Port Everglades Plant and Terminal

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, and U.S. Coast Guard Regulations under 33 CFR 154

FACILITY CONTACT PERSON

Rudy Sanchez
Plant General Manager
(305) 242-3822 (Office)
(b) (6) [redacted]
(305) 274-8226 (Mobile)

FACILITY OPERATOR

Port Everglades Plant
8100 Eisenhower Boulevard
Port Everglades, Florida 33316

Port Everglades Terminal
c/o King-Murray Operating, LLC
2701 Eisenhower Boulevard
Port Everglades, Florida 33316

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RESPONSE PLAN COVER SHEET &

GENERAL FACILITY INFORMATION FORM

Facility Name:	Port Everglades Plant and Terminal
Plant Street Address:	8100 Eisenhower Boulevard
Terminal Street Address:	2701 Eisenhower Boulevard
Plant Mailing Address:	P.O. Box 13118 Ft. Lauderdale, FL 33316
Terminal Mailing Address:	P.O. Box 350566 Ft. Lauderdale, Florida 33335
City:	Fort Lauderdale
County:	Broward
State:	Florida
Zip Code:	33316
Plant Telephone Number:	**(954) 527-3600**
Terminal Telephone Number	**(954) 765-3522**
Plant Facsimile Number:	(954) 527-3636
Terminal Facsimile Number	(954) 522-1800

(b) (7)(F) [redacted]

Wellhead Protection Area:	Not Applicable
Plant and Terminal Owner: and Plant Operator	Florida Power and Light Company Power Generation Division P.O. Box 14000 (mailing address) 700 Universe Blvd. (street address) Juno Beach, Florida 33408-0420 (561) 694-3600 (24-hour availability) Facsimile Number: (561) 694-3615
Terminal Operator:	King-Murray Operating Systems, LLC. 2400 Port West Boulevard West Palm Beach, Florida 33407 (561) 844-5084 (Office)
Qualified Individual:	Rudy Sanchez 8100 Eisenhower Boulevard Port Everglades, Florida 33316
Telephone Number:	(305) 242-3822 (Office) (b) (6) [redacted] (305) 274-8226 (Mobile)

Qualified Individual: (Alternate)	R. Johnsen 8100 Eisenhower Boulevard Port Everglades, Florida 33316
Telephone Number:	(954) 527-3640 (Office) (b) (6) (561) 371-1846 (Mobile)
Qualified Individual: (Alternate)	I. Stokes 8100 Eisenhower Boulevard Port Everglades, Florida 33316
Telephone Number:	(954) 527-3507(Office) (b) (6) (561) 654-6920 (Mobile)
Date of Oil Storage Start-up:	1960 Plant; 1958 Terminal
Current Operation:	The plant is an electric-generating plant with four (4) steam generating units and twelve (12) gas turbine units capable of generating 1542 megawatts of electrical power using fuel oil and/or natural gas. The terminal is the storage facility for the Port Everglades Plant.
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):	Plant: Unit 1 was added in 1960; Unit 2 was added in 1961; Unit 3 was added in 1964; Unit 4 was added in 1965; and the 12 gas turbine units were added in 1971. Terminal: Tanks 901 and 902 were added in 1977.
Date of last update:	1/2012
Largest Oil Storage Tank Capacity:	(b) (7)(F)
Maximum Oil Storage Capacity:	
Number of Oil Storage Tanks:	Twenty
Worst Case Discharge Amount:	(b) (7)(F)

Pipeline Response Zone:	The Lauderdale “Dania Spur” Pipeline consists of a 1-mile section of 8-inch diameter pipeline located in Broward County Florida. The pipeline connects the Everglades Pipeline to FPL’s Lauderdale Plant and is located within one response zone. The response zone consists of one line section (1 mile section of 8-inch diameter pipeline) which could be expected to cause significant and substantial harm as the pipeline crosses two water bodies (a private canal off the Dania cut-off Canal and the Dania cut-off Canal). These water bodies are connected to the Intracoastal Waterway, which provides habitats for snook and the West Indian Manatee.
Orientation of Facility:	The Port Everglades Plant and Terminal is located on the east coast of Florida between Hollywood and Fort Lauderdale, Florida, in Port Everglades. The plant is adjacent to the Port Everglades Terminal and both are in the southern portion of the port.
Physical Description of The Dock Area:	The fuel oil unloading facilities are located at Slips Number 2 and 3 and unloading can occur at berths 10 and 13 within the port. These facilities are bulkheaded within the port with water depths greater than 35 feet. The largest vessel that calls on the Port Everglades Terminal is approximately 500 feet long and carries about 300,000 barrels of oil. The fuel oil is delivered to the terminal and is pumped mainly through three 12-inch underground pipelines to the tanks within the terminal facility. After receipt, the fuel oil is pumped to the plant by the pipeline as needed.
Environmental Conditions:	The Port Everglades Terminal utilizes Slips 2 and 3 within Port Everglades. Port Everglades has a short entrance channel from the Atlantic Ocean. The two slips are located west of the turning basin in Port Everglades. The slips and port area are almost completely bulkheaded. Water depth within the slips is approximately 35 feet. The Port Everglades Plant receives cooling water north of the plant and discharges into a discharge canal that joins the Intracoastal Waterway (ICW) south of the turning basin.

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 January 21, 2011 by Kevin Gordon

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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 X 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 X

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 X 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 X

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 X

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): Rudy Sanchez

Title: Plant General Manager

Date: _____

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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

	35332	Florida
Date	Registration	State

P. E. SEAL

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MANAGEMENT APPROVAL

This FRP and SPCC Plan has been prepared by FPL as the owner of the Port Everglades Plant and Terminal. 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: Rudy Sanchez

Signature: _____

Title: Plant General Manager

Date: _____

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PLAN UPDATING PROCEDURES

This FRP and SPCC Plan will be maintained by the plant'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.

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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 Everglades Plant and Terminal 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 Everglades Plant and Terminal. The Plan will be amended or not as indicated below.

	Review Dates	Signature	Plan will be Amended	Plan will Not be Amended
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				

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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 Everglades Plant and Terminal:

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

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PLAN UPDATE

To update your Plan, turn to the designated section and remove the pages listed in the "Discard" column. Next, insert the pages listed under the "Add" column.

DISCARD	ADD	DESCRIPTION OF REVISION

RECORD OF REVISIONS

DATE OF REVISION	DATE REPLACED	PAGES	DESCRIPTION OF REVISION	INITIALS OF PERSON MAKING REVISION
Change 1: 12/2008		All	Reformatted and revised plans to include recent changes in regulations.	DJG
Change 2: 03/2011		See Plan Update Page	PE Amendment to facility SPCC plan; Updates to sections II and X	KWG
Change 3: 01/2012		See Plan Update Page	Administrative revision of: Preface; Sections II, V, VI, X, and XI; Appendicies A, D, and F.	RTK

EPA – FACILTY RESPONSE PLAN		
CROSS REFERENCE INDEX		
Rule Citation 40 CFR 112 APP. F	**Description of Rule**	**Location**
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 X, VI.L
1.6.2	Automated Discharge Detection	Section X
1.7	Plan Implementation	Sect. VI
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

EPA – FACILTY RESPONSE PLAN		
CROSS REFERENCE INDEX		
Rule Citation 40 CFR 112 APP. F	**Description of Rule**	**Location**
1.8.2.2	Spill Management Team Tabletop Exercise Logs	Section XII
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	Preface Cover Page
3.0	Acronyms	Appendix G
4.0	References	Appendix G

SPCC PLAN COMPONENTS		
CROSS REFERENCE INDEX		
Rule Citation	**Description of Rule**	**Location**
§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

USCG		
CROSS REFERENCE INDEX		
Rule Citation 33 CFR 154 154.1030	**Description of Rule**	**Location**
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 1
(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

USCG		
CROSS REFERENCE INDEX		
Rule Citation 33 CFR 154 154.1030	**Description of Rule**	**Location**
(d)	Plan Review and Update	Section XIII
(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

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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 Everglades Plant and Terminal located in Port Everglades, 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 have 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 Everglades Plant and Terminal. 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's regulations 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 Everglades Plant and Terminal.
- Provide a description of the Port Everglades Plant and 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 Everglades Plant and 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 plant 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 **Plant 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 **Plant 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 **Plant 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.

Port Everglades Plant and Terminal

FACILITY RESPONSE PLAN

EMERGENCY RESPONSE

ACTION PLAN

In Compliance with the Facility Response Plan in 40 CFR 112

FACILITY CONTACT PERSON:

Rudy Sanchez
Plant General Manager
(305) 242-3822 (Office)
(305) 793-7663 (Cell)
(b) (6) [redacted]

PLANT OPERATOR
Port Everglades Plant
8100 Eisenhower Boulevard
Port Everglades, Florida 33316

TERMINAL OPERATOR
Port Everglades Terminal
c/o King-Murray Operating, LLC
2701 Eisenhower Boulevard
Port Everglades, Florida 33316

In case of an uncontrolled release of oil onto the ground or surface water, contact the following after initial control measures have been implemented (stop source, deployment of containment, or absorbent materials).

Port Everglades Plant .....(954) 527-3600 (24-hr number)
Port Everglades Terminal.....(954) 765-3522 (24-hr number)
COSRT.....(561) 694-3600

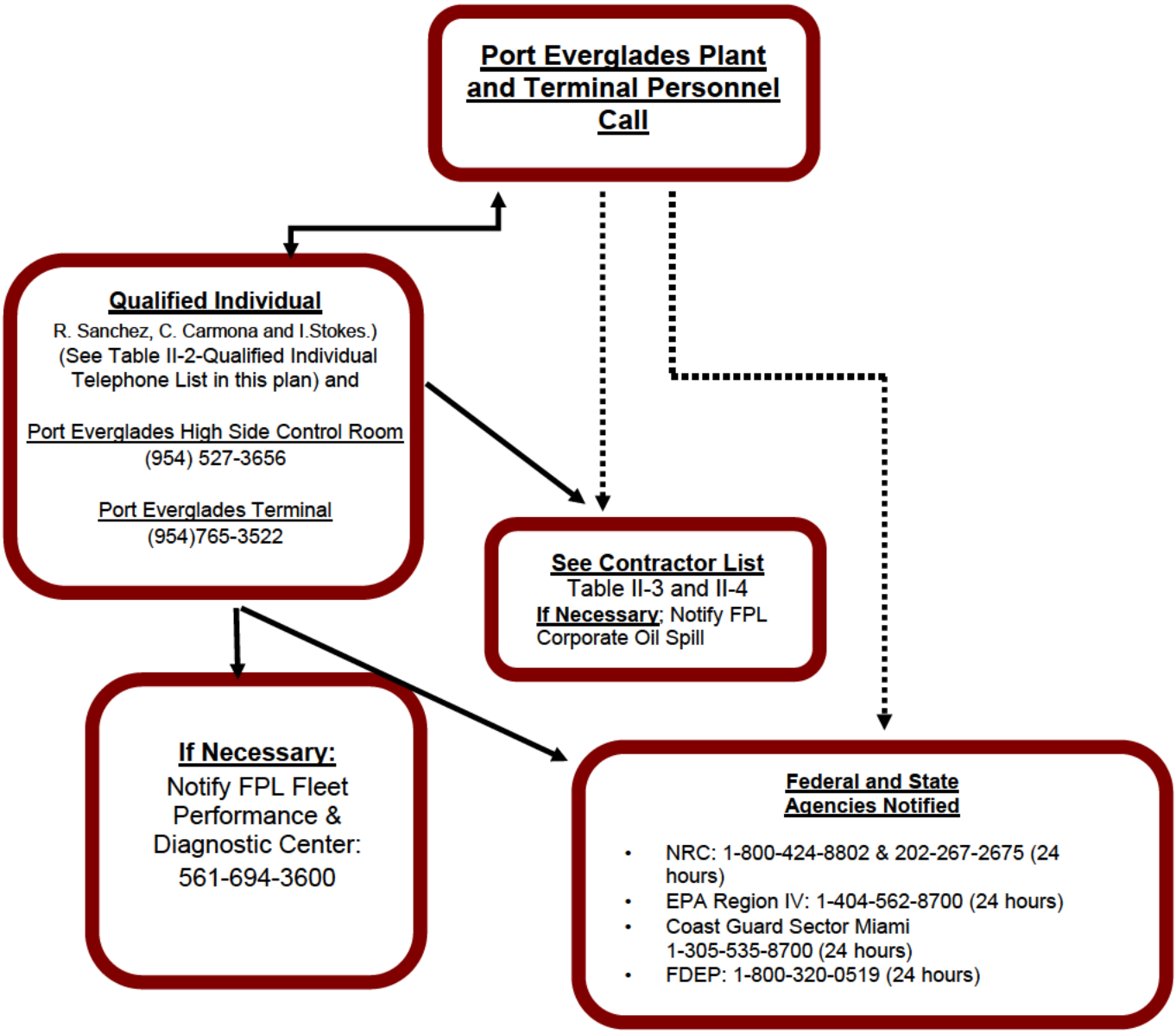


FIGURE II-1 EMERGENCY RESPONSE ACTIONS

Immediate Actions

In case of an uncontrolled release of oil onto the ground or into surface water, the initial control measures listed below are to be implemented.

Immediate steps to be taken by the Port Everglades Plant and Terminal Spill Observer/First Responder include the following:

1. **Make an immediate assessment of the incident (see Table II-1).**
2. **Stop the discharge (e.g., act quickly to secure pumps).** 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. **Take any steps deemed necessary to minimize any threat to public health and safety and to reduce the severity of the incident, if safe to do so.**
    - Until confirmed otherwise, the spill environment must be presumed to be hazardous. That presumption remains until the characteristics of the spilled material have been determined and the area has been tested.
    - If the first responder does not have information and equipment to make the determination as to the characteristics of the spilled material, an immediate request for assistance should be made.
4. **Warn personnel** – Notify the person in charge of the tank truck (if a tank truck is involved). Notify the Plant Operator, who will then function as the OSC/QI. Call for medical assistance if an injury has occurred.
5. **Shut off ignition sources** – motors, electrical circuits, open flames, etc.
6. **Initiate spill containment** – Place containment or sorbent boom around the area as appropriate.
7. **Make any required agency notifications** (see Table II-3).

Immediate steps to be taken by the Port Everglades Plant and Terminal Operations Supervisor include:

1. **Assume the position of OSC/QI.**
2. **Evaluate the spill information given by the first responder.**
3. **Verify that medical assistance has been requested if an injury is reported.**
4. **Activate the Port Everglades Plant and Terminal Spill Response Team.**
5. **Notify FPL FPDC.**
6. **Activate the Spill Response Contractor(s), if required.**

7. **Notify the Port Everglades Plant and Terminal OSC/QI (see Table II-2) and Port Everglades Plant and Terminal Control Room. Give spill incident status and request assistance as required.**

8. **Proceed to the spill location to supervise spill containment and cleanup procedures. The following flowcharts (Figure II-2, II-3, and II-4) may aid the OSC/QI in determining the appropriate spill response actions.**

TABLE II-1
INCIDENT ASSESSMENT CHECKLIST
____ Status of all personnel
____ Possible health or fire hazards
____ Time of the spill
____ Type of product spilled & estimated of amount of product spilled
____ Cause of the spill and whether the source is controlled or continuing
____ Location of the tank or pipeline involved
____ Whether the oil is contained or not
____ The status of response operations
____ On-scene weather conditions
____ An initial assessment of whether the spilled oil can be contained and cleaned up with onsite equipment, or whether Level II or Level III equipment is required

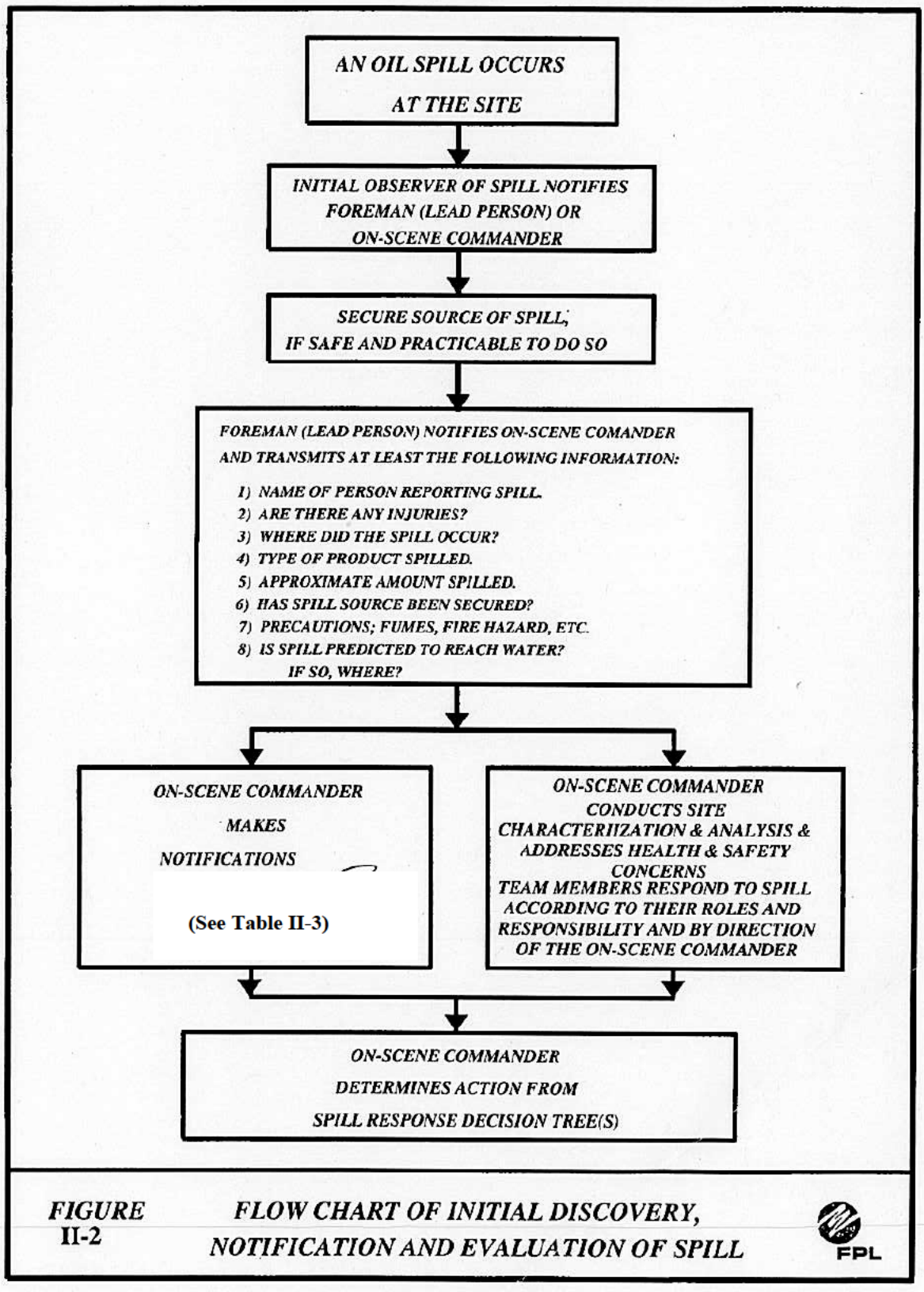


FIGURE II-2 FLOW CHART OF INITIAL DISCOVERY, NOTIFICATION AND EVALUATION OF SPILL

PORT EVERGLADES FRP EMERGENCY RESPONSE ACTION PLAN

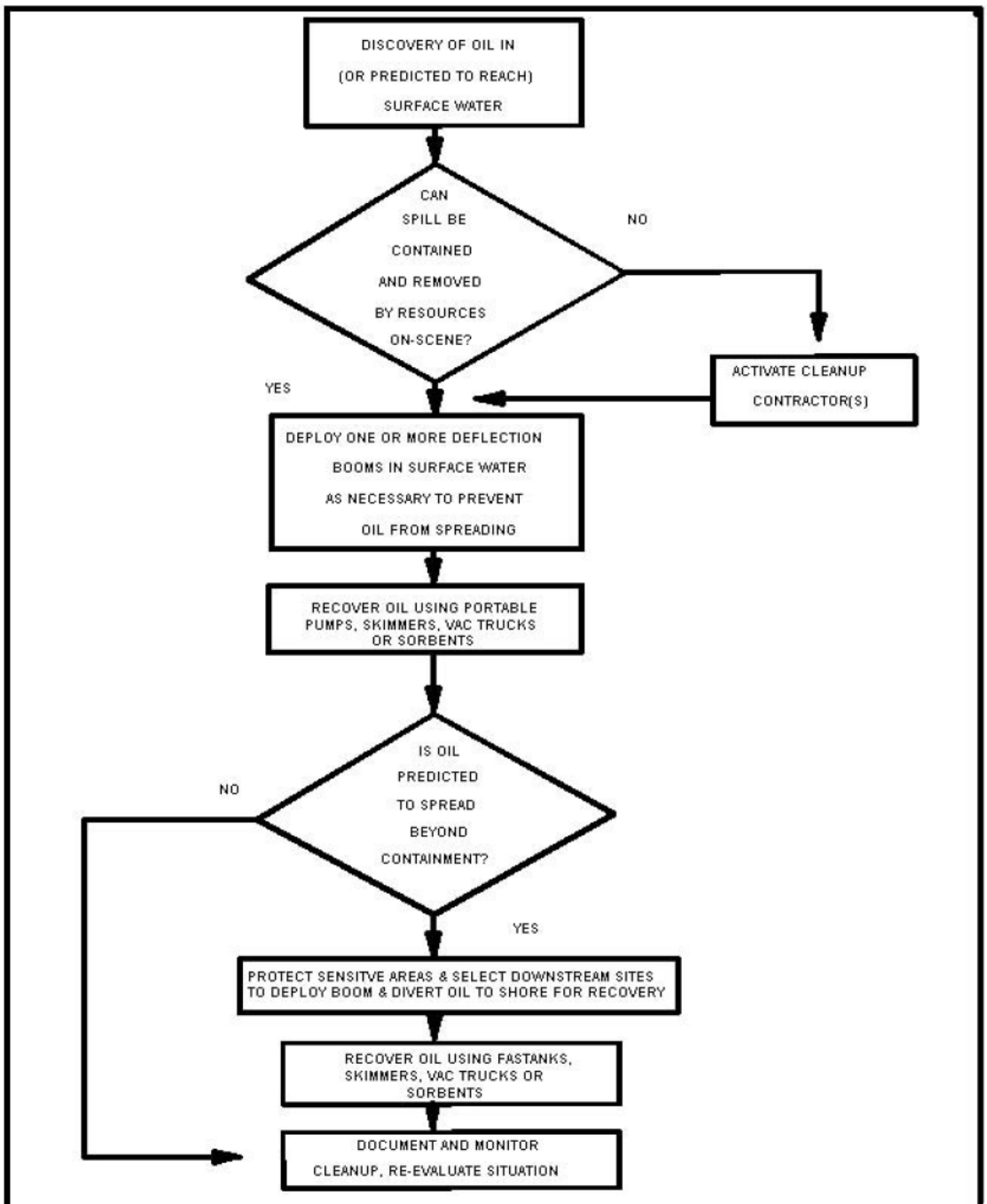


FIGURE II-3 **DECISION TREE FOR SPILL OCCURRING IN OR PREDICTED TO REACH SURFACE WATER**

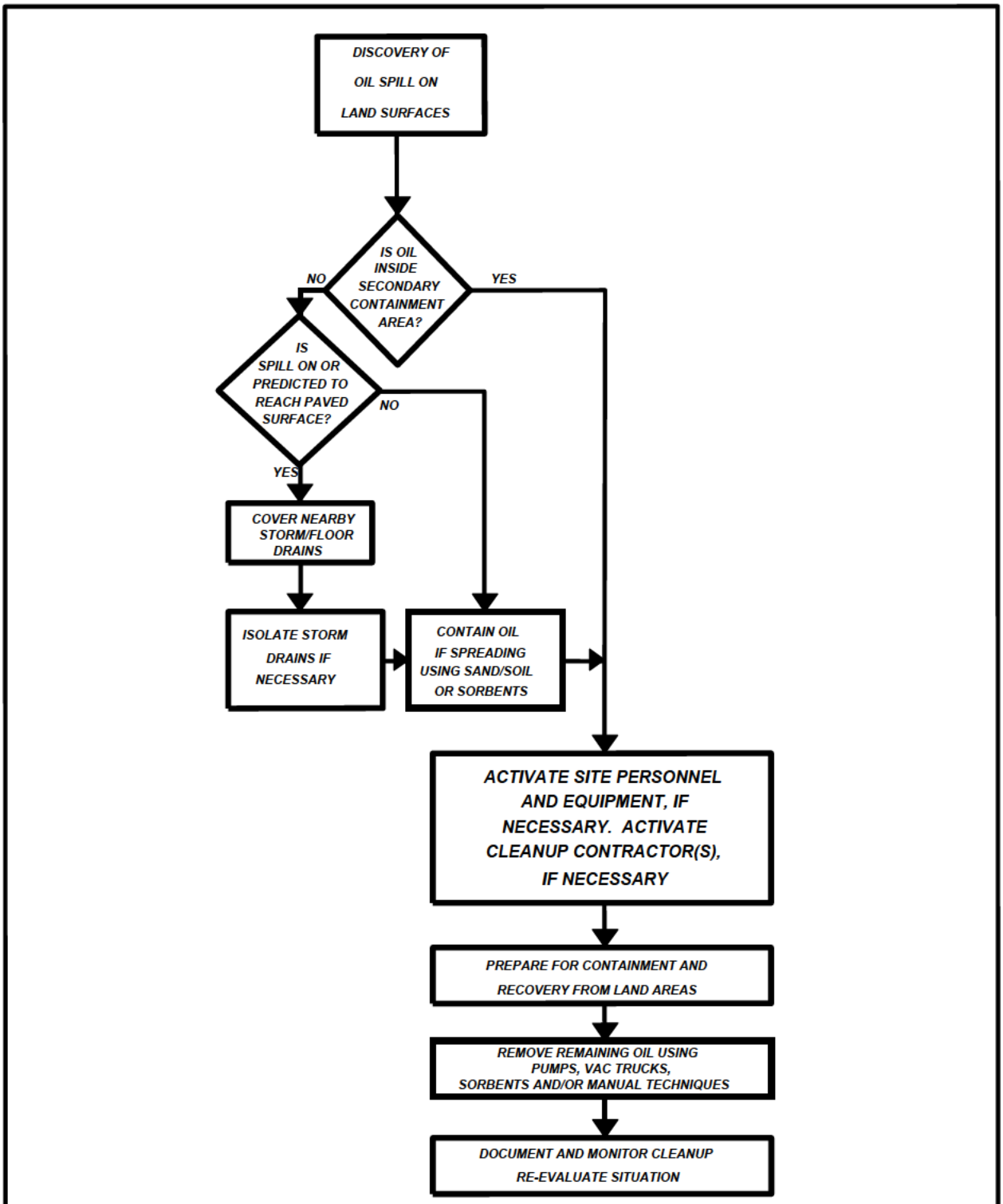


FIGURE II-4 **DECISION TREE FOR SPILLS ON LAND SURFACES**

PORT EVERGLADES FRP EMERGENCY RESPONSE ACTION PLAN

TABLE II-2 QUALIFIED INDIVIDUAL (QI) INFORMATION			
PRIMARY		**ALTERNATE**	
Port Everglades Plant and Terminal			
Name	Rudy Sanchez	Chris Carmona	Idayna Stokes
Position	Plant General Manager	Production Manager	Plant Leader
Work Address	8100 Eisenhower Blvd. Port Everglades, FL 33316	8100 Eisenhower Blvd. Port Everglades, FL 33316	8100 Eisenhower Blvd. Port Everglades, FL 33316
(b) (6)			
Work Phone No.	(305) 242-3822	(954) 527-3640	(954) 527-3507
(b) (6)			
Cellular Phone No.	(305) 793-7663	(305) 753-1154	(561) 654-6920
Response Time onsite to Tank Area	Less than 5 minutes	Less than 5 minutes	Less than 5 minutes
Response Time to Port Everglades Plant	50 minutes	45 minutes	60 minutes
Training – Experience	Haz Mat. Specialist	Haz. Mat. Specialist	HAZWOPER (40-hr)

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.

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.

TABLE II-3 EMERGENCY NOTIFICATION LIST	
CONTACT	**TELEPHONE NUMBER**
Federal, State and Local Agencies	
SPILLS WHICH THREATEN OR ENTER NAVIGABLE/STATE WATERS REQUIRE NOTIFICATION TO:	
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 - Miami	(305) 535-8700
Florida State Department of Environmental Protection (FDEP) – Bureau of Emergency Response (State Warning Point)	(800) 320-0519 (24 hrs) (850) 413-9911
SPILLS ON LAND SURFACES OF 25 GALLONS OR MORE REQUIRE NOTIFICATION TO:	
Florida State Department of Environmental Protection (FDEP) – Bureau of Emergency Response (State Warning Point) State Warning Point notifies State Emergency Response Commission (SERC), and Local Emergency Planning Committee (LEPC)	(800) 320-0519 (24 hrs) (850) 413-9911
Florida Department of Environmental Protection (Boca Raton)	(561) 393-5877
ADDITIONAL AGENCY CONTRACTS AS NECESSARY	
LEPC 11th District – Manny Cela	(954) 985-4416
U.S. Department of Interior: U.S. Fish and Wildlife Service Region 4 – Atlanta, Georgia	(404) 763-7959 (24 hours)
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) phone numbers	See Qualified Individual Table II-2 (above)
Company response team (day and evening) phone numbers	See Table II-4 (below)

TABLE II-3
EMERGENCY NOTIFICATION LIST

CONTACT	TELEPHONE NUMBER
Federal On-Scene Coordinator and/or Regional response center (day and evening) phone numbers	Federal On-Scene Coordinator US Coast Guard Telephone 1-800-424-8802 (National Response Center)
Local response team phone numbers (Fire Department/Cooperatives)	See OSRO List (see below) Port Authority Fire Department (954) 522-1528 (24 hours) 911(24 hours)
Broward County Division of Emergency Preparedness	(954) 357-8250
Port Authority Fire Department	(954) 522-1528 or 911
Police phone number	911 (24 hours)
Broward County Sheriff's Department	(954) 753-5050
Port Authority Public Safety	(954) 523-3404 (24 hours)
Broward General Medical Center	(954) 355-4400
Wastewater treatment facility(s) name and phone number	Ft. Lauderdale – GT Lohmeyer WWTP (305) 492-7801
Local Water Supply System	Not applicable
Weather report phone number	Ft. Lauderdale (954) 763-5353
Local radio phone number(s) for evacuation notification	**AREA RADIO STATIONS**
	WAFG FM 90.3 (Ft. Lauderdale) (954) 776-7705 **WBGG FM 105.9 (Ft. Lauderdale)** (305) 654-9494 **WEXY AM 1520 (Wilton Manors)** (954) 561-1520 **WHYI Y100 (Ft. Lauderdale)** (954) 862-2000
	WIOD AM 610 (Miami) (954) 862-2000 **WKIS FM 99.9 (Boca Raton)** (954) 431-6200 **WQAM AM 560 (Miami)** (305) 382-7961 **WRMF FM 97.9 (Palm Beach)** (561) 868-1100

TABLE II-3
EMERGENCY NOTIFICATION LIST

CONTACT	TELEPHONE NUMBER	
Local TV Stations phone number(s) for evacuation notification	**LOCAL TV STATIONS AND BROADCASTING COMPANIES**	
	WTVJ TV 4 (Ft. Lauderdale) (954) 771-8301 **WDZL TV 39 (Hollywood)** (954) 925-3939	**WSVN TV 7 (Ft. Lauderdale)** (954) 524-0388 **WPLG TV 10 (Miami)** (954) 364-2500
Transtate Industrial Pipeline Systems	**Tom Ulmer**	(561) 844-5084 (24 hours) (954 765-3522/(954) 525-9275 (TPE office) (561) 371-5561 (Mobile)
Primary Oil Spill Response Organization (OSRO)	**SWS Environmental First Response** (877) 742-4215 (24 hours)	
Secondary Oil Spill Response Organization (OSRO)	**FPL FPDC (Fleet Performance and Diagnostic Center)** (866) 375-3732 (toll free) (561) 694-3600 (office) **Diversified Environmental** Gene Russell (800) 786-3256 (toll free) (813) 248-3256 (office) (b) (6) [redacted] (813) 918-3775 (cell) **Jacksonville Pollution Control** Steve Lamir (904) 355-4164 (24 hours) (904) 759-4564 **Moran Environmental** Tom Hill (800) 359-3740 (24 hours)	
Factories/Utilities with water intakes	None	

TABLE II-3
EMERGENCY NOTIFICATION LIST

CONTACT	TELEPHONE NUMBER
Wildlife Contacts	**Tri-State Bird Rescue and Research, Inc.** (302) 737-9543 **National Wildlife Refuge** Lou Hines (239) 472-1100 **Wildlife Care Center** (954) 524-4302 **Local Aquatic Preserves and/or State Parks** (850) 245-2094 **Bird Emergency Aid and Kare Sanctuary (B.E.A.K.S.)** Cynthia Mosling (904) 251-2410 (O)
Trustees of Sensitive Areas	**National Wildlife Refuge** (239) 472-1100 **State Aquatic Preserve** (850) 245-2094
Security Services	**Allied Barton** West Palm Beach, Florida (561) 697-8170

TABLE II-3
EMERGENCY NOTIFICATION LIST

CONTACT	TELEPHONE NUMBER
Surveillance Operations	**FPL Aviation** Palm Beach International Airport (561) 640-2200 **Aircoastal Helicopters** 2615 Lantana Road Lantana, Florida 33462 (phone forwarded at night) (561) 642-6840 (office) Dan Crow (By air) **Helicopters of Boca** 3700 Airport Road Boca Raton, Florida 33431 (561) 394-9596 (office) (561) 498-4255 (night) (561) 243-5444 (pager) Jerry Pagano (By air) **O'Brien's Response Management** Aerial Surveillance Specialists (985) 781-0804 (24/7)

TABLE II-3
EMERGENCY NOTIFICATION LIST

CONTACT	TELEPHONE NUMBER
Local Marinas	**Bahia Mar Resort and Yachting Club** (954) 627-6309 **Best Western Marina Inn and Yacht Club** Dave Culler (954) 525-3484 **Hall of Fame Marina** Mike Reinhardt (954) 764-3975 **Harbour Towne Marina** Kathy Petowsky (954) 926-0300 **Marriott Portside Marina** Bill Shewbridge (954) 527-6781 **Pier 66 Marina** (954) 728-3578 **Seafair** (954) 562-7537
Note: See Figure II-8a for location of communication equipment	

PORT EVERGLADES 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: Power Company
YOUR POSITION:
ADDRESS: 8100 EISENHOWER BOULEVARD
CITY: PORT EVERGLADES STATE: FL ZIP: 33316
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:
NEAREST CITY: FORT LAUDERDALE STATE: FL COUNTY: BROWARD ZIP: 33316
DISTANCE FROM CITY: UNITS: MILES DIRECTION FROM CITY:
SECTION: TOWNSHIP: RANGE:
CONTAINER TYPE: TANK CAPACITY: UNITS:

(b) (7)(F)

[redacted]

PORT EVERGLADES 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 EVERGLADES FRP EMERGENCY RESPONSE ACTION PLAN

SPILL RESPONSE NOTIFICATION FORM			
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

CALLER NOTIFICATION			
	YES/NO	**WHO**	**TIME/DATE**
NATIONAL RESPONSE CENTER (NRC) 1 800 424-8802			
COAST GUARD			
STATE WARNING POINT			
FDEP			
BROWARD COUNTY			
COSRT			
RESPONSE CONTRACTOR			
ENVIRONMENTAL SERVICES			
AREA EXTERNAL AFFAIRS REP.			
CORPORATE COMMUNICATIONS			
Others			

On-Scene Commander **Date**

TABLE II-4 COMPANY RESPONSE TEAM TELEPHONE LIST				
PORT EVERGLADES ONSITE RESPONSE TEAM (ORT) PORT EVERGLADES ORT RESPONSE TIME IS LESS THAN 5 MINUTES IF ONSITE				
POSITION	**CONTACT**	**TELEPHONE NUMBER**	**TRAINING**	**RESPONSE TIME FROM OFFSITE (MINUTES)**
PORT EVERGLADES PLANT AND TERMINAL				
On-Scene Commander/ Qualified Individual	Rudy Sanchez	(b) (6) (305) 793-7663 (mobile) (305) 242-3822 (office)	Haz Mat. Specialist	50
Alternate	Chris Carmona	(954) 527-3640 (office) (b) (6) (305) 753-1154(mobile)	Haz Mat. Specialist	45
Alternate	Idayna Stokes	(954) 527-3507 (office) (b) (6) (561) 654-6920 (mobile)	HAZWOPER (40-hour)	60
TEAM MEMBERS				
Oil Spill Coordinator	Idayna Stokes	(954) 527-3507 (office) (b) (6) (561) 654-6920(mobile)	HAZWOPER (40-hour)	60
Team Leader	Carlos Carasa	(954) 527-3696 (office) (b) (6) (954)439-4771 (mobile)	HAZWOPER (40-hour)	45
Team Member	Rick Dietz	(954) 527-3696 (office) (954) 683-9646 (mobile)	Hazwoper –40 hrs ICS 100/200 (PENDING)	60
Team Member	Ivan Darias	(954) 527-3603 (office) (305) 586-6850(mobile)	Hazwoper –40 hrs ICS 100/200 (PENDING)	120
Team Member	Lawrence Sanchez	(954) 765-3522 (office) (305) 968-7649 (mobile)	Hazwoper –40 hrs ICS 100/200 (PENDING)	30
Team Member	Daniel Howle	(954) 765-3522 (office) (954) 681-0751 (mobile)	Hazwoper –40 hrs ICS 100/200 (PENDING)	60
Team Member	James McAllister	(954) 765-3522 (office) (407) 505-9878 (mobile)	Hazwoper –40 hrs ICS 100/200 (PENDING)	60

TABLE II-4
COMPANY RESPONSE TEAM TELEPHONE LIST

Team Member	Francis Sanchez	(954) 765-3522 (office) (832) 968-7649 (mobile)	Hazwoper –40 hrs ICS 100/200 (PENDING)	30
Team Member	Jim Forrler	(954) 765-3522 (office) (561) 601-1688 (mobile)	Hazwoper –40 hrs ICS 100/200 (PENDING)	90
On Land Unit Leader	COSRT	Kevin Gordon (561) 845-4875 (office) (941) 737-0683 (cell)	HAZWOPER (20-hour)	240
On Water Unit Leader	COSRT	Jim Lindsay (561) 691-7032 (office) (561) 762-1296 (mobile)		240

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 COSRT.
- Interact, as appropriate, with COSRT.

PRIMARY OIL SPILL REMOVAL ORGANIZATION

SWS First Response (Ft. Lauderdale Office)	1-877-742-4215 (24-HOURS)	60

ALL SWS PERSONEL HAVE 40 HR HAZWOPER TRAINING. IN ADDITION, SWS SUPERVISORS HAVE ICS/NIMS TRAINING.

