is available on the adverse effects of this material on the environment. A film or sheen will cause discoloration of the water surface or adjoining shoreline.

---

## 13. DISPOSAL CONSIDERATIONS

This product has been evaluated for RCRA characteristics and *does not* meet the criteria of a hazardous waste if discarded in its purchased form. Under RCRA it is the responsibility of the user of the product to determine at the time of disposal, whether the product meets RCRA criteria for hazardous waste. This product is subject in service to chemical alteration, which may render the resulting material hazardous.

---

## 14. TRANSPORT INFORMATION

### DOT

PRODUCT CLASS PLACARD NO. PACKAGING

Not App. Not.App Not App. Not App.

---

## 15. REGULATORY INFORMATION

**TSCA:** All components of this material are listed in the U.S. TSCA Inventory.

**OSHA:** IARC Monographs state that when laboratory animals are exposed to severely hydrotreated oils, such as these products(s), there is insufficient evidence for cancer. Thus, these product are **Unlabeled** in accordance with 29 CFR 1910.1200

**SARA TITLE III** Section 302/304 Extremely Hazardous Substance None

Section 311 - EPA Hazard Categories

*Immediate Delayed Sudden*

*Health Health Fire Pressure Release Reactive*

None None Minor None None

> 250 °F

Section 313 Toxic Chemicals None

**CERCLA** Section 102(a) Hazardous Substance No Reportable  
Quantity (RQ) Substances

**CANADIAN DOMESTIC SUBSTANCES LIST** - - All components of this material are listed.

## 16. OTHER INFORMATION Hazard Ratings Recommended for Containers

NFPA HMIS

Fire 1 Health 1

Health 1 Flammability 1

Reactivity 0 Reactivity 0

Specific Hazard none Personal Protection Index B

This information is furnished without warranty, expressed or implied, except that it is accurate to the best knowledge of Cross Oil Refining & Marketing Company, Inc.. The data on this sheet is related only to the specific material designated herein. Cross Oil Refining & Marketing Co., Inc. assumes no legal responsibility for use or reliance upon these data.

NA = Not Available Not App. = Not Applicable

## 17. PRODUCT LABEL

Product Trade Name: CrossTrans 106, 206 or 306 Date: 10-30-00

Tank Car Number: NA Cross Truck Loading Manifest No: NA

### WARNING

**Avoid Prolonged Breathing of Mist or Spray.** Average exposure to airborne mist for an 8-hour workday should not exceed 5.0 milligrams of mist per cubic meter of air.

**Avoid Eye and Skin Contact:** Wear oil-impervious protective clothing. If clothes become contaminated, change to clean clothing after thoroughly washing exposed skin with soap and warm water.

### FIRST AID

**Inhalation:** If overcome by fumes, remove from exposure immediately and call a physician.

**Skin:** Wash with warm water and soap until the exposed area is clean.

**Eyes:** Flush with water for at least fifteen (15) minutes. See physician if symptoms persist.

**Ingestion:** Do not induce vomiting. Obtain medical assistance. Small amounts that accidentally enter through the mouth should be rinsed out until no taste of it remains.

### FIRE CONTROL

Use water spray or fog, chemical foam, dry powder or carbon dioxide.

### SPILL / LEAK

Add absorbent (sand, sawdust, etc.) to the spill area. Contain spill. Advise State Environmental Protection Agency, if required. Put recovered material in an appropriate container and dispose of according to federal, state, and local regulations. For guidance call Cross Oil Refining & Marketing Co., Inc. at (870) 725-3611, Ext. 163

### STORAGE

Store in original or equivalent container. Store at the lowest practical temperature. Keep container closed when not in use. Do not apply heat or flame to the container

## \*\*\*\* SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION \*\*\*\*

MSDS Name: Fuel Oil #2  
 Catalog Numbers:  
 SRS954 020, SRS954 500, SRS954020, SRS954500  
 Synonyms:  
 Company Identification: Fisher Scientific  
 1 Reagent Lane  
 Fairlawn, NJ 07410  
 For information, call: 201-796-7100  
 Emergency Number: 201-796-7100  
 For CHEMTREC assistance, call: 800-424-9300  
 For International CHEMTREC assistance, call: 703-527-3887

## \*\*\*\* SECTION 2 - COMPOSITION, INFORMATION ON INGREDIENTS \*\*\*\*

CAS#	Chemical Name	%	EINECS#
0-00-0	May contain sulfur		unlisted
68476-30-2	Fuel oil no. 2	>99	270-671-4

Hazard Symbols: None Listed.  
 Risk Phrases: None Listed.

## \*\*\*\* SECTION 3 - HAZARDS IDENTIFICATION \*\*\*\*

## EMERGENCY OVERVIEW

Appearance: light brown.  
 Caution! Combustible liquid. Cancer suspect agent. May cause eye and skin irritation. May cause respiratory and digestive tract irritation.  
 Target Organs: None.

## Potential Health Effects

Eye:  
 Causes eye irritation.  
 Skin:  
 Causes mild skin irritation.  
 Ingestion:  
 May cause gastrointestinal irritation with nausea, vomiting and diarrhea.  
 Inhalation:  
 May cause respiratory tract irritation.  
 Chronic:  
 May cause cancer in humans.

## \*\*\*\* SECTION 4 - FIRST AID MEASURES \*\*\*\*

Eyes:  
 Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.  
 Skin:  
 Flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid if irritation develops or persists.  
 Ingestion:  
 If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical aid.

**Inhalation:**

Remove from exposure to fresh air immediately. Get medical aid if cough or other symptoms appear.

**Notes to Physician:**

Treat symptomatically and

## \*\*\*\* SECTION 5 - FIRE FIGHTING MEASURES \*\*\*\*

**General Information:**

As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear.

**Extinguishing Media:**

For small fires, use dry chemical, carbon dioxide, water spray or alcohol-resistant foam.

Autoignition Temperature: Not applicable.

Flash Point: Not applicable.

Explosion Limits, lower: 0.6

Explosion Limits, upper: 7.5

NFPA Rating: Not published.

## \*\*\*\* SECTION 6 - ACCIDENTAL RELEASE MEASURES \*\*\*\*

**General Information:** Use proper personal protective equipment as indicated in Section 8.

**Spills/Leaks:**

Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container. Remove all sources of ignition.

## \*\*\*\* SECTION 7 - HANDLING and STORAGE \*\*\*\*

**Handling:**

Use with adequate ventilation. Avoid prolonged or repeated contact with skin. Avoid contact with eyes. Empty containers retain product residue, (liquid and/or vapor), and can be dangerous. Avoid contact with heat, sparks and flame. Avoid ingestion and inhalation. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose empty containers to heat, sparks or open flames.

**Storage:**

Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances.

## \*\*\*\* SECTION 8 - EXPOSURE CONTROLS, PERSONAL PROTECTION \*\*\*\*

**Engineering Controls:**

Use adequate ventilation to keep airborne concentrations low.

**Exposure Limits**

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
May contain sulfur	none listed	none listed	none listed
Fuel oil no. 2	none listed	none listed	none listed

**OSHA Vacated PELs:****May contain sulfur:**

No OSHA Vacated PELs are listed for this chemical.

**Fuel oil no. 2:**

No OSHA Vacated PELs are listed for this chemical.

## Personal Protective Equipment

## Eyes:

Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

## Skin:

Wear appropriate gloves to prevent skin exposure.

## Clothing:

Wear appropriate protective clothing to minimize contact with skin.

## Respirators:

Follow the OSHA respirator regulations found in 29CFR 1910.134 or European Standard EN 149. Always use a NIOSH or European Standard EN 149 approved respirator when necessary.

## \*\*\*\* SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES \*\*\*\*

Physical State: Liquid

Appearance: light brown

Odor: petroleum-like - mild odor

pH: Not available.

Vapor Pressure: 2.6 mm Hg @50C

Vapor Density: >1

Evaporation Rate: Not available.

Viscosity: 2-3.6 cSt @38C

Boiling Point: 340-675F

Freezing/Melting Point: -20 deg F

Decomposition Temperature: Not available.

Solubility in water: Insoluble in water.

Specific Gravity/Density: <1

Molecular Formula: Petroleum hydrocarbon

Molecular Weight:

## \*\*\*\* SECTION 10 - STABILITY AND REACTIVITY \*\*\*\*

## Chemical Stability:

Stable under normal temperatures and pressures.

## Conditions to Avoid:

Ignition sources, excess heat.

## Incompatibilities with Other Materials:

Strong oxidizers.

## Hazardous Decomposition Products:

Carbon monoxide, oxides of sulfur, carbon dioxide.

Hazardous Polymerization: Has not been reported.

## \*\*\*\* SECTION 11 - TOXICOLOGICAL INFORMATION \*\*\*\*

## RTECS#:

CAS# 0-00-0 unlisted.

CAS# 68476-30-2: LS8930000

## LD50/LC50:

Not available.

CAS# 68476-30-2: Draize test, rabbit, eye: 100 mg/30S Mild; Draize test, rabbit, skin: 500 mg/24H Moderate; Draize test, rabbit, skin: 500 uL/24H Moderate; Oral, rat: LD50 = 12 gm/kg; Skin, rabbit: LD50 = 4720 uL/kg.

## Carcinogenicity:

May contain sulfur -

Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA.

Fuel oil no. 2 -

Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA.

**Epidemiology:**

Epidemiological studies involving petroleum refinery workers indicate persons with routine exposure to petroleum or one of its constituents may be at an increased risk to the development of benign neoplasms, digestive tract cancers, and skin cancer.

## \*\*\*\* SECTION 12 - ECOLOGICAL INFORMATION \*\*\*\*

## \*\*\*\* SECTION 13 - DISPOSAL CONSIDERATIONS \*\*\*\*

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste.

US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

RCRA P-Series: None listed.

RCRA U-Series: None listed.

## \*\*\*\* SECTION 14 - TRANSPORT INFORMATION \*\*\*\*

## US DOT

No information available

Canadian TDG

No information available.

## \*\*\*\* SECTION 15 - REGULATORY INFORMATION \*\*\*\*

## US FEDERAL

## TSCA

CAS# 0-00-0 is not listed on the TSCA inventory.

It is for research and development use only.

CAS# 68476-30-2 is listed on the TSCA inventory.

## Health &amp; Safety Reporting List

None of the chemicals are on the Health & Safety Reporting List.

## Chemical Test Rules

None of the chemicals in this product are under a Chemical Test Rule.

## Section 12b

None of the chemicals are listed under TSCA Section 12b.

## TSCA Significant New Use Rule

None of the chemicals in this material have a SNUR under TSCA.

## SARA

## Section 302 (RQ)

None of the chemicals in this material have an RQ.

## Section 302 (TPQ)

None of the chemicals in this product have a TPQ.

## Section 313

No chemicals are reportable under Section 313.

## Clean Air Act:

This material does not contain any hazardous air pollutants.

This material does not contain any Class 1 Ozone depletors.

This material does not contain any Class 2 Ozone depletors.

## Clean Water Act:

None of the chemicals in this product are listed as Hazardous Substances under the CWA.

None of the chemicals in this product are listed as Priority Pollutants under the CWA.

None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

## OSHA:

None of the chemicals in this product are considered highly hazardous by OSHA.

## STATE

May contain sulfur is not present on state lists from CA, PA, MN, MA, FL, or NJ.

Fuel oil no. 2 is not present on state lists from CA, PA, MN, MA, FL, or NJ.

California No Significant Risk Level:

None of the chemicals in this product are listed.

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols: Not available.

Risk Phrases:

Safety Phrases:

WGK (Water Danger/Protection)

CAS# 0-00-0: No information available.

CAS# 68476-30-2: No information available.

United Kingdom Occupational Exposure Limits

Canada

CAS# 68476-30-2 is listed on Canada's DSL List.

WHMIS: Not available.

CAS# 0-00-0 is not listed on Canada's Ingredient Disclosure List.

CAS# 68476-30-2 is not listed on Canada's Ingredient Disclosure List.

Exposure Limits

\*\*\*\* SECTION 16 - ADDITIONAL INFORMATION \*\*\*\*

MSDS Creation Date: 9/02/1997 Revision #2 Date: 8/02/2000

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no way shall the company be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if the company has been advised of the possibility of such damages.

-----  
-

---

## APPENDIX F: MEDIA RELATIONS

### F.1 MARKETING & COMMUNICATION EMERGENCY PROCEDURES

#### F.1.1 MARKETING & COMMUNICATION

The Marketing & Communication department is responsible for the development and coordination of all corporate-related information issued to the media, the public and employees. Generally, media inquiries should be referred to M&C when:

- Issues have financial, legal or regulatory implications
- A condition or incident may have systemwide implications
- A problem attracts statewide media attention
- A nuclear situation or issue arises
- Civil authorities are involved
- Loss of life or injury occur

#### F.1.2 EMERGENCY COMMUNICATIONS

The primary objective of Marketing & Communication is to provide timely and consistent information to all stakeholders: the news media, the public, employees, government officials and shareholders. In the event that a NextEra Energy, Inc. Corporate Emergency Plan (*e.g. hurricane, capacity, oil spill, etc.*) is activated, the Vice President of Marketing & Communication will assume the role of Public Information Officer within the Incident Command Structure.

#### F.1.3 NOTIFICATIONS

In the event of an emergency or critical incident at a NextEra Energy, Inc. site, it is important that the FPL *Media Relations Duty Officer* receive prompt notification. This is essential in order to be responsive to media inquiries. Depending on the magnitude of the incident, Marketing & Communication personnel may be dispatched to the location to handle public information activities and/or assistance may be requested of specially-trained area media liaisons.

#### F.1.4 DURING NORMAL WORKING HOURS, AFTER-HOURS, WEEKENDS & HOLIDAYS

The Media Relations staff can be contacted any time, 24/7 by calling **305-552-3888**. A Duty Officer is designated to respond to media inquiries. The Vice President of Marketing & Communication (MC/JB) and the Director of Media Relations (MC/JB) are also available to provide communications counsel and direction. A list of names and phone numbers for Marketing & Communication duty personnel and managers appears in Table F-1.

#### F.1.5 COMMUNICATING WITH THE MEDIA

If a significant event takes place at a NextEra Energy, Inc. facility, the news media may arrive on the scene to report the event. If a designated spokesperson is not at the scene when reporters

---

arrive, members of the media should be greeted courteously and directed to (1) contact Marketing & Communication Media Relations for information at **305-552-3888 (MEDIA ONLY phone number)** and/or (2) directed to wait at a location where a spokesman will be made available at a specified time. Permission to enter secured areas should be denied for safety reasons, but may be evaluated once an escort is available. Continue to refer media inquiries to Marketing & Communication until a designated spokesman is available locally. A list of area media liaisons is included in Table F-2.

Certain situations may require someone other than the Marketing & Communication spokesperson to respond to news media inquiries. If Marketing & Communication cannot provide a spokesperson immediately, they will provide guidance on who should assume that role and how to respond to questions. It is company policy that such arrangements be made with the prior knowledge and authorization of Marketing & Communication to ensure that company positions and activities are communicated in a consistent manner.

Refusal to cooperate with the media and provide whatever assistance is possible permits speculation, rumor and conjecture to take the place of fact. As a consequence, the company may be vulnerable to unfounded charges or subject to unjustified legal claims for damages or restrictive legislation adversely affecting operations.

This overview of Marketing & Communication procedures for emergencies and other critical incidents is supported by an Emergency Communication Response Organization and certain incident-specific communications support plans maintained by the department. Included in the *Emergency Communications SharePoint Site* are emergency plans and news media procedures, including incident-specific plans for hurricanes/severe storms, capacity shortfalls, oils spills and fuel shortages. The SharePoint site is periodically updated and communicated to M&C staff and selected executives, media liaisons and field contacts. For more information, contact Marketing & Communication.

---

**Table F-1**  
**NAMES AND PHONE NUMBERS OF CORPORATE**  
**COMMUNICATIONS PERSONNEL**

**FPL Media Duty Officers****Media Hotline: 305-552-3888****Full Duty Week Coverage** (begins @ 5 p.m. Friday, concludes following Friday @ 5 p.m.)**Duty Officer Access:** 305-552-3888. After hours this number rolls to South Area CIC where the emergency services shift supervisor will contact the M&C officer on duty by cell phone.**Media Relations:**

Name	Cellular	Home	Office
<a href="#">Jackie Anderson</a>	(b) (6)		561-694-3496
<a href="#">Greg Brostowicz</a>			561-694-3745
<a href="#">Sarah Marmion</a>			561-694-4643
<a href="#">Neil Nissan</a>			561-694-3712
<a href="#">Mayco Villafañã</a>			305-552-3231 305-719-5084 (beeper)

**Nuclear media inquiries and emergencies:**

Name	Office	Home Phone	Beeper	Cellular Phone
Michael Waldron	561-694-3618			(b) (6)

**Table F-2  
AREA MEDIA LIAISONS**

	<b>NAME</b>	<b>OFFICE</b>	<b>OFFICE FAX</b>	<b>CELLULAR</b>	<b>HOME</b>
<b>DAYTONA/ N FLORIDA (904)</b>	Womble, Jeff (A)	386-329-5102	386-329-5115	(b) (6)	
	Cobb, Dave (P) Lake City (St. John's North)	386-754-2022	386-397-3481		
	Russillo, Rusty (A)	386-824-7630	386-824-7620		
<b>BREVARD/ SEMINOLE (321)</b>	Sanderson, Sandy (P) (Brevard)	321-726-4955	321-726-4919		
	Volenc, Larry (A) (Seminole)	386-254-2353	386-254-2352		
	Bock, Craig(A)	321-726-4952	321-726-4944		
	Kunz, Tom (A) Brevard	321-726-4946	321-726-4944		
	Quinn, Jim (A)	321-726-4948	321-726-4944		
	Lee, Tim (A)	321-726-4940	321-726-4944		
<b>SARASOTA/ BRADENTON/ VENICE/ ARCADIA (941)</b>	Dowling, Rae	941-316-6266	941-316-7104		
	Chamberlin, Russ (A)	941-316-6251	941-316-6281		
	Sayer, Don (A)	941-708-2900	941-708-2920		
	Alsop, Rod (A)	941-316-6250	941-316-6252		
<b>FT. MYERS/ PUNTA GORDA/ NAPLES (941)</b>	Whidden, Grover (P)	239-332-9291	239-332-9209		
	Balogh, Frank (A)	239-332-9140	239-332-9209		
	Carlyle, Bill (A)	239-332-9193	239-332-9209		
	Miller, Charlotte (A)	239-332-9103	239-332-9209		
<b>PALM BEACH (561)</b>	Kiselewski, Don (North & West)	561-691-7948	561-694-4718		
	Williams, Ethel (South & Central)	561-691-2575	561-694-4718		
<b>TREASURE COAST (772)</b>	Blount, Nick (P)(Martin & Okeechobee)	772-781-3118	772-781-3117		
	Brunjes, Amy (St. Lucie & Indian River)	772-337-7006			
<b>BROWARD (954)</b>	Shatas, Lynn (P) (Central)	954-321-2215	954-321-2220		
	Wesley, Ben (A) (Southern)	954-321-2258	954-321-2220		
	Hebert, Isabel (A) (Northern)	954-321-2189	954-321-2189		
<b>DADE (305)</b>	Rodriguez, Manny J. (P)	305-552-3443	305-552-2772		
	Ferrer, Ramon (A)	305-552-2514	305-552-2772		
	Villasuso, Eloy (A)	305-552-2549	305-552-2772		
	Player, Aletha	305-552-4124	305-552-2772		
	Beck, Gene (A)	305-552-2825	305-552-4955		

### **F.1.6 Initial Response Phase**

**Initial Statement** – A “sample” initial statement is included in this Appendix. To make the “sample” statement incident-specific and accurate, the Corporate Communications Officer or individual assuming responsibility for the function should work with the On-scene Commander or CRT Incident Commander to prepare the statement.

