INTEGRATED CONTINGENCY PLAN

PORT ARTHUR REFINERY

Owner/Operator:
Highway 366 and 32 Street
Port Arthur, TX 77640

24-Hour Number:

(409) 963-6800

Prepared by: The Response Group, Inc. 13939 Telge Road; Cypress, Texas 77429

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PAR Integrated Contingency Plan

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1.1 APPLICABILITY OF SUBSTANTIAL HARM CRITERIA

Does the facility transfer oil over-water[1] 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[2] that is sufficiently large to contain the capacity of the largest aboveground oil storage tank plus sufficient freeboard to allow for precipitation?

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[2] (as calculated using the appropriate formula in Appendix C or a comparable formula) such that a discharge from the facility could cause injury to fish and wildlife and sensitive environments[2]?

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[2] (as calculated using the appropriate formula in Appendix C or a comparable formula) such that a discharge from the facility would shut down a public drinking water intake[2]?

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 spill[2] in an amount greater than or equal to 10,000 gallons within the last 5 years?

Yes _____ No X

Certification

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

Signature: Eric M. Miller

Name (please type or print): Eric Miller

Title: HSEQ Manager

Date: 02/06/2008

[1] Calculated using the appropriate formula in Attachment C-III to this appendix or a comparable formula.

[2] For further description of fish and wildlife and sensitive environments, see Appendices I, II, and III to DOC/NOAA's "Guidance for Facility and Vessel Response Plans: Fish and Wildlife and Sensitive Environments" (59 FR 14713, March 29, 1994) and the applicable ACP.

1.2 CERTIFICATION OF QUALIFIED INDIVIDUAL AND ALTERNATE QUALIFIED INDIVIDUAL

Total Petrochemicals & Refining USA, Inc. hereby certifies that the individuals identified as Qualified Individual and Alternate Qualified Individual in this Plan are capable of being reached on a 24-hour basis and have the full authority in accordance with the applicable federal and state regulations and as detailed in this Plan to:

- Activate and engage in contracting with oil spill removal organizations.
- Act as a liaison with the pre-designated Federal On-Scene Coordinator (FOSC).
- Obligate funds required to carry out response activities.

Plan Approved:

Eric H. Miller — Eric Miller, HSEQ Manager

02/06/2008 — Date

Qualified Individual: (24 hour basis)	Nigel Tranter Incident Commander
Work:	Total Petrochemicals & Refining USA, Inc. Highway 366 and 32 Street Port Arthur, TX 77640 (409) 985-0478 (409) 963-6807 (FAX)
Emergency Contact Telephone No.:	(409) 963-6800
Training:	8 Hr. Intro w/ Annual Refresher
Alternate Qualified Individuals: (24 hour basis)	**Name:** Ryan Riffer (409) 985-0154 Dorothy Bartol (409) 985-0353 Tom Henry (409) 985-0362 Hugues Morain (409) 985-0400 Amber Skinner (409) 985-0643 Keith Kelly (409) 985-0477
Work:	Total Petrochemicals & Refining USA, Inc. Highway 366 and 32nd Street Port Arthur, TX 77640
Emergency Contact Telephone No.:	(409) 963-6800
Training:	8 Hr. Intro w/ Annual Refresher

1.3 OPERATOR'S STATEMENT – SIGNIFICANT AND SUBSTANTIAL HARM AND CERTIFICATION OF RESPONSE

Facility Name: Total Petrochemicals & Refining USA, Inc – Port Arthur Refinery
Facility Address: Highway 366 and 32nd Street
Port Arthur, Texas 77642

Is the pipeline greater than 6 and 5/8 inches (168 mm) in outside nominal diameter, greater than 10 miles (16.1 km) in length? and

YES X NO _____

Has any line section experienced two or more reportable releases, as defined in 49 CFR 195.5, within the past five years? or

YES _____ NO X

Does any line section contain any electric resistance welded pipe, manufactured prior to 1970 and operates at a maximum operating pressure established under 49 CFR 195.406 that corresponds to a stress level greater than 50 percent of the specified minimum yield strength of the pipe? or

YES _____ NO X

Is any line located within a 5-mile (8 km) radius of potentially affected public drinking water intakes and could reasonably be expected to reach public drinking water intakes? or

YES X NO _____

Is any line located within a 1-mile (1.6 km) radius of potentially affected environmentally sensitive areas and could reasonably be expected to reach these areas?

YES X NO _____

Based on the DOT-PHMSA criteria above, the Total Petrochemicals USA, Inc. Port Arthur Refinery Pipeline system is considered "Significant and Substantial Harm".

Total Petrochemicals USA, Inc. certifies to the Pipeline and Hazardous Materials Safety Administration of the Department of Transportation that we have obtained, by contract or other approved means, the necessary private personnel and equipment to respond, to the maximum extent practicable, to a worst-case discharge.

Signature

HSEQ Manager
Title

Eric Miller
Name

02/06/2008
Date

1.4 DISTRIBUTION LIST

The Plan can be accessed electronically on the Total Petrochemical intranet, on the Environmental Department web site.

1.5 ANNUAL CERTIFICATION

The Plan must be reviewed at least annually for any changes in personnel, operations, response capabilities, or any other changes. All updates must be promptly submitted to the appropriate agencies. The log below must be kept with the plan for documentation purposes.

Name of Reviewer	Date of Review	Changes to Document (Y/N)
Leslie Stuart	9/10/07	Y
Leslie Stuart	2/1/08	N
Leslie Stuart	1/15/09	Y
Leslie Stuart	12/15/09	Y
Leslie Stuart	12/22/2010	Y
Corbin Smith	10/21/2011	N
Chris Gonzales	11/21/2012	N
Chris Gonzales	2/11/2013	Y
C. Smith	April 2015	Y

1.6 PURPOSE AND SCOPE

The Port Arthur Refinery (PAR) Integrated Contingency Plan is designed to provide Total PAR employees and Total Petrochemical Pipeline Company personnel with information regarding specific systems, procedures, and operations, which will aid in the response to incidents at the Port Arthur Refinery or incidents involving Total Petrochemical Pipeline Company's various off-site pipelines. The plan covers emergencies that are global in nature and extend beyond a simple operational upset handled by operations personnel. While not designed as a "how to" manual, this document will serve as a resource tool for response to a variety of incidents.

Specific objectives of this plan are to:

- Define procedures and systems to help prevent emergencies.
- Define alert, notification, and accountability (both internal and external) procedures to be followed when an emergency incident occurs.
- Define the organizational structure within Total PAR for responding to incidents occurring at the Port Arthur, Texas facilities or off-site involving Total Petrochemical Pipeline Company's various pipelines.
- Identify and list all available equipment and personnel resources for response to in-plant incidents (both internal and external).
- Diagram in-plant response systems for use in emergencies.
- Outline general precautions to be taken in preparation for inclement weather.
- Describe the training requirements for Total PAR Incident Management Team response personnel.
- Identify sensitivities and protection strategies for response to spills within the geographic location boundaries of the plan.
- The Port Arthur Refinery geographic location boundaries have been defined as the areas occupied by the facilities and close proximity areas including portions of the Neches River and Sabine Lake as follows:
  - the easternmost portion of the Neches River from Bird Island Bayou to the mouth of the Sabine Lake
  - the northernmost portion of Sabine Lake south to Crane Bayou
- Satisfy requirements of regulatory agencies mandating written procedures to address response to emergencies occurring at Total Port Arthur Refinery or off-site involving Total Petrochemical Pipeline Company's various pipelines.

1.6 PURPOSE AND SCOPE (Cont'd)

The Port Arthur Refinery Integrated Contingency Plan is based on the National Incident Management System (NIMS) Incident Command System and utilizes the standard plan format recommended by the National Response Team Guidance Document on Integrated Contingency Planning as published in the Federal Register, 61 FR 28641.

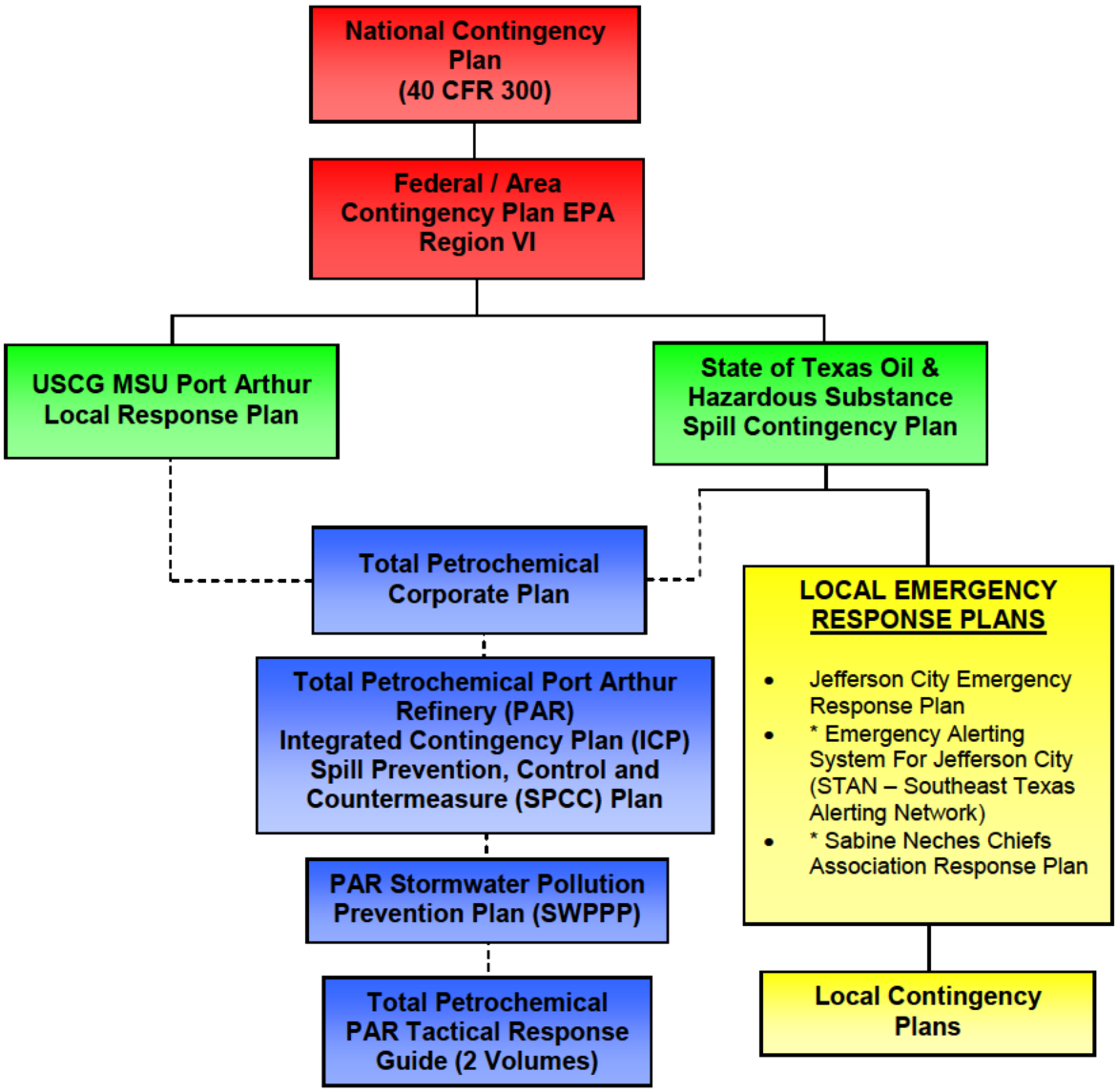
The Plan is intended to satisfy the requirements of regulatory agencies mandating written procedures to address response to emergencies occurring at the Port Arthur Refinery and off-site involving the various pipelines of the Total Petrochemical Pipeline Company, including:

- U.S. Environmental Protection Agency's (EPA) Oil Pollution Prevention Regulations, (i.e., 40 CFR, Part 112) that require a Spill Prevention Control and Countermeasures (SPCC) Plan and a Non-Transportation Related Facility Response Plan.
- U.S. EPA Spill Prevention, Control, and Countermeasure (SPCC) regulations as published in 40 CFR Part 112.1 – 112.8.
- OSHA's Emergency Action Plan Regulation as published in 29 CFR 1910.38(a).
- OSHA's HAZWOPER Regulation as published in 29 CFR 1910.120.
- Submittal of this Plan is intended to also satisfy requirements for:
  - the State of Texas under the Texas Oil Spill Prevention and Response Act of 1991 (TOSPRA),
  - Total Petrochemical's TGLO OSPR Certificate # 10219, EPA's RCRA Program 40 CFR 264, TNRCC 30 TAC 335, and
  - Total Petrochemical's compliance with anticipated federal requirements under the Oil Pollution Act of 1990 (OPA 90).
- Total PAR prepared the Integrated Contingency Plan to satisfy the USCG Marine Transportation Related Facility Response Plan Regulation 33 CFR 154, Part F.
- The Spill Response Plan has been submitted to the Department of Transportation – Pipeline and Hazardous Materials Safety Administration (PHMSA) to meet the Oil Pollution Act of 1990 (OPA 90) and 49 CFR 194 requirements for onshore oil pipelines.
- Total PAR has opted to follow the PREP Guidelines retroactive to January 1, 1994.

The response zone has been reviewed for consistency with the following plans:

- National Contingency Plan
- EPA Region VI – Regional Integrated Contingency Plan
- USCG – One Gulf Plan, Marine Safety Unit Port Arthur Geographic Response Plan

FIGURE 1.6 – INTERFACE WITH OTHER PLANS



- - - - - - - - - STAND ALONE CONTINGENCY PLANS
——————— FEDERAL, STATE, OR LOCAL ORGANIZATIONAL PLANS

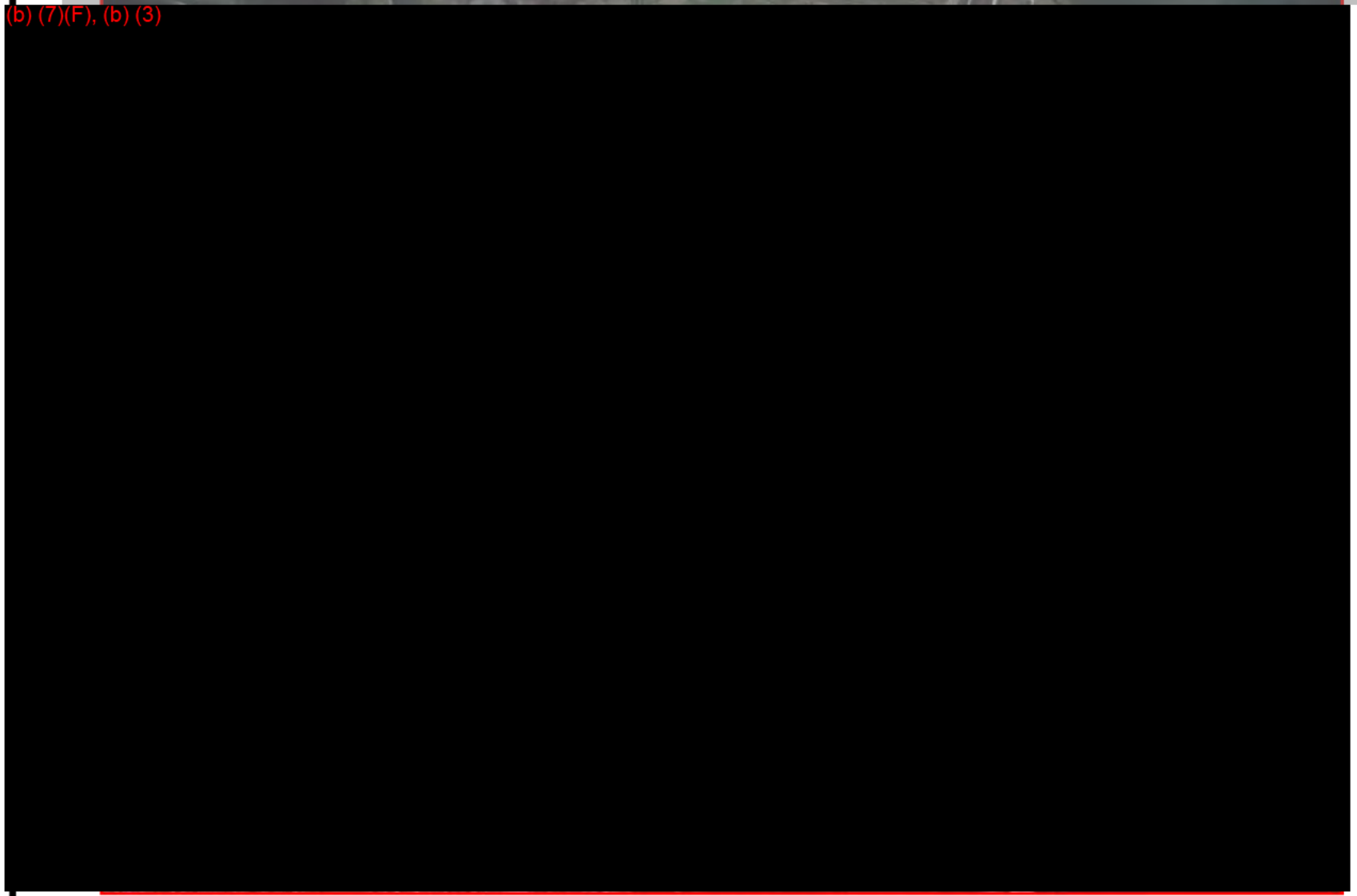
This Integrated Contingency Plan is designed to allow Total PAR and Total Pipeline to interface with existing governmental contingency plans with jurisdiction in the Port Arthur area. Priority to these plans will be adhered to pursuant to the federal, state and local laws and regulations. Copies of all of the above plans are maintained at the Shift Supervisor's Office and within the Command Center for use during an emergency response.

1.7 GENERAL FACILITY IDENTIFICATION INFORMATION

FACILITY NAME	**Total Petrochemicals & Refining USA, Inc. - Port Arthur Refinery** **Total Petrochemicals USA Pipeline Company** ***Phone (24 HR):*** **(409) 963-6800 or (409) 962-4421** **Fax: (409) 963-6633**		
LOCATION	**Physical Address** Highway 366 and 32nd Street Port Arthur, Texas 77642	**Mailing Address:** Post Office Box 849 Port Arthur, Texas 77641-0849	
	Latitude:	(b) (7)(F), (b) (3)	
	Longitude:		
	County:	Jefferson	
	State:	Texas	
	(b) (7)(F), (b) (3)		
OWNER ADDRESS / PHONE	Total Petrochemicals & Refining USA, Inc. Total Plaza 1201 Louisiana St., Ste. 1800 Houston, Texas 77002 (713) 483-5000	**PARENT COMPANY NAME**	Total, S.A.
EPA FRP ID NUMBER	FRP-06-TX-00439		
PHMSA/DOT ID NUMBER	1081		
TRI FACILITY ID NUMBER	77640FNLNDHIGHW		
RCRA ID NUMBER	TXD065099160		
TGLO ID NUMBER	10219		

FIGURE 1.7 AERIAL PHOTOGRAPH

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



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1.7 GENERAL FACILITY IDENTIFICATION INFORMATION (Cont'd)

FACILITY OPERATIONS

Facility Hours of Operation:	24 Hours
Date of Oil Storage Start-up:	Total Petrochemicals & Refining USA Inc. began operations as Fina Oil & Chemical during July 1973.
Facility's Standard Industrial Classification (SIC) Codes:	Petroleum Refining 2911 Petroleum Products 5172
Facility's Dunn & Bradstreet Number:	TOTAL NY, NY 001-329-077 Total Petrochemicals, Inc. Port Arthur Refinery Port Arthur, TX 03-913-2659
Financial Responsibility Certificate Numbers of Facility:	TXD065099160 (Port Arthur)
Nearest Cities:	Port Arthur, Groves, Port Neches
Direction from city to site:	From Beaumont - Take U.S. 69 South to Highway 73 East to Highway 366. The Total Port Arthur Refinery is located at the intersection of Highway 366 and 32nd Street in Port Arthur, Texas.
Wellhead Protection Area:	N/A
Facility Distance to Navigable Waters:	0 to ¼ quarter mile
Maximum Permitted Daily Production Throughput:	(b) (7)(F), (b) (3) [redacted]
Facility Total Maximum Oil Storage Capaci (Crude Oil & Petroleum Product):	
Total Number of Oil Storage Tanks (Crude Oil & Petroleum Product):	
Largest Oil Storage Tank Construction Capacity:	
Worst Case Oil Discharge Amount:	
Total Petrochemical Insurance Manager: Houston	281-227-5438/5772/5773

2.1 DISCOVERY

This section is a guide for response actions to be taken when an oil or hazardous substance spill is first reported or observed. All Total PAR employees are familiar with and trained in the procedures to be followed in an emergency. Specific procedures to be followed for responding will vary depending on the location of the spill and the operations taking place. Also included are safety procedures to be followed by all PAR employees. Facility security procedures can be found in Annex G of this plan.

2.1.1 INITIAL DISCOVERY / RESPONSE CHECKLIST

This section is a guide for response actions to be taken when an oil or hazardous substance spill, is first reported or observed.

SPILL DISCOVERER	Initiate Internal Notification/Response Procedures (Refer to **Section 2.2**). Refer to **FIGURE 2.4** for a flowchart showing logical steps to be followed by the Incident Management Team.

PORT ARTHUR REFINERY EMPLOYEES

All Port Arthur Refinery employees are trained in emergency response procedures. Specific response procedures will vary depending on the spill location and operational considerations in the area.

PERSON-IN-CHARGE OF FACILITY
RESPSONSE GUIDELINES

The appropriate response to a particular incident may vary depending on the nature and severity of the incident.

1		Stop the flow of oil	Act quickly to shut in source, close valves, etc. (**IF SAFE TO DO SO, PROPERLY TRAINED & HAVE PROPER PPE**).
2		Consider safety of personnel / call for medical assistance if needed.	Sound alarm via (b) (7)(F), (b) (3) or telephone (call extension 2222). **EVACUATE IF NECESSARY**.
3		Shut off ignition sources.	Motors, open flames, electrical circuits.
4		Call for medical assistance if needed / Coordinate rescue and medical response actions.	Perform this task only if trained to do so (i.e., member of medical & rescue teams) Refer to Hospital Listing in Figure 2.3.
5		Identify pollutant and assess possible hazards to human health and the environment.	Identify source and volume, characterize oxygen levels, explosive character, toxicity of air on scene, splash and ingestive hazards.
6		Initiate containment if safe to do so.	Contact PSC (b) (7)(F), (b) (3)), OSROs or DCOs if necessary (per Figure 2.3 listing).
7		Report all spills to your immediate supervisor, the Shift Supervisor or the Main Gate (b) (7)(F), (b) (3)	Follow Notification Flowchart, **FIGURE 2.4** and Immediate Action Flowchart in **SECTION 2.2**.

2.1 DISCOVERY (Cont'd)

2.1.2 EMERGENCY ALARM SYSTEM

The Port Arthur Refinery Emergency Alarm System is designed to provide notification to all areas of the plant in the event of an emergency.

Emergency Alarm Announcement As To The Affected Area

Activation of Emergency Alarm System

Total PAR Employee	Activate PAR's Emergency Alarm System. Notify Main Gate of the situation via the Total PAR Radio (b) (7)(F), (b) (3) or by calling 2222 on the telephone.
Non-Total Employee	Activate PAR's Emergency Alarm System. Immediately report the incident to a Total PAR employee or call the Main Gate ([redacted] or call X2222).
Emergency Notification Procedure	Report the situation by dialing (**2222**) on the telephone or by calling the Main Gate on the radio (b) (7)(F), (b) (3) Report the following information

1		Location of the Emergency
2		Type of Emergency
3		Name of Person Reporting the Emergency
4		Company Affiliation of the Person Reporting the Emergency.

Emergency Alarm System Test Frequency

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

2.1 DISCOVERY (Cont'd)

2.1.3 FIRE BRIGADE ACTIVATION: The Total PAR Fire Brigade is comprised of operations shift employees and is the fastest response organization that can be deployed to combat both a fire or vapor cloud threat. DAY SHIFT (7:30 AM–4:00 PM, Monday - Friday) When the Emergency Alarm Sounds		
Fire Brigade	Report to the fire area in full turn-out gear and commence control and extinguishments.	
On Scene Fire Chief	Will assign, when appropriate, personnel to drive fire engine to scene.	
Department Supervisor / Process Supervisor	Account for his/her personnel. Report missing person(s) according to plant personnel accounting policy.	
Machinist Foreman	Refinery or Tank Field Fire	Assign machinist to the fire pumps at the boat canal and/or the LNVA Canal
	Dock Fire	Assign machinist to the dock area fire water pump.
Logistics Section Chief / Stores Supervisor	Requisition two (2) flat bed trucks or forklifts to:	
	1	Move foam concentrate from the warehouse to the fire site
	2	Assign a driver to bring diesel fuel, via the refinery, fuel truck to refuel the diesel fueled fire trucks.
Storeroom Employees, Technical Employees And Maintenance Employees	Report to their respective shops and offices and standby for assignments.	
FIRES DURING OFF SHIFTS (NIGHTS, WEEKEND, HOLIDAYS)		
Fire Brigade	Report to the fire area in full turn-out gear and commence control and extinguishments	
Medical personnel	Report to the fire scene to provide first aid. Arrange transportation (ambulance and/or medivac) to the hospital (if anyone is injured).	
On-Scene Fire Chief, Deputy Incident Commander or Shift Supervisor	Activate Brigade call out list. Activate external notification (mutual aid) according to Refinery policy.	
Shift Supervisor	Assign personnel to monitor five water pumps until assigned personnel arrive. Arrange for delivery of foam concentrate from the warehouse as necessary until the Staging Coordinator arrives on scene.	

2.1 DISCOVERY (Cont'd)

2.1.4 INITIAL RESPONSE ACTIONS

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

The pages that follow discuss initial response actions for a variety of emergencies that have the possibility of occurring. These emergencies are discussed in the order listed below:

- Loss of Containment
- Vapor Cloud
- Decontamination
- Medical Emergency
- Natural Disaster

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

GENERAL RESPONSE GUIDELINES

Given below are general considerations that should be kept in mind when responding to an oil spill.

- Fire and explosion potential always exist.
- If you are uncertain about the safety of an area, wear protective gear and a breathing apparatus when approaching the area.
- Approach spilled material from an upwind direction, if possible.
- Keep non-essential personnel away from scene.
- Toxic gases may be released by some spills.
- Do not walk into or touch any spilled material. Avoid inhaling fumes, smoke, and vapors, even if no hazardous materials are involved.
- Do not assume that gases or vapors are harmless because of lack of odor.
- Check the MSDS to determine the flammable and toxic characteristics of the spilled material.

2.1 DISCOVERY (Cont'd)

2.1.4 INITIAL RESPONSE ACTIONS (Cont'd)

GENERAL RESPONSE GUIDELINES (Cont'd)

- Speed is essential in recovery efforts, especially during the initial response.
- Determine strategic objectives at the beginning of a spill.