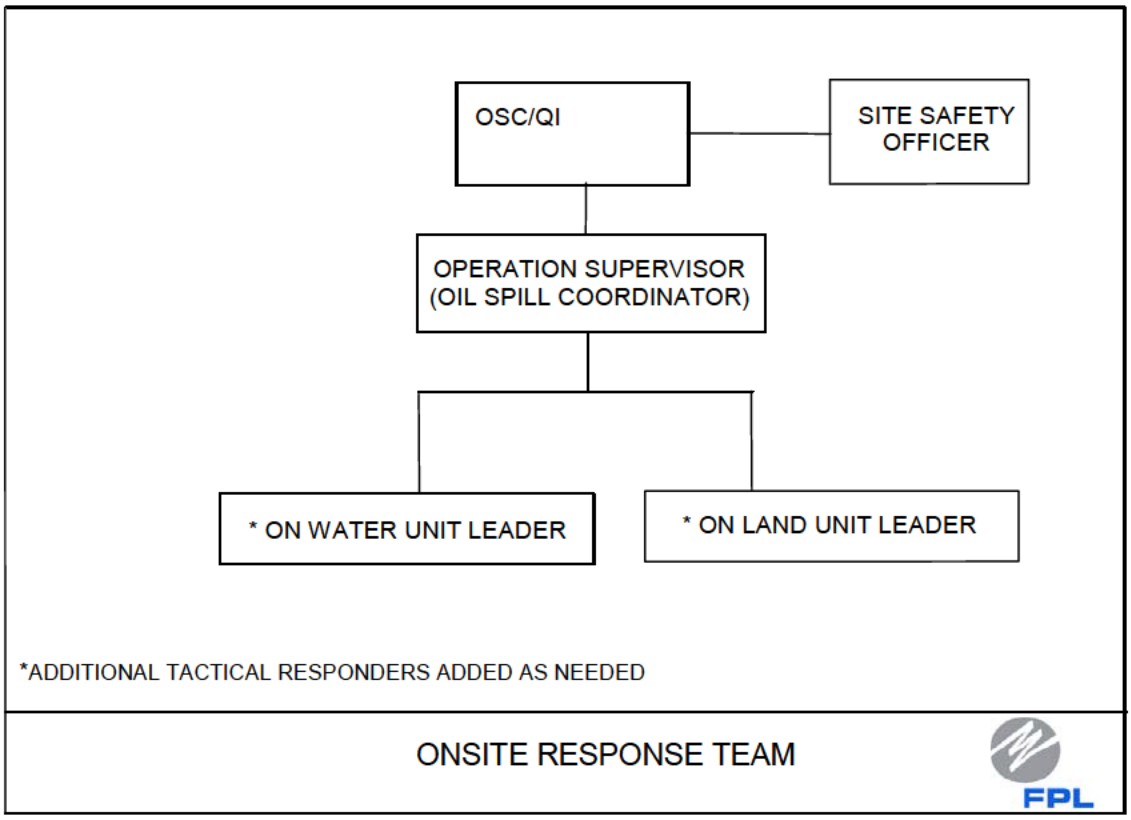
FPL CORPORATE OIL SPILL RESPONSE TEAM (COSRT)

RESPONSE TIME TO PORT EVERGLADES PLANT AND TERMINAL: NOTIFIED WITHIN TWO HOURS, ONSITE WITHIN 3-4 HOURS

NAME	FUNCTION	HOME LOCATION	TELEPHONE NUMBERS
Fleet Performance & Diagnostics Center (FPDC)	Staffed 24 hours/day, 7 days/week.	FPL Juno Beach	(866) 375-3732 (toll free) (561) 694-3600 (office)
Kevin Gordon	Corporate Oil Spill Prevention & Response Coordinator Land	FPL Juno Beach	(561) 845-4875 (office) (941) 737-0683 (cell)

TABLE II-4 COMPANY RESPONSE TEAM TELEPHONE LIST			
Mark Jones	Alternate Corporate Oil Spill Prevention & Response Coordinator	FPL Juno Beach	(561) 691-7041 (office) (b) (6) (561) 346-2028 (cell)
Jim Lindsay	Alternate Corporate Oil Spill Prevention & Response Coordinator	FPL Juno Beach	(561) 691-7032 (office) (b) (6)) (561) 762-1296 (mobile)
To activate the FPL Corporate Oil Spill Response Team, contact any of the above telephone numbers.			
FPL EXTERNAL AFFAIRS			
Lynn Shatas			(954) 629-3945 (cell (954) 321-2215 (office)
CORPORATE COMMUNICATIONS			
Corporate Communications (If spill could attract media attention)			(305) 552-3894 or (305) 446-8468 (24 hours)
ENVIRONMENTAL SERVICES			
Mark Jones			(561) 691-7041 (office) (b) (6) (561) 346-2028 (cell)
TRANSTATE INDUSTRIAL PIPELINE SYSTEMS, INC.			
Mike Kordsmeier			(561) 845-3398 (office) (b) (6) (561) 262-0053 (cell)
FUEL INFRASTRUCTURE			
Kevin Gordon			(561) 845-4875 (office) (941) 737-0683 (mobile)
TRANSFORMER SPILLS			
Area Environmental Coordinator			(954) 925-4520 (office) 24 Hours

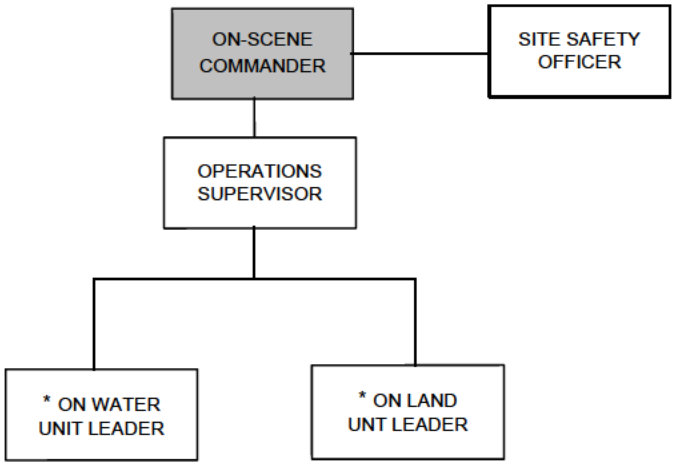
FIGURE II-5 ONSITE RESPONSE ORGANIZATION



Note: Job descriptions are located in Section V of the FRP.

PORT EVERGLADES FRP EMERGENCY RESPONSE ACTION PLAN

ON-SCENE COMMANDER/QUALIFIED INDIVIDUAL



The OSC/QI is responsible for conducting an initial assessment of the situation and immediately taking the steps necessary to ensure the safety of personnel. The OSC/QI will identify and control the source (if possible), conduct a detailed incident assessment, initiate and manage response operations, and make internal notifications.

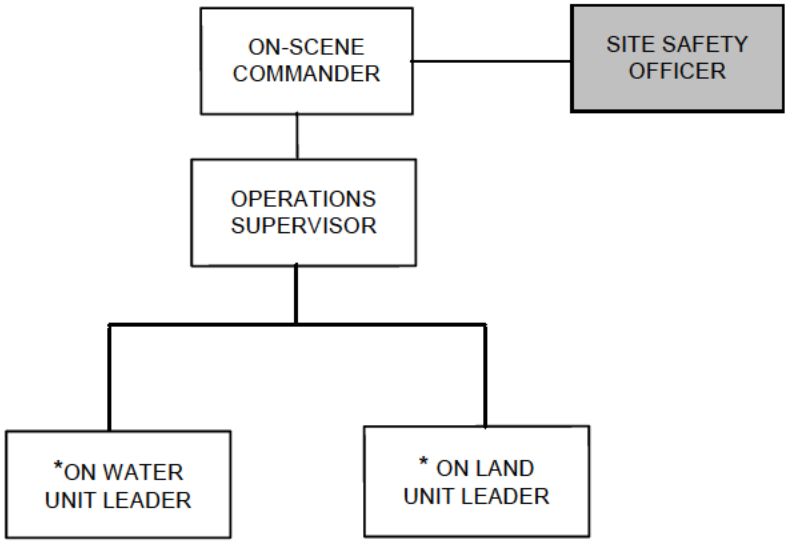
(A) Activate internal alarms and hazard communication systems to notify all facility personnel;
(B) Notify all response personnel, as needed;
(C) Identify the character, exact source, amount, and extent of the release, as well as the other items needed for notification;
(D) Notify and provide necessary 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.

Document all actions.

* Additional tactical responders added as needed.

PORT EVERGLADES FRP EMERGENCY RESPONSE ACTION PLAN

SITE SAFETY OFFICER



The Site Safety Officer is responsible for conducting an initial assessment of the situation and immediately taking the steps necessary to ensure the safety of personnel. The Site Safety Officer will keep the OSC/QI informed of all safety and health related issues.

If practical and safe, conduct a site characterization & analysis to identify hazards (i.e., has anyone been, or could become injured; is there a threat of fire or explosion; what type of material is involved).

Establish Hazard Control Zones.

Select appropriate Personal Protective Equipment.

Monitor incident scene for combustible gases or hazardous concentrations, as appropriate.

Define training requirements and ensure that workers are properly trained.

Set up Decontamination & First Aid Stations.

Prepare an incident-specific Site Safety Plan.

Monitor emergency response operations and stop any unsafe activities.

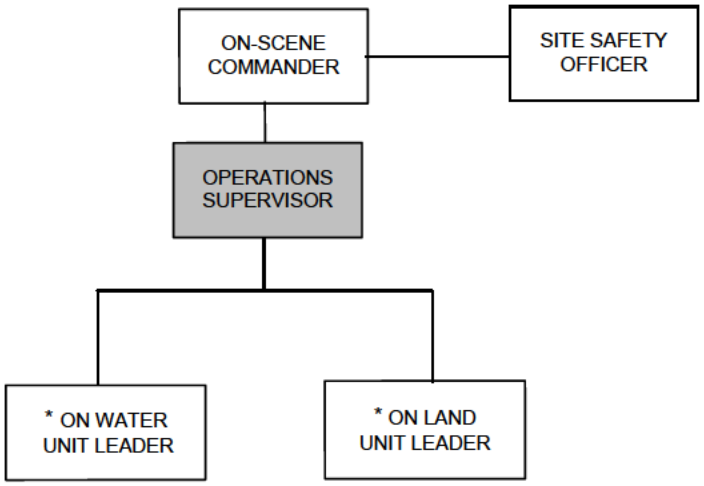
Evaluate the need for post-incident drug and alcohol testing.

Document all actions.

* Additional tactical responders added as needed.

PORT EVERGLADES FRP EMERGENCY RESPONSE ACTION PLAN

OPERATIONS SUPERVISOR



The Operations Supervisor or Oil Spill Coordinator is responsible for supervising the development of tactical response strategies, the deployment of response equipment, and keeping the OSC/QI informed of the status of response operations.

Obtain a briefing from the OSC/QI.

Develop tactical strategies for the deployment of onsite equipment.

Provide Tactical Responders with a safety briefing.

Provide Tactical Responders with directions for the placement of sorbent materials and/or containment booms to contain a spill and prevent further spreading.

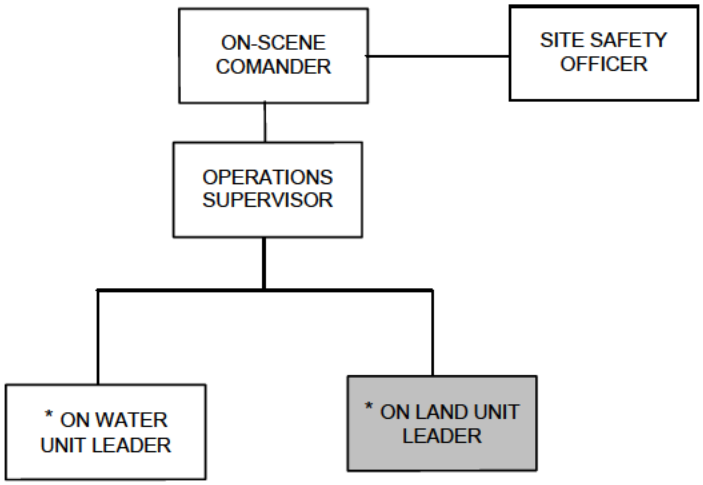
Provide Tactical Responders with direction for covering drains.

Document all actions.

* Additional tactical responders added as needed.

PORT EVERGLADES FRP EMERGENCY RESPONSE ACTION PLAN

ON LAND UNIT LEADER



The On Land Unit Leader is responsible for carrying out shoreside activities pertaining to boom deployment and cleanup activities, as directed by the Operations Supervisor (Oil Spill Coordinator).

Obtain a briefing from the Operations Supervisor (Oil Spill Coordinator).

For Landside Spills:

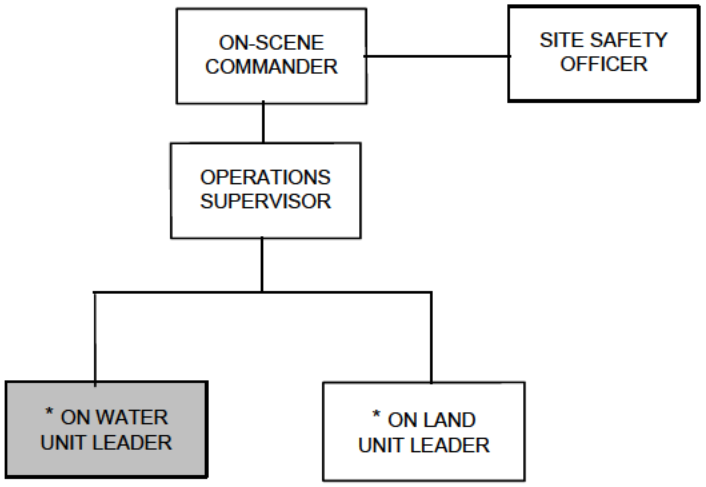
- Deploy sorbent materials around the spill to prevent it from spreading.
- Cover any storm drains that may be in the flow path of the spill.
- Once the spill is contained, additional sorbent materials can be placed on top of the product and/or pumps can be used to effect final cleanup.

Document all actions.

* Additional tactical responders added as needed.

PORT EVERGLADES FRP EMERGENCY RESPONSE ACTION PLAN

ON WATER UNIT LEADER



The On Water Unit Leader is responsible for deploying the boat, containment boom, sorbent materials, and oil recovery devices, as directed by the Operations Supervisor (Oil Spill Coordinator).

Obtain a briefing from the Operations Supervisor (Oil Spill Coordinator).

For Spills into Surface Waters:

- Deploy response boat and containment boom.
- Position boom to deflect oil to shore for recovery.
- Position other boom to protect sensitive areas, if necessary.
- Begin recovery operations using skimmers or sorbent materials.
- Remove all contaminated materials including soil and place material inside 55-gallon drums. Recovered liquid product should also be placed in 55-gallon drums or portable tanks and stored in a safe place to await final disposal.

Document all actions.

* Additional tactical responders added as needed.

TABLE II-5A PORT EVERGLADES PLANT AND TERMINAL OIL SPILL RESPONSE EQUIPMENT

PORT EVERGLADES POWER PLANT

PHONE #: (954) 527-3507

Contact: Idayna Stokes

PORT EVERGLADES TEMINAL

PHONE #: (954) 765-3522

Lawrence Sanchez

EFFECTIVE DAILY RECOVERY RATE (derated) 204 BBL/DAY

CONTAINMENT BOOM: 5200 FT

TABLE II-5A Port Everglades Plant and Terminal Oil Spill Response Equipment								
TYPE	QTY	MAKE	MODEL	AGE	LOCATION	DESIGN CAPACITY (GPM)	EFFECTIVE DAILY RECOVERY RATE PER 24 HRS (BBLS)	EQUIPMENT DESIGN
CONTAINMENT								
Harbor Boom	800 ft			1989	Oil Spill House - Conex Box			12"
Fixed Hardboom (deployed)	330 ft			2011	Intake Canal			24"
Fixed Hardroom (deployed)	285 ft			2011	Discharge Canal			24"
Harbor Boom on Reel	2000 ft			2010	P.E. Terminal Boom Reel Trailer			18"
Harbor Boom	500 ft			2007	P.E. Terminal Spill Trailer			12"
Harbor Boom	1900 ft				P.E. Terminal - Conex Box			18"
RECOVERY								
Holding Tank / Fast Tank	1 unit				Oil Spill House	1000 gal capacity		
Oil Snare (Pom Poms)	50 bags			1993	Oil Spill House			
Absorbent Carpet	20 rolls				Oil Spill House			50 ft per roll

TABLE II-5A Port Everglades Plant and Terminal Oil Spill Response Equipment								
TYPE	QTY	MAKE	MODEL	AGE	LOCATION	DESIGN CAPACITY (GPM)	EFFECTIVE DAILY RECOVERY RATE PER 24 HRS (BBLS)	EQUIPMENT DESIGN
Absorbent Pads	20 bags			1993	Oil Spill House			17" X 19" 100 pads per bag
Absorbent Boom	20 bags	Sorbent Boom			Oil Spill House			40 ft per bag
Portable Skimmer & Hose	1 unit	SkimPac		1985	Oil Spill House	10 gpm		
Absorbent Clay (Oil Dry)	12 bags				Oil Spill House			40 lbs per bag
Vacuum Trailer & Portable Skimmer	1 unit	Vacuum Pump & SkimPac			P. E. Plant	10 gpm ; 1000 gal capacity		
PUMPS								
Gas Pumps & Hoses	2 units	Honda		2008	Oil Spill House	10 gpm	68	3" Pump
Back Up Gas Pump & Hose	1 unit	Honda		2008	Oil Spill House – Conex Box	10 gpm	68	3" Pump
Holding Tank / Fast Tank	1 unit				P.E. Terminal Garage	1000 gal capacity		
TRANSPORTATION								
Boat	1 unit		Sea Nymph (Jon Boat)	1986	Next to Oil Spill House			9.9 HP Motor
Boat	1 unit		Southern Skimmer		P. E. Terminal Garage			50 HP Motor
MISCELLANEOUS								
Anchor w/ Rope & Shackle	1 unit				P.E. Terminal Boat / Southern Skimmer			
USCG Throw-Ring with Rope	1 unit				P.E. Terminal / Boat Dry-Box			
Life Jackets	3 units				P.E. Terminal / Boat Dry-Box			

TABLE II-5A Port Everglades Plant and Terminal Oil Spill Response Equipment

TYPE	QTY	MAKE	MODEL	AGE	LOCATION	DESIGN CAPACITY (GPM)	EFFECTIVE DAILY RECOVERY RATE PER 24 HRS (BBLS)	EQUIPMENT DESIGN
USCG Required Boat Supplies	1 unit				P.E. Terminal / Boat Dry-Box			
Anchor w/ Ropes & Shackle	4 units				Oil Spill House - Conex Box			
Anchor Buoys	2 units				Oil Spill House - Conex Box			
Throw Ring with Rope	1 unit				Oil Spill House / Boat Dry-Box			
USCG Reqired Boat Supplies	1 unit				Oil Spill House / Boat Dry-Box			
Shovels	4 units				Oil Spill House			
Manilla Rope	600 ft				Oil Spill House			½ inch
Life Jackets	8 units				Oil Spill House			
Squeegees	4 units				Oil Spill House			
Hard Bristle Push Brooms	2 units				Oil Spill House			
Dip Nets	3 units				Oil Spill House			
Whee barrow w/ No-Flat Wheel	1 unit				Oil Spill House			

OSRO: Oil Spill Removal Organization
SWS First Response is the Port Everglade Plant and Terminal OSRO. A contract with SWS is maintained at the facility.
SWS OSRO Classification by the USCG is for River/Canal and Inland for Facilities and Vessels.
SWS response time to the site is approximately 75 minutes.
SWS personal have a minimum of 40 hours of HAZWOPER training.
SWS inspects and maintains the response equipment is monthly and review action items with Site Environmental Leader after each monthly inspection. Records will be maintained at the Site by the Site environmental leader.

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

TABLE II-5B			
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
	Recovery	Portable Oil Bladder 2500 gal	1 unit
	Recovery	Hose 4" suction w/cam-lock fittings	100 ft

TABLE II-5B			
LIST OF COSRT RESPONSE EQUIPMENT			
Location	**Type**	**Equipment Design**	**Quantity**
	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	Bouys	71 units
Box No. 22	Miscellaneous	Anchors	46 units
	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

TABLE II-5B			
LIST OF COSRT RESPONSE EQUIPMENT			
Location	**Type**	**Equipment Design**	**Quantity**
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 11/2"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
	Safety	Air Bottle	8 units
	Pump	Air operated Pumps	3 units
	Miscellaneous	Air Fitting Air King Safty Clip	50 units

TABLE II-5B			
LIST OF COSRT RESPONSE EQUIPMENT			
Location	**Type**	**Equipment Design**	**Quantity**
	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
	Miscellaneous	Tow Bridle, 18"	3 units
	Miscellaneous	Tow Bridle, 18" floating	2 units
	Miscellaneous	Oil 2 Cycle	7 pints

TABLE II-5B			
LIST OF COSRT RESPONSE EQUIPMENT			
Location	Type	Equipment Design	Quantity
	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
	Miscellaneous	Hose Floats	40 units
	Miscellaneous	Cam-Lok 2" Female x 1 1/2" Male	14 units

TABLE II-5B			
LIST OF COSRT RESPONSE EQUIPMENT			
Location	**Type**	**Equipment Design**	**Quantity**
	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
	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

TABLE II-5B			
LIST OF COSRT RESPONSE EQUIPMENT			
Location	**Type**	**Equipment Design**	**Quantity**
	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
	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

TABLE II-5B			
LIST OF COSRT RESPONSE EQUIPMENT			
Location	**Type**	**Equipment Design**	**Quantity**
	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
	Recovery	Response Boat, 13' Seadoo Explorer	1 unit
	Recovery	Response Boat, 24' Carolina Skiff	1 unit
	Miscellaneous	Gas Water Heater	1 unit

TABLE II-5B			
LIST OF COSRT RESPONSE EQUIPMENT			
Location	**Type**	**Equipment Design**	**Quantity**
	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
	Recovery	Vac Unit, trailer mounted	1 unit
	Miscellaneous	Pressure washer	1 unit
	Miscellaneous	Command trailer	1 unit

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 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.

TABLE II-6

OIL SPILL LEVEL AND GROUP

LEVEL	VOLUME	OIL GROUP
Level I (Small Case Discharge)	50 barrels (2,100 gallons)	Group II, III, IV
Level II (Medium Case Discharge)	857 barrels (36,000 gallons)	Group II, III, IV
Level III (Worst Case Discharge)	(b) (7)(F) [redacted]	Group II Group III Group IV

PORT EVERGLADES FRP EMERGENCY RESPONSE ACTION PLAN

Evacuation Plan

EVACUATION PLANS	
TOPIC	**DESCRIPTION**
• **Location of stored materials**	Limited quantities of materials are stored and used onsite. The bulk of the hazardous materials are No. 6 fuel oil, No. 2 fuel oil, Jet A lubricating oils, diesel, and transformer mineral oils. All other chemicals are used and stored in consumer size quantities. Locations of the fuel oil, oil drums, and transformers are all shown on Figures II-6a, II-6b, II-6c and II-7.
• **Hazard imposed by spilled materials (MSDS)**	Material Safety Data Sheets are maintained onsite. Health hazards associated with fuel oil and lubricants are: • Inhalation, ingestion and skin contact hazard • Combustion hazard (flash points 125°F or above) • Possible cancer hazard (fuel oil No. 2) • Violent reactions with strong oxidizers
• **Spill flow direction**	See Drainage Diagram in Figure II-13 of this plan for predicted directions of spill flow direction. Spills within the plant area will be collected by the plant drainage system. Actual direction is also dependent upon: • Wind • Immediate Area Drainage • Air and Fuel Temperature • Immediate Physical Barriers • Surface characteristics (soil, asphalt, etc.) • Location of release • Condition of release (line pressure, location of break, etc.)
• **Prevailing wind directions and speed**	Call Weather service (see Emergency Notification Phone List) for current conditions.
• **Water currents, tides, or wave conditions (if applicable)**	Port Everglades Plant and Terminal is adjacent to surface waters. Port Everglades is adjacent to the Intracoastal Waterway and has a short entrance channel from the Atlantic Ocean. Use www.tides.com to obtain daily tidal information.
• **Arrival route of emergency response personnel and response equipment**	Arrival route of emergency responders will approach the site either from the north or south on Eisenhower Boulevard. In the event of an emergency that warrants evacuation, only emergency and rescue vehicles will be allowed on the section of Eisenhower boulevard in the vicinity of the site.

PORT EVERGLADES FRP EMERGENCY RESPONSE ACTION PLAN

EVACUATION PLANS	
TOPIC	**DESCRIPTION**
• **Evacuation routes (see Figure II-11) Alternative routes of evacuation**	By land, the road that runs adjacent to the site is Eisenhower Boulevard. Most evacuation from this facility will utilize this road. The other evacuation option is to evacuate the terminal facility via the Port Everglades Plant located to the south of the terminal. Access to the west is available through the Port Everglades Plant. By water, there are no docking areas in the vicinity of the facility. By air, in the event that a helicopter is utilized for evacuation, the closest and most reasonable landing area would be the designated landing site at the plant. The Area Contingency Plan and the Broward County Emergency Management Plan are references if a wider area than the plant needs to be evacuated. The FL 11th District LEPC is contracted to provide evacuation routes for the nearby community.
• **Transportation of injured personnel to nearest emergency medical facility**	By land, the closest medical facility Is Broward General Medical Center located at 1600 S. Andrews Avenue in Fort Lauderdale. From the facility continue north on Eisenhower Boulevard to the 17th Street Causeway. Continue west on the 17th Street Causeway. Broward General Medical Center is located at the northeast corner of the SE 17th Street Causeway and Andrews Avenue. By air, the personnel are transported in a helicopter.
• **Location of alarm/notification systems**	Handheld two-way FM radios located in the Main Office Area (Plant) and Terminal Building (Terminal). All personnel that leave office area will carry a radio. The operations communication channel used at the plant is Channel 1. The maintenance communication channel used at the plant is Channel 2.
• **Centralized check-in area for roll call**	Check-in station is located at the Administration Building (Plant) and the Terminal Building (Terminal).
• **Mitigation command center location**	The Incident Command Post (ICP) will be at a location away from the Port Everglades Plant and Terminal yet still have a good view of the site.
• **Location of shelter at facility**	Inside the Administration Building (Plant) and the Terminal Building (Terminal).

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-16) can be used to identify appropriate valves to close. The areas of source include: the unloading dock, 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.

TABLE II-7						
PORT EVERGLADES PLANT AND TERMINAL PETROLEUM BULK STORAGE CONTAINERS						
TANK ID	**TYPE**	**CONTENTS**	**CAPACITY**	**SECONDARY CONTAINMENT TYPE**	**SECONDARY CONTAINMENT (CAPACITY)**	**EQUIPMENT START UP YEAR**
PLANT						
T17	Fuel Oil Dump Tank	No. 2 or No. 6 Fuel Oil	(b) (7)(F)	oncrete ontainment	(b) (7)(F)	1971
T26	Drum Storage Area	Oil		oncrete ontainment		1960
T27	Waste/Used Oil Drum Storage Area	Oil		oncrete ontainment		1960
T28	Empty Drum Storage Area	Oil		oncrete ontainment		1960
T29	Drum Storage Area	Oil		oncrete ontainment		1960
T34	Satellite Oil Drum Storage	Oil		oncrete ontainment		1977
T36	Metering Tank 1	Fuel No. 6		oncrete Wall plus dditional metal plate		1960
T37	Metering Tank 2	Fuel No. 6		oncrete Wall plus dditional metal plate		1961
T38	Metering Tank 3	Fuel No. 6		oncrete Wall plus dditional metal plate		1964
T39	Metering Tank 4	Fuel No. 6		oncrete Wall plus		1965

TABLE II-7						
PORT EVERGLADES PLANT AND TERMINAL PETROLEUM BULK STORAGE CONTAINERS						
TANK ID	TYPE	CONTENTS	CAPACITY	SECONDARY CONTAINMENT TYPE	SECONDARY CONTAINMENT (CAPACITY)	EQUIPMENT START UP YEAR
PLANT						
			(b) (7)(F)	additional metal plate	(b) (7)(F)	
T40	Tank 901	Jet A		Earthen Berm with/HDPE Liner		1977
T41	Tank 902	Jet A		Earthen Berm with/HDPE Liner		1977
T42	GT Tank 903	Jet A or No. 2 Fuel Oil		Concrete Wall plus additional metal plate		1971
T43	GT Tank 904	Jet A or No. 2 Fuel Oil		Concrete Wall plus additional metal plate		1971
T15	Slop Oil Tank	Waste Oil and Oily Water		Concrete Containment		1955
T16	Slop Oil Tank	Waste Oil and Oily Water		Concrete Containment		1955
T44	Tank 800	Fuel No. 6		Earthen/Gunite Dike		1955
T45	Tank 801	Fuel No. 6		Earthen/Gunite Dike		1956
T46	Tank 802	Fuel No. 6		Earthen/ Gunite Dike		1956
T47	Tank 804	Fuel No. 6		Earthen/ Gunite Dike		1957
T48	Tank 805	Fuel No. 6		Earthen/ Gunite Dike		1957
T49	Tank 806	Fuel No. 6		Earthen/ Gunite Dike		1957
T50	Tank 807	Fuel No. 6		Earthen/ Gunite Dike		1963
T51	Tank 808	Fuel No. 6		Earthen/ Gunite Dike		1965

TABLE II-7						
PORT EVERGLADES PLANT AND TERMINAL PETROLEUM BULK STORAGE CONTAINERS						
TANK ID	TYPE	CONTENTS	CAPACITY	SECONDARY CONTAINMENT TYPE	SECONDARY CONTAINMENT (CAPACITY)	EQUIPMENT START UP YEAR
PLANT						
Notes: T stands for Tank, G stands for Gallons, B stands for Barrels Locations are indicated on Figure II-6.						

TABLE II-8						
PORT EVERGLADES PLANT AND TERMINAL NONBULK STORAGE CONTAINERS (OIL FILLED EQUIPMENT)						
TANK ID	TYPE	CONTENTS	CAPACITY	SECONDARY CONTAINMENT TYPE	SECONDARY CONTAINMENT (CAPACITY)	EQUIPMENT START UP YEAR
PLANT						
T3	U-1 Turbine Lube Oil	Lube Oil	(b) (7)(F)	Concrete Curb	(b) (7)(F)	1960
T4	U-2 Turbine Lube Oil	Lube Oil		Concrete Curb		1961
T5	U-3 Turbine Lube Oil	Lube Oil		Concrete Curb		1964
T6	U-4 Turbine Lube Oil	Lube Oil		Concrete Curb		1965
T7	Units 1 & 2 Bulk Lube Oil Storage Tank (Empty and only used during outages & lube oil issues)	Lube Oil		Concrete Curb		1960
T8	U-3 Steam Gen BFP Lube Oil Tank	Lube Oil		Drains to Oil Trap/new Oil Water Separator		1964
T9	U-4 Steam Gen BFP Lube Oil	Lube Oil		Drains to Oil Trap/		1965

TABLE II-8

PORT EVERGLADES PLANT AND TERMINAL NONBULK STORAGE CONTAINERS (OIL FILLED EQUIPMENT)

TANK ID	TYPE	CONTENTS	CAPACITY	SECONDARY CONTAINMENT TYPE	SECONDARY CONTAINMENT (CAPACITY)	EQUIPMENT START UP YEAR
	Tank		(b) (7)(F)	new Oil Water Separator	(b) (7)(F)	
T10	Units 3 & 4 Bulk Lube Oil Storage Tank (Empty and only used during outages or lube oil issues)	Lube Oil		Concrete Curb		1964
T20	U-3 Stator Oil Tank	Lube Oil		Concrete Containment		1964
T21	U-4 Stator Oil Tank	Lube Oil		Concrete Containment		1965
T22	Units 3 & 4 Hydrogen Seal Oil Tank	Lube Oil		Drains to Oil Trap/ new Oil Water Separator		1964
T25	12-GT Lube Oil Tanks	Lube Oil		U.G. Tank		1971
X1	Unit 1 Main Trans.	Mineral oil		Concrete Curb		2007
X2	Unit 1 Aux. Trans.	Mineral oil		Concrete Curb drains to Unit Main Transformer containment		1960
X3	Service Trans. or Unit Substation Trans.	Mineral oil		Concrete Curb		1960
X4	Service Trans. or Unit Substation Trans.	Mineral oil		Concrete Curb		1960
X5	Service Trans.	Mineral oil		Concrete Curb		1960
X6	Service Trans.	Mineral oil		Concrete Curb		1960

TABLE II-8

PORT EVERGLADES PLANT AND TERMINAL NONBULK STORAGE CONTAINERS (OIL FILLED EQUIPMENT)

TANK ID	TYPE	CONTENTS	CAPACITY	SECONDARY CONTAINMENT TYPE	SECONDARY CONTAINMENT (CAPACITY)	EQUIPMENT START UP YEAR
			PLANT			
X7	Service Trans.	Mineral oil	(b) (7)(F)	Concrete Curb	(b) (7)(F)	1960
X8	Service Trans.	Mineral oil		Concrete Curb		1960
X9	Service Trans.	Mineral oil		Concrete Curb		1960
X10	Service Trans.	Mineral oil		Concrete Curb		1960
X11	Unit 1 Power Potential Trans.	Silicone		Concrete Curb drains to Unit Main Transformer containment		1960
X12	Unit 2 Main Trans.	Mineral oil		Concrete Curb		2007
X13	Unit 2 Aux Trans.	Mineral Oil		Concrete Curb drains to Unit Main Transformer containment		1961
X14	Service Trans.	Mineral Oil		Concrete Curb		1961
X15	Service Trans.	Mineral Oil		Concrete Curb		1961
X16	Service Trans.	Mineral Oil		Concrete Curb		1961
X17	Service Trans.	Mineral Oil		Concrete Curb		1961
X18	Service Trans.	Mineral Oil		Concrete Curb		1961
X19	Service Trans.	Mineral Oil		Concrete Curb		1961
X20	Service Trans.	Mineral Oil		Concrete Curb		1961
X21	Service Trans.	Mineral Oil		Concrete Curb		1961
X22	Grounding Trans.	Mineral Oil		Concrete Curb		1961

TABLE II-8

PORT EVERGLADES PLANT AND TERMINAL NONBULK STORAGE CONTAINERS (OIL FILLED EQUIPMENT)

TANK ID	TYPE	CONTENTS	CAPACITY	SECONDARY CONTAINMENT TYPE	SECONDARY CONTAINMENT (CAPACITY)	EQUIPMENT START UP YEAR
X23	Unit 3 Main Trans.	Mineral Oil	(b) (7)(F)	Concrete Curb	(b) (7)(F)	1964
X24	Unit 3 Aux. Trans.	Mineral Oil		Concrete Curb drains to Unit Main Transformer containment		1964
X25	Unit 3 Power Potential Trans.	Mineral Oil		Concrete Curb drains to Unit Main Transformer containment		1964
X26	Service Trans.	Mineral Oil		Concrete Curb		1964
X27	Service Trans.	Mineral Oil		Concrete Curb		1964
X28	Service Trans.	Mineral Oil		Concrete Curb		1964
X29	Service Trans.	Mineral Oil		Concrete Curb		1964
X30	Service Trans.	Mineral Oil		Concrete Curb		1964
X31	Service Trans.	Mineral Oil		Concrete Curb		1964
X32	Unit 2 Power Potential Trans.	Silicone		Concrete Curb drains to Unit Main Transformer containment		1964
X33	Unit 4 Main Trans.	Mineral Oil		Concrete Curb		1965
X34	Unit 4 Power PotentialTrans.	Mineral Oil		Concrete Curb drains to Unit Main Transformer containment		1965

TABLE II-8

PORT EVERGLADES PLANT AND TERMINAL NONBULK STORAGE CONTAINERS (OIL FILLED EQUIPMENT)

TANK ID	TYPE	CONTENTS	CAPACITY	SECONDARY CONTAINMENT TYPE	SECONDARY CONTAINMENT (CAPACITY)	EQUIPMENT START UP YEAR
			PLANT			
X35	Unit 4 Aux. Trans.	Mineral Oil	(b) (7)(F)	Concrete Curb drains to Unit Main Transformer containment	(b) (7)(F)	
X36	Service Trans.	Mineral Oil		Concrete Curb		1965
X37	Service Trans.	Mineral Oil		Concrete Curb		1965
X38	Service Trans.	Mineral Oil		Concrete Curb		1965
X39	Service Trans.	Mineral Oil		Concrete Curb		1965
X40	Service Trans.	Mineral Oil		Concrete Curb		1965
X41	Service Trans.	Mineral Oil		Concrete Curb		1965
X42	Grounding Trans.	Mineral Oil		Concrete Curb		1965
X43	GT Main No. 1 Trans.	Mineral Oil		Concrete Curb		1971
X44	GT Main No. 2 Trans.	Mineral Oil		Concrete Curb		1971
X45	GT Main No. 3 Trans.	Mineral Oil		Concrete Curb		1971
X46	Emergency Power Trans. (9 places)	Mineral Oil		Inside Gas Combustion Turbine Building		1971
X47	Cathodic Protection Rectifier 4	Mineral Oil		Concrete Containment		1971
X48	Cathodic Protection Rectifier 3	Mineral Oil		Concrete Containment		1971
X49	Units 3&4 Start-Up Transformer	Mineral Oil		Concrete Containment		1971

TABLE II-8

PORT EVERGLADES PLANT AND TERMINAL NONBULK STORAGE CONTAINERS (OIL FILLED EQUIPMENT)

TANK ID	TYPE	CONTENTS	CAPACITY	SECONDARY CONTAINMENT TYPE	SECONDARY CONTAINMENT (CAPACITY)	EQUIPMENT START UP YEAR
			PLANT			
X51	Padmount Distribution Transformer	Mineral Oil	(b) (7)(F)	Concrete Containment	(b) (7)(F)	1964
X52	Spare GSU Transformer (Temp)	Mineral Oil		Liner embedded in Gravel		2009
X53	Transformer	Mineral Oil		Concrete Curb		2009
X54	Cathodic Protection Rectifier	Mineral Oil		Concrete Curb		2009
X55	Cathodic Protection Rectifier	Mineral Oil		Concrete Curb		2009
X56	Transformer	Mineral Oil		Concrete Curb		2009

Notes:

T stands for Tank, X stands for Transformer, G stands for Gallons, B stands for Barrels, L stands for Liters
Locations are indicated on Figures II-6 and II-7.
* Concrete curbing drains to oil water separator and containment volume includes area occupied by transformer/electrical equipment.

1 Additional containment is provided by curbing around gas turbine power park

TABLE II-9				
PORT EVERGLADES ADDITIONAL FEATURES (SEE FIGURE II-6)				
ID	TYPE	CONTENTS	CONTAINMENT	EQUIPMENT START UP YEAR
T1	Fuel Oil Transfer Pit/Pumps	Jet A	Concrete Pit	1977
T2	Fuel Oil Transfer Filters	Jet A	Concrete Pit	1977
T31	Underground Oil Water Separator	Oily Water	Double Walled	December 2010
T32	Aboveground Oil Water Separator	Oily Water	Concrete Curb	2008
T33	Oil Trap 3	Oily Water	Concrete Curb	1960

Notes:
Locations are indicated on Figure II-6.