As determined by the Corporate Communications Officer, the initial statement will be used to make callouts or respond verbally to news media inquiries. As appropriate, the Corporate Communications Officer will develop an initial, incident-specific policy on *how* or *if* FPL will allow/facilitate requests for television taping and photography. All follow-up, or questions beyond the scope of the initial statement, should be referred to the Corporate Communications Officer. The Corporate Communications Officer will be responsible for issuing all written news releases or public statements.

#### ***Key Messages***

- FPL has preplanned, government-approved Facility Response Plans for the facilities covered by this Manual. These plans describe oil spill removal organizations and equipment that would be called upon to initiate spill containment and cleanup operations.
- *(as appropriate)* Government agencies have been notified and are working with FPL.
- If onsite reporting/taping is initially being denied to the news media, it's likely for safety or other critical reasons and will be reevaluated at the earliest possible opportunity.

### **F.1.7 Longer-Term Recovery Phase**

***Corporate and Field Media Relations Activities*** – The Corporate Communications Officer will evaluate the deployment of media relations or area liaison personnel to the affected field location. The Corporate Communications Officer additionally will monitor and make public relations recommendations, approve and issue all subsequent written news releases and news statements, and direct all other assigned communications duties, including activation of the Corporate Communications emergency response organization, as appropriate.

#### ***Key Messages***

- According to plan, FPL has established a Unified Command and is coordinating its response operations with all federal, state, and local authorities; public information will be jointly coordinated and situation updates will be issued on a regular schedule *[establish where briefings will be held (if appropriate), who the participants will be in addition to FPL, and what time regularly scheduled news statements/updates will be issued]*.
- FPL is a leader in providing safe, reliable, and cost-effective products and services in an environmentally responsible manner. It is the company's policy – should a spill occur as a result of FPL operations at its facilities – to undertake whatever actions are required to mount and sustain control and/or response operations.

---

<b>Background Statement to Media</b>
--------------------------------------

**FPL ANNUALLY CONDUCTS OIL SPILL TRAINING EXERCISE**

FPL annually conducts oil spill training exercises. These exercises are typically conducted in cooperation with applicable federal and state agencies.

FPL maintains Facility Response Plans and other support documents, and regularly conducts training exercises in connection with its electrical generating power plant sites. FPL's plans are developed and exercise in compliance with provisions of the Federal Oil Pollution Act of 1990 and contingency planning requirements of the applicable State.

The FPL training exercises allow the utility and local, state, and federal agencies to participate in simulated oil spill response drills. This helps ensure that all parties can move quickly and efficiently to minimize any spill in the unlikely event an incident should take place.

As part of its emergency plans, FPL trains personnel in oil spill prevention and response activities, including deployment of containment and cleanup equipment. FPL additionally maintains an inventory of oil spill response equipment at each of its power plants. Additional equipment and personnel resources are available through a number of private oil spill removal organizations.

---

<b>Sample Standby Statement to Media</b>
------------------------------------------

My name is \_\_\_\_\_. I work for FPL and I am \_\_\_\_\_ (*title and/or what you do*). I have some brief information about the oil spill incident at \_\_\_\_\_ (*location*). Please appreciate that the details we have at this time are based on the earliest reports and we are now trying to verify other information that we hope to have available at a later time.

You should know that our preplanned Facility Response Plan has been activated, and specialist personnel are already responding to the situation. All appropriate government agencies have been notified of the incident according to our plan.

***(Use only known facts. Do NOT speculate.)***

Date: \_\_\_\_\_ Time: \_\_\_\_\_

Location: \_\_\_\_\_

Facts of what happened: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Deaths or injuries (*if known: NO names, NO speculation*): \_\_\_\_\_

Existing hazard or situation: \_\_\_\_\_

Corrective actions being taken: \_\_\_\_\_

Cause (*ONLY if known for sure*): \_\_\_\_\_

Name and phone number of designated spokesperson (*for follow-up, additional questions*): \_\_\_\_\_

\_\_\_\_\_

###

---

<b>Media Statement – Corporate Communications Department</b>
--------------------------------------------------------------

**FPL REPORTS OIL SPILL AT \_\_\_\_\_**

FPL reports a fuel oil spill of approximately \_\_\_\_\_ barrels early this morning in/at \_\_\_\_\_. *(Enter detail if available. For example: “the spill occurred at a pump flange as oil was being pumped into a holding tank from a tanker at \_\_\_\_\_.”)*

FPL immediately activated its Onsite Response Team and notified state, federal, and local agencies. Special onsite equipment to contain the spill is being deployed and FPL Corporate Response Team is en route to the scene.

The spill was discovered at \_\_\_\_\_ a.m/p.m. by \_\_\_\_\_. The oil discharge was stopped at about \_\_\_\_\_ a.m/p.m. when pumping operations were halted. The spill was believed to have begun at about \_\_\_\_\_ a.m/p.m.

Assessment of the situation is underway and FPL will provide further updates this morning/afternoon.

###

**Media Statement – Joint Information Center**

**UNIFIED COMMAND STRUCTURE FORMED;  
MEDIA INFORMATION CENTER TO OPEN**

FPL officials, U.S. Coast Guard, and authorities have established a Unified Command structure to handle response efforts in today’s oil spill in \_\_\_\_\_ (*location*).

In addition, a Joint Information Center has been opened. A news briefing will be held at \_\_\_\_\_ a.m/p.m. today in connection with the oil spill response and recovery effort. Unified Command representatives from FPL, the U.S. Coast Guard, and the will be available, including:

Federal On-Scene Coordinator: \_\_\_\_\_ U.S. Coast Guard

State On-Scene Coordinator: \_\_\_\_\_ (*Agency*) \_\_\_\_\_

FPL Incident Commander: \_\_\_\_\_

FPL Senior Executive: \_\_\_\_\_

Media representatives are invited to the Joint Information Center located at \_\_\_\_\_.

Phone inquiries from the *news media only* should be directed to FPL Corporate Communications at 1-888-867-3050.

###

---

<b>Media Statement – Joint Information Center</b>
---------------------------------------------------

**OIL CONTAINMENT AND RECOVERY EFFORTS UNDERWAY**

FPL and federal and state government agencies report that containment and recovery efforts are underway to minimize damage from this morning's oil spill at/in \_\_\_\_\_.

***If applicable:***

In addition, the U.S. Coast Guard has closed \_\_\_\_\_ (*on-water location*). No vessels will be permitted to enter or leave (*describe area*). Also, an exclusion zone has been established extending from \_\_\_\_\_ on the east/south to \_\_\_\_\_ on the west/north. No public access will be permitted within this area.

FPL and oil spill removal organizations are deploying containment boom to prevent the oil slick from spreading further (*describe area attempting to protect*). More than \_\_\_\_\_ feet of containment boom have been positioned at various locations within the port, including (*list unique and/or sensitive areas*).

Oil recovery devices are being deployed in the spill area. (*Number of*) \_\_\_\_\_ oil spill vacuum trucks will be used to remove oil from the water's surface inside the port. Additional equipment such as boats, barges, pumps, and collection tanks will be moved into place to supplement the equipment stored at the port for initial response to oil spills.

In addition to response teams from FPL and contractors, support and guidance is being provide by various organizations, including the U.S. Coast Guard, Department of Environmental Protection (*or applicable agency*), the \_\_\_\_\_ Port Authority, and others (*contractors, etc.*).

Members of the public or businesses located in the vicinity of the oil spill who have questions about boat traffic issues should call \_\_\_\_\_.

Members of the public with questions regarding private property cleanup and/or claims should call FPL at \_\_\_\_\_.

###

---

<b>Media Statement – Joint Information Center</b>
---------------------------------------------------

**PUBLIC CAUTIONED TO AVOID EXPOSURE TO OIL**

FPL and the members of Unified Command are asking the public to avoid areas where they could be exposed to oil and oil fumes as a result of today's oil spill at/in \_\_\_\_\_. While recent air quality tests in the area indicate there is no hazard from oil fumes, officials urge the public to be aware that excessive exposure to the oil can result in the following:

- Redness and drying of the skin.
- Irritation of the eyes and respiratory tract.
- Headache, dizziness, and nausea.
- Other adverse health effects.

###

---

<b>Media Statement – Joint Information Center</b>
---------------------------------------------------

**FPL SEEKING TRAINED VOLUNTEERS  
TO ASSIST IN WILDLIFE PROTECTION EFFORTS**

In coordination with \_\_\_\_\_ (*e.g., wildlife rehabilitation organization*), FPL has opened a facility to clean birds and other wildlife affected by the oil spill.

Volunteers with background in animal care, such as veterinarians, veterinarian technicians, and animal wildlife specialists, are being sought to assist in that effort. Training will be held at \_\_\_\_\_ at \_\_\_\_\_ a.m/p.m. for qualified volunteers. The training is necessary to ensure proper handling of wildlife during recovery and cleaning activities.

Members of the community also may assist by donating cleaning supplies, including liquid dish detergent, bleach, newspapers, paper towels, playpens, Q-Tips, four-inch-square cotton gauze, and garden hoses. For more information, interested volunteers should call \_\_\_\_\_ (*area code/phone*).

Representatives from the U.S. Fish and Wildlife Service and \_\_\_\_\_ (*other applicable agency*) are also assisting in the wildlife protection and rehabilitation efforts.

###

*[intentionally blank]*

**APPENDIX G**  
**LIST OF ACRONYMS, DEFINITIONS, AND REFERENCES**



## APPENDIX G: LIST OF ACRONYMS AND DEFINITIONS

This glossary contains definitions of terms that will be used frequently during the course of response operations.

**ACP.** Area Contingency Plan.

**Activation.** The process of mobilizing personnel and/or equipment within the response organization to engage in response operations.

**Activator.** An individual in the response organization whose responsibilities include notifying other individuals or groups within the organization to mobilize personnel and/or equipment.

**Addspack.** Aerial Dispersant.

**Agency Representative.** Individual assigned to an incident from an agency who has been delegated full authority to make decisions on all matters affecting that agency's participation in response operations.

**Allocated Resources.** Resources dispatched to an incident that are not yet checked-in and available for an assignment to a Division/Group.

**Assigned Tactical Resources.** Performing an active assignment in a Division/Group.

**Assisting Agency.** An agency contributing suppression, rescue, support, or service resources to another agency.

**Available Tactical Resources.** Ready for assignment. All resources in staging areas are available tactical resources.

**Average Most Probable Discharge.** A discharge of the lesser of 50 barrels or 1 percent of the volume of the worst case discharge.

**Barrel (bbl).** A barrel of oil equals 42 gallons (U.S.) at 60 degrees Fahrenheit.

**Bioremediation.** An oil spill cleanup technique using nutrients or a mixture of nutrients and bacteria to facilitate the degradation of the oil by microorganisms.

**Boom.** A piece of equipment or a strategy used to either contain free floating oil to a confined area or protect an uncontaminated area from intrusion by oil.

**Briefing Meeting.** Held to review Incident Action Plan for next operational period.

**Camp.** A geographical site, within the general incident area, separate from the base, equipped and staffed to provide food, water, and sanitary services to incident personnel.

**Captain of the Port Zone.** A zone specified in 33 CFR Part 3 and the seaward extension of that zone to the outer boundary of the exclusive economic zone.

**CERCLA.** Comprehensive Environmental Response, Compensation, and Liability Act of 1980.

**CFR.** Code of Federal Regulations.

**Check-in.** Location where assigned resources check-in at an incident. The locations are: incident command post (resources unit), incident base, staging areas, aircraft bases, division supervisors (for direct line assignment).

**Clear Text.** The use of plain English in radio communications transmissions. No ten codes are used when using clear text.

**Coastal Waters.** All U.S. waters subject to the tide, U.S. waters of the Great Lakes specified ports and harbors on the inland rivers, waters of the contiguous zone (12 n. mi.) or other waters subject to discharges in connection with activities under the Outer Continental Shelf Lands Act or the Deepwater Port Act. These waters include those contained within the Exclusive Economic Zone (200 n. mi.).

**Command.** The act of controlling manpower and equipment resources by virtue of explicit or delegated authority.

**Command Staff.** A group comprised of: Incident Commander, Corporate Communication Officer, External Affairs Officer, Safety Officer, Legal Officer, and Deputy Incident Commander.

**Command Staff Meeting.** Held to determine progress made to date, ensure implementations of current Incident Action Plan, and to establish overall strategic objectives for next operational period.

**Containment Boom.** Rigid and/or inflatable device of standard length to contain floating oil on water or prevent oil from contaminating specific areas.

**COPT.** Captain of the Port.

**CWA.** Clean Water Act.

**Decontamination.** The process of removing oil contamination from personnel, clothing, and equipment to preclude the occurrence of foreseeable adverse health effects.

**Demobilization.** The de-activation of equipment, personnel, and other resources involved in response operations.

**Detailed Incident Assessment.** An analysis process involving the gathering of

information on what has occurred and what is being done to control the source and respond to the incident.

**Discharge.** Any spillage, leaking, pumping, pouring, emitting, emptying, or dumping.

**Dispatch.** The implementation of a command decision to move a resource or resources from one place to another.

**Dispatch Center.** A facility in the Command Post from which resources are directly assigned to an incident.

**Dispersants.** Chemicals that can be applied to an oil spill to aid the natural process in breaking up the oil. There are three types of dispersants: water-based, solvent-based, and concentrates. Use of dispersants is subject to On-Scene Coordinator approval, with approval of the Environmental Protection Agency representative to the Regional Response Team and the concurrence of the state with jurisdiction over the navigable waters polluted by the spill.

**Emergency.** The phase of response operations where activities are conducted in a "reactive" mode, according to a pre-planned strategy, such as notification, activation, and onsite response.

**EPA.** U.S. Environmental Protection Agency.

**FDEP.** Florida Department of Environmental Protection.

**Federal On-Scene Coordinator.** USCG or EPA representative that provides overall coordination of clean-up activities.

**FOSC.** Federal On-Scene Coordinator.

**FPL.** Florida Power & Light Company.

**General Plan.** A schedule that describes the activities to be performed and the major equipment and manpower resources to be utilized to respond to an incident, in a comprehensive and well organized fashion, from the outset through to the completion of operations.

**Group.** Established to divide response operations into functional areas.

**GT-185.** Commonly used weir skimmer coupled with an Archimedes style pump.

**Harmful Quantity.** Discharge that violate applicable water quality standards or causes a film or sheen upon, or discoloration of, the surface of the water or adjoining shorelines or causes a sludge or emulsion to be deposited beneath the surface of the water or upon adjoining surfaces.

**Hazardous Substance.** Substance designated by the EPA in 40 CFR Section 116.4.

**HAZMAT.** Hazardous materials or hazardous substances, exposure to which may result in adverse effects on health or safety of employees.

**HAZWOPER.** Hazardous Waste Operations and Emergency Response Regulations published by OSHA to cover worker safety and health aspects of response operations.

**ICS.** Incident Command System.

**Incident.** An occurrence or event, either human-caused or natural phenomena, that requires action by emergency service personnel to prevent or minimize loss of life or damage to property and/or natural resources.

**Incident Action Plan.** A highly structured document comprised of a series of forms that collectively organize and present information on the manpower, equipment, and support resources that will be needed to implement the General Plan on a daily basis.

**Incident Commander.** The individual who is vested with the authority for the overall management of response operations.

**Incident Command Post (ICP).** That location at which all primary command functions are executed.

**Incident Command System (ICS).** The combination of facilities, equipment, personnel, procedures, and communications operating within a common organizational structure, with responsibility for the management of assigned resources at an incident.

**Initial Briefing Meeting.** Held to brief personnel on the contents of the General Plan and Initial Incident Action Plan.

**Initial Incident Briefing Meeting.** Held to develop a comprehensive, accurate, and up-to-date understanding of the incident, nature of status of control operations, and nature and status of response operations; ensure the adequacy of control and response operations; begin to organize control and response operations; and prepare for interactions with outside world.

**Initial Planning Meeting.** Held to review and approve general plan and commission development of Initial Incident Action Plan.

**Initial Tactical Operations Planning Meeting.** Held immediately after General Plan approval meeting. The General Plan is used to identify field activities for next operational period.

**Inland Area.** The area shoreward of the boundary lines defined in 46 CFR Part 7, except in the Gulf of Mexico. In the Gulf of Mexico, it means the area shoreward of the lines of demarcation (COLREG lines) defined in Sections 80.740 - 80.850 of Title 33 of the CFR.

**Jurisdictional Agency.** The agency having jurisdiction and responsibility for a specific geographic area and/or resource.

**Level I or "Small" Incident.** Average most probable discharge.

**Level II or "Medium" Incident.** Maximum most probable discharge.

**Level III or "Worst Case" Incident.** Worst case discharge.

**Lightering Vessel.** A vessel designated to receive and store oil cargo and/or bunkers from another vessel. The lightering vessel will usually come alongside the vessel to be lightered (the mother vessel) and cargo will be transferred using the mother vessel's pumps or portable lightering pumps.

**Management by Objective (MBO).** Top-down management so that all involved know and understand the objectives of the operations.

**Marine Spill Response Corporation (MSRC).** An independent, non-profit corporation dedicated to providing a best-effort response to help clean up large spills of persistent oil in U.S. offshore and tidal waters, including bays, harbors, and mouths of rivers. It will respond to spills further up river when oil has been spilled from ocean going tankers heading up river. MSRC succeeds PIRO.

**Marine Transportation-Related Facility (MTR Facility).** An onshore facility, including piping and any structure used to transfer oil to or from a vessel, subject to regulation under 33 CFR Part 154 and any deepwater port subject to regulation under 33 CFR Part 150.

**Maximum Most Probable Discharge.** A discharge of the lesser of 1200 barrels or 10 percent of the volume of a worst case discharge (USCG). The lesser of 36,000 gallons or 10 percent of the volume of the worst case discharge.

**Message Center.** The message center is part of the communications center and is co-located or placed adjacent to it. It receives, records, and routes information about resources reporting to the incident, resource status, and administration and tactical traffic.

**Mobilization Center.** An off incident location at which emergency service personnel and equipment are temporarily located pending assignment, release, or reassignment.

**MSDS.** Material Safety Data Sheet.

**Multiagency Coordination System (MACS).** The combination of facilities, equipment, personnel, procedures, and communications integrated into a common system with responsibility for coordination of assisting agency resources and support to agency emergency operations.

**NCP.** National Contingency Plan.

**Nearshore Area.** 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 Sections 80.740 - 80.850 of Title 33 of the CFR.

**NEPA.** National Environmental Policy Act.

**NMFS.** National Marine Fisheries Service.

**NOAA.** National Oceanic and Atmospheric Administration.

**Non-persistent or Group I Oil.** 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 centigrade (645 degrees Fahrenheit); and (2) at least 95% or which by volume, distill at a temperature of 370 degrees centigrade (700 degrees Fahrenheit).