In the event a spill exceeds the capability of the PAR Incident Management Team:

- The Deputy Incident Commander will request additional assistance from Total Petrochemicals & Refining USA, Inc, Inc. Corporate Office (Houston) as well as other Total locations (if necessary).
- PAR's Incident Commander will consult with the Deputy Incident Commander to determine if they should request activation and mobilization of the other Total facilities. If assistance is deemed necessary, activation and mobilization will be done immediately. The Incident Commander or the appointed designee will then notify the appropriate internal and external parties

2.1 DISCOVERY (Cont'd)

2.1.5 LOSS OF CONTAINMENT

LOSS OF CONTAINMENT: a) SPILL or b) EXPLOSIVE OR TOXIC VAPOR RELEASE			
Notify Response Personnel	To minimize the catastrophic potential.		
Notify Personnel in Effected Area	Notify all personnel in the immediate area or downwind to minimize exposure.		
Vapor Mitigation	Should begin immediately to minimize impact of release. (See Section 2.1.6 – Control Actions.		
EMERGENCY ALARM SYSTEM			
ACTIVATION	Use plant radio or telephone (intrinsically safe) to activate Emergency Alarm System described in **Section 2.1.2** and **Annex B**.		
IF RADIOS ARE USED	Identify the following		
	1		Released Material (if possible)
	2		Area Affected (size) & Location
	3		Direction of Travel
MAIN GATE	Monitor the radio message (day or night)		
	Immediately rebroadcast the alert on all available frequencies		
	Immediately notify PAR Safety Personnel / Shift Supervisor.		

WHAT IS A VAPOR CLOUD?			
A vapor cloud may be formed in the rapid release of product stored or processed under pressure and above its atmospheric boiling point. The cloud may be flammable or toxic and under certain conditions difficult to see if not invisible. Some of the more common types of material either processed or utilized in the process at the Refinery include (there may be other materials):			
Ammonia (sour water)	LPG	Chlorine	Naphtha
Hexane	Gasoline	Benzene	Xylene
Natural Gas	Propane	Hydrogen Sulfide (H2S)	
Propylene	Butane	Butylene	Sulfur Dioxide (SO2)
Toluene	Hydrogen	Hydrocarbon Mixtures	

VAPOR CLOUD NOTIFICATION PROCEDURES	
IMMEDIATELY	Activate vapor release alarm system (if present). If alarm is not available, use the phone or radio to report a release.
Non-Operating Personnel or Contractors	Notify the Number One Operator, Shift Supervisor or Main Gate at once.
Number One Operator / Shift Supervisor	Initiate Evacuation and Isolation of all areas threatened by the vapor cloud. **Quick Action is Essential**.
Off-Site Impact?	Vapor clouds may impact off-site which can require emergency notification according to pre-determined policy.

2.1 DISCOVERY (Cont'd)

2.1.5 LOSS OF CONTAINMENT (Cont'd)

EVASIVE ACTION TO CONSIDER	
When You Become Aware	Move out or away from contaminated site
Immediate Actions	Assess the wind direction
	Walk (do not run) in a cross wind or up wind direction. (Running will cause deeper respiration and you could trip / fall resulting in personal injury that would prevent you from leaving the area. Remember, the chemical cloud will only move at wind speeds. You will be able to walk away from most gas clouds)
	Short and shallow breathing while moving out of the area.
Wind Direction	Observe steam exhaust or wind socks to determine wind direction. Observe these indicators several times during your work shift.

2.1 DISCOVERY (Cont'd)

2.1.6 CONTROL ACTIONS

CONTROL ACTIONS: Immediate measures should be taken to dilute, control, and disperse a vapor cloud.		
Shutdown the Following	Ground Flares	Vehicles
	Welding	Boilers
	Burning in the Field or Shops	
Isolate Vapor Cloud	Control vapor cloud at the point closest to the source (if possible and safe). **DO NOT TAKE CHANCES**	
Apply	Water from monitor nozzles, hose lines, and if available, water deluge systems will be applied to the cloud to dilute and disperse vapors. Water nozzles should be set in the fog pattern. Personnel applying water must be careful not to position themselves down-wind and be adversely impacted by vapors.	
NOTE:	**UNDER NO CIRCUMSTANCE SHALL ANY EMPLOYEE KNOWINGLY ENTER A VAPOR CLOUD EVEN IN AN AIR PAK / SELF CONTAINED BREATING APPARATUS (SCBA).**	
If Vapor Cloud is Ignited	**DO NOT** extinguish the fire unless it poses an immediate and more serious hazard than the vapor cloud itself. Extinguishment and then re-ignition of the vapor from hot metal or area fire may be more hazardous than letting the fire burn.	
After Source is Under Control	Continue water fog application until vapors have been completely dispersed.	
Consider Run-off Water Containment	Water run-off from vapor mitigation is most likely contaminated and must be collected in the industrial sewer or contained in ditches for pick-up and treatment.	
ACCUTELY TOXIC GAS CONSIDERATIONS		
Most Likely Offenders	Sulphur Dioxide (SO_2)	Hydrogen Sulfide (H_2S)
	Chlorine (Cl_2)	Ammonia (NH_3)
Chemical Awareness	These chemicals can cause immediate acute stress on the human body and must be recognized quickly with appropriate evasive action taken to prevent acute health problems from exposure.	
Warning Properties	Material is very irritating to the eyes and respiratory track and a person (unless incapacitated) will not remain in even low concentrations. Hydrogen sulfide (rotten egg odor) may be unpleasant to smell initially, however H2S will rapidly fatigue one's sense of smell making it particularly hazardous.	

2.1 DISCOVERY (Cont'd)

2.1.7 DECONTAMINATION

DECONTAMINATION
• Decontamination facilities shall be designed to allow effective, efficient removal, and containment of contaminants. Decontamination facilities should be in place prior to employee/contractor entrance to areas where potential for exposure to contaminants exists.
• **Regardless of the decontamination facilities, all efforts to minimize personnel exposure should be taken.**
• Particular attention shall be paid to personal hygiene, i.e., wash hands prior to eating, drinking, or smoking, etc.
• A separate decontamination area should be established to allow only for emergency decontamination of personnel requiring life saving medical attention. Appropriate MSDS's shall be stored at this area at all times and be provided to health professionals involved in the care of injured workers.
• Decontamination facilities shall be designed to prevent further contamination of the environment and allow efficient movement of workers through the area.
• Incorporated into the decontamination area will be a "tool drop" area to serve as a temporary storage area for items that will be reused in the contaminated area such as rakes, shovels, brooms, etc.

2.1 DISCOVERY (Cont'd)

2.1.8 MEDICAL EMERGENCY

MEDICAL EMERGENCY	
All requests for emergency or **life saving** medical treatment are to be made through the Medical Unit Leader or by contacting the Total PAR Main Gate. On-site emergency medical response requires the same rapid assessment of the patient as any other situation, but requires the responders to be aware of other considerations that may affect the way they handle the patient. These considerations include the following:	
• The potential for contamination of the patient, responders, and equipment should be addressed. Responders should arrange to treat all patients **AFTER** the injured party has been decontaminated according to the Site Safety and Health Plan.	
• Site personnel should make the initial assessment of the patient and determine the severity of the injury/illness.	
• If the treatment needed is critical care or "life saving" treatment, rapid decontamination of the injured/ill party should be started. Refer to the site safety plan for steps to be taken in a gross decontamination for medical treatment.	
• **The need for full decontamination should be carefully weighed against the need for prompt medical treatment.**	
• The ambulance responding to medical emergencies shall be contacted as soon as possible and instructed exactly where to respond when needed and the nature of the contaminant.	
• MSDS information will be available and should be provided to medical personnel to alert them to decontamination requirements. MSDS info is available at each control room via PAR's web site, the Main Gate Security Building, the HSE Dept, and the F&S Bldg. In addition, the various MSDS are also available on PAR's computer system web site.	
• If emergency medical treatment is needed, it must be provided by trained medical personnel.	
Basic First Aid and Stabilization	The extent of in-plant treatment is that of "basic first aid" and stabilization of the injured employee. Basic first aid and stabilization is considered to consist of: • bandaging/splinting procedures. • CPR (cardio-pulmonary resuscitation). • immobilization of extremities. • basic re-hydration procedures (non-invasive fluid administration). • non-invasive thermal treatment (warming/cooling procedures). • emergency eye wash/shower.
Minor injuries may be evaluated and/or treated at the Refinery Health Services by medical personnel. More extensive/life threatening injuries will be treated by outside providers. If required, personnel injured at the refinery shall be stabilized as much as possible by the Emergency Medical Team member prior to transportation. In those cases where advanced medical care is required, the Emergency Medical Team shall attempt to determine the affected employees "relevant medical history" and "person to contact in the event of an emergency" from the Administrative Manager. Total Human Resources (HR) representative will meet with employees and/or family members to ensure all needs are addressed.	

2.1 DISCOVERY (Cont'd)

2.1.9 TORNADO / SEVERE WEATHER

TORNADO/SEVERE WEATHER	
Plant Action and Responsibilities	
Security/ Management	During questionable weather conditions, the Security group will monitor the weather band radio, county emergency radio network, and the STAN system. If a Tornado Warning is issued for our area, Security will immediately alert all Management Committee members. Based on the information received via the Tornado Warning, weather conditions in our specific locationand any sighting of funnel clouds, the Management Committee will determine if it is appropriate to issue a Plant Tornado Alert. Until a Plant Tornado Alert is issued, all persons in the refinery should not interrupt their normal routine except to watch for the presence of a tornado.
Plant Tornado Alert	In the event of a Plant Tornado Alert, the Security group will make an announcement over all radio channels stating: **THE PORT ARTHUR REFINERY IS NOW UNDER A PLANT TORNADO ALERT. ALL PERSONNEL ARE ADVISED TO TAKE IMMEDIATE SHELTER.** The Security group will also make an announcement over the public address system stating: **THE PORT ARTHUR REFINERY IS NOW UNDER A PLANT TORNADO ALERT. ALL FRONT OFFICE PERSONNEL SHOULD REMAIN IN THE BUILDING AND STAY AWAY FROM EXTERIOR WINDOWS OR DOORS.**
Plant Personnel, Contractors, and Visitors	All Total Port Arthur employees, contract personnel, and visitors should take the following action once a Plant Tornado Alert is announced: • Seek inside shelter, preferably in a reinforced building. All employees, contractors and visitors in a process area should immediately move into the local control house in that area. • All personnel located in the Central Maintenance Facility should move away from exterior windows or doors. **DO NOT ASSEMBLE IN THE CMF LUNCH ROOM!** • All personnel located in the Administration Building (front office) should take cover in the center part of the building - closing doors of the offices with windows. • If caught outside, take cover on low ground. If a tornado is approaching, lie flat in the nearest ditch or ravine.

2.1 DISCOVERY (Cont'd)

2.1.9 TORNADO / SEVERE WEATHER (Cont'd)

TORNADO/SEVERE WEATHER (Cont'd)	
Plant Personnel, Contractors, and Visitors	• Personnel who are housed in trailers or portable buildings should evacuate these locations and seek alternate shelter such as the Fire & Safety Building, Central Control, CMF, or the Administrative Building.
Updates/ All Clear	During the time that the refinery is under a Plant Tornado Alert, personnel should refrain from contacting the Main Gate for weather information. Updated conditions and pertinent information will be communicated via the radio system and /or public address system. When it has been determined that threatening conditions have passed, the ALL CLEAR will be sounded via the fire whistle system.

2.1 DISCOVERY (Cont'd)

2.1.10 BOMB THREAT

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

[redacted]

2.2 INITIAL RESPONSE PROCEDURES

The first Total Port Arthur Refinery (PAR) individual who discovers a spill will be responsible for initiating internal notification/response procedures. The flow chart shows the internal notification steps to be followed by the PAR Incident Management Team.

INITIAL RESPONSE STEPS		
SPILL OBSERVER / FIRST RESPONDER – IMMEDIATE STEPS		
1	Safety is first priority. Utilize PPE prior to any corrective action.	
2	Assess reported incident facts.	
3	Vessel?	Notify Vessel PIC (Person In Charge)
	Dock?	Notify Dock Operator
4	Notify Shift Supervisor (who functions as PAR's Deputy Incident Commander until relieved by the on-duty Deputy Incident Commander).	
5	Call for medical assistance if needed.	
6	Take immediate steps to correct the operation.	
7	Presume the environment surrounding the incident is hazardous until the area has been tested.	
8	Contain spill as required.	

TOTAL PETROCHEMICAL PAR SHIFT SUPERVISOR – IMMEDIATE STEPS	
1	Assess reported incident fact as reported by First Responder.
2	Verify medical assistance has been dispatched (if anyone is injured).
3	Act as Deputy IC until relieved by on-duty Deputy IC.
4	Inform the Incident Commander of **all**: • Incident/Bodily Injury – Transport of an individual from PAR or WPATF to the hospital; • Incidents/Pollution – Actual or potential significant pollution external to the refinery or WPATF; • Media Incidents – Actual or potential coverage by a news media; and • Other high profile events as determined by the Shift Supervisor
5	Confer with Incident Commander to determine classification of **all** incidents and near misses, based on the severity or potential severity of the incident. Severity Level 1 – Minor 2 – Moderate 3 – Serious **4 – Major** **5 – Catastrophic** *Note: See Attachment I – Incident Reporting Classification Guidelines for reporting specifications.
6	Activate Total PAR Incident Management Team, if required.

2.2 INITIAL RESPONSE PROCEDURES (Cont'd)

2.2.1 DISCHARGE DETECTION

The Discovery elements are addressed by the Initial Discovery/Response Checklist located in Section 2.1.1.

The Initial Discovery/Response Checklist directs the person discovering the incident to initiate a response under the Total ICP. These incidents may include: fire, spills, gas release, explosion, injury, medical condition, confined space/high angle rescue, severe weather, bomb threat, and security threat.

Discharge Detection By Personnel

The facility is frequently inspected for evidence of leaks or abnormal operating conditions by PAR personnel. This includes all tanks, vessels, and area above flow lines and transfer lines.

Transfer equipment and storage tank inspections hall be made routinely in accordance with Total PAR's procedures, Total Petrochemical Pipeline Company's Operating Manual, and PAR's Spill Prevention, Control, and Countermeasure (SPCC) Plan. Necessary repairs will be made as quickly as practicable.

Personnel conducting Facility daily inspections are responsible for leak detection. This Facility does have automated detection systems on the storage tanks. As a result, spills are detected by routine facility inspections and automated systems.

Personnel performing daily operations within the vicinity will visually will visually inspect the area for indications of leakage, e.g., dead vegetation.

Once the leak is detected, the estimated maximum time required to shutdown the facility in adverse weather is one hour.

2.2 INITIAL RESPONSE PROCEDURES (Cont'd)

2.2.1 DISCHARGE DETECTION (Cont'd)

Refinery Units/Facilities are inspected by Total PAR personnel for evidence of leaks or abnormal operating conditions.

The immediate responsibility for taking action rests with the most senior facility employee on the scene. The Terminal Manager will be responsible for all emergencies within this area of supervision. Any employee discovering the emergency will take all steps possible to immediately combat the emergency, reduce the hazard, and then contact his supervisor as soon as possible.

Total PAR has a number of safety systems and practices in place to minimize the occurrence and subsequent impact of accidental releases. (b) (7)(F), (b) (3) [redacted] control releases immediately.

The routine responsibilities that ensure oil spills will be detected and mitigated as soon as possible by operations personnel may include, but are not limited to the following:

•	Regularly scheduled visual monitoring of all discharge points to ensure no presence of oil (See Inspection Checklist)
•	Routine walk-through and monitoring of equipment and vessel pressures, temperatures, levels, etc. to ensure proper operation of all equipment.
•	Immediate response to alarms and signals that may indicate a possible release of oil.
•	Identify and shut off the source as soon as possible, taking safety into account.
•	Notify the Total PAR Person in Charge as soon as possible to mitigate spill event.

2.2 INITIAL RESPONSE PROCEDURES (Cont'd)

2.2.1 DISCHARGE DETECTION (Cont'd)

INSPECTION CHECKLIST	
✳	**Actions**
	Check for leaks on tanks, pipelines, valves, pumps, meters, and loading equipment.
	Dike drain valves shall be closed and locked.
	The oil/water separator system.
	The drainage ditch for pollution or facility damage.
	Check all buildings, warehouses, and terminal fence lines.
	Vapor Emission Control device.
	Facility lighting should be checked twice monthly at a minimum and during evening receipts by the operator on duty. The Terminal Manager must be notified and immediately make repairs.
	The terminal should be kept free of all trash and debris. This includes all dikes, containment areas and fence lines. Containment areas should be cleaned with sufficient frequency to be kept from accumulating dirt, trash and other debris.
	Product delivery valves must be inspected daily.

MECHANICAL DISCHARGE DETECTION

Alarms

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

Fire alarms are present at the loading rack, manifold, warehouse and office. Air locks on the truck receiving fuel are locked in and overfill protection is provided by a level switch in the tank.

2.2 INITIAL RESPONSE PROCEDURES (Cont'd)

2.2.1 DISCHARGE DETECTION (Cont'd)

Mechanical leak detection systems currently in operation at the Port Arthur Refinery and associated facilities include the following:

- Crude & Condensate Pipelines - continuously monitored for abnormal pressure conditions.
- Bayou / WPATF Pipeline - contains high and low pressure shutdowns on pumps at the refinery and a high pressure alarm at WPATF.
- Explorer 16" & 12" Pipelines - contains high and low pressure shutdowns.
- Pipelines will be inspected by the Total Petrochemical Pipeline Company's Pipeline Coordinator or PAR's Inspection Department in accordance with procedures outlined in Total Petrochemical PAR's Liquid Products Pipelines Manual. Refer to Annex B, Figure B.1 which lists those responsible for overseeing leak detection and maintaining the logs and inspection forms.

Testing and inspection is performed in accordance with established Total Petrochemical PAR guidelines. Tank inspection records are maintained by the Total Petrochemical PAR Inspection Department. All storage tanks are subject to the following inspections.

External Visual Inspection

In addition to the inspections as described below, the exterior of the tanks are visually inspected monthly for evidence of deterioration, leaks which may cause a spill, or accumulation of oil inside the dike areas.

External Mechanical Integrity Inspection

An external mechanical integrity inspection is performed on each tank at least every five years. Detailed inspections are performed which evaluate the integrity of the following components:

- foundation
- firewalls, floor, valves, and piping
- stairways and platforms
- shell
- roof, including nozzles and appurtenances
- floating roof systems (including seals)

2.2 INITIAL RESPONSE PROCEDURES (Cont'd)

2.2.1 DISCHARGE DETECTION (Cont'd)

Internal Mechanical Inspection

An internal mechanical inspection is performed whenever the opportunity is available but not to exceed the intervals stated in API 653. Detailed inspections are performed which evaluate the integrity of the following components:

- roof structure
- coatings
- floor and plate welds
- shell
- rafters
- floating roof systems

2.2.2 SPILL MITIGATION PROCEDURES AND RESPONSE/CHECKLIST

The purpose of this section is to identify the response procedures/checklist to follow based on the type of incident that could occur at the PAR Facility and to mitigate as much as possible, the potential impact. The checklists below are developed to allow the field personnel the ability to make sound decisions during the initial response of an incident. The checklists are not meant to substitute for emergency response knowledge, training, or sound judgment calls and do not account for all circumstances. In the event of any type of incident, it is imperative that the safety of all personnel be considered first, and then the protection of property second. Initial response actions are those taken by local personnel immediately upon becoming aware of a discharge or emergency incident, before the Spill Management Team is formed and functioning. Timely implementation of these initial steps is of the utmost importance because they can greatly affect the overall response operation.

Initial Discovery / Response Actions Checklist	
DISCOVERER	Initiate Initial Response Procedures and Notifications (Refer to **Section 2**). A list of contact numbers is located in Section 5: List of Contacts.

PERSON-IN-CHARGE
RESPSONSE GUIDELINES

The appropriate response to a particular incident may vary depending on the nature and severity of the incident.

	✓	Action	Definition
1	☐	Secure the source.	Act quickly to shut-in source, close valves, etc. (**IF SAFE TO DO SO, PROPERLY TRAINED & HAVE PROPER PPE**).
2	☐	Consider safety of personnel / call for medical assistance if needed.	Pull an alarm, push an evacuation button, use radio or call 911. **EVACUATE IF NECESSARY**.
3	☐	Shut off ignition sources.	Motors, open flames, electrical circuits.
4	☐	Coordinate rescue and medical response actions.	Perform this task only if trained to do so (i.e., member of medical & rescue teams) Refer to hospital listings in local notifications section of Section 5.
5	☐	Identify pollutant and assess possible hazards to human health and the environment.	Identify source and volume; characterize oxygen levels, explosive character, toxicity of air on scene, and splash and ingestive hazards.
6	☐	Initiate containment if necessary and safe to do so.	Contact OSROs / response contractors as necessary.
7	☐	Report all incidents to [Company Specific Personnel Title]	Follow Notification Procedures, **Section 2.** Contact Numbers located in Section 5.

Fire and Explosion:

Fire / Explosion Mitigation Procedures/Checklist	
☐	When fire is noticed sound the alarm and notify the fire department. Secure the source, **only if it is safe to do so. Do not attempt to extinguish a fire with a dry chemical extinguisher if a known source of re-ignition is present.**
☐	Initiate internal notifications and begin accounting for all personnel in the unit or area where the fire occurred.
☐	Evacuate all non-essential personnel from the Facility including injured personnel.
☐	Conduct a brief assessment of situation to determine: • Location and extent of fire/explosion • Type and status of equipment involved • Types of releases involved and associated exposure or explosion risks • Need for additional resources • Likelihood of impact on other areas (internal/external)
☐	Activate integrated fire suppression devices, if not automatically activated and if appropriate. Initiate fire fighting by operations personnel, which may include use of monitors, deluge systems and portable fire extinguishers.
☐	Consider need and be prepared for emergency shutdown procedures for affected operating systems.
☐	Shut down vessel loading pumps.
☐	Close isolating valves to storage tanks, pumping discharge lines and related equipment.
☐	Conduct air monitoring to ensure safety of personnel and appropriate PPE is required to respond.
☐	Shut down electrical power and sources of ignition. Designate staging areas for equipment and personnel and brief and assist Fire Department upon arrival.
☐	Evacuate nearby residents if required.

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

Failure of manifold, mechanical loading arm, other transfer equipment or hoses Checklist	
When there is a failure of transfer equipment, operations personnel should:	
☐	Immediately stop work activities and shut off transfer pumps. Close header and tank valves. Conduct brief assessment Operations Manager briefing.
☐	Notify Terminal Operations Manager and the Vessel PIC as well as maintenance personnel to correct the malfunction. Take appropriate action(s) to control source of spill and limit spill volume/affect areas.
☐	Drain remaining contents of dike to vessel tanks.
☐	Secure the area and evaluate the risk of spill and/or fire/explosion and active response procedures as appropriate. Shut down electric power and sources of ignition.
☐	Initiate oil spill clean up response actions and ensure safety of personnel involved in spill response actions.

Equipment Failure Mitigation/Procedures Checklist

Equipment Failure Mitigation/Procedures Checklist	
When there is an equipment failure operations personnel should:	
☐	Immediately stop work activities.
☐	Shut off transfer pumps. Close header and tank valves. Conduct a brief assessment of the situation to determine amount and location of spill.
☐	Notify Terminal Operations Manager and the Vessel PIC as well as maintenance personnel to correct the malfunction. Take appropriate action(s) to control source of spill and limit spill volume/affect areas.
☐	Drain remaining contents of dike to vessel tanks.
☐	Secure the area and evaluate the risk of spill and/or fire/explosion and active response procedures as appropriate. Shut down electric power and sources of ignition.
☐	Initiate oil spill clean up response actions and ensure safety of personnel involved in spill response actions.

Tank Overfill

Tank Overfill Response Mitigation/Procedures Checklist	
When an oil storage tank overfills, operations personnel should:	
☐	Contact dock personnel to immediately stop work activities and shutdown all unloading operations, by emergency stop methods if necessary.
☐	Stop product flow and shut off flow to tank.
☐	If safe, ensure dike drains are closed (if applicable) and shutoff all ignition sources.
☐	Switch to another tank as soon as possible and scan all tanks in the system.
☐	Notify terminal superintendent.
☐	Secure the area.
☐	Initiate notification procedures as well as oil spill response actions.

Tank Failure

Tank Failure Response Mitigation/Procedures Checklist	
When an oil storage tank fails, operations personnel should:	
☐	Contact dock personnel to Immediately stop work activities and shutdown all unloading operations, by emergency stop methods if necessary. Stop product flow.
☐	Contact terminal personnel to stop all transfer operations from the terminal to the tank farm and from tank to tank within the tank farm.
☐	Shut off all ignition sources and warn personnel in area of the incident and the associated possible hazards.
☐	Ensure valves in dike drains are closed (if applicable) to retain all product on site.
☐	Notify terminal superintendent and begin internal notification procedures.
☐	Secure the area and be alert to unsafe conditions. Scan all tanks in system
☐	Be alert to unsafe conditions and recover/clean-up action. Deploy recovery equipment as much as possible and begin recover/clean-up action.

Piping Rupture

Piping Rupture Response Mitigation/Procedures Checklist	
When transfer piping ruptures, operations personnel should:	
☐	Immediately stop work activities.
☐	Shut off flow through the pipe.
☐	Isolate the leaking section of the pipe.
☐	Notify terminal superintendent.
☐	Place a container under the leak and attempt to temporarily plug the hole.
☐	Initial spill containment (if outside containment area).
☐	Evacuate contents of line with suction pump or flush with water to remove remaining oil.
☐	Block and purge affected equipment.
☐	Initiate recovery/clean-up action.

Piping Leak

Piping Leak Response Mitigation/Procedures Checklist	
When transfer piping leaks, operations personnel should:	
☐	Immediately stop work activities and shut down affect line. Stop product flow.
☐	Initiate notification procedures and shutdown all transfer operations.
☐	Isolate the leaking section of the pipe and notify terminal superintendent and spill response personnel
☐	Conduct a brief assessment of the situation to determine the location of the leak and the extent of the spill.
☐	Place a container under the leak and attempt to temporarily plug the hole.
☐	Take appropriate actions to control source of the spill and limit spill volume/affected area.
☐	Evacuate contents of line with suction pump or flush with water to remove remaining oil.
☐	Block and purge affected equipment.
☐	Initiate recovery/clean-up action.

PIPELINE DISCHARGE DETECTION AND LOCATION

All pipelines operated by Total Petrochemical are equipped with high and low pressure sensors. In the event of a change in pipeline pressure beyond a specified set point, the pressure sensors will trigger an alarm to the facility operator and/or shut down the pipeline. Total Petrochemical operators will perform the following procedures when they are alerted to a potential pipeline emergency:

•	Ensure that the pipeline pressure sensing equipment is not malfunctioning and note operating pressure.
•	Visually observe in the direction of the pipeline ROW for an oil release. In the event oil is observed, initiate emergency notification procedures as outlined in the Facility Response Plan.
•	In the event oil is discovered, the Total Petrochemical PAR Integrated Contingency Plan will be activated.
•	In the event a leak is not found, an investigation into the cause of the pressure change will continue until determined.

Visual Leak Inspection

Above-ground pipelines are visually inspected for leaks by either aerial observation or ground patrol with special attention given to locations where pipelines cross highways, railroads, and bodies of water. Federal regulations require visual inspections at intervals not exceeding three weeks, but at least 26 times per year (Refer to Total Petrochemical PAR's Liquid Products Pipelines Manual for pipeline patrol procedures).

Inspection of Cased Crossings

Inspections and electrical tests are performed to ensure that pipelines are electrically isolated from cased crossings. These inspections are performed at intervals not exceeding 15 months.