Insert

FIGURE II-6A LOCATION OF FUEL OIL AND LUBE OIL STORAGE TANKS, FUEL TRANSFER LINES AND TRUCK UNLOADING AREA

Insert

FIGURE II-6B LOCATION OF FUEL OIL AND LUBE OIL STORAGE TANKS, FUEL TRANSFER LINES AND TRUCK UNLOADING AREA

Insert

FIGURE II-6C LOCATION OF FUEL OIL AND LUBE OIL STORAGE TANKS, FUEL TRANSFER LINES AND TRUCK UNLOADING AREA

Insert

FIGURE II-7 LOCATION OF OIL FILLED ELECTRICAL EQUIPMENT

Insert

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

INSERT

FIGURE II-9 FIRE PROTECTION PLAN

Insert

FIGURE II-10 ENVIRONMENTALLY SENSITIVE AREAS

Insert

FIGURE II-11 SITE EVACUATION PLAN

Insert

FIGURE II-12A SITE DRAINAGE PLAN

Insert

FIGURE II-12B SITE DRAINAGE PLAN

Insert

FIGURE II-12C SITE DRAINAGE PLAN

Insert

FIGURE II-12D SITE DRAINAGE PLAN

Insert

FIGURE II-13A OIL SPILL DRAINAGE PATHS

Insert

FIGURE II-13B OIL SPILL DRAINAGE PATHS

Insert

FIGURE II-13C OIL SPILL DRAINAGE PATHS

Insert

FIGURE II-14 BOOMING STRATEGIES FOR THE PORT EVERGLADES AREA

Insert

FIGURE II-14 A BOOMING STRATEGIES FOR THE PORT EVERGLADES AREA SITE OVERVIEW

Insert

FIGURE II-14 B BOOMING STRATEGIES FOR THE PORT EVERGLADES AREA VIEW 1

Insert

FIGURE II-14 C BOOMING STRATEGIES FOR THE PORT EVERGLADES AREA VIEW 2

Insert

FIGURE II-14 D BOOMING STRATEGIES FOR THE PORT EVERGLADES AREA VIEW 3

Insert

FIGURE II-14 E BOOMING STRATEGIES FOR THE PORT EVERGLADES AREA VIEW 4

Insert

FIGURE II-14 F BOOMING STRATEGIES FOR THE PORT EVERGLADES AREA VIEW 5

SECTION III: FACILITY DESCRIPTION

A. FACILITY LOCATION AND DESCRIPTION

Facility Name and Location

The Port Everglades Plant and Terminal is located on the east coast of Florida between Hollywood and Ft. Lauderdale, Florida in Port Everglades. The plant is adjacent to FPL's Port Everglades Terminal and both facilities are located in the southern portion of the port. Figure III-1 provides a map showing an overview of the plant site.

The latitude and longitude of the Plant are:

(b) (7)(F) [redacted]

The address and telephone number of the Plant is:

8100 Eisenhower Boulevard
Port Everglades, Florida 33316
(954) 527-3600

The address and telephone number of the Terminal is:

2701 Eisenhower Boulevard
Port Everglades, Florida 33316
(954) 765-3522

Nearest Navigable Waterway

The nearest navigable waterway to the site is: **The Intracoastal Waterway.**

The distance to the nearest waterway/wetland to the Plant is: **The Port Everglades Plant and Terminal is located adjacent to the Intracoastal Waterway.**

Facility Layout

The Port Everglades Plant is an electric-generating plant with four (4) steam generating units and twelve (12) gas turbine units capable of generating 1542 megawatts of electrical power using fuel oil and/or natural gas. The terminal is the storage facility for the Port Everglades Plant.

The Port Everglades Terminal was originally constructed in 1958. Tanks 901 and 902 were added in 1977. The Port Everglades Plant was constructed in 1960 with one unit; additional units were added in 1961, 1964, and 1965.

The plant currently consists of the following structures/areas:

- Administration building and parking area
- Maintenance building
- Laboratory
- Generating units 1, 2, 3, and 4
- Gas turbine area
- Water-treatment plant
- Intake and discharge canal system
- Wastewater treatment system
- Electrical switchyard area

The terminal currently consists of the following structures/areas:

- Two (2) tanker/barge berths
- Three (3) underground pipelines from the port to the terminal
- Eight (8) No. 6 oil storage tanks,
- Two (2) slop oil/waste water storage tanks
- Two (2) Transfer pumps and interconnecting piping
- Two (2) Jet A Storage Tanks

Port Everglades Facility receives and stores a significant amount of No. 6 and Jet A for use in operation of the plant. The plant also has storage capabilities for No. 2 Fuel Oil. The plant receives the No. 6 fuel oil from the fuel oil offloading terminal at Port Everglades operated by Transtate Industrial Pipeline, Inc. Fuel oil is unloaded from tankers and oceangoing barges at Port Everglades and transported by pipeline to storage tanks at the Port Everglades Terminal, operated by Transtate Industrial Pipeline Systems, Inc., located on property contiguous to the plant.

The types of oil stored at the Port Everglades Plant are No. 6 fuel oil, No. 2 fuel oil, lube oil, mineral oil, and Jet A. There are four (4) fuel oil metering tanks and two No. 2 oil/Jet A storage tanks which are aboveground at the Port Everglades Plant. There are eight

(8) fuel oil storage tanks, two storage tanks which are typically used for Jet A, and two (2) slop oil storage tanks at the terminal. All of the tanks were engineered solely for the purpose of storing oil and constructed with materials compatible with oil.

The Port Everglades Plant can also transport fuel oil via the Dania Spur (Lauderdale) Pipeline to FPL's Lauderdale Plant. The Dania Spur (Lauderdale) Pipeline consists of a one-line section that is one mile in length and has a diameter of eight inches. It is designed to deliver No. 2 fuel oil or Jet A to the Lauderdale Plant by way of the Everglades Pipeline from Port Everglades at operational pressures of 600 to 800 psi. The pipeline is located in one response zone within Broward County, Florida, and crosses one navigable water body, the Dania Cut-off Canal, on its entrance into the Lauderdale Plant. Because this pipeline crosses a navigable water, contingency planning for a worst-case discharge is required under 49 CFR 194 for the entire response zone.

The fuel oil unloading facilities at the Port Everglades Terminal are located at Slips Number 2 and 3 and unloading can occur at berths 10 and 13 within the port. All of these facilities are bulkheaded within the port with water depths greater than 35 feet. The largest vessel that calls on the Port Everglades Terminal is approximately 500 feet long and carries about 300,000 barrels of oil. The fuel oil is delivered to the terminal and is pumped mainly through three 12-inch underground pipelines to the tanks within the terminal facility. After receipt, the fuel oil is pumped to the plant by pipeline as needed for Power Plant operations.

If required, the terminal also has the capability of loading oil from the No. 6 oil storage tanks into barges or tankers.

The Port Everglades Fuel Oil Terminal is manned 24 hours per day, 7 days per week. During loading or offloading operations there are a minimum of one employee and a contracted dock watch located at the facilities at all times. One person will be stationed at the terminal and the second person at the dock. They remain in constant contact via radio communications.

Mineral oil is the only petroleum product transferred by tank truck at the facility. Mineral oil is infrequently pumped into or out of the plant's transformers using company owned trucks of approximately 5,600 gallons.

Lube oil and lubricants are also delivered to the plant in sealed drums or containers by truck. The oil drums are stored in a special designated paved and curbed area.

Surplus storage tanks above the needs of the power plant are available in the east tank farm. Currently, these surplus tanks are being leased out to a third party for the storage of Jet A. Although, the lessee is responsible for developing and maintaining a separate Facility Response Plan and SPCC Plan for the jet fuel operations, FPL has included these tanks in its plan as the tanks are owned by FPL.

Insert

FIGURE III-1 SITE LOCATION

[Intentionally blank]

B. WATERFRONT DESCRIPTION

The fuel oil unloading facilities are located at Slips Number 1 and 3 and unloading can occur at berths 10 and 13 within the port. All of these facilities are bulkheaded within the port with water depths greater than 35 feet. The largest vessel that calls on the Port Everglades Terminal is approximately 500 feet long and carries about 300,000 barrels of oil. The fuel oil is delivered to the terminal and is pumped mainly through three 12-inch underground pipelines to the tanks within the terminal facility. After receipt, the fuel oil is pumped to the plant by the pipeline as needed.

C. ENVIRONMENTAL CONDITIONS

Environmental Conditions: The Port Everglades Terminal utilizes Slips 1 and 3 within Port Everglades. Port Everglades has a short entrance channel from the Atlantic Ocean. The two slips are located west of the turning basin in Port Everglades. The slips and port area are almost completely bulkheaded. Water depth within the slips is approximately 35 feet. The Port Everglades Plant receives cooling water from Slip 3 north of the plant into the intake canal. After passing through the condensers, the water enters the discharge canal that joins the Intracoastal Waterway (ICW) south of the turning basin.

Tides

Tides in the area are semidiurnal. The tide within Port Everglades has a mean range of 2.6 feet at the entrance to the Port, and 2.3 feet along the wharfs. Spring tides have a range of 3.1 feet.

Currents

Currents vary dramatically within the port area. Near the slips and within the turning basin, the currents are low; maximum flood tide is 0.2 knots (0.3 ft/sec) and maximum ebb tide is 0.4 knots (0.7 ft/sec). In the entrance to the port (between the jetties) the maximum flood tide current is 0.6 knots (1.0 ft/sec); the maximum ebb tide current is 0.7 knots (1.2 ft/sec). This current increases as the waterway constricts both north and south of the turning basin. The maximum flood tide current is 300 yards north of the turning basin is 0.9 knots (1.5 ft/sec) and 1.9 knots (3.2 ft/sec)at the 17th Street Causeway. The maximum ebb tide current is about 1.8 knots (3.0 ft/sec) at both

locations. South of the turning basin within the ICW, the maximum flood tide current is 1.3 knots (2.2 ft/sec); the maximum ebb the current, 1.7 knots (2.9 ft/sec).

Water Depths

Water depths in the slips are approximately 35 feet. Water depths in the discharge canal are approximately 10 feet.

Shoreline

Most of the shorelines within the port and north of the port along the ICW are bulkheaded including residential canals. Most of the shoreline within the discharge canal and south along the ICW is natural, some with extensive contiguous mangrove wetlands. Outside of the inlet, the shorelines are sandy beaches.

Structures

There are no significant structures within the slips or port area.

D. METEOROLOGICAL CONDITIONS

Winds

A five-year annual wind rose for the Miami International Airport (1982 - 1986) is presented in Figure III-2. The Miami data are representative wind direction and wind frequency data available for the Port Everglades Plant and Terminal. 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 Miami wind direction frequencies are mostly dominant from the eastern hemisphere with the greatest frequencies occurring for east (17 percent), and east-southeast (12 percent).

Insert

FIGURE III-2 WIND ROSE

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Temperatures

The temperature means and extremes for the Miami International Airport (1944-1991) are presented in Table III-1. The Miami data are representative temperature data for the Port Everglades Plant and Terminal. The mean annual temperature of 75.6°F varies from a monthly high of 82.8°F in August to a monthly low of 67.1°F in January. The average diurnal maximum varies from 89.2°F in August to a low of 75.0° in January. The average diurnal minimum varies from a maximum of 76.5°F in August to a minimum of 59.2°F in January. The extreme maximum temperature recorded from the period 1944 through 1991 is 98°F while the minimum temperature recorded during the same period is 30°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 Miami International Airport (1944-1991) are presented in Table III-2. The Miami data are representative precipitation data for the Port Everglades Plant and Terminal. 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 plant site varies from a peak of 9.15 inches in June to a minimum of 1.86 inches in December. The annual mean precipitation is 57.55 inches. The maximum monthly and daily rainfall amounts (1944 - 1991) are 24.40 and 16.21 inches, respectively.

Visibility

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 1.4 in January to 0.0 in June. The average number of days in which heavy fog occurs annually is 6.1.

TABLE III-1

MONTHLY MEAN AND EXTREME TEMPERATURES FOR THE PORT EVERGLADES PLANT AND TERMINAL

	Mean Temperatures[a] (°F)			Extreme Temperatures[b] (°F)	
Month	Average	Maximum	Minimum	Maximum	Minimum
January	67.1	75.0	59.2	88	30
February	67.8	75.8	59.7	89	32
March	71.7	79.3	64.1	92	32
April	75.3	82.4	68.2	96	46
May	78.5	85.1	71.9	95	53
June	81.0	87.3	74.6	98	60
July	82.4	88.7	76.2	98	69
August	82.8	89.2	76.5	98	68
September	81.8	87.8	75.7	97	68
October	77.9	84.2	71.6	95	51
November	72.8	79.8	65.8	89	39
December	68.5	76.2	60.8	87	30
Annual	75.6	82.6	68.7	98	30

a: Miami International Airport, 1951-1980
b: Miami International Airport, 1944-1991

TABLE III-2

MONTHLY PRECIPITATION AND VISIBILITY FOR THE PORT EVERGLADES PLANT AND TERMINAL

Month	Precipitation (inches)			Number of Days with Visibility ≤ ¼ Mile[b]
	Mean[a]	Extreme[b]		
		Monthly	Daily	
January	2.08	6.66	2.68	1.4
February	2.05	8.07	5.73	0.9
March	1.89	10.57	7.07	0.7
April	3.07	17.29	16.21	0.6
May	6.53	18.54	11.59	0.3
June	9.15	22.36	8.20	0.0
July	5.98	13.51	4.55	0.1
August	7.02	16.88	6.92	0.1
September	8.07	24.40	7.58	0.1
October	7.14	21.08	9.95	0.2
November	2.71	13.15	7.93	0.9
December	1.86	6.39	4.38	0.9
Annual	57.55	24.40	16.21	6.1

a: Miami International Airport 1951-1980
b: Miami International Airport 1944-1991
c: Miami International Airport 1950-1991

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SECTION IV: NOTIFICATION / ACTIVATION PROCEDURES

A. INTERNAL NOTIFICATIONS

Depending on the size of the incident, the OSC/QI or alternate from the Port Everglades Site 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 designee, the Juno Environmental Services (JES) representative, and the Power Generation Environmental Representative. The Corporate response team (CORST) will be activated by the OSC/QI any time deemed necessary, irrespective of the level of incident. The OSC/QI will also complete the Spill Response Notification Form (Figure IV-1).

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 Form 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 EVERGLADES PLANT AND TERMINAL
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: ___ EISENHOWER BOULEVARD

CITY: PORT EVERGLADES STATE: FL ZIP: 33316

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: _____

NEAREST CITY: PORT EVERGLADES STATE: FL COUNTY: BROWARD ZIP: 33316

DISTANCE FROM CITY: _____ UNITS: MILES DIRECTION FROM CITY: _____

SECTION: _____ TOWNSHIP: _____ RANGE: _____

CONTAINER TYPE: TANK CAPACITY: UNITS:

(b) (7)(F)

[redacted]

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 EVERGLADES PLANT AND TERMINAL			
CALLER NOTIFICATIONS			
	Yes/No	**Who**	**Time/Date**
National Response Center (NRC) 1-800 424-8802			
Coast Guard			
State Warning Point			
FDEP			
Broward County			
COSRT			
Response Contractor			
Environmental Services			
Area External Affairs Rep.			
Corporate Communication			
Others			
On-Scene Commander		**Date**	

SECTION V: EMERGENCY RESPONSE ORGANIZATION

A. TIERED RESPONSE

Response resources that will be available to respond to oil spill incidents at the Port Everglades Plant and 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 Everglades Plant and Terminal would be 50 barrels (2,100 gallons) of No. 2 fuel oil, mineral oil, and lube 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 Everglades Plant and Terminal is 36,000 gallons (857 barrels).

A Level II or “Maximum Most Probable Discharge” (MMPD) at an onshore marine transportation-related facility is defined as the lesser of 1,200 barrels or 10 percent of the volume of a worst case discharge. A Level II, or “MMPD," discharge at the Port Everglades Plant and Terminal would be 50,400 gallons (1,200 barrels).

In order to approximate the MMPD from the dock lines, it is assumed that it would take 10 minutes to discover the release and five 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. Utilizing a maximum transfer rate of 14,000 barrels of oil per hour, the "maximum most probable discharge" from the dock lines would be approximately (b) (7)(F) [redacted]

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. The Level III or "worst case discharge" that may occur at the Port Everglades Plant and Terminal is 10(b) (7)(F) of No. 6 fuel oil. 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 maximum time to discover the release from the pipe in hours, plus the maximum time to shut down flow from the pipe in hours (based on historic discharge data or the best estimate in the absence of historic discharge data for the facility), multiplied by the maximum flow rate expressed in barrels per hour (based on the maximum relief valve setting or maximum system pressure when relief valves are not provided, 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.

The Level III or "worst case" discharge from the dock lines would be the "maximum most probable" discharge plus the total capacity of all piping carrying oil, including inline and (b) (7)(F) A.

The Dania Spur (Lauderdale) pipeline consists of a less than one mile, 8 inch section of pipeline which delivers Jet A fuel to the Lauderdale Plant. The pipeline has a (b) (7)(F)). 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 the juncture of the Everglades Pipeline and the Dania Spur (Lauderdale Pipeline) and at the Lauderdale Plant would be closed to mitigate the release; however, a significant amount of oil would be discharged prior to the closure of these valves.

In order to calculate the worst case discharge for the pipeline, in adverse weather, it is assumed that the maximum time to discover a release will be two hours and the maximum time to shutdown the transfer will be 15 minutes. Utilizing a maximum transfer rate of 1,400 barrels plus the total contents of the pipeline (328 barrels), the (b) (7)(F) of Jet A fuel. Worst case discharge calculations are provided in Appendix H.

B. EMERGENCY RESPONSE ORGANIZATION

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 COSRT.

C. ONSITE RESPONSE TEAM (ORT)

The Port Everglades Plant and Terminal has their own small ORT (see Section IV.A). Each ORT comprises 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 FPL's Corporate Response Equipment and 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 effect 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 COSRT.
- Interact, as appropriate, with COSRT.

Each ORT is led by an On-Scene Commander (OSC) 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 OSC/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 Port Everglades Plant and Terminal uses FPL's Corporate Response Team (COSRT) 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 is 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's equipment, and the secondary OSRO's equipment (FPL COSRT) would be responsible for responding to all Level I, Level II, and Level III incidents at the facility. FPL's COSRT 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 OSC. The OSC/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 OSC/QI(s) has been granted full authority to implement removal actions. The OSC/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 OSC/QI(s) have 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:

- OSC/QI
- Site Safety Officer
- Operations Supervisor (Oil Spill Coordinator)
- On Water Unit Leader
- On Land Unit Leader

During Level II or III incidents, the OSC/QI would notify the FPDC to activate the COSRT for assistance. When activated, the OSC/QI and all or a portion of the COSRT would report to a Command Post which would be established at or near the Port Everglades Plant and Terminal. The OSC/QI would support the efforts of the ORT and local contractors, facilitate the acquisition of additional response resources, engage in a planning process that would generate a comprehensive plan to guide response operations and daily work plans to implement the comprehensive plan, and manage response operations to their successful conclusion.

D. CORPORATE RESPONSE TEAM (COSRT)

The ORT 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 COSRT. The COSRT consists of Company personnel drawn from FPL.

The COSRT is led by an Incident Commander (OSC/QI) who operates out of an Incident Command Post (ICP) that normally is set up at a location away from the FCP. When the COSRT is activated, the ORT is initially assimilated into, and becomes the part of the Operations Section of, the COSRT. Level II and III incidents will require the activation of the COSRT. During long-term events, ORT members will be replaced by other COSRT members.

The COSRT 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 OSC/QI). It generates Strategic Objectives, determines response priorities, 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 COSRT would rely on this document and the Corporate Response Plan to provide them with guidance on their roles and responsibilities.

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

During a Level III or WCD incident, the COSRT 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 response equipment and identifies additional contractor equipment and resources available to respond to a WCD incident.

Training

The OSC/QI has demonstrated knowledge of the requirements listed by the DOT, EPA, and USCG. The OSC/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 EVERGLADES PLANT AND TERMINAL ONSITE RESPONSE TEAM (ORT) ORGANIZATION CHART

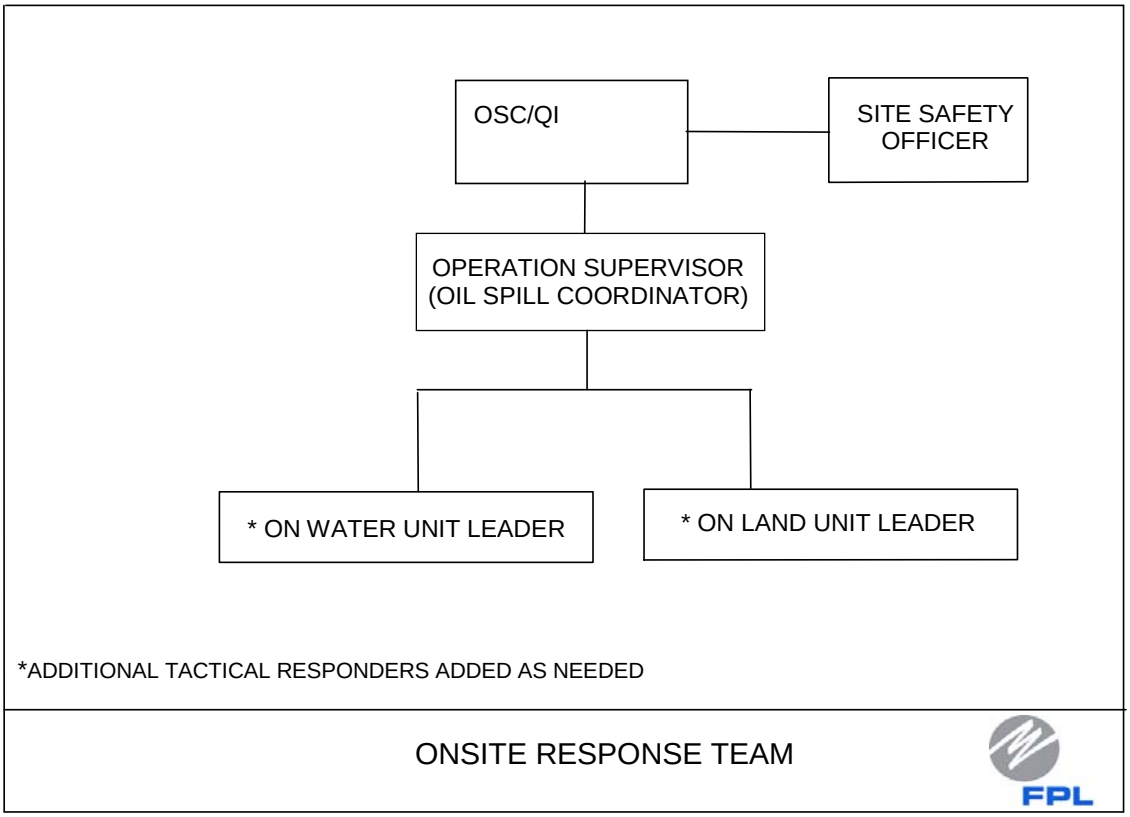
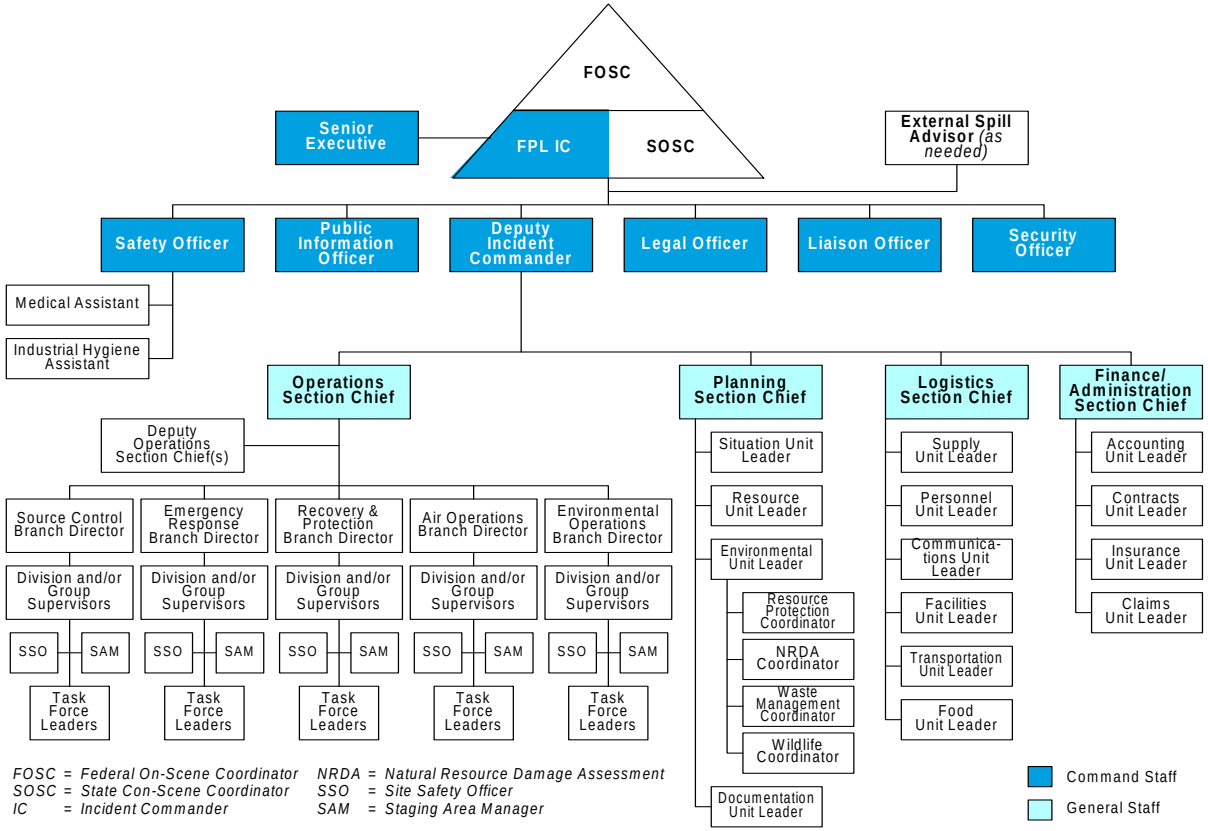
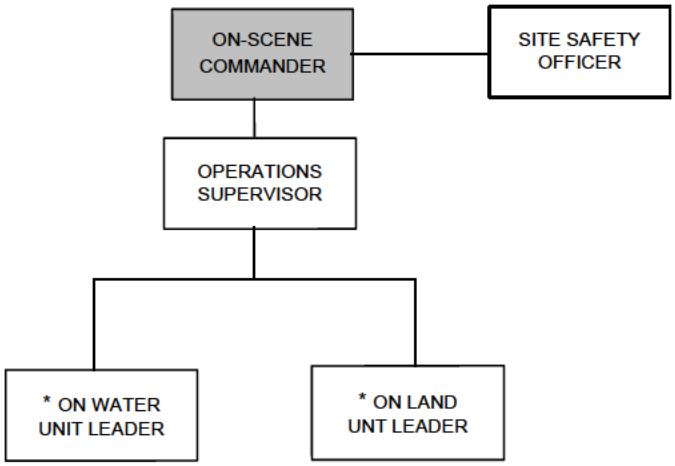


FIGURE V-2 FLORIDA POWER AND LIGHT COMPANY CORPORATE OIL SPILL RESPONSE TEAM (COSRT) ORGANIZATION CHART



ON-SCENE COMMANDER/QUALIFIED INDIVIDUAL



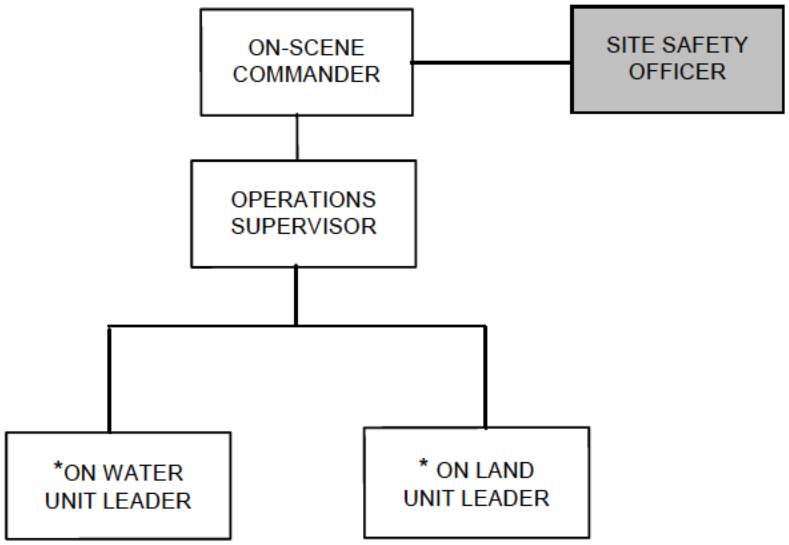
The OSC/QI is responsible for conducting an initial assessment of the situation and immediately taking the steps necessary to ensure the safety of personnel. The OSC/QI will identify and control the source (if possible), conduct a detailed incident assessment, initiate and manage response operations, and make internal notifications.

(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.

Document all actions.

* Additional tactical responders added as needed.

SITE SAFETY OFFICER



The Site Safety Officer is responsible for conducting an initial assessment of the situation and immediately taking the steps necessary to ensure the safety of personnel. The Site Safety Officer will keep the OSC/QI informed of all safety and health related issues.

If practical and safe, conduct a site characterization & analysis to identify hazards (i.e., has anyone been, or could become injured; is there a threat of fire or explosion; what type of material is involved).

Establish Hazard Control Zones.

Select appropriate Personal Protective Equipment.

Monitor incident scene for combustible gases or hazardous concentrations, as appropriate.

Define training requirements and ensure that workers are properly trained.

Set up Decontamination & First Aid Stations.

Prepare an incident-specific Site Safety Plan.

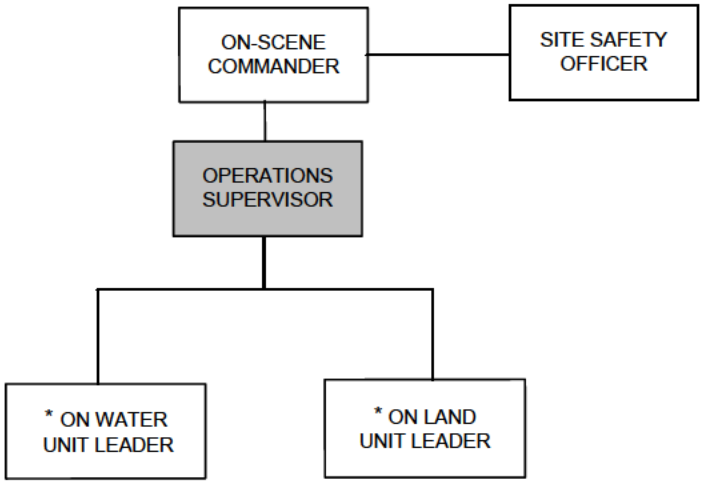
Monitor emergency response operations and stop any unsafe activities.

Evaluate the need for post-incident drug and alcohol testing.

Document all actions.

* Additional tactical responders added as needed.

OPERATIONS SUPERVISOR



The Operations Supervisor or Oil Spill Coordinator is responsible for supervising the development of tactical response strategies, the deployment of response equipment, and keeping the OSC/QI informed of the status of response operations.

Obtain a briefing from the OSC/QI.

Develop tactical strategies for the deployment of onsite equipment.

Provide Tactical Responders with a safety briefing.

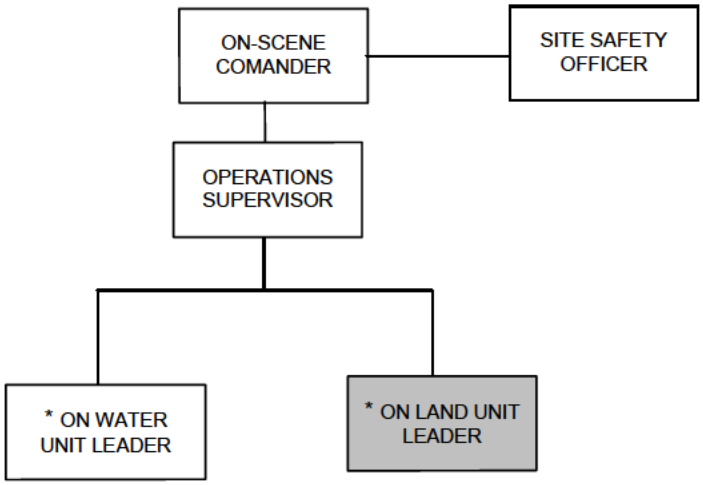
Provide Tactical Responders with directions for the placement of sorbent materials and/or containment booms to contain a spill and prevent further spreading.

Provide Tactical Responders with direction for covering drains.

Document all actions.

* Additional tactical responders added as needed.

ON LAND UNIT LEADER



The On Land Unit Leader is responsible for carrying out shoreside activities pertaining to boom deployment and cleanup activities, as directed by the Operations Supervisor (Oil Spill Coordinator).

Obtain a briefing from the Operations Supervisor (Oil Spill Coordinator).

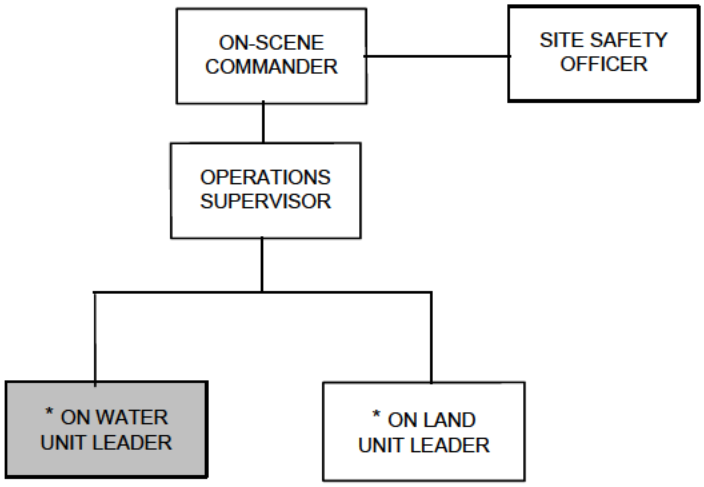
For Landside Spills:

- Deploy sorbent materials around the spill to prevent it from spreading.
- Cover any storm drains that may be in the flow path of the spill.
- Once the spill is contained, additional sorbent materials can be placed on top of the product and/or pumps can be used to effect final cleanup.

Document all actions.

* Additional tactical responders added as needed.

ON WATER UNIT LEADER



The On Water Unit Leader is responsible for deploying the boat, containment boom, sorbent materials, and oil recovery devices, as directed by the Operations Supervisor (Oil Spill Coordinator).

Obtain a briefing from the Operations Supervisor (Oil Spill Coordinator).

For Spills into Surface Waters:

- Deploy response boat and containment boom.
- Position boom to deflect oil to shore for recovery.
- Position other boom to protect sensitive areas, if necessary.
- Begin recovery operations using skimmers or sorbent materials.
- Remove all contaminated materials including soil and place material inside 55-gallon drums. Recovered liquid product should also be placed in 55-gallon drums or portable tanks and stored in a safe place to await final disposal.

Document all actions.

* Additional tactical responders added as needed.

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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 **OSC/QI**. Upon arrival at the spill scene, the **OSC/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 **OSC/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 **OSC/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 **OSC/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 Everglades Plant and Terminal and associated pipelines 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 II of this 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 **OSC/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.
2. Stop the discharge (e.g., act quickly to secure pumps). 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. Take any steps deemed necessary to minimize any threat to public health and safety and to reduce the severity of the incident, if safe to do so.
    - Until confirmed otherwise, the spill environment must be presumed to be hazardous. That presumption remains until the characteristics of the spilled material have been determined and the area has been tested.

- If the first responder does not have information and equipment to make the determination as to the characteristics of the spilled material, an immediate request for assistance should be made.

4. **Warn personnel –** Notify the Person-In-Charge of the tank truck (if tank truck involved). Notify the Plant Leader, who will then function as the OSC/QI. Call for medical assistance if an injury has occurred.

5. **Shut off ignition sources –** motors, electrical circuits, open flames, etc.

6. **Initiate spill containment –** Place containment or sorbent boom around the area as appropriate.

7. **Make any required agency notifications** (see Table II-3).

Immediate steps to be taken by the Port Everglades Plant Operator include:

1. Assume the position of OSC/QI.

2. Evaluate spill information given by the first responder.

3. Verify that medical assistance has been requested if injury is reported.

4. Activate the Port Everglades Plant and Terminal Spill Response Team.

5. Activate Spill Response Contractor(s) if required.

6. Notify the OSC (see Table II-2) and Port Everglades Plant and Terminal Control Room. Give spill incident status and request assistance as required.

7. Proceed to the spill location to supervise spill containment and cleanup procedures.

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, a containment boom is deployed between the barge and the bulkhead.

Oil recovery devices with an effective daily recovery equal to the amount of 2,100 gallons or greater must be available at the facility within 2 hours of the detection of an oil discharge. The oil storage capacity for recovered oily material must be able to sustain twice the effective daily recovery capacities from oil recovery equipment, or 4,200 gallons.

RESPONSE RESOURCES REQUIRED FOR SMALL SPILLS		
Resource	**Required Amount**	**Available Amount**
Containment Boom	1,000 feet within 1 hour	3750 feet on site*
Oil Recovery Capacity	2,100 gpd	115,038 gpd*
Temporary Storage Capacity	4,200 gallons	115,038 gpd*
Note: This includes resources available from the Port Everglades Plant		

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 provided by the listed secondary OSRO (i.e. FPL COSRT) in Tables II-3. In a Level II or Level III incident (spills that are beyond the capability of the ORT), all or some of FPL's COSRT 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 COSRT would serve as the Company's Spill Management Team. COSRT 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 (b) (7)(F) [redacted]. Since the medium discharge is 36,000 gallons of oil or 10% of the worst case discharge, whichever is less, the planning volume is 36,000 gallons. 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 50 percent of the planning volume, or 18,000 gallons per day. Temporary storage capacity on-scene must

equal twice the daily recovery capacity or 36,000 gallons. Containment boom is available at the Port Everglades Plant and 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) [redacted] 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. Appendix A lists FPL's available daily recovery capacities for a WCD.

TABLE VI-1

DETAILED INCIDENT ASSESSMENT FORM

GENERAL INFORMATION

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: _____

SAFETY & HEALTH CONCERNS

The status of all personnel (injuries, etc.): _____
_____

Identification of possible health or fire hazards: _____
_____

ENVIRONMENTAL IMPACTS

Environmentally sensitive areas impacted: _____
_____
Wildlife impacted: _____
_____

TABLE VI-1
DETAILED INCIDENT ASSESSMENT FORM
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.

Diversion 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 Everglades Plant and Terminal 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.

TABLE VI-2

CLEANUP AND RECOVERY TECHNIQUES

TECHNIQUE	DESCRIPTION
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, plant 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 plant's service building.

(b) (7)(F)

(b) (7)(F)

[redacted]

I. SURVEILLANCE

The **OSC/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 **OSC/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.

Surveillance operations would be conducted from an aircraft, since it would be virtually impossible to conduct surveillance operations from the ground. However, vehicles and vessels may be used to verify the information collected from the air.

The type of aircraft used (i.e., fixed-wing or helicopter) would depend upon the distances that must be covered, the range of available aircraft, and the mission to be carried out. Fixed-wing aircraft would be faster and can cover greater ranges than helicopters. On the other hand, helicopters would have greater maneuverability which would make them superior to fixed-wing aircraft for site-specific evaluations.