**NRC.** National Response Center.

**NRDA.** Natural Resource Damage Assessment.

**NWS.** National Weather Service.

**OPA 90.** Oil Pollution Act of 1990.

**Oil Spill Response Organization.** An exclusive team referring to all internal and external manpower resources involved in response operations and response support activities.

**Oil Spill Response Vessels.** Vessels fitted with dedicated oil spill response equipment to be used exclusively for those purposes.

**Oily Debris.** Includes sorbent pads/boom, protective clothing/gear, soil, sand, rocks, logs, kelp, plastics, mousse, oil/water mixture and animal carcasses.

**Oily Waste.** Oil-contaminated waste resulting from an oil spill or oil spill response operations.

**Operational Period.** The period of time scheduled for execution of the Incident Action Plan, (usually 24 hours).

**Operational Planning Sheet.** Provides guidance on the type and status of equipment resources that will be needed to implement (a) tactical operations plan(s).

**OSHA.** Occupational Safety and Health Administration.

**OSSC.** Oil Spill Service Center, Southampton, England.

**Out-of-Service Resources.** Resources assigned to an incident but unable to respond for mechanical, rest, or personnel reasons.

**Out-of-Service Tactical Resources.** Not ready for assignment.

**Persistent Oil.** A petroleum-based oil that does not meet the distillation criteria for a non-persistent oil. For the purpose of this plan, persistent oils are further classified based on specific gravity as follows: (1) Group II - specific gravity less than .85; (2) Group III - specific gravity between .85 and less than .95; (3) Group IV - specific gravity .95 to and including 1.9; (4) Group V - specific gravity greater than 1.0.

**PIC.** Person-In-Charge.

**Planning Meetings.** Held to finalize tactical operations plans for next operational period and to commission preparation of Incident Action Plan.

**Post Emergency.** The phase of response operations conducted after the immediate threat of the release has been stabilized, and cleanup operations have begun.

**Q.I.** Qualified Individual.

**Qualified Individual.** The designated person serving as the incident commander and who has full authority to: activate response contractors; liaison with the federal on-scene coordinator; and obligate funds to carry out response activities.

**RCP.** Regional Contingency Plan.

**Reclaimed.** Reclaimed refers to any process that must be utilized to return the product to its pre-spill state and the process for which it was destined.

**Resource Trustees.** Governmental agencies, federal and state responsible for managing and protecting sensitive resources.

**Response Contractor.** Individual, organization, association, or cooperative that provides or intends to provide equipment and/or personnel for oil spill containment, cleanup, and/or removal activities.

**Response Priorities.** Mechanism used to maximize the effective use of manpower and equipment resources based upon their availability during an operational period.

**RRT.** Regional Response Team.

**Safety and Health Plan.** A site-specific plan developed at the time of an incident that addresses:

- safety and health hazard analysis for each operations.
- personal protective equipment to be used.
- training requirements for site workers.
- medical surveillance requirements.
- air monitoring requirements.
- site control measures.
- decontamination procedures.
- emergency response procedures.
- confined space entry procedures.

**SARA.** Superfund Amendments and Reauthorization Act.

**Section.** That organizational level having functional responsibility for primary segment or incident operations such as: operations, environmental, planning, logistics, finance.

**Sheen.** An iridescent appearance on the surface of the water.

**Single Resource.** Individual piece of equipment plus the required number of individuals to properly utilize it.

**Site Characterization.** An evaluation of a cleanup site to determine the appropriate safety and health procedures needed to protect employees from identified hazards.

**SITREP.** Situation Status Report.

**Skimmer.** Mechanically driven device designed to recover oil floating on water.

**Snare Boom.** Oil will adhere to the material of which this boom is made of and thus collect it.

**Sorbent Boom.** The material of which this boom is manufactured will absorb persistent oil and thus collect it.

**Source Control.** Any number of procedures that may be employed to stop, curtail, and/or inhibit the source of a spill.

**Span-of-Control.** The supervisory ratio of from three to seven individuals with five being established as a general rule of thumb.

**Spill.** Unauthorized discharge of oil or hazardous substance which enters the waters of the state.

**Staging Area.** That location where incident personnel and equipment are assigned on a time specific available status.

**Strategic Objectives.** Short, concise statements that define broad scale objectives to be achieved or addressed during an operational period.

**Strike Team.** Set number of resources of the same kind and type that can be assembled for a specific mission.

**Tactical Operations Planning Meetings.** Help to develop the specific tactics that will be used to achieve or address the strategic objectives for the next operational period.

**Tactical Operations Plans.** Specific response strategies designed to achieve strategic objectives consistent with response priorities.

**Task Force.** A combination of resources that can be assembled for a specific mission.

**Technical Specialists.** Personnel with special skills who are activated only when needed.

**Tender.** Any vessel used for transportation of resources to and from the site of a marine oil spill.

**USCG.** United States Coast Guard.

**Unified Command.** A method for agencies who have jurisdictional responsibility, and in some cases those who have functional responsibility at the incident, to contribute to:

- Determining overall objectives for the incident.
- Selection of a strategy to achieve the objectives.

**Unified or Coordinated Command Meeting.** Held to obtain agreement on strategic objectives and response priorities; review tactical strategies; engage in joint planning; integrate response operations; maximize use of resources; and minimize resolve conflicts.

**Unit.** That organization element having functional responsibility for a specific incident planning, logistics, or finance activity.

**Vessels of Opportunity.** Vessels not fitted with any type of oil spill response equipment during normal operation, but with the potential to do so.

**Vessel of Opportunity Skimming System (VOSS).** A system of one or more vessels of opportunity fitted with one or more skimmers and boom to contain and recover oil on water.

**Worst Case Discharge.** Incident at an onshore marine transportation related facility is defined as the largest foreseeable discharge in adverse weather conditions meeting the following criteria (USCG).

Not less than, where applicable, the loss of the entire capacity of all in-line and

breakout storage tank(s) needed for the continuous operation of the pipeline(s) used for the purpose of handling or transporting oil, in bulk, to or from a vessel regardless of the presence of secondary containment; plus 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 shutdown 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, whichever is greater), 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.

A "worst case" incident at a transportation related facility can be defined as 100 percent of the volume of the largest tank in secondary containment area (EPA).

## REFERENCES

- Department of Transportation, U.S. Coast Guard. (33 CFR 154): "Navigation and Navigable Waters." July 1993.
- Department of Transportation, U.S. Coast Guard Research and Special Programs Administration, Environmental Protection Agency, Department of the Interior Minerals Management Service: "National Preparedness for Response Exercise Program (PREP) Guidelines." August 1994.
- Department of Transportation, U.S. Coast Guard Research and Special Programs Administration, Environmental Protection Agency, Department of the Interior Minerals Management Service: "Training Reference for Oil Spill Response." August 1994.
- Federal Register* (40 CFR 112): "Oil Pollution Prevention; Non-Transportation-Related Onshore Facilities." July 1994.
- Hazardous Materials Response and Assessment Division National Oceanic and Atmospheric Administration: "Area Response Plan, Ft. Pierce County, Sensitive Areas and Protection Strategies.
- United States Coast Guard Marine Safety Office: "Area Contingency Plan for Oil and Hazardous Substance Pollution Response." Marine Safety Office, Jacksonville, Florida.

**APPENDIX H**  
**WORKSHEET FOR DETERMINING DISCHARGE VOLUMES**

**INTENTIONALLY BLANK**

## WORST CASE DISCHARGE WORKSHEET

No. 6 FUEL MANATEE TERMINAL

### Appendix D to CRF 112

Oil Group # =  (Type number in box)

Operating Area = 

X		
---	--	--

  
 (Type "X" in box)      Near Shore/Inland      Rivers      Great Lakes

**I Single Tank Facilities**

A. If secondary containment is adequate, then WCD = 80% tank's capacity  
 (Type "X" in box)       (gallons)

B. If secondary containment is adequate, then WCD = tank's capacity  
 (Type "X" in box)       (gallons)

Largest AST Volume        
 WCD       (gallons)

**II Multiple Tank Facilities**

**If all ASTs lack adequate secondary containment go to A. If not, go to B.**

A. WCD = Total capacity of all AST's       (gallons)

B. 1) Calculate total AST capacity without adequate secondary containment.  
 X =  (gallons)

2) Calculate the capacity of the largest AST within adequate secondary containment.  
 Y =  (gallons)

3) WCD = X + Y  
 WCD =  (gallons)       (barrels)

**WORKSHEET FOR DETERMINING WORST CASE DISCHARGE VOLUMES  
NO. 6 FUEL OIL ABOVEGROUND STORAGE TANK MANATEE TERMINAL**

Part I Background Information

Step (A) Calculate Worst Case Discharge in barrels

(b) (7)(F), (b) (3)

Step (B) Oil Group

Step (C) Operating Area (choose one)

Nearshore/Inland  
Great Lakes

or Rivers  
and Canals

Step (D) Percentages of Oil

Percent Lost to  
Natural Dissipation

Percent Recovered  
Floating Oil

Percent  
Oil Onshore

(b) (7)(F), (b) (3)

Step (E1) On-Water Recovery

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

(b) (7)(F), (b) (3)

Step (E2) Shoreline Recovery

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

Step (F) Emulsification Factor

Step (G) On-Water Oil Recovery Resource Mobilization Factor

Tier 1

Tier 2

(b) (7)(F), (b) (3)

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

Tier 1

Tier 2

(b) (7)(F), (b) (3)

Part III Shoreline Cleanup Volume (barrels)

Part IV On-Water Response Capacity By Operating Area

(Amount needed to be contracted for in barrels/day)

Tier 1

Tier 2

(b) (7)(F), (b) (3)

Part V On-Water Amount Needed to be Identified, but not Contracted for in Advance (Barrels/day)

Tier 1

Tier 2

(b) (7)(F), (b) (3)

**WORKSHEET FOR DETERMINING WORST CASE DISCHARGE VOLUMES  
NO. 6 FUEL OIL PIPELINE FROM DOCK TO MANATEE PUMPING STATION**

Part I Background Information

(b) (7)(F), (b) (3)

Step (A) Calculate Worst Case Discharge in barrels

Step (B) Oil Group

Step (C) Operating Area (choose one)

Nearshore/Inland  
Great Lakes

or Rivers  
and Canals

Step (D) Percentages of Oil  
Percent Lost to  
Natural Dissipation

Percent Recovered  
Floating Oil

Percent  
Oil Onshore

(b) (7)(F), (b) (3)

Step (E1) On-Water Recovery

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

(b) (7)(F), (b) (3)

Step (E2) Shoreline Recovery

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

Step (F) Emulsification Factor

Step (G) On-Water Oil Recovery Resource Mobilization Factor

(b) (7)(F), (b) (3)

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

Tier 1	Tier 2
(b) (7)(F), (b) (3)	

Part III Shoreline Cleanup Volume (barrels)

Part IV On-Water Response Capacity By Operating Area  
(Amount needed to be contracted for in barrels/day)

Tier 1	Tier 2
(b) (7)(F), (b) (3)	

Part V On-Water Amount Needed to be Identified, but not Contracted for in Advance (Barrels/day)

Tier 1	Tier 2
(b) (7)(F), (b) (3)	

**WORKSHEET FOR DETERMINING WORST CASE DISCHARGE VOLUMES  
NO. 6 FUEL OIL PIPELINE TO MANATEE PLANT**

Part I Background Information

Step (A) Calculate Worst Case Discharge in barrels

(b) (7)(F), (b) (3)

Step (B) Oil Group

Step (C) Operating Area (choose one)

Nearshore/Inland  
Great Lakes

or Rivers  
and Canals

Step (D) Percentages of Oil

Percent Lost to  
Natural Dissipation

Percent Recovered  
Floating Oil

Percent

(b) (7)(F), (b) (3)

(b) (7)(F), (b) (3)

Step (E1) On-Water Recovery

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

Step (E2) Shoreline Recovery

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

Step (F) Emulsification Factor

Step (G) On-Water Oil Recovery Resource Mobilization Factor

Tier 1	Tier 2
(b) (7)(F), (b) (3)	(b) (7)(F), (b) (3)

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

Tier 1	Tier 2
(b) (7)(F), (b) (3)	(b) (7)(F), (b) (3)

Part III Shoreline Cleanup Volume (barrels)

Part IV On-Water Response Capacity By Operating Area

(Amount needed to be contracted for in barrels/day)

Tier 1	Tier 2
(b) (7)(F), (b) (3)	(b) (7)(F), (b) (3)

Part V On-Water Amount Needed to be Identified, but not Contracted for in Advance (Barrels/day)

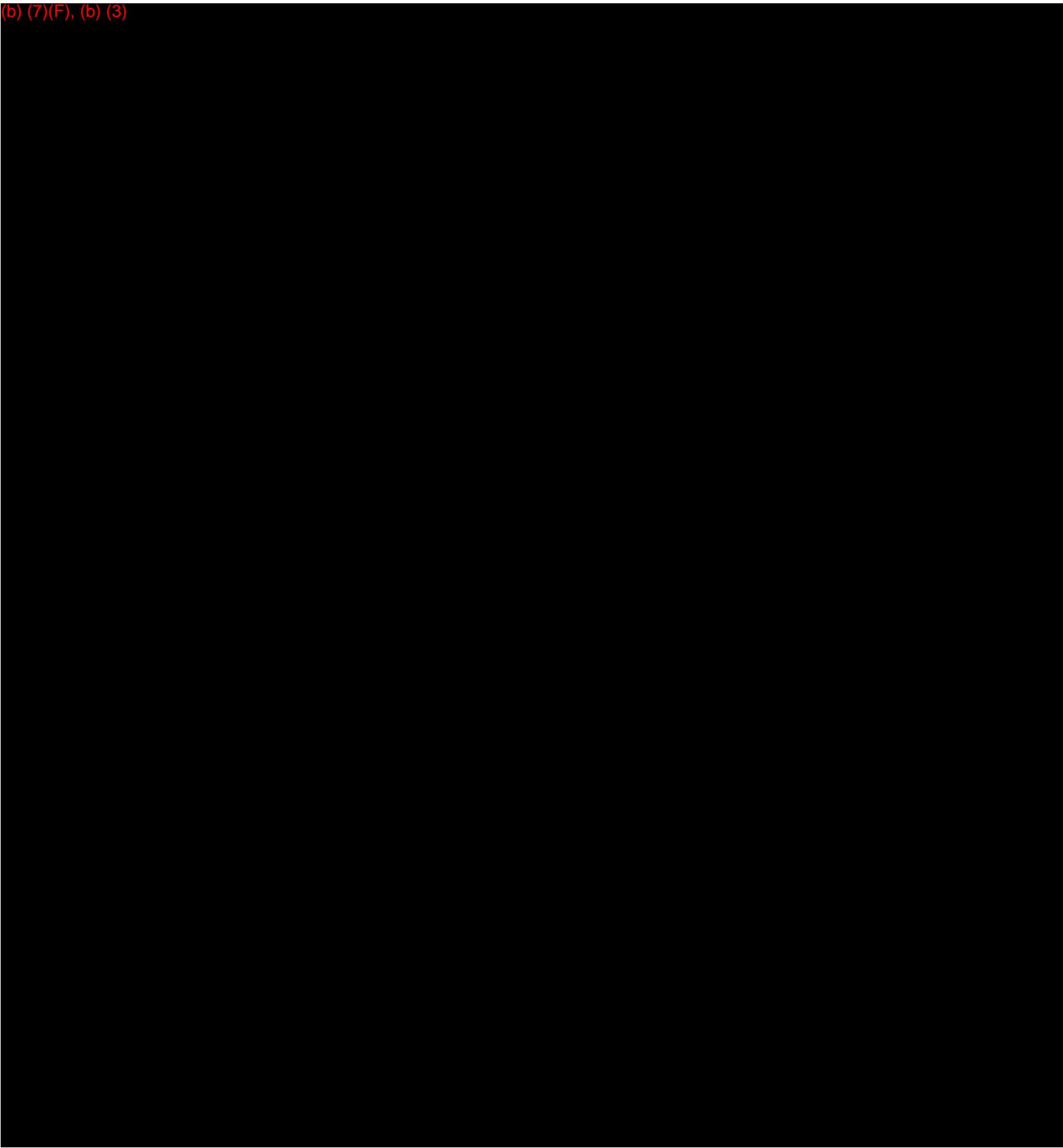
Tier 1	Tier 2
(b) (7)(F), (b) (3)	(b) (7)(F), (b) (3)

**Manatee Pipeline**

**Worst Case Discharge Calculations**

**Assumptions**

(b) (7)(F), (b) (3)



### WORKSHEET FOR DETERMINING WORST CASE DISCHARGE VOLUMES NO. 2 FUEL OIL ABOVEGROUND STORAGE TANK MANATEE PLANT

Part I Background Information

Step (A) Calculate Worst Case Discharge in barrels

(b) (7)(F), (b) (3)

Step (B) Oil Group

Step (C) Operating Area (choose one)

Nearshore/Inland  
Great Lakes

or Rivers  
and Canals

Step (D) Percentages of Oil

Percent Lost to  
Natural Dissipation

Percent Recovered  
Floating Oil

Percent

(b) (7)(F), (b) (3)

(b) (7)(F), (b) (3)

Step (E1) On-Water Recovery

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

Step (E2) Shoreline Recovery

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

Step (F) Emulsification Factor

Step (G) On-Water Oil Recovery Resource Mobilization Factor

Tier 1

Tier 2

(b) (7)(F), (b) (3)

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

Tier 1

Tier 2

(b) (7)(F), (b) (3)

Part III Shoreline Cleanup Volume (barrels)

Part IV On-Water Response Capacity By Operating Area

(Amount needed to be contracted for in barrels/day)

Tier 1

Tier 2

(b) (7)(F), (b) (3)

Part V On-Water Amount Needed to be Identified, but not Contracted for in Advance (Barrels/day)

Tier 1

Tier 2

(b) (7)(F), (b) (3)