2.2 INITIAL RESPONSE PROCEDURES (Cont'd)

2.2.3 SOURCE CONTROL

Total PAR operators have been trained to respond to spill events according to severity. Source control will be maintained with the following systems and procedures:

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

•	In the event the spill source cannot be controlled by the facility operator or remotely with a safety system, Total will activate the Integrated Contingency Plan and assemble a team to respond to the situation.

FIGURE 2.1 SPILL RESPONSE NOTIFICATION FORMS

SPILL RESPONSE NOTIFICATION FORM

TOTAL PETROCHEMICALS & REFINING USA, **INC.**
P.O. BOX 849
PORT ARTHUR, TEXAS 77641-0849

DATE, TIME, AND DURATION OF SPILL:

IF HAZARDOUS SUBSTANCE SPILL: CAS # _____

FORM: LIQUID [ ]
GAS [ ]
SOLID [ ]

NAME AND PHONE NUMBER OF INDIVIDUAL WHO REPORTED SPILL:

LOCATION OF SPILL:

DID SPILL REACH BODY OF WATER: YES [ ] NO [ ]
IF YES, IDENTIFY BODY OF WATER:

REFINERY COORDINATES:

WEST PORT ARTHUR TANK FARM COORDINATES:

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

TYPE OF OIL OR SPILLED PRODUCT:

ESTIMATED QUANTITY SPILLED:

DISCRIPTION OF SLICK (COLOR, LENGTH, WIDTH):

SOURCE OF SPILL (SHIP, PIPELINE, REFINERY):

FIGURE 2.1 SPILL RESPONSE NOTIFICATION FORMS (Cont'd)

DESCRIPTION OF SPILL INCIDENT (NOTE ANY INJURIES OR POTENTIAL HUMAN OR ENVIRONMENTAL HAZARDS):

DESCRIBE INITIAL CONTAINMENT/CLEAN-UP ACTIONS:

NAME OF CONTRACTOR, IF USED:

WEATHER CONDITIONS:

NAME OF PERSON COMPLETING THIS FORM:

*It is not necessary to wait for all information before calling NRC. National Response Center—1–800–424–8802 or direct telephone: 202–267–2675.

NOTIFICATION REQUIRED:	TELEPHONE:	PERSON NOTIFIED:	TIME:
NATIONAL RESPONSE CENTER	(800) 424-8802		
NRC MUST BE NOTIFIED WITHIN 1 HR OF SPILL DISCOVERY			
U. S. COAST GUARD MSU-PORT ARTHUR	(409) 723-6500		
TEXAS GENERAL LAND OFFICE	(512) 424-2277 (800) 832-8224		
TCEQ REGION 10	(409) 898-3838 (24 hr) 800-8-32-8224		
JEFFERSON COUNTY ENVIRONMENTAL CONTROL	(409) 719-5910		
TEXAS RAILROAD COMMISSION (OFFSITE PIPELINE SPILLS)	(512) 463-6788 (24 HR)		

FIGURE 2.1 SPILL RESPONSE NOTIFICATION FORM (CONT'D)

NOTIFICATION REQUIRED FOR SPILLS THAT MAY ENDAGER PUBLIC HEALTH:

NOTIFICATION REQUIRED:	TELEPHONE:	PERSON NOTIFIED:	TIME:
PORT ARTHUR FIRE DEPT.	(409) 983-8700		
PORT ARTHUR POLICE DEPT.	(409) 983-8600		
GROVES FIRE DEPT.	(409) 962-4460		
GROVES POLICE DEPT.	(409) 962-0244		
JEFFERSON COUNTY LEPC	(409) 835-8757		
PORT ARTHUR DEPARTMENT OF HEALTH	(409) 983-8864		

OTHER AGENCIES AS REQUIRED:

U.S. EPA - REGION 6 DALLAS, TEXAS	1-800-424-8802 (24 HR)		
TEXAS PARKS AND WILDLIFE	(512) 389-4848 (24 HR)		

NOTIFICATION FOR INCIDENTS INVOLVING RAIL LINES

KCS	409-832-5442		

2.2 INITIAL RESPONSE PROCEDURES (Cont'd)

2.2.4 REPORTABLE QUANTITIES FOR COMMON SUBSTANCES HANDLED AT TOTAL PAR

Below is a list of reportable quantities (RQs) for some of the more common hazardous substances and waste products at the Total Port Arthur Refinery (PAR). The list should be used as a guideline for determining reportable quantities to the land and to the air. Noted on the following page is a formula which can be used to determine reportable quantities when the substance is spilled in combination with water on land (i.e., inside a firewall or drainage ditch).

An MSDS for these materials/products is maintained in at the main gate and on PAR's web site.

However, any substance/product, no matter what the quantity spilled to water, that results in a discoloration, visible sheen, detectable oil layer, foam, floating solids, film or emulsion on the water surface or below it is a reportable spill.

SPILLS TO LAND REPORTABLE QUANTITIES (RQs)

SPILLED SUBSTANCE Hazardous Substance	Reportable Quantity
Petroleum Product	5 Barrels
Crude Oil	5 Barrels
Gasoline	5 Barrels
Benzene (CAS # 71432)	10 Pounds **(1.3 Gallons)**
Toluene (CAS # 108883)	1,000 Pounds
Xylene (m-, o- Xylene) (CAS # 1330207)	1,000 Pounds
Mixed Xylenes (p- Xylene, mixed Xylenes)	100 Pounds
Sulfuric Acid (Virgin & Spent) * (CAS # 7664939) * Amount of Spent Sulfuric Acid spilled to reach Sulfur Dioxide RQ = 1,750 Gallons	1,000 Pounds **(65 Gallons)**
Sulfur Dioxide * (CAS # 7446095)	500 Pounds
Sodium Hydroxide (50% caustic) (CAS # 1310732)	158 Gallons
Sodium Hydroxide (20% Caustic) (CAS # 1310732)	500 Gallons
Diethanolamine	100 Pounds
1,3 – Butadiene	10 Pounds

2.2 INITIAL RESPONSE PROCEDURES (Cont'd)

SPILLS TO LAND REPORTABLE QUANTITIES (RQs)

SPILLED SUBSTANCE Hazardous Waste	Reportable Quantity
CPI Separator Sludge (F037)	1 Pound **(1 Pint)**
DAF Float Skim & Bottoms (K048)	1 Pound **(1 Pint)**
Heat Exchanger Bundle Cleaning Sludge (K050)	10 Pounds **(1 Gallon)**
Recovered Oil Emulsion Solids (K049) (Tanks 506, 595, 596, 678, 905)	1 Pound **(1 Pint)**
Tank 660 Contents (K048)	1 Pound **(1 Pint)**
Oily Liquid Separation Units (K048/K049/K050/F037/F038) (Tanks 679, 680, 681)	1 Pound **(1 Pint)**
Sludges from Process Sewers (F037/F038)	1 Pound **(1 Pint)**
API Separator Sludge (K051)	1 Pound **(1 Pint)**

SPILLS/RELEASES TO AIR REPORTABLE QUANTITIES (RQs)

SPILLED SUBSTANCE Hazardous Substance	Reportable Quantity
Hydrogen Sulfide (CAS # 7783064)	100 Pounds/1,000 Cubic Feet
Ammonia (CAS # 7664417)	100 Pounds/2,000 Cubic Feet
Sulfur Dioxide (CAS # 7446095)	500 Pounds/3,000 Cubic Feet
Chlorine (CAS # 7782505)	10 Pounds/50 Cubic Feet

HAZARDOUS SUBSTANCES IN COMBINATION WITH WATER

The following formula must be used to determine if a spill is reportable when the hazardous substance spilled is in combination with water. Such hazardous substances include, but not limited to, diethylamine, dimethylamine, and phenol.

HAZARDOUS SUBSTANCE CONCENTRATION % BY WEIGHT KNOWN

% x 10,000 = mg/1 concentration

$$\text{mg/1 conc.} \times 8.34 \times \frac{\text{gallons of water}}{1{,}000{,}000} = \text{Pounds of Hazardous Substance}$$

2.2 INITIAL RESPONSE PROCEDURES (Cont'd)

2.2.5 IN-SITU BURNING

When mechanical recovery of spilled oil is not feasible, in-situ burning should be considered as a potentially viable option. Since burning presents a potential safety and air pollution hazard to the surrounding area, approval from appropriate regulatory agencies is required.

In-situ burning alters the composition of the spilled oil by eliminating anywhere from 90 to 99 percent of the original volume of oil provided it is controlled within a fire resistant boom or other containment system. A portion of the original oil is released into the atmosphere as soot and gaseous emissions. Solid or semi-solid residues typically remain following a burn but are relatively easy to retrieve. They can be further reduced in volume through repeated burns, and ultimately are collected and removed from the marine environment.

Evaluation

In-situ burning generates a thick black smoke that contains primarily particulates, soot, and various gases (carbon dioxide, carbon monoxides, water vapor, nitrous oxides and PAHs). The components of the smoke are similar to those of car exhaust. Of these smoke constituents, small particulates less than 10 microns in diameter, known as PM-10, (which can be inhaled deeply into the lungs) are considered to pose the greatest risk to humans and nearby wildlife. Each affected area is considered on a case-by-case basis.

Decisions to burn or not to burn oil in areas considered case-by-case are made on the basis of the potential for humans to be exposed to the smoke plume, and pollutants associated with it. PM-10 exposure is generally limited to 150 micrograms per cubic meter. Smoke plume modeling is done to predict which areas might be adversely affected. In addition, in-situ burning responses require downwind air monitoring for PM-10. Aerial surveys are also conducted prior to initiating a burn to minimize the chance that concentrations of marine mammals, turtles and birds are in the operational area and affected by the response. SMART (Special Monitoring for Applied Response Technologies) protocols are used. They recommend that sampling is conducted for particulates at sensitive downwind sites prior to the burn (to gather background data) and after the burn has been initiated. Data on particulate levels are recorded and the Scientific Support Team forwards the data and recommendations to the Unified Command.

The potential for implementing a successful burn of spilled oil depends upon the knowledge and experience of those responsible for the assessment of the spill situation. Review of the spill conditions, together with the above spill checklist, will ensure that the safety issues, the benefits, and the environmental impacts will have been examined carefully.

While steps may be taken to move critical equipment into position for a possible burn, there will be no attempt to ignite spilled oil without prior authorization from both Federal and/or State On-Scene Coordinators.

Before a spill on water is ignited, several factors must be considered:	
•	Oil type, amount and condition
•	Environmental conditions
•	Availability of personnel and equipment
•	Timing
• T	Human safety
•	Danger of fire spreading
•	Presence of explosive vapors
•	Damage to nearby habitats that may prolong natural recovery

Approval Process and Monitoring

When a request for an in-situ burn is made:	
•	The burn must be outside the corporate city limits, except as deemed necessary by the local fire department.
•	Wind direction should move the smoke away from the city and/or populated Areas
•	Burning must be at least 300 feet from any adjacent properties.
•	Burning should commence between the hours of 9:00 am and 5:00 pm of the same day.
• T	Wind speed should be between 6 and 23 mph during the burn period.
•	Burn should not be conducted during persistent atmospheric thermal inversions.

In general, SMART is conducted when there is a concern that the general public may be exposed to smoke from the burning oil. It follows that monitoring should be conducted when the predicted trajectory of the smoke plume indicates that the smoke may reach population centers, and the concentrations of smoke particulates at ground level may exceed safe levels. Monitoring is not required, however, when impacts are not anticipated.

Execution of in-situ burning has a narrow window of opportunity. It is imperative that the monitoring teams are alerted of possible in-situ burning and SMART operations as soon as burning is being considered, even if implementation is not certain.

The monitoring teams are deployed at designated areas of concern to determine ambient concentrations of particulates before the burn starts. During the burn, sampling continues and readings are recorded both in the data logger of the instrument and manually in the recorder data log.

After the burn has ended and the smoke plume has dissipated, the teams remain in place for 15-30 minutes and again sample for and record ambient particulate concentrations. During the course of the sampling, it is expected that the instantaneous readings will vary widely. However, the calculated time-weighted average readings are less variable, since they represent the average of the readings collected over the sampling duration, and hence are a better indicator of particulate concentration trend.

2.2 INITIAL RESPONSE PROCEDURES (Cont'd)

2.2.6 DISPERSANTS

Consideration of dispersant use during a spill must account for all aspects of the situation including:	
•	Nature of the oil
•	Resources at risk
•	Adequacy of cleanup techniques
•	Natural dispersion
•	Time
•	Logistics
•	Economics
•	Chemical dispensability of the oil
•	Nature of the oil/dispersant mixture

Special considerations such as threatened or endangered species, critical habitats, historical or cultural sites, and other structures must also be considered in the decision process.

Approval Process

All pre-approved dispersants are found in the NCP product schedule. This list is updated on a monthly or bimonthly basis. When considering dispersant use, only a product on this list may be used except during an emergency situation such as an immediate threat to human life.

All personnel who might be involved in an oil spill response are informed that detergents and other surfactants are prohibited from being used on an oil spill in the water. Dispersants can only be used with the approval of the Regional Response Team.

The Federal On-Scene Coordinator (FOSC) may authorize the use of dispersants when concurrence has been received by the RRT. In the case where dispersants are necessary due to an immediate threat, the FOSC may authorize their use and inform the RRT of the action by the most rapid mean of communication available.

2.2 INITIAL RESPONSE PROCEDURES (Cont'd)

2.2.7 NOTIFICATION PROCEDURES

INTERNAL NOTIFICATION & ACTIVATION OF SAFER / AREA RAE MONITORING

The following internal notifications should be made for each emergency incident to the extent that the incident demands. In no event shall notification be delayed because the immediate supervisor is inaccessible. Authorization is given to bypass management levels if necessary to provide timely notification to appropriate management.

The first Total Port Arthur Refinery (PAR) individual who discovers a spill will be responsible for initiating response procedures. A flow chart showing the logical steps to be followed by the Incident Management Team is shown in Figure 2.4. Additional details are discussed in Section 2.2. **Refer to Section B.2, which presents the various emergency level notifications used by Total Port Arthur Refinery. PAR's MIR 3 system is used to notify the appropriate PAR personnel of an emergency level that is being implemented. The various PAR emergency levels are as follows:**

EMERGENCY LEVEL A NOTE: Requires internal refinery personnel only Operational upset or incident that may contribute to a larger event

EMERGENCY LEVEL B NOTE: Requires internal refinery Incident Management Team resources & more refinery personnel as required to respond to an upset or incident

EMERGENCY LEVEL C NOTE: Requires internal refinery Incident Management Team resources & off-duty refinery Incident Management Team personnel as required to stabilize the situation

EMERGENCY LEVEL 1 SHELTER NOTE: Requires outside emergency response resources. The public outside the refinery are being adversely affected. A possibility exists for people outside the refinery to shelter in place

EMERGENCY LEVEL 2 EVACUATION NOTE: Requires outside emergency response resources. Requires evacuation of the public outside of the refinery. Requires evacuation of non-essential refinery personnel

The Shift Supervisor (as acting Deputy Incident Commander) or the Deputy IC can request activation of PAR's SAFER System and / or monitoring within PAR (as well as along PAR's fence line) utilizing the various AREA RAE monitors (located within PAR's Health Services Department).

Contact lists for internal notification are located in Section 3. The main gate has all cell and pager numbers for incident Command Team members.

2.2 INITIAL RESPONSE PROCEDURES (Cont'd)

2.2.7 NOTIFICATION PROCEDURES (Cont'd)

EXTERNAL NOTIFICATION

Refer to Figure B.8 if external notification of federal, state, or local regulatory/governmental agencies is required. PAR's Management Team is committed to providing timely notifications to regulatory agencies in accordance with all regulatory policies. In the event of any incident that requires notification of any agency, the appropriate PAR representative will initiate the notification process. The Port Arthur Refinery response teams are staffed with personnel who are tasked with providing relevant information to the local elected officials. For incidents occurring at the Port Arthur Refinery, these response team members will act in a proactive manner to governmental agencies.

TOTAL PETROCHEMICALS & REFINING, INC. – HOUSTON NOTIFICATION

When necessary to do so, notification to Houston can be accomplished by calling the emergency number 1-800-322-3462.

EMERGENCY PHONE LIST

Annex B consists of the various telephone numbers that will be utilized in the event of an emergency (a spill, release, etc.) for contacting the appropriate federal, state and local agencies / authorities as well as the appropriate response contractors, ambulance service, hospitals, support consultants, and media.

SPILL NOTIFICATION CHECKLIST

Figure 2.1 will be utilized by Total PAR Main Gate personnel if it has been determined that a spill/release event is indeed reportable.

2.2 INITIAL RESPONSE PROCEDURES (Cont'd)

Incident Reporting

Shift supervisor must be notified immediately upon discovery of an incident. The shift supervisor must inform the Incident Commander of:

1. Incidents/Bodily Injury- transport of an individual from PAR or WPATF to the hospital;
2. Incidents/Pollution – actual or potential significant pollution external to the refinery or WPATF;
3. Media Incidents – actual or potential coverage by a news media; and
4. Other high profile events as determined by the Shift Supervisor

The Incident Commander must classify the incident after conferring with shift supervisor (see Attachment 1). The incident classification applies to all incidents and near miss occurrences and is based on the severity or potential severity of the incident. The following classification system shall be used.

Severity Level	
1	Minor
2	Moderate
3	Serious
4	Major
5	Catastrophic

Notifications must be made to refinery management and 800# as noted in attachment #1. Houston and Paris based on the following determinations:

All accidents/incidents ≥ level 2:

- Potential/actual media events IC or his/her designee makes notification to TPRI Business Head and 800# as soon as possible. All others the refinery includes in monthly report following internal reporting procedures.

All accidents/incidents ≥ level 3:

- IC, refinery manager, or designee makes notifications according to Attachment 3.

All accidents/incidents ≥ level 4:

- IC, refinery manager, or designee makes notifications according to Attachment 3

*Information listed in Attachment 2 is to be provided when making the notifications to the 800#.

- See Attachment 1 below for accident/incident classification guidance.
- See Attachment 3 for notification flow chart.

2.2 INITIAL RESPONSE PROCEDURES (Cont'd)

Attachment 1

INCIDENT TYPE	5	4	3	2	1
Accidents/ Bodily Injury	•□ Several fatalities •□ Missing employ-ees or third parties	•□ Permanent invalidity, one fatality or physical injury involving population (transport included)	•□ Recordable injury with lost time, medical treatment and restricted work case	•□ Recordable no lost time injury	•□ Dangerous acts and situations •□ First aid •□ Anomalies
Fires/Explosions	•□ Major damage (>$10,000K) •□ Mutual Aid activated •□ Fire not controlled/ contained	•□ Serious damage ($2,000K - $10,000K) •□ Fire extinguished or controlled •□ Unit shutdown	•□ □ Significant damage ($200K- $2,000K) •□ Unit shutdown	•□ Minimal, if any damage •□ ($20K - $200K)	•□ No damage •□v(<$20K)
Environmental Spills/Releases (including third party damage to Total property)	•□ Major spills/releases (>250 bbls petroleum, >1,000 # hazmat). Major pollution with sustained environ-mental consequences external to the site. •□ Extensive cleanup (days/weeks) •□ Serious environ-mental impact (e.g. spills to water) •□ Tank overfills – not contained	(b) (7)(F), (b) (3) 1,000# hazmat). Evacuation of persons •□ Source isolated/ climinated •□ Simple cleanup (days) •□ Small environmental impact •□ Any offsite impact (IC evaluation)	•□ Moderate spills/ releases • No off-site impact (IC Evaluation)	•□ Small spills/ releases requiring notification to agency •□ Little, if any cleanup •□ Source eliminated •□ Tank overfills - contained	•□ Small spills/ releases not requiring agency notification
Media	• International coverage	•□ National coverage	•□ Local, regional and/or state coverage •□National rumor •□ Notify TPI 800# and follow TOTAL internal media relations notification procedure if media coverage anticipated.	•□ Regional press / local rumor	•□ No reaction
Equipment Failure/Incident (e.g., tank car, tank truck, marine vessels/ barges***, tanks, other heavy equipment)	•□ Vehicle/equipment (Not leaking) with major damage (>$10,000K) •□ Damage to non-TPI equipment/facilities •□ Marine vessel/barge grounding (spill)	Vehicles/equipment (Not leaking) with serious damage (>$2,000K - $10,000K)	•□ Any incident including hazmat cargo •□ Significant damage •□ ($200K - $2,000K)	•□ Minor incidents/ collisions, no spill •□ Minimal, if any damage •□ ($20K - $200K)	• Near miss – no damage •□v(<$20K)
Internal Reporting	Notify 800# as soon as possible	Notify 800# as soon as possible	Notify 800# as soon as possible	Potential/actual media events notify Houston PR and Refinery management as soon as possible, others Notify Refinery Management	Notify Refinery Management

2.2 INITIAL RESPONSE PROCEDURES (Cont'd)

Attachment 2

DRILL? (CHECK ONE) ☐ YES ☐ NO

EMERGENCY MANAGEMENT SYSTEM
Initial Notification Report
800-322-TOTAL PETROCHEMICALS

Contact Information on Notification

Called Received By: _____ Time: _____ (AM/PM) Date _____

Called Information

Name: _____ Title _____

Organization: _____ Location: _____

Primary Phone # (_____) _____ - _____ Secondary Phone # (_____) _____ _____

Location of Facility/Incident

Date and Time of Incident

Date: _____ Time _____ (AM/PM)

(X) Type of Facility Involved		(X) Emergency Type	(X) Community Impact
( ) Barge	( ) Ship	( ) Accident	( ) Evacuation
( ) C-Store	( ) Tank Truck	( ) Fire/Explosion	( ) Known//Possible Casualties
( ) Pipeline	( ) Terminal	( ) Release or Spill	( ) Impacted Waterways
( ) Rail Car	( ) E&P Lease	( ) Vapor Cloud Releases	( ) Utility outages
( ) Refinery	( ) Chemical Plant	( ) Well Control	( ) Damage
( ) Remediation Sites	( ) Other	( ) Emergency Shutdowns	( ) Unknown
		( ) Other_____	( ) None

(X) Site Casualties (Known/Possible)		(X) Current Status	(X) Material Released	
( ) Fatality	( ) Missing	( ) All Clear	( ) Gasoline	( ) Plastic
( ) Hospitalized	( ) Unknown	( ) Out of Control	( ) Oil	( ) Natural Gas
( ) Injury/Illness	( ) None	( ) Under Control	( ) Chemical	( ) Other___
		( ) Unknown	( ) Quantity	

(X) Public Emergency Response Groups and Outside Officials & Agencies Notification

( ) Ambulance	( ) Hazmat/OSRO	( ) Local	( ) DOT	( ) TNRCC
( ) Fire	( ) Police	( ) Media	( ) EPA	( ) RRC)
( ) Other_____	( ) None	( ) State	( ) OSHA	( ) NRC
_____		( ) Other_____	( ) USCG	
_____		_____	( ) None	

(X) Resources Requested/Required

( ) Away Team	( ) Legal	( ) Security
( ) Environmental	( ) Purchasing	( ) Spill Control
( ) Human Resources	( ) Medical	( ) Toxicology
( ) Industrial Hygiene	( ) Public Affairs	( ) Transportation
( ) Insurance Claims	( ) Safety	( ) Other_____
( ) Fire	( ) Communications	( ) None)

Additional Information _____

( ) Security requested Material Safety Data Sheets to be faxed to (214) 750-2340
( ) Initial Pager Notification Sent Date_____/_____/_____ Time_____:_____ am/pm

Reviewed By:_____ Date_____/_____/_____

Time_____:_____ am/pm

2.2 INITIAL RESPONSE PROCEDURES (Cont'd)

Attachment 3

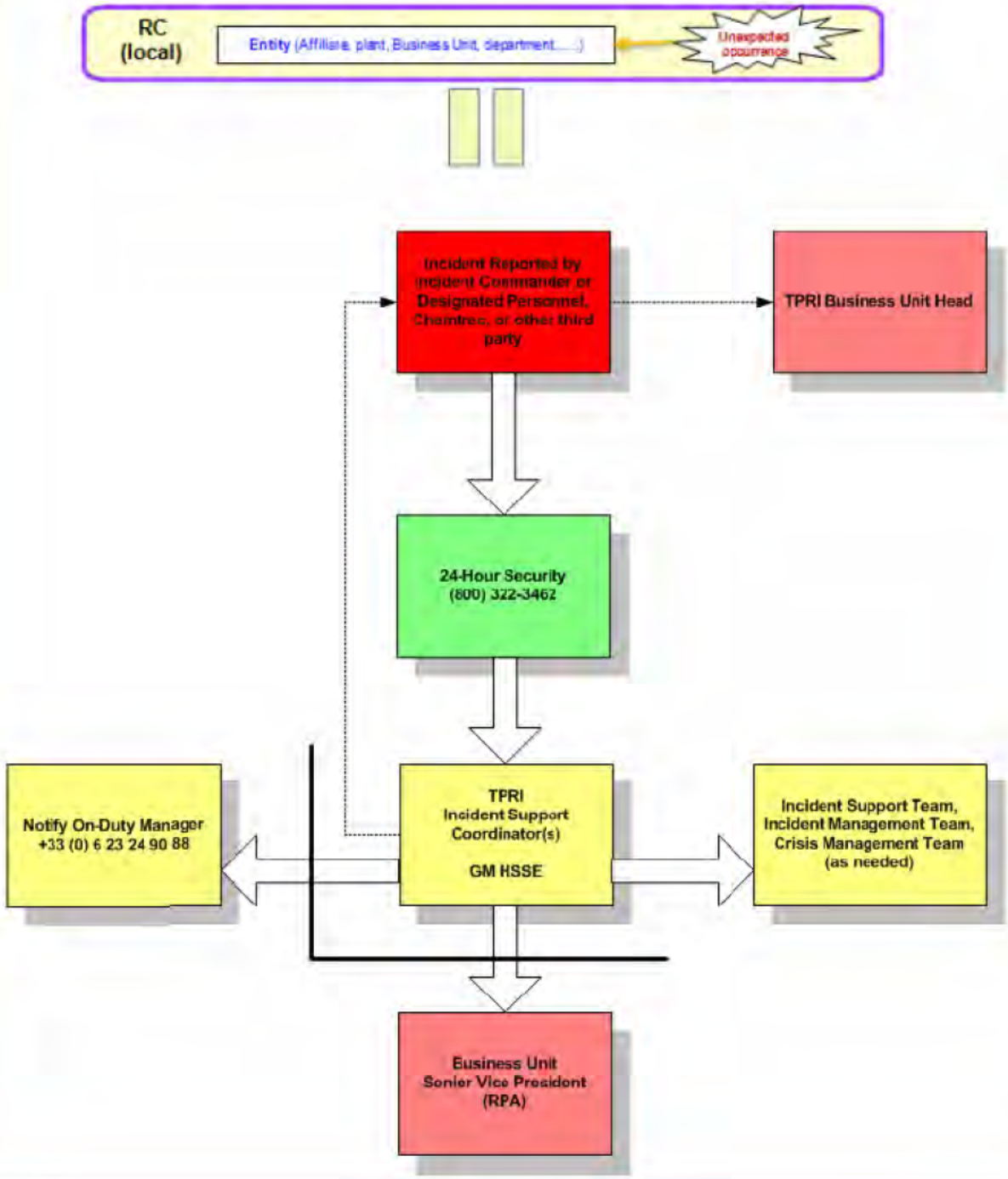


FIGURE 2.2 – EXTERNAL NOTIFICATIONS

AGENCY NOTIFICATIONS	
National Response Center (NRC)	(800) 424-8802
Federal On-Scene Coordinator - USCG MSU Port Arthur (Port Arthur COTP Zone)	(409) 723-6500
EPA Region VI – Dallas	(800) 424-8802
Texas Railroad Commission	(512) 463-6788
Texas Commission on Environmental Quality (TCEQ) Formerly TNRCC (after hours)	(409) 898-3838
TCEQ Austin (After Hours Spill Notification) Also known as TX Emergency Response Ctr)	(512) 463-7727
TX Dept of State Health Services	(512) 458-7111
Jefferson County Environmental Control	(409) 719-5910
Texas General Land Office (TGLO) TGLO - Nederland	(800) 832-8224 (409) 727-7481
Lower Neches Valley Authority (LNVA)	(409) 892-4011
Texas Parks and Wildlife Dept.	(512) 389-4848
Jefferson County LEPC	(409) 835-8757
Jefferson County Drainage District 7 (DD-7) DD-7 Data Center (24 hour)	(409) 985-4369
U.S. Fish and Wildlife Service	(409) 861-4436
U.S. Army Corps of Engineers	(409) 766-3899
Port Arthur Dept. of Health	(409) 983-8835
City of Port Arthur	(409) 983-8100