Aircraft would be dedicated to surveillance operations. This does not mean that the aircraft would not be used for other operations, but it does mean that surveillance operations would always be given priority treatment.

A surveillance team would consist of the aircraft's pilot and a trained observer. Whenever possible, a surveillance team would be kept intact throughout response operations to ensure consistency and continuity in their observations.

In the event of a Level I oil spill incident at the Port Everglades Plant and Terminal, surveillance would be initiated and carried out by personnel on the dock or in the boom deployment boat/vessel. 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.

FPL also owns the following aircraft stored at Palm Beach International Airport:

(1) Falcon 2000 jet
(2) Cesna Citation Jets
(2) Augusta 109 Helicopters

This equipment is located at Palm Beach International Airport, West Palm Beach and can be activated by contacting FPL aviation at (561) 640-2200.

J. EVACUATION PLAN

The Oil Spill Coordinator (Operation Supervisor) will determine the need for evacuation. The Evacuation Plan will become effective upon verbal notification by the Oil Spill Coordinator or designated personnel. Evacuation activities will proceed in accordance with routes identified in the site evacuation diagram (Figure II-11). The Area Contingency Plan and the Broward County Emergency Management Plan are references if a wider area than the plant needs to be evacuated.

Location of surrounding features/facilities:

North: Intake Canal and Port Everglades Terminal and Tank Farm.

East: Eisenhower Boulevard and Port Everglades and East Tank Farm

South: Discharge canal and plant switchyard

West: Plant access road

Evacuation Routes:

Evacuation by land can occur on foot or by vehicle (Figure II-11). Re-grouping areas are available along Eisenhower Blvd. in both directions, north or south.

The road that runs adjacent to the site is Eisenhower Boulevard. Most evacuation from this facility will utilize this road. The other evacuation option is to evacuate the terminal facility via the Port Everglades Plant located to the south of the terminal. Access to the west is available through the Port Everglades Plant. Table VI-3 also gives a description of the evacuation plan.

The Florida 11th district Local Emergency Planning Committee (LEPC) is contacted to provide evacuation routes for the nearby community. Table II-3 provides contact information.

Air - In the event that land routes are inaccessible, a helicopter can be dispatched to aid in the evacuation. The closest and most reasonable landing area would be Eisenhower Boulevard. The proximity of the tank farm limits the availability of landing areas to Eisenhower Boulevard or the west side of the plant.

Closest Medical is Broward General Medical Center located at 1600 S. Andrews Avenue in Fort Lauderdale. From the facility continue north on Eisenhower Boulevard to the 17th Street Causeway. Continue west on the 17th Street Causeway. Broward General Medical Center is located at the northeast corner of the SE 17th Street Causeway and Andrews Avenue. The telephone number of Broward General Medical Center is (954) 355-4400.

Emergency response personnel and equipment will approach the site either from the north or south on Eisenhower Boulevard. In the event of an emergency that warrants evacuation, only emergency and rescue vehicles will be allowed on the section of Eisenhower Boulevard in the vicinity of the site.

TABLE VI-3	
EVACUATION PLANS	
TOPIC	**DESCRIPTION**
• **Location of stored materials**	Limited quantities of materials are stored and used onsite. The bulk of the hazardous materials are No. 6 fuel oil, No. 2 fuel oil, Jet A, lubricating oils, diesel, and transformer mineral oils. All other chemicals are used and stored in consumer size quantities. Locations of the fuel oil, oil drums, and transformers are all shown on Figures II-6a, II-6b, II-6c and II-7.
• **Hazard imposed by spilled materials (MSDS)**	Material Safety Data Sheets are maintained onsite. Health hazards associated with fuel oil and lubricants are: • Inhalation, ingestion and skin contact hazard • Combustion hazard (flash points 125°F or above) • Possible cancer hazard (fuel oil No. 2) • Violent reactions with strong oxidizers
• **Spill flow direction**	See Drainage Diagram in Figure II-13 of this plan for predicted directions of spill flow direction. Spills within the plant area will be collected by the plant drainage system. Actual direction is also dependent upon: • Wind • Immediate Area Drainage • Air and Fuel Temperature • Immediate Physical Barriers • Surface characteristics (soil, asphalt, etc.) • Location of release • Condition of release (line pressure, location of break, etc.)
• **Prevailing wind directions and speed**	Call Weather service (see Emergency Notification Phone List) for current conditions.
• **Water currents, tides, or wave conditions (if applicable)**	Port Everglades Plant and Terminal is adjacent to surface waters. Port Everglades is adjacent to the Intracoastal Waterway and has a short entrance channel from the Atlantic Ocean Use www.tides.com to obtain daily tidal information.
• **Arrival route of emergency response personnel and response equipment**	Arrival route of emergency responders will approach the site either from the north or south on Eisenhower Boulevard. In the event of an emergency that warrants evacuation, only emergency and rescue vehicles will be allowed on the section of Eisenhower boulevard in the vicinity of the site.

TABLE VI-3	
EVACUATION PLANS	
TOPIC	**DESCRIPTION**
• **Evacuation routes (see Figure II-11) Alternative routes of evacuation**	By land, the road that runs adjacent to the site is Eisenhower Boulevard. Most evacuation from this facility will utilize this road. The other evacuation option is to evacuate the terminal facility via the Port Everglades Plant located to the south of the terminal. Access to the west is available through the Port Everglades Plant. By water, there are no docking areas in the vicinity of the facility. By air, in the event that a helicopter is utilized for evacuation, the closest and most reasonable landing area would be the designated landing site at the plant. The Area Contingency Plan and the Broward County Emergency Management Plan are references if a wider area than the plant needs to be evacuated. The FL 11th District LEPC is contracted to provide evacuation routes for the nearby community.
• **Transportation of injured personnel to nearest emergency medical facility**	By land, the closest medical facility Is Broward General Medical Center located at 1600 S. Andrews Avenue in Fort Lauderdale. From the facility continue north on Eisenhower Boulevard to the 17th Street Causeway. Continue west on the 17th Street Causeway. Broward General Medical Center is located at the northeast corner of the SE 17th Street Causeway and Andrews Avenue. By air, the personnel are transported in a helicopter.
• **Location of alarm/notification systems**	Handheld two-way FM radios located in the Main Office Area (Plant) and Terminal Building (Terminal). All personnel that leave office area will carry a radio. The operations communication channel used at the plant is Channel 1. The maintenance communication channel used at the plant is Channel 2.
• **Centralized check-in area for roll call**	Check-in station is located at the Administration Building (Plant) and the Terminal Building (Terminal).
• **Mitigation command center location**	The Incident Command Post (ICP) will be at a location away from the Port Everglades Plant and Terminal yet still have a good view of the site.
• **Location of shelter at facility**	Inside the Administration Building (Plant) and the Terminal Building (Terminal).

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

FPL has incorporated various detection and verification measures at its facility. These measures are described below.

- Leak detection is accomplished by personnel surveillance.
- The oil storage tanks consist of a diked area, equipped with oil piping systems. The diked area has runoff collection within the bermed area.
- Operating personnel will visually inspect oil handling systems and equipment using an inspection sheet as the guide on a daily and weekly basis to assure proper operation and integrity and to look for any obvious signs of leaks (piping or tanks).
- Operating personnel read the oil level in the storage tank prior to filling operations. This is accomplished by the use of the visual gauge located on the side of each tank.
- The turbine lube oil system has a low-level alarm. If the alarm activates, an operator will be sent to investigate whether there is an actual leak.
- (b) (7)(F) [redacted]
- Jet A Tanks 901 and 902 have double-bottoms and dike field liners.

If a spill is detected, procedures detailed in the emergency response action plan (Section II) will be followed.

M. SOURCE VERIFICATION

At the tank farm, source verification would be accomplished by determining which tank is involved and the characteristics of the spilled product. Tables II-8 and II-9 clearly identifies the type of petroleum product stored in each tank at the terminal and plant. This table would be used to identify the type of product stored in each tank. Jet A is also transferred into the Lauderdale Plant Pipeline. In general, Jet A is straw in color; No. 2 oil is clear to amber; and No. 6 fuel oil and lube oil are dark in color and mineral oil is light brown in color.

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.

At the dock, source verification would be aided by the fact that only No. 6 fuel oil and Jet A is transferred via the pipeline to the bulk storage tanks. In the event of a spill at the dock, 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-16) can be used to identify appropriate valves to close. The areas of source include: the unloading dock, 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 **OSC/QI,** and proceed to fight the fire with dry chemical extinguishers. In the event of an emergency situation along the pipeline route, the **Plant Operator** would communicate the problem and ensure that all gate valves are closed. The **OSC/QI** would immediately contact the appropriate agency representatives.

Fire protection for the facilities consists primarily of water distributed through a private system of underground yard mains that supply hydrants.

Portable dry chemical fire fighting equipment will be made available on the dock during transfer operations.

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 Everglades Plant and Terminal. These extinguishers are applicable for all flammable liquids and electrical fires. Instructions for use are located on the extinguishers, and in addition, plant personnel have been instructed on the proper use of this equipment.

In an emergency situation, the OSC/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 OSC 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 facility 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 heavy petroleum oil, like #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 #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-5 provides API gravity values for water salinity and temperature conditions that may be encountered at this facility.

Table VI-5 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 it's 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 indicating 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 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-5

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 II0 °
0 PPT	10.10	10.04	10.14	10.28	10.48	10.71	10.94	II.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 waterbody, 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 waterbody 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 waterbody. The current velocity will vary in the horizontal direction (velocity often greater at the center of the waterbody) 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 waterbody. 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 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 waterbody 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

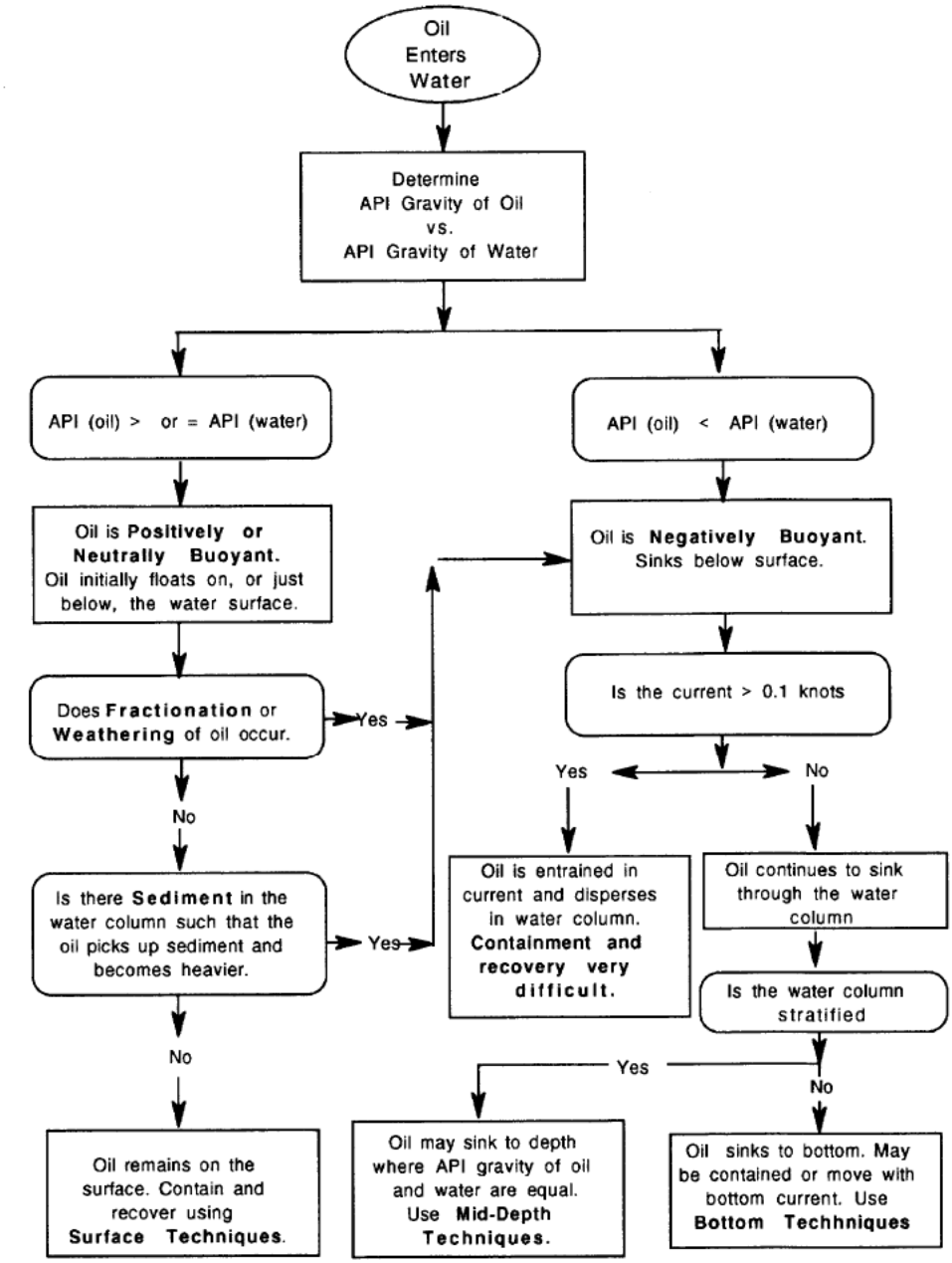
pattern is difficult to predict; it is best detected by direct observation. Once it occurs it will clearly become a complicating factor for further containment and cleanup of the spill.

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 waterbody.

Figure VI-1

Expectation Diagram for Determining the Potential Behavior of



Expected Buoyancy of API Gravity 10 Oil in Water

H_2O Salinity	Temp 40 °	Temp 50 °	Temp 60 °	Temp 70 °	Temp 80 °	Temp 90 °	Temp 100 °	Temp II0 °
0 ppt								
5 ppt								
10 ppt								
15 ppt								
20 ppt								
25 ppt								
30 ppt								
35 ppt								

Key: Floats | Neutral | Sinks

Expected Buoyancy of API Gravity 9 Oil in Water

H_2O Salinity	Temp 40 °	Temp 50 °	Temp 60 °	Temp 70 °	Temp 80 °	Temp 90 °	Temp 100 °	Temp II0 °
0 ppt								
5 ppt								
10 ppt								
15 ppt								
20 ppt								
25 ppt								
30 ppt								
35 ppt								

Key: Floats | Neutral | Sinks

Expected Buoyancy of API Gravity 8 Oil in Water

H_2O Salinity	Temp 40 °	Temp 50 °	Temp 60 °	Temp 70 °	Temp 80 °	Temp 90 °	Temp 100 °	Temp II0 °
0 ppt								
5 ppt								
10 ppt								
15 ppt								
20 ppt								
25 ppt								
30 ppt								
35 ppt								

Key: Floats | Neutral | Sinks

Expected Buoyancy of API Gravity 7 Oil in Water

H_2O Salinity	Temp 40 °	Temp 50 °	Temp 60 °	Temp 70 °	Temp 80 °	Temp 90 °	Temp 100 °	Temp II0 °
0 ppt								
5 ppt								
10 ppt								
15 ppt								
20 ppt								
25 ppt								
30 ppt								
35 ppt								

Key: Floats | Neutral | Sinks

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.

Characterization of Environmental Settings: The identification of environmentally sensitive areas and resources surrounding the facility are identified in Section VII of the plan. In addition the Environmental Sensitivity Map (Figure II-10) list sites which may require protection in the event of a spill. Refer to Section VII for more detailed information.

Response Strategies for Group V Oils

Tables VI-6 and VI-7 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-6 describes various detection techniques while Table VI-7 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 Table II-5C of this plan and the Corporate Plan. Contractor resources are also located in Appendix A of the Corporate Plan.

TABLE VI-6		
DETECTION TECHNIQUES FOR GROUP V OILS		
OIL LOCATION	**DEPTH OF OIL**	**DETECTION TECHNIQUE**
On Surface	0 – 1 meter +/-	• Visual (aircraft) • Photobathymetric Tech.
Near neutral Buoyancy (suspended in water column)	0 – 3 meters +/-	• Visual (diver) • Sonar • Visual (video mapping, remote camera) • Water Column Sampling • In-Situ Detectors
Negative Buoyancy (sinks to bottom)	0 – 1 meter +/- 0 – 3 meters +/- No depth restriction	• Visual (aircraft) • Photobathymetric Tech. • Visual (diver) • Geophysical • Sonar • Side-Scan Sonar • Enhanced Acoustic • Grab Samples • Bottom Trawls • Visual (video mapping, remote camera) • In-Situ Detectors

TABLE VI-7			
CONTAINMENT AND RECOVERY TECHNIQUES FOR GROUP V OILS			
OIL LOCATION	**DEPTH OF OIL**	**RECOVERY TECHNIQUE**	**NOTES**
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.

Group V Oil Response Contractors

The following is a list of Response Contractors, which have been identified as having response capability for Group V oils. A condensed summary of their response capabilities is also provided.

Full Service Contractors with Submersible Pumping Capability

Cliff Berry, Inc, Ft. Lauderdale, FL (800) 899-7745
Full service contractor with associated equipment & personnel including submersible pumping systems.

John E. McCausland, Inc., Jacksonville, FL (904) 358-1975
Emergency response team and submersible pumps.

OHM Corporation, Clermont, FL (904) 394-8601
Emergency response teams, spill clean-up equipment and technology.

Moran Environmental Recovery, Inc., Jacksonville, FL (800) 359-3740
Full service contractor with associated equipment & personnel including submersible pumping systems. Also subcontracts with dredging company.

Southern Waste Services, St. Petersburg, FL (800) 852-8878
Full service contractor with associated equipment & personnel including submersible pumping systems. Transportable oil/water separators.

Diversified Environmental Services, Tampa, FL (813) 248-3256
Full service contractor with associated equipment & personnel including submersible pumping systems.

Oil Mop Inc., Lafayette, LA (318) 237-5300
Full service contractor with integrated approach to Group V oil recovery.

Marine Pollution Control, Detroit, MI (313) 849-2333
Full service contractor with submersible pumping system pre-staged in Tampa.

Thompson Environmental Management Inc., New Orleans, LA (504) 393-7661
Full service contractor, submersible, divers, and FRAC tanks.

Lightering, Storage and Recovery Barges

Coastal Fuels Marketing, Ft. Lauderdale, Fl (954) 525-4261
Tugs and lightering barges.

Maritrans GP Inc., Tampa, FL (813) 247-4595
Tugs and lightering barges.

ST Services, Jacksonville, FL (904) 355-9675
Lightering barges.

Cross State Towing Company, Jacksonville, FL (904) 745-1603
Lightering barges.

Sunstate Marine, Green Cove Springs, FL (904) 264-6582
Lightering barges.

Dredging Equipment

Bull Dredging, Inc., Jacksonville, FL (904) 246-II21
Suction and cutter dredges with related submersible pumping system.

Great Lakes Dredge and Dock Company, Jacksonville, FL (904) 737-2739
Dredges and associated attendant plant.

Hendry Corporation, Tampa, FL (813) 831-12II
Various dredging equipment.

Wood Hopkins Contracting, Jacksonville, FL (904) 353-5521
Various dredging equipment.

Diving Contractors

Continental Shelf & Associates, Jupiter, FL (561) 746-8998
Divers, submersible and vacuum assisted diesel pumps and related components.

Logan Divers, Inc., Jacksonville, FL (904) 731-0000
Submersible pumps and divers.

Sea Spill South, Tampa, FL (800) 732-7745
Divers and submersible pumping systems.

Industrial Divers Corp., Ft. Lauderdale (954) 523-2906

Divers

Coastal Divers and Pollution Control, Savannah, GA (504) 393-7661

Full service contractor, divers, submersible pumping systems & portable tanks.

Detection and Mapping Services

Sea Byte Inc. Tequesta, FL (561) 745-9333

Underwater detection capability, utilizing a combination of underwater video and computer generated mapping (IVMS). Sidescan sonar; Fathometer; and divers.

ARD Corporation, Columbia, MD (410) 997-5600

Robotic – remote identification & removal system.

Arc Surveying & Mapping, Inc., Jacksonville, FL (904) 384-8377

Underwater detection and mapping.

Oceans System International, Tampa, FL (813) 360-1660

Underwater detection capability (Sonar).

Temporary Storage Tanks

Modu Tank, Inc. Long Island City, NY (800) 245-6964

Temporary emergency storage tanks.

Baker Tanks, LaPorte, TX (904) 751-3554

Temporary emergency storage tanks.

Oil/ Water Separator Systems

Petroleum Management, Inc., Davie, FL (954) 581-4455

Oil/water separators.

Hyde Products, Inc., Cleveland, OH (216) 871-4885

Oil/water separators

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SECTION VII: IDENTIFICATION OF ENVIRONMENTALLY SENSITIVE AREAS/RESOURCES

A. INTRODUCTION

The Port Everglades Terminal utilizes Slips 1 and 3 within Port Everglades. Port Everglades has a short entrance channel from the Atlantic Ocean. The two slips are located west of the turning basin in Port Everglades. The slips and port area are almost completely bulkheaded. Water depths within the slips are approximately 35 feet. The Port Everglades Plant receives cooling water through Slip 3 and discharges the cooling water south of the plant into a discharge canal that joins the Intracoastal Waterway (ICW) south of the turning basin.

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

Waterways

The Port Everglades area is predominantly bulkheaded. Most of the shoreline within the port area and in the northern part of the survey area is bulkheaded. Figure III-1 shows the general vicinity around the Port Everglades Plant and Terminal. Figure II-10 is a map of the sensitive habitats around the plant. The most environmentally sensitive areas are south of the port along the Intracoastal Waterway (ICW). Both sides of the ICW contain remnants of a mangrove forest. John U. Lloyd State Park is located along the east side of the ICW and includes the Atlantic Ocean beaches south of the inlet entrance.

In the event of an oil spill that may impact the state park, the **Oil Spill Coordinator** would contact:

Sid Leve at: (954) 923-2834

The port area includes: the Intracoastal Waterway from just north of 17th Street Causeway to the entrance of the Dania Cutoff Canal; and Port Everglades Inlet, the Atlantic Ocean off the port, and the beaches and nearshore areas north and south of the inlet. The most important habitat within the survey area are intertidal areas

located south of the discharge canal and within John U. Lloyd State Park. The remnants of a mangrove forest remains south of the discharge canal, along the western shoreline of the Intracoastal Waterway. The area is cut by tidal creeks; dominant plant species are red and black mangroves (*Rhizophora mangle* and *Avicennia germinans*, respectively). Two important habitat areas exist within John U. Lloyd State Park. One, the existing intertidal habitat and mitigation areas located along the east side of the Intracoastal Waterway. Red and black mangroves are the most abundant plant species in the existing intertidal habitat. The mitigation areas have been scraped down to intertidal elevations and planted with cordgrass (*Spartina alterniflora*) and red mangrove.

The nearshore Atlantic Ocean and beaches exist within the survey area. Nearshore hard bottom areas (i.e., reefs) are found south of the inlet. Dominant epibiota on the rock includes algae, sponges, and hard and soft corals.

Animals which use the survey area include fish, birds, reptiles, and mammals. The inlet functions as an important conduit between the Atlantic Ocean habitats (e.g., nearshore and offshore reefs) and the estuarine habitats, which may, for some species, function as nursery and/or breeding habitat. One such species, the snook, *Centropomus undecimalis*, is listed as a Species of Special Concern (SSC) by the Florida Game and Freshwater Fish Commission (FGFWFC). The Port Everglades Plant intake canal is a collection point for snook and reef fish species.

Conspicuous bird species include floating and diving birds, aerially searching birds, and birds of prey. Floating and diving birds include the Double Crested Cormorant (*Phalacrocorax auritus*) and the Brown Pelican (*Pelecanus occidentalis*) (listed as a SSC by the FGFWFC). Aerially searching birds include the Least Tern (*Sterna antillarum*), listed as Threatened by the FGFWFC and the U.S. Fish and Wildlife Service (USFWS), which may be resting along the sandy beaches or feeding in the nearshore or estuarine waters.

Reptiles which use the area include the loggerhead (*Caretta caretta*) and *green (Chelonia mydas*) sea turtles. These species enter the estuarine areas to forage

and possibly breed. Females nest on sandy beaches between March and August and hatchlings emerge approximately 60 days later (May through November).

Marine mammal species which may be found within the survey area include the West Indian manatee (*Trichechus manatus latirostris*) listed Threatened by the USFWS and FGFWFC. In winter, manatees may concentrate within the cooling water discharge and the mangrove area at the junction of the Intracoastal Waterway and the cooling water discharge.

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. Oil slick movements can be predicted by vector addition of the two main motive forces that apply: surface currents and winds. Surface currents will dominate spill movement unless the winds are extremely strong. In Port Everglades harbor, the surface Currents in the Intracoastal Waterway (ICW) will dominate the direction and speed of the spilled oil, but in the turning basin winds will have some effect on the direction the spilled oil will move. Wind will cause an oil slick to move at about 3.3% of the wind speed, and in the same general direction.

A study of the tides and current activities in the Port Everglades turning basin indicates there are three forces affecting what direction spilled oil on water will travel. The sea current which enters Port Everglades meets with the north/south current from the ICW with such force, on the incoming tide, that it causes a mixed and confused pattern resulting in spilled oil taking the course of least resistance. This accounts for the past federal studies stating that spilled oil normally accumulates in and around piers 4, 5/6, 7, 9, 10/12, 13, 14, 15/18, 19, 20, and 21 on the west side of the turning basin, and impacting the west side of the turning basin from the Ft. Lauderdale Coast Guard Station to and past John Lloyd State Park shorelines. Also impacted would be the west side of the channel (ICW) south to Dania Cut-Off Canal.

History supports existing conditions and confirms the location of the Port Everglades boom and recovery sites. To the north, on an incoming tide, spilled oil would impact Pier 66 and the area around the Marina Inn. The surface current in the center of the

channel at the 17th street bridge reaches as high as 2.6 knots, but this same surface current is reduced on either side of the center current.

Oil will always take the course of least resistance, such that the spilled oil would slide off the main surface current direction, and take a course toward the sides of the channel or turning basin. Once spilled oil moves out of the turning basin, forced by the direction of the wind and sea currents, it will travel in the ICW, sliding off to either side and impact shorelines unless they are boomed properly. In the area east of the Lauderdale Yacht Club the surface currents again merge as two channels meet causing a stagnated area near the eastern shoreline. Spilled oil would have the tendency to move slowly after it reaches this point, and begin to slide off to the side as the surface currents continue to increase in either direction.

The tidal differences between the turning basin area and the southern approaches to the ICW, would cause spilled oil to travel south on the ICW on an incoming tide. Areas that would be affected are:

- Nova University Basin
- The Coast Guard Station
- The Mitigation area along The John U. Lloyd State Park
- Piers 18,19, 20, and 21

Since there are highly sensitive areas in and along the southern ICW such as mangroves and seasonal breeding grounds, oil boom and recovery sites have been defined to protect these sensitive areas and divert the spilled oil to more suitable recovery points.

Figure II-15 indicates possible oil slick trajectories at the end of one, four, eight, twelve, and twenty-four hours assuming various wind directions, a wind speed of 10 mph, and an outgoing tide. In the event of a worst case spill at the Port Everglades Plant and Terminal, Figures II-14 A-F provide booming strategies to collect and recover oil and also protect sensitive resources that may be in the path of the oil. 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 form 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

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

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-1 presents techniques that could be utilized to protect wildlife that may be threatened by an oil spill incident.

TABLE VII-1

WILDLIFE PROTECTION TECHNIQUES

TECHNIQUE	DESCRIPTION
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 unaffected and to rescue affected wildlife. The following agencies can be contacted for assistance:

Tri-State Bird Rescue

800-710-0695 or 800-710-0696

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 Everglades Plant and Terminal, FPL personnel would assist in responding to the incident, as appropriate.

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 Everglades Plant and Terminal. The worst case spill incident is based upon the contents of the 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 Everglades Plant and Terminal, additional scenarios for this plant 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

Other scenarios addressed in 40 CFR 112 APP F 1.5.1.1 that do not apply to the Port Everglades Plant and Terminal:

- 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 downgradient 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 at Unloading Area

Incident Description

A vessel was unloading Jet-A fuel at 0700 on 21 July 1992 when the loading hose ruptured. The Dock Operator immediately notified the Terminal Operator to shut down the pumps and close the appropriate shore valves. The incident resulted in the release of less than 5 barrels (210 gallons). The fuel sprayed onto the dock. Some of the fuel remains on the dock; however, the larger percentage goes into the water around the dock. All of the fuel is contained within the area between the vessel and the dock. This area was enclosed by booms prior to unloading.

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 ranges from 85° F to 93° F; water temperatures are approximately 85° F. The tide is flooding at approximately 0.25 feet per second (low tide was at 0602; the next high tide is at 1217).

Response Actions

TIME	EVENT
0703	The Terminal Operator, Dock Operator, and vessel crew ensures that all valves are closed and flow of fuel has stopped. An assessment is made that approximately 3 to 4 barrels (126 to 168 gallons) of fuel is in the water. Assistance is required for cleanup. All of the fuel is trapped by the containment boom placed between the vessel and the dock prior to transfer.
0705	The Oil Spill Coordinator makes the necessary internal contacts to ensure that sufficient backup terminal personnel are available for response. The Oil Spill Coordinator contacts the Port Everglades Qualified Individual (QI); the response contractor (SWS); and the necessary external contacts (National Response Center, Coast Guard, Broward County, Port Authority, and FDEP). The QI gives the Oil Spill Coordinator full responsibility to cleanup the spill.
0715	The Dock Operator with the assistance of the vessel crew is able to place additional boom between the vessel and the dock to further enclose the oil in that area.
0730	Additional terminal personnel begin to arrive with available terminal recovery and cleanup equipment. Oiled cleanup equipment is temporarily stored in bags and drums for eventual removal.
0800	Terminal personnel begin cleanup using available sweeps, snares, and absorbent boom. Response contractor arrives to assist in cleanup and removal of the oiled equipment and debris. The FDEP Marine Patrol personnel arrive to inspect the site.
1030	The dock area has been cleaned and transfer operations resumed using an available hose assembly.
1200	The Oil Spill Coordinator has remained in contact with the Florida Power & Light Company; one representative of the team arrives to observe the final stages of site remediation.

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 COSRT 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. There are no down gradient wells or drinking water intakes that will be affected. 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 at the barge unloading area would not make a rupture of the tank, or other oil storage areas more likely.

C. LEVEL II SPILL SCENARIO

Incident at Unloading Area

At 1000 hours on 12 October 1992, a vessel is unloading Jet-A fuel at the Port Everglades Terminal 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 and the Dock Operator have stepped away from the pumping operations and almost 3 minutes pass before the operator is alerted and operations are shutdown. Approximately 750 barrels (31,500 gallons) of Jet-A fuel is spilled onto the dock and into the water.

Environmental Conditions

As has been described, the winds are strong (35 miles per hour, gusting to 45 miles per hour) out of the north. 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 outgoing - low tide is at 1452 hours. The next high tide is at 2043 hours.

Response Actions

TIME	EVENT
1015	The Dock Operator, Terminal Operator, and Vessel Operator effect a shutdown of fuel unloading operations and all valves. An initial assessment is immediately conducted. The Dock Operator informs the Oil Spill Coordinator of the situation indicating that a large quantity of fuel has entered the water.
1020	The Oil Spill Coordinator makes the necessary internal contacts to ensure that sufficient terminal personnel are available for response. Available personnel also contact the El Paso Qualified Individual (QI); the spill contractor (SWS.); and the necessary external contacts (National Response Center, Coast Guard, Broward County, Port Authority, and FDEP Bureau of Emergency Response). The Port Authority and the Broward County Sheriff's Department and FWCC are called to assist in securing the site during response and cleanup operations. Terminal personnel with the assistance of vessel personnel launch a boat and deploy the available boom around the entire barge (see Level II booming strategy). Much of the fuel is trapped in the area between the barges and the shoreline which was boomed prior to unloading. Some of the fuel has escaped the booming and is moving toward the entrance to the port. Movement of the fuel is slow because the north wind is keeping the fuel along the southern shoreline impeding flow of the fuel with the tide (see trajectories).
1045	A team from the response contractor arrives to assist in the initial response. Additional terminal personnel and the response contractor assist in the deployment of available boom

TIME	EVENT
	east of the offloading dock (see Level III entrapment booming) in order to trap the fuel along the shoreline for recovery.
1100	Terminal and response contractor personnel begin cleanup of the shoreline using the equipment available at the terminal and brought by the response contractor including skimmers, pumps and tanks, sweeps, snares, absorbents, and absorbent boom. The Oil Spill Coordinator coordinates with the wildlife recovery and cleaning firm and with the resource agencies to ensure that oiled seabirds and shorebirds will be properly handled.
1215	Additional response contractor personnel arrive with additional equipment and assist in shoreline cleanup using available skimmers, inflatable tanks, and absorbents.
1400	Federal, State, local, and Florida Power & Light representatives arrive and are briefed on the current situation. The fuel has been contained and recovery is progressing. A press release is prepared by El Paso for the local media. Approximately 30,000 gallons of Jet-A fuel was spilled at the facility. All of the fuel has been contained along the shoreline within the Port area. Recovery is progressing well.
1430	The response contractor and available terminal personnel continue the shoreline cleanup using vacuum trucks, skimmers, and absorbents. Product from skimming, separating, etc. is stored in onsite temporary storage tanks and frac tanks. Waste is stored at a temporary site for removal and disposal by an approved waste hauler. Federal, State, and local regulators monitor the situation meeting with the Oil Spill Coordinator, representatives of the cleanup contractor, and the Port Everglades QI.

Shoreline remediation continues for 3 days following the initial response. Surveillance and oversight by the Port Everglades QI and the Oil Spill Coordinator 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. There are no downgradient wells or drinking water intakes that will be affected. Containment booms are used to protect environmental sensitive areas as discussed in Section VII.

Fuel transfer operations resumed at the terminal two days after the spill.

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

Oil transfer operations resumed at the plant three days after the spill. The facility is able to resume offloading from barges to the tanks.

D. LEVEL III SPILL SCENARIO

Incident Description

At 0400 hours on 25 August 1992, the Port Everglades 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 the Port area was 10 to 12 feet above sea level. The Port area and all terminal personnel are evacuated prior to the arrival of the storm.

Personnel inspect the site at approximately 0700 hours. The roads around the facility are covered by debris and nearly impassable. Damage to the terminal facility is extensive; the terminal building was completely flooded and flying debris pierced the (b) (7)(F) area. The nearly 14 inches of rainfall, water from storm surge, and the fuel have filled and overflowed the containment area. The fuel/water mixture from the containment area is flowing overland directly into the power plant discharge canal. The total release of fuel is estimated at approximately 20,000 barrels (840,000 gallons).

Environmental Conditions

The hurricane passes within a matter of hours traveling from east inland toward the west. 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 a 0945; low tide is at 1611.

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 QI and the Oil Spill Response Coordinator to implement the Incident Command System (ICS). The QI; Terminal personnel; the spill contractor, SWS.; and Florida Power & Light Company are familiar with ICS and utilize this system in emergency management. A general time line of events based on the initiation of ICS is described below.

TIME	EVENT
Day 1	**Initial Assessment** - The Oil Spill Coordinator is able to survey the site to make an initial

TIME	EVENT
0700	assessment. The secondary containment area is filled with an fuel/water mixture. Release of fuel from this area is continuing through low points in the containment dike. Windblown fuel covers the area surrounding the tanks. Oil and water has and is flowing overland into the discharge canal of the power plant.
Day 1 0715	**Required Notifications** - All required external notifications (National Response Center, Coast Guard, FDEP, Broward County, and Port Authority) are made. The Oil Spill Coordinator makes all of the necessary internal notifications to mobilize available terminal personnel, the Qualified Individual (QI), and the oil spill contractor. The Oil Spill Coordinator also contacts the Port Safety Department and Broward County Sheriff's Department to assist in traffic control during the initial response effort.
Day 1 0730	The QI immediately begins to mobilize to the area. Based on the information from the initial assessment, the spill contractor mobilizes pre-staged response equipment to the site. The QI begins to arrange for a helicopter for site surveillance, and arrange for site security.
Day 1 0800	**Initial Response** - Additional terminal personnel and spill contractor personnel begin to arrive. They are assigned the tasks of checking and inventorying available response equipment and general facility equipment. Further releases from the containment area are prevented by filling and plugging areas of the dike. Overland flows of oily water are diked and prevented from entering the discharge canal. Available boom is deployed in areas where fuel is flowing from the site into surface waters in order to contain any fuel that may continue to be released from the site.
Day 1 1100	**Response Initiation Phase - Detailed Assessments** – The QI arrives at the site. The command center is initially established in the Port administration building until trailers can be brought to the site. The QI and spill contractor begin detailed assessments of the spill site. The spill contractor provides personnel to meet the helicopter and begin an overflight of the area. The fuel has spread into the Intracoastal Waterway. Containment activities continue with the available personnel. Diversion booming is used along the south shoreline of the Port (see Level III booming strategy) to prevent fuel from leaving the Port and begin to collect the fuel at collection points along the south shoreline.
Day 1 1400	**General Plan Development Phase - Initial Incident Briefing Meeting** The Incident Commander calls a meeting of the Command Staff after the detailed assessments are performed. He is appraised of the status of the spill through detailed assessment reports. The cleanup priorities are: • ensure the safety of personnel at the site; • attempt to contain the fuel within the Port area and begin cleanup of fuel; • protect environmentally and socially sensitive areas, e.g., the marinas; • begin to cleanup the fuel on the site grounds; • begin to cleanup fuel and water within the secondary containment area; • repair the tank; and • keep the public informed. The following immediate response priorities are identified. • All personnel are to receive safety briefing and be issued appropriate safety equipment.
Day 1	**Initial Tactical Operations Planning Meeting** 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

TIME	EVENT
	period. • A minimum of 10,000 feet of boom is required to boom marinas and to begin to contain fuel for recovery. Associated anchors, chain, lines, etc. are required. Five thousand feet of absorbent boom, miscellaneous absorbents, sweeps, etc. are also required. • A minimum of four vessels are required to assist in boom deployment in these areas. • Skimmers are required to be used from the shoreline and boats/barges. • Communications equipment is required for each vessel and base station • The helicopter is required for continued surveillance. • Five vacuum trucks. Approximately 40 contract personnel are required for the nearshore/onshore activities. All personnel must have required HAZWOPER training.
Day 1	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: • continued high capacity recovery; • minimizing the amount of fuel that leaves the Port; • trajectory analysis for the spill, if necessary; • recovered oil storage; • continued containment and recovery along shoreline areas; • shoreline cleanup assessments; • support infrastructure (e.g., food, lodging, water, sanitation facilities, transportation, etc.) • wildlife hazing, capture, and rehabilitation; • waste handling and disposal; • vessel/equipment cleaning; • Natural Resource Damage Assessment surveys; • eventual site restoration; • eventual demobilization.
Day 1	The planning Section Chief compiles the information from the Initial Tactical Operations 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.
Day 2	**Initial Planning Meeting** - 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. Some fuel has moved out of the Port with the first outgoing tide because of the large volume of water that exited the Port during that tidal cycle. Diversion booming is required along the beaches south of the Port to contain the fuel as it moves southward along the shore. Some of the fuel has moved offshore. A contracted firm capable of offshore containment and cleanup is contacted. Fuel has been contained within the discharge canal and the east and west turning basins; recovery and cleanup has begun. A number of plans are identified that need to be prepared including: • a communications plan; • a medical plan; • a waste disposal plan;

TIME	EVENT
	• a containment area cleanup plan; and • a nearshore area cleanup plan. 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.
Day 2	**Initial Incident Briefing Meeting** - The Command Staff are briefed on the Initial Planning Meeting and the Initial Incident Action Plan.
Day 2	**Plan Implementation Phase** - The field personnel conduct the response operations in accordance to 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.
Day 2	**Command Staff Meeting** - 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: • wildlife capture and rehabilitation; • sensitive area protection and cleanup; • availability of additional equipment and personnel; and • continued trajectory modeling.
Day 2	**Unified Command Meeting** - A meeting is held with representatives of the federal state, and local agencies and representatives of FPL and the spill contractor 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. Federal, State, and local agencies express a concern toward capture, cleanup, and rehabilitation of wildlife, primarily birds. 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.
Day 2	**Tactical Operations Planning Meeting** - 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 shorelines 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 the discharge canal, the Port area, along the beaches south of the Port, offshore, and at the facility site. Within these areas, additional personnel, boom (and associated line and anchors), boats, and cleanup equipment are required to protect sensitive areas and force the fuel into collection areas for recovery and cleanup. At the facility site, the containment area needs to be drained so that site remediation can begin. 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.