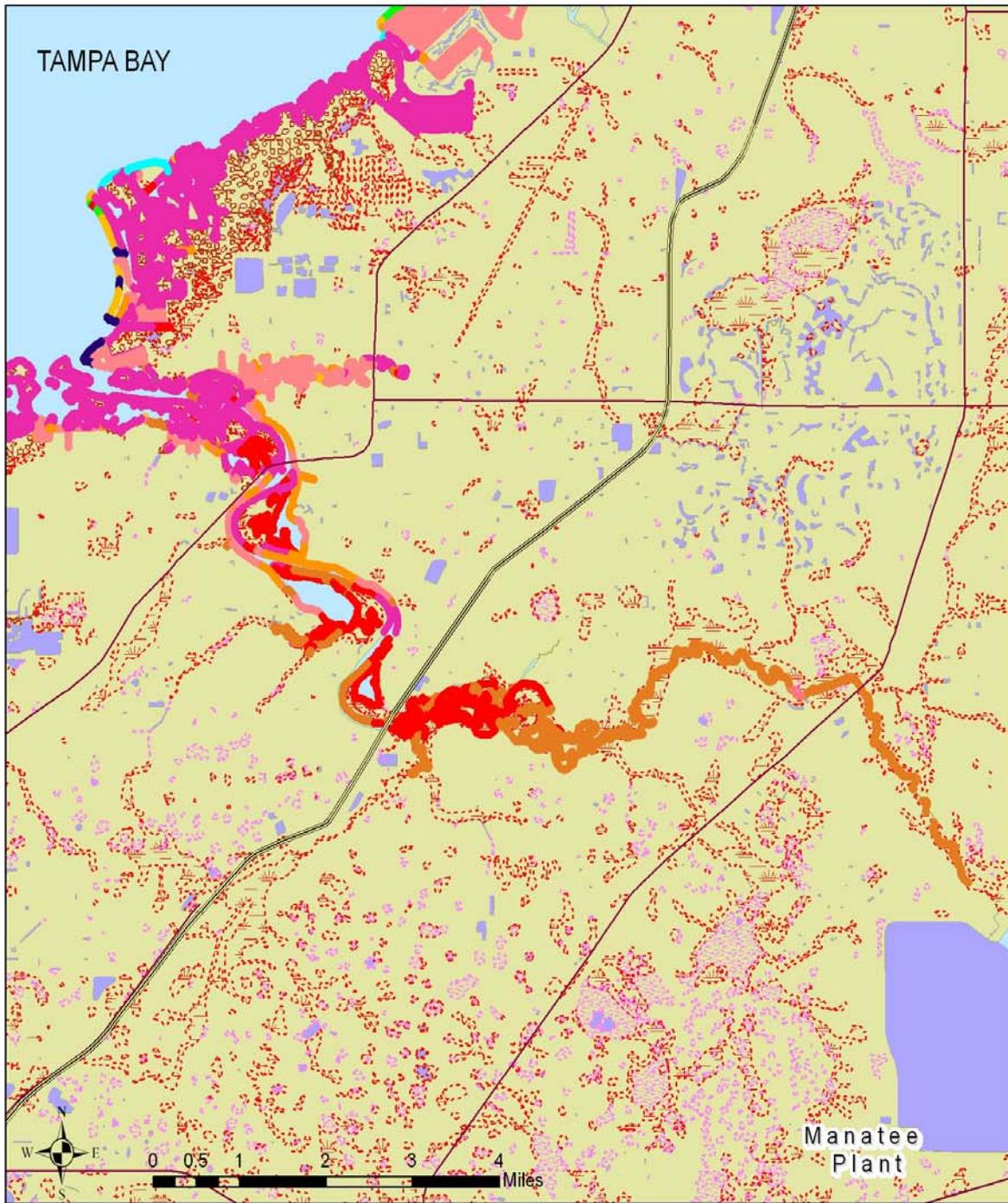
**APPENDIX I**  
**SPILL REPORT FORM**

**INTENTIONALLY BLANK**

Table I.1  
Spill Report Form

<b>INCIDENT DESCRIPTION</b>	
Date of discharge	
Cause of discharge	
Materials discharged	
Amount discharged (Gallons)	
Amount reached Navigable Waters	
Effectiveness of secondary containment	
Clean-up actions taken	
Steps to reduce recurrence	
Capacity of tank(s)/containment from which spill occurred	
Enforcement actions	
Effectiveness of monitoring equipment	
Description of how spill detected	

<b>INCIDENT DESCRIPTION</b>	
Date of discharge	September 18, 2006
Cause of discharge	Two pin-hole leaks in a section of 12 inch diameter piping located in a valve pit at berth 10.5 within Port Manatee.
Materials discharged	No. 6 fuel oil
Amount discharged (Gallons)	900 gallons
Amount reached Navigable Waters	900 gallons
Effectiveness of secondary containment	Spill overflowed valve pit
Clean-up actions taken	Using FPL's Corporate Response Team and FPL's primary OSRO, 15,000 feet of containment and sorbent boom was used to contain the spill within the Port area and protect the shoreline north of the Port. Vacuum trucks and drum skimmers were also used to remove oil from within the boomed areas and from the valve pit. Additional remedial activities were conducted of contaminated soils adjacent to the valve pit.
Steps to reduce recurrence	The section of the pipeline in valve pit was cut, capped, and removed from service. The remaining underground section of the purge oil line was cut and separated from the main pipeline. The line was also cleaned, capped, grouted, and abandoned in place.
Capacity of tank(s)/containment from which spill occurred	N.A.
Enforcement actions	Received Natural Resource Damage Assessment in the amount of \$15,865.
Effectiveness of monitoring equipment	N.A.
Description of how spill detected	Visual detection



**ESI Legend**

- |                                                                                           |                                                                                                       |                                                                                                                                    |
|-------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|
| <span style="color: red;">■</span> 10A: Salt- and Brackish Water Marsh                    | <span style="color: yellow;">■</span> 8A: Sheltered scarps in bedrock, mud, or clay                   | <span style="color: cyan;">■</span> 4: Course-grained sand beaches, Sandy beaches, bars and gently sloping banks                   |
| <span style="color: pink;">■</span> 10B: Freshwater Marsh                                 | <span style="color: lightcoral;">■</span> 8B: Sheltered solid man-made structures                     | <span style="color: grey;">■</span> 3A: Fine- to medium- grained sand beaches                                                      |
| <span style="color: orange;">■</span> 10C: Estuarine/Lacustrine/Riverine Swamps           | <span style="color: yellow;">■</span> 8C: Sheltered riprap                                            | <span style="color: grey;">■</span> 2A: Exposed wave-cut platforms in bedrock, mud, or clay, Shelving bedrock shores, Rocky shoals |
| <span style="color: magenta;">■</span> 10D: Scrub-shrub wetlands                          | <span style="color: green;">■</span> 7: Exposed tidal flats                                           | <span style="color: grey;">■</span> 2B: Exposed scarps and steep slopes in clay                                                    |
| <span style="color: orange;">■</span> 9A: Sheltered tidal flats; Sheltered sand/mud flats | <span style="color: blue;">■</span> 6A: Gravel beaches bars and gently sloping banks                  | <span style="color: darkblue;">■</span> 1A: Exposed rocky shores or Exposed rocky banks                                            |
| <span style="color: orange;">■</span> 9B: Sheltered, vegetated low banks                  | <span style="color: green;">■</span> 6B: Riprap                                                       | <span style="color: darkblue;">■</span> 1B: Exposed, solid man-made structures                                                     |
| <span style="color: green;">■</span> 9C: Hypersaline tidal flats                          | <span style="color: green;">■</span> 5: Mixed sand and gravel beaches, bars, and gently sloping banks | <span style="color: red;">■</span> 10A- Salt- and Brackish- Water Marsh                                                            |
|                                                                                           |                                                                                                       | <span style="color: pink;">■</span> 10B- Freshwater Marsh                                                                          |
|                                                                                           |                                                                                                       | <span style="color: orange;">■</span> 10C- Swamps                                                                                  |
|                                                                                           |                                                                                                       | <span style="color: magenta;">■</span> 10D- Scrub-Shrub Wetlands                                                                   |
|                                                                                           |                                                                                                       | <span style="color: orange;">■</span> 9C- Hypersaline Tidal Flats                                                                  |
|                                                                                           |                                                                                                       | <span style="color: yellow;">■</span> L                                                                                            |
|                                                                                           |                                                                                                       | <span style="color: blue;">■</span> W                                                                                              |
|                                                                                           |                                                                                                       | <span style="color: brown;">■</span> road:12                                                                                       |
|                                                                                           |                                                                                                       | <span style="color: grey;">■</span> road:14                                                                                        |

**Figure II-10a  
Environmentally Sensitive Areas  
Manatee Terminal**

NOTES:

1. PIPELINE AND OTHER DATA SHOWN IS BASED ON INFORMATION RECEIVED FROM FLORIDA POWER & LIGHT COMPANY.

DRAGON ENGINEERING SERVICES INC. ASSUMES NO RESPONSIBILITY FOR INFORMATION PROVIDED BY OTHERS.

3. ALL DATA SHOWN IS GEO-REFERENCED TO NAD83 DATUM, FLORIDA STATE PLANE EAST, FEET.

DRAWING NO.			REFERENCE TITLE			IMP BASE MAP WITH PIPELINE SEGMENTS SHOWN FLORIDA POWER & LIGHT COMPANY 16" MANATEE PIPELINE		
NO.	DATE	BY	REVISION DESCRIPTION	CHK.	APP.	DRAWN BY: WCS	DATE: 2/14/2003	SCALE: AS SHOWN
A	2/14/03	WCS	ISSUED FOR CLIENT REVIEW	RDY	DTP	CHECKED BY: RDT	DATE: 2/14/2003	SHEET: 1 OF 1
						APPROVED BY: DTP	DATE: 2/14/2003	DRAWING NUMBER: A2211-M-0102
								FIGURE C-3



SITE EVACUATION PLAN



FLORIDA POWER & LIGHT COMPANY

MANATEE FUEL TERMINAL

FIGURE II-11

SITE DRAINAGE PLAN



FLORIDA POWER & LIGHT COMPANY

MANATEE FUEL TERMINAL

FIGURE II-12

OIL SPILL DRAINAGE PATHS



FLORIDA POWER & LIGHT COMPANY

MANATEE FUEL TERMINAL

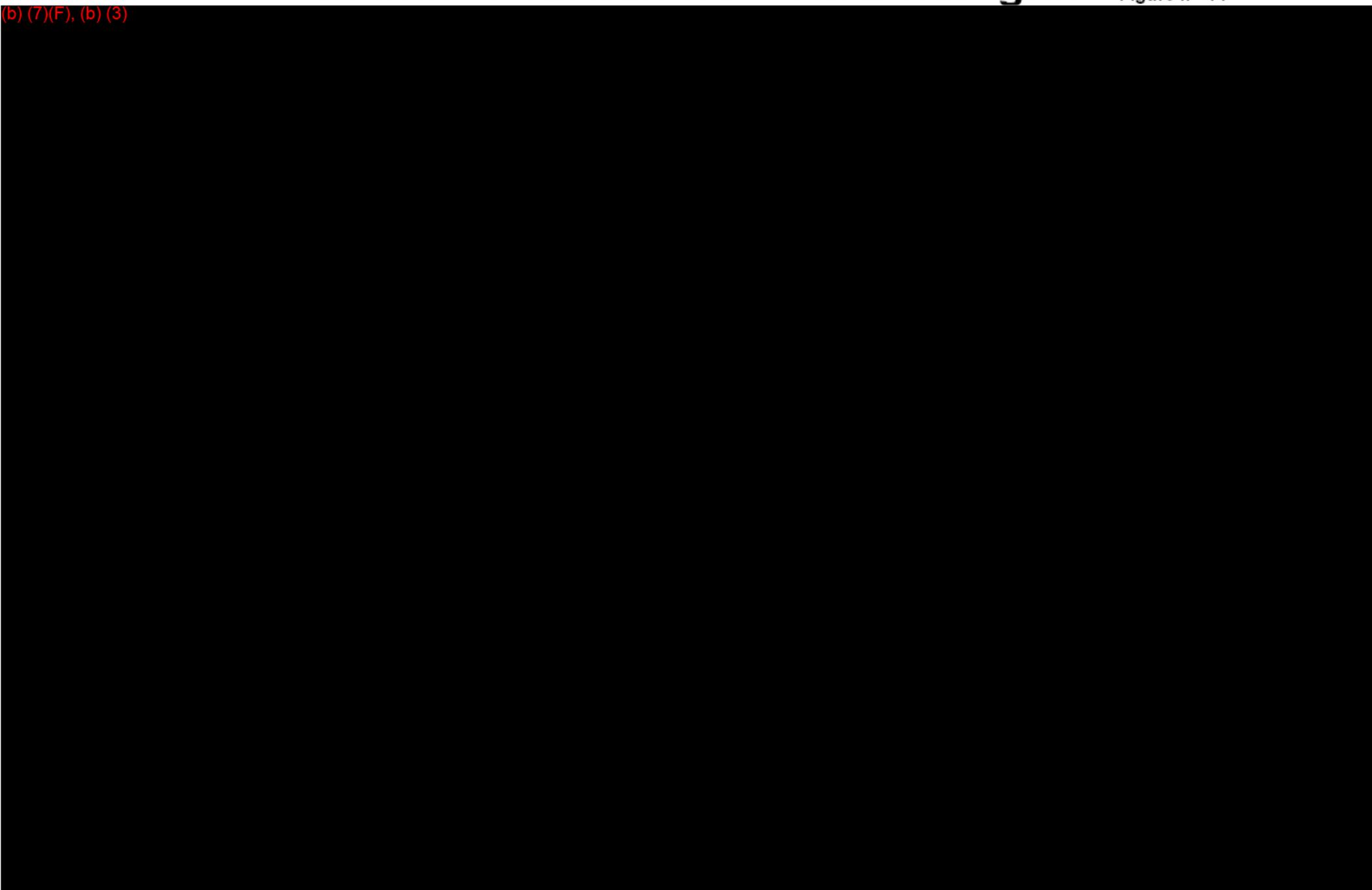
FIGURE II-13

# **Port Manatee Terminal**

# Manatee Terminal Boom Strategies

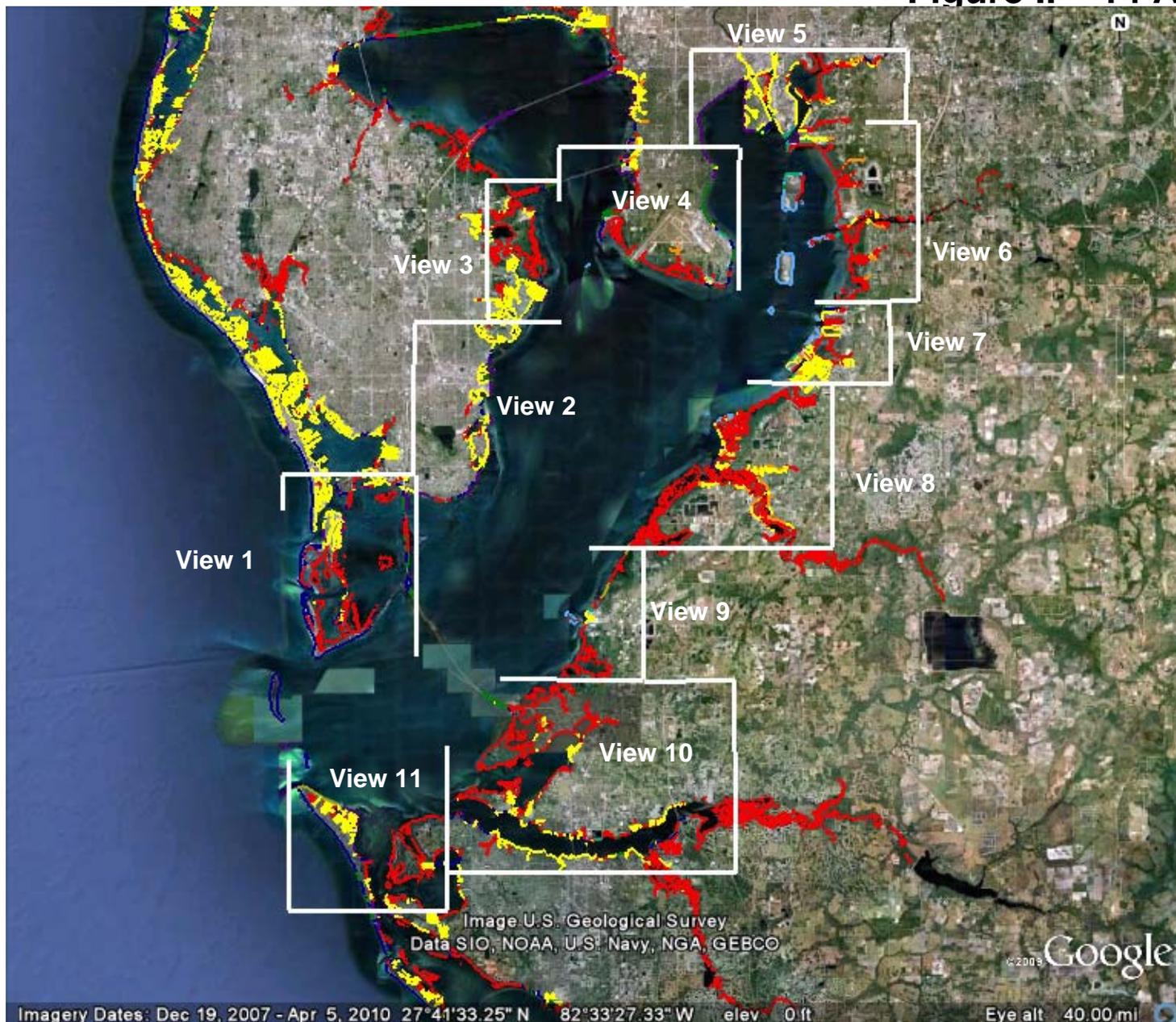
Figure II - 14

(b) (7)(F), (b) (3)