OIL SPILL REMOVAL ORGANIZATIONS (OSROs)	
Miller Enviromental	(800) 797-9992 (409) 835-7400
Oil Mop Inc. River/Canal: Level W3* (131 Keating Dr. Belle Chasse, LA) Inland/Near Shore: Level W3*	(800) 645-6671
Garner Environmental Services River/Canal: Level W3* (5048 Houston Ave Port Arthur, TX) Inland/Near Shore: Level W3*	(409) 983-5646

**Refer to Figure B.3 for OSRO Classification information.*

FIGURE 2.2 – EXTERNAL NOTIFICATIONS (Cont'd)

DISCHARGE CLEANUP ORGANIZATIONS (DCOs)	
Clean Harbors Environmental Services	(409) 796-1388
OSRL/EARL (Oil Spill Response Limited./ East Asia Response Limited). *See Annex B for instructions*	UK: +44 (0)23 8033 1551 Singapore: +65 6266 1566

EMERGENCY NOTIFICATIONS	
Emergency Management Coordinator	
Port Arthur EMC (Pt. Arthur Fire Dispatch)	(409) 983-8707
Groves EMC (Central Dispatch)	(409) 722-4965
Port Neches EMC (Central Dispatch)	(409) 722-4965
Bridge City EMC (Bridge City Police Dispatch)	(409) 735-5332
Police Departments	
Port Arthur Texas Department of Public Safety	(409) 983-8600 (409) 898-0770
Jefferson County Sheriff	(409) 835-8411
Groves	(409) 962-0244
Fire Departments	
Port Arthur	(409) 983-8700
Groves	(409) 962-0244
Sabine-Neches Chiefs Association (Bmt. Fire Dept)	(409) 838-6371
Emergency Medical Services	
Acadian Ambulance	(409) 729-9300
Herman Life Flight	(800) 392-4397
Air Rescue	(409) 385-6959
Hospitals	
Medical Center of SE TX	(409) 724-7389
Occucare International	(409) 724-0600
Other	
TOTAL – Emergency Notification Line	(800) 322-3462
BASF-FINA Main Gate	(409) 960-5293 / 5294

FIGURE 2.2 – EXTERNAL NOTIFICATIONS (Cont'd)

WEATHER / MEDIA / MISC SUPPORT	
Weather Report	
NOAA – Port Arthur	(337) 477-5285
National Climatic Data Center	(828) 271-4800
Local Television Station	
KFDM (CBS) Ch. 6	(409) 892-6622
KBTV (NBC) Ch. 4	(409) 840-4444
KBMT (ABC) Ch. 12	(409) 833-7512
Local Radio Station	
KLVI/KYKR 560 AM/95.1FM	(409) 838-3388
KQXY Q 94	(409) 899-4994
KYKR	(409) 896-5957
KLVI	(409) 896-5584
K-106 FM	(409) 212-1061
Newspapers	
Port Arthur News	(409) 729-6397
Beaumont Enterprise	(409) 833-3311
Houston Chronicle	(713) 220-7171
Other	
Sherwood Veterinary Associates	(409) 842-3681
Wildlife Rehab & Education	(281) 332-8319
Witt O'Brien's Oil Pollution Service	(281) 320-9796

FIGURE 2.3 INTERNAL EMERGENCY NOTIFICATION SEQUENCE

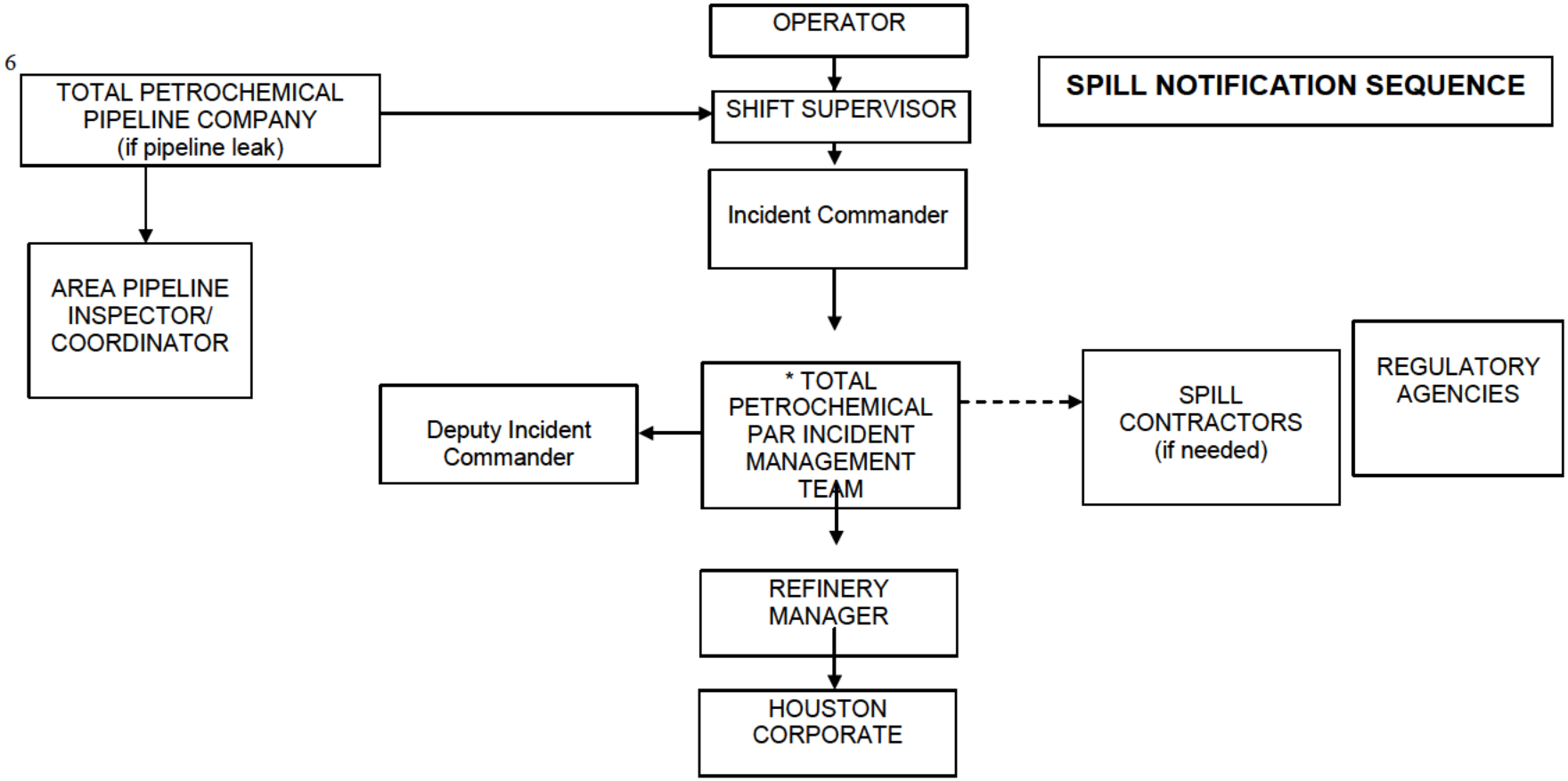


FIGURE 2.4 STAN ACTIVATION FLOW DIAGRAM

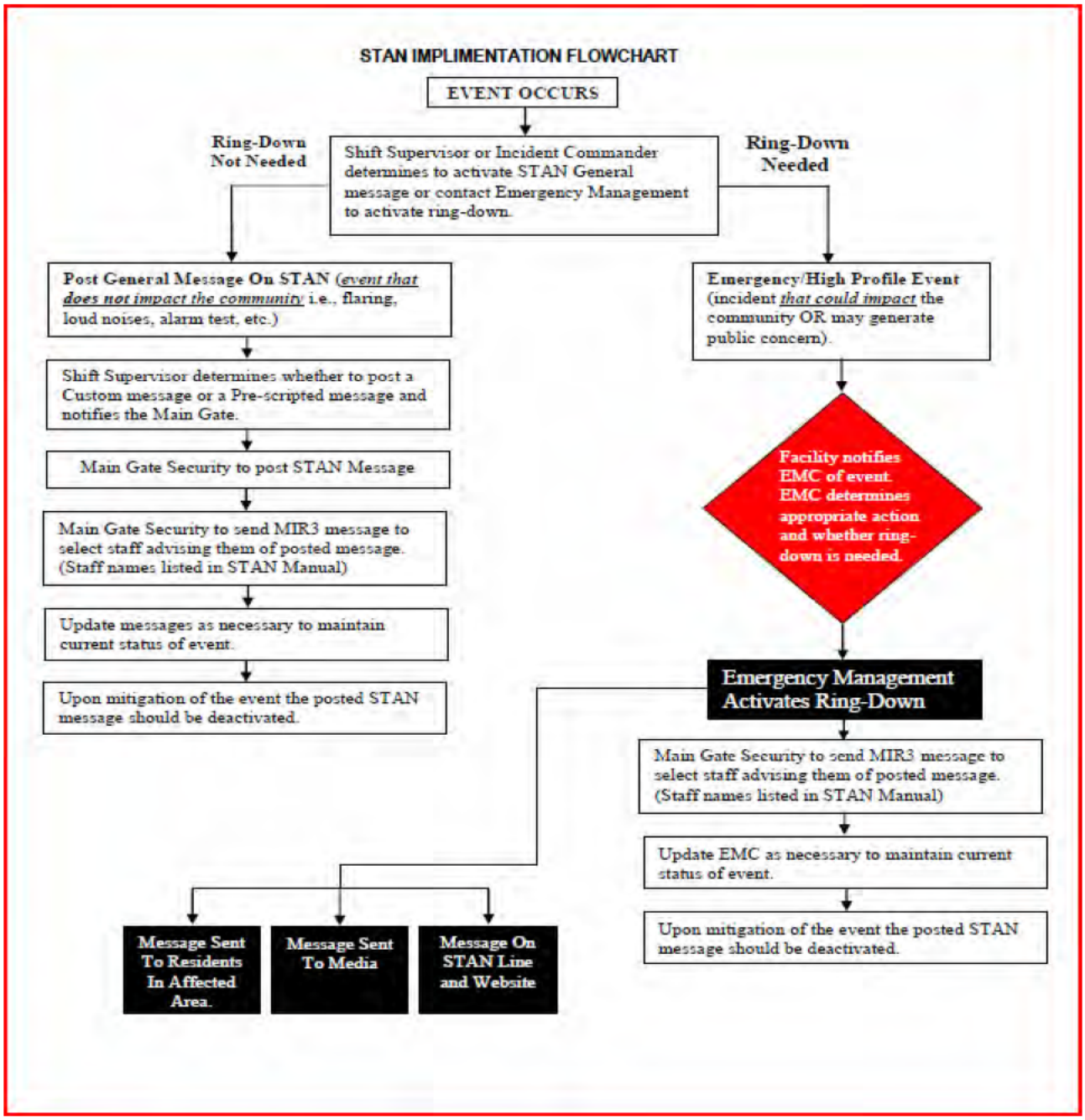
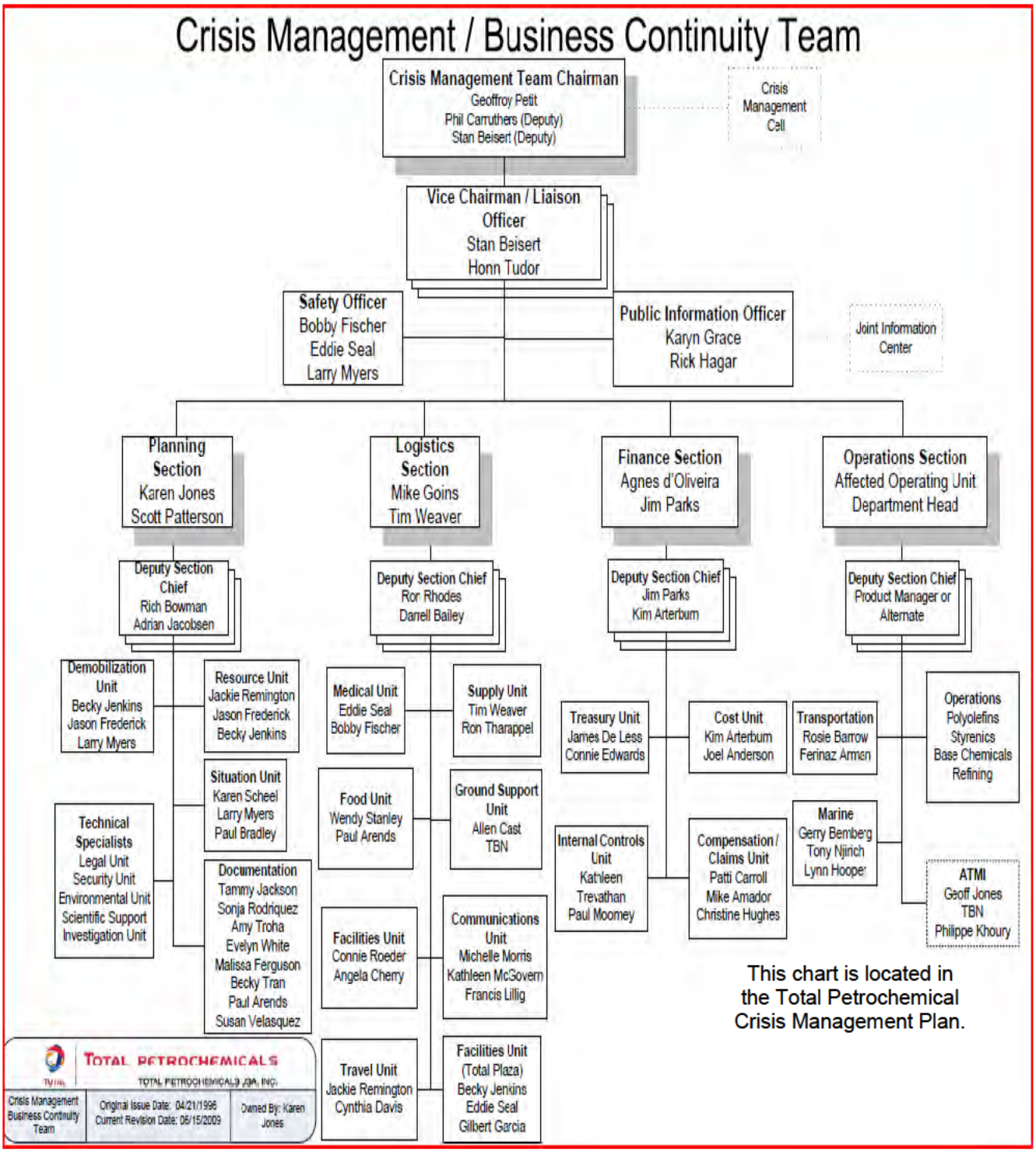
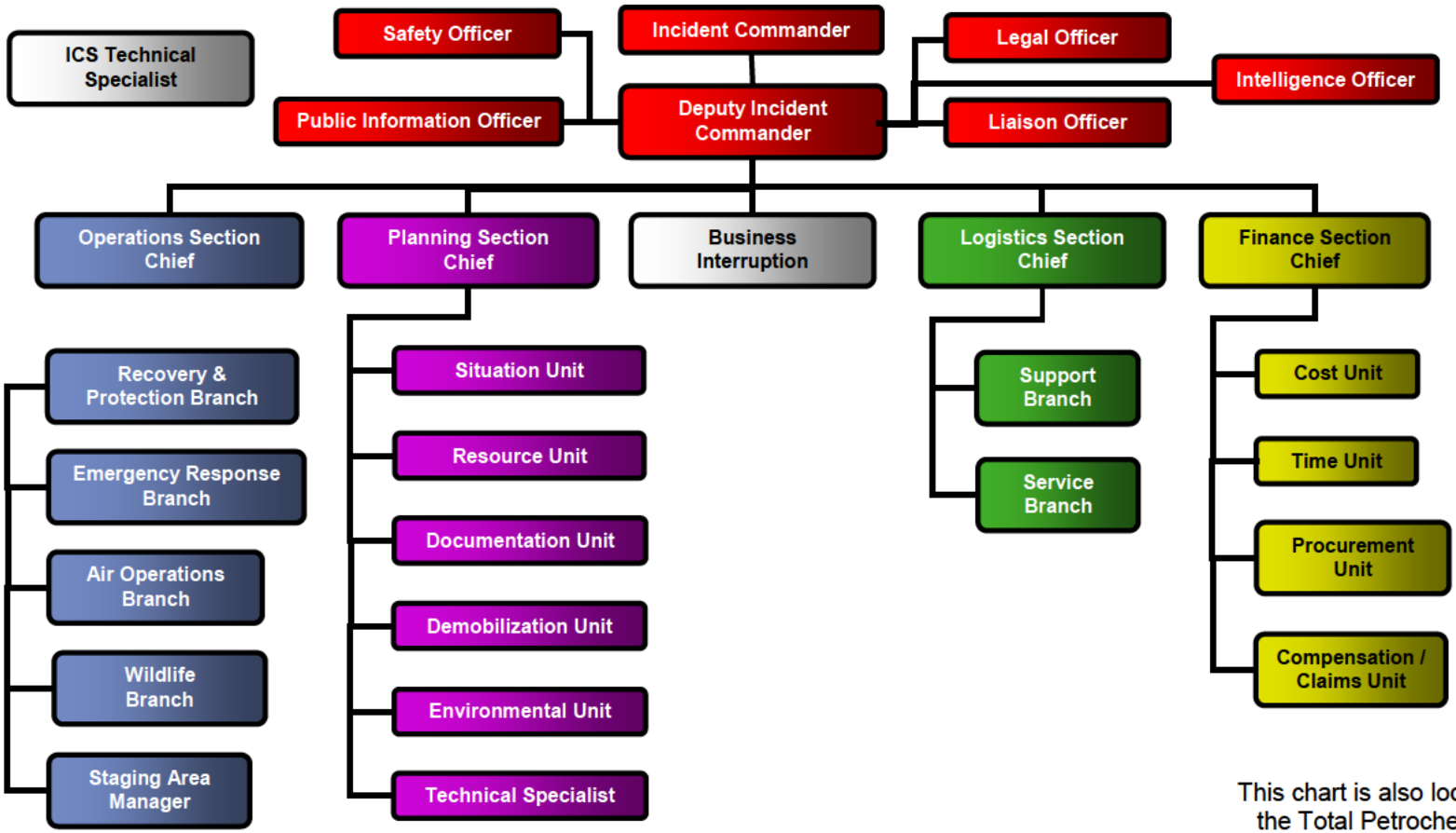


FIGURE 2.5 CRISIS MANAGEMENT TEAM



This chart is located in the Total Petrochemical Crisis Management Plan.

FIGURE 2.6 INCIDENT MANAGEMENT TEAM ORGANIZATION



This chart is also located in the Total Petrochemical Incident Management Handbook.

2.2 INITIAL RESPONSE PROCEDURES (Cont'd)

2.2.8 RESPONSE MANAGEMENT STRUCTURE

FORMATION OF A UNIFIED COMMAND

A Unified Command System will be established by the Incident Commander (i.e., Responsible Party) with the State and Federal Regulatory Representatives (i.e., SOSC and FOSC). Please note that SOSC is the State On-Scene Coordinator (i.e., TGLO, TCEQ, TRRC) and FOSC is the Federal On-Scene Coordinator (i.e., EPA, USCG, DOT). The Unified Command Team is responsible for the overall management of the incident / emergency response.

INCIDENT MANAGEMENT TEAM ORGANIZATION / COMMAND STRUCTURE

The command aspects / team organization adopted for Total Port Arthur Refinery is a modified version of the National Interagency Incident Management System (NIIMS) Incident Command System. PAR's Qualified Individuals also serve as Incident Commanders (IC) and Deputy IC.

- The organization of the Port Arthur Refinery Incident Management Team is modular, depending on the size and scope of the incident. Response team positions will be filled by personnel from the Port Arthur Refinery on an as-needed basis depending on the circumstances of the spill situation.
- The maximum staffing level needed to cover all task assignments that might be required to respond to an incident are shown in the Incident Management Team organizational chart and the Incident Management Team roster **(Refer to Figures 2.3 and 2.6).**
- It is the responsibility of the primary designee for each job position to notify the alternate in the event that he/she is unavailable.

During the course of an emergency response, a number of tasks and problems will be identified that will require full support from any number of company response personnel. Any and all of the various Incident Management Team members are available to assist in accomplishing these tasks.

In some instances, the sequence of emergency procedures and the personnel responsible for the response actions may vary, based on when the emergency occurs, the number of people on duty, and various other circumstances. Good judgment must be exercised at the time of the emergency to decide if the appropriate personnel are available for the actual conditions of the emergency. Close communication and coordination is critical between the emergency response personnel to initiate the appropriate actions needed to mitigate the damage potential of the emergency incident.

CRISIS MANAGEMENT TEAM

The purpose of this Crisis Management Team will be to provide support and to respond to oil and hazardous substance spills (as well as other emergencies) which are beyond the response capability of the Port Arthur Refinery Incident Management Team. (Refer to Figure 2.5: Crisis Management Team Organization Chart)

2.2 INITIAL RESPONSE PROCEDURES (Cont'd)

2.2.8 RESPONSE MANAGEMENT STRUCTURE (Cont'd)

INCIDENT MANAGEMENT TEAM RESPONSIBILITIES

The various team positions are described along with their respective responsibilities checklists in Annex C. The Deputy Incident Commander with the various support sections (i.e., Safety, Liaison, Operations, Planning, Logistics, Security) will be set up within the Command Post / Emergency Operations Center which is set up in the Jefferson Conference Room. Finance and Purchasing could be set up in the EOC or operated from the Business and Finance offices.

TOTAL PIPELINE EMERGENCIES

Refer to Figure B.1 for list of the PAR contacts in the event of an emergency involving our crude, condensate or finished product pipelines.

2.2.9 PRELIMINARY ASSESSMENT

Locating a Spill

Spill size and volume estimations are essential for identifying potential oil spill trajectories, impact zones, and shoreline arrival times. Accurate monitoring of the oil slick is also important in documenting the nature and aerial distribution of oil so that meaningful decisions can be made regarding containment and recovery operations and the potential use of dispersants.

The volume of spilled oil should be determined as soon as possible in order to facilitate planning and initiate response operations. This volume will be needed to evaluate equipment and personnel needs as well as requirements for storage and disposal of recovered oil. The volume of spilled oil should be determined by utilizing tank gauges and/or pumping rates, if possible. If this information is not available, a rough estimate of the spill volume can be generated from visual observation of the oil on the surface of the water and by utilizing the following table. (Estimated spill volumes should be rounded off to avoid the appearance of a precise determination.)

Data Acquisition

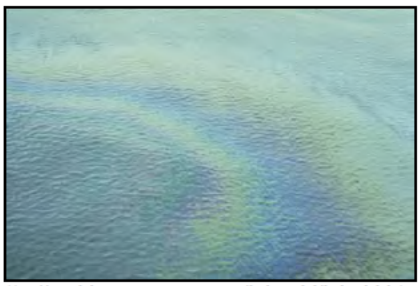
LOCATE	Use aircraft, whenever possible, to locate the spill source (latitude and longitude) and the aerial distribution of any resulting surface slicks.
MEASURE	Describe the approximate dimensions of the oil slick based on available reference points (i.e., vessel, platforms, islands, shoreline features, etc.). As necessary, use aircraft to derive coordinates of spill dimensions.

2.2 INITIAL RESPONSE PROCEDURES (Cont'd)

2.2.9 PRELIMINARY ASSESSMENT (Cont'd)

Determining the Size and Volume of a Spill

Oil Spill Volume Estimation - Reports of oil spills, both oral and written, will conform to the following guidelines:

Sheen – oil visible on the water as a silvery sheen or with tints of rainbow colors. This is the smallest thickness of oil.	 http://archive.orr.noaa.gov/job_aid/jobaid.html
Dark colors – visible with dark colors (i.e., yellowish brown, light brown) with a trace of rainbow color but is not black or dark brown.	 http://archive.orr.noaa.gov/job_aid/jobaid.html
Black/Dark Brown – fresh oil after initial spreading will have a black or very dark brown color. This is the largest thickness of non emulsified oil.	 http://archive.orr.noaa.gov/job_aid/jobaid.html
Mousse – water-in-oil emulsion which is often orange to rust colored. It is thick and viscous and may contain 30% oil.	 http://archive.orr.noaa.gov/job_aid/jobaid.html

2.2 INITIAL RESPONSE PROCEDURES (Cont'd)

2.2.9 PRELIMINARY ASSESSMENT (Cont'd)

Spill Factors - The Spill Volume Estimation Form will be used to estimate the volume of oil unless a more accurate amount is known by other means. These factors should be compared to volumes estimated from the source of the spill, for example, piping volume, tank volume. Exact estimates of the volume of a spill are not possible by visual observation of the oil on the surface of the water. For this reason, the spill volumes determined from the following should be rounded off to avoid the appearance of an accurate determination.

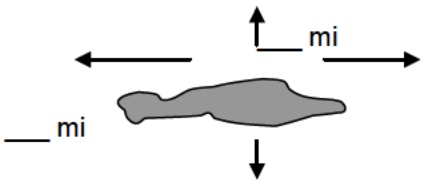
While the correlation between spilled oil's appearance and thickness is correct in theory, it does not always work in practice. This is because the following conditions may affect the observer's ability to survey oil on water:

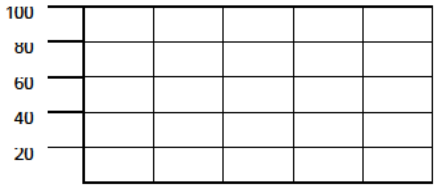
- observer's distance above the water surface.
- roughness of water surface.
- direction of viewing compared with the light's direction. An oil slick will reflect light and appear silvery in color regardless of its thickness if viewed under some conditions, for example, toward the sun.
- experience of the individual observer.

Estimating Procedures - See the following Spill Volume Estimation Form and accompanying example to be used in determining an estimate of the amount of oil spilled.