TIME	EVENT
Day 2	**Planning Meeting** - 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. The Operations Section Chief reports that surveillance continues to indicate that the fuel has been contained within areas of the Port and along the shoreline south of the Port. Containment and recovery is proceeding offshore. 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 at the recreational facility on the plant site. The state and environmental section personnel are working with volunteers to clean captured birds. 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.
Day 3	**Briefing Meeting** - 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. 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 near the Port. The security firm has arrived to replace the sheriff's department in security duties. Handling oil debris and fluid is a problem. A temporary staging area for oil debris is being designed and constructed within the Port. The Environmental Section Chief reports that the agencies are sending personnel to view aspects of the response and cleanup. The Shoreline Assessments Teams (SCAT) are evaluating oiled shorelines. The Natural Resource Damage Assessment (NRDA) contractor has been contacted. 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.

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. Facility site remediation and cleanup continues for approximately four months. The facility is fully operational within 21 days.

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 COSRT.

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 plant 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 stormwater 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 Everglades Plant and 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 9,462 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			
WASTE OIL STORAGE CAPACITY			
TANK LOCATION	**TANK NUMBER**	**TANK CAPACITY (BARRELS)**	**TOTAL CAPACITY OVERFLOW POINT (BARRELS)**
Putnam Plant	D	(b) (7)(F)	(b) (7)(F)
Putnam Plant	F		
Martin Terminal	Purge Oil		
		TOTAL QUANTITY (BARRELS)	

TABLE IX-3			
FPL/VENDOR TANK TRUCK CAPACITY			
LOCATION/FPL DEPARTMENT	**NUMBER**	**VOLUME/TRUCK (GALLONS)**	**TOTAL VOLUME (GALLONS)**
* Transmission/substations	51	(b) (7)(F)	
* Transmission/substations	2		
Distribution West Palm	2		
Distribution Miami	3		
TOTAL	88		

* Trucks located within FPL's service territory.

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
Atlantic Industrial Services Environmental	(954)689-3730	Bulk Trailers Vacuum Trucks Dump Trucks		X	X
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	
CEMEX (Miami)	(800) 226-7647	DumpTruck			X
FCC Environmental	(800) 282-9585	Bail Trailers Vacuum Trucks Dump Trucks		X	X
SWS	(866) 797 3447	Vacuum Trucks Tanker Trucks Dump 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**
C. A. Myers Paving and Construction P.O. Box 55727 Orlando, FL 32855	(407) 877-3609	Thermal Destruction	No	No	No
CEMEX 1200 N.W. 137th Ave. Miami, FL 33182	(305) 334-5532 (800) 226-7647	Thermal Destruction	Yes	Yes	Yes
Clark Environmental Mulberry, FL	(800) 276-2187	Thermal Destruction	Yes	Yes	Yes
Waste Management, Inc. (Chambers) Okeechobee, FL	(863) 763-4818	Non Haz Landfill	Yes	No	Yes
Veolia Environmental Services Creedmore, NC	(919) 528-6111	Hazardous Waste Disposal			
Clean Harbors Bartow, FL	(863) 533-6111	Hazardous Waste Disposal	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.)

Cleanup 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.

TABLE IX-6
GENERIC ANALYTICAL REQUIREMENTS FOR DISPOSAL
WASTE OILS-WASTE FUELS
1. 601 2. 602 3. 8 RCRA Metals Totals (Arsenic, Barium, Cadmium, Chromium, Lead, 4. Mercury, Selenium, Silver). 5. Total Halogens 6. Percent Water (%) 7. Flash Point (^{o}F) 8. Percent Solids (%)
OILY WASTE WATERS
1. 601 2. 602 3. RCRA Metals (Total) 4. Arsenic, Barium, Cadmium, Chromium, Lead, Mercury, Silver, Selenium. 5. Total Chlorides 6. Total Organic Carbon (TOC) 7. Percent Solids(%)
CONTAMINATED SOILS/SLUDGES
1. VOH (Volatile Organic Halocarbons) – 8010 2. VOA (Volatile Organic Aromatics) – 8020 3. TRPH (Total Recoverable Petroleum Hydrocarbons) – 9073 4. Total Metals (Arsenic, Barium, Cadmium, Chromium, Lead, Mercury, Selenium, Silver) 5. Total Organic Halides - 9056, 9252, 9253 6. Soils contaminated with used oil, hydraulic oil, or mineral oil shall be analyzed for PCB by EPA methods. 7. Percent Solids (%)

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 Everglades Plant and 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 plant.

- 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.

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SECTION X: DISCHARGE PREVENTION MEASURES

A. SPCC PLAN COMPONENTS

This section addresses the Spill Prevention, Control and Countermeasure (SPCC) plan components for the Port Everglades Plant and Terminal. 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 transfer operations;
- Discharge Potential;
- Discharge prevention measures;
- Other effective discharge prevention & containment procedures;
- Facility Drainage;
- Discharge reports;
- 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 preformed at the Port Everglades Plant and Terminal to assess the requirements of the revised SPCC rule as published on July 17, 2002 with the plant'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
Install permanent hard boom in Intake and Discharge Canal	December 2012
Spare GSU Transformer X52 to be removed from site	March 2012
Provide location, contents and containment for X54, X55, and X56	Complete
Replace Port Everglades Terminal Gunnite Dike	Complete
Extend curbing around FD Fan area	Complete
Extend containment wall for Metering tanks 1 & 2, Metering tanks 3 & 4, and Tank 903 & 904	Complete
Replace and increase curbing around Gas Turbine Power Park (GTPP)	Complete
Install new Oil Water Separator	Complete
Added HDPE Liner at the earthen secondary containment for Fuel Oil Storage Tanks 901 and 902. Also raised the berm to increase secondary containment volume and added an oil/water separator to treat the stormwater effluent from the lined area.	Complete
Added a concrete secondary containment wall for the above ground fuel oil piping outside the northeast corner of the secondary containment berm for Fuel Oil Storage Tanks 901and 902.	Complete
Increased the secondary containment volume by raising the concrete curbing for the storage tank at oil trap OT-3.	Complete
Added new containment curbing at the 12 Gas Turbines (GTs), and also added double wall for the above ground fuel oil piping outside the new containment curbing at the 12 GTs.	Complete
Increased secondary containment volume by raising the concrete curbing at the 3 GT Transformers.	Complete
Added double wall for the No. 6 Fuel Oil piping in trench north of the Unit 3 and 4 Metering Tanks	Complete
Added double wall for the light oil piping that crosses over the intake canal.	Complete
Add double wall to the No. 6 fuel oil piping between the terminal and the metering tanks for Units 1 and 2.	Complete
Add double wall to the No. 6 fuel oil piping that has not previously been double walled between the terminal and metering tanks for Units 3 and 4.	Complete
Add secondary containment for the existing pad mount transformer north of Fuel Oil Tanks 901 and 902.	Complete
Replace Oil Water Separator located south of the Unit 3 and 4 metering tanks secondary containment wall.	Complete
Add secondary containment for the padmount distribution transformer located south of the main service building (x51)	Complete
Add secondary containment for the padmount distribution transformer located north of the gas turbine service building (x49)	Complete

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

There are four (4) fuel oil metering tanks containing No. 6 fuel oil, two (2) storage tanks containing Jet A, two (2) storage tanks containing Jet A or No. 2 Fuel Oil, and seven (7) equipment tanks containing lube oil at the Port Everglades Plant. There are eight (8) storage tanks containing No. 6 fuel oil and two (2) slop oil/waste water storage tanks at the Port Everglades Terminal, all of which are aboveground. They were engineered solely for the purpose of storing oil and constructed with materials compatible with oil. Table II-8 includes a list of these tanks, their capacities, the type of oil stored in each, and a description of the secondary containment structure surrounding each tank.

Tanks 901 and 902 have overfill protection installed which consists of a mechanical float style high (i.e., a Varec gauge) and high-high level alarm system. (Note: Tank 901 and 902 are the only light oil tanks that can receive a direct transfer from the barge dock). These alarm systems are also connected to red lights at the pump house in the 901/902 tank farm. Additionally a strobe light will go off with any type of alarm. Each tank also has an independent tank product level measurement indictor, which provides a continual digital readout in the 800's Tank Farm's Terminal building. The storage tank alarms are tested on a semiannual basis. The maximum fill, high level, high-high level, and overflow point are provided below for each tank.

Tanks 903 and 904 have overfill protection installed which consists of a mechanical float style high level alarm system. This alarm system is also connected to an enunciator yellow light at the Gas Turbine Unit 1 Control Room for Tank 903 and Gas Turbine Unit 2 Control Room for Tank 904. Each tank also has an independent tank product level measurement indictor, which

provides a continual digital readout in the Control Room. The storage tank alarms are tested on a semiannual basis. The maximum fill, high level, high-high level and overflow point are provided, below for each tank.

Storage Tank Fill & Alarm Levels	Maximum Fill	High Level Alarm	High-High Level Alarm	Overflow
PORT EVERGLADES PLANT				
Tank M1 Levels (Feet & Inches)	48'-0"	50'-0"	NA	54'-0"
Tank M2 Levels (Feet & Inches)	48'-0"	50'-0"	NA	54'-0"
Tank M3 Levels (Feet & Inches)	61'-10"	63'-1"	NA	67'-6"
Tank M4 Levels (Feet & Inches)	61'-11"	62'-4"	NA	67'-6"
Tank 901 Levels (Feet & Inches)	35'-3"	35-6 ¾"	35'-7 ½"	39'-6 ½"
Tank 902 Levels (Feet & Inches)	35'-2"	35-5 ¾"	35'-6 ½"	39'-6 ½"
Tank 903 Levels (Feet & Inches)	37'-0"	37'-1"	N/A	37'-10"
Tank 904 Levels (Feet & Inches)	37'-0"	37'-1"	N/A	37'-10"
PORT EVERGLADES TERMINAL				
Tank 800 Levels (Feet & Inches)	38'-2"	38'-6"	38'-10"	No overflow – shell height is 40'.
Tank 801 Levels (Feet & Inches)	54'-0"	54'-0"	54'-6"	No overflow – shell height is 56'.
Tank 802 Levels (Feet & Inches)	54'-0"	54'-0"	54'-6"	No overflow – shell height is 56'.
Tank 804 Levels (Feet & Inches)	39'-6"	39'-6"	40'-0"	No overflow – shell height is 43'.
Tank 805 Levels (Feet & Inches)	39'-6"	39'-6"	40'-0"	No overflow – shell height is 43'.
Tank 806 Levels	39'-6"	39'-6"	40'-0"	No overflow –

(Feet & Inches)				shell height is 43'.
Tank 807 Levels (Feet & Inches)	42'-6"	43'-0"	43'-0"	44'-7"
Tank 808 Levels (Feet & Inches)	42'-6"	43'-0"	43'-0"	44'-11"

Non-Bulk Storage Containers

At the Port Everglades Plant, there is bulk lube oil storage of multiple 55-gallon lube oil drums. The four locations are indicated on Figure II-6b.

The plant also contains numerous non-bulk storage containers including large and small transformers, cathodic protection rectifiers, turbine lube oil systems, hydrogen seal oil systems, and hydraulic pressure units. These operating systems either use mineral oil, lube oil, or hydraulic oil in their units. Table II-8 provides a listing of all non-bulk storage containers and their contents and capacities, while Figures II-6a, II-6b, II-6c and II-7 provide the location of these non-bulk storage containers.

Throughput Analysis

The plant'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 average daily throughput of the petroleum products contained onsite is provided below:

PETROLEUM PRODUCT	DAILY THROUGHPUT (GAL)
No. 6 Fuel Oil	600,000
Jet A/ No. 2 Fuel Oil	2,000

D. FACILITY LOADING & UNLOADING & FACILITY TRANSFER OPERATIONS

Vessel/Pipeline Transfer Operations

No. 2 fuel oil is delivered by pipeline from one of the many terminals in Port Everglades while bulk deliveries of No. 6 fuel oil and Jet A fuel is delivered via ocean-going tankers or barges which moor to one of several unloading facilities within Port Everglades. Using the ship's unloading pumps, the oil is pumped into the North Tank Farm or East Tank Farm depending on the product being transferred. The FPL Port Everglades Fuel Oil Terminal operates the north tank farm, which is shown in Figure II-6a.

The location of the tanker unloading facilities and the fuel oil transfer pipelines are also shown in Figure II-6a. Fuel oil is transferred from the terminal to the plant as needed. The pipelines between the North Tank Farm and the plant and the East Tank Farm are mostly aboveground, and the transfer pumps are in concrete pits.

Transfer pipelines in contact with the soil are provided with cathodic protection and aboveground pipelines are supported with pipeline fixtures designed to minimize abrasion and corrosion.

Tank Truck Unloading Operations

The tank truck loading procedures at the Port Everglades Plant meets the minimum requirements and regulations established by the Department of Transportation (DOT). Oil transfer operations occur through aboveground unloading hoses. The hoses are supported and designed to minimize abrasion during transfer operations.

Mineral oil is the only petroleum products transferred by tank truck at the facility. Mineral oil is infrequently pumped into or out of the plant's transformers using trucks of approximately 5,600 gallons.

Lube oil and lubricants are also delivered to the plant in sealed drums or containers by truck. The oil drums are stored in a special designated paved and curbed area shown in Figure II-6a and II-6b.

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 Everglades Plant and Terminal 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 plant 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 plant 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 – Port Everglades Plant

A lined earthen berm secondary containment system surrounds tanks 901 and 902. Additionally, three separate concrete containment systems surround the plants' metering tanks, and gas turbine tanks (Tanks 903 and 904). Additionally, an aboveground oil water separator is used to drain any oily wastewater from the metering tank containment area. Figure II-12b indicates the location of these containment areas. These containment systems are sufficiently impervious to the types of oil being stored in the respective tanks.

Containment Structures – Port Everglades Terminal

An earthen berm secondary containment system surrounds these eight (8) No. 6 oil storage tanks. The containment system is constructed of compacted soils and is sufficiently impervious to contain a spill of No. 6 fuel oil due to the high viscosity of this product and FPL's rapid response capabilities. The two slop oil/waste water tanks have their own individual concrete secondary containment system.

Transformer Containment Structures

At both the Port Everglades Plant and Terminal, main transformers are provided with rock-filled containment, which is located directly beneath the units, while substation electrical equipment is surrounded by a minimum of a 3-inch gravel bed. Both systems are designed to contain potential releases or rainwater to reduce the potential shock hazard associated with holding rainwater around electrical equipment. These containment system/beds can hold the entire contents of a transformer plus rainwater, further reducing the probability that a release would reach navigable waters. FPL has determined that the installation of additional containment around this equipment is not practicable due to the potential electrical hazards associated with holding storm water around electrical equipment.

Non-Bulk Storage Containers

For non-bulk storage containers such as the plant's hydraulic systems and turbine lube oil system, concrete curbing is provided around these units. There are also plant drains within the curbed areas, which would channel any leakage

of oil to the plant's stormwater collection system. This system provides more than adequate containment for any of the oil storage containers on site (i.e., system provides more than 110% capacity of any single oil storage unit). These containment systems are also sufficiently impervious to contain a release of oil. For other non-bulk storage containers such as oil-filled electrical equipment, two systems have been installed to contain potential discharges. The plant and gas turbine main transformers are provided with concrete curbing and rock-filled containment, which is located directly beneath the units and which is designed to contain potential releases or rainwater to reduce the potential shock hazard associated with holding rainwater around electrical equipment. These containment system/beds can hold the entire contents of a transformer plus rainwater, further reducing the probability that a release would reach navigable waters. The plant's gas turbine power park (GTPP) is enclosed by additional concrete curbing therefore any oily water from the GTPP will be retained from reaching navigable waters.

The plant site also has a switchyard, which contains oil-filled electrical equipment. This facility is provided with a concrete curb and 3-inch gravel bed beneath the units. This gravel-based system provides for a significant amount of containment capacity for oil that may be released, further reducing the probability that a release would move off-site or reach navigable waters. Additionally, FPL has oil spill containment equipment on-site that could be quickly deployed to contain and remove any discharge. A listing of available equipment is provided in the facility response plan.

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 significantly reduced 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, 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.

TABLE X-1

LISTING OF BULK OIL STORAGE TANKS, TANK TRUCK UNLOADING STATIONS & CONTAINMENT CAPACITIES

Bulk Storage Container (location)	Type of Oil	Volume of Container (gals)	Capacity of Secondary Containment (gals)	Description of Containment
Tanks 901 and 902 (Plant)	Jet A	(b) (7)(F) [redacted]		Lined Earthen Berm
Tanks 903 and 904 (Plant)	Jet A or Fuel No. 2			Concrete wall plus additional metal plate
Tanks 800, 801, 802, 804, 805, 806, 807 and 808 (Terminal)	Fuel No. 6			Earth/Gunite Dike
Units 1 and 2 Metering Tanks & Light Oil Storage (Plant)	Fuel No. 6			Concrete wall plus additional metal plate
Units 3 and 4 Metering Tanks (Plant)	Fuel No. 6			Concrete wall plus additional metal plate

F. DISCHARGE PREVENTION MEASURES

The Port Everglades Plant and Terminal 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 plant. These prevention measures are summarized below:

- A secondary containment has been constructed around all of the bulk storage tanks at the plant and terminal. The containment structures are capable of containing the full capacity of the largest tank with allowance for rainwater. The containment structures at the plant are sufficiently impervious to oil. Rainwater that collects inside the secondary containment for Tanks 901 and 902 (East Tank Farm) is pumped through an oil-water separator, and then into the discharge canal (via IWW permit allowance). At the Terminal (North Tank Farm), rainwater either evaporates or percolates into the ground inside the diked area or is pumped to the intake canal after visual inspection for oil. Additional curbing around gas turbine power park (GTPP) provides an additional barrier from any oily water/waste entering navigable waters.

- Curbing has been constructed around the unloading dock. Drains can be closed using available containment equipment in case of a spill.
- High liquid level pump cutoff device installed on the fuel oil metering tanks. Overflow protection is provided by means of an automatic shutdown when the level in either storage tank reaches the high-high level for tanks at the plant.
- At the terminal, each storage tank is equipped with a mechanical level indicator. At the plant, overflow protection has been provided for the largest tanks. High liquid level alarms are on tanks 903 and 904, which will sound in the control center to alert operations personnel when the fuel oil reaches a predetermined level, also red light flashes in terminal office and north tank farm for the terminal tanks.
- These alarms are tested annually by exercising the mechanical float switch to verify the alarm sounds in the control center. High level alarms and pump cutoff devices on the fuel oil day tanks are checked monthly, using the plant procedure titled “Monthly Alarm Checks – Boiler”.
- Transfer lines have been equipped with closure valves. At the plant, overflow protection is provided by means of a "pie pan" in the overflow pipe which will trip if any oil is overflowed. 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 which will in turn stop the pump.
- At the terminal, piping from the docks is all below ground until entering the terminal dikes. These lines are hydrostatically tested

once each year per USCG requirements to 150 psi. Piping is cathodically protected.

- All aboveground piping at the plant has been coated with corrosion resistant paint. The plant uses underground piping only where necessary to penetrate the diked area around the fuel oil storage tanks and these pipes have also been coated with corrosion resistant paint to minimize abrasion and corrosion
- Electrical switchyard transformers are monitored by supervisory low-level oil alarms that notify Plant employees if a problem occurs. In these types of events, a response person is dispatched immediately.
- Switchyards are constructed with compacted lime rock sub-base with 3 inches of gravel having 40 percent porosity, which is designed to contain rainwater and reduce the potential shock hazard associated with electrical equipment. These beds provide a significant amount of containment capacity for oil that may be released, further reducing the probability that a release would reach navigable waters.
- At the plant, tank trucks are inspected prior to unloading and after receipt. Strict unloading procedures are followed during oil transfer operations. These procedures are described in the Tank Truck Unloading Operations section above. The compacted lime rock base and/or a portable truck containment system or wastewater collection system provides containment for tank trucks unloading operations.
- Specific supplies of oil spill response equipment have been selected, purchased, and stored at the Port Everglades Plant and Terminal for immediate use.
- Installation of double bottoms on field-erected light oil storage tanks and Jet A tanks. Fuel Oil Storage Tanks 901, 902, 903, and 904 have double bottoms with an interstitial monitoring system to detect any leakage into the space between the two bottoms. Valves are located around the perimeter of the tanks and are periodically opened to check for leaks. Once a month, these tanks are checked for the presence of any fuel in the interstitial space by opening the valves.
- Curbing around FD fan Units 3&4 shall provide a barrier to oil flowing outside the power block. Area enclosed by curbing shall be regularly inspected for any oil leakage. In case of an oil spill in FD fan area, operator action will be performed and the Ash/Soot pit pump for Units 3&4 will be turned off; oil will be removed before discharging into ash handling system.
- Any oil spill within the power block will drain to the oil water separator. If an oil spill occurs at any transformer or operating equipment, operator action will be performed; the oil water separator will be turned off. The oil will be removed and the remaining waste water will

- All sumps are regularly inspected for sheen or oil. If there was oil present in Sump S-11, the sump pumping to S-11 (i.e. S-3, S-4, or S-5) will be turned off. The oil from S-3, S-4, S-5 or S-11 will be pumped out using an additional pump or absorbent boom will be used to clean it up. If oil leakes from the sumps into Basins B-5 and B-2 then it would be contained with absorbent boom and pump trucks to ensure that oil does not discharge to surface waters from the outfall weir.
- 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.
- Site personnel have been trained to use standard procedures during off loading operations. Only trained personnel are used in the transfer operations.
- Aboveground tanks are visually inspected monthly by operating personnel for signs of deterioration or leaks.
- Valves are routinely inspected by plant and terminal personnel.
- At the plant, tank truck unloading procedures meet the minimum requirements and regulations established by the DOT. These include setting up a barrier to prevent a truck from leaving before completion of unloading and checking of tank drains and connections before departure.
- A stockpile of oil spill response equipment exists at the Port Everglades Plant and Terminal.
- The plant has an in-house team of oil spill response personnel.
- Drain valves on tanks at the plant are locked in closed position.
- Starter controls on all oil pumps at the plant are locked in the "off" position and are accessible only to authorized personnel.
- A chain link security fence surrounds the plant and terminal to meet safety and security requirements, adequate lighting has been installed at the plant and terminal to permit surveillance of each facility, and all entrance gates at the plant remain closed and each facility is manned 24 hours per day, 365 days per year.

- The plant fuel transfer relief valves are set to take a maximum pressure of 75 psig.
- The unloading connection at the dock is capped with a blind flange and gasket.
- A permanent containment boom is deployed across the intake canal.
- During each transfer operation, the facility Operator coordinates the unloading operation with the Vessel Tankerman,In addition, the **Dock Operator** and the **Vessel Tankerman** have constant, direct communication via two-way radios during transfer operations.
- The emergency shutdown procedure is for the **Dock Operator** to notify the **Tankerman** to shutdown, then the **Dock Operator** closes all valves to the onshore pipeline after acknowledgement that vessel pumps are off line.
- During transfer operations, the **Dock Operator** maintains constant surveillance of the operation to check the unloading components for leaks or spills.
- Containment boom is deployed between the ship/barge and the dock before connections are made.

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

Figures II-12a, II-12b, II-12c, and II-12d contain specific drainage drawings of the facility, which depict the flows in the drainage systems. These figures also indicate

potential spill pathways, which can be useful in preventing the spread of a release should one occur.

All equipment area drains discharge through oil/water separators and sumps to Basin B-5 (see Figure II-12a, II-12b, II-12c, and II-12d). Basin B-5 is an evaporation/percolation basin designed to collect the first 15 minutes of a 10-year, 24-hour rainfall event. Stormwater Forwarding Sump S-11, which is equipped with a baffle-type oil/water separator, is an integral part of Basin B-5. Normally, water drains through the baffles int Basin B-5. If Basin B-5 reaches a certain water level, an automatic pump turns on and pumps excess water into Basin B-2. A back-up manual pump with a larger capacity is turned on if the automatic pump is unable to pump the excess water into B-2. If Both pumps are unable to pump the excess water to reduce the water level, an emergency overflow from Sump S-11 flows over a weir into plant discharge canal. All non-equipment area drains also are routed through Basin B-5/Sump S-11.

Drainage from the diked secondary containment area surrounding the Port Everglades Terminal fuel oil storage tanks is pumped to the intake canal following visual observation to confirm there is no oil sheen. Therefore, any tank leakage is restrained from reaching navigable waters.

The east tank farm secondary containment has an impervious HDPE liner. Drainage from this area is pumped to the plant discharge canal through an oil/water separator after verifying there has not been a major oil spill within the secondary containment area.

I. DISCHARGE POTENTIAL

The Port Everglades Plant and 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 (901 or 902):

Spilled fuel oil from the east, west, and north portions of the tank farm would spread out into the adjacent areas. However, spilled fuel oil from the south would flow into the cooling water discharge canal. 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. Postulated Failure of Metering Tanks or Gas Turbine Fuel Tanks:

Spilled fuel oil from the metering tanks would flow into the cooling water intake canal near the face of the intake structure, pass through the condensers and flow into the discharge canal. Spilled fuel oil form the gas turbine tanks would also spill directly or indirectly into the intake canal. 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).

3. Postulated Failure of Large Transformers:

A spill from a transformer on the south side of the switchyard would be caught and held up by the wastewater holding basins in the area, or caught and held by an embankment on the south side of the holding basins. From the other directions the spill would flow either directly or indirectly into the intake/discharge canal. A release rate could vary substantially from a small release of several ounces per minute to an instantaneous release of the entire transformers' contents (see table II-9 for transformer capacities). In the event of a transformer overfill, approximately 1 to 5,000 gallons (capacity of off-loading truck), and up to 200 gallons per minute could be released.

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

TABLE X-2				
RELEASE PREDICTIONS				
SOURCE	**TYPE OF FAILURE**	**VOLUME**	**RATE (gallons/hour)**	**DIRECTION OF FLOW**
Port Everglades Plant				
Metering Tank Unit 1	Leakage; Overfill	(b) (7)(F)	Rates vary up to 136,226 gals/hr	To sumps & EP Pond
Metering Tank Unit 2	Leakage; Overfill		Rates vary up to 136,226 gals/hr	To sumps & EP Pond
Metering Tank Unit 3	Leakage; Overfill		Rates vary up to 503,507 gals/hr	To sumps & EP Pond
Metering Tank Unit 4	Leakage; Overfill		Rates vary up to 503,507 gals/hr	To sumps & EP Pond
Tank 903	Leakage; Overfill		Rates vary up to 1,054,340 gals/hr	To sumps & EP Pond
Tank 904	Leakage; Overfill		Rates vary up to 1,054,340 gals/hr	To sumps & EP Pond
Turbine Lube Oil Unit 1	Rupture; Leakage		4,500 gals/hr	To sumps & EP Pond
Turbine Lube Oil Unit 2	Rupture; Leakage		4,500 gals/hr	To sumps & EP Pond
Turbine Lube Oil Unit 3	Rupture; Leakage		4,700 gals/hr	To sumps & EP Pond
Turbine Lube Oil Unit 4	Rupture; Leakage		4,700 gals/hr	To sumps & EP Pond
No. 2 Oil Pipeline and No. 6 Oil Pipeline	Rupture; Leakage		Rates vary up to 14,000 bbls/hr	Direction varies depending on location
55-gallon drums	Rupture; Leakage		55 gals/hr	
Port Everglades Terminal				
Tank T-800	Overfill, weld seam, corrosion, gasket, Dresser coupling	(b) (7)(F)	Seepage to 4,620,000 gals/hr	Retained inside Earthen dike
Tank T-801	Overfill, weld seam, corrosion, gasket, Dresser coupling		Seepage to 4,620,000 gals/hr	Retained inside Earthen dike
Tank T-802	Overfill, weld seam, corrosion, gasket, Dresser coupling		Seepage to 4,620,000 gals/hr	Retained inside Earthen dike

TABLE X-2				
RELEASE PREDICTIONS				
SOURCE	**TYPE OF FAILURE**	**VOLUME**	**RATE (gallons/hour)**	**DIRECTION OF FLOW**
Tank T-804	Overfill, weld seam, corrosion, gasket, Dresser coupling	(b) (7)(F)	Seepage to 1,050,000 gals/hr	Retained inside Earthen dike
Tank T-805	Overfill, weld seam, corrosion, gasket, Dresser coupling		Seepage to 1,050,000 gals/hr	Retained inside Earthen dike
Tank T-806	Overfill, weld seam, corrosion, gasket, Dresser coupling		Seepage to 1,050,000 gals/hr	Retained inside Earthen dike
Tank T-807	Overfill, weld seam, corrosion, gasket, Dresser coupling		Seepage to 8,400,000 gals/hr	Retained inside Earthen dike
Tank T-808	Overfill, weld seam, corrosion, gasket, Dresser coupling		Seepage to 8,400,000 gals/hr	Retained inside Earthen dike
Slop Oil Tank (T15)	Overfill, weld seam, corrosion, gasket		Seepage to 8,700 gals/hr	Retained inside Concrete Containment
Slop Oil Tank (T16)	Overfill, weld seam, corrosion		Seepage to 8,700 gals/hr	Retained inside Concrete Containment
High Voltage Transformer	Corrosion, mechanical damage		Seepage to 200 gal/hr	Retained inside Earthen dike
Pumps, strainers, flanges & valves	Seals, gaskets		Seepage to 1 gal/min	Retained inside Earthen dike

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 Figure XIII-1. 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 Everglades Plant and 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 and Records. 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 5 years in addition to a monthly visual inspection as described in the next section. Internal inspections are scheduled 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 Everglades Plant and Terminal:

	External Inspection		Internal Inspection	
Tank Number	**Last**	**Next**	**Last**	**Next**
PLANT				
M1	2010	2015	1995	2015
M2	2010	2015	1996	2016
M3	2006	2011	2010	2030
M4	2006	2011	2006	2026
903	2006	2011	1996	2016

904	2006	2011	1996	2016
TERMINAL				
Tank T-800	2007	2012	2007	2027
Tank T-801	2006	2011	1991	2011
Tank T-802	2006	2011	2006	2026
Tank T-804	2006	2011	1994	2014
Tank T-805	2006	2011	2008	2028
Tank T-806	2006	2011	1993	2013
Tank T-807	2006	2011	1993	2013
Tank T-808	2008	2013	2003	2023
Tank T-901	2008	2013	1993	2013
Tank T-902	2010	2015	1995	2015

The Port Everglades Plant and Terminal aboveground storage tanks (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 Everglades Plant and 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 Everglades AST's that they 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 two 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. Since the two shop fabricated tanks are visually inspected monthly, are supported above concrete secondary containment and pose a low risk of internal corrosion, no additional internal integrity testing is deemed necessary.

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 and associated piping, along with 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. Any such leak or discharge of oil is promptly removed.

In addition to monthly visual inspections of the secondary containment, the HPDP liners around TPE-901/902 will be structurally inspected on a 5-year basis consistent with FPL policy. This structural assessment will be timed with the tanks API-653 External inspections. This technical inspection will inspect the condition, installation, mounting battens and overall material condition of this secondary containment system.

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 plant control room and plant 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.

(b) (7)(F)

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(b) (7)(F)

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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 Everglades Plant and Terminal is under tidal influence. Based on worst case discharges of persistent oil, the planning distance method 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 Everglades Plant and 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 vessels, containment volume analysis, and throughput variability analysis.

Hazard identifications of the oil storage tanks at the Port Everglades Plant and 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 plant.

TABLE XI-1

PORT EVERGLADES PLANT AND TERMINAL OIL STORAGE TANKS

TANK NUMBER	SUBSTANCE STORED	AVERAGE QUANTITY STORED (GAL)	TANK TYPE/YEAR	MAXIMUM CAPACITY (GAL)	FAILURE/ CAUSE
PORT EVERGLADES PLANT					
T36 (M1)	No. 6 Fuel Oil	(b) (7)(F)	AST/FR 1960	(b) (7)(F)	None
T37 (M2)	No. 6 Fuel Oil		AST/FR 1961		Tank Overflow/ Manual Transfer 12/10/93
T38 (M3)	No. 6 Fuel Oil		AST/FR 1964		None
T39 (M4)	No. 6 Fuel Oil		AST/FR 1965		None
T40 (901)	Jet A		AST/FRT 1977		None
T41 (902)	Jet A		AST/FRT 1977		None
T42 (903)	Jet A		AST/FR 1971		None
T43 (904)	Jet A		AST/FR 1971		None
PORT EVERGLADES TERMINAL					
T44 (800)	No. 6 Fuel Oil	(b) (7)(F)	AST/FR 1955	(b) (7)(F)	None
T45 (801)	No. 6 Fuel Oil		AST/FR 1956		None
T46 (802)	No. 6 Fuel Oil		AST/FR 1956		None
T47 (804)	No. 6 Fuel Oil		AST/FR 1957		None
T48 (805)	No. 6 Fuel Oil		AST/FR 1957		None

TABLE XI-1

PORT EVERGLADES PLANT AND TERMINAL OIL STORAGE TANKS

TANK NUMBER	SUBSTANCE STORED	AVERAGE QUANTITY STORED (GAL)	TANK TYPE/YEAR	MAXIMUM CAPACITY (GAL)	FAILURE/ CAUSE
T49 (806)	No. 6 Fuel Oil	(b) (7)(F)	AST/FR 1957	(b) (7)(F)	None
T50 (807)	No. 6 Fuel Oil		AST/FR 1963		None
T51 (808)	No. 6 Fuel Oil		AST/FR 1965		None

Note:
AST = Aboveground Storage Tank
FR = Fixed Roof
FRT = Floating Roof
SF = Shop Fabricated

TABLE XI-2

HAZARD IDENTIFICATION
PORT EVERGLADES PLANT AND TERMINAL SURFACE IMPOUNDMENTS

Surface Impoundment	SUBSTANCE STORED	QUANTITY	SURFACE AREA(ft2)/YEAR	MAXIMUM CAPACITY (GAL)	FAILURE/ CAUSE
Neutralization Basins (2) NB-1 & NB-2 (X-1 & X-2)	No longer in use	(b) (7)(F)	4,225 each/ 1977	(b) (7)(F)	None
Storm water Collection Basins SWCB-A & SWCB-B (B1-A & B1-B)	Ash Water & Precipitated Metals		18,000 each/ 2000		None
Percolation Basin / Evaporation Percolation Pond EPP (B-2)	Wastewater and Stormwater		9,280/ 1977		None
Solids Settling Basins SSB-1/SSB-2 (B-3)	Ash & Water		22,000/ 2000		None
Stormwater Forwarding Basin SWFB B-5	Stormwater		7,050/ 1977		None
Boiler Blowdown Recovery Basin BRB (B-6)	Boiler Blowdown		3,750/ 1986		None

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FIGURE XI-1 PORT EVERGLADES PLANT AND TERMINAL SIGNIFICANT MATERIALS LOCATION MAP

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TABLE XI-3			
PORT EVERGLADES PLANT AND TERMINAL SIGNIFICANT MATERIALS INVENTORY			
ITEM No.	**LOCATION**	**MATERIAL**	**MAXIMUM QUANTITY**
1	Units 1&2	Hydrazine Tote, 35%	(b) (7)(F) [redacted]
2	Units 3&4	Hydrazine Tote, 35%	
3	Units 1&2	Aqua Ammonia Tote	
4	Units 3&4	Aqua Ammonia Tote	
5	Liquid Chemical Storage Building	Hydrazine Tote, 35%	
		Aqua Ammonia Drum(s)	
		Inhibitor-AZ8101 Drum(s)	
		Corrshield MD4106 Drum(s)	
6	Units 1&2	Aqua Ammonia Drum(s)	
7	Units 3&4	Fuel Additive Tank (Magox)**	
8	Units 3&4	Soda Ash Tank	
9	Units 1-4	Liquid Propane Tanks	
10	Units 1-4	Nitrogen Natural Gas Purge Cylinders	
11	Units 1&2	Fuel Additive Tank (Magox)**	
12	Water Treatment Plant	Brine Tank	
13	GTPP	Jet A Fuel Oil Product Recovery Tank (Dump Tank)	
14	Paint House	Paint	
15	Dry Chemical Storage Building	Sodium Metabisulfite Bags	
16	Water Treatment Plant	Sodium Hydroxide Drums Sodium Bisulfite Drums Sulfuric Acid Drums Sodium Metabisulfite Bags	
17	South of Unit 4	Liquid Hydrogen Tank	
18	B1 Basin	Caustic Soda Tank	
19	South of Units 2 and 3	150 lbs. Compressed Gas Cylinders Hydrogen Nitrogen Carbon Dioxide	
20	South of Unit 3	150 lbs. Compressed Gas Cylinders Acetylene	

TABLE XI-3			
PORT EVERGLADES PLANT AND TERMINAL SIGNIFICANT MATERIALS INVENTORY			
ITEM No.	LOCATION	MATERIAL	MAXIMUM QUANTITY
		Oxygen Argon Helium	(b) (7)(F) [redacted]
21	Oil House	Oil Drums	
22	Gas Turbine Area	Liquid Carbon Dioxide Tanks	
23	Gas Turbine Area	Oil Drum	
24	Laundry	Liquid Propane Canisters	
25	Hurricane Shelters Units 1&2 and 3&4	Liquid Propane	

** Magox tanks to be installed in early 2009.

Facility Operations Which May Result in a Discharge

Non-transportation-related facility operations, which may result in a spill at the plant, would include maintenance activities on the storage tank, the transferring of fuel from the storage tank to the generating units, and during barge unloading operations.

To mitigate against such releases, facility personnel follow specified procedures when taking oil storage 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 barge unloading station, the oil transfer piping and the storage tank areas are inspected both during unloading and transfer operations and during other routine inspections. Spill prevention policies, practices and procedures are described in detail in Section X of this plan.

Barge Unloading Operation

The Port Everglades Terminal and Plant handles two products by vessel: No. 6 fuel oil and Jet A. These products are typically delivered by barges or ships which are not owned by FPL. Shipments of No. 6 oil are delivered approximately 30 times per year and contain on average approximately (b) (7)(F) [redacted]

Tank Truck Unloading Operation

Spill prevention techniques at the Port Everglades Terminal and Plant 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.