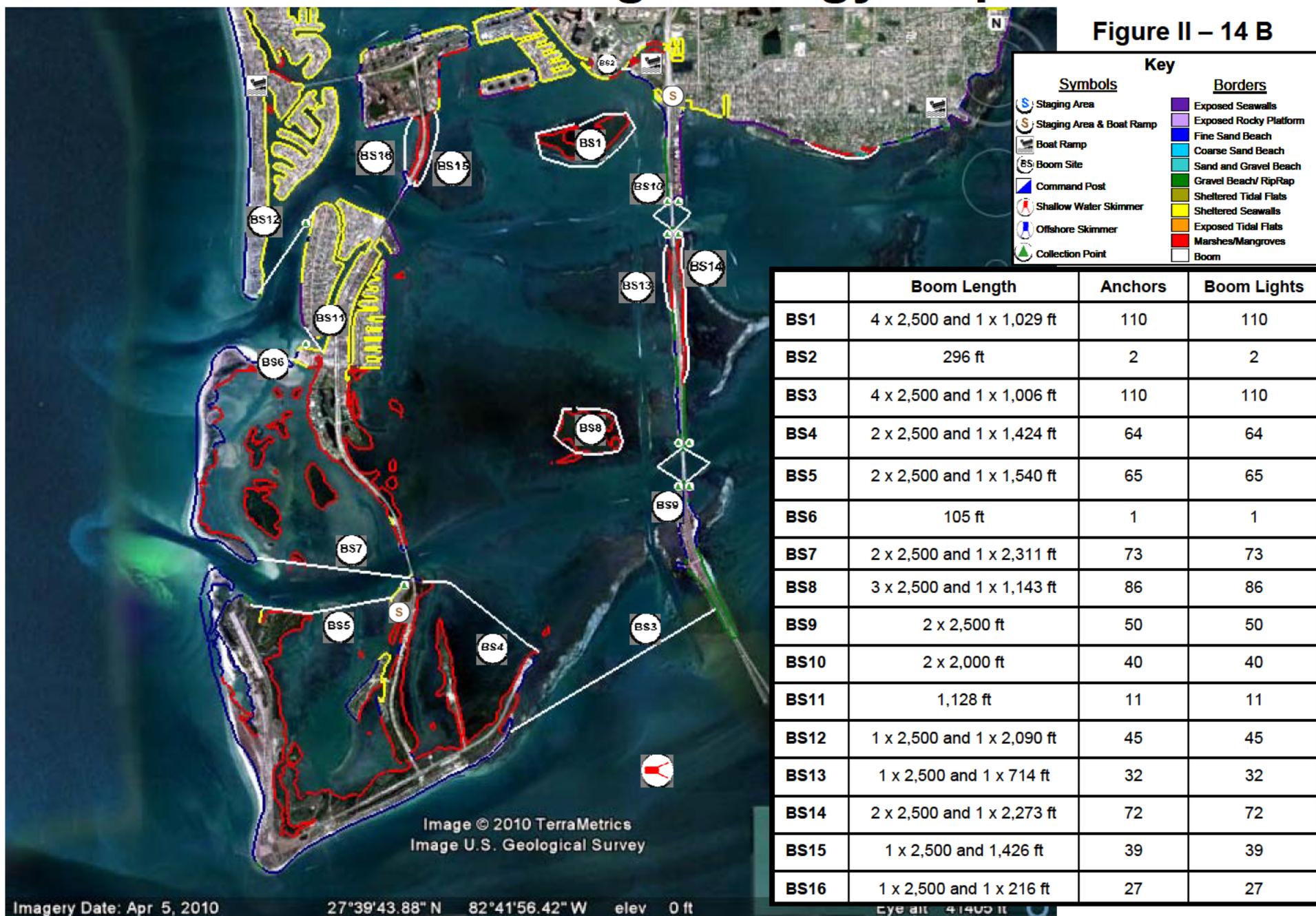


# Port Manatee Booming Strategy Map Site Overview

Figure II – 14 A



# Port Manatee Booming Strategy Map View 1



# Port Manatee Booming Strategy Map View 2

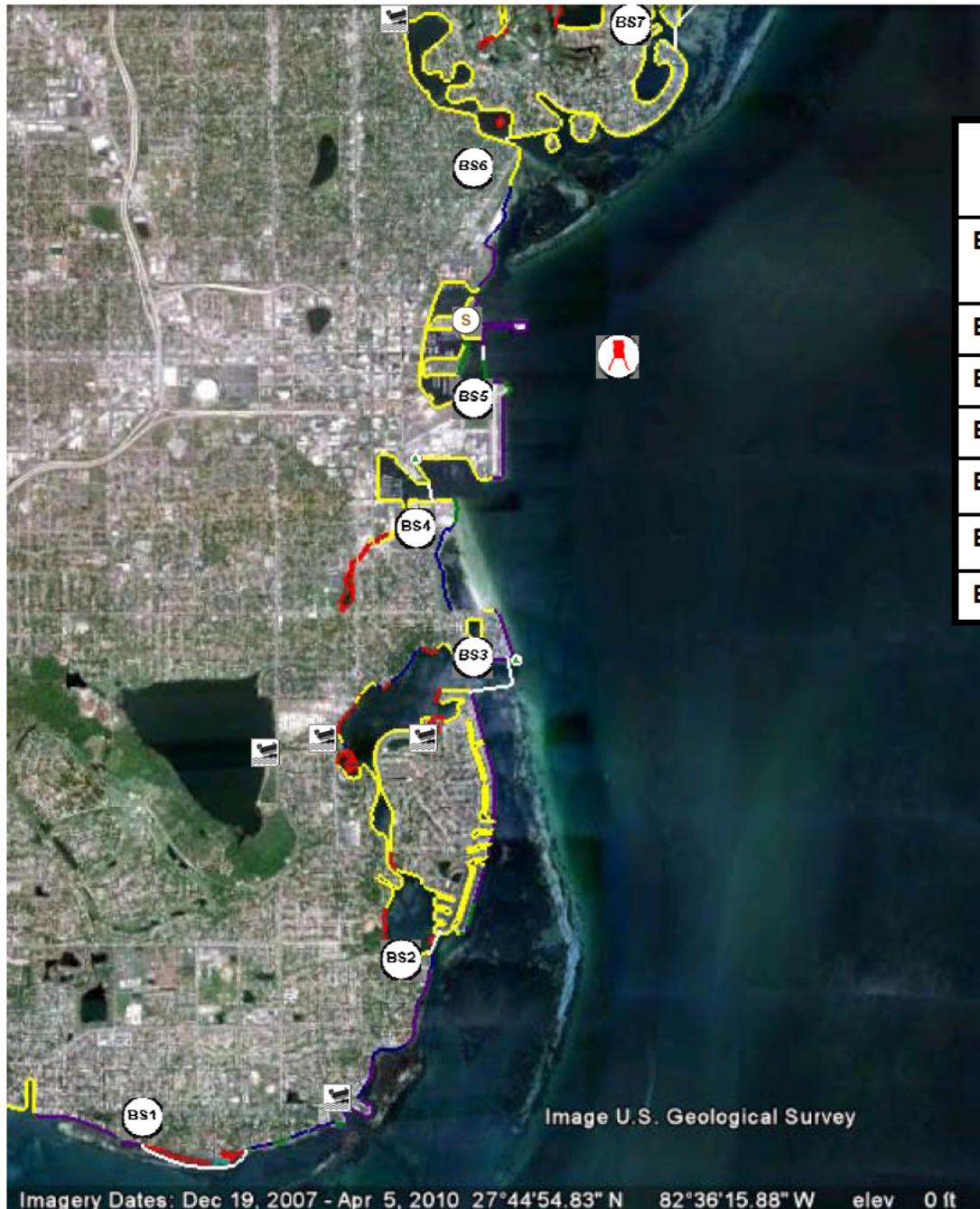
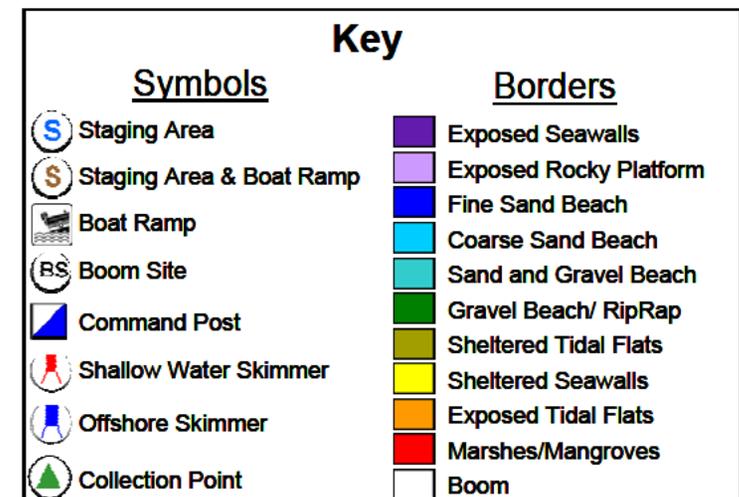
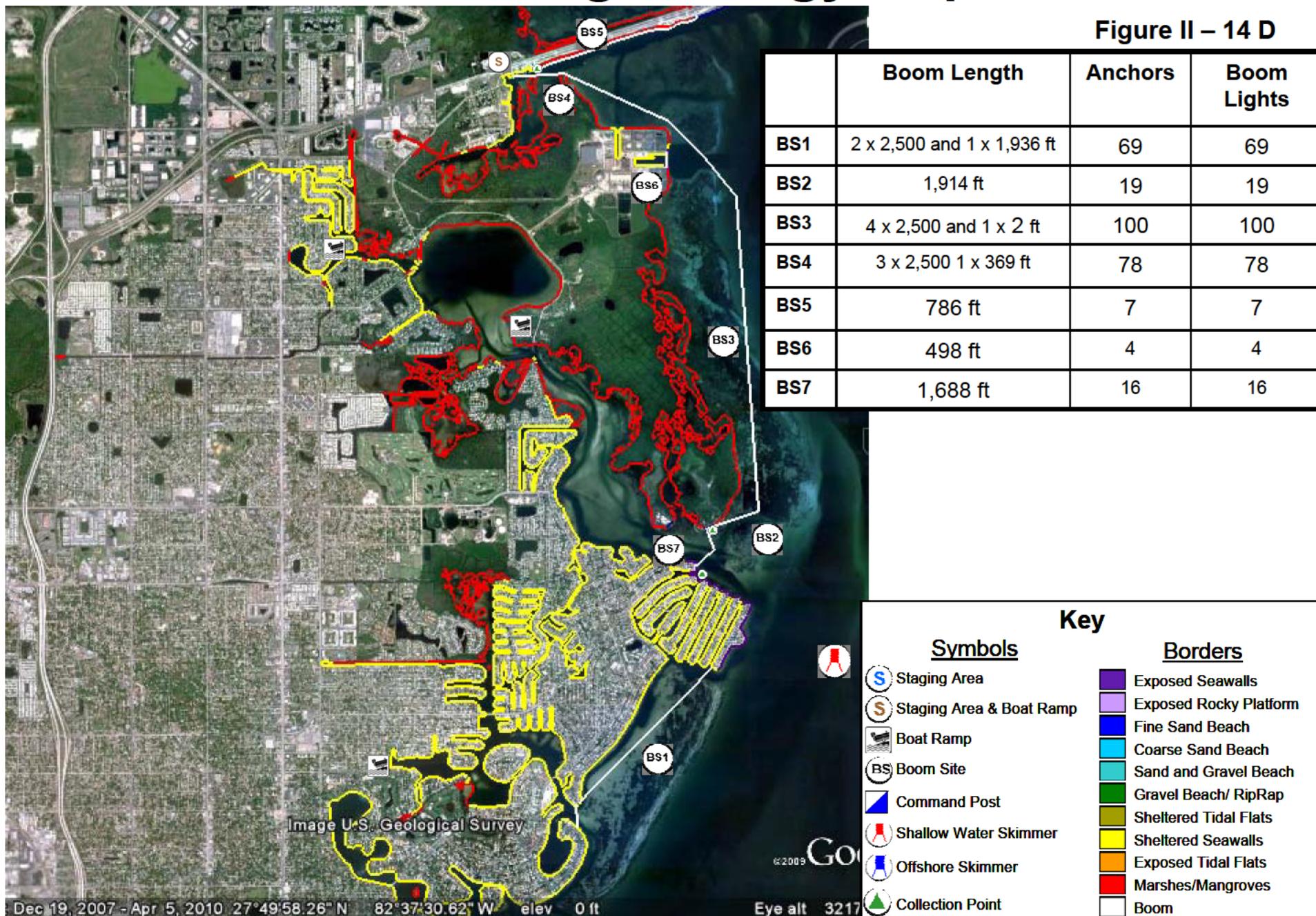


Figure II – 14 C

	Boom Length	Anchors	Boom Lights
BS1	1 x 2,500 and 1 x 1,332 ft	38	38
BS2	700 ft	7	7
BS3	2,339 ft	23	23
BS4	595 ft	5	5
BS5	445 ft	4	4
BS6	275 ft	2	2
BS7	763 ft	7	7

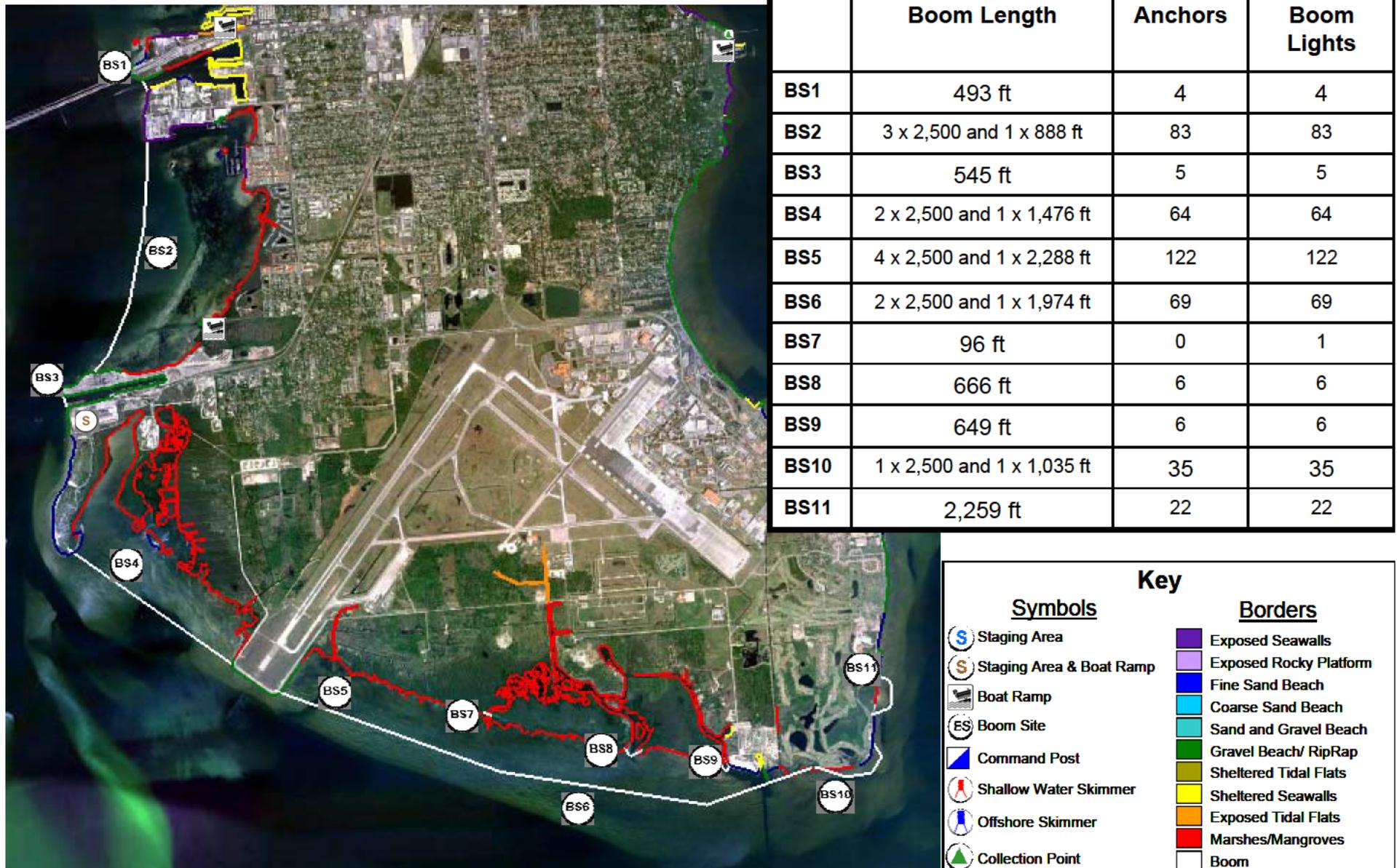


# Port Manatee Booming Strategy Map View 3



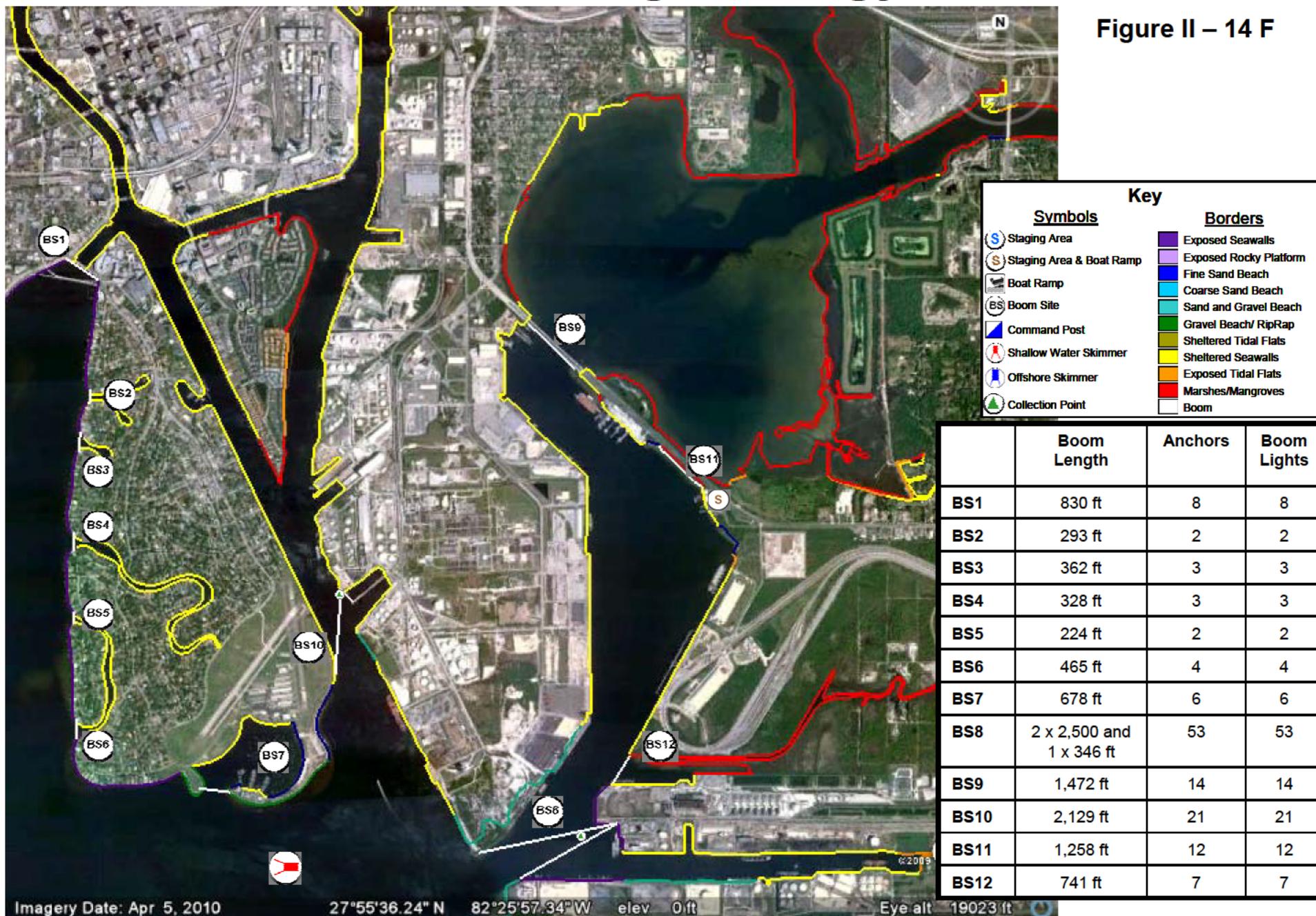
# Port Manatee Booming Strategy Map View 4