FIGURE 2.7 – SPILL VOLUME ESTIMATION FORM

Spill size and volume estimations are essential for identifying potential oil spill impact zones and shoreline arrival times. To estimate the quantity of oil on water you must establish the size of the area affected by pollution, the percent of oil coverage within that area, and the appearance of oil. The appearance of oil determines gallons per square mile (based on the U.S. Coast Guard's field operations guide estimations table).

<table>
<tr>
<td>1) To establish the area affected by pollution.
- Determine spill size (use aircraft if possible).
- Draw an imaginary box around the oil.
- Measure the length and width of the box (5,280 feet = 1 mile).
- Multiply the length x width = (a) m^2.</td>
<td> 

= ___ mi^2
(a)</td>
</tr>
<tr>
<td>2) Extent of Oil Coverage
- Envision the oil pushed together into one part of the box.
- Estimate % of box containing oil = (b) % coverage.</td>
<td> 

= ___% coverage
(b)</td>
</tr>
<tr>
<td>3) Multiply estimated area (a) x estimated coverage (b) = (c) total m^2:</td>
<td>___ mi^2 x ___ % coverage = ___ total mi^2
(a) (b) (c)</td>
</tr>
<tr>
<td>4) Appearance of Oil:
- Estimate the percent of the oil matching each color under appearance. Enter that number in the percentage blank (e.g. 50% dull, 30% brightly colored, 20% slightly colored).
- Enter total mi^2 (Item c).
- Multiply % appearance x gal/mi^2 x mi^2 for each appearance.
- Enter sum for total gallons.</td>
<td>ESTIMATION TABLE
<table>
<tr><th>Appearance</th><th>%</th><th>x</th><th>Gal/ mi^2</th><th>x</th><th>mi^2 (c)</th><th>=</th><th>Gal.</th></tr>
<tr><td>Barely Visible</td><td></td><td>x</td><td>25</td><td>x</td><td></td><td>=</td><td></td></tr>
<tr><td>Silvery</td><td></td><td>x</td><td>50</td><td>x</td><td></td><td>=</td><td></td></tr>
<tr><td>Slightly Colored</td><td></td><td>x</td><td>100</td><td>x</td><td></td><td>=</td><td></td></tr>
<tr><td>Brightly Colored</td><td></td><td>x</td><td>200</td><td>x</td><td></td><td>=</td><td></td></tr>
<tr><td>Dull</td><td></td><td>x</td><td>666</td><td>x</td><td></td><td>=</td><td></td></tr>
<tr><td>Dark</td><td></td><td>x</td><td>1332</td><td>x</td><td></td><td>=</td><td></td></tr>
<tr><td colspan="7">Total Gallons</td><td></td></tr>
</table></td>
</tr>
<tr>
<td>5) Final Calculation (divide gallons by 42):</td>
<td>____ Total gal/42 = _____ bbls</td>
</tr>
</table>

2.2 INITIAL RESPONSE PROCEDURES (Cont'd)

2.2.10 ESTABLISH RESPONSE OBJECTIVES

2.2.10(a) IMMEDIATE GOALS / TACTICAL PLANNING

IMMEDIATE GOALS / TACTICAL PLANNING – The Incident Commander (as part of Unified Command) will quickly establish response objectives and brief the IMT on strategies, objectives, and response priorities. PAR's two volume Tactical Response Guide has established a variety of response sites complete with objectives and response strategies / priorities. These response priorities include:

1		Protect human life and health		
2		Minimize ecological impacts		
3		Minimize economic and public impacts		
4		Determine protection priorities		
5		Determine appropriate countermeasures		
		A		Assess the need for clean-up
		B		Select the most appropriate clean-up method
6		Determine type of boom to be used		
7		Determine natural collection areas and boom sites		
8		Determine boom deployment techniques and containment systems		
9		Determine removal technique		
10		Determine shoreline clean-up techniques / strategies		

2.2.10(b) MITIGATING ACTIONS

Schematic diagrams of PAR's various storm water control structures and permitted storm water outfalls and capacities can be found in the SPCC, located in Annex G.

Response resources and various contractors are located in Annex A.

2.2 INITIAL RESPONSE PROCEDURES (Cont'd)

2.2.10 ESTABLISH RESPONSE OBJECTIVES (Cont'd)

2.2.10(c) RESPONSE TIERS

Below are three categories into which oil spill incidents within Total Port Arthur Refinery are classified per federal regulations.

Tier I - Operational spill: up to 50 barrels typically handled by the facility/operation utilizing facility/operation and local resources.

Tier II - Regional spill: more than 50 barrels but less than 1200 barrels; typically handled by a regional response using regional resources.

Tier III - National spill: greater than 1200 barrels typically involving large spill response contractor resources in addition to local, regional and national resources.

2.3 SUSTAINED ACTIONS

2.3.1 TACTICAL PLAN IMPLEMENTATION

Based on the strategic objectives and priorities presented in the Tactical Response Guide (i.e., Tactical Plan) as well as existing site / weather / tide conditions, the Deputy Incident Commander with help from the Planning Section Chief and Operations Section Chief, will prioritize the various sites. An Initial Incident Action Plan will then be developed which will include a site safety assessment maximizing protection of response personnel.

2.3.2 RESOURCE MOBILIZATION

The Qualified Individual/Incident Commander or his designee will call out Total PAR resources and/or OSRO response equipment listed below.

Total PAR will conduct semiannual oil spill equipment deployment drills in accordance with the regulations. During these exercises, PAR's response equipment will be deployed to simulate local response to a spill occurring at the Total Petrochemical Port Arthur Refinery. Deployment should reflect strategies included in the Total Port Arthur Refinery Tactical Response Guide (TRG) for protecting adjacent interests and areas. Records of the equipment deployed, personnel involved, and other information regarding the exercise shall be maintained for a period of at least five (5) years.

(A) Total Port Arthur Refinery Response Equipment

1. Boom Equipment

Manufacturer	Model #	Boom Type Code	Inventory Length (Feet)	Skirt Size (Inches)	Float Size (Inches)	End Connector Type Code	Storage Location
More Boom Co.			1,000	12"	6"	International quick connect	Boom House 1
More Boom Co.			1,000	12"	6"	International quick connect	Boom House 2
More Boom Co.			1,000	12"	6"	International quick connect	Boom House 3
More Boom Co.			1,100	12"	6"	International quick connect	Boom House 4
More Boom Co.			1,100	12"	6"	International quick connect	Trailer

* Stored within the four boom storage pads (North, Middle & South) at Docks 2, B, A, and 1.
** Permanent "fence" boom.

2.3 SUSTAINED ACTIONS (Cont'd)

2.3.2 RESOURCE MOBILIZATION (Cont'd)

2. Response Boats

Manufacturer	Model #	Boat Type Code	Horse Power	Normal Crew Size	Length /Beam	Draft Limitations	Location
Aluma Weld	Commercial	LFB	70	4	18' / 7'	1'	Port Arthur Refinery
Custom Craft-Lobell's	Commercial	Bay	150	4 to 8	20' / 8'	1'	Port Arthur Refinery

Firefighting Equipment

The Facility is equipped with adequate firefighting equipment. The services of local fire departments and mutual aid organizations shall be called for any uncontrolled fire.

(B) Oil Spill Removal Organizations (OSROs)

OSRO information is located in Annex A.

(C) Discharge Cleanup Organizations (DCOs)

(D) Mutual Aid

Response operations may need to be managed twenty-four hours a day, seven days a week until the operation is complete. Incident Management Team (IMT) members from other areas within the company will be cascaded in to support the IMT. Once the initial emergency stage of the spill situation has transformed to the sustained action stage, the response management structure will develop more prolonged mitigation and recovery action strategies. Refer to **Section 2.2.6** for Immediate Actions Flowchart. The actions of the Incident Management Team are detailed in **Annex C.** Documentation of events during the spill is also important, and is discussed in **Annex F**.

2.4 TERMINATION AND FOLLOW-UP ACTIONS

Cleanup operations will be terminated when, in the opinion of Unified Command:

- There is no detectable oil in the water.
- Further removal actions would cause more environmental harm than remaining oil.
- Cleanup measures would be excessive in view of their insignificant contribution to minimizing a threat to the public health, welfare, or the environment.
- Action required to repair unavoidable damage resulting from removal activities have been completed.

2.5 SUMMARY OF SPILL MITIGATION PROCEDURES

The first three following diagrams are of various configurations of the Port Arthur Facility. Also included is an evacuation diagram (Figure 2.9). The remaining figures are contracts that the facility has in place with various Oil Spill Response Organizations (OSRO's) in accordance with 33 CFR 154.1028.

FIGURE 2.8(a) REFINERY/DOCK DIAGRAM

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

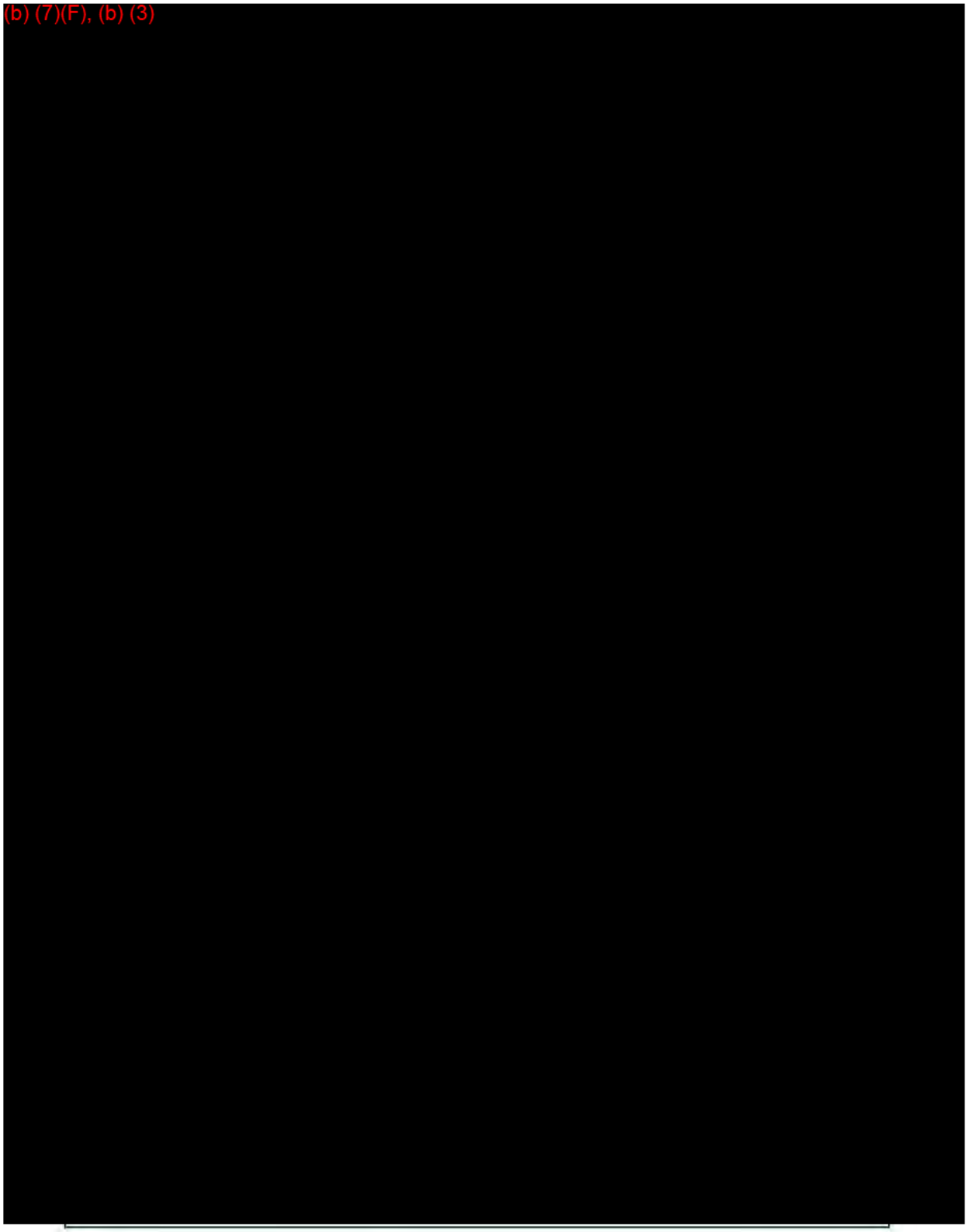


FIGURE 2.8(b) WEST PORT ARTHUR TANK FARM DIAGRAM

WEST PORT ARTHUR TANK FARM SIMPLIFIED PLOT PLAN

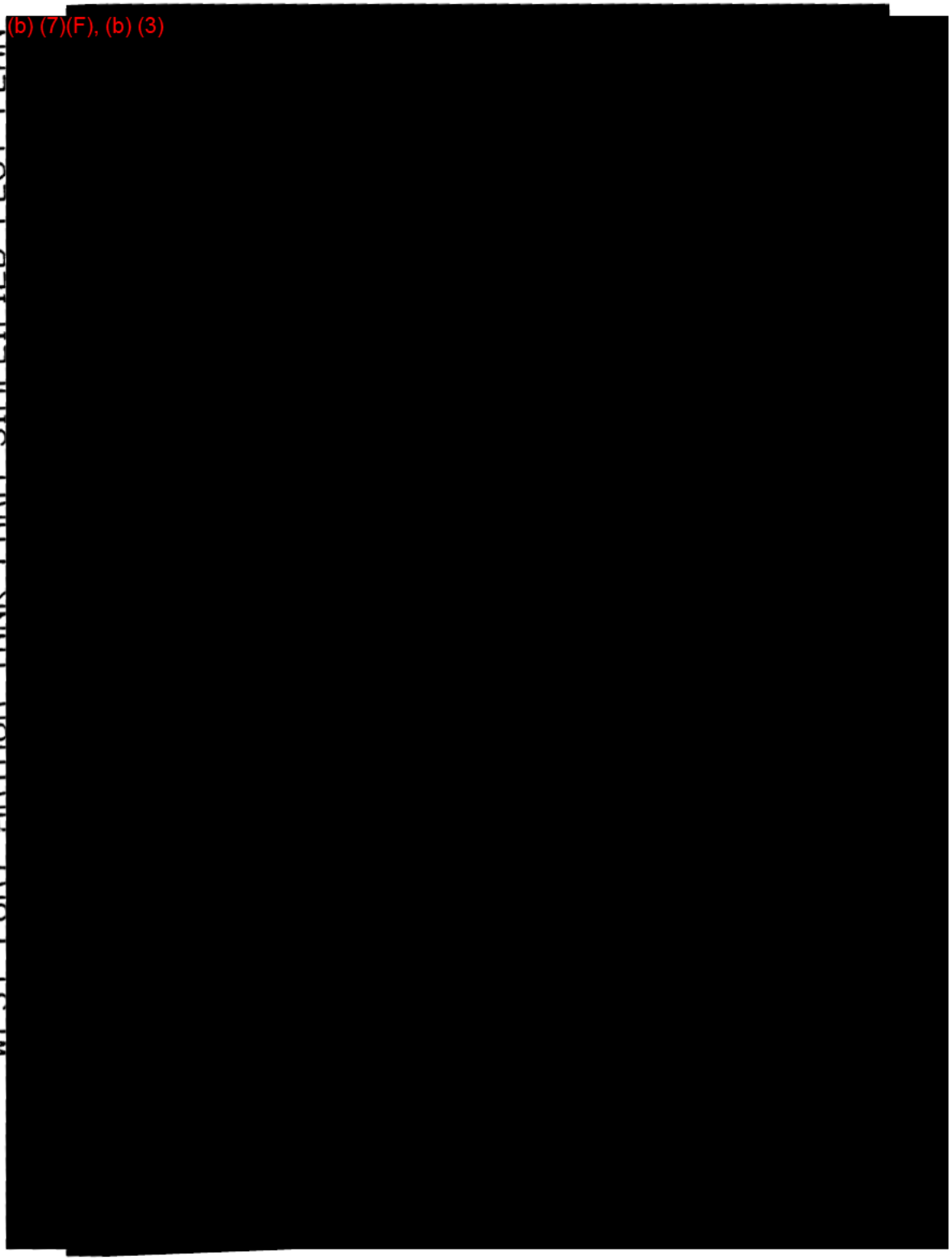


FIGURE 2.8(c) NON-REFINERY PIPELINE DIAGRAM

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

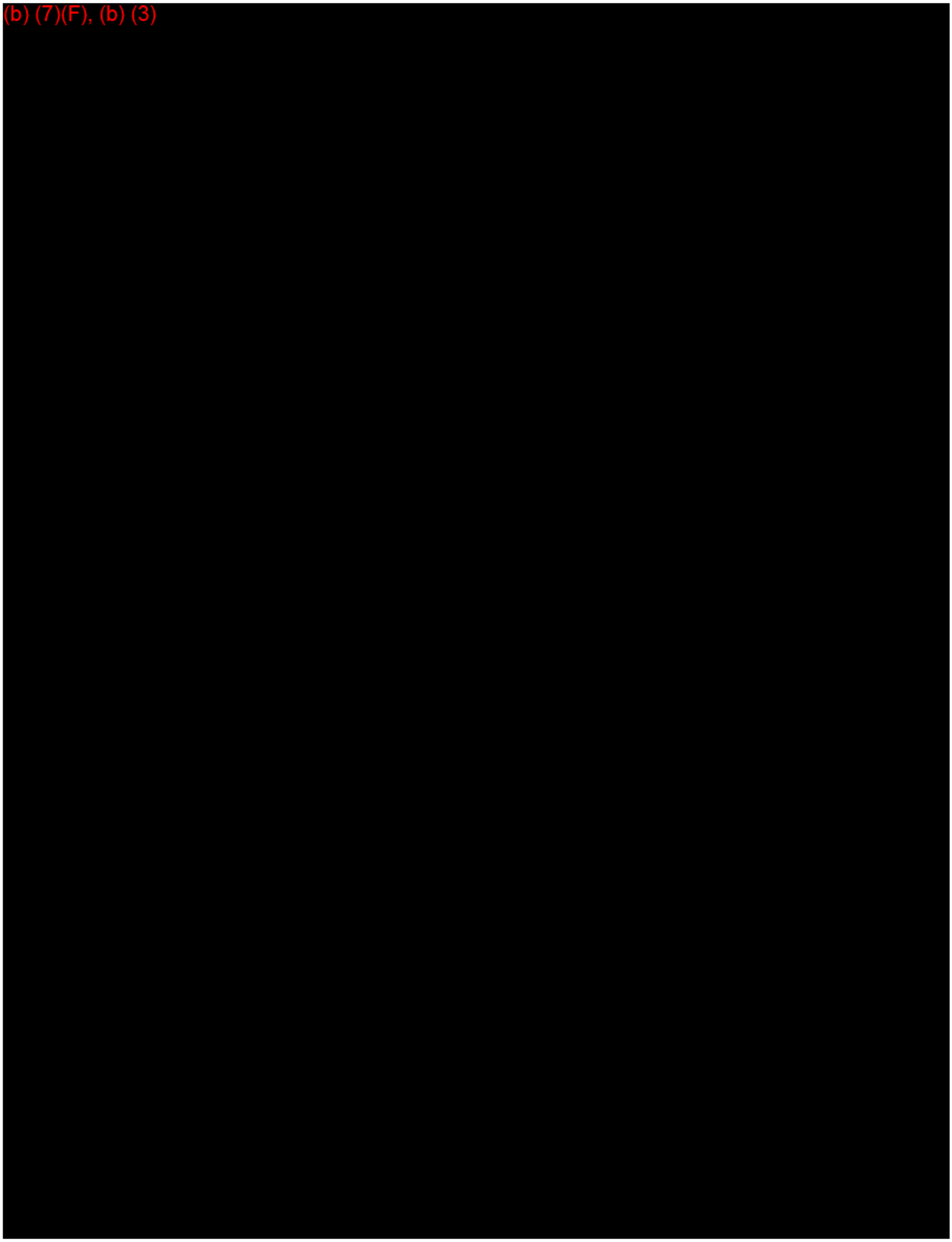


FIGURE 2.9 EVACUATION DIAGRAM

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

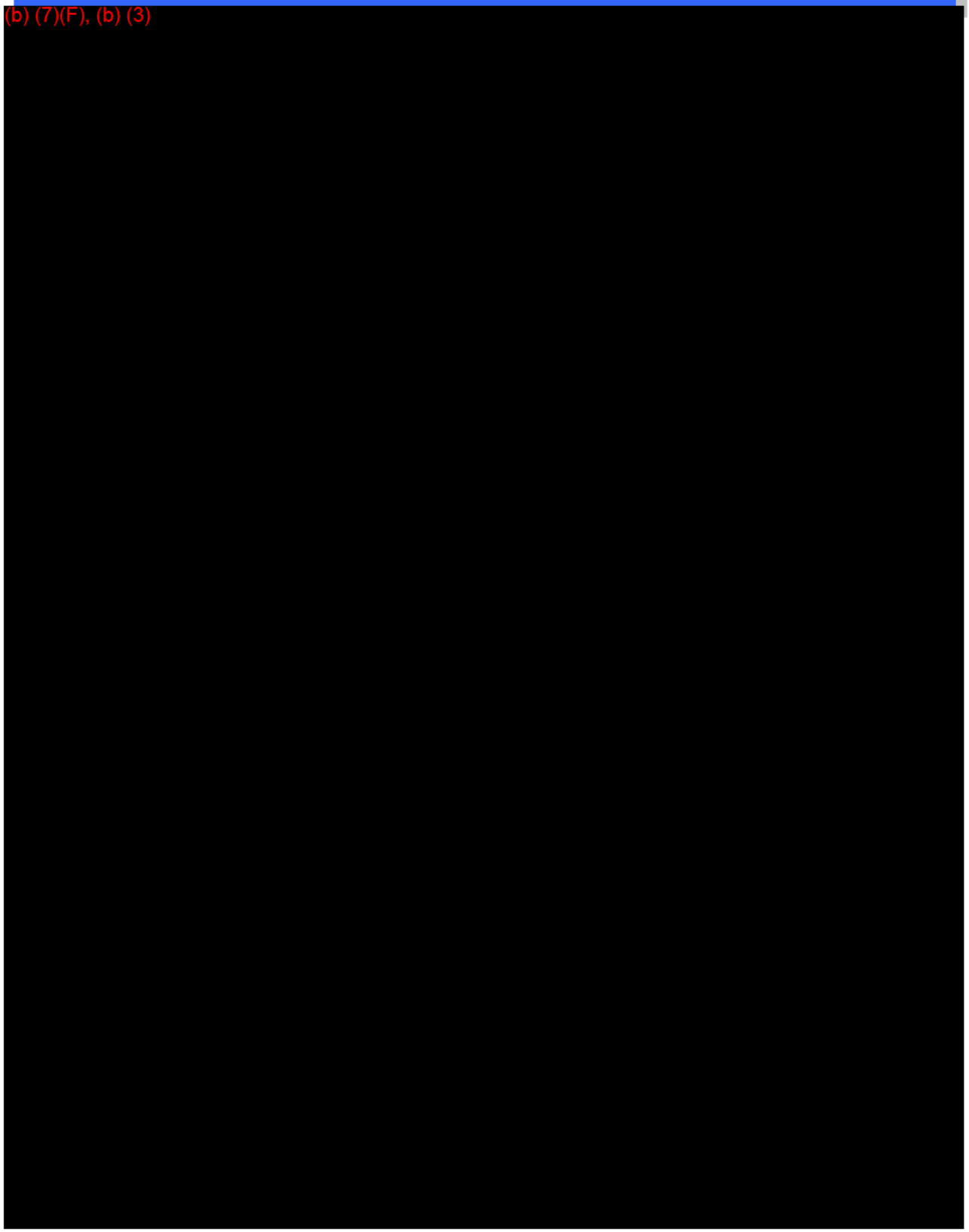


FIGURE 2.10(a) GARNER RESPONSE RESOURCES

GARNER

GARNER ENVIRONMENTAL SERVICES, INC.

CORPORATE OFFICE: 1717 W. 13TH STREET, DEER PARK, TX 77536 • 281-930-1200 • 800-424-1716

EMERGENCY RESPONSE

DISASTER RESPONSE

INDUSTRIAL SERVICES

WASTE MANAGEMENT

REMEDIATION

HEALTH & SAFETY TRAINING

EQUIPMENT SALES

November 11, 2010

Ms. Leslie Stuart
Total Petrochemical Environmental Engineers
Highway 366 & 32nd Street
Port Arthur, Texas 77642

Ms. Stuart,

Regarding your request for information about our ability to staff a major event at your location, let me assure you that Garner Environmental Services, Inc. will be able to provide trained personnel and the proper equipment to staff your needs for the first seven days of an oil spill and longer. We also will be able to supply EOC support and staffing. Two prime examples are recent and occurred in 2010. We responded to the Deepwater Horizon spill in the Gulf of Mexico in late April and finally brought our personnel home in September. At various times during this deployment we had as many as 400+ people working with and for us. In late July we responded to the Marshall Michigan spill and were there until October employing as many as 500 people on this project. During this time, we maintained enough equipment and personnel to keep our OSRP classification in good standing.
Please let me know if there is anything else you may need.

Sincerely,

Tim Ware
V.P. Business Development
Garner Environmental Services, Inc.
281.930.4403, Direct
(b) (6) [redacted]
tware@garner-es.com

Branch Offices

Deer Park, TX (Operation & Training) 281-930-1200	Pt. Arthur, TX (Operations) 409-983-5646	Port Arthur, TX (Training) 409-984-9836	LaMarque, TX (Operations) 409-935-0308

FIGURE 2.10(b) OIL MOP RESPONSE RESOURCES

161 KEARNY DRIVE
BELLE CHASSE, LA 70037

PHONE (504) 394-6110
FAX (504) 392-8977

OIL MOP, LLC
The Total Solution
www.oilmop.com

November 12th 2010

Total Port Arthur Refinery
Hwy 366 & 32nd Street
Port Arthur 77641
Attn: Leslie Stuart

RE: Letter of Intent – Agreement for Emergency Spill Response

Dear Leslie,

Thank you for the opportunity to be of service to Total Port Arthur Refinery. ***Oil Mop LLC (Oil Mop)*** can provide emergency response services to your facilities on a 24 hour basis. All of our response resources are listed within our United States Coast Guard ("USCG") Oil Spill Removal Organization ("OSRO") Classification. Our resources are maintained and exercised annually in accordance with the USCG PREP and OPA 90 readiness guidelines ***Oil Mop*** is listed as an MM through W3 Company with the USCG. Per 33 CFR 154.1045 paragraph (c)(1) and (c)(2), all time and equipment requirements will be met for the worst-case discharge.

"OMI will provide trained personnel necessary to continue operation of the equipment as required by **33CFR154.1035 (b) (3) (IV)** (B)."

All of ***Oil Mop's*** response resources, maintenance and training records are available for inspection by Customer upon request. ***Oil Mop*** will provide response services to Customer on an immediate basis. In the event ***Oil Mop*** is unable to provide immediate response services for any reason whatsoever, ***Oil Mop*** will subcontract and/or assign the work to be performed hereunder. Response times will vary due to facility/vessel location.

The response agreement covers a three-year period, starting in November **2010** through November **2013**.

24-Hour Emergency Response Hotline

1-800-645-6671

This Letter of Intent will provide proof of our intention to respond with all available resources; however, it is highly recommended that a Master Service Agreement be executed between Oil Mop, LLC and Total Port Arthur Refinery prior to Oil Mop responding to any incident.