Pipeline Operations

Port Everglades Plant receives approximately (b) (7)(E) the Everglades Pipeline or via FPL storage tanks 901 and 902, when required. Jet A fuel is also transhipped to FPL's Lauderdale Plant via pipeline. Shipments of Jet A are delivered approximately 2 to 4 times per year and contain an average of (b) (7)(F)

Facility Operations

Non-transportation-related facility operations which may result in a spill would include inter-tank transfer operations and maintenance activities on associated transfer piping and storage tanks. The Terminal conducts daily transfer of No. 6 fuel oil to the Plant Metering Tanks depending on the operational status of the units. Transfers of No. 6 fuel oil occur between the bulk oil tanks approximately once per month for blending purposes. The average transfer is 50,000 barrels.

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 five (5) storage tank secondary containment systems at the Port Everglades Plant and Terminal. The terminal tanks: 800, 801, 802, 804, 805, 806, 807 and 808;

Tanks 901, 902; Tanks 903 and 904; Units 1 and 2 Meter Tanks and Light Oil Storage; and Units 3 and 4 Metering Tanks are within their own containment area. Table X-1 lists the secondary containment systems and their associated volume.

Throughput Analysis

Section X.C.3 provides approximate daily throughput quantities of petroleum products at the Port Everglades Plant. A change in daily throughput either positive or negative would not increase the potential for a release of stored product.

C. 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 report focuses on the Vulnerability Analysis (VA) section of the FRP and was prepared for the Port Everglades Plant and Terminal. 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 power plant into a body of water and b) identifying the resources at risk located within the planning distance.

The planning distance was based upon a planning distance of 15 miles as required for tidal influenced waters. 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 ICW, 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 along the ICW, 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 ICW. 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. This report 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

EPA provided the following formula for facility owners or operators to use for calculating the distance that oil may travel after entering moving navigable waters in the event of a spill:

$$d = v*t*c$$

The velocity of the current varies dramatically within the Port area near the Port Everglades Power Plant and Terminal. The current was determined from previous Oil Spill Response Plan surface water measurements.

Currents vary dramatically within the port area. Near the slips and within the turning basin, the currents are low; maximum flood tide is 0.2 knots (0.3 ft/sec) and maximum ebb tide is 0.4 knots (0.7 ft/sec). In the entrance to the port (between the jetties) the maximum flood tide current is 0.6 knots (1.0 ft/sec); the maximum ebb tide current is 0.7 knots (1.2 ft/sec). This current increases as the waterway

constricts both north and south of the turning basin. The maximum flood tide current is 300 yards north of the turning basin is 0.9 knots (1.5 ft/sec) and 1.9 knots (3.2 ft/sec)at the 17th Street Causeway. The maximum ebb tide current is about 1.8 knots (3.0 ft/sec) at both locations. South of the turning basin within the ICW, the maximum flood tide current is 1.3 knots (2.2 ft/sec); the maximum ebb the current, 1.7 knots (2.9 ft/sec).

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 areas (Table XI-4).

TABLE XI-4	
SPECIFIED RESPONSE TIME INTERVALS	
Operating Areas	**Substantial Harm Planning Time (hours)**
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

Using the formula provided by EPA (d = v*t*c), the distance that oil could potentially flow downstream, once entering the ICW from the Port Everglades Plant or Terminal, was 58.9 miles (3.2 ft/sec*27 hours*3,600 minutes/hour (min/hr) = 311,040 feet or 58.9 miles). The EPA only requires a planning distance of 15 miles.

(b) (7)(F)

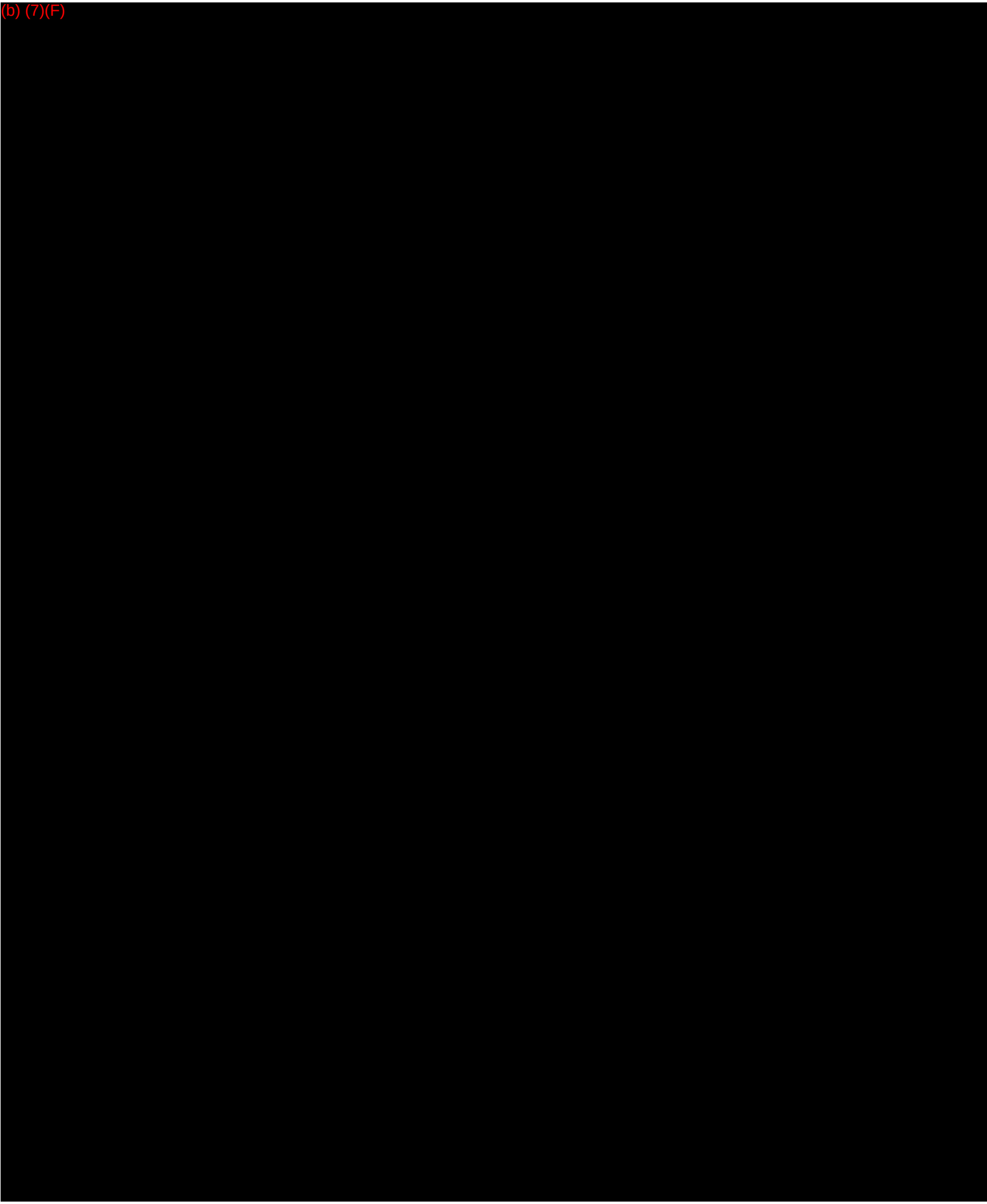
[redacted]

Schools

Table XI-5 lists all of the schools within 15 miles of the Port Everglades Plant and Terminal.

(b) (7)(F)

(b) (7)(F)


(b) (7)(F)

(b) (7)(F)

[redacted]

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 Everglades Plant and Terminal.

(b) (7)(F)

[redacted]

(b) (7)(F)

(b) (7)(F)

Evacuation of these medical facilities should not be necessary due to their distance from the facility.

Residential Areas

A large residential area consisting of canal front homes exists north of the 17th Street Causeway. A smaller residential community also exists just north of the inlet.

Businesses

The Port Everglades Plant and Terminal is surrounded by petroleum terminals to the north and west of the facility. Tanker unloading berths along with cruise terminals exist to the east. The Port Authority building and the South Port Container Dock and Facility are located south of the plant.

Transportation Routes (Air, Land, and Water)

The Port Everglades Plant and Terminal are located on Eisenhower Boulevard which runs north south. The 17th Street Causeway crosses Eisenhower Boulevard approximately 1/4 -mile north of the plant and terminal. Eller Drive (with access to Interstate 595 crosses Eisenhower Boulevard approximately 1-mile south of the facility. There are no other docking facilities within the vicinity of the facility. Air travel should not be impacted by events at the Port Everglades facility.

Wetlands and Other Sensitive Areas

The most environmental sensitive areas are south of the port along the Intracoastal Waterway (ICW) where mangrove forests are present. Both sides of the ICW contain remnants of a mangrove forest. John U. Lloyd State Park is located along the east side of the ICW and includes the Atlantic Ocean beaches south of the inlet entrance. Mangrove forest also exists along the Plant's discharge canal just north of the South Port Container dock.

Lakes and Streams

The port area includes: the Intracoastal Waterway from just north of 17th Street Causeway to the entrance of the Dania Cutoff Canal; and Port Everglades Inlet, the Atlantic Ocean off the port, and the beaches and nearshore areas north and south of the inlet. The most important habitat within the survey area are intertidal areas located south of the discharge canal and within John U. Lloyd State Park.

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 Everglades Plant and Terminal.

TABLE XI-7

THREATENED AND ENDANGERED SPECIES IN FLORIDA

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

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

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

TABLE XI-7		
THREATENED AND ENDANGERED SPECIES IN FLORIDA		
STATUS	**COMMON NAME**	**SCIENTIFIC NAME**
E	Lupine, scrub	*(Lupinus aridorum)*
T	Birds-in-a-nest, white	*(Macbridea alba)*
E	Beargrass, Britton's	*(Nolina brittoniana)*
T	Whitlow-wort, papery	*(Paronychia chartacea)*
E	Cactus, Key tree	*(Pilosocereus robinii)*
T	Butterwort, Godfrey's	*(Pinguicula ionantha)*
E	Polygala, Lewton's	*(Polygala lewtonii)*
E	Polygala, tiny	*(Polygala smallii)*
E	Wireweed	*(Polygonella basiramia)*
E	Sandlace	*(Polygonella myriophylla)*
E	Plum, scrub	*(Prunus geniculata)*
E	Rhododendron, Chapman	*(Rhododendron chapmanii)*
T	Gooseberry, Miccosukee	*(Ribes echinellum)*
E	Chaffseed, American	*(Schwalbea americana)*
T	Skullcap, Florida	*(Scutellaria floridana)*
E	Campion, fringed	*(Silene polypetala)*
E	Pinkroot, gentian	*(Spigelia gentianoides)*
E	Meadowrue, Cooley's	*(Thalictrum cooleyi)*
E	Torreya, Florida	*(Torreya taxifolia)*
E	Warea, wide-leaf	*(Warea amplexifolia)*
E	Mustard, Carter's	*(Warea carteri)*
E	Ziziphus, Florida	*(Ziziphus celata)*
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.		

The following species are found near the Port Everglades Plant and Terminal:

Least Tern, *Sterna antillarum*

- federally threatened species
- rest along the sandy beaches or feed in the nearshores or estuarine waters

Manatee, Trichechus manatus

- federally endangered marine mammal
- present year round
- very high to high concentrations of manatees can occur
- manatees are attracted to warm water discharges from power plants and will congregate in these areas especially during the colder months
- irritation of skin and mucous membrane surfaces may occur, inhaling vapors may cause irritation of lungs
- manatees may attempt to feed on oiled vegetation or be at risk from collisions with boats or vessels during cleanup activities oil exposure impacts to manatees are likely to be transient.

Other Wildlife

The remnants of a mangrove forest remains south of the discharge canal, along the western shoreline of the Intracoastal Waterway. The area is cut by tidal creeks; dominant plant species are red and black mangroves (*Rhizophora mangle* and *Avicennia germinans*, respectively). Two important habitat areas exist within John U. Lloyd State Park. One, the existing intertidal habitat and mitigation areas located along the east side of the Intracoastal Waterway. Red and black mangroves are the most abundant plant species in the existing intertidal habitat. The mitigation areas have been scraped down to intertidal elevations and planted with cordgrass (*Spartina alterniflora*) and red mangrove.

The nearshore Atlantic Ocean and beaches exist within the survey area. Nearshore hard bottom areas (i.e., reefs) are found south of the inlet. Dominant epibiota on the rock includes algae, sponges, and hard and soft corals.

Animals which use the survey area include fish, birds, reptiles, and mammals. The inlet functions as an important conduit between the Atlantic Ocean habitats (e.g., nearshore and offshore reefs) and the estuarine habitats, which may, for some species, function as nursery and/or breeding habitat. One such species, the snook, *Centropomus undecimalis*, is listed as a Species of Special Concern (SSC) by the Florida Game and Freshwater Fish Commission (FGFWFC). The Port Everglades Plant intake canal is a collection point for snook and reef fish species.

Conspicuous bird species include floating and diving birds, aerially searching birds, and birds of prey. Floating and diving birds include the Double Crested Cormorant (*Phalacrocorax auritus*) and the Brown Pelican (*Pelecanus occidentalis*) (listed as a SSC by the FGFWFC). Aerially searching birds include the Least Tern (*Sterna antillarum*), listed as Threatened by the FGFWFC and the U.S. Fish and Wildlife Service (USFWS), which may be resting along the sandy beaches or feeding in the nearshore or estuarine waters.

Recreational Areas

The ICW is the nearest navigable waterway. Figure II-10 identifies other shorelines that may be of concern. Table II-3 lists marinas near the plant.

Utilities

There are two utility companies located near the Port Everglades Plant:

Fort Lauderdale – GT Lohmeyer WTTP (0.7 miles)
1765 SE 18th Street
Fort Lauderdale, Florida

Peele Dixie – Drinking Water (6.7 miles)
1500 South State Road 7
Fort Lauderdale, FL 33317

Other Areas of Economic Importance

There are no other areas of economic importance.

D. RISK ANALYSIS

A risk analysis was performed of the Port Everglades Plant and Terminal 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. Tables XI-8 and XI-9 present the EMEA and FMEA for Port Everglades Plant and Terminal. 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 (spills to navigable waters) at the Port Everglades Plant and Terminal.

INCIDENT DESCRIPTION	
Date of discharge	July 26, 1979
Cause of discharge	Leak in plant blow-down line
Materials discharged	No. 6 fuel oil
Amount discharged (Gallons)	2 gallons
Amount reached Navigable Waters	2 gallons
Effectiveness of secondary containment	Not Applicable
Clean-up actions taken	Spill removed using sorbents
Steps to reduce recurrence	Leak repaired
Capacity of tank(s)/containment from which spill occurred	Not Applicable
Enforcement actions	Case dismissed
Effectiveness of monitoring equipment	Not Applicable
Description of how spill detected	Visual detection

INCIDENT DESCRIPTION	
Date of discharge	December 28, 1987
Cause of discharge	Leak in drain pipe
Materials discharged	No. 6 fuel oil
Amount discharged (Gallons)	301 gallons
Amount reached Navigable Waters	< 1 gallon
Effectiveness of secondary containment	Unknown
Clean-up actions taken	Contractor deployed boom and used sorbent pads to remove sheen
Steps to reduce recurrence	Drain pipe removed
Capacity of tank(s)/containment from which spill occurred	Not Applicable
Enforcement actions	Not Applicable
Effectiveness of monitoring equipment	Not Applicable
Description of how spill detected	Visual detection

INCIDENT DESCRIPTION	
Date of discharge	April 28, 1989
Cause of discharge	Repair of pipeline expansion joint while oil/water mixture remained in pipeline
Materials discharged	Light oil
Amount discharged (Gallons)	2-4 gallons
Amount reached Navigable Waters	2-4 gallons
Effectiveness of secondary containment	Not Applicable
Clean-up actions taken	Plant personnel deployed containment boom in discharge canal and removed oil with sorbents
Steps to reduce recurrence	Completely drain pipeline prior to performing maintenance activities which could result in spill
Capacity of tank(s)/containment from which spill occurred	Not Applicable
Enforcement actions	None
Effectiveness of monitoring equipment	Not Applicable
Description of how spill detected	Visual detection

INCIDENT DESCRIPTION	
Date of discharge	August 2, 1989
Cause of discharge	Gasket failure on unloading hose
Materials discharged	No. 6 fuel oil
Amount discharged (Gallons)	10 gallons
Amount reached Navigable Waters	10 gallons
Effectiveness of secondary containment	Not Applicable
Clean-up actions taken	Spill was removed using sorbent materials
Steps to reduce recurrence	Check gasket and flange connections prior to transfer
Capacity of tank(s)/containment from which spill occurred	Not Applicable
Enforcement actions	None
Effectiveness of monitoring equipment	Not Applicable
Description of how spill detected	Visual detection

INCIDENT DESCRIPTION	
Date of discharge	April 13, 1991
Cause of discharge	Transfer hose failure
Materials discharged	No. 6 fuel oil
Amount discharged (Gallons)	1,680 gallons
Amount reached Navigable Waters	400 gallons
Effectiveness of secondary containment	Not Applicable
Clean-up actions taken	Contractor removed oil in the water and cleaned all shoreside structures
Steps to reduce recurrence	Replace unloading hoses every 3 years
Capacity of tank(s)/containment from which spill occurred	Not Applicable
Enforcement actions	Penalty assessment of $ 2,500.00
Effectiveness of monitoring equipment	Not Applicable
Description of how spill detected	Visual detection by vessel and facility person-in-charge

INCIDENT DESCRIPTION	
Date of discharge	July 25, 2007
Cause of discharge	The leak occurred when an operator opened the wrong valves on the unit 4 fuel oil heater while placing the heater back in operation. This action allowed No. 6 fuel oil in the heater to eventually be released once the oil gained enough temperature to cause the oil to flow inside of the heater.
Materials discharged	No. 6 fuel oil
Amount discharged (Gallons)	1,000 gallons
Amount reached Navigable Waters	0 gallons to Nav. Waters. 25-50 gallons to Plant intake canal.
Effectiveness of secondary containment	The release occurred inside of the concrete secondary containment area surrounding the heater and then overflowed onto the concrete surface of the basement beneath the unit 4 boiler. As the oil began to spread out on the concrete surface, some product entered the plant's storm water drainage system through floor drains to the S3 sump where the spill was isolated.
Clean-up actions taken	SWS First Response, FPL's contracted oil spill removal organization (OSRO), was immediately contacted & responded to the plant with personnel, cleanup supplies & vacuum trucks. Cleanup operations consisted of removing free product from the secondary containment system surrounding the heater, the adjacent concrete surfaces and plant drains and S3 sump. A total of 2,800 gallons of oil and oily water was recovered during this operation with approximately 30% of this total (or approximately 850 gallons) being free product. SWS also removed the small amount of product in the intake canal using two vacuum trucks, absorbent materials and containment boom. A total of 2,900 gallons of oily-water was removed from the intake canal by vacuum truck operations of which approximately 1.5% (42 gallons) was free product.
Steps to reduce recurrence	Tags have been place on the fuel oil heater valves to alert operators that these valves are to remained closed when the unit is in operation. Structural improvements are also scheduled to be made to the seawall.
Capacity of tank(s)/containment from which spill occurred	(b) (7)(F)
Enforcement actions	None
Effectiveness of monitoring equipment	N.A.
Description of how spill detected	Visual detection

INCIDENT DESCRIPTION	
Date of discharge	January 16th, 2010
Cause of discharge	Break in old open cooling water pipe and existing Sump 4 pipe
Materials discharged	No. 6 fuel oil
Amount discharged (Gallons)	0.5 gallons
Amount reached Navigable Waters	0.5 gallons
Effectiveness of secondary containment	Not Applicable
Clean-up actions taken	Contained oil by deploying oil absorbent booms and contained oil in condenser pit.
Steps to reduce recurrence	The abandoned open cooling water pipe was capped at the OTCW pipeline and the abandoned line was partially filled with concrete. The effectively prevented any oil from entering the OTCW pipe
Capacity of tank(s)/containment from which spill occurred	Not Applicable
Enforcement actions	None
Effectiveness of monitoring equipment	Not Applicable
Description of how spill detected	Visual detection by employee

Vulnerability of Facility from a Nature Disaster

The Port Everglades Plant and Terminal 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 plant 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 AND EFFECTS ANALYSIS
PROCESS FUNCTION: FUEL OIL LOADING & UNLOADING OPERATION
PROCESS LEVEL: OPERATION ASSOCIATED WITH LOADING & UNLOADING
FEB 1991

ACTIVITY	OPERATION TASK	OPERATION ERROR	CAUSE OF ERROR	COMPONENT INVOLVED	ULTIMATE FAILURE	TIME OF FAILURE	CRITICALITY ASSESSMENT				INSTANT RESPONSE
							PROBABILITY OF OCCURRENCE (1)	RESULT OF FAILURE (1)	OIL SPILLS WHERE (1)	HAZ. RANK (2)	
PRIOR TO UNLOAD NG	POSITION HOSE ONTO TANKER	MOB LE BOOM TRUCK DROPS HOSE	IMPROPER OPERATION OF BOOM	UNLOADING HOSE	CUTS, GOUGES, OR INTERNAL FRACTURE	DURING HOOKUP	MODE-RATE 4	SMALL SP LL 3	DECK, DOCK, OR WATER 4	48	MOVE HOSE BACK ON DOCK
PRIOR TO UNLOAD NG	OPEN PIPELINE VALVE ON DECK	FAILS TO OPEN VALVE	NOT FOLLOWING PROCEDURES	UNLOADING HOSE CON-NECTIONS	FLANGE GASKETS MAY LEAK	WHEN PUMPS ARE STARTED	LOW 3	SMALL LEAK 2	DOCK OR WATER 2	12	STOP PUMPS CONTA N SPILL
PRIOR TO UNLOAD NG	OPEN STORAGE TANK VALVE	OPENS VALVE ON WRONG TANK	IMPROPER PROCEDURE	STORAGE TANK	TANK OVERFLOW	DURING UN-LOADING	MODE-RATE 5	LARGE SP LL 4	INSIDE D KE 1	20	STOP PUMPS
DUR NG UNLOAD NG	CHECK HOSE POSITION	FA LED TO RE-POSITION HOSE	IMPROPER POSITION OF HOSE	UNLOADING HOSE	HOSE STRETCHES & RUPTURES	DURING UN-LOADING	LOW 3	LARGE SP LL 5	DECK, DOCK, OR WATER 4	60	STOP PUMPS CONTA N SPILL
AFTER UNLOAD NG	CHECK BLIND FLANGE ON HOSE	FA LED TO CHECK	NOT YET INSTALLED BY TANKERMAN	UNLOADING HOSE BL ND FLANGE	OPEN HOSE DRAINAGE	DURING DISCON-NECTION	MODE-RATE 4	SMALL TO MODE-RATE 3	DECK, DOCK, OR WATER 3	36	MOVE HOSE INSIDE CURBING
AFTER UNLOAD NG	DISCONNECT HOSE FROM DOCK L NE	FA LED TO CLOSE DOCK VALVE	OPEN DOCK VALVE	UNDER-GROUND PIPELINE	P PEL NE BELCHES	DURING DISCON-NECTION	LOW 3	SMALL TO MODE-RATE 3	DOCK 2	18	CLOSE VALVE
AFTER UNLOAD NG	INSTALL BLIND FLANGE ON DOCK END OF HOSE	FA LED TO INSTALL	NOT INSTALLED BY DOCK WORKER	UNLOADING HOSE BL ND FLANGE	OPEN HOSE DRAINAGE	DURING DISCON-NECTION	MODE-RATE 4	SMALL TO MODE-RATE 3	DOCK 2	24	INSTALL BL ND FLANGE
MOVING TO ANOTHER BERTH	MOVE HOSE TO ANOTHER BERTH	IMPROPER LOADING ON HOSE WAGON	HOSE FALLS OFF WAGON	UNLOADING HOSE	DAMAGED HOSE	DURING UN-LOADING	MODE-RATE 4	LARGE SP LL 5	DOCK OR WATER 4	80	CONTA N SPILL
PRIOR TO UNLOAD NG	OPEN STORAGE TANK VALVE	FAILS TO OPEN VALVE	IMPROPER PROCEDURES	PIPELINE FROM DOCK TO STORAGE TANK	FLANGE LEAK	WHEN PUMPS ARE STARTED	LOW 3	SMALL SP LL 2	ON LAND 2	12	STOP PUMPS CONTA N SPILL

NOTES:
(1) RISK NUMBERS SELECTED FOR EACH ITEM, FROM 1 TO 5, WITH 5 AS THE HIGHEST
(2) HAZARD RANKING DETERM NED BY MULT PLY NG NUMBERS OF THREE PREVIOUS COLUMNS
(3) IMPROPER TRA N NG, NOT FOLLOWING PROCEDURES
Source: FPL Oil Spill Task Team, Final Recommendations, a Quality Improvement Story provided in memo from Mark A. Jones to Ron Rostorfer dated January 9, 1992.

TABLE XI-9
FAILURE MODES AND EFFECTS ANALYSIS
SYSTEM FUNCTION: FUEL OIL LOADING & OPERATION
INDENTURE LEVEL: LOADING & UNLOADING COMPONENTS
FEB 1990

			CRITICALITY ASSESSMENT								
			ADVANCE DETECTION	FREQUENCY OF FAILURE		RESULT OF FAILURE		OIL SPILLS WHERE		HAZARD RANKING	INSTANT RESPONSE
COMPONENT	FAILURE MODE	PROBABLE CAUSE	(1)	(2)		(2)		(2)		(3)	
UNLOAD NG HOSE	REDUCED STRENGTH	CUTS, CRACKS, GOUGES, AGE	VISUAL & HYDROTEST	LOW	3	LARGE WITH PUMPS ON	5	DECK, DOCK, OR WATER	4	60	STOP PUMPS, CONTAIN SPILL
UNLOAD NG HOSE	INSTANT RUPTURE	VESSEL HEAVES	NONE	LOW	3	LARGE WITH PUMPS ON	5	DECK, DOCK, OR WATER	4	60	STOP PUMPS, CONTAIN SPILL
UNLOAD NG HOSE	INSTANT RUPTURE	MOBILE BOOM TRUCK DROPS HOSE	NONE	LOW	3	SMALL WITH PUMPS OFF	3	DECK, DOCK, OR WATER	4	36	STOP PUMPS, CONTAIN SPILL
UNLOAD NG HOSE	INTERMEDIATE FLANGE CONNECTION	BOLTING OR GASKET PROBLEM	VISUAL & HYDROTEST	LOW	3	SMALL WITH PUMPS ON	3	DECK, DOCK, OR WATER	4	36	STOP PUMPS, CONTAIN SPILL
DOCKS DE FLANGE CONNECTIONS	GASKET LEAK	WORN GASKET	INSPECT GASKET	FREQUENT	5	SMALL WITH PUMPS ON	3	NS DE CURBED AREA	1	15	STOP PUMPS, CLEAN UP SP LL
ABOVE GROUND PIPELINE ON DOCK	METAL TH NNING	CORROSION	VISUAL & HYDROTEST	LOW	3	SMALL WITH PUMPS ON	3	NS DE CURBED AREA	1	9	STOP PUMPS, CLEAN UP SP LL
UNDERGROUND P PEL NE DOCK TO TERM NAL	METAL TH NNING	CORROSION	ANNUAL HYDROTEST	VERY LOW	2	MODERATE WITH PUMPS ON	4	UNDERGROUND	1	8	STOP PUMPS, CLEAN UP SP LL
IDLE UNLOADING HOSE	CUTS, GOUGES, OR RUPTURE	DOCK VEHICLE HITS HOSE	NONE	MODERATE	4	SMALL	2	DOCK	2	16	CONTAIN SPILL
ABOVE GROUND P PEL NE TO PLANT	METAL TH NNING	CORROSION	VISUAL & HYDROTEST	LOW	3	SMALL WITH PUMPS ON	3	ON GROUND	3	27	STOP PUMPS, CLEAN UP SP LL
ABOVE GROUND P PEL NE TO PLANT	METAL TH NNING	CORROSION	VISUAL & HYDROTEST	LOW	3	SMALL WITH PUMPS ON	3	INTO WATER	4	36	STOP PUMPS, CLEAN UP SPILL

NOTES:
(1) THESE ARE THE DETECTION METHODS CURRENTLY N USE AT THE SITE
(2) RISK NUMBERS SELECTED FOR EACH ITEM, FROM 1 TO 5, WITH 5 AS THE HIGHEST
(3) HAZARD RANKING DETERM NED BY MULT PLY NG NUMBERS OF THREE PREVIOUS COLUMNS
Source: FPL Oil Spill Task Team, Final Recommendations, a Quality Improvement Story provided in memo from Mark A. Jones to Ron Rostorfer dated January 9, 1992.

E. 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 offer to assist if appropriate. Potential oil spill drainage pathways 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.

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. The plant drainage system is structured such that all plant drains are routed to one of five stormwater basins (see Figures II-12 and II-13) which would be capable of containing discharge that reached the drainage system. A more thorough discussion of the plant's stormwater management system including drainage and detention system is provided in Section X.

A listing of the capacities of each sump pump is provided in the following Table.

Sump Pump Capacities

Sump Number	Capacity (Gallons Per Minutes)
S-2 Intake Area Sump	2880 (2-1440 gpm pumps)
S-3 West Collection Sump	8600 (4-2150 gpm pumps)
S-4 Central Collection Sump	1500 (2-750 gpm pump)
S-5 East Collection Sump	5000 (2-2500 gpm pumps)
S-10 Day Tank Area Sump	100 (2-50 gpm pumps)
S-11 Stormwater Forwarding Sump	2100 (1-300 gpm pump and 1-1800 gpm pump)
S-12 GT Area Sump	400 (2-200 gpm pumps)
North Tank Farm - Secondary Containment Sump	1200
East Tank Farm – Secondary Containment Sumps	400 (2 sumps, each with 200 gpm pump)

SECTION XII: TRAINING AND DRILLS

A. DISCHARGE PREVENTION AND RESPONSE TRAINING

Florida Power and Light (FPL) 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 aspect 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 Oil Spill Response Team (COSRT) 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 COSRT 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 COSRT in accordance with the Prep schedule in Table XII-1. The Plant 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 consists 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:

TABLE XII-1				
DRILLS CONDUCTED BY FACILITY ONSITE RESPONSE TEAM (ORT) and/or CONTRACTED OIL SPILL REMOVAL ORGANIZATION (OSRO)				
DRILL TYPE	**FREQUENCY**	**DRILLS/ 3 YR.PERIOD**	**AGENCY**	**INITIATING AUTHORITY**
QI Notification By ORT	Quarterly	12	EPA, USCG, PHMSA	Facility ORT
Unannounced Exercises By ORT	Annual	3(1)	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(5)	EPA, USCG, PHMSA	Facility ORT
DRILLS CONDUCTED BY CORPORATE SPILL MANAGEMENT TEAM (SMT)				
Tabletop Exercise	Annual	3(3)	EPA, USCG	Corporate SMT
Exercise Entire Response Plan	All Components Every 3 YRS	1(5)	EPA, USCG, PHMSA	Corporate SMT
AGENCY INITIATED DRILLS				
DRILL TYPE	**FREQUENCY**	**ADVANCED NOTICE**	**INITIATING AUTHORITY**	**RESPONSE TEAM AFFECTED**
Unannounced Tabletop Exercise	Annually, If Selected	10 (2,4) Days Prior	PHMSA	CORP SMT
Unannounced Equipment Deployment	Annually, If Selected	None(4)	EPA, USCG	Facility ORT/OSRO
Area Exercise	Triennially, If Selected	Advanced Notice (2) Provided	EPA, USCG, FPL	Facility ORT/OSRO and/or Corp SMT

Notes:
(1) Unannounced drills can include any of the following:
- Emergency Procedures Exercise
- Spill Management Team Tabletop Exercise
- Equipment Deployment Exercise
- Actual Spill Event

(2) 20 Exercises total nationwide per year (6 Government led and 14 Industry led)
(3) One drill must include a worst case discharge scenario
(4) Not required to participate in another federal government initialed drill until 36 months have passed

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 COSRT 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 COSRT will be responsible for exercising and documenting all of the response plan components (1-3 & 10-15). The COSRT 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 OSC/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 Plant 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 COSRT sufficient to document training of its personnel for as long as the member remains a part of the COSRT. 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 Plant 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 COSRT are maintained for five years. Drill records would be made available for inspection upon request by agency personnel.

TABLE XII-2

DISCHARGE PREVENTION MEETING LOG

Date:

Attendees_____

Subject/Issue Identified	Required Action	Implementation Date

Drill Documentation Forms

Drill Documentation Forms are provided on the following pages.

EQUIPMENT DEPLOYMENT DRILL DOCUMENTATION FORM

SECTION I: DRILL INFORMATION

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

SECTION II: DRILL OBJECTIVES

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

_____

_____

EQUIPMENT DEPLOYMENT DRILL DOCUMENTATION FORM
SECTION III: DRILL EVALUATION & RESULTS
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:
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

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 BETAKEN 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 ADESSED 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 _____

3. DID THE INCIDENT COMMAND SYSTEM FUNCTION SUCCESSFULLY DURING THE

EMERGENCY PROCEDURES EXERCISE DOCUMENTATION FORM (OPTIONAL)
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

OSC/QI NOTIFICATION DRILL DOCUMENTATION FORM
SECTION I: DRILL INFORMATION
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?
SECTION II: DRILL OBJECTIVES
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
SECTION III: DRILL EVALUATION & RESULTS
THE FOLLOWING QUESTIONS WILL BE COMPLETED BY THE DRILL EVALUATOR (A NO ANSWER REQUIRES A COMMENT) 1. WAS CONTACT MADE WITH THE OSC/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:

OSC/QI NOTIFICATION DRILL DOCUMENTATION FORM	
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

NOTIFICATION FORM			
ON-SCENE COMMANDER/QUALIFIED INDIVIDUAL			
NAME	**DATE CONTACTED**	**TIME CONTACTED**	**CONTACT METHOD (SEE BELOW)**
RESPONSE TEAM MEMBERS (OPTIONAL)			

Contact Method:

T - TELEPHONE
R - RADIO
M - MESSAGE-PAGER
F - FACSIMILE
O - LIST METHOD

SPILL MANAGEMENT TEAM TABLETOP EXERCISE DOCUMENTATION FORM

SECTION I: DRILL INFORMATION

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

SECTION II: DRILL OBJECTIVES

CHECK EACH OBJECTIVE DEMONSTRATED DURING THE DRILL

_____KNOWLEDGE OF RESPONSE PLAN.
_____ PROPER NOTIFICATIONS MADE.
_____ EFFECTIVENESS OF COMMUNICATION SYSTEM.
_____ ABILITY TO ACCESS AN OSRO.
_____ COORDINATION OF INTERNAL RESPONSE PERSONNEL.
_____ ANNUAL REVIEW OF THE TRANSISTION FROM LOCAL TEAM TO CORPORATE TEAM.
_____ COORDINATE TO EFFECTVELY COORDINATE SPILL RESPONSE ACTIVITY WITH THE NATIONAL RESPONSE SYSTEM INFRASTRUCTURE.
_____ ABILITY TO ACCESS INFORMATION IN AREA CONT. PLAN FOR LOCATION OF SENSITIVE AREAS AND RESOURCES.

USE THE CORPORATE PLAN RESPONSE MANAGEMENT SYSTEM FORMS TO ASSIST IN DOCUMENTING APPROPRIATE DRILL INFORMATION.
DESCRIBE EXERCISE:

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

EXERCISE ENTIRE RESPONSE PLAN DOCUMENTATION FORM
SECTION I: DRILL INFORMATION
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:
SECTION II: DRILL OBJECTIVES
CHECK EACH OBJECTIVE DEMONSTRATED DURING THE DRILL _____KNOWLEDGE OF RESPONSE PLAN. _____ PROPER NOTIFICATIONS MADE. _____ EFFECTIVENESS OF COMMUNICATION SYSTEM. _____ ABILITY TO ACCESS AN OSRO. _____ COORDINATION OF INTERNAL RESPONSE PERSONNEL. _____ ANNUAL REVIEW OF THE TRANSISTION FROM LOCAL TEAM TO CORPORATE TEAM. _____ COORDINATE TO EFFECTVELY COORDINATE SPILL RESPONSE ACTIVITY WITH THE NATIONAL RESPONSE SYSTEM INFRASTRUCTURE. _____ ABILITY TO ACCESS INFORMATION IN AREA CONT. PLAN FOR LOCATION OF SENSITIVE AREAS AND RESOURCES. USE THE CORPORATE PLAN RESPONSE MANAGEMENT SYSTEM FORMS TO ASSIST IN DOCUMENTING APPROPRIATE DRILL INFORMATION. DESCRIBE EXERCISE:

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

PORT EVERGLADES PLANT AND TERMINAL OIL SPILL PREVENTION & RESPONSE TRAINING – ATTENDANCE RECORD			
DATE	**COURSE TITLE/ SPILL PREVENTION BRIEFING ISSUES**	**INSTRUCTORS**	**AFFILIATION**
START DATE: **FINISH DATE:**		**1.** **2.**	

TOTAL HOURS:		**3.**	

NAME (please print)	NAME (signature)	JOB TITLE	WORK LOCATION SYMBOL

[Intentionally blank]

SECTION XIII: PLAN REVIEW AND UPDATE PROCEDURES

The Port Everglades Plant and Terminal 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.

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

FIGURE XIII-1 EXAMPLE OF A REVISION COVER LETTER

Table A.1 lists the available equipment at the Port Everglades Plant and Terminal.