Figure II – 14 E

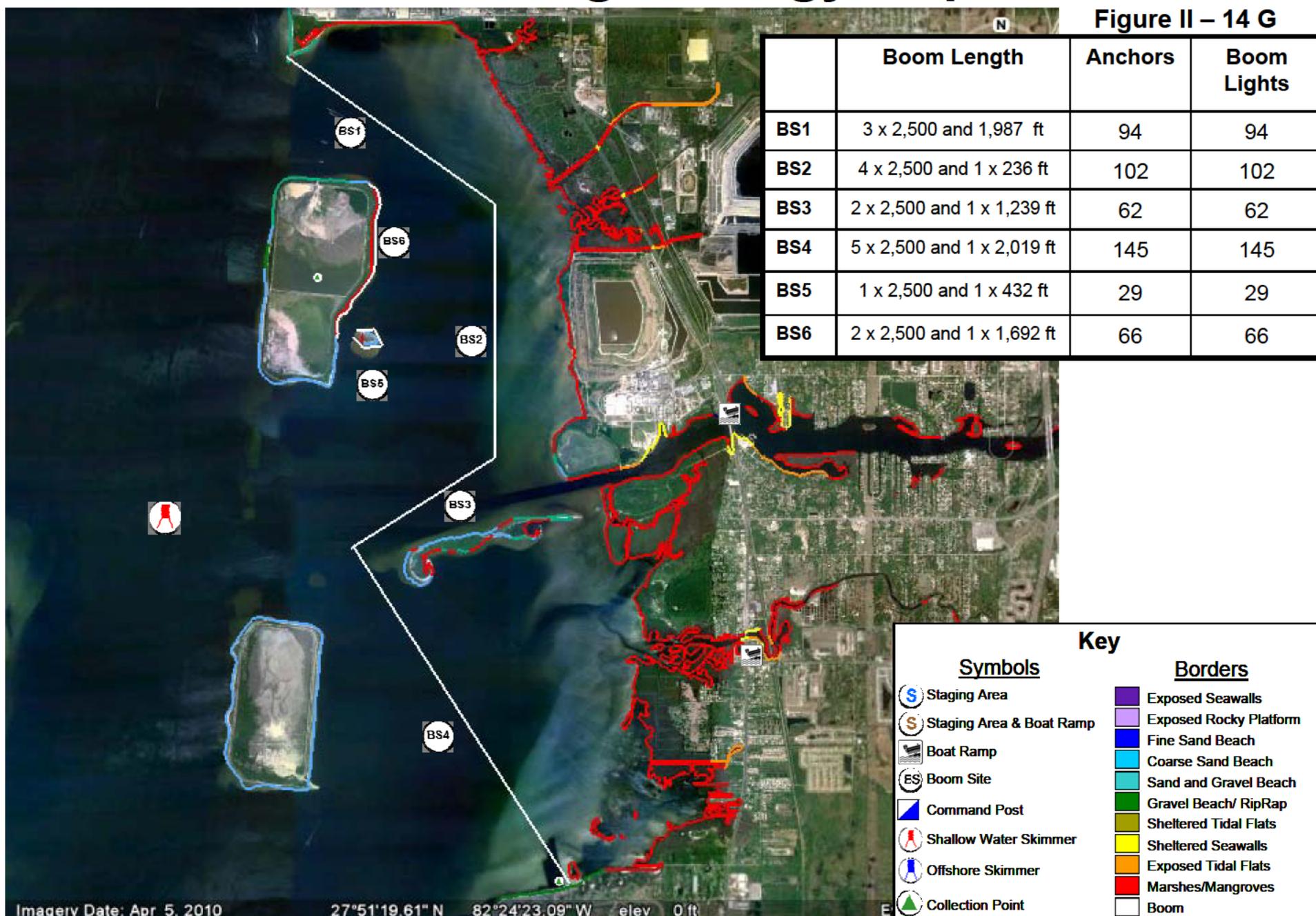


# Port Manatee Booming Strategy Map View 5

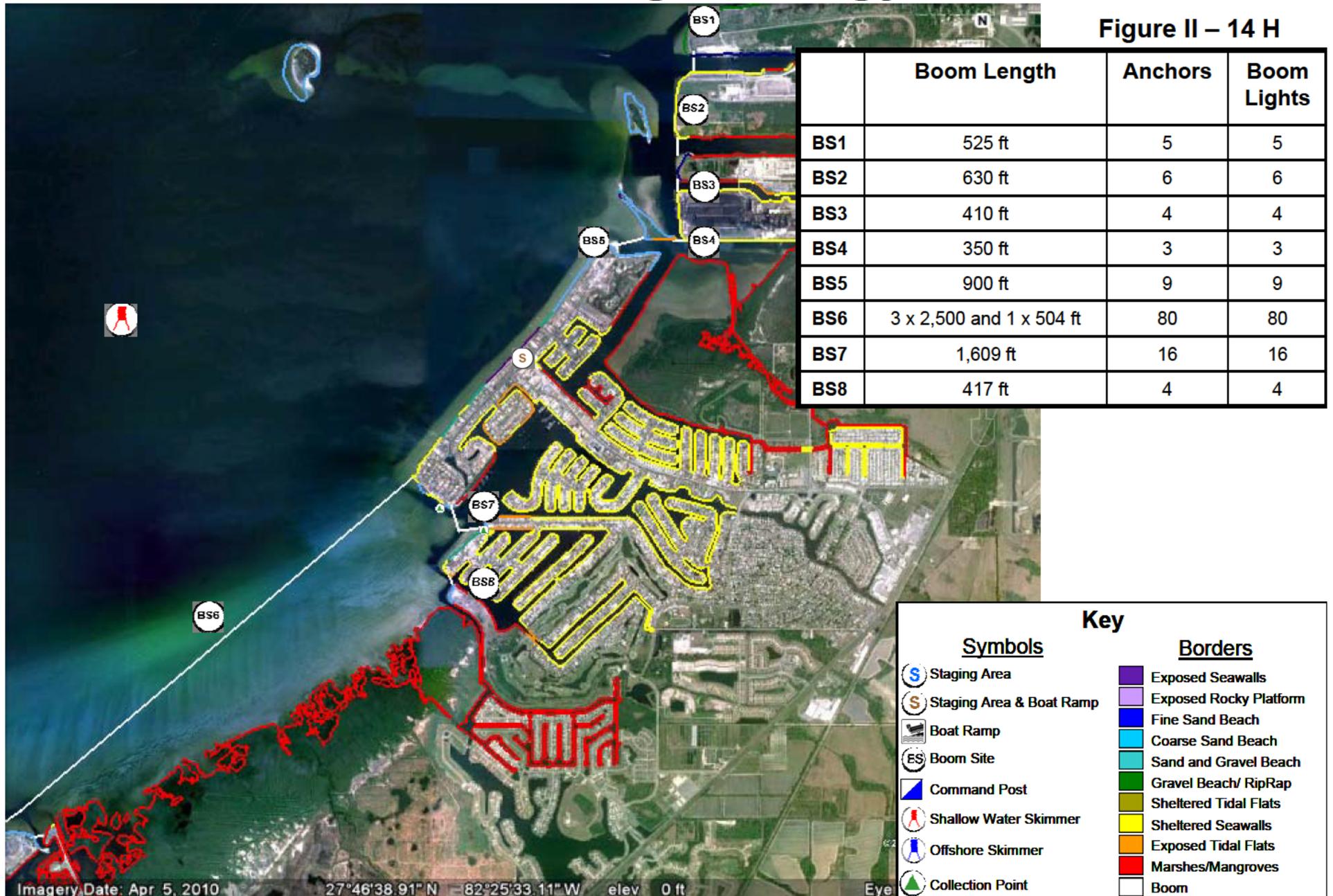
Figure II – 14 F



# Port Manatee Booming Strategy Map View 6



# Port Manatee Booming Strategy Map View 7

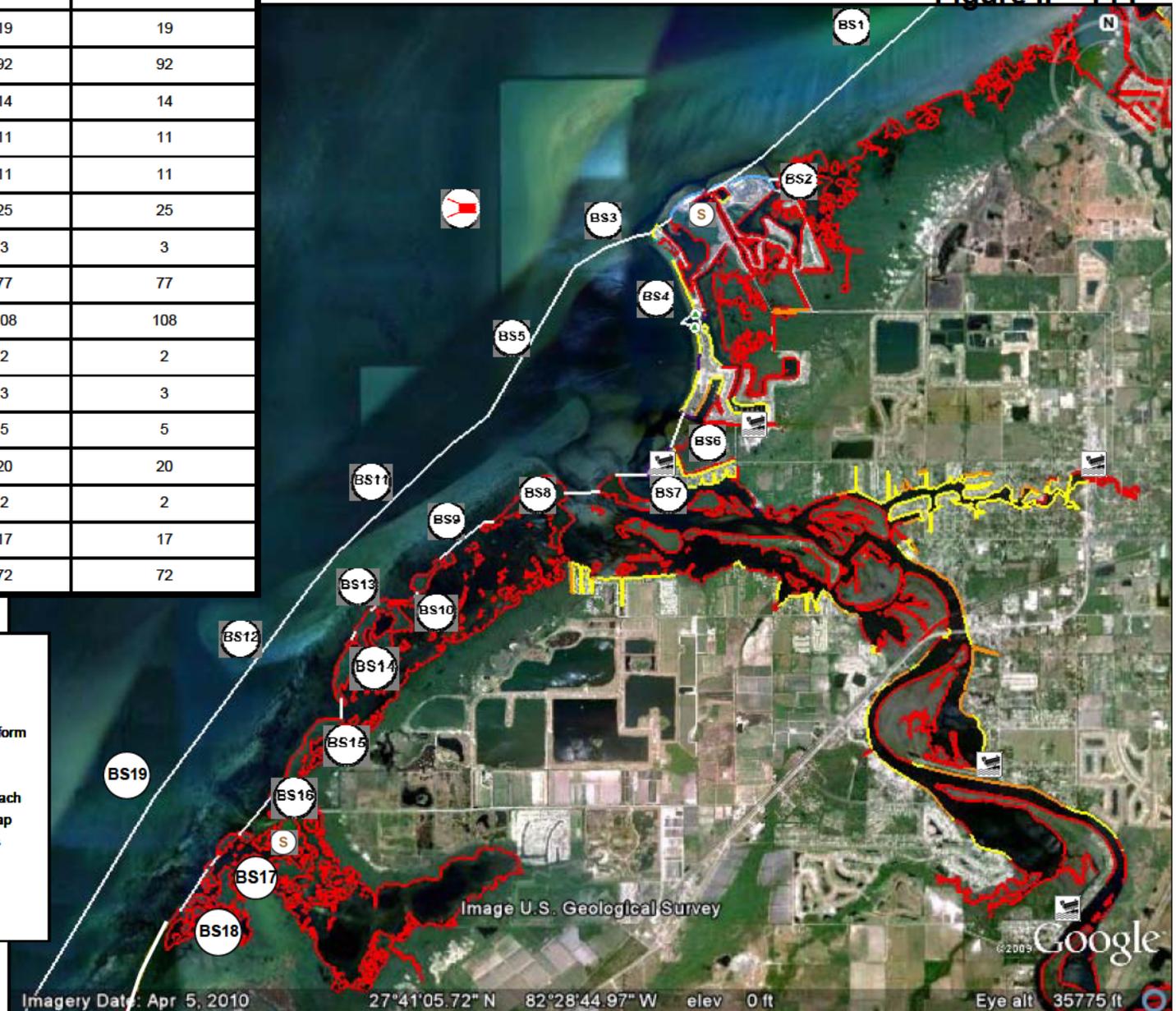


# Port Manatee Booming Strategy Map View 8

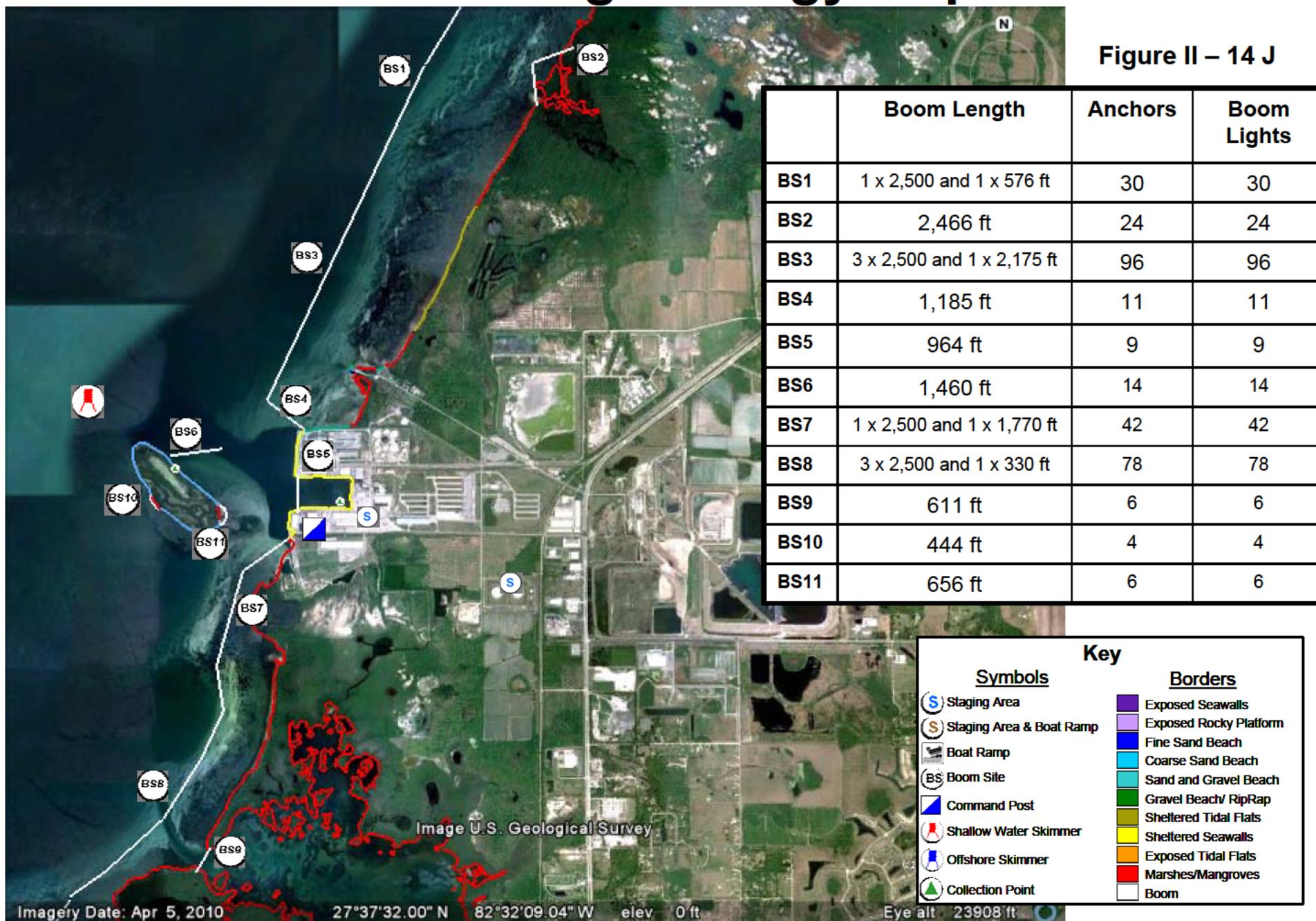
Figure II – 14 I

	Boom Length	Anchors	Boom Lights
BS1	3 x 2,500 and 1 x 1,280 ft	87	87
BS2	434 ft	4	4
BS3	664 ft	6	6
BS4	1,925 ft	19	19
BS5	3 x 2,500 and 1 x 1,766 ft	92	92
BS6	1,418 ft	14	14
BS7	1,134 ft	11	11
BS8	1,169 ft	11	11
BS9	1 x 2,500 and 1 x 18 ft	25	25
BS10	318 ft	3	3
BS11	3 x 2,500 and 1 x 288 ft	77	77
BS12	4 x 2,500 and 1 x 890 ft	108	108
BS13	266 ft	2	2
BS14	350 ft	3	3
BS15	598 ft	5	5
BS16	2,055 ft	20	20
BS17	278 ft	2	2
BS18	1,743 ft	17	17
BS19	2 x 2,500 and 1 x 2,230 ft	72	72

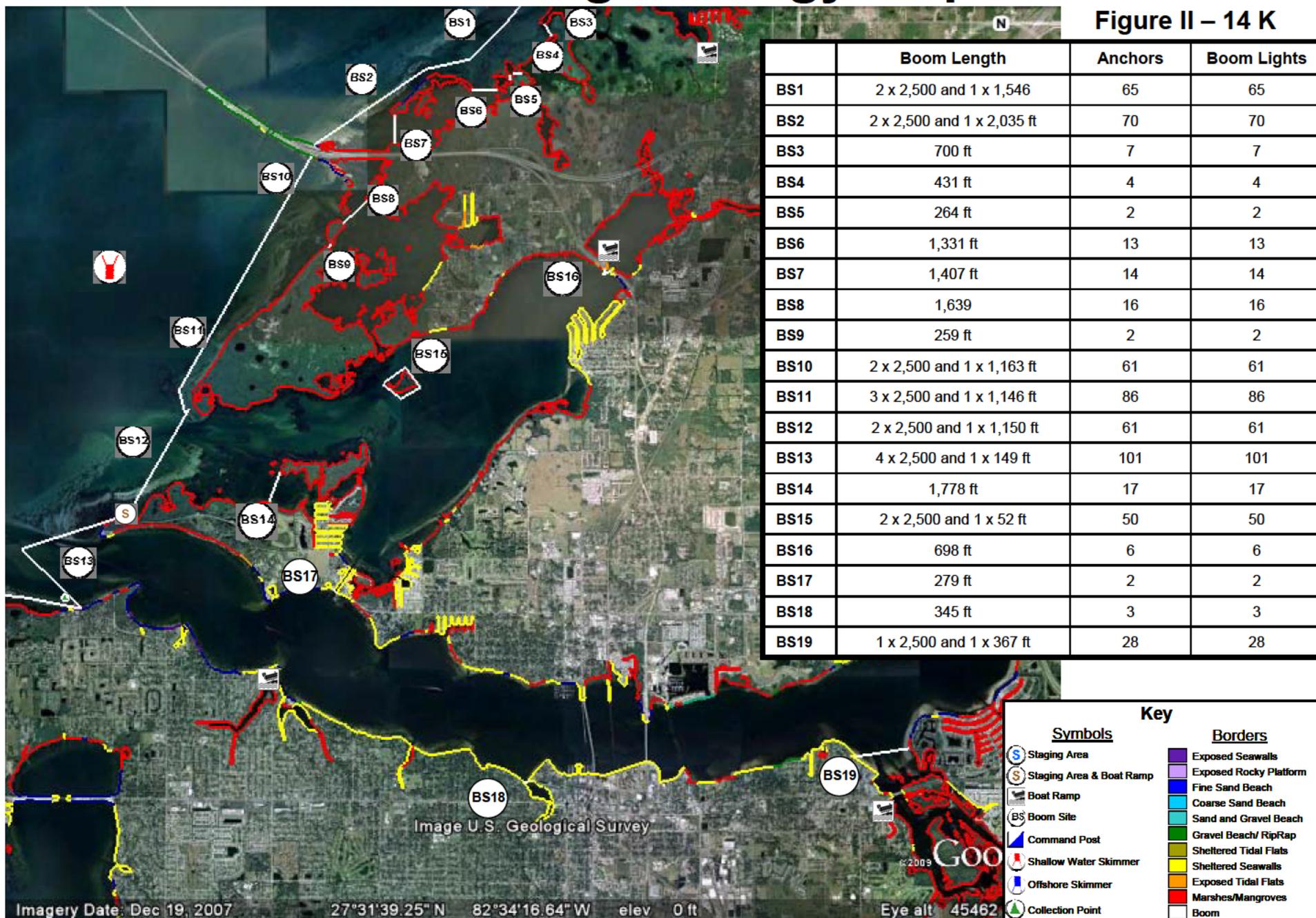
Key	
Symbols	Borders
Staging Area	Exposed Seawalls
Staging Area & Boat Ramp	Exposed Rocky Platform
Boat Ramp	Fine Sand Beach
Boom Site	Coarse Sand Beach
Command Post	Sand and Gravel Beach
Shallow Water Skimmer	Gravel Beach/ RipRap
Offshore Skimmer	Sheltered Tidal Flats
Collection Point	Sheltered Seawalls
	Exposed Tidal Flats
	Marshes/Mangroves
	Boom