Again thank you for the opportunity to be of service to Total Port Arthur Refinery. If we can be of any further assistance please feel free to call at any time.

Sincerely,

Joseph J. Christiana
Vice President

FIGURE 2.10(c) CLEAN HARBORS RESPONSE RESOURCES

Clean Harbors
42 Longwater Drive
P.O. Box 9149
Norwell, MA 02061-9149
781.792.5000
800.282.0058
www.cleanharbors.com

February 12, 2013

Ms. Corbin Smith
Environmental Engineer
TOTAL Port Arthur Refinery
7600 32nd Street
Port Arthur, TX 77642
409.963.6916

Dear Mr. Smith:

Please let this letter serve as evidence that the STANDBY EMERGENCY RESPONSE AGREEMENT (SERA), executed on August 15, 2006 by Clean Harbors Environmental Services (CHES), with corporate offices in Norwell, Massachusetts and Total Petrochemicals is an "evergreen" agreement and, as such, remains in force on this date, and will remain in force for all of 2013.

The purpose and intent of the SERA was, and continues to be, to provide Total Petrochemicals with emergency oil spill response resources and response capabilities, as required under the Oil Pollution Act of 1990, according to the terms and conditions of the March 25, 2009 agreement and in accordance with the USCG OSRO Ratings on file with the USCG for Clean Harbors.

In the event that an Emergency Response is identified, contact 1-800-645-8265 (1-800-OIL-TANK) immediately to reach the Clean Harbors Emergency Operations Center. A Clean Harbors EOC Duty Operator will then be able to provide sound management throughout the course of the event and rapid response time of response equipment and personnel.

Clean Harbors holds all necessary permits to perform this type of emergency response, and has regular training programs in place for all of its responders, including, but not limited to, 40 hour OSHA "Hazwoper" training and annual 8 hour refresher.

Any questions on this matter should be directed to this writer at (781) 792-5000.

Sincerely,

John Rodier

"People and Technology Creating a Better Environment"

3.1 TOTAL RESPONSE INVOLVING A KINDGER MORGAN INCIDENT

3.1 Overview

Kinder Morgan (KM) operates a coke dock, coke conveyor belt, and coke handling facilities at both the Coker Unit and coke dock area. Coke is loaded onto the conveyor belt at the Coker Unit and transported by conveyor belt to the KM operated coke handling facility where it is stockpiled then loaded onto ships at the coke dock that is located just plant north of TOTAL's Dock 2.

3.2 Communications

Kinder Morgan (KM) personnel assigned to the TOTAL facility have been assigned TOTAL plant radios. KM personnel will be operating on channels (b) (7)(F), (b) (3)

3.3 Notification

KM personnel will notify TOTAL Security (by phone or radio) at the main gate of any emergency situations that arise on KM property. TOTAL Security will make the necessary notifications to TOTAL incident response personnel.

3.4 Escorting Outside Emergency Responders

TOTAL will assist KM with the escorting of emergency services (personnel & equipment) through the refinery to the KM property.

3.5 Accountability

KM personnel assigned to the Coker Unit will participate in the Coker Unit accountability system. KM will perform accountability of their personnel working on KM property and will report to the TOTAL Main Gate.

3.6 Fire Incidents

TOTAL will respond to fire incidents involving the conveyor and the Coker pit area on KM property. TOTAL will not be responsible for responding to fire incidents involving pet coke once it is loaded aboard a vessel.

3.7 Security & Law Enforcement Incidents

TOTAL will assist with surveillance of KM dock and approaches from water when informed of an incident. TOTAL security personnel will not respond to security incidents on KM property.

3.8 Spills/Releases to Water

KM will be the primary responder for any spill/releases to water. TOTAL will provide a supporting role to a KM led response to a spill/release to water, upon request by KM. KM has current contracts with Oil Spill Response Organizations (OSRO's) for responses to these incidents.

KM will follow the guidelines in their own SPCC Plan to respond to these incidents.

3.9 Rescue, HAZMAT, and Medical Incidents

TOTAL will not respond to rescue, HAZMAT (spills to land) or medical incidents on KM property. TOTAL may respond to KM property if requested by another responding agency as a part of a mutual aid request for assistance. TOTAL will respond to medical/rescue incidents involving TOTAL employees on KM property.

3.10 Drills and Exercises

KM has expressed an interest in participating with TOTAL in emergency drills and exercises. TOTAL Security will be participating with KM as a part of the annual port wide security exercises, initiated by the US Coast Guard/DHS.

3.11 Emergency Contact Information

Title	Name	Mobile
Kinder Morgan Personnel		
Director Of Operations	Kevin Robertson	(b) (7)(F), (b) (3)
Terminal Manager	William (Bill) Castleman	
Terminal Supervisor	PENDING	
EHS Specialist	Kelly Price	
EHS Specialist	Scott Clingenpeel	
EHS Regional Manager	Jim Wilson	

The Port Arthur Refinery is situated on a 1,244-acre site at Port Arthur, a low-lying coastal region of South East Texas, 90 miles east of Houston. The Port Arthur Refinery is a complete integrated refining facility for processing various grades of crude oil. Crude oil is transferred to the Port Arthur Refinery by tanker via the Refinery docks and by pipeline, and is processed into refined products. The refined products are then transferred out of the Port Arthur Refinery by pipeline, tank truck, barge, and tanker. All references to north throughout this plan will be interpreted as plant north. Plant north is actually (b) (7)(F) due west of true north. Descriptions and maps of environmentally sensitive areas are located in the Tactical Response guide.

A.1 AREA MAP

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

A.2 FACILITY DESCRIPTION

Crude and Feedstock Supplies

The Port Arthur Refinery is capable of handling a mixture of sweet and sour crudes with sour crude being the predominant feed slate. The significant volumes of crude enter the Refinery through pipeline and the dock.

The main elements of the supply routes are:

- a dedicated dock, completely owned and operated by Total Petrochemicals & Refining USA, Inc. PAR, located on the Neches River with capability of discharging medium-size tankers with a draft not exceeding 40 feet.
- crude oil is transported to the Port Arthur Refinery by the 10" Crude Pipeline which is owned and operated by Total Petrochemical Pipeline Company.
- condensate is transported to the Port Arthur Refinery by the 8" Condensate Pipeline which is owned and operated by Total Petrochemical Pipeline Company.

The current demand is met by import over the Refinery dock. The Sun terminal has considerable spare throughput capacity at present. In addition to crude, naphtha, and vacuum gas oil (VGO) can be imported to supplement the feedstock for the reformer unit.

Product Dispatch

The Refinery products are dispatched in a variety of ways, with a reasonable amount of flexibility.

- Diesel, jet fuel, gas oil and gasoline products are mostly transferred by pipelines to the Explorer, Texas Eastern Transmission Pipeline (TET), and West Port Arthur terminals, situated five and four miles respectively from the Refinery. Total PAR owns tanks at the terminals from where product can be distributed by major pipeline systems to other terminals in the southern U.S.A. LPG can also be dispatched by pipeline to Huntsman Chemical in the area. A gasoline/diesel truck loading rack and LPG loading rack allow for LPG material, diesel, and gasoline to be distributed.
- Heavier oils are generally transported by sea from one of the three Refinery docks. Facilities also exist to allow movement of gasoline over the docks, if necessary.
- Sulfur is transported from site by road tanker.
- Coke is loaded into a conveyor belt that transports it to the coke dock that is just North of the TOTAL marine terminal. The conveyor belt and coke dock are operated by Kinder Morgan.

A.2 FACILITY DESCRIPTION (Cont'd)

Tankage Overview

The Port Arthur facility has extensive tankage capacity. Storage capacity ranges from high vapor pressure material through to very heavy oils such as asphalt and #6 Fuel. Tanks are varied in age and condition. The largest, single tank constructed capacity is (b) (7)(F), (b) (3) of crude. Currently crude oil tankage makes up the majority of the tanks with approximately (b) (7)(F), (b) (3) in oil service for a total capacity of approximately (b) (7)(F), (b) (3) (b) (7)(F), (b) (3)). Refer to Annex G for the Port Arthur Refinery Tank Listing. The above total capacity did not include storage tanks located at West Port Arthur Tank Farm. All other tanks including those that are out of service were included in the total capacity.

Some key safety features of the tankage are:

- Tank spacing is generally considered good with inter-tank separation ranging from two to three tank diameters on most large tanks. All tanks are provided with levees and appropriate secondary containment.
- (b) (7)(F), (b) (3)

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

- Access is available to all tanks on all four sides of the levee.
- A substantial number of tanks are equipped with fixed fire protection and/or equivalent safety systems.
- LPG spheres are equipped with either spray or flooding systems.
- Tanks are checked regularly by Operations and Inspection personnel.

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

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

A.2 FACILITY DESCRIPTION (Cont'd)

Storm Water Control Structures (SWCS) / Outfalls

The Total PAR has several permitted outfalls / stormwater control structures, which are described in detail in Annex G later in this Plan.

Utilities

Port Arthur Refinery has the capability to fulfill some of its own utility needs. Electricity is partially supplied by local providers, with the rest being cogenerated at the Facility. All steam is generated internally. Cooling water is maintained at the Facility, with feed water coming from canals north of the Beaumont area. Fuel gas is imported from outside the Facility.

Pipelines

16 Inch Products Pipeline (Explorer) / 12 Inch Products Pipeline (Explorer)

The 16 inch products pipeline is owned and operated by Total PAR and originates at the Total PAR Port Arthur Refinery and terminates at a manifold system adjacent to the Motiva Asphalt Port Neches Facility at the Explorer Pipeline System, approximately three miles west of the Total PAR Refinery. This pipeline transports diesel, gasoline, and jet fuel from the Total PAR Refinery to the Explorer Pipeline System. The Explorer pipeline leaves the refinery as a 16-inch pipeline and at Pine Street Junction becomes a 12 inch pipeline for approximately 2,800 feet where it terminates at the Explorer Manifold within Motiva's Tank Farm. The entire length of the Explorer 16 inch / 12 inch pipeline is approximately 4 miles. The Total Petrochemical Pipeline Company is responsible for responding to a spill with mutual aid support from PAR.

Bayou/West Port Arthur Tank Farm Pipeline

The Bayou/WPA Pipeline is owned and operated by Total PAR. This pipeline is utilized to transport gasoline and diesel from the Port Arthur Refinery to the WPATF. It originates at the Port Arthur Refinery as a ten-inch line and runs for approximately three miles southwest of the Refinery to Explorer/Pine Street Junction in Port Neches. The pipeline then becomes a 12-inch line and terminates at the WPATF. The entire length of the Bayou / West Port Arthur Pipeline is approximately ten and a half (10.5) miles. The Total Petrochemical Pipeline Company is responsible for responding to a spill with mutual aid support from PAR.

LPG Pipelines (Neches Pipeline Systems)

TOTAL LPG Pipelines consists of :
6" BB to TPC (Texas Petrochemical Company) formerly Huntsmans
4" BB Return from TPC to TOTAL PAR
3" Crude C-4 from BASF/Sabina to TPC
4" Refinery Grade Propylene (RGP) to Huntsmans

All four lines are within the same Right of Way beginning near the corner of Grandview and Terrell. The lines cross under the COE Levee, through Molasses Bayou, under Sara Jane Road, over the Texaco Canal, to Orchard Street, (b) (7)(F), (b) (3)

A.2 FACILITY DESCRIPTION (Cont'd)

LPG Pipelines (Cont'd)

Huntsmans on Hwy. 366 between Orchard and Pine Street. (b) (7)(F), (b) (3) [redacted]

Crude Oil and Condensate Pipelines

The Port Arthur Refinery also receives crude oil and condensate via two pipelines to supplement dock receipts. These pipelines are owned and operated by Total Petrochemical Pipeline Company and consist of the following:

The Total Petrochemical 10" Crude Pipeline begins at Smith's Bluff Manifold in Port Neches and terminates at the refinery. This 10" pipeline supplies crude oil to the Refinery. The Total Petrochemical Pipeline Company is responsible for responding to a spill with mutual aid support from PAR. This pipeline was formerly part of the Amdel Pipeline (also known as the West Texas Pipeline) until Total Petrochemical Pipeline Company purchased the Smith's Bluff to PAR portion from ALON. The length of this pipeline is approximately 7 miles.

The Total Petrochemical 8" Condensate Pipeline also begins at Smith's Bluff Manifold in Port Neches and terminates at the refinery. This 8" pipeline supplies condensate to the refinery. This pipeline was formerly known as the Neale Pipeline until Total Petrochemical Pipeline Company purchased the Neale Pipeline from ALON. The length of this pipeline is approximately 6 miles. The Total Petrochemical Pipeline Company is responsible for responding to a spill with mutual aid support from PAR.

Refer to Figure A.4 for a summary of worst-case discharge for each of the pipelines. In addition, please refer to drawing number 750-589, "Pipeline Locations Outside Refinery" within Figure A.2(c) for the path each pipeline takes within Jefferson County, Texas and a description of each corresponding pipeline.

All of Total PAR raw material and finished product pipelines are located within Jefferson County (PHMSA Sequence No. 1081) and could potentially impact various environmentally sensitive areas. Total PAR has developed a two volume Tactical Response Guide which consists of various identified sites complete with photos, checklists, maps, preplanned response actions and ICS 204 form.

Port Arthur Refinery Docks/Vessel Accommodation

The Port Arthur Refinery docks are located approximately one mile north of the Port Arthur Refinery at one half mile west of Sabine Lake. The docks consist of four berths and are utilized to transfer primarily crude oil from tankers to the Port Arthur Refinery and finished products to tankers and barges from the Port Arthur Refinery. Dock I can accommodate barges or a ship with a maximum length of 900 feet, Dock 2 can accommodate ships with a maximum length of 900 feet. Dock 3 has two berths, Berth A and Berth B. Berth A can accommodate barges with a maximum length of 500 feet, Berth B can accommodate barges

A.2 FACILITY DESCRIPTION (Cont'd)

Port Arthur Refinery Docks/Vessel Accommodation – (Cont'd)

with a maximum length of 500 feet. Products are transferred to and from the dock via pipelines approximately one mile in length. Figure A. 2(a) illustrates the piping configuration between the Refinery and docks.

The first valve on Total Port Arthur Refinery facility piping separating the transportation-related portion of the facility from the non-transportation-related portion of the facility is as follows:

- (b) (7)(F), (b) (3) [redacted]

Maps identifying the (b) (7)(F), (b) (3) [redacted] s are located in Figure A.2(a).

West Port Arthur Tank Farm

(b) (7)(F), (b) (3) [redacted]

(constructed capacity) barrel cone roof tank with an internal floater for slops, is also used to store gasoline and diesel produced at the Port Arthur Refinery. The products are transported from the Port Arthur Refinery to the WPATF via the WPATF pipeline. At the WPATF there is a tie-in to the Unocal line to deliver to the Unocal tankage at Port Arthur Pipeline System (PAPS). Products exit the WPATF into the Colonial Pipeline system.

This site has a fire water system with response personnel provided by the Refinery. Being situated in an industrial region, good mutual aid back up exists and the site should be reasonably well equipped to deal with most fire situations.

FIGURE A.1 DATES/TYPES SUBSTANTIAL EXPANSION

AFE	DESCRIPTION	AFE DATE
050726	Amine Collection	10/95
050729	Asphalt Blending	11/95
050730	Alky Caustic Wash	12/95
050740	Tank Farm Upgrade	1/96
050741	Inline Blending to	1/96
050743	Dock Road Crude Line	1/96
050744	Utility Feeder Upgrade	1/96
050748	Doc Facility Upgrade	1/96
050750	Capacity Maint. Contg.	1/96
050758	Ethylene Cracker	2/96
050759	1996 FCCU Modif.	2/96
050761	PHA Follow-up - PHII	2/96
050764	Light Naphitha Splttr	3/96
050765	Crude Tank Farm Improve.	4/96
050767	DHT Debottlenecking	6/96
050768	Improved Pump	7/96
050769	Demex Upgrade	6/96
061612	Gasoline Loading Rk	1/89
062093	Inst. Inj. System-052	6/90
080511	Replace MV 1524	1/89
450002	FAS150 Truck/Railcar	1/97
450003	Capacity Maintenance	1/97
450004	Dock Facility Upgrade	1/97
450005	Polymer Modified	1/97
450007	Small Improvement	1/97
450010	Asphalt Railcar	1/97
450011	Reforming/Aromatics	1/97
450012	Improved Pump	1/97
450017	PHA Follow-up	2/97
450019	Increased Olefins	2/97
450028	Par Crude Logistics	5/97
450036	Demex Upgrade PH II	6/97

FIGURE A.1 DATES/TYPES SUBSTANTIAL EXPANSION (Cont'd)

AFE	DESCRIPTION	AFE DATE
450040	Dock No. 1	8/97
450063	OM & S Optimization	1/98
450065	Dock No. I	1/98
450067	No. 6 Oil Blending	1/98
450069	PHA Action Items	1/98
450077	Xylene Bromine	6/98
450080	Zero-Pen Asphalt	7/98
450084	Jet Merox Treating	10/98
450086	Increase Unibon	10/98
450087	Road Asphalt Prod.	10/98
450088	Increased Unibon	1/99
450089	Jet Treating Upgrade	1/99
450094	Dock I Upgrade	1/99
450097	PHA Action Item	2/99
450098	DHT-1 / DHT-2	2/99
450102	FCCU 2001 Enhancement	4/99
450107	Alky C4 Splitter	7/99
450118	6 Oil Blending	11/99
450122	Small Improv. Project	1/00
450123	Asphalt Debottleneck	1/00
450124	LPG Recovery	1/00
450125	PHA Action Items	1/00
450129	Alky Debottlenecking	1/00
450130	Boilerhouse Instrum.	2/00
450132	EPA Stormwater	2/00
450133	Unibon Debottleneck.	2/00
450134	ATB FCCU Feed	3/00
450136	Dock I Upgrade	4/00
450140	DHT-2 Burners	8/00
450142	FAS-150 Loading Rack Cap.	9/00
450146	Unibon Wash Water Cap.	1/01
450147	Small Improvement Projects	1/01
450151	PHA Action Items – 2001	1/01

FIGURE A.1 DATES/TYPES SUBSTANTIAL EXPANSION (Cont'd)

AFE	DESCRIPTION	AFE DATE
450160	Distillate Blending – Phase II	4/01
458008	Cross Country Pipeline	4/01
450171	Asphalt PMA Debottlenecking Ph. II	1/02
450172	Asphalt Blendstock Rail Car Unloading	1/02
450173	Alky Cooling Tower LPG Detector	1/02
450176	Amdel Pipeline Upgrade	1/02
450177	Continuous Flare Gas Reduction	2/02
450178	Relaibility Improvement	2/02
450179	Spare High Pressure Deaerator	2/02
450180	PHA Action Items – CDU Heater Controls	2/02
450183	C-200 Backup Sour Tailgas Compressor	2/02
450186	Dock Facility Upgrade	1/02
658012	BFLP Diesel Blender	4/02
	Constructed Gasoline Hydrotreater	1/03
A450178-1300	RelImpr-UnibonNuclear Lvl V-5 Hot Separa	
A450180-0201	PHA Action Items - CDU Heater Controls	
A450184-0055	Low Sulfur Fuels (GHT) Project	
A450184-0067	Low Sulfur Fuels -GHT Offgas Facilities	
A450184-0100	Low Sulfur Fuels Capitalized Interest	
A450220-0000	Ultra Low Sulfur Diesel	
A450223-0000	PHA Action Items-VAC Heater Controls	
A450224-0000	Alkylation Unit Sewer Upgrade	
A450225-0000	ACU-1/Vacuum Improvements	
A450226-0000	BLENDING IMPROVEMENTS	
A450228-0000	Alkylation Debottleneck Phase III-Study	
A450232-0000	PHA Action Items - 2005	
A450232-0001	PHA Action Items-Remote Tank Shutdown	
A450232-0002	PHA Action-H25 & HydroCO Monitor Ref/NHT	
A450232-0004	PHA Actions DHT1 51-V11 Blowdown Line	
A450233-0006	Cap Cont 2005-WasteH2o Collect Sys Ctrls	
A450238-0000	Demex Debottlenecking	
A450241-0000	Sulfur Recovery Debottlenecking	
A450246-0000	Crude Blending & Flexibility	

FIGURE A.1 DATES/TYPES SUBSTANTIAL EXPANSION (Cont'd)

A450247-0000	FCC Propylene Improvements	
A450249-0000	Storage Tank Modernization	
A450250-0000	Unibon Compress Suction Piping	
A450254-0000	Replace North Flare Line Seal Drum	
A450255-0000	Tank 917/918 Spillbacks	
A450256-0000	HSE Hazard Reduction/Regulatory Compliance	
A450256-0001	HSE - SCBA Mask Upgrade(AV2000 to AV3000	
A450256-0002	Installation gas monitors in Tank Farm	
A450256-0003	Alky Refrigerant Flash Drum Level Instr	
A450257-0004	Lab Upgrade-Drum Storage Building	
A450257-0005	Lab Upgrade-DHA Upgrade	
A450258-0004	Activation of LPG Rail Car Loading Rack	
A450259-0000	Deep Conversion Project / Coker Unit	
A450260-0000	Naphtha Flexibility	
A450261-0000	Replace CCR RX Feed/Effluent Exchanger	
A450267-0000	PHA Action Items - H2S Monitors - DHT2	
A450271-0000	Col-Tex National Foam Property	
A450272-0000	ERE Dock Area Wastewater Containment	

FIGURE A.2 FACILITY DIAGRAMS

(a) 750-D-01-782 (Refinery and Docks)

(b) WPATF Diagram (4-Tank Farm)

(c) 750-589 (Pipelines outside Refinery)

FIGURE A.2(a) REFINERY/DOCKS DIAGRAM

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

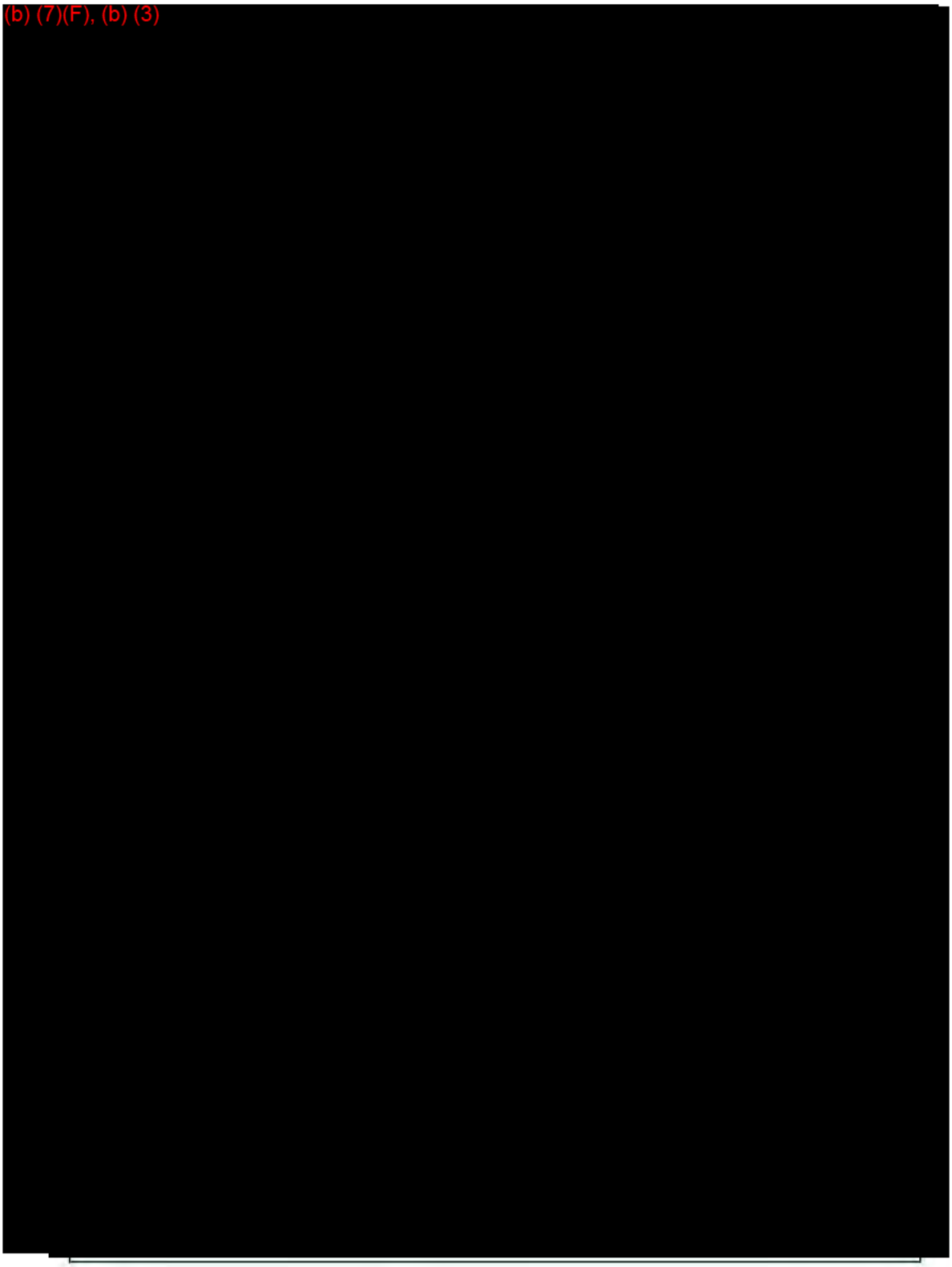


FIGURE A.2(b) WEST PORT ARTHUR TANK FARM DIAGRAM

WEST PORT ARTHUR TANK FARM SIMPLIFIED PLOT PLAN

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

FIGURE A.2(c) NON-REFINERY PIPELINES DIAGRAM

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

A.3 SPILL VOLUME CALCULATIONS AND SCENARIOS

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 Incident Management 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 all team members 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 useful as a planning and training tool, scenarios are not intended as outlines of expected spill responses; nor can they be regarded as predictions or performance guarantees. An actual response must always be tailored to meet actual circumstances.

SCOPE

Four scenarios are presented, a small operational spill, a medium operational spill and two worst case scenarios. These scenarios are as follows:

- Small operational spill - involves the rupture of a flange gasket on a loading hose during transfer operations at the dock. This results in a spill of approximately 10 barrels into the Neches River.
- Medium operational spill - involves overfilling Tank 560 such that Gas Oil is flowing out the tanks foam lines (inadvertently left uncapped) into Main Street. This results in a spill of approximately 700 barrels.
- Worst case scenarios - involves the worst case scenario for the crude oil pipeline (operated by Total Petrochemical Pipeline Company) and for the refinery. The scenarios are as follows:

  - West Port Arthur Pipeline rupture - a pipeline rupture at (b) (7)(F), (b) (3) [redacted] ht. This location is not accessible by road and the spill cannot be located until daylight, when it is noticed at (b) (7)(F), (b) (3) [redacted] als that hydrocarbon product is in the canal. A surveillance aircraft is then dispatched to confirm the rupture. (b) (7)(F), (b) (3) [redacted]. This was selected as the worst case spill for the West Port Arthur Pipeline due to the inaccessible location and potential for a large spill. Total Petrochemical PAR provides mutual aid support to Total Petrochemical Pipeline Company.