TABLE A.1 Port Everglades Plant and Terminal Oil Spill Response Equipment

TYPE	QTY	MAKE	MODEL	AGE	LOCATION	DESIGN CAPACITY (GPM)	EFFECTIVE DAILY RECOVERY RATE PER 24 HRS (BBLS)	EQUIPMENT DESIGN
CONTAINMENT								
Harbor Boom	800 ft			1989	Oil Spill House - Conex Box			12"
Fixed Hardboom (deployed)	330 ft			2011	Intake Canal			24"
Fixed Hardroom (deployed)	285 ft			2011	Discharge Canal			24"
Harbor Boom on Reel	2000 ft			2010	P.E. Terminal Boom Reel Trailer			18"
Harbor Boom	500 ft			2007	P.E. Terminal Spill Trailer			12"
Harbor Boom	1900 ft				P.E. Terminal - Conex Box			18"
RECOVERY								
Holding Tank / Fast Tank	1 unit				Oil Spill House	1000 gal capacity		
Oil Snare (Pom Poms)	50 bags			1993	Oil Spill House			
Absorbent Carpet	20 rolls				Oil Spill House			50 ft per roll
Absorbent Pads	20 bags			1993	Oil Spill House			17" X 19" 100 pads per bag
Absorbent Boom	20 bags	Sorbent Boom			Oil Spill House			40 ft per bag
Portable Skimmer & Hose	1 unit	SkimPac		1985	Oil Spill House	10 gpm		
Absorbent Clay (Oil Dry)	12 bags				Oil Spill House			40 lbs per bag
Vacuum Trailer & Portable Skimmer	1 unit	Vacuum Pump & SkimPac			P. E. Plant	10 gpm ; 1000 gal capacity		

TABLE A.1 Port Everglades Plant and Terminal Oil Spill Response Equipment								
TYPE	QTY	MAKE	MODEL	AGE	LOCATION	DESIGN CAPACITY (GPM)	EFFECTIVE DAILY RECOVERY RATE PER 24 HRS (BBLS)	EQUIPMENT DESIGN
PUMPS								
Gas Pumps & Hoses	2 units	Honda		2008	Oil Spill House	10 gpm	68	3" Pump
Back Up Gas Pump & Hose	1 unit	Honda		2008	Oil Spill House - Conex Box	10 gpm	68	3" Pump
Holding Tank / Fast Tank	1 unit				P.E. Terminal Garage	1000 gal capacity		
TRANSPORTATION								
Boat	1 unit		Sea Nymph (Jon Boat)	1986	Next to Oil Spill House			9.9 HP Motor
Boat	1 unit		Southern Skimmer		P. E. Terminal Garage			50 HP Motor
MISCELLANEOUS								
Anchor w/ Rope & Shackle	1 unit				P.E. Terminal Boat / Southern Skimmer			
USCG Throw-Ring with Rope	1 unit				P.E. Terminal / Boat Dry-Box			
Life Jackets	3 units				P.E. Terminal / Boat Dry-Box			
USCG Required Boat Supplies	1 unit				P.E. Terminal / Boat Dry-Box			
Anchor w/ Ropes & Shackle	4 units				Oil Spill House - Conex Box			
Anchor Buoys	2 units				Oil Spill House - Conex Box			
Throw Ring with Rope	1 unit				Oil Spill House / Boat Dry-Box			
USCG Reqired Boat Supplies	1 unit				Oil Spill House / Boat Dry-Box			

TABLE A.1 Port Everglades Plant and Terminal Oil Spill Response Equipment

TYPE	QTY	MAKE	MODEL	AGE	LOCATION	DESIGN CAPACITY (GPM)	EFFECTIVE DAILY RECOVERY RATE PER 24 HRS (BBLS)	EQUIPMENT DESIGN
Shovels	4 units				Oil Spill House			
Manilla Rope	600 ft				Oil Spill House			½ inch
Life Jackets	8 units				Oil Spill House			
Squeegees	4 units				Oil Spill House			
Hard Bristle Push Brooms	2 units				Oil Spill House			
Dip Nets	3 units				Oil Spill House			
Wheelbarrow w/ No-Flat Wheel	1 unit				Oil Spill House			

OSRO: Oil Spill Removal Organization
SWS First Response is the Port Everglade Plant and Terminal OSRO. A contract with SWS is maintained at the facility.
SWS OSRO Classification by the USCG is for River/Canal and Inland for Facilities and Vessels.
SWS response time to the site is approximately 75 minutes.
SWS personal have a minimum of 40 hours of HAZWOPER training.
SWS inspects and maintains the response equipment is monthly and review action items with Site Environmental Leader after each monthly inspection. Records will be maintained at the Site by the Site environmental leader.

A.2 COSRT 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

TABLE A.2			
LIST OF COSRT RESPONSE EQUIPMENT			
Location	**Type**	**Equipment Design**	**Quantity**
	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	Bouys	71 units
Box No. 22	Miscellaneous	Anchors	46 units
	Miscellaneous	Anchors / Chains / Ropes	46 units

TABLE A.2			
LIST OF COSRT RESPONSE EQUIPMENT			
Location	**Type**	**Equipment Design**	**Quantity**
	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 11/2"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

TABLE A.2			
LIST OF COSRT RESPONSE EQUIPMENT			
Location	**Type**	**Equipment Design**	**Quantity**
	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
	Tool	Pipe Wrench 24"	4 units
	Tool	Pipe Vice	1 unit
	Tool	Pipe Threader	3 sets

TABLE A.2			
LIST OF COSRT RESPONSE EQUIPMENT			
Location	**Type**	**Equipment Design**	**Quantity**
	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
	Miscellaneous	Cam-Lok 4" plug	31 units
	Miscellaneous	Tackle for bolcks	4 units
	Miscellaneous	Blocks	16 units
	Safety	Rubber Boots	107 pair

TABLE A.2			
LIST OF COSRT RESPONSE EQUIPMENT			
Location	**Type**	**Equipment Design**	**Quantity**
	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
	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

TABLE A.2			
LIST OF COSRT RESPONSE EQUIPMENT			
Location	**Type**	**Equipment Design**	**Quantity**
	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
	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

TABLE A.2			
LIST OF COSRT RESPONSE EQUIPMENT			
Location	**Type**	**Equipment Design**	**Quantity**
	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
	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.

TABLE A.2			
LIST OF COSRT RESPONSE EQUIPMENT			
Location	**Type**	**Equipment Design**	**Quantity**
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
	Recovery	Vac Unit, trailer mounted	1 unit
	Miscellaneous	Pressure washer	1 unit
	Miscellaneous	Command trailer	1 unit

A.3 FIRE EXTINGUISHERS

Table A.3 lists the fire extinguishers at the Port Everglades plant and Terminal and their location and type.

TABLE A.3 FIRE EXTINGUISHERS AND LOCATIONS PORT EVERGLADES PLANT AND TERMINAL	
Location	**Type**
Oil Transfer Pit	20# ABC
Apprentice Bldg. W. Wall Inside	20# ABC
Fire Equipment Room Behind 3 & 4 Elevator	20# ABC
Fire Equipment Room Behind 3 & 4 Elevator	20# ABC
Fire Equipment Room Behind 3 & 4 Elevator	20# ABC
Fire Equipment Room Behind 3 & 4 Elevator	5# ABC
North Wall of Hazardous Waste Storage Area	20# ABC
South Wall of Hazardous Waste Storage Area	20# ABC
Fire Equipment Room Behind 3 & 4 Elevator	20# ABC
Fire Equipment Room Behind 3 & 4 Elevator	20# ABC
Fire Equipment Room Behind 3 & 4 Elevator	20# ABC
Fire Equipment Room Behind 3 & 4 Elevator	5# ABC
East of No. 2 BFP	20# ABC
No. 2C BFP	15# ABC
North Wall of Welding Shop	10# ABC

APPENDIX C

INSPECTION FORMS

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.

FLORIDA POWER AND LIGHT COMPANY
CONTAINER INSPECTION RECORD

MONTH:	WEEK 1	WEEK 2	WEEK 3	WEEK 4	WEEK 5
INSPECTED BY (ENTER INITIALS)					
DATE INSPECTED (MONTH/DAY/YEAR)					
IS HAZARDOUS WASTE STORED ON SITE?					
NUMBER OF CONTAINERS INSPECTED?					
ARE ALL DRUM BUNGS AND TOPS SECURE?					
IS UNKNOWN WASTE SAMPLED AND STORED SEPARATELY?					
ARE DRUMS IN GOOD CONDITION? (NO LEAKS, DENTS, BULGES, RUST, ETC.)					
IS AISLE SPACE SUFFICIENT?					
ARE WARNING SIGNS POSTED?					
ARE DRUMS LABELED: HAZARDOUS WASTE, ACCUMULATION DATE OR SAMPLE DATE?					
ARE FLAMMABLE WASTE DRUMS GROUNDED?					
IS THE STORAGE AREA FREE FROM RAIN?					
HAVE ALL DRUMS BEEN STORED FOR LESS THAN 90 DAYS?					
HAS AREA BEEN INSPECTED DURING THE LAST 7 DAYS?					
IS SPILL EQUIPMENT AVAILABLE?					
IS A FIRE EXTINGUISHER AVAILABLE?					
ARE IGNITABLE AND REACTIVE WASTES STORED > 50 FT INSIDE PROPERTY LINES?					
ARE ALL WASTE ACCUMULATED IN D.O.T. APPROVED CONTAINERS?					
IS HOUSEKEEPING IN GOOD ORDER?					
ARE INCOMPATIBLE WASTES SEPARATED?					
IS WASTE STORED IN BULK QUANTITIES SECURED?					
COMMENTS:					

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.

FLORIDA POWER AND LIGHT COMPANY

STORAGE TANK AND PIPING INSPECTION RECORD – TERMINAL

	CALENDAR YEAR:	J	F	M	A	M	J	J	A	S	O	N	D
	INSPECTED BY (ENTER INITIALS)												
	DATE INSPECTED (MONTH/DAY)												
TANK DIKE AREAS	IS PIPING, VALVES, FLANGES, ETC. FREE OF LEAKS, RUPTURES OR CORROSION												
	ARE PIPE SUPPORTS IN GOOD CONDITION												
	IS SPILL EQIPMENT AVAILABLE												
	ARE WARNING SIGNS POSTED												
	IS HOUSEKEEPING IN GOOD ORDER												
	ARE DIKE AREAS FREE OF EXCESSIVE RAINWATER												
	IS IN-LINE EQUIPMENT OPERATING PROPERLY												
	IS SECONDARY CONTAINMENT LINER FOR TANKS 901/902 INTACT												
TANK 800	IS LEVEL CONTROL AND ALARM WORKING PROPERLY												
	IS TANK EXTERIOR COATING IN GOOD CONDITION												
	IS TANK FOUNDATION SHOWING SIGNS OF SETTLING												
	IS TANK SHOWING SIGNS OF WETTING, DISCOLORATION, BLISTERING, CORROSION, CRACKS OR LEAKAGE												
TANK 801	IS LEVEL CONTROL AND ALARM WORKING PROPERLY												
	IS TANK EXTERIOR COATING IN GOOD CONDITION												
	IS TANK FOUNDATION SHOWING SIGNS OF SETTLING												
	IS TANK SHOWING SIGNS OF WETTING, DISCOLORATION, BLISTERING, CORROSION, CRACKS OR LEAKAGE												
TANK 802	IS LEVEL CONTROL AND ALARM WORKING PROPERLY												
	IS TANK EXTERIOR COATING IN GOOD CONDITION												
	IS TANK FOUNDATION SHOWING SIGNS OF SETTLING												
	IS TANK SHOWING SIGNS OF WETTING, DISCOLORATION, BLISTERING, CORROSION, CRACKS OR LEAKAGE												

TANK 804	IS LEVEL CONTROL AND ALARM WORKING PROPERLY												
	IS TANK EXTERIOR COATING IN GOOD CONDITION												
	IS TANK FOUNDATION SHOWING SIGNS OF SETTLING												
	IS TANK SHOWING SIGNS OF WETTING, DISCOLORATION, BLISTERING, CORROSION, CRACKS OR LEAKAGE												
TANK 805	IS LEVEL CONTROL AND ALARM WORKING PROPERLY												
	IS TANK EXTERIOR COATING IN GOOD CONDITION												
	IS TANK FOUNDATION SHOWING SIGNS OF SETTLING												
	IS TANK SHOWING SIGNS OF WETTING, DISCOLORATION, BLISTERING, CORROSION, CRACKS OR LEAKAGE												
TANK 806	IS LEVEL CONTROL AND ALARM WORKING PROPERLY												
	IS TANK EXTERIOR COATING IN GOOD CONDITION												
	IS TANK FOUNDATION SHOWING SIGNS OF SETTLING												
	IS TANK SHOWING SIGNS OF WETTING, DISCOLORATION, BLISTERING, CORROSION, CRACKS OR LEAKAGE												
TANK 807	IS LEVEL CONTROL AND ALARM WORKING PROPERLY												
	IS TANK EXTERIOR COATING IN GOOD CONDITION												
	IS TANK FOUNDATION SHOWING SIGNS OF SETTLING												
	IS TANK SHOWING SIGNS OF WETTING, DISCOLORATION, BLISTERING, CORROSION, CRACKS OR LEAKAGE												
TANK 808	IS LEVEL CONTROL AND ALARM WORKING PROPERLY												
	IS TANK EXTERIOR COATING IN GOOD CONDITION												
	IS TANK FOUNDATION SHOWING SIGNS OF SETTLING												
	IS TANK SHOWING SIGNS OF WETTING, DISCOLORATION, BLISTERING, CORROSION, CRACKS OR LEAKAGE												
SLOP TANK 1	IS LEVEL CONTROL AND ALARM WORKING PROPERLY												
	IS TANK EXTERIOR COATING IN GOOD CONDITION												
	IS TANK FOUNDATION SHOWING SIGNS OF SETTLING												
	IS TANK SHOWING SIGNS OF WETTING, DISCOLORATION, BLISTERING, CORROSION, CRACKS OR LEAKAGE												
SLOP TANK 2	IS LEVEL CONTROL AND ALARM WORKING PROPERLY												
	IS TANK EXTERIOR COATING IN GOOD CONDITION												
	IS TANK FOUNDATION SHOWING SIGNS OF SETTLING												
	IS TANK SHOWING SIGNS OF WETTING, DISCOLORATION, BLISTERING, CORROSION, CRACKS OR LEAKAGE												

TANK 901	IS LEVEL CONTROL AND ALARM WORKING PROPERLY												
	IS TANK EXTERIOR COATING IN GOOD CONDITION												
	IS TANK FOUNDATION SHOWING SIGNS OF SETTLING												
	IS TANK SHOWING SIGNS OF WETTING, DISCOLORATION, BLISTERING, CORROSION, CRACKS OR LEAKAGE												
	IS INTERSTITIAL SPACE FREE OF PRODUCT												
TANK 902	IS LEVEL CONTROL AND ALARM WORKING PROPERLY												
	IS TANK EXTERIOR COATING IN GOOD CONDITION												
	IS TANK FOUNDATION SHOWING SIGNS OF SETTLING												
	IS TANK SHOWING SIGNS OF WETTING, DISCOLORATION, BLISTERING, CORROSION, CRACKS OR LEAKAGE												
	IS INTERSTITIAL SPACE FREE OF PRODUCT												

FPL - STORAGE TANK AND PIPING INSPECTION RECORD - PLANT

MONTHLY INSPECTION (not to exceed 35 days)	**DATE: _____**						
INSPECTION ITEMS **LEGEND: Y = YES, N = NO**	**TANK # M1**	**TANK # M2**	**TANK # M3**	**TANK # M4**	**TANK # 903**	**TANK # 904**	**TANK # CAUSTIC**
PIPING COMPONENTS							
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?							
SECONDARY CONTAINMENT SYSTEM							
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?							
STORAGE TANK COMPONENTS							
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
PORT EVERGLADES
FUEL OIL TERMINAL
Storm Water From Diked Petroleum Areas, D01B2

Prerequisites to discharging from this outfall are as follows:

1] Facility must have a Spill Prevention Control and Countermeasures [SPCC] Plan

2] Facility will not discharge any oil, grease, or oily sheen. All of these contaminants shall be removed prior to discharge with a portable oil skimmer or similar device or oil absorbent material.

3] Facility shall not discharge any floating solids or visible foam.

4] Facility shall record and file the following information monthly.

5] Pump volume is rated at 12000 GPM.

Date of Reading _____

Time of Reading _____

* Hour Meter Reading _____

Volume in Gallons _____

Was oil or grease present? _____ yes ____ no. If yes, advise how it was removed prior to discharge.

_____

_____

_____

Initials _____

* The hour meter indicates the amount of time the pump runs, which is used to calculate volume discharged.

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

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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	(954) 658-2262 Mobile (305) 863-4010 Miami Office (561 (640-2479 WPB Office	8 – 118 - 9570

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:

- A Mobile Data Terminal utilizing Ram Mobile Data's wireless data network. This system is capable of allowing a user to log on to FPL's mainframe computer for use with applications such as PROFS, TCMS, etc.

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

	PPN			GRP 1	PSN			GRP 2	PCC			GRP 3	PMR			GRP 4	PRV			GRP 5
	Putnam		**20**		**Sanford**		**96**		**Cape Canaveral**		**37**		**Martin**		**165**		**Riviera**		**35**	
	New TK250 =		0		TK250 =		62		TK250 =		6		CP200 =		93		New TK250 =		0	
	New GP300 =		10		GP300 =		34		EX 500 =		4		GP300 =		16		New GP300 =		35	
	Exist TK250 =		0		Exist TK250 =		0		HT750 =		7		GP 350=		6		Exist TK250 =		0	
	Exist GP300 =		10		Exist GP300 =		7		RPV516A		9		Exist GP300 =		50		Exist GP300 =		0	
CHANNEL	**TX**	**RX**	**Descrptn**	**Tone**	**TX**	**RX**	**Descrptn**	**Tone**	**TX**	**RX**	**Descrptn**	**Tone**	**TX**	**RX**	**Descrptn**	**Tone**	**TX**	**RX**	**Descrptn**	**Tone**
1	158.250	153.680	RPT1	1	153.500	153.500	BSE1	1	153.680	153.680	BSE1	2	153.500	158.250	RPT1	1	153.515	153.515	BSE1	1
2	153.545	153.545	PP 1	3	153.545	153.545	PP 1	3	153.545	153.545	PP 1	3	153.425	159.660	RPT2	1	153.545	153.545	PP 1	3
3	153.635	153.635	PP 2	3	153.530	153.530	PP 7	3	153.635	153.635	PP 2	3	153.455	159.720	RPT3	3	153.635	153.635	PP 2	3
4	**XXX**	**162.475**	**WX**	**CSQ**	158.250	158.250	PP11	3	153.575	153.575	PP 8	3	158.175	151.985	RPT4	3	153.665	153.665	PP10	3
5					158.235	153.620	RPT3	1	**XXX**	**162.55**	**WX**	**CSQ**	153.590	153.470	T/A1	3	**XXX**	**162.475**	**WX**	**CSQ**
6					**XXX**	**162.475**	**WX**	**CSQ**					160.065	153.59	T/A2					
7													160.065	160.065	T/A3					
8					451.625	456.625	RPT 1						153.635	153.635	T/A4					
9					451.050	456.050	RPT 2						153.545	153.545	T/A5					
10													153.500	153.500	RPT Fail 1					
11													153.425	153.425	RPT Fail 2					
12													153.455	153.450	RPT Fail 3					
13													158.175	158.175	RPT Fail 4					
14													162.425		Weather					
15																				
16	153.680	153.680	T/A 1	1																

	PPE			GRP 6	PFL			GRP 7	PCU			GRP 8	PFM			GRP 9	PMT			GRP 10
	Port Everglades		**100**		**Fort Lauderdale**		**0**		**Cutler**		**5**		**Fort Myers**		**35**		**Manatee**		**100**	
	New TK2140 =		80		New TK250 =		0		New TK250 =		0		New TK250 =		29		TK250 =		20	
	New GP300 =		20		New GP300 =		0		New GP300 =		5		New GP300 =		0		TK280 =		30	
	Exist TK250 =		0		Exist TK250 =		0		Exist TK250 =		0		Exist TK250 =		6		TK2170 =		50	
	Exist GP300 =		0		Exist GP300 =		0		Exist GP300 =		0		Exist GP300 =		0		Exist GP300 =		0	
CHANNEL	**TX**	**RX**	**Descrptn**	**Tone**	**TX**	**RX**	**Descrptn**	**Tone**	**TX**	**RX**	**Descrptn**	**Tone**	**TX**	**RX**	**Descrptn**	**Tone**	**TX**	**RX**	**Descrptn**	**Tone**
1	159.540	153.125	RPT1	203.5	457.075	452.075	Ch 1	82.5	158.175	153.665	RPT1	2	153.125	153.125	BSE1	2	159.585	153.320	RPT1	1
2	154.490	159.930	BSE2	D565N	452.000	452.000	Ch 2	107.2	159.585	159.585	PP 3	3	159.540	159.540	BSE2	2	159.615	153.425	RPT2	1
3	159.780	159.780	BSE3	203.5	451.725	451.725	Ch 3	107.2	**XXX**	**162.55**	**WX**	**CSQ**	153.545	153.545	PP 1	3	158.235	153.620	RPT3	1
4	159.585	159.585	PP 3	103.5	457.525	457.525	Ch 4	107.2					153.635	153.635	PP 2	3	159.870	159.870	PP 6	3
5	159.615	159.615	PP 4	103.5	457.550	457.550	Ch 5	107.2					159.615	159.615	PP 4	3	159.735	159.735	PP12	3
6	159.825	159.825	PP 5	103.5	457.575	457.575	Ch 6	107.2					159.825	159.825	PP 5	3	159.780	159.780	PP13	3
7	159.870	159.870	PP 6	103.5	457.600	457.600	Ch 7	107.2					**XXX**	**162.475**	**WX**	**CSQ**	**XXX**	**162.55**	**WX**	**CSQ**
8	159.900	159.900	PP14	103.5	451.125	451.125	Ch 8	107.2									153.320	153.320	T/A 1	1
9	153.530	153.530	PP15	103.5	451.775	451.775	Ch 9	107.2									153.425	153.425	T/A 2	1
10	159.930	159.930	SIMLX	D565N	456.775	451.775	Ch 10	D152N									153.620	153.620	T/A 3	1
11		162.550	WX	CSQ													**156.450**	**156.450**	**Marine 9**	**CSQ**
12																	**156.800**	**156.800**	**Marine 16**	**CSQ**
13																	**157.100**	**157.100**	**Marine 22**	**CSQ**
14																	**156.425**	**156.425**	**Marine 68**	**CSQ**
15																	**156.625**	**156.625**	**Marine 72**	**CSQ**
16									153.665	153.665	T/A 1	2					**156.925**	**156.925**	**Marine 78**	**CSQ**

	PWC			GRP9
	Power Plant West County			**85**
	New HT750 =		85	
CHANNEL	**TX**	**RX**	**Descrptn**	**Tone**
1	158.525	151.520	RPT1	114
2	160.050	151.535	RPT2	116
3	160.140	151.490	RPT3	122
4		162.475	Weather	
5	T/A 1	151.5200		114
6	T/A 2	151.5350		116
7	T/A 3	151.4900		122
8				
9				
10				
11				
12				
13				
14				
15				
16				

TONES:
1. 203.5
2. 151.4
3. 103.5
4. 82.5
5. 107.2
6. D152N

NOTES:
1. Total radios required by all locations = 355 (105 16 channel TK250 + 235 16 channel GP300s for plants + 15 160 channel TK250s for Juno)
2. Total existing radios = 117 (67 GP300's and 50 TK250's)
3. 270 new radios available (181 GP300's and 89 TK250's), therefore, 32 additional radios are available as spares
4. 13 spare GP300s will be programmed with SIMPLEX FREQUENCIES ONLY
5. 19 Spare TK250s will be programmed for ALL LOCATIONS (160 channels GRP 1-10)
6. Frequencies licensed at PFL, but implementation on hold
7. Frequency Update 2/11/2010 D.Gutierrez

APPENDIX E

SITE SAFETY AND HEALTH PLAN

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 Florida Power and Light Company'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 Florida Power and Light Company 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.
- Serving as the principal point of contact for state and federal safety and health personnel assigned to monitor response operations.

The Port Everglades Plant 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.
- 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.
- 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.
- 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.
- 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.
- 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 the Port Everglades Plant. Table E-1 provides general information on these products, and this appendix contains Chemical Data Sheets for these products. General safety and health guidelines to be observed when working on a spill involving these products are provided below.

- No. 2 fuel oil
- No. 6 fuel oil
- Jet A
- Unleaded gasoline
- Lube oil
- Mineral oil
- Diesel

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 fire:

- Secure all open flames; no smoking.
- Do not use open lights.
- Don necessary protective clothing.
- 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.

TABLE E-1
DESCRIPTIVE INFORMATION ON
OIL HANDLED AT THE
PORT EVERGLADES PLANT

NAME	APPEARANCE	ODOR	HAZARDS
No. 2 Fuel Oil	Clear to Light Amber	Mild Petroleum	• Combustible. May be Ignited By Heat or an Open Flame. • Avoid inhalation. • Irritating to Skin and Eyes; Avoid Contact. • Avoid Ingestion.
No. 6 Fuel Oil	Viscous Dark Liquid	Sulfur	• Combustible. May be Ignited By Heat or an Open Flame. • Avoid inhalation. • Irritating to Skin and Eyes; Avoid Contact. • Avoid Ingestion.
Jet A	Clear to Amber	Slight Hydrocarbon	• Combustible. May be Ignited By Heat or an Open Flame. • Avoid inhalation. • Irritating to Skin and Eyes; Avoid Contact. • Avoid Ingestion.
Lube Oil	Light Pale Liquid	Mild Odor	• Combustible. May be Ignited By Heat or an Open Flame. • Avoid inhalation. • Irritating to Skin and Eyes; Avoid Contact. • Avoid Ingestion.
Unleaded Gasoline	Light Straw to Light Red Liquid	Hydro-carbon Odor	• Combustible. May be Ignited By Heat or an Open Flame. • Avoid inhalation. • Irritating to Skin and Eyes; Avoid Contact. • Avoid Ingestion.
Mineral Oil	Colorless to Light Brown	Motor Oil-Like Odor	• Combustible. May be Ignited By Heat or an Open Flame. • Avoid inhalation. • Irritating to Skin and Eyes; Avoid Contact. • Avoid Ingestion.

If respiratory equipment is required, the Oil Spill Coordinator, or his/her designee, would contact:

Safety Equipment Company
6507 North Harney Road
P.O. Box 31268
Tampa, FL 33631-3268
Phone No. (813) 748-1438

Signs and symptoms of inhalation of No. 2 fuel oil 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.
- 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 rehydrate 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.
- **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.
- 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.
- 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.
- 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.
- 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."
- 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 rewarming can be attempted by placing a bottle filled with warm water next to the victim's head, neck, arm pits, or groin.

- 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.
- **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).
- 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.

- 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 exists and read instructions for accessing the exits.
- 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.
- **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.
- 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.
- 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^3 as mineral oil mist
ACGIH TLV-TWA: 5 mg/m^3 as mineral oil mist*
*1997 NOIC: sum of 15 NTP-listed polynuclear aromatic hydrocarbons 0.005 mg/m^3, A1
100
Hydrogen Sulfide (H_2S)
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 varieswith product specification and does not affect the health and safety properties as outlined in this MaterialSafety Data Sheet.

Hydrogen Sulfide (H_2S) may be present in trace quantities (by weight), but may accumulate to toxic concentrations such as in tank headspace. The presence of H_2S is highly variable, unpredictable and does not correlate with sulfur content. Studies with similar products have shown that 1 ppm H_2S by weight in liquid may produce 100 ppm or more H_2S 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 followingacute (single) exposure. May cause dermal sensitization. Liquid may be hot (typically 110 - 120 ^{o}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 mayresult 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 ^{o}F (>65.5 ^{o}C) (minimum) ASTM D-93
AUTOIGNITION TEMPERATURE: > 765 ^{o}F (>407 ^{o}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, CO2, 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 ^{o}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_2S) - confined spaces should be tested for H_2S 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_2S 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_2S 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_2S) has a rotten egg “sulfurous” odor. This odor should not be used as a warning property of toxic levels because H_2S can overwhelm and deaden the sense of smell. Also, the odor of H_2S in heavy oils can easily be masked by the petroleum-like odor of the oil. Therefore, the smell of H_2S should not be used as an indicator of a hazardous condition - a H_2S

meter or colorimetric indicating tubes are typically used to determine the concentration of H_2S.

BASIC PHYSICAL PROPERTIES
BOILING RANGE: > 500 ^oF (> 260 ^oC)
VAPOR PRESSURE: <0.1 psia @ 70 ^oF (21 ^oC)
VAPOR DENSITY (air = 1): NA
SPECIFIC GRAVITY (H_2O = 1): 0.876 – 1.000 (API 30.0 – 10.0)
PERCENT VOLATILES: Negligible
EVAPORATION RATE: negligible
SOLUBILITY (H_2O): 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 ExposureLevel (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 respons bility 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
PRODUCT NAME: MAPLLC AVIATION TURBINE FUEL JET A
MARATHON MSDS NO: 0123MAR019

1. CHEMICAL PRODUCT AND COMPANY INFORMATION

PRODUCT NAME:
MANUFACTURER / DISTRIBUTOR:
MAPLLC AVIATION TURBINE FUEL JET A
MARATHON ASHLAND PETROLEUM LLC
539 SOUTH MAIN STREET

FINDLAY OH 45840
SYNONYMS:

AVIATION TURBINE FUEL JET A, MAPLLC; JET A AVIATION FUEL; MAPLLC AVIATION TURBINE

EMERGENCY PHONE NUMBERS:
FUEL JET A (877)627-5463
(800)424-9300

CHEM FAMILY: PETROLEUM HYDROCARBON
MSDS INFORMATION: (419)421-3070
CHEM FORMULA: MIXTURE
PRODUCT CODE: NONE
MSDS REVISION DATE: 07/28/1998

INFORMATION SUPPLIED BY: CRAIG M. PARKER
MANAGER, TOXICOLOGY AND PRODUCT SAFETY

2. COMPOSITION / INFORMATION ON INGREDIENTS

PRODUCT INFORMATION:

MAPLLC AVIATION TURBINE FUEL JET A (CAS # 8008-20-6) IS A/AN COMPLEX MIXTURE OF PARAFFINS, CYCLOPARAFFINS, OLEFINS AND AROMATIC HYDROCARBONS HAVING HYDROCARBON CHAIN LENGTHS PREDOMINANTLY IN THE RANGE OF C9 THROUGH C16. CONTAINS MINOR AMOUNTS OF SULFUR (<0.05%). MAY CONTAIN A TRACE AMOUNT OF BENZENE (<0.01%).

	PERCENT RANGE	CAS NUMBER
COMPONENTS:		
SATURATED HYDROCARBONS (PARAFFINS AND CYCLOPARAFFINS)	70.00- 80.00	MIXTURE
AROMATIC HYDROCARBONS	17.00- 20.00	MIXTURE
UNSATURATED HYDROCARBONS (OLEFINS)	3.00- 6.00	MIXTURE

EXPOSURE GUIDELINES

	LIMIT	TYPE	SOURCE
PRODUCT:			
MAPLLC AVIATION TURBINE FUEL JET A	NONE ESTABLISHED		
COMPONENTS:			
SATURATED HYDROCARBONS	NONE ESTABLISHED		
AROMATIC HYDROCARBONS	NONE ESTABLISHED		
UNSATURATED HYDROCARBONS	NONE ESTABLISHED		

3. HAZARDS IDENTIFICATION

********** EMERGENCY OVERVIEW **********

AVIATION TURBINE FUEL JET A IS A CLEAR TO AMBER COLORED LIQUID. AVIATION TURBINE FUEL JET A IS CONSIDERED TO BE A COMBUSTIBLE LIQUID PER THE OSHA HAZARD COMMUNICATION STANDARD AND SHOULD BE KEPT AWAY FROM HEAT, FLAME AND SOURCES OF IGNITION. NEVER SIPHON THIS PRODUCT BY MOUTH. IF SWALLOWED, TURBINE FUEL MAY GET SUCKED INTO THE LUNGS (ASPIRATED) AND CAUSE LUNG DAMAGE OR EVEN DEATH. PROLONGED OR REPEATED SKIN CONTACT CAN CAUSE DEFATTING AND DRYING OF THE SKIN WHICH MAY PRODUCE SEVERE IRRITATION OR DERMATITIS.

OSHA WARNING LABEL:

WARNING!
COMBUSTIBLE LIQUID.
ASPIRATION (INADVERTENT SUCTION) OF LIQUID INTO THE LUNGS CAN PRODUCE CHEMICAL PNEUMONIA OR EVEN DEATH.
PRODUCES SKIN IRRITATION UPON PROLONGED OR REPEATED CONTACT.

****
*

POTENTIAL HEALTH EFFECTS

EYE:

PRODUCES LITTLE OR NO IRRITATION ON DIRECT CONTACT WITH THE EYE.

SKIN:

PROLONGED AND REPEATED LIQUID CONTACT CAN CAUSE DEFATTING AND DRYING OF THE SKIN WHICH MAY PRODUCE SEVERE IRRITATION OR DERMATITIS.

INHALATION:

HIGH VAPOR CONCENTRATIONS MAY PRODUCE HEADACHE, GIDDINESS, VERTIGO, AND ANESTHETIC STUPOR.

INGESTION:

INGESTION MAY RESULT IN NAUSEA, VOMITING, DIARRHEA AND RESTLESSNESS.

ASPIRATION (INADVERTENT SUCTION) OF LIQUID INTO THE LUNGS MUST BE AVOIDED AS EVEN SMALL QUANTITIES IN THE LUNGS CAN PRODUCE CHEMICAL PNEUMONITIS, PULMONARY EDEMA/HEMORRHAGE AND EVEN DEATH.

CARCINOGEN LISTING:

THE INTERNATIONAL AGENCY FOR RESEARCH ON CANCER (IARC) HAS DETERMINED THAT THERE IS INADEQUATE EVIDENCE FOR THE CARCINOGENICITY OF FUEL OIL IN HUMANS.

IARC HAS DETERMINED THAT THERE IS SUFFICIENT EVIDENCE FOR THE CARCINOGENICITY IN EXPERIMENTAL ANIMALS OF WHOLE ENGINE EXHAUST AND EXTRACTS OF DIESEL ENGINE EXHAUST PARTICLES. IARC DETERMINED THAT THERE IS ONLY LIMITED EVIDENCE FOR THE CARCINOGENICITY IN HUMANS OF DIESEL ENGINE EXHAUST. HOWEVER, IARC'S OVERALL EVALUATION HAS RESULTED IN THE IARC DESIGNATION OF DIESEL ENGINE EXHAUST AS PROBABLY CARCINOGENIC TO HUMANS (GROUP 2A) BECAUSE OF THE PRESENCE OF CERTAIN ENGINE EXHAUST COMPONENTS.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE:

PREEXISTING SKIN CONDITIONS AND RESPIRATORY DISORDERS MAY BE AGGRAVATED BY EXPOSURE TO COMPONENTS OF FUEL OILS.

4. FIRST AID MEASURES

EYE:

FLUSH EYES WITH LARGE AMOUNTS OF WATER FOR AT LEAST 15 MINUTES. IF SYMPTOMS OR IRRITATION OCCUR, CALL A PHYSICIAN.

SKIN:

WASH WITH SOAP AND LARGE AMOUNTS OF WATER. REMOVE CONTAMINATED CLOTHING. IF SYMPTOMS OF IRRITATION OCCUR, CALL A PHYSICIAN.

INHALATION:

IF AFFECTED, MOVE PERSON TO FRESH AIR. IF BREATHING IS DIFFICULT, ADMINISTER OXYGEN. IF NOT BREATHING OR NO HEARTBEAT, GIVE ARTIFICIAL RESPIRATION OR CARDIOPULMONARY RESUSCITATION (CPR). IMMEDIATELY CALL A PHYSICIAN.

INGESTION:

DO NOT INDUCE VOMITING. DO NOT GIVE LIQUIDS. IMMEDIATELY CALL A PHYSICIAN.

NOTES TO PHYSICIAN:

NO DATA AVAILABLE.

5. FIRE FIGHTING MEASURES

FLAMMABLE PROPERTIES:

FLASH POINT:	120-190 F
AUTOIGNITION TEMP:	489 F
EXPLOSIVE LIMITS (% BY VOLUME IN AIR)	
LOWER:	0.7
UPPER:	5.0

FIRE AND EXPLOSION HAZARDS:

THIS PRODUCT HAS BEEN DETERMINED TO BE A COMBUSTIBLE LIQUID PER THE OSHA

HAZARD COMMUNICATION STANDARD AND SHOULD BE HANDLED ACCORDINGLY. FOR ADDITIONAL FIRE RELATED INFORMATION, SEE NFPA 30 OR THE NORTH AMERICAN EMERGENCY RESPONSE GUIDE 128.

EXTINGUISHING MEDIA:

FOR SMALL FIRES, CLASS B FIRE EXTINGUISHING MEDIA SUCH AS CO2, DRY CHEMICAL, FOAM (AFFF/ATC) OR WATER SPRAY CAN BE USED. FOR LARGE FIRES, WATER SPRAY, FOG OR FOAM (AFFF/ATC) CAN BE USED. FIRE FIGHTING SHOULD BE ATTEMPTED ONLY BY THOSE WHO ARE ADEQUATELY TRAINED AND EQUIPPED WITH PROPER PROTECTIVE EQUIPMENT.

SPECIAL FIRE FIGHTING INSTRUCTIONS:

AVOID USE OF STRAIGHT WATER STREAMS. WATER SPRAY AND FOAM (AFFF/ATC) MUST BE APPLIED CAREFULLY TO AVOID FROTHING. AVOID EXCESSIVE APPLICATION. USE WATER SPRAY TO COOL EXPOSED SURFACES FROM AS FAR A DISTANCE AS POSSIBLE. KEEP RUN-OFF WATER OUT OF SEWERS AND WATER SOURCES.

6. ACCIDENTAL RELEASE MEASURES

ISOLATE AND EVACUATE AREA. SHUT OFF SOURCE IF SAFE TO DO SO. ELIMINATE ALL IGNITION SOURCES. ADVISE NATIONAL RESPONSE CENTER (800-424-8802) IF SUBSTANCE HAS ENTERED A WATERWAY. NOTIFY LOCAL HEALTH AND POLLUTION CONTROL AGENCIES, IF APPROPRIATE. CONTAIN LIQUID WITH SAND OR SOIL. RECOVER AND RETURN FREE LIQUID TO PROPER CONTAINERS. USE SUITABLE ABSORBENT MATERIALS SUCH AS VERMICULITE, SAND, OR CLAY TO CLEAN UP RESIDUAL LIQUIDS.

7. HANDLING AND STORAGE

COMPLY WITH ALL APPLICABLE OSHA, NFPA AND CONSISTENT LOCAL REQUIREMENTS. USE APPROPRIATE GROUNDING AND BONDING PRACTICES. STORE IN PROPERLY CLOSED CONTAINERS THAT ARE APPROPRIATELY LABELED AND IN A COOL, WELL-VENTILATED AREA. DO NOT EXPOSE TO HEAT, OPEN FLAME, STRONG OXIDIZERS OR OTHER SOURCES OF IGNITION. DO NOT CUT, DRILL, GRIND OR WELD ON EMPTY CONTAINERS SINCE THEY MAY CONTAIN EXPLOSIVE RESIDUES. AVOID REPEATED AND PROLONGED SKIN CONTACT. EXERCISE GOOD PERSONAL HYGIENE INCLUDING REMOVAL OF SOILED CLOTHING AND PROMPT WASHING WITH SOAP AND WATER. NEVER SIPHON THIS PRODUCT BY MOUTH.

8. EXPOSURE CONTROL / PERSONAL PROTECTION

ENGINEERING CONTROLS:

LOCAL OR GENERAL EXHAUST REQUIRED WHEN SPRAYING OR USING AT ELEVATED TEMPERATURES.

PERSONAL PROTECTIVE EQUIPMENT

RESPIRATORY PROTECTION:

USE APPROVED ORGANIC VAPOR CHEMICAL CARTRIDGE OR SUPPLIED AIR RESPIRATORS WHEN MATERIAL PRODUCES VAPORS THAT EXCEED PERMISSIBLE LIMITS OR EXCESSIVE VAPORS ARE GENERATED. OBSERVE RESPIRATOR PROTECTION FACTOR CRITERIA CITED IN ANSI Z88.2. SELF-CONTAINED BREATHING APPARATUS SHOULD BE USED FOR FIRE FIGHTING.

SKIN PROTECTION:

NEOPRENE, NITRILE, POLYVINYL ALCOHOL (PVA), POLYVINYL CHLORIDE AND POLYURETHANE GLOVES TO PREVENT SKIN CONTACT.

EYE PROTECTION:

NO SPECIAL EYE PROTECTION IS NORMALLY REQUIRED. WHERE SPLASHING IS POSSIBLE, WEAR SAFETY GLASSES WITH SIDE SHIELDS.