# Port Manatee Booming Strategy Map View 9

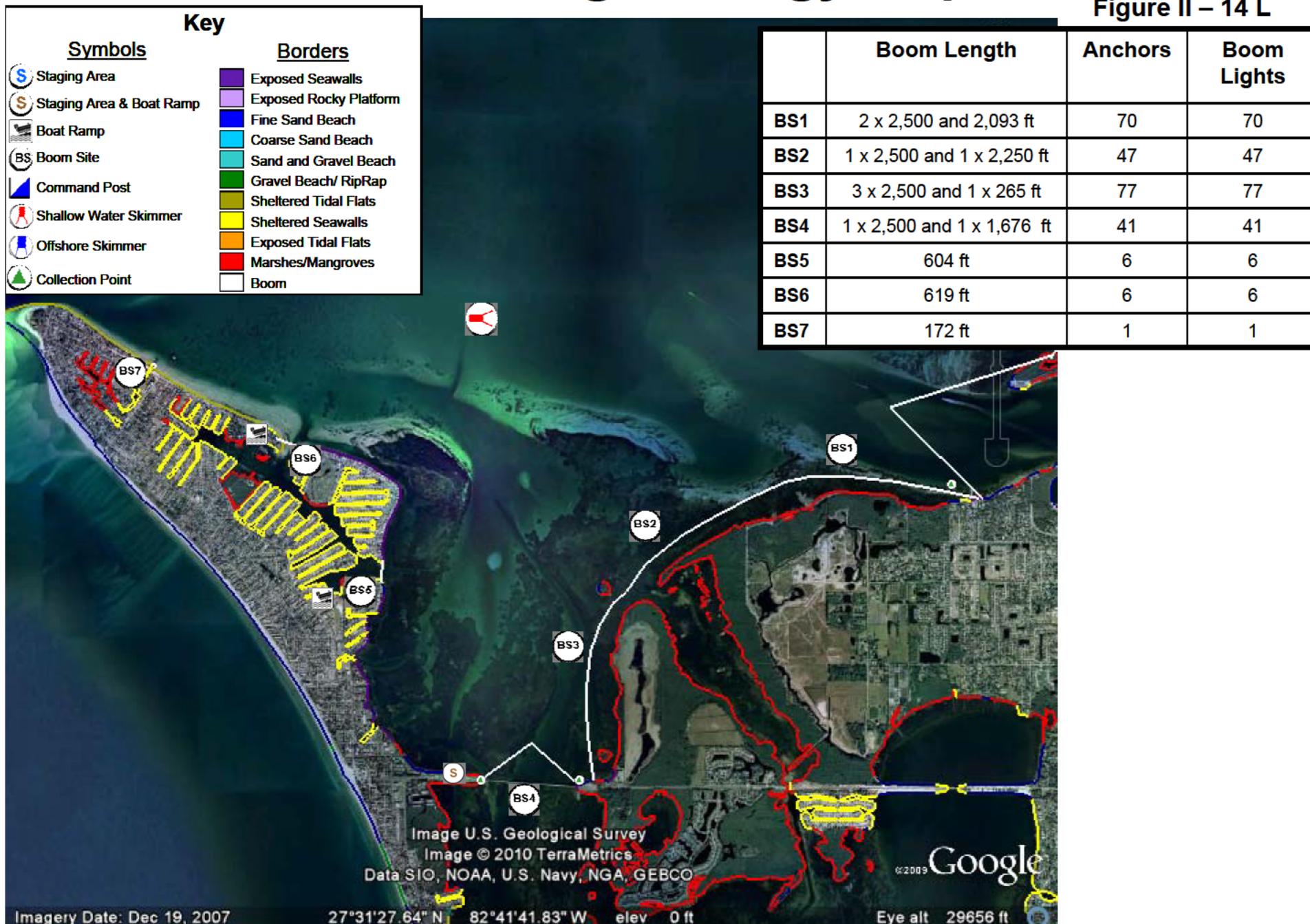


# Port Manatee Booming Strategy Map View 10



# Port Manatee Booming Strategy Map View 11

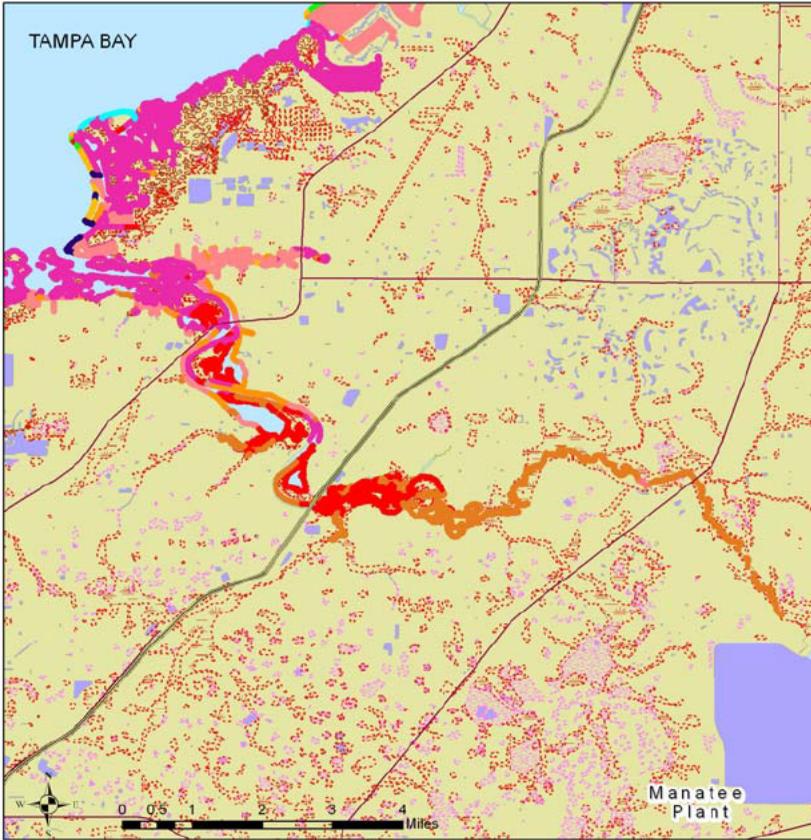
Figure II – 14 L





# FPL Manatee Plant Comprehensive Response Data

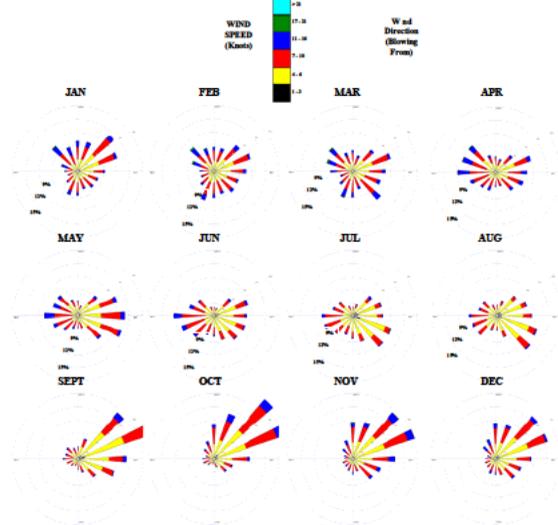
## Environmental Sensitivity Map Little Manatee River



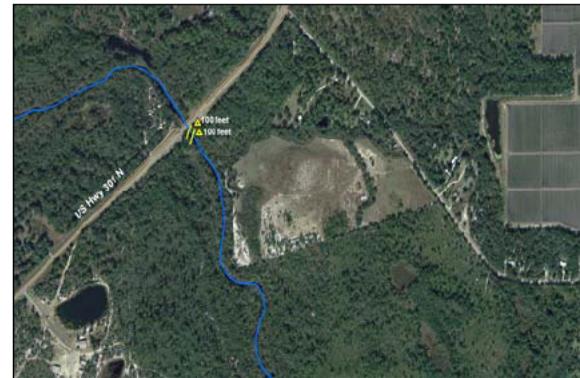
- ESI Legend**
- |                                                 |                                                                  |                                                                                         |
|-------------------------------------------------|------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 10A: Salt- and Brackish Water Marsh             | 5A: Sheltered scarp in bedrock, mud, or clay                     | 4: Course-grained sand beaches, Sandy beaches, bars and gently sloping banks            |
| 10B: Freshwater Marsh                           | 5B: Sheltered solid man-made structures                          | 5A: Fine- to medium- grained sand beaches                                               |
| 10C: Estuarine/Lacustrine/Riverine Swamps       | 5C: Sheltered ramp                                               | 5B: Exposure-out platforms in bedrock, mud, or clay, Shaking beach shores, Rocky shores |
| 10D: Scrub-shrub wetlands                       | 7: Exposed tidal flats                                           | 5E: Exposed scarp and steep slopes in clay                                              |
| 5A: Sheltered tidal flats, Shaded sand/mud flat | 5A: Gravel beach bar and gently sloping banks                    | 5A: Exposed rocky shores or Exposed rocky banks                                         |
| 5B: Sheltered, vegetated low banks              | 5B: Riprap                                                       | 5B: Exposed solid man-made structures                                                   |
| 5C: Hypersaline Tidal Flats                     | 5: Mixed sand and gravel beaches, bars, and gently sloping banks | 10A: Salt- and Brackish Water Marsh                                                     |
|                                                 |                                                                  | 10B: Freshwater Marsh                                                                   |
|                                                 |                                                                  | 10C: Swamps                                                                             |
|                                                 |                                                                  | 10D: Scrub-Shrub Wetlands                                                               |
|                                                 |                                                                  | 5C: Hypersaline Tidal Flats                                                             |
|                                                 |                                                                  | W                                                                                       |
|                                                 |                                                                  | ROADS                                                                                   |

## Monthly Wind Rose

Wind Source: Tampa International Airport,  
Hourly Wind Data, 1984-1992



## Booming Strategies By Site



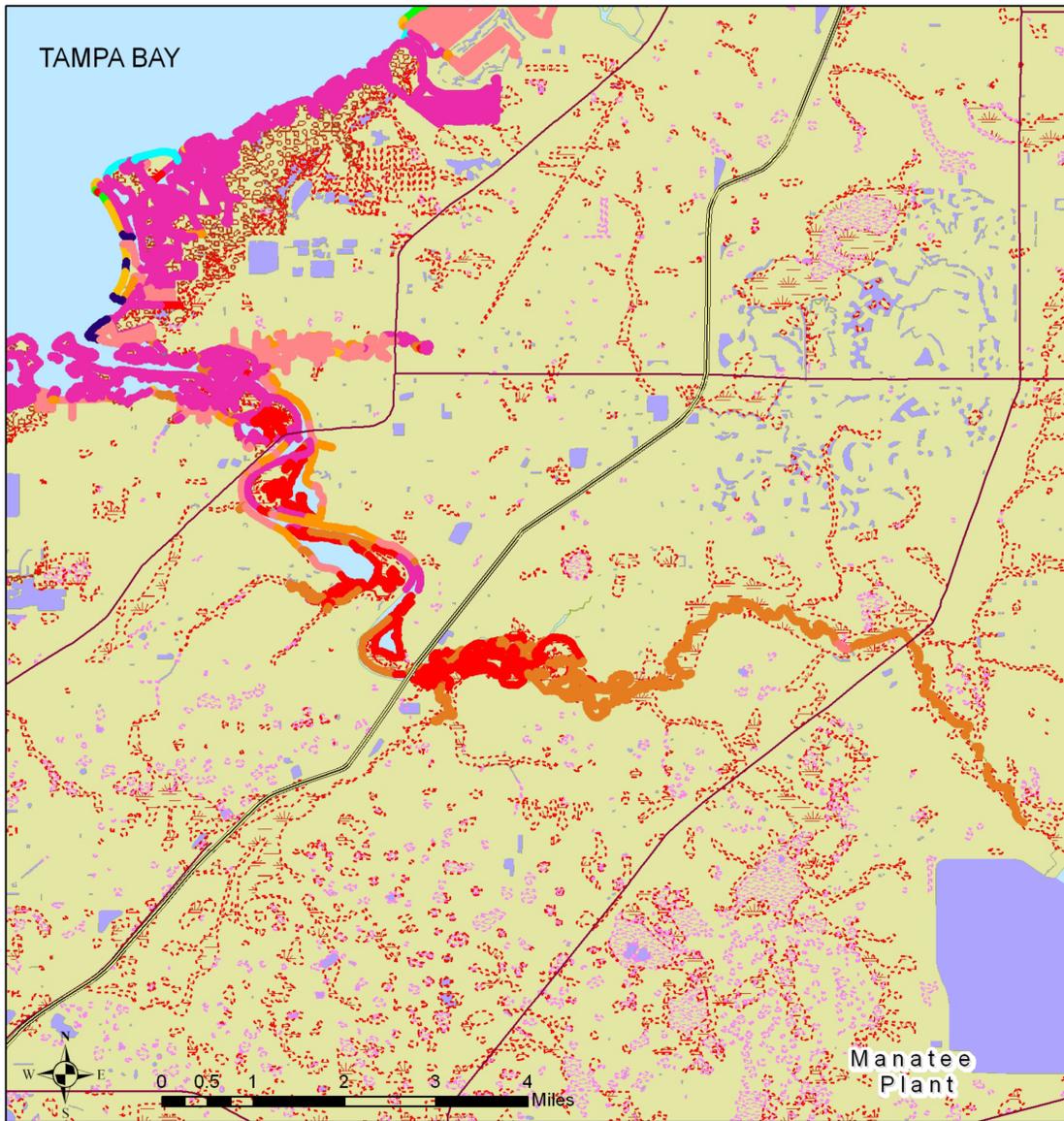
## Booming Strategies Overview





# FPL Manatee Plant Comprehensive Response Data

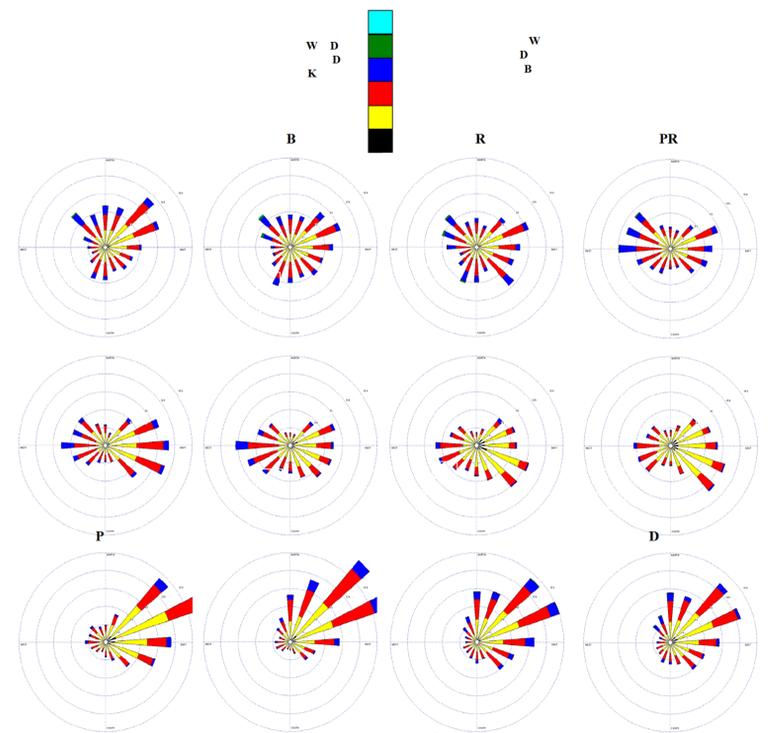
## Environmental Sensitivity Map Little Manatee River



- ESI Legend**
- |                                                     |                                                                  |                                                                                                |
|-----------------------------------------------------|------------------------------------------------------------------|------------------------------------------------------------------------------------------------|
| 10A: Salt- and Brackish Water Marsh                 | 8A: Sheltered scarps in bedrock, mud, or clay                    | 4: Course-grained sand beaches, Sandy beaches, bars and gently sloping banks                   |
| 10B: Freshwater Marsh                               | 8B: Sheltered solid man-made structures                          | 3A: Fine- to medium- grained sand beaches                                                      |
| 10C: Estuarine/Lacustrine/Riverine Swamps           | 8C: Sheltered riprap                                             | 2A: Exposed wave-cut platforms in bedrock, mud, or clay, Shelving bedrock shores, Rocky shoals |
| 10D: Scrub-shrub wetlands                           | 7: Exposed tidal flats                                           | 2B: Exposed scarp and steep slopes in clay                                                     |
| 8A: Sheltered tidal flats, Sheltered sand/mud flats | 6A: Gravel beaches bars and gently sloping banks                 | 1A: Exposed rocky shores or Exposed rocky banks                                                |
| 8B: Sheltered, vegetated low banks                  | 6B: Riprap                                                       | 1B: Exposed, solid man-made structures                                                         |
| 8C: Hypersaline tidal flats                         | 5: Mixed sand and gravel beaches, bars, and gently sloping banks | 10A - Salt- and Brackish- Water Marsh                                                          |
|                                                     |                                                                  | 10B - Freshwater Marsh                                                                         |
|                                                     |                                                                  | 10C - Swamps                                                                                   |
|                                                     |                                                                  | 10D - Scrub-Shrub Wetlands                                                                     |
|                                                     |                                                                  | 9C - Hypersaline Tidal Flats                                                                   |
|                                                     |                                                                  | L                                                                                              |
|                                                     |                                                                  | W                                                                                              |
|                                                     |                                                                  | road12                                                                                         |

## Monthly Wind Rose

Wind Data from Tampa Inlet on Appt  
Hourly Wind Data 1/84/19/2



Booming Strategies  
By Site



## Booming Strategies Overview

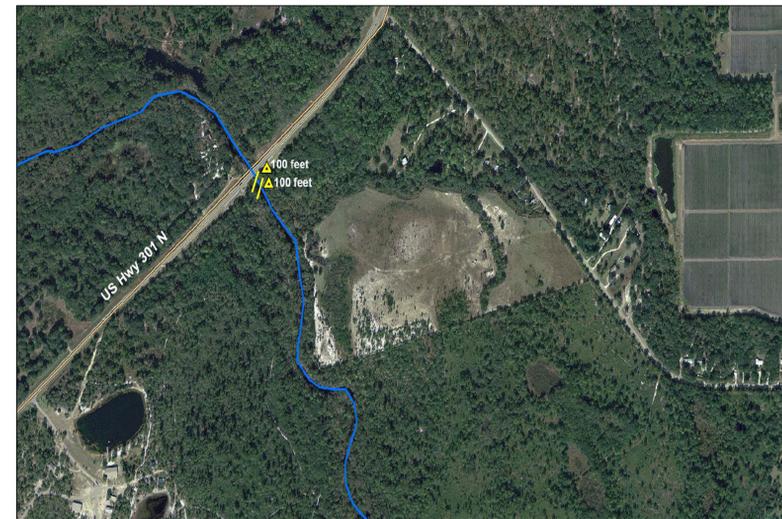
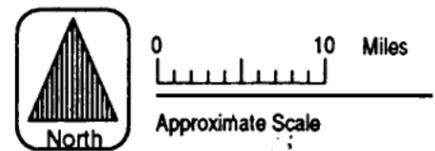
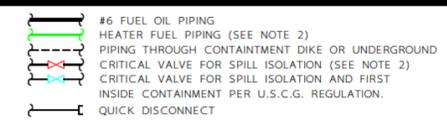