  - Piping failure between refinery and (b) (7)(F), (b) (3) [redacted] transfer operations from the refinery to the dock. Fifteen minutes of pumping is required to create a spill of this magnitude. Pressure on the line is continuously monitored, so it is reasonable that a rupture in the line would be responded to within fifteen minutes. This was selected as the worst case scenario for the refinery due to high pumping rates, large volumes of product transferred, and close proximity to water.

A.3 SPILL VOLUME CALCULATIONS AND SCENARIOS (Cont'd)

A.3.1 SMALL OPERATIONAL SPILL

INCIDENT

At 0730 hours the Spill Observer/Terminal Operator witnesses the rupture of a loading hose during transfer operations at the dock. The Spill Observer/Terminal Operator is aware that the product being loaded into the third party barge is diesel fuel. The Spill Observer/Terminal Operator immediately shuts down the transfer operation and stops the source of the spill. It is estimated that approximately five to ten barrels of diesel fuel have been spilled into Neches River. Approximately three barrels sprayed onto the barge's deck and hull.

ENVIRONMENTAL CONDITIONS

Weather:	Light rain, visibility less than 1.0 mile, temperature 57°F, winds from the South at 10 miles per hour.
Forecast:	Cloudy, high 82°F, light rain expected to end by 1030 hours, winds to continue from the South at 10 knots.
Neches River Currents:	Ebb tide, currents at 1.0. knot

IMMEDIATE RESPONSE

The Spill Observer immediately implements procedures to secure the source of the spill in accordance with Section 2.1.1. The barge's tankerman keeps all valves open so that the oil in the loading hose can drain into the barge, alerts the tug's crew of the situation, and makes the notifications outlined in the Total (PAR) Integrated Contingency Plan. The Spill Observer notifies the Shift Supervisor as shown in the Internal Spill Notification Sequence in Figure 2.3. The Shift Supervisor notifies the Deputy Incident Commander, who takes charge of the spill response operation. The following internal notifications are then made as noted in Figure 2.3 and regulatory notifications (as detailed in Figure 2.2 and Figure B.8). All phone numbers are listed in the Section 2 and Annex B.

Total PAR Notifications:

- Incident Commander
- HS&E Supervisor
- Area Superintendent
- Operations Manager

A.3 SPILL VOLUME CALCULATIONS AND SCENARIOS (Cont'd)

A.3.1 SMALL OPERATIONAL SPILL (Cont'd)

IMMEDIATE RESPONSE (Cont'd)

Regulatory Notifications:

- National Response Center
- USCG MSO - Port Arthur
- Texas General Land Office
- Texas Commission on Environmental Quality (TCEQ)
- Jefferson County Local Emergency Planning Committee

PRODUCT CHARACTERISTICS AND SAFETY PRECAUTIONS

Prior to entering a spill area, a Safety Monitor must perform an initial safety and health evaluation of the site. The Safety Monitor first evaluates MSDS information on the spilled diesel fuel and determines that Hydrogen Sulfide and benzene levels are characteristically low and do not present a health risk for the clean-up workers or the community. Appropriate personnel protective devices will be selected based on MSDS information. MSDS information is located on the TOTAL PAR intranet home page.

Following the completion of these screening procedures, the Safety Monitor develops the appropriate measures to be taken by responders while on site.

VESSEL RESPONSE

The barge's tankerman encircles the oil on deck with absorbent material so the diesel is contained in one area. Next, he checks the deck scuppers to make sure they do not leak. After ensuring that no more diesel goes overboard, he secures pom-poms connected with ropes to the deck railing in the area of the oiled hull in order to catch the diesel before it drips into Neches River.

The tug's crew boards the barge to help remove diesel from the deck and hull. The tankerman and tug's crew don protective gear and begin removing the diesel on the deck using buckets, degreaser, rags, and sorbent material. Pom-poms on poles are used to remove the diesel from the hull. All oiled material is placed in garbage bags and handed to Total Petrochemical PAR personnel for proper disposal.

CONTAINMENT AND CLEANUP

The immediate goals of the Incident Management Team are as follows:

- ensure the safety of all personnel
- eliminate the source of the spill
- mitigate the impact of the spill
- make the necessary internal and external notifications

A.3 SPILL VOLUME CALCULATIONS AND SCENARIOS (Cont'd)

A.3.1 SMALL OPERATIONAL SPILL (Cont'd)

CONTAINMENT AND CLEANUP (Cont'd)

Once the goals of the immediate response activities have been accomplished, the task of containment and cleanup are undertaken. The Deputy Incident Commander calls out selected members of the Port Arthur Refinery Incident Management Team including the Liaison Officer, Operations Section Chief, and Disposal Specialist. The organizational chart of the Port Arthur Refinery Incident Management Team is illustrated in Figure 2.6, the Incident Management Team roster is shown in Figure 2.5, and job descriptions of each position on the Incident Management Team are detailed in Annex C. The following is a brief outline of the activities which the Incident Management Team implements for this phase of the response as well as the procedures implemented by the barge crew.

The Deputy Incident Commander contacts site OSRO on-site personnel and directs them to begin deployment of Total PAR's on-site boom in an effort to isolate the third party barge and prevent the oil from moving east with the current. Total Petrochemical PAR's boom is stored at the dock (in 3 boom storage pads) and deployed with the aid of two response/work boats (16' and 20') located near the Gasoline Loading Rack. Site OSRO personnel are on location and in the process of deploying boom within an hour of the spill, immediately following approval from the Safety Monitor to enter the spill area. The Incident Management Team is successful in isolating the diesel. The boom is monitored closely to ensure that no diesel escapes.

After consulting with the Spill Observer/Terminal Operator, the Deputy Incident Commander confirms that approximately five to ten barrels of diesel has been spilled.

The Deputy Incident Commander decides that the incident can be handled by the Total PAR Incident Management Team, thereby classifying the spill as a Tier I in accordance with the classification system in Section 2.2.9(c). He/she also recommends that additional resources be procured to Total Petrochemical for the continuing containment and clean-up effort.

After consultation with the Operations Section Chief, the Deputy Incident Commander decides to supplement the response effort with additional manpower and equipment from site OSRO. Site OSRO has enough equipment staged to clean up this spill. Personnel can be dispatched to arrive at the spill site in approximately one hour. (A complete listing of OSRO's equipment inventory is located in Annex B)

The Deputy Incident Commander contacts site OSRO and informs them that approximately ten barrels of diesel fuel have been spilled. He/she states site OSRO on-site personnel are responding with Total PAR's boats and booms and that they have the spill contained. He/she suggests that site OSRO deploy additional boom as a backup, then skimming equipment to remove the oil from the water. OSRO responds that they will deploy two additional boats, 2,500 feet of boom, and two vacuum trucks, all located at Vidor. OSRO personnel are expected to arrive at the spill site in approximately one and a half hours.

A.3 SPILL VOLUME CALCULATIONS AND SCENARIOS (Cont'd)

A.3.1 SMALL OPERATIONAL SPILL (Cont'd)

CONTAINMENT AND CLEANUP (Cont'd)

In the event that oil escapes the initial containment area, the Deputy Incident Commander thoroughly reviews the Environmental Response Maps in Annex A in order to ensure that all potential environmental and socioeconomic sensitivities will be protected. There are environmentally sensitive shorelines in the area of the spill on the south bank of the river in the vicinity of the dock as well as in the unnamed inlet east of the dock. These areas are prioritized for protection. Boom will be deployed at the entrance to the unnamed inlet in the event that oil escapes the initial containment area. The Environmental Response Maps also provide logistical staging and response information, including potential booming strategies.

The Deputy Incident Commander contacts the Texas General Land Office and the U.S. Coast Guard MSO to discuss Total PAR's clean-up strategy. Both agencies concur with Total PAR's plans to contain and clean up the spill and will send representatives to the scene to monitor progress.

While awaiting the arrival of additional OSRO equipment, several Incident Management Team members monitor the boom and place absorbent boom and pads in surrounding areas. The recovered oil/water mixture is temporarily stored in pre-approved on-site storage containment units. The Disposal Specialist, whose duties and responsibilities are stated in Annex C, coordinates the disposal of the recovered oil/water mixture, debris, and absorbent materials that have been collected.

At 0830, additional OSRO personnel and equipment begin arriving at the Port Arthur Dock. They immediately deploy a second boom around the existing boom and start removing the spilled diesel from the area vacuum trucks. In addition, they deploy boom across the unnamed inlet in the event that oil escapes the initial containment area. Once the utilization of the vacuum trucks becomes ineffective, the remainder of the oil/sheen is picked up with rope mop skimmers and absorbent boom/pads. All clean-up equipment is cleaned in order to prevent further sheening. The entire clean-up process takes approximately eight hours. After all oil is cleaned up and removed from the barge, the tankerman receives clearance from the USCG and begins loading the balance of cargo. Incident Management Team personnel remain on standby to ensure that there is no additional oil in the water.

The Deputy Incident Commander convenes an Incident Summary/Evaluation Meeting with Incident Management Team members. The objectives of the meeting are to determine what could have been done to prevent the incident and how they could have improved their response/clean-up activities. A report is presented by the Deputy Incident Commander stating the materials and expendable used during the spill response and subsequent clean-up operation. All materials are promptly replaced and suggestions to improve future response activities are considered.

FIGURE A.3(a) RESPONSE CAPABILITIES

SMALL DISCHARGE = 50 BBLS

Response Requirement

The Facility shall identify sufficient resources, by contract or other approved means, to respond to a Small Discharge. The response resources shall, as appropriate, include:

- 1,000' of containment boom and a means of deploying it within one (1) hour of the discovery of a spill.
- Oil recovery devices with an effective daily recovery capacity equal to the amount of oil discharged in a *Small Discharge* or greater, which is available at the Facility within two (2) hours of the detection of an oil discharge.
- Oil storage capacity for recovered oily material equivalent to twice the effective daily recovery rate.

Facility Response Resources/Capability

The Facility will respond to a ***Small Discharge*** with the manpower detailed in Figures 2.3 and 2.6 as well as local contract resources as detailed in Figure 2.10(a)(b) & (c) and Annex B.

A.3 SPILL VOLUME CALCULATIONS AND SCENARIOS (Cont'd)

A.3.2 MEDIUM OPERATIONAL SPILL

INCIDENT

At 0930 hours the Spill Observer/Tankfarm Operator witnesses petroleum product coming out of the Tank 560 foam lines (which have been inadvertently left uncapped). The Spill Observer/Tankfarm Operator is aware that the product stored within Tank 560 is Gas Oil. The Spill Observer/Tankfarm Operator immediately notifies the Shift Supervisor and tries to secure the discharge of Gas Oil from Tank 560 to no avail. The Shift Supervisor upon arrival observes that Gas Oil is flowing out of the Tank 560 foam lines onto Main Street. The secondary containment of Tank 560 has been bypassed completely due to the foam lines passing through the secondary containment berm. By the time Tank 560 can be pumped down below the foam lines inlet and the foam lines secured, approximately 700 barrels of Gas Oil has been spilled onto Main Street and into the nearby ditches.

ENVIRONMENTAL CONDITIONS

Weather: Sunny, winds from the Southeast at 10 mph, temperature 82°F, visibility very good.

Forecast: Partly cloudy with scattered showers and thunderstorms, high near 90°F, dewpoints in the lower to middle 70's, winds mostly southeasterly at 3 to 14 mph.

IMMEDIATE RESPONSE

The Spill Observer immediately notifies the Shift Supervisor as shown in the Spill Notification Sequence Procedures in Figure 2.3. Then the Spill Observer attempts to secure the spill source in accordance with Section 2.1.1. Meanwhile, the Shift Supervisor notifies the Deputy Incident Commander, who takes charge of the spill response operation. The following internal notifications are then made as noted in Figure 2.3 and regulatory notifications (as described in Figure 2.2). All phone numbers are listed in Section 2 and Annex B.

Total PAR Notifications:

- Incident Commander
- HS&E Supervisor
- Area Superintendent
- Operations Manager
- Refinery Manager

Regulatory Notifications:

- National Response Center
- Texas General Land Office
- Texas Commission on Environmental Quality (TCEQ)

A.3 SPILL VOLUME CALCULATIONS AND SCENARIOS (Cont'd)

A.3.2 MEDIUM OPERATIONAL SPILL (Cont'd)

PRODUCT CHARACTERISTICS AND SAFETY PRECAUTIONS

Prior to entering a spill area, a Safety Monitor must perform an initial safety and health evaluation of the site. The Safety Monitor first evaluates MSDS information on the spilled Gas Oil and advises the Deputy Incident Commander to the health risks for this product and also advises that the product is flammable and that the appropriate precautions should be followed to ensure that the area is safe to enter. Appropriate personnel protective devices are utilized based on the results of the survey.

IMMEDIATE RESPONSE

The immediate goals of the Incident Management Team are as follows:

- ensure the safety of all personnel
- eliminate the source of the spill
- mitigate the impact of the spill
- make the necessary internal and external notifications

Once the goals of the immediate response activities have been accomplished, the task of cleanup is undertaken. The Deputy Incident Commander calls out the entire Total Port Arthur Refinery Incident Management Team. The organizational chart of this team is illustrated in Figure 2.6, the Incident Management Response Team roster is shown in Figure 2.3, and job descriptions of each position on the Incident Management Team are detailed in Annex C. The following is a brief outline of the activities which the Incident Management Team implements for this phase of the response.

The Deputy Incident Commander contacts OSRO on-site personnel and directs them to start making earthen dams within the ditches in an effort to isolate the spilled Gas Oil and prevent the Gas Oil from spreading and possibly entering Stormwater Control Structure (SWCS) E. Earthen dams are placed in the ditches alongside Dock Road, east and west of Main Street, with the aid of front end loaders. OSRO personnel are on location within 20 minutes of the spill. Immediately following the approval from the Safety Monitor to enter the area, OSRO placed absorbent booms within the Main Street ditches as well as deploying vacuum trucks to the spill site. The Incident Management Team is successful in containing the spilled Gas Oil within the Main Street and Dock Roads ditches. OSRO begins recovery of the spilled Gas Oil with several vacuum trucks. Tank 560 has been emptied to a level below the inlet to the foam lines. The foam lines are then plugged/capped.

The Deputy Incident Commander decides that the incident can be handled by the local Incident Management Team, even though the spill has been classified as a Tier II incident, as defined in Section 2.2.9(c). This decision is supported by the fact that the Gas Oil spill has been contained within the nearby ditches and the source of the spill has been secured.

After consultation with the Operations Section Chief, the Deputy Incident Commander decides to supplement the response effort with additional manpower and equipment from OSRO. OSRO has enough equipment staged to clean up this spill. Personnel can be dispatched to arrive at the spill site in approximately one hour.

A.3 SPILL VOLUME CALCULATIONS AND SCENARIOS (Cont'd)

A.3.2 MEDIUM OPERATIONAL SPILL (Cont'd)

IMMEDIATE RESPONSE (Cont'd)

The Deputy Incident Commander contacts OSRO and informs them that approximately 700 barrels of Gas Oil have been spilled. He/she states OSRO on-site personnel are responding with earthen dams and vacuum trucks and that they have the spill contained. The Deputy Incident Commander requests that OSRO send additional vacuum trucks, absorbent material and roll-off boxes to the spill site. OSRO responds that they will deploy three more vacuum trucks, two roll-off boxes and one guzzler, all located at their West Port Arthur location. OSRO personnel are expected to arrive at the spill site in approximately one hour.

In the event that the Gas Oil spill escapes the initial containment area, the Deputy Incident Commander has already selected alternative sites where earthen dams can be placed within the Dock Road ditch to prevent the Gas Oil from entering SWCS E. Front end loaders have already been positioned at these locations and will use nearby soil to make the earthen dams if required.

The Liaison Officer contacts the National Response Center, Texas General Land Office, and the Texas Commission on Environmental Quality (TCEQ). The TGLO and TCEQ concur with Total PAR's plans to contain and clean up the spill. The TGLO sends a representative to the spill scene to inspect the clean-up operations already underway.

While awaiting the arrival of the additional OSRO equipment to begin, several Incident Management Team members place absorbent boom and pads in surrounding areas. The recovered oil/water mixture is stored temporarily in pre-approved on-site storage containment units. The Disposal Specialist, whose duties and responsibilities are stated in Annex C, coordinates the disposal of the recovered oil/water mixture, debris and absorbent materials that have been collected.

At 1118 hours, additional OSRO personnel and equipment begin arriving at the Total Petrochemical PAR's Main Gate. They immediately deploy the guzzler and the additional vacuum trucks. After the vacuum trucks and guzzler have recovered all of the spilled product possible. Frontend loaders along with a backhoe that has been leased begin the removal of the contaminated ditch soil to nearby roll-off boxes. The entire clean-up process takes approximately 72 hours. All excavation response equipment is cleaned off at the wash-out slab before leaving the Total Petrochemical Port Arthur Refinery.

The Deputy Incident Commander convenes an Incident Summary/Evaluation Meeting with Incident Management Team members. The objectives of the meeting are to determine what could have been done to prevent the incident and how they could have improved their response/clean-up activities. A report is presented by the Deputy Incident Commander stating the materials and expendables used during the spill response and subsequent clean-up operation. All materials are promptly replaced and suggestions to improve future response activities are considered.

FIGURE A.3(b) RESPONSE CAPABILITIES

MEDIUM DISCHARGE = 857 BBLS

Response Requirement

The Facility shall identify sufficient response resources, by contract or other approved means, to respond to a Medium Discharge. The response resources shall, as appropriate, include:

- Oil recovery devices with an effective daily recovery capacity equal to 50% of the *Medium Discharge* volume that are capable of arriving on scene within 12 hours.
- Sufficient quantity of containment boom must arrive within 12 hours for oil collection and containment and for protection of fish and wildlife and sensitive environments, as appropriate.
- Temporary storage capacity equal to twice the daily recovery capacity.

Facility Response Resources/Capability

The Facility will respond to a ***Medium Discharge*** with the manpower detailed in Figures 2.3 and 2.6 as well as local contract resources as detailed in Figure 2.10(a)(b) & (c) and Annex B.

A.3 SPILL VOLUME CALCULATIONS AND SCENARIOS (Cont'd)

A.3.3 WORST CASE SPILL – MUTUAL AID SUPPORT

INCIDENT

At 2200 hours, the West Port Arthur Tank farm Operator notices that (b) (7)(F), (b) (3) [redacted]. A shipment of Diesel Fuel has been ongoing but his hourly gauge shows no change in the tank level. He contacts the Total Petrochemical Port Arthur Refinery's Main Gate and informs the security guard that a possible rupture of the West Port Arthur Pipeline may have occurred. The security guard then contacts the Total Petrochemical Pipeline's Qualified Individual / Pipeline Coordinator to inform him of the possible rupture. The pipeline is immediately shut down, however, the exact location of the failure is not yet known. Since it is dark, the source of the spill may not be able to be located until morning. An airplane will be dispatched as soon as visibility allows the spill to be located. Personnel are immediately dispatched to travel the pipeline, where accessible, to search for the leak. Local emergency services (Sheriffs Department and Police) are notified that a diesel fuel leak may have occurred at some point between Total Petrochemical's Pine Street Junction and Total Petrochemical's West Port Arthur Tank farm. Local emergency services are requested to notify the Total Petrochemical Pipeline Coordinator, in the event that calls are received from the public that could be related to the apparent leakage. Estimations of the spill size will not be attempted until the leak is located.

ENVIRONMENTAL CONDITIONS

Weather: Light rain, temperature 75°F, winds from the south at 6 knots.

Forecast: Winds to continue from the South at 6 knots.

NOTIFICATION

The West Port Arthur Tank farm Operator immediately notifies the Total PAR Main Gate Security Guard who in turn notifies the Total Petrochemical Pipeline Company's Pipeline Coordinator or other designated individual. The Pipeline Coordinator notifies the Shift Supervisor, who notifies the Total PAR Deputy Incident Commander individuals as shown in the Spill Notification Sequence in Figure 2.3. The Total PAR Deputy Incident Commander, in coordination with the Total Petrochemical Pipeline Coordinator, takes charge of the initial spill response operation in accordance with the Mutual Aid Support Agreement.

The Pipeline Coordinator puts a contract aerial service pilot on notice to be prepared to locate the pipeline leak at first light. Site OSRO, a spill response contractor, is also placed on standby to respond with personnel and equipment upon notification at sunrise. None of the personnel have been able to find the leak during the night. The patrol plane departs at 0630 hours and detects the (b) (7)(F), (b) (3) [redacted] The Pipeline Coordinator departs to the area to verify the spill leading edge location.

A.3 SPILL VOLUME CALCULATIONS AND SCENARIOS (Cont'd)

A.3.3 WORST CASE SPILL – MUTUAL AID SUPPORT (Cont'd)

NOTIFICATION (Cont'd)

The following internal notifications are then made (as detailed in Figure 2.3) and regulatory notifications (as detailed Figure 2.2 and Annex B). All phone numbers are listed in Figure 2.2 and Figure B.8.

Total PAR Notifications:

- Incident Commander
- HS&E Supervisor
- Area Superintendent
- Operations Manager
- Refinery Manager
- Vice President of Refining
- Corporate Managers

Regulatory Notifications:

- National Response Center
- USCG MSO - Port Arthur
- Texas General Land Office
- Texas Commission on Environmental Quality (TCEQ)
- Texas Railroad Commission (Due to off-site pipeline spill)
- Jefferson County Local Emergency Planning Committee (LEPC)

The Total PAR Incident Management Team Emergency Operations Center is established at the Holiday Inn Park Central on Jimmy Johnson Blvd in Port Arthur, TX (this location is closer to the spill site than PAR). All personnel are instructed to report to the Emergency Operations Center as soon as possible.

PRODUCT CHARACTERISTICS AND SAFETY PRECAUTIONS

Prior to entering a spill area, a Safety Monitor must perform an initial safety and health evaluation of the site. The Safety Monitor first evaluates MSDS information on the spilled diesel fuel and advises the Total PAR Deputy Incident Commander to the health risks for this product and also advises that the product could be flammable and that the appropriate precautions should be followed to ensure that an explosion does not occur. Air monitoring is performed to ensure that the area is safe to enter. Appropriate personnel protective devices are utilized based on the results of this survey.

A.3 SPILL VOLUME CALCULATIONS AND SCENARIOS (Cont'd)

A.3.3 WORST CASE SPILL – MUTUAL AID SUPPORT (Cont'd)

IMMEDIATE RESPONSE

The immediate goals of the Total PAR Incident Management Team are as follows:

- ensure the safety of all personnel
- eliminate the source of the spill
- mitigate the impact of the spill
- make the necessary internal and external notifications

Once the goals of the immediate response activities have been accomplished, the task of cleanup is undertaken. The Total PAR Deputy Incident Commander calls out the entire Total PAR Incident Management Team. The organizational chart of the Total PAR Incident Management Team is illustrated in Figure 2.6. The Total PAR Incident Management Team roster is shown in Figure 2.5, and job descriptions of each position on the Total PAR Incident Management Team are detailed in Annex C. The following is a brief outline of the activities which the Total PAR Incident Management Team implements for this phase of the response.

Upon arriving at the site, the Total PAR Operations Section Chief utilizes the spill volume estimating procedure in Section 2.2.9 and estimates the spill at (b) (7)(F), (b) and contacts the Total PAR Deputy Incident Commander to report this information to him.

The Total PAR Deputy Incident Commander contacts OSRO, who is on (b) (7)(F), (b) (3) barrels of diesel fuel has spilled. Surveillance aircraft indicates the leading edge of the spill is approximately 1 mile south of the pipeline crossing. In accordance with the Volume 2 of the Tactical Response Guide, the nearest access area is at the Highway 73 crossing of the Main B/C Canal (south of the spill).
OSRO responds that they will mobilize 20 HAZWOPER trained personnel, three 16 ft workboats, 2,000 feet of boom, three 3 inch floating skimmers, two vacuum trucks, and sorbent booms and pads. They expect to be on location within 30 minutes. Upon arrival, the Total PAR Branch Operations Chief directs the contractor to deploy boom across the Main B/C Canal upstream at Highway 73 and to boom across DD-7's Main Outfall Canal. These sites are listed in Volume 2 of the Tactical Response Guide. The trapped diesel fuel will then be recovered with vacuum trucks and skimmers.

The Total PAR Deputy Incident Commander contacts the Texas General Land Office and the U.S. Coast Guard MSO to discuss Total Petrochemical PAR's clean-up strategy. Total PAR's response strategy consists of:

A.3 SPILL VOLUME CALCULATIONS AND SCENARIOS (Cont'd)

A.3.3 WORST CASE SPILL – MUTUAL AID SUPPORT (Cont'd)

RESPONSE PLANNING

1. Management. The Total Port Arthur Refinery Incident Management Team will initiate response actions. Their actions will be supplemented by OSRO, a spill response contractor. Total PAR personnel will supervise spill response activities performed by OSRO.

2. Incident Command. The Total PAR Incident Commander will establish a unified command with the Federal On-Scene Commander and the State On-Scene Commander.

3. Monitoring. Aerial surveillance will be performed during daylight hours to monitor spill movement and identify areas impacted by the diesel fuel. Verification and adjustment of spill trajectories will be made as necessary, compared with PAR's Tactical Response Guide, Volume 2, and incorporated into continuing response planning. Environmentally and socio-economically sensitive areas projected to be at risk of impact by spill trajectories will be closely monitored for signs of potential impact.

4. Containment and Recovery. Containment booms will be deployed across the Main B/C Crossing at Highway 73 and at the leading edge of the spill within DD-7's Main Outfall Canal to contain the diesel fuel and prevent it from moving further downstream with the current. Skimmers and vacuum trucks (where possible) will be utilized to recover trapped oil (in accordance with the site sheets in PAR's Tactical Response Guide, Volume 2). Sorbent booms and pads will be utilized to absorb pockets of crude oil and residual sheens.

5. Storage and Disposal. Sorbents and oiled debris will be containerized for temporary storage prior to disposal in an approved manner at a location acceptable to regulatory agencies. The Disposal Specialist will coordinate the disposal of the debris and sorbent material that are collected.

6. Response Equipment and Manpower. The Total PAR Deputy Incident Commander will utilize the entire Port Arthur Refinery Incident Management Team and will rely on OSRO to provide additional manpower and equipment for response operations. In addition, Garner Environmental can be utilized if necessary. Garner is a Level W3 OSRO and their equipment list is maintained within a Corporate Contracts Notebook located within the office of Total PAR's Contracts Department Supervisor.

7. Shoreline Cleanup. Total PAR, along with all concerned agencies, will review various shoreline clean-up techniques to determine which method(s) will be used depending on the shoreline type. This clean-up activity, if necessary, will be initiated upon approval.

A.3 SPILL VOLUME CALCULATIONS AND SCENARIOS (Cont'd)

A.3.3 WORST CASE SPILL – MUTUAL AID SUPPORT (Cont'd)

RESPONSE PLANNING (Cont'd)

8. Wildlife Protection and Rehabilitation. Total PAR will coordinate wildlife protection and rehabilitation with the Texas Parks & Wildlife Department (TX P&W) or the U.S. Fish & Wildlife (U.S. F&W). Appropriate personnel will be notified and contracted as necessary, by the TX P&W or U.S. F&W, to assist in operating a local center to care for oiled wildlife. These personnel/organizations will also be responsible for organizing and training volunteers to care for wildlife undergoing rehabilitation. State resource agency personnel will be requested to provide personnel to perform capture operations.