OTHER PROTECTIVE EQUIPMENT:

NO SPECIAL PROTECTIVE CLOTHING IS NORMALLY REQUIRED. SELECT PROTECTIVE CLOTHING DEPENDING ON INDUSTRIAL OPERATIONS.

USE MECHANICAL VENTILATION EQUIPMENT THAT IS EXPLOSION-PROOF.

9. PHYSICAL AND CHEMICAL PROPERTIES

BOILING POINT:	360-550 F
MELTING POINT:	NO DATA AVAILABLE
SPECIFIC GRAVITY (H20=1):	C.A. 0.8
PACKING DENSITY (KG/M3):	NO DATA AVAILABLE
% SOLUBILITY IN WATER:	NEGLIGIBLE
VAPOR DENSITY (AIR=1):	4-5
VAPOR PRESSURE:	1-10 MMHG @ 100 F
PH INFORMATION:	NO DATA AVAILABLE
% VOLATILES BY VOL:	NO DATA AVAILABLE
EVAPORATION RATE:	NO DATA AVAILABLE
APPEARANCE:	CLEAR TO AMBER LIQUID
ODOR:	SLIGHT HYDROCARBON
ODOR THRESHOLD (PPM):	NO DATA AVAILABLE

ADDITIONAL PROPERTIES:

DENSITY: 6.76 LBS/GALLON
AVERAGE MOLECULAR WEIGHT: 180

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10. STABILITY AND REACTIVITY

STABILITY:

THE MATERIAL IS STABLE AT 70 F, 760MM PRESSURE.

CONDITIONS TO AVOID:

EXCESSIVE HEAT, SOURCES OF IGNITION.

HAZARDOUS DECOMPOSITION PRODUCTS:

CARBON MONOXIDE, ALDEHYDES, AROMATIC, OTHER HYDROCARBONS.

INCOMPATIBLE MATERIALS:

STRONG OXIDIZERS SUCH AS NITRATES, PERCHLORATES, CHLORINE, FLUORINE.

HAZARDOUS POLYMERIZATION:

WILL NOT OCCUR.

CONDITIONS TO AVOID:

NO DATA AVAILABLE.

ADDITIONAL COMMENTS:

NO DATA AVAILABLE.

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11. TOXICOLOGICAL INFORMATION

LIFETIME SKIN PAINTING STUDIES IN ANIMALS WITH SIMILAR DISTILLATE FUELS HAVE PRODUCED WEAK TO MODERATE CARCINOGENIC ACTIVITY FOLLOWING PROLONGED AND REPEATED EXPOSURE. SIMILAR MIDDLE DISTILLATES, WHEN TESTED AT NONIRRITATING DOSE LEVELS, DID NOT SHOW ANY SIGNIFICANT CARCINOGENIC ACTIVITY INDICATING THAT THIS TUMORIGENIC RESPONSE IS LIKELY RELATED TO CHRONIC IRRITATION AND NOT TO DOSE. REPEATED DERMAL APPLICATION HAS PRODUCED SEVERE IRRITATION AND SYSTEMIC TOXICITY IN SUBACUTE TOXICITY STUDIES. SOME COMPONENTS OF DISTILLATE FUELS, I.E., PARAFFINS AND OLEFINS, HAVE BEEN SHOWN TO PRODUCE A SPECIES SPECIFIC, SEX HORMONAL DEPENDENT KIDNEY LESION IN MALE RATS FROM REPEATED ORAL OR INHALATION EXPOSURE. SUBSEQUENT RESEARCH HAS SHOWN THAT THE KIDNEY DAMAGE DEVELOPS VIA THE FORMATION OF ALPHA-2U-GLOBULIN, A MECHANISM UNIQUE TO THE MALE RAT. HUMANS DO NOT FORM ALPHA-2U-GLOBULIN, THEREFORE, THE KIDNEY EFFECTS RESULTING FROM THIS MECHANISM ARE NOT RELEVANT IN HUMANS. KEROSENE AND NO.1 FUEL OIL WERE FOUND TO BE POSITIVE IN A FEW MUTAGENICITY TESTS WHILE NEGATIVE IN THE MAJORITY OF OTHERS. THE EXACT RELATIONSHIP BETWEEN THESE RESULTS AND HUMAN HEALTH IS NOT KNOWN.

COMBUSTION OF KEROSINE AND/OR DIESEL FUELS PRODUCES GASES AND PARTICULATES WHICH INCLUDE CARBON MONOXIDE, CARBON DIOXIDE, OXIDES OF NITROGEN AND/OR SULFUR AND HYDROCARBONS. EXPOSURE TO HIGH CONCENTRATIONS OF CARBON MONOXIDE CAN CAUSE HYPOXIA VIA THE FORMATION OF CARBOXYHEMOGLOBIN. CHRONIC INHALATION STUDIES OF WHOLE DIESEL ENGINE EXHAUST IN MICE AND RATS PRODUCED A SIGNIFICANT INCREASE IN LUNG TUMORS.

12. ECOLOGICAL INFORMATION

LIQUID CAN BE TOXIC TO AQUATIC LIFE AND CAUSE FOULING OF THE SHORELINE AT HIGH CONCENTRATIONS. THE AQUATIC 24 HOUR TLM IS 2,990 PPM IN FRESHWATER BLUEGILL FISH. HOWEVER, KEROSENE AND FUEL OILS DO NOT BIOCONCENTRATE IN THE FOOD CHAIN. IF PRODUCT IS RELEASED TO SOIL OR WATER, IT IS EXPECTED TO BIODEGRADE UNDER BOTH AEROBIC AND ANAEROBIC CONDITIONS.

13. DISPOSAL CONSIDERATIONS

THIS PRODUCT AS PRODUCED IS NOT SPECIFICALLY LISTED AS AN EPA RCRA HAZARDOUS WASTE ACCORDING TO FEDERAL REGULATIONS (40 CFR 260-271). HOWEVER, WHEN DISCARDED OR DISPOSED OF, IT MAY MEET THE CRITERIA OF AN "IGNITABLE" HAZARDOUS WASTE. THIS MATERIAL COULD ALSO BECOME A HAZARDOUS WASTE IF MIXED OR CONTAMINATED WITH A LISTED HAZARDOUS WASTE. IT IS THE RESPONSIBILITY OF THE USER TO DETERMINE IF DISPOSAL MATERIAL IS HAZARDOUS ACCORDING TO FEDERAL, STATE AND LOCAL REGULATIONS.

14. TRANSPORTATION INFORMATION

49 CFR 172.101:

PROPER SHIPPING NAME:	FUEL, AVIATION, TURBINE ENGINE
DOT CLASSIFICATION:	3
DOT IDENTIFICATION NUMBER:	UN 1863
PACKING GROUP:	PG III

15. REGULATORY INFORMATION

THE FOLLOWING REGULATIONS APPLY TO THIS PRODUCT:

OSHA HAZARD COMMUNICATION STANDARD (29 CFR 1910.1200):

THIS PRODUCT HAS BEEN EVALUATED AND DETERMINED TO BE HAZARDOUS AS DEFINED IN OSHA'S HAZARD COMMUNICATION STANDARD.

EPA TOXIC SUBSTANCES CONTROL ACT (40 CFR PART 710):

THIS PRODUCT AND/OR ITS COMPONENTS ARE LISTED ON THE TSCA CHEMICAL INVENTORY.

EPA SARA TITLE III SUPERFUND AMENDMENTS & REAUTHORIZATION ACT - EMERGENCY PLANNING & COMMUNITY RIGHT-TO-KNOW ACT OF 1986.

EXTREMELY HAZARDOUS SUBSTANCES (40 CFR PART 355):

THIS PRODUCT CONTAINS THE FOLLOWING COMPONENT(S) IDENTIFIED ON APPENDIX A AND B OF THE EXTREMELY HAZARDOUS SUBSTANCE LIST (AT A LEVEL OF 1% OR GREATER IF HAZARDOUS; 0.1% OR GREATER IF CARCINOGENIC: NONE.

EMERGENCY RELEASE NOTIFICATIONS (40 CFR PART 355):

THIS PRODUCT CONTAINS THE FOLLOWING COMPONENT(S) IDENTIFIED EITHER AS AN EXTREMELY HAZARDOUS SUBSTANCE (40 CFR 355) OR A CERCLA HAZARDOUS SUBSTANCE (40 CFR 302) WHICH IN CASE OF A SPILL OR RELEASE MAY BE SUBJECT TO EMERGENCY RELEASE REPORTING REQUIREMENTS: NONE.

MATERIAL SAFETY DATA SHEET REQUIREMENTS (40 CFR PART 370):

THE FOLLOWING EPA HAZARD CATEGORIES APPLY TO THIS PRODUCT:

IMMEDIATE (ACUTE) HEALTH HAZARD
FIRE HAZARD

MSDS'S OR A LIST OF MSDS'S AND THEIR HAZARDS (SEE EPA HAZARD CATEGORIES ABOVE) MAY BE REQUIRED TO BE SUBMITTED TO THE STATE EMERGENCY RESPONSE COMMISSION (SERC), LOCAL EMERGENCY PLANNING COMMITTEE (LEPC) AND LOCAL FIRE DEPARTMENT (LFD).

IN ADDITION, A TIER II OR TIER I FORM MAY BE REQUIRED TO BE SUBMITTED ANNUALLY TO THE SERC, LEPC AND LFD IF APPLICABLE THRESHOLD REPORTING QUANTITIES ARE EXCEEDED. CURRENT FEDERAL THRESHOLDS ARE:

10,000 POUNDS OR MORE OF AN OSHA HAZARDOUS SUBSTANCE
OR
500 POUNDS OR THE THRESHOLD PLANNING QUANTITY, WHICHEVER IS LESS, OF AN EXTREMELY HAZARDOUS SUBSTANCE.

NOTE: THRESHOLDS MAY VARY ACCORDING TO LOCAL AND STATE REGULATIONS.

TOXIC CHEMICAL RELEASE REPORTING (40 CFR PART 372):

THIS PRODUCT CONTAINS THE FOLLOWING COMPONENT(S) (AT A LEVEL OF 1% OR GREATER IF HAZARDOUS; 0.1% OR GREATER IF CARCINOGENIC) THAT MAY BE SUBJECT TO REPORTING ON THE TOXIC RELEASE INVENTORY (TRI) FORM R: NONE.

STATE AND COMMUNITY RIGHT-TO-KNOW REGULATIONS:

THIS MATERIAL MAY BE REGULATED BY LOUISIANA'S RIGHT-TO-KNOW LAW (REGULATORY STATUTE 30:2361).

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16. OTHER INFORMATION

NFPA CLASSIFICATION		**HMIS CLASSIFICATION**		**HAZARD RATING**
HEALTH:	1	HEALTH:	1	0 - LEAST
FIRE:	2	FIRE:	2	1 - SLIGHT
REACTIVITY:	1	REACTIVITY:	1	2 - MODERATE
OTHER:	-	PERSONAL PROTECTION:	*	3 - HIGH
				4 - EXTREME

COMMENTS:

* SEE SECTION 8 FOR GUIDANCE IN SELECTION OF PERSONAL PROTECTIVE EQUIPMENT.

Updated: Friday, June 29, 2001

**** 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 & 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.

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Material Safety Data Sheet for Mineral Oil

CrossTrans 106, 206 & 306 Page 1 of 5
Revised: 10-30-00
MSDS #: crostran

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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

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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

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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 ºF.
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.

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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 of 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, ºC (Method) See Section 9 (COC)
Ignition Temp.ºF 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

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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.

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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.

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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 by 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/m3 for mineral oil mist over an 8 hour daily exposure (ACGIH).

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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, ºC SPECIFIC PCA's 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 keytones when heated to combustion.
□Hazardous polymerization does not occur.

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11. TOXICOLOGICAL INFORMATION

TOXOLOGICAL 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.

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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.

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14. TRANSPORT INFORMATION

DOT
PRODUCT CLASS PLACARD NO. PACKAGING
Not App. Not.App Not App. Not App.

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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.

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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 induct 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

430306-00 MOBIL JET OIL 254
MATERIAL SAFETY DATA BULLETIN

LUBE OIL

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1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: MOBIL JET OIL 254
SUPPLIER: EXXONMOBIL CORPORATION
3225 GALLOWS RD.
FAIRFAX, VA 22037
24 - Hour Health and Safety Emergency (call collect): 609-737-4411
24 - Hour Transportation Emergency (Primary) CHEMTREC: 800-424-9300
(Secondary) 281-834-3296
Product and Technical Information: 800-662-4525 703-846-6693
MSDS Fax on Demand: 613-228-1467, other MSDS information: 856-224-4644

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2. COMPOSITION/INFORMATION ON INGREDIENTS

CHEMICAL NAMES AND SYNONYMS: SYN. HYDROCARBONS AND ADDITIVES
GLOBALLY REPORTABLE MSDS INGREDIENTS:

Substance Name	Approx. Wt%
TRICRESYL PHOSPHATE (1330-78-5)	1-5

See Section 8 for exposure limits (if applicable).

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3. HAZARDS IDENTIFICATION

This product is considered hazardous according to regulatory guidelines
(See Section 15).
EMERGENCY OVERVIEW: Brown Liquid. DOT ERG No. : NA. SEC: 0
POTENTIAL HEALTH EFFECTS: This product is not expected to produce neurotoxic effects under normal conditions of use and with appropriate personal hygiene practices. This product contains tricresyl phosphate (TCP). Overexposure to TCP by swallowing, prolonged or repeated breathing of oil mist, or prolonged or repeated skin contact may produce nervous system disorders including gastrointestinal disturbances, numbness, muscular cramps, weakness and paralysis. Paralysis may be delayed. Refer to emergency and first aid procedures for additional information.
POTENTIAL ENVIRONMENTAL EFFECTS: Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
For further health effects/toxicological data, see Section 11.

---

4. FIRST AID MEASURES

EYE CONTACT: Flush thoroughly with water. If irritation occurs, call a physician.

SKIN CONTACT: Wash contact areas with soap and water. Do not wear ordinary clothing wet with this product. Remove contaminated clothing. Launder contaminated clothing before reuse.

INHALATION: Remove from further exposure. If respiratory irritation, dizziness, nausea, or unconsciousness occurs, seek immediate medical assistance. If breathing has stopped, assist ventilation with bag-valve-mask device or use mouth-to-mouth resuscitation.

INGESTION: Seek immediate medical attention. If medical attention will be delayed, contact a Regional Poison Center or emergency medical professional regarding the induction of vomiting or use of activated charcoal. Do not induce vomiting or give anything by mouth to a groggy or unconscious person.

NOTE TO PHYSICIANS: This product is not expected to produce adverse effects under normal conditions of use and appropriate personal hygiene. This product contains TCP which can cause symptoms associated with cholinesterase inhibition. TCP may also produce neurotoxicity associated with inhibition of neuropathy target esterase (NTE). Effects of cholinesterase inhibition are expected to occur within hours of exposure, but neurotoxicity related to NTE inhibition may not become evident for several days. Treat appropriately.

---

5. FIRE-FIGHTING MEASURES

EXTINGUISHING MEDIA: Carbon dioxide, foam, dry chemical and water fog.

SPECIAL FIRE FIGHTING PROCEDURES: Water or foam may cause frothing. Use water to keep fire exposed containers cool. Water spray may be used to flush spills away from exposure. Prevent runoff from fire control or dilution from entering streams, sewers, or drinking water supply.

SPECIAL PROTECTIVE EQUIPMENT: For fires in enclosed areas, fire fighters must use self-contained breathing apparatus.

UNUSUAL FIRE AND EXPLOSION HAZARDS: None.

COMBUSTION PRODUCTS: Fumes, smoke, carbon monoxide, sulfur oxides, aldehydes and other decomposition products, in the case of incomplete combustion.

Flash Point C(F): > 246(475) (ASTM D-92).

Flammable Limits (approx.% vol.in air) - LEL: NE, UEL: NE

NFPA HAZARD ID: Health: 1, Flammability: 1, Reactivity: 0

---

6. ACCIDENTAL RELEASE MEASURES

NOTIFICATION PROCEDURES: Report spills as required to appropriate authorities. U. S. Coast Guard regulations require immediate reporting of spills that could reach any waterway including intermittent dry creeks. Report spill to Coast Guard toll free number (800) 424-8802. In case of accident or road spill notify CHEMTREC (800) 424-9300.

PROCEDURES IF MATERIAL IS RELEASED OR SPILLED: Adsorb on fire retardant treated sawdust, diatomaceous earth, etc. Shovel up and dispose of at an appropriate waste disposal facility in accordance with current applicable laws and regulations, and product characteristics at time of disposal.

ENVIRONMENTAL PRECAUTIONS: Prevent spills from entering storm sewers or drains and contact with soil.

PERSONAL PRECAUTIONS: See Section 8

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7. HANDLING AND STORAGE

HANDLING: Avoid ingestion. Avoid inhalation of mists. Avoid prolonged repeated skin contact. Wash thoroughly before eating or smoking. Keep away from feed or food products. Do not use on food processing machinery.

STORAGE: Store in a cool, dry, well ventilated area away from heat.

SPECIAL PRECAUTIONS: Prevent small spills and leakages to avoid slip hazard.

EMPTY CONTAINER WARNING: Empty containers retain residue (liquid and/or vapor) and can be dangerous. DO NOT PRESSURIZE, CUT, WELD, BRAZE, SOLDER, DRILL, GRIND OR EXPOSE SUCH CONTAINERS TO HEAT, FLAME, SPARKS, STATIC ELECTRICITY, OR OTHER SOURCES OF IGNITION; THEY MAY EXPLODE AND CAUSE INJURY OR DEATH. Do not attempt to refill or clean container since residue is difficult to remove. Empty drums should be completely drained, properly bunged and promptly returned to a drum reconditioner. All containers should be disposed of in an environmentally safe manner and in accordance with governmental regulations.

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8. EXPOSURE CONTROLS/PERSONAL PROTECTION

OCCUPATIONAL EXPOSURE LIMITS:

When mists/aerosols can occur, the following are recommended: 5 mg/m3 (as oil mist)- ACGIH Threshold Limit Value (TLV), 10 mg/m3 (as oil mist) - ACGIH Short Term Exposure Limit (STEL), 5 mg/m3 (as oil mist) - OSHA Permissible Exposure Limit (PEL)

VENTILATION: Use in well ventilated area with local exhaust ventilation.

RESPIRATORY PROTECTION: Approved respiratory protective equipment should be used if ventilation is inadequate and breathing of mists or vapors is likely.

EYE PROTECTION: If eye contact is likely, safety glasses with side shields or chemical type goggles should be worn.

SKIN PROTECTION: If prolonged or repeated skin contact is likely, oil impervious gloves should be worn. Good personal hygiene practices should always be followed.

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9. PHYSICAL AND CHEMICAL PROPERTIES

Typical physical properties are given below. Consult Product Data Sheet for specific details.
APPEARANCE: Liquid
COLOR: Brown
ODOR: Mild
ODOR THRESHOLD-ppm: NE
pH: NA
BOILING POINT C(F): > 316(600)
MELTING POINT C(F): NA
FLASH POINT C(F): > 246(475) (ASTM D-92)
FLAMMABILITY (solids): NE
AUTO FLAMMABILITY C(F): NE
EXPLOSIVE PROPERTIES: NA
OXIDIZING PROPERTIES: NA
VAPOR PRESSURE-mmHg 20 C: < 0.1
VAPOR DENSITY: NE
EVAPORATION RATE: NE
RELATIVE DENSITY, 15/4 C: 0.99
SOLUBILITY IN WATER: Negligible
PARTITION COEFFICIENT: NE
VISCOSITY AT 40 C, cSt: 26.4
VISCOSITY AT 100 C, cSt: 5.3
POUR POINT C(F): -62(-80)
FREEZING POINT C(F): NE
VOLATILE ORGANIC COMPOUND: NE
DMSO EXTRACT, IP-346 (WT.%): <3, for mineral oil only
NA=NOT APPLICABLE NE=NOT ESTABLISHED D=DECOMPOSES
FOR FURTHER TECHNICAL INFORMATION, CONTACT YOUR MARKETING REPRESENTATIVE

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10. STABILITY AND REACTIVITY

STABILITY (THERMAL, LIGHT, ETC.): Stable.
CONDITIONS TO AVOID: Extreme heat.
INCOMPATIBILITY (MATERIALS TO AVOID): Strong oxidizers.
HAZARDOUS DECOMPOSITION PRODUCTS: Product does not decompose at ambient temperatures.
HAZARDOUS POLYMERIZATION: Will not occur.

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11. TOXICOLOGICAL DATA

---ACUTE TOXICOLOGY---

ORAL TOXICITY (RATS): Practically non-toxic (LD50: greater than 2000 mg/kg). ---Based on testing of similar products and/or the components.

DERMAL TOXICITY (RABBITS): Practically non-toxic (LD50: greater than 2000 mg/kg). ---Based on testing of similar products and/or the components.

INHALATION TOXICITY (RATS): Practically non-toxic (LC50: greater than 5 mg/l). ---Based on testing of similar products and/or the components.

EYE IRRITATION (RABBITS): Practically non-irritating. (Draize score: 0 or greater but 6 or less). ---Based on testing of similar products and/or the components.

SKIN IRRITATION (RABBITS): Practically non-irritating. (Primary Irritation Index: greater than 0.5 but less than 3). ---Based on testing of similar products and/or the components.

OTHER ACUTE TOXICITY DATA: ****This mixture or a similar mixture did not result in any fatalities to rats at concentrations (see inhalation toxicity above) substantially higher than the 5 mg/m3 TLV suggested for oil mists.

---REPRODUCTIVE TOXICOLOGY (SUMMARY)---

This product is unlikely to produce reproductive effects by any route of exposure. In ExxonMobil laboratory studies, no adverse effects were seen on male reproductive systems of rats exposed to a generic jet engine oil containing 3% TCP for 14 days oral or 13 weeks dermal exposure. In addition, no adverse effects were seen in ovaries of female rats after 13 weeks dermal exposure.

---OTHER TOXICOLOGY DATA---

Under normal conditions of use this product is unlikely to produce neurotoxic effects by dermal or inhalation exposure but may produce such effects if orally ingested. While not acutely toxic, repeated applications of 2 g/kg of a generic engine oil containing 3% tricresyl phosphate (TCP), (one dermal application/ day, 5 days/week for 90 days), to male and female Sprague-Dawley rats decreased the activities of both serum and red blood cell cholinesterases. TCP was found to be responsible for the observed effects. Acute oral studies with the TCP additive showed inhibition of brain neuropathy target esterase which is indicative of a potential to produce delayed neurotoxicity. Repeated oral administration of 2 g/kg of a generic jet engine oil containing 3% tricresyl phosphate (TCP) (once/day, 5 days/week for 10 weeks) to hens (60mg/kg/day TCP) inhibited brain neuropathy target esterase (NTE) by 70% and caused ataxia or paralysis in 22 of 30 hens in this treatment group.

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12. ECOLOGICAL INFORMATION

ENVIRONMENTAL FATE AND EFFECTS:
This environmental assessment was conducted using information on the individual components as no test data was available for this specific formulation.
ECOTOXICITY: This product is expected to be harmful to aquatic organisms. May cause long-term adverse effects in the aquatic environment.
MOBILITY: Not established.
PERSISTENCE AND DEGRADABILITY: Not established.
BIOACCUMULATIVE POTENTIAL: Not established.

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13. DISPOSAL CONSIDERATIONS

WASTE DISPOSAL: Product is suitable for burning in an enclosed, controlled burner for fuel value or disposal by supervised incineration. Such burning may be limited pursuant to the Resource Conservation and Recovery Act. In addition, the product is suitable for processing by an approved recycling facility or can be disposed of at an appropriate government waste disposal facility. Use of these methods is subject to user compliance with applicable laws and regulations and consideration of product characteristics at time of disposal.
RCRA INFORMATION: The unused product, in our opinion, is not specifically listed by the EPA as a hazardous waste (40 CFR, Part 261D), nor is it formulated to contain materials which are listed hazardous wastes. It does not exhibit the hazardous characteristics of ignitability, corrosivity, or reactivity. The unused product is not formulated with substances covered by the Toxicity Characteristic Leaching Procedure (TCLP). However, used product may be regulated.

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14. TRANSPORT INFORMATION

USA DOT: NOT REGULATED BY USA DOT.
RID/ADR: NOT REGULATED BY RID/ADR.
IMO: NOT REGULATED BY IMO.
IATA: NOT REGULATED BY IATA.

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15. REGULATORY INFORMATION

US OSHA HAZARD COMMUNICATION STANDARD: Product assessed in accordance with OSHA 29 CFR 1910.1200 and determined to be hazardous.
EU Labeling: Product is dangerous as defined by the European Union Dangerous Substances/Preparations Directives.
Symbol: Not applicable.
Risk Phrase(s): R52/53.
Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
Safety Phrase(s): Not applicable.
Governmental Inventory Status: All components comply with TSCA, EINECS/ELINCS and AICS.

U.S. Superfund Amendments and Reauthorization Act (SARA) Title III:
This product contains no "EXTREMELY HAZARDOUS SUBSTANCES".
SARA (311/312) REPORTABLE HAZARD CATEGORIES:
CHRONIC
This product contains no chemicals subject to the supplier notification requirements of SARA (313) toxic release program.
The following product ingredients are cited on the lists below:

CHEMICAL NAME	CAS NUMBER	LIST CITATIONS
*** NO REPORTABLE INGREDIENTS ***		

--- REGULATORY LISTS SEARCHED ---

1=ACGIH ALL 6=IARC 1 11=TSCA 4 16=CA P65 CARC 21=LA RTK
2=ACGIH A1 7=IARC 2A 12=TSCA 5a2 17=CA P65 REPRO 22=MI 293
3=ACGIH A2 8=IARC 2B 13=TSCA 5e 18=CA RTK 23=MN RTK
4=NTP CARC 9=OSHA CARC 14=TSCA 6 19=FL RTK 24=NJ RTK
5=NTP SUS 10=OSHA Z 15=TSCA 12b 20=IL RTK 25=PA RTK
26=RI RTK
Code key: CARC=Carcinogen; SUS=Suspected Carcinogen; REPRO=Reproductive

---

16. OTHER INFORMATION

USE: JET TURBINE LUBRICANT
NOTE: PRODUCTS OF EXXON MOBIL CORPORATION AND ITS AFFILIATED COMPANIES ARE NOT FORMULATED TO CONTAIN PCBS.
Health studies have shown that many hydrocarbons pose potential human health risks which may vary from person to person. Information provided on this MSDS reflects intended use. This product should not be used for other applications. In any case, the following advice should be considered:
INJECTION INJURY WARNING: If product is injected into or under the skin, or into any part of the body, regardless of the appearance of the wound or its size, the individual should be evaluated immediately by a physician as a surgical emergency. Even though initial symptoms from high pressure injection may be minimal or absent, early surgical treatment within the first few hours may significantly reduce the ultimate extent of injury.
Precautionary Label Text:
CONTAINS TRICRESYL PHOSPHATE
WARNING!
Swallowing this product can cause nervous system disorders including paralysis. Prolonged or repeated breathing of oil mist, or prolonged or repeated skin contact can cause nervous system effects.
Never swallow. Wash hands after handling and before eating. Never use in or around food. Avoid prolonged or repeated overexposure to skin or lungs.
FIRST AID: If swallowed, seek immediate medical attention. If medical attention will be delayed, induce vomiting. In case of contact, wash skin with soap and water. Remove contaminated clothing.
For industrial use only. Not intended or suitable for use in or around a household or dwelling.
Never use empty container to carry water or food. Do not cut, puncture, or weld on or near container.

****

For Internal Use Only: MHC: 0* 0* 1* 0* 1*, MPPEC: C, TRN: 430306-00, ELIS: 400326, CMCS97: 970833, REQ: MIAMI, SAFE USE: L

EHS Approval Date: 15OCT2002
****

****
Legally required information is given in accordance with applicable
Information given herein is offered in good faith as accurate, but
without guarantee. Conditions of use and suitability of the product for
particular uses are beyond our control; all risks of use of the product
are therefore assumed by the user and WE EXPRESSLY DISCLAIM ALL
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MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE IN RESPECT TO
THE USE OR SUITABILITY OF THE PRODUCT. Nothing is intended as a
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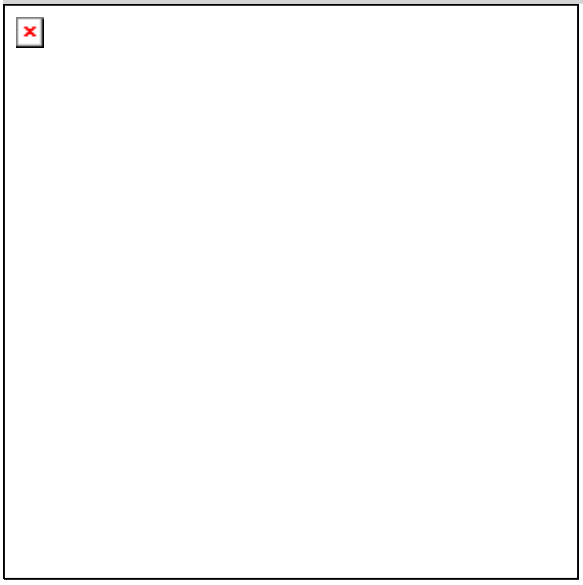

APPENDIX F
MEDIA RELATIONS

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
Jackie Anderson	561-310-2866	(b) (6)	561-694-3496
Greg Brostowicz	561-339-8342		561-694-3745
Sarah Marmion	786-375-0914		561-694-4643
Neil Nissan	561-281-5804		561-694-3712
Mayco Villafaña	305-588-1584		305-552-3231 305-719-5084 (beeper)

Nuclear media inquiries and emergencies:

Name	Office	Home Phone	Beeper	Cellular Phone
Michael Waldron	561-694-3618			561-324-7035

Table F-2
AREA MEDIA LIAISONS

(b) (6)

	NAME	OFFICE	OFFICE FAX	CELLULAR
DAYTONA/ N FLORIDA (904)	Womble, Jeff (A)	386-329-5102	386-329-5115	352-317-1324
	Cobb, Dave (P) Lake City (St. Johns's North)	386-754-2022	386-397-3481	386-397-3481
	Russillo, Rusty (A)	386-824-7630	386-824-7620	904-806-3323
BREVARD/ SEMINOLE (321)	Sanderson, Sandy (P) (Brevard)	321-726-4955	321-726-4919	321-258-3723
	Volenec, Larry (A) (Seminole)	386-254-2353	386-254-2352	386-547-4131
	Bock, Craig(A)	321-726-4952	321-726-4944	321-403-1028
	Kunz, Tom (A) Brevard	321-726-4946	321-726-4944	321-266-1158
	Quinn, Jim (A)	321-726-4948	321-726-4944	321-266-1629
	Lee, Tim (A)	321-726-4940	321-726-4944	321-258-8022
SARASOTA/ BRADENTON/ VENICE/ ARCADIA (941)	Dowling, Rae	941-316-6266	941-316-7104	941-704-9072
	Chamberlin, Russ (A)	941-316-6251	941-316-6281	941-914-2368
	Sayer, Don (A)	941-708-2900	941-708-2920	941-704-9944
	Alsop, Rod (A)	941-316-6250	941-316-6252	941-350-0007
FT. MYERS/ PUNTA GORDA/ NAPLES (941)	Whidden, Grover (P)	239-332-9291	239-332-9209	239-209-1169
	Balogh, Frank (A)	239-332-9140	239-332-9209	941-410-4014
	Carlyle, Bill (A)	239-332-9193	239-332-9209	239-410-9371
	Miller, Charlotte (A)	239-332-9103	239-332-9209	239-691-1610
PALM BEACH (561)	Kiselewski, Don (North & West)	561-691-7948	561-694-4718	561-379-6064
	Williams, Ethel (South & Central)	561-691-2575	561-694-4718	561-346-8891
TREASURE COAST (772)	Blount, Nick (P)(Martin & Okeechobee)	772-781-3118	772-781-3117	772-285-2003
	Brunjes, Amy (St. Lucie & Indian River)	772-337-7006		561-603-8378
BROWARD (954)	Shatas, Lynn (P) (Central)	954-321-2215	954-321-2220	954-629-3945
	Wesley, Ben (A) (Southern)	954-321-2258	954-321-2220	954-614-0162
	Hebert, Isabel (A) (Northern)	954-321-2189	954-321-2189	954-321-2220
DADE (305)	Rodriguez, Manny J. (P)	305-552-3443	305-552-2772	305-794-7638
	Ferrer, Ramon (A)	305-552-2514	305-552-2772	305-773-9164
	Villasuso, Eloy (A)	305-552-2549	305-552-2772	305-613-4143
	Player, Aletha	305-552-4124	305-552-2772	305 794 2039
	Beck, Gene (A)	305-552-2825	305-552-4955	305-215-3620

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 COSRT 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.

Background Statement to Media

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.

Sample Standby Statement to Media

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)*: _____

_____

###

Media Statement – Corporate Communications Department

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.

###

Media Statement – Joint Information Center

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 _____.

###

Media Statement – Joint Information Center

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.

###

Media Statement – Joint Information Center

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.

###

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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 if 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.

MSRC. Marine Spill Response Corporation

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, Southhampton, 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

WORKSHEET FOR DETERMINING WORST CASE DISCHARGE VOLUMES
NO. 6 FUEL OIL ABOVEGROUND STORAGE TANK AT THE PORT EVERGLADES TERMINAL

Part I Background Information

Step (A) Calculate Worst Case Discharge in barrels: [redacted] (A)

Step (B) Oil Group: 4

Step (C) Operating Area (choose one): X 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
10 (D1)	50 (D2)	70 (D3)

Step (E1) On-Water Recovery: Step (D2) x Step (A) / 100 = [redacted] (E1)

Step (E2) Shoreline Recovery: Step (D3) x Step (A) / 100 = [redacted] (E2)

Step (F) Emulsification Factor: 1.4 (F)

Step (G) On-Water Oil Recovery Resource Mobilization Factor

Tier 1	Tier 2	Tier 3
0.15 (G1)	0.25 (G2)	0.40 (G3)

Part II On-Water Oil Recovery Capacity (barrels/day): [redacted]

Part III Shoreline Cleanup: [redacted] Step (E2) x Step (F)

Part IV On-Water Response Capacity By Operating Area
(Amount needed to be contracted for in barrels/day)

Tier 1	Tier 2	Tier 3
10,000 (J1)	20,000 (J2)	40,000 (J3)

Part V On-Water Amount Needed to be Identified, but not Contracted for in Advance (Barrels/day)

Tier 1	Tier 2	Tier 3
11,000 Part II Tier 1 - Step (J1)	15,000 Part II Tier 2 - Step (J2)	16,000 Part II Tier 3 - Step (J3)

WORKSHEET FOR DETERMINING WORST CASE DISCHARGE VOLUMES
NO. 6 FUEL OIL PIPELINE DOCK TO TERMINAL

Part I Background Information

Step (A) Calculate Worst Case Discharge in barrels: (b) (A)

Step (B) Oil Group: 4

Step (C) Operating Area (choose one): X 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
10 (D1)	50 (D2)	70 (D3)

Step (E1) On-Water Recovery: Step (D2) x Step (A) / 100

Step (E2) Shoreline Recovery: Step (D3) x Step (A) / 100

(b) (7)(F)

Step (F) Emulsification Factor: 1.4 (F)

Step (G) On-Water Oil Recovery Resource Mobilization Factor

Tier 1	Tier 2	Tier 3
0.15 (G1)	0.25 (G2)	0.40 (G3)

Part II On-Water Oil Recovery Capacity (barrels/day)

(b) (7)(F)

Part III Shoreline Clean

Step (E2) x Step (F)

Part IV On-Water Response Capacity By Operating Area
(Amount needed to be contracted for in barrels/day)

Tier 1	Tier 2	Tier 3
10,000 (J1)	20,000 (J2)	40,000 (J3)

Part V On-Water Amount Needed to be Identified, but not Contracted for in Advance (Barrels/day)

Tier 1	Tier 2	Tier 3
0 Part II Tier 1 - Step (J1)	0 Part II Tier 2 - Step (J2)	0 Part II Tier 3 - Step (J3)

WORKSHEET FOR DETERMINING WORST CASE DISCHARGE VOLUMES
JET A OIL FROM PIPELINE DOCK TO TANKS 901 AND 902

Part I Background Information

Step (A) Calculate Worst Case Discharge in barrels: (b) (A)

Step (B) Oil Group: 2

Step (C) Operating Area (choose one): X 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
50 (D1)	50 (D2)	30 (D3)

Step (E1) On-Water Recovery: Step (D2) x Step (A) / 100 = (b) (7)(F)

Step (E2) Shoreline Recovery: Step (D3) x Step (A) / 100 = [redacted] (E2)

Step (F) Emulsification Factor: 1.8 (F)

Step (G) On-Water Oil Recovery Resource Mobilization Factor

Tier 1	Tier 2	Tier 3
0.15 (G1)	0.25 (G2)	0.40 (G3)

Part II On-Water Oil Recovery Capacity (barrels/day): (b) (7)(F) [redacted]

Part III Shoreline Cleanup Volume (barrels): Step (E2) x Step (F)

Part IV On-Water Response Capacity By Operating Area
(Amount needed to be contracted for in barrels/day)

Tier 1	Tier 2	Tier 3
10,000 (J1)	20,000 (J2)	40,000 (J3)

Part V On-Water Amount Needed to be Identified, but not Contracted for in Advance (Barrels/day)

Tier 1	Tier 2	Tier 3
0 Part II Tier 1 - Step (J1)	0 Part II Tier 2 - Step (J2)	0 Part II Tier 3 - Step (J3)

WORKSHEET FOR DETERMINING WORST CASE DISCHARGE VOLUMES
JET A OIL FROM EVERGLADES PIPELINE TO LAUDERDALE PLANT

Part I Background Information

Step (A) Calculate Worst Case Discharge in barrels: (b) (A)

Step (B) Oil Group: 2

Step (C) Operating Area (choose one): [ ] Nearshore/Inland Great Lakes [X] or Rivers and Canals

Step (D) Percentages of Oil

Percent Lost to Natural Dissipation	Percent Recovered Floating Oil	Percent Oil Onshore
40	15	45
(D1)	(D2)	(D3)

Step (E1) On-Water Recovery: Step (D2) x Step (A) / 100 = (b) (7)(F)

Step (E2) Shoreline Recovery: Step (D3) x Step (A) / 100 = (E2)

Step (F) Emulsification Factor: 1.8 (F)

Step (G) On-Water Oil Recovery Resource Mobilization Factor

Tier 1	Tier 2	Tier 3
0.30	0.40	0.60
(G1)	(G2)	(G3)

Part II On-Water Oil Recovery Capacity (barrels/day)

Tier 1 Tier 2 Tier 3 (b) (7)(F)

Part III Shoreline Cleanu

Step (E2) x Step (F)

Part IV On-Water Response Capacity By Operating Area
(Amount needed to be contracted for in barrels/day)

Tier 1	Tier 2	Tier 3
1,500	3,000	6,000
(J1)	(J2)	(J3)

Part V On-Water Amount Needed to be Identified, but not Contracted for in Advance (Barrels/day)

Tier 1	Tier 2	Tier 3
0	0	0
Part II Tier 1 - Step (J1)	Part II Tier 2 - Step (J2)	Part II Tier 3 - Step (J3)

(b) (7)(F)

APPENDIX I

SPILL REPORT FORM

Table I.1

Spill Report Form

INCIDENT DESCRIPTION	
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	

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