FIGURE I-2  
PLAN VIEW



SCALE  
10  
K



#6 FUEL OIL PIPING  
 HEATER FUEL PIPING (SEE NOTE 2)  
 PIPING THROUGH CONTAINMENT DIKE OR UNDERGROUND  
 CRITICAL VALVE FOR SPILL ISOLATION (SEE NOTE 2)  
 CRITICAL VALVE FOR SPILL ISOLATION AND FIRST  
 INSIDE CONTAINMENT PER U.S.C.G. REGULATION.  
 QUICK DISCONNECT

REFERENCE DRAWINGS:

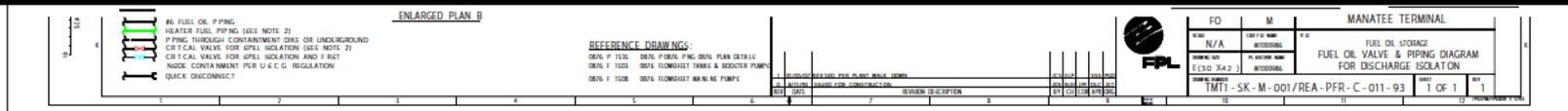
0876 - P-1535 .....0876 -PI0876 -PING 0876 -PLAN DETAILS  
 0876 - F-1503 .....0876 - FLOWSHEET TANKS & BOOSTER PUMPS  
 0876 - F-1508 .....0876 - FLOWSHEET MAINLINE PUMPS

REV	DATE	REVISION DESCRIPTION	BY	CHK	APP	ORG
1	01/05/07	REVISED PER PLANT WALK-DOWN	JCS	ELP	SSS	PGD
0	8/11/93	ISSUED FOR CONSTRUCTION	JDS	NJH	JPE	DLC
			CH	COR	APR	JET



FO	M	
SCALE N/A	CAD FILE NAME MT000986	TITLE FUEL OIL STORAGE FUEL OIL VALVE & PIPING DIAGRAM FOR DISCHARGE ISOLATION
DRAWING SIZE E(30"x42")	PK ARCHIVE NAME MT000986	
DRAWING NUMBER TMT1 - SK - M - 001 / REA - PFR - C - 011 - 93	SHEET 1 OF 1	REV 1





K

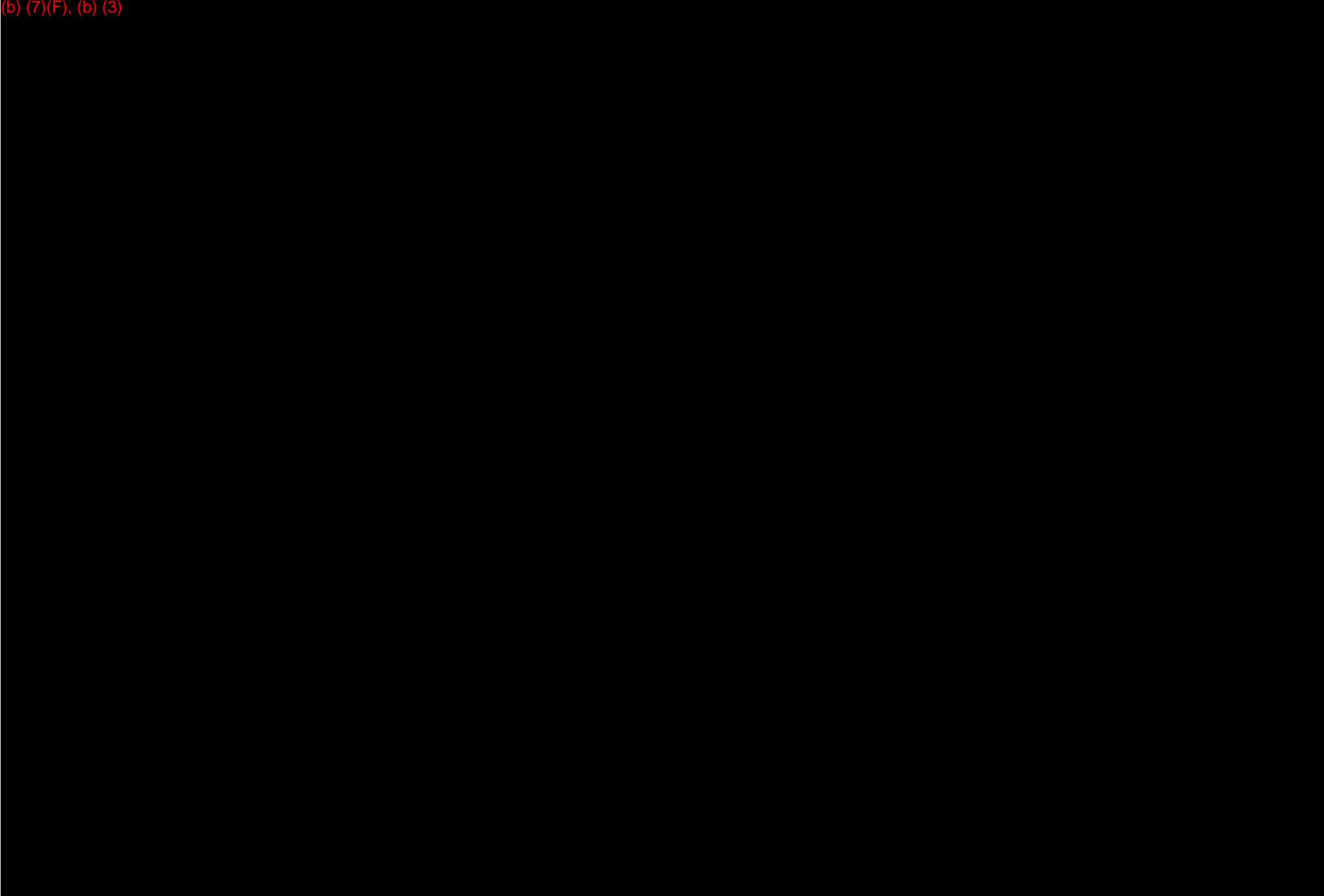
K

REV	DATE	REVISION DESCRIPTION	BY	CH	COR	APR	ORG
1	01/05/07	REV'D AS NOTED					
0	09/09/92	ISSUED FOR USE					

ELP	SD	SSS	PGD



SYSTEM FO	DISCIPLINE M	PLANT/UNIT MANATEE PORT FACILITY
SCALE N/A	CAD FILE NAME MT000276	TITLE FUEL OIL VALVE & PIPING DIAGRAM FOR DISCHARGE ISOLATION
DRAWING SIZE E(30"X42")	FPL ARCHIVE NAME MT000276	
DRAWING NUMBER TMT1 - SK - M - 001/REA - PFR - C - 110 - 92		SHEET 1 OF 1
		REV 1



LOCATION OF EQUIPMENT TANKS AND FUEL OIL STORAGE TANKS



FLORIDA POWER & LIGHT COMPANY

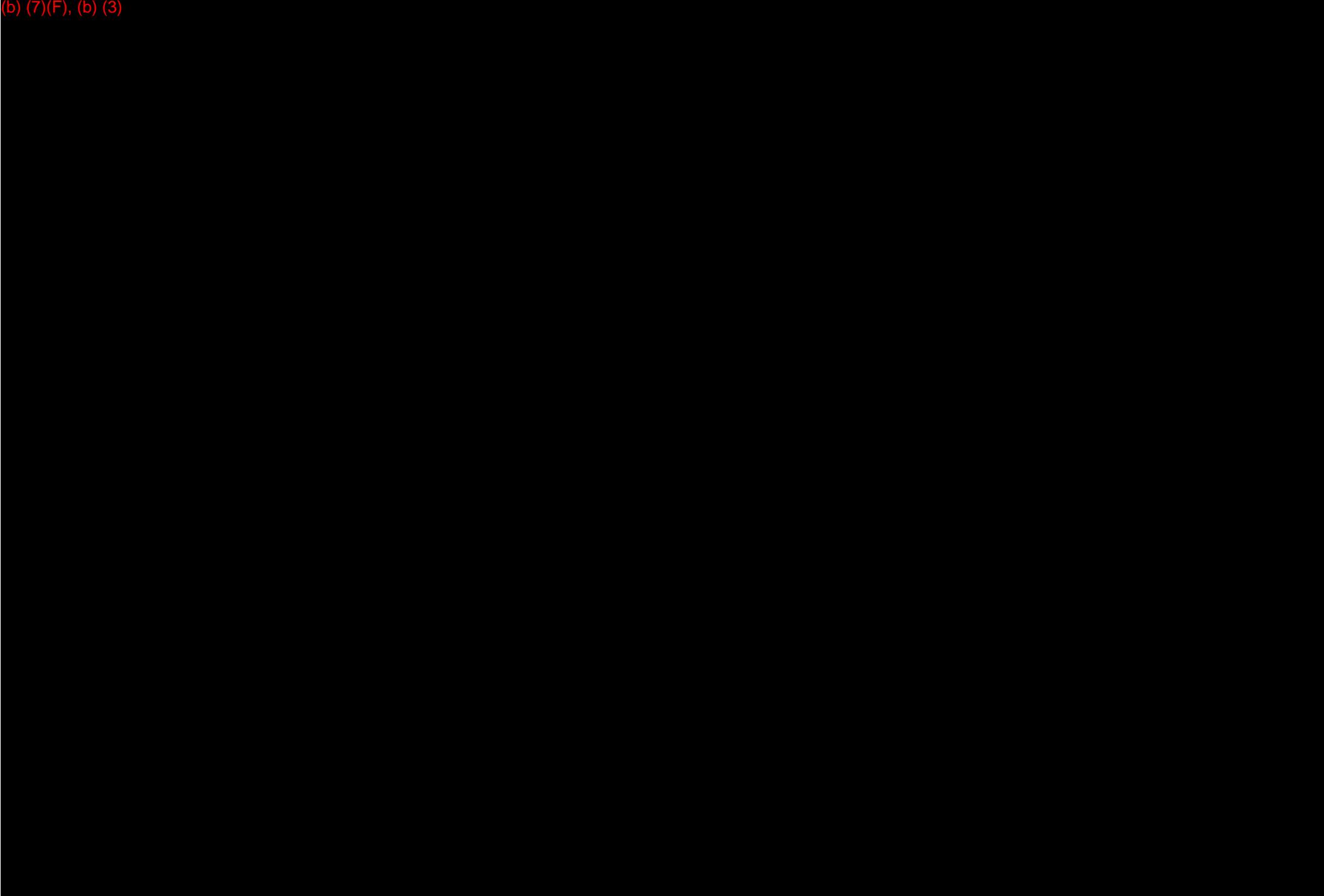
MANATEE FUEL TERMINAL

FIGURE II-6

LOCATION OF OIL FILLED EQUIPMENT



FLORIDA POWER & LIGHT COMPANY  
MANATEE FUEL TERMINAL  
FIGURE II-7



LOCATION OF OIL SPILL RESPONSE & COMMUNICATION EQUIPMENT



FLORIDA POWER & LIGHT COMPANY

MANATEE FUEL TERMINAL

FIGURE II-8

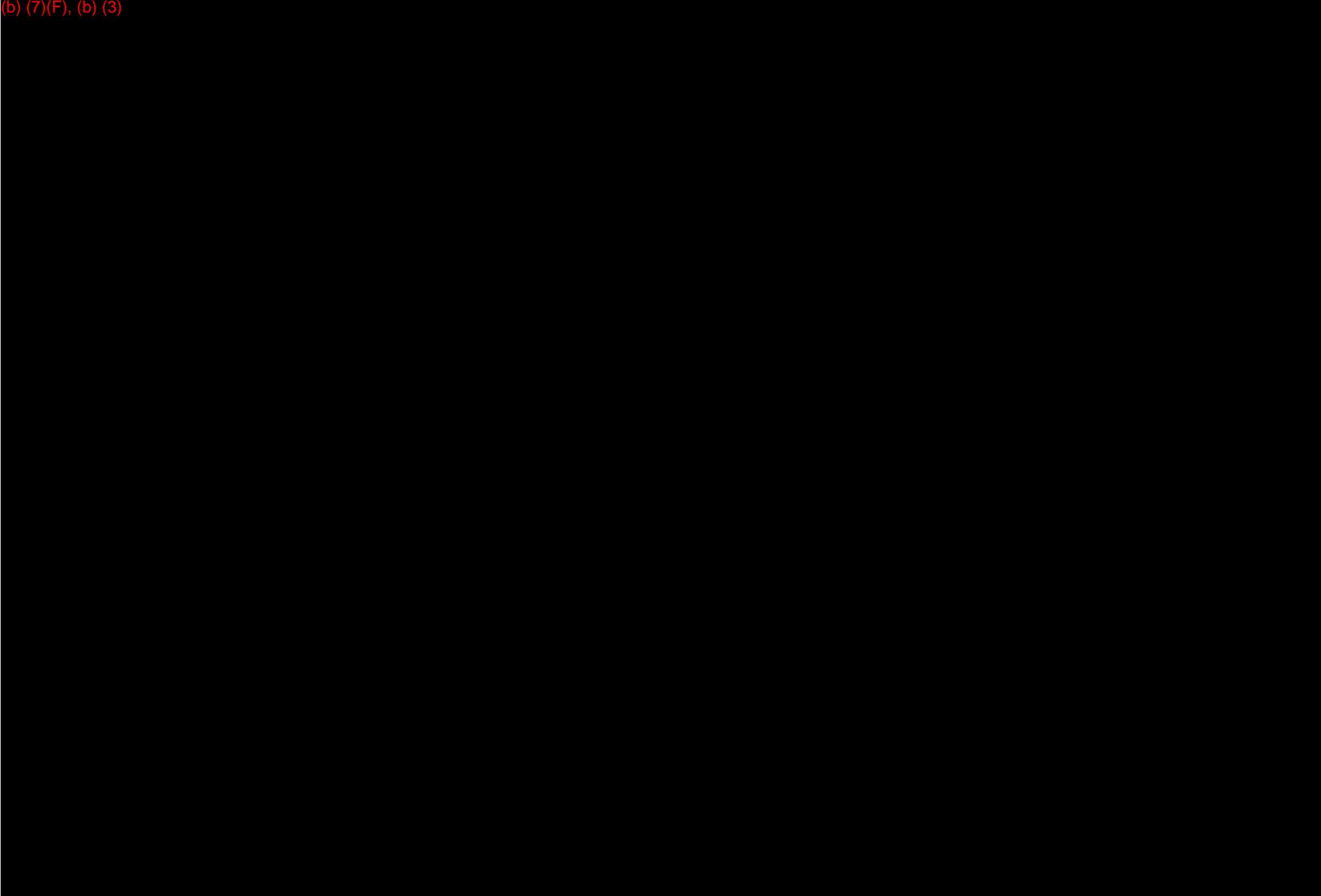
FIRE PROTECTION PLAN



FLORIDA POWER & LIGHT COMPANY

MANATEE FUEL TERMINAL

FIGURE II-9



SITE LOCATION



FLORIDA POWER & LIGHT COMPANY

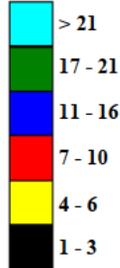
MANATEE FUEL TERMINAL

FIGURE III-1

# Monthly Wind Rose

Wind Source: Tampa International Airport,  
Hourly Wind Data, 1984-1992

**WIND  
SPEED  
(Knots)**



**Wind  
Direction  
(Blowing  
From)**

**JAN**

**FEB**

**MAR**

**APR**

**MAY**

**JUN**

**JUL**

**AUG**

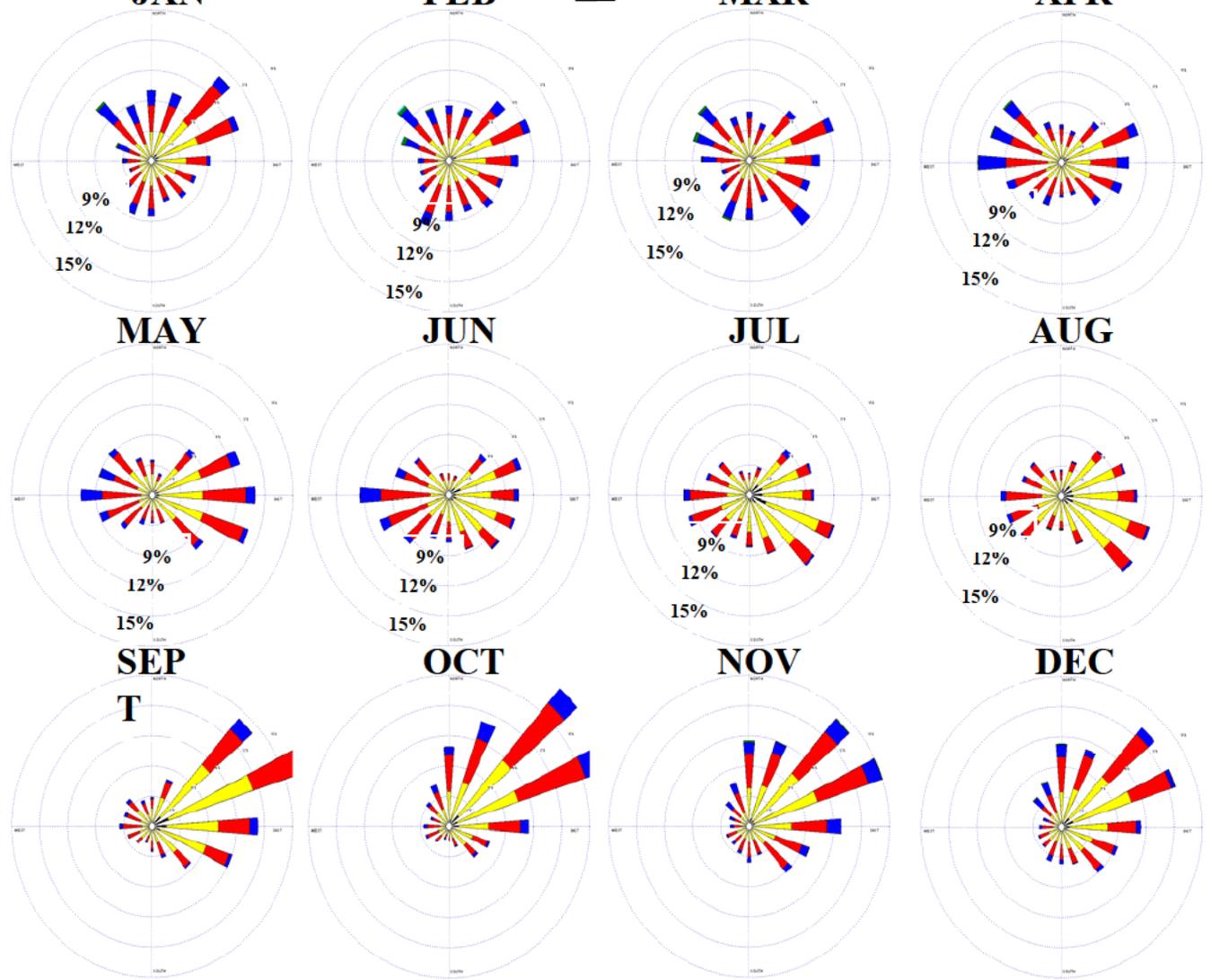
**SEP**

**OCT**

**NOV**

**DEC**

**T**



**Figure III-2  
Wind Rose  
Manatee Terminal**

(b) (3), (b) (7)(F)

**Figure XI-1**  
**Port Manatee Terminal Significant Materials Location Map**