9. Public Relations. Total PAR will make a daily press release, as necessary, to keep the public informed about the oil spill and progress of the clean-up operations.

Agency representatives agree with Total PAR's plans for responding to the spill. State agencies agree to provide support for wildlife protection and in setting response priorities. Total PAR also contacts the FAA to have them control the increase in air traffic over the spill site. In addition, Total PAR requests the Jefferson County Sheriff's Department provide crowd and traffic control.

CONTAINMENT AND CLEANUP

At approximately 0800, OSRO personnel begin arriving at the Highway 73 Bridge. The Total PAR Branch Operations Chief directs OSRO to begin containment operations in the Main B/C Canal, and to deploy boom across the canal upstream of the Highway 73 Bridge to contain the diesel fuel. Boats are launched from the banks at the Highway 73 Bridge. In addition, boats are launched at the Martin Luther King Memorial Parkway Bridge where the Main Outfall Canal/Alligator Bayou crosses underneath (in accordance with PAR's Tactical Response Guide, Volume 2). Containment booms are towed upstream to the leading edge of the diesel fuel. OSRO deploys equipment as agreed upon by the unified command. Adjustment are made as needed. The Total PAR Branch Operations Chief also directs OSRO to utilize sorbent boom and pads to remove remaining pockets of product and sheen.

OSRO personnel are utilized to provide laborers for shoreline cleanup in the Main B/C Canal and the Main Outfall Canal. The Total PAR Branch Operations Chief works with the contractors to ensure that the appropriate HAZWOPER training has been implemented and that they are following safe operating practices.

Press conferences are held for state and local agencies, media, and the public. The Total PAR Incident Commander, Total PAR Liaison Officer, and representatives from the U.S. Coast Guard MSO, and Texas General Land Office present details of the day's incident, response objectives, and anticipated continuing activities. Total PAR establishes a claims center and publishes a claims phone number.

A.3 SPILL VOLUME CALCULATIONS AND SCENARIOS (Cont'd)

A.3.3 WORST CASE SPILL – MUTUAL AID SUPPORT (Cont'd)

RESPONSE PLANNING (Cont'd)

Upon completion of the response effort, all response equipment is cleaned in order to prevent further sheening. The entire clean-up process takes approximately 14 days. Total PAR fully complies with federal, state, and local agencies having oversight of the spill clean-up operation.

The Total PAR Deputy Incident Commander convenes an Incident Summary/Evaluation Meeting with Incident Management Team members and/or Pipeline Spill Response Team members. The objectives of the meeting are to determine what could have been done to prevent the incident and how could they have improved their response/clean-up activities. A report is presented by the Deputy Incident Commander stating the materials and expendables used during the spill response and subsequent clean-up operation. All materials are promptly replaced and suggestions to improve future response activities are considered.

A.3 SPILL VOLUME CALCULATIONS AND SCENARIOS (Cont'd)

A.3.4 WORST CASE SPILL – DOCK TO REFINERY PIPELINE RUPTURE

INCIDENT

At 0730 hours, an Operator notices crude oil in the Neches River below the approach to Dock 2 during transfer operations from the refinery to the dock. The Operator traces the source to a rupture in the pipeline. The product is pumped at the rate of (b) (7)(F), (b) (3) per hour. Since the pumping operation has been in progress for twenty minutes, it is estimated that the spilled quantity is approximately (b) (7)(F), (b) (3) of Crude.

ENVIRONMENTAL CONDITIONS

Weather:	Light rain, temperature 75°F, winds from the south at 6 knots.
Forecast:	Rain expected to end by 0830 hours, winds to continue from the South at 10 knots.
Neches River Currents:	Ebb tide, current at one knot.

NOTIFICATION

The Operator immediately stops the source by stopping pumping operations and closing appropriate valves in accordance with the steps outlined in Section 2.1.1, then notifies the Shift Supervisor as shown in the Spill Notification Sequence in Figure 2.3. The Shift Supervisor notifies the Incident Commander, who takes charge of the spill response operation. The following internal notifications are then made (as detailed in Figure 2.3) and regulatory notifications (as Figure 2.2 and Annex B). All phone numbers are listed in the Figure 2.2 and Figure B.7.

Total PAR Notifications:

- Incident Commander
- HS&E Supervisor
- Area Superintendent
- Operations Manager
- Refinery Manager
- Corporate Managers

Regulatory Notifications:

- National Response Center
- USCG MSO - Port Arthur
- Texas General Land Office
- Texas Commission on Environmental Quality (TCEQ)
- Jefferson County Local Emergency Planning Committee (LEPC)

A.3 SPILL VOLUME CALCULATIONS AND SCENARIOS (Cont'd)

A.3.4 WORST CASE SPILL –DOCK TO REFINERY PIPELINE RUPTURE (Cont'd)

PRODUCT CHARACTERISTICS AND SAFETY PRECAUTIONS

Prior to entering a spill area, a Safety Monitor must perform an initial safety and health evaluation of the site. The Safety Monitor first evaluates MSDS information on the spilled crude oil and advises the Incident Commander to the health risks for this product and also advises that the product is flammable and that the appropriate precautions should be followed to ensure that an explosion does not occur. Air monitoring is performed to ensure that the area is safe to enter. Appropriate personnel protective devices are utilized based on the results of this survey.

IMMEDIATE RESPONSE

The immediate goals of the Incident Management Team are as follows:

- ensure the safety of all personnel
- eliminate the source of the spill
- mitigate the impact of the spill
- make the necessary internal and external notifications

Once the goals of the immediate response activities have been accomplished, the task of cleanup is undertaken. The Incident Commander calls out the entire Total PAR Incident Management Team. The organizational chart of the Incident Management Team is illustrated in Figure 2.6, the Incident Management Team roster is shown in Figure 2.5, and job descriptions of each position on the Incident Management Team are detailed in Annex C. The following is a brief outline of the activities which the Incident Management Team implements for this phase of the response.

After consulting with the Operator, the Incident Commander confirms by barge level gauges that approximately (b) (7)(F), (b) (3) of crude oil has spilled.

The Incident Commander quickly determines that additional resources are needed to supplement the Total PAR Port Arthur Refinery Incident Management Team and will call out a spill response contractor. The Incident Management Team Emergency Operations Center is established at the Training Trailers. All personnel are instructed to report to the Training Trailers / Emergency Operations Center as soon as possible.

The Operations Section Chief begins following the spill to determine the extent of impact and where the leading edge of the spill is located. He determines that the spill has entered the Neches River and is rapidly spreading with the tide. The Incident Commander directs the Operations Section Chief to dispatch vacuum trucks to the site and to begin deployment of Total PAR's on-site containment boom.

A.3 SPILL VOLUME CALCULATIONS AND SCENARIOS (Cont'd)

A.3.4 WORST CASE SPILL – REFINERY TO DOCK PIPELINE RUPTURE (Cont'd)

IMMEDIATE RESPONSE (Cont'd)

The Incident Commander contacts on-site and off-site oil spill response companies that are listed in the plan and informs them that approximately (b) (7)(F), (b) (3) of crude oil has spilled, all of which has entered the Neches River. The Incident Commander directs the contractors to immediately mobilize boats and boom in an effort to contain the oil that spilled into the river and to deploy skimming and other recovery equipment to the Neches River. In addition, many shoreline clean-up personnel will be needed.

The oil spill response companies respond that they will each mobilize 20 HAZWOPER trained personnel, three 16 ft. workboats, 3,000 feet of boom, three 3 inch floating skimmers, two vacuum trucks, and sorbent booms and pads. They expect to be on location within one hour. The Incident Commander directs the contractors to deploy boats into the Neches River from the Rainbow Marina public boat ramp east of the Total Petrochemical PAR Marine Dock Terminal.

The Environmental Unit Leader thoroughly reviews the site sheets in PAR's Tactical Response Guide, Non-DD7 Waterways, as well as the vulnerability maps and sensitive areas maps within Annex A of this ICP in order to ensure that all potential environmental and socioeconomic sensitivities will be protected. Environmentally sensitive areas include the south bank of the Neches River in the vicinity of the dock and the inlet located east of the dock area. The shorelines will be protected if possible and the inlet will be isolated with boom to prevent diesel from entering. Air monitoring is to be performed before any boom is deployed to ensure that the area is safe to enter. PAR's Tactical Response Guide, Non-DD7 Waterways, provide logistical staging and response information, including potential booming strategies.

The Incident Commander contacts the Texas General Land Office and the U.S. Coast Guard MSO to discuss Total Petrochemical PAR's clean-up strategy. Total Petrochemical PAR's response strategy consists of:

RESPONSE PLANNING

1. Management. The Total PAR Port Arthur Refinery Incident Management Team will initiate response actions. Their actions will be supplemented by spill response contractors. Total PAR personnel will supervise spill response activities performed by spill response contractors.

2. Incident Command. The Total PAR Incident Commander will establish a unified command with the Federal On-Scene Commander and the State On-Scene Commander.

A.3 SPILL VOLUME CALCULATIONS AND SCENARIOS (Cont'd)

A.3.4 WORST CASE SPILL – REFINERY TO DOCK PIPELINE RUPTURE (Cont'd)

RESPONSE PLANNING (Cont'd)

3. Monitoring. Aerial surveillance may be performed if needed during daylight hours to monitor spill movement and identify areas impacted by oil. Verification and adjustment of spill trajectories will be made as necessary, and incorporated into response planning. Environmentally and socio-economically sensitive areas projected to be at risk of impact by spill trajectories will be closely monitored for signs of potential impact. Agency personnel will be invited to participate in the effort using aircraft chartered by Total PAR.

4. Containment and Recovery. Due to rapid currents in Neches River, diversion booms will be utilized to herd crude oil to the shoreline to facilitate recovery operations. Containment boom will be used as needed to prevent the spread of oil. Skimmers and vacuum trucks (where possible) will be utilized to recover trapped oil. Sorbent booms and pads will be utilized to absorb pockets of oil and residual sheens.

5. Storage and Disposal. Sorbents and oiled debris will be containerized for temporary storage prior to disposal and stored at predetermined sites. The Disposal Specialist will coordinate the disposal of the debris and sorbent material that are collected. Recovered oil and water will be processed within Total PAR's on-site Recovered Oil Storage/Treatment Facility and will be transported to the refinery via vacuum trucks.

6. Response Equipment and Manpower. The Total PAR Incident Commander will utilize all members of the Port Arthur Refinery Incident Management Team and will rely on spill contractors to provide additional manpower and equipment for response operations.

7. Shoreline Cleanup. Total PAR, along with all concerned agencies, will review various shoreline clean-up techniques to determine which method(s) will be used depending on the shoreline type. This clean-up activity will be initiated upon approval.

8. Wildlife Protection and Rehabilitation. Total PAR will coordinate wildlife protection and rehabilitation with the Texas Parks & Wildlife Department (TX P&W) or the U.S. Fish & Wildlife (U.S. F&W). Personnel from Texas Wildlife Rehabilitation Coalition, Texas Oiled Wildlife Response Program, or Texas State Aquarium will be notified and contracted as necessary, by either TX P&W or U.S. F&W, to assist in operating a local center to care for oiled wildlife. These organizations will also be responsible for organizing and training volunteers to care for wildlife undergoing rehabilitation. State resource agency personnel will be requested to provide personnel to perform capture operations.

A.3 SPILL VOLUME CALCULATIONS AND SCENARIOS (Cont'd)

A.3.4 WORST CASE SPILL – REFINERY TO DOCK PIPELINE RUPTURE (Cont'd)

RESPONSE PLANNING (Cont'd)

9. Public Relations. Total PAR will make a daily press release, as necessary, to keep the public informed about the oil spill and progress of the clean-up operations.

Agency representatives agree with Total PAR's plans for responding to the spill. State agencies agree to provide support for wildlife protection and in setting response priorities. Total PAR also contacts the FAA to have them control the increase in air traffic over the spill site. In addition, Total PAR requests the Jefferson County Sheriff's Department provide crowd and traffic control.

CONTAINMENT AND CLEANUP

At approximately 0830, spill contractor personnel begin arriving at the Port Arthur Refinery.

The Branch Operations Chief directs spill contractors to begin containment operations in Neches River, and to deploy boom across the inlet east of the dock to prevent any oil from entering. Spill contractors deploy equipment as agreed upon by the unified command. Adjustment are made as needed. The Branch Operations Chief also directs spill contractors to utilize sorbent boom and pads to remove remaining pockets of product and sheen.

Diversion booms are installed in Neches River to herd oil to the shoreline where it can be recovered. Sorbent booms are also utilized to clean up small pockets of crude.

Spill contractor personnel are utilized to provide laborers for shoreline cleanup along the river. The Safety Officer works with the contractors to ensure that the appropriate HAZWOPER training has been implemented and that they are following safe operating practices.

Press conferences are held for state and local agencies, media, and the public. The Total PAR Incident Commander, Public Affairs Officer, and representatives from the U.S. Coast Guard MSO, and Texas General Land Office present details of the day's incident, response objectives, and anticipated continuing activities. Total PAR establishes a claims center and publishes a claims phone number.

Upon completion of the response effort, all response equipment is cleaned in order to prevent further sheening. The entire clean-up process takes approximately two weeks. Total Petrochemical PAR fully complies with federal, state, and local agencies having oversight of the spill clean-up operation.

The Total PAR Incident Commander convenes an Incident Summary/Evaluation Meeting with Incident Management Team members. The objectives of the meeting are to determine what could have been done to prevent the incident and how could they have improved their response/clean-up activities. A report is presented by the Incident Commander stating the materials and expendables used during the spill response and subsequent clean-up operation. All materials are promptly replaced and suggestions to improve future response activities are considered.

A.3 SPILL VOLUME CALCULATIONS AND SCENARIOS (Cont'd)

A.3.5 WORST CASE SPILL – REFINERY: (b) (7)(F), (b) (3)

(b) (7)(F), (b) (3) has been designed to survive an earthquake and wind speeds of approximately 110 miles per hour. I(b) (7)(F), (b) (3) would leak crude oil until the level inside has reached the puncture or until the tank's level is pumped down just below the puncture. With this in mind and at the request of the EPA, Total PAR has developed the following scenario.

Per OPA90/PREP Rules, this(b) (7)(F), (b) (3) tank's worst case scenario must address escaping containment. This tank will not escape containment within the Facility's boundaries. The weather conditions that must be present to cause a catastrophic failure of this tank and the discharge escaping containment would require extreme weather conditions such as a tornado or a hurricane. Therefore the weather for this scenario will describe a tornado.

ENVIRONMENTAL CONDITIONS

Weather:	Light rain, temperature 75 degrees F, winds from the southeast at 6 knots.
Forecast:	Thunderstorms are expected throughout the day. Winds to continue from the south at 6 to 10 knots.
Neches River Currents:	Ebb tide, currents at one knot.

INCIDENT

At 0730 hours, an Operator observes a funnel cloud dip. The path of the tornado crosses the (b) (7)(F), (b) (3) (b) (7)(F), (b) (3) The tornado hits causing the shell to collapse and a significant hole in the firewall. The entire contents of (b) (7)(F), (b) (3) the tank onto the surrounding soil with approximately(b) (7)(F), (b) (3) of crude oil exiting over the damaged firewall (oil one foot high remains inside the firewall which has a surface area of(b) (7)(F), square feet). Within five (5) minutes after the tornado has passed through the area, the Shift Supervisor is notified by a tank farm operator performing an initial damage assessment (Spill Observer) of the spill. The Shift Supervisor orders that Stormwater Control Structure E (located upstream of Outfall 004) be blocked off and contacts DD-7's Crane Bayou Pumping Station to shut-off their pumps and secure the station for possible crude oil. The Shift Supervisor then contacts the Deputy Incident Commander. The Deputy Incident Commander directs the Shift Supervisor to close off the ditch on each side of 17th Street near Tank 500-A and near Tank 524. In addition, the Deputy Incident Commander directs the Shift Supervisor to call out OSRO, Garner Environmental Services, Pneumatic Industrial Services and Oil Mop. SWCS E is blocked off within 15 to 20 minutes after the tornado has passed through the area. DD-7 Crane Bayou Pump Station is closed off within 30 to 45 minutes. Within 30 to 45 minutes, the earthen dams are placed within the ditches on each side of 17th Street, upstream of SWCS E. Due to the topography along 17th Street and the number of dense weeds and cattails, it is highly unlikely that oil will travel to SWCS E. If so, the oil would require 45

A.3 SPILL VOLUME CALCULATIONS AND SCENARIOS (Cont'd)

A.3.5 WORST CASE SPILL – REFINERY: (b) (7)(F), (b) (3) (Cont'd)

INCIDENT

minutes. But, as a precaution, the (b) (7)(F), (b) (3) and the spill containment boom is placed in each basin within 20 to 30 minutes. A water seal is maintained around the downturned pipes that exit the lower basin of SWCS E.

ENVIRONMENTAL CONDITIONS

Weather: Night, winds from the Southeast with gusts up to 70 miles per hour, temperature 48 degrees F, visibility fair.

Forecast: Partly cloudy with scattered showers and thunderstorms, high near 62 degrees F, dew point in the lower to middle 70's, winds southeasterly at 17 to 40 mph.

IMMEDIATE RESPONSE

The Spill Observer immediately notifies the Shift Supervisor as shown in the Spill Notification Sequence Procedures in Figure 2.4. The Spill Observer follows the procedures for Tank Failure as noted in Section 2.2.2. The Shift Supervisor notifies the Deputy Incident Commander, who upon arrival to the refinery, takes charge of the spill response operation. The following internal notifications are made by the Shift Clerk (after notification of the Deputy Incident Commander) as noted in Figure 2.4. The Liaison Officer/Shift Clerk will perform the regulatory notifications as Annex B and Figure 2.1. All phone numbers are listed in Figure 2.2 and Figure B.8.

Total PAR Notifications:

- Incident Commander
- EH&S Supervisor
- Area Superintendent
- Operations Manager
- Refinery Manager
- Total PAR Incident Management Team
- Oil Spill Response Organizations
- Local Spill Response Contractors

A.3 SPILL VOLUME CALCULATIONS AND SCENARIOS (Cont'd)

A.3.5 WORST CASE SPILL – REFINERY: (b) (7)(F), (b) (3) (Cont'd)

IMMEDIATE RESPONSE (Cont'd)

Regulatory Notifications:

- National Response Center (EPA)
- Texas General Land Office
- Texas Commission on Environmental Quality (TCEQ)
- United States Coast Guard
- Jefferson County LEPC
- Jefferson County Local Emergency Planning Committee (LEPC)
- City of Port Arthur Health Department

PRODUCT CHARACTERISTICS AND SAFETY PRECAUTIONS

Prior to entering a spill area, a Safety Monitor must perform an initial safety and health evaluation of the site. The Safety Monitor first evaluates MSDS information on the spilled crude oil and advises the Deputy Incident Commander to the health risks for this product. He/She also advises that the product is flammable and that the appropriate precautions should be followed to ensure that the area is safe to enter. Appropriate personnel protective devices are utilized based on the results of the survey.

IMMEDIATE RESPONSE

The immediate goals of the Incident Management Team are as follows:

- ensure the safety of all personnel.
- eliminate/secure the source of the spill.
- mitigate the impact of the spill.
- (b) (7)(F), (b) (3)
- make the necessary internal and external notifications.

Once the goals of the immediate response activities have been accomplished, the task of cleanup is undertaken. The Deputy Incident Commander calls out the entire Total PAR Port Arthur Refinery Incident Management Team. The organizational chart of this team is illustrated in Figure 2.6, the Response Team roster is shown in Figure 2.3, and job descriptions of each position on the Response Team are detailed in Annex C. The following is a brief outline of the activities which the Incident Management Team implements for this phase of the response.

A.3 SPILL VOLUME CALCULATIONS AND SCENARIOS (Cont'd)

A.3.5 WORST CASE SPILL – REFINERY: (b) (7)(F), (b) (3) (Cont'd)

IMMEDIATE RESPONSE (Cont'd)

The Shift Supervisor contacts OSRO personnel and directs them to start making earthen dams within the ditches of 17th Street near Tank 500-A, with the aid of frontend loaders. OSRO personnel are on location within 20 minutes of the spill. Immediately following the approval from the Safety Monitor to enter the area, OSRO places spill containment booms and absorbent booms/sweep within the 17th Street ditches as well as deploying vacuum trucks to the spill site. The Incident Management Team is successful in containing the spilled crude oil within the tank farm ditches and SWCS E. SWCS E was designed such that a water seal is maintained around the inlet to the downturned pipes. Thus, an oil layer up to 2 feet high can be contained within the structure. OSRO, Garner, Pneumatic and Oil Mop begin recovery of the spilled crude oil throughout the tank farm with several vacuum trucks. Within 30 to 45 minutes, (b) (7)(F), (b) (3) off. The oil contained within the tank farm varies in depth from 0.5 feet to 2 feet.

The Deputy Incident Commander has decided that the incident will require the help of all of Total Petrochemical PAR's spill response contractors. The crude oil recovery will be handled by the local response team, even though the spill volume classifies it as a Tier III incident as described in Section 2.2.9(c). This decision is supported by the fact that the crude oil spill has been contained within the nearby ditches and the source of the spill has been secured. Approximately eight (8) to nine (9) days will be required for recovery.

After consultation with the Operations Section Chief, the Deputy Incident Commander decides to supplement the response effort with additional manpower and equipment from each of the on-scene spill response contractors. Between the four various contractors, there is enough equipment staged in Port Arthur, TX, Deer Park, TX, Bridge City, TX, and Sulphur/Lake Charles, LA to clean up this spill. Personnel can be dispatched from the various spill response contractors to arrive at the spill site in approximately one to two hours. (A complete listing of the various DCO's [Discharge Cleanup Organization] response contractor's equipment inventory is located in Figure 2.10(a)(b) & (c) along with a listing of the OSRO's [Oil Spill Removal Organizations]).

The Deputy Incident Commander contacts Garner, Pneumatic and Oil Mop to inform them that approximately (b) (7)(F), (b) (3) of crude oil have been spilled. He/she states that OSRO's personnel are responding with earthen dams and vacuum trucks and that the spill is contained on-site by SWCS E and the Stormwater berm. The Deputy Incident Commander requests that all four contractors send additional vacuum trucks, absorbent materials, and roll-off boxes to the spill site. Once Garner arrives at the site, Garner will become the lead contractor. The other contractors will then assist Garner.

In the event that the crude oil spill escapes the initial containment area, the Deputy Incident Commander has already been informed that the DD-7 Crane Bayou Pump Station has been secured. As a precaution, spill containment boom is being placed within DD-7's South Lateral 1-A Drainage Ditch downstream of SWCS E and Outfall 004. Frontend loaders are using nearby soil to build up existing earthen dams and construct new ones upstream of SWCS E to prevent anymore crude oil from entering SWCS E.

A.3 SPILL VOLUME CALCULATIONS AND SCENARIOS (Cont'd)

A.3.5 WORST CASE SPILL – REFINERY: (b) (7)(F), (b) (3) (Cont'd)

IMMEDIATE RESPONSE (Cont'd)

The Environmental Liaison Officer contacts the National Response Center, Texas General Land Office, and the Texas Commission on Environmental Quality (TCEQ). The GLO and TCEQ concur with Total PAR's plans to contain and clean up the spill. The GLO sends a representative to the spill scene to inspect the clean-up operations already underway.
The recovered oil/water mixture is stored temporarily in pre-approved on-site storage containment units in accordance with Total PAR's interim storage and disposal guidelines. The Disposal Specialist, whose duties and responsibilities are described in Annex C, coordinates the disposal of the recovered oil/water mixture, debris and absorbent materials that have been collected. After the various vacuum trucks and guzzlers have recovered all the spilled product possible, front end loaders along with a backhoe that has been leased begin the removal of the contaminated ditch soil to nearby roll-off boxes. The entire clean-up process takes approximately seven (7) additional days. All excavation response equipment is cleaned off at the wash-out slab before leaving the Total Port Arthur Refinery.

A total of sixteen (16) days is required for the recovery of the spilled oil and the removal of the contaminated soil. At this time, the Deputy Incident Commander convenes an Incident Summary/Evaluation Meeting with the Incident Management Team members. The objectives of the meeting are to determine what could have been done to prevent the incident and how they could have improved their response/clean-up activities. A report is presented by the Deputy Incident Commander detailing the equipment, manpower and expendable materials used during the spill response and subsequent clean-up operation. All expendable materials are promptly replaced and suggestions to improve future response activities are considered.

Follow-up Investigating/Reporting requirements are detailed in Annex D.

FIGURE A.3(c) RESPONSE CAPABILITIES

EPA WORST CASE DISCHARGE = (b) (7)(F), (b)

Response Requirement

The Facility shall identify sufficient response resources, by contract or other approved means, to respond to a worst case discharge to the maximum extent practicable. The response resources shall, as appropriate, include:

- All resources shall be capable of arriving at the Facility within the applicable response tier requirements (Tier 1 = 6 hours; Tier 2 = 30 hours; Tier 3 = 54 hours).
- Oil recovery devices with an effective daily recovery capacity equal to the lesser of 50% of the WCD or the response caps. If the daily recovery rate exceeds the applicable contracting caps (see Table) then the Facility must identify additional resources equal to twice the cap or the amount necessary to reach the calculated planning volume.
- Temporary storage capacity equal to twice the daily recovery capacity.
- At least 20% of the on-water response equipment should be capable of operating in water of 6 feet or less depth.
- Containment boom for oil collection and containment and for protection of areas of environmental sensitivity or economic importance.
- Identify resources capable of responding to a shoreline clean-up operation involving the calculated volume of oil and emulsified oil that might impact the affected shoreline.

Facility Response Resources/Capability

The Facility will respond to a ***Worst Case Discharge (WCD)*** initially with a similar response as identified for a small or medium discharge. Additional OSRO(s) will be activated as the situation demands. The response resources will be capable of arriving within the required response tiers and will include:

A.4 WORST CASE DISCHARGE ANALYSIS

Port Arthur Refinery is classified as a "Complex Facility" which operates in a High Volume Port Area. "Complex" means a facility possessing a combination of transportation-related and non-transportation related components that is subject to the jurisdiction of more than one Federal agency under section 311(j) of the Clean Water Act (CWA).

Complexes must perform discharge calculations for each jurisdictional agency and plan for the largest Worst Case Discharge Volume pursuant to the respective regulations. The EPA, DOT, and USCG discharge volume calculations are described as follows:

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

[redacted]

A.4 WORST CASE DISCHARGE ANALYSIS (Cont'd)

A.4.3 DOT-PHMSA Discharge Volume Calculation

Worst Case Discharge = the largest volume (bbls) of the following:

- Pipeline's maximum release time (hrs), plus the maximum shutdown response time (hrs), multiplied by the maximum flow rate (bbls/hr), plus the largest line drainage volume after shutdown of the line section.

OR

- Largest foreseeable discharge for the line section is based on the maximum historic discharge, if one exists, adjusted for any subsequent corrective action or preventive action taken.

OR

- Capacity of the single largest breakout tank or battery of tanks within a single secondary containment system, adjusted for the capacity or size of the secondary containment system.

A.4 WORST CASE DISCHARGE ANALYSIS (Cont'd)

USCG WORST CASE DISCHARGE EQUIPMENT PLANNING

This section addresses the equipment needed to respond to a worst case discharge. Average most probable discharges (50 barrels[1]) and maximum most probable discharges (1,200 barrels[2]) are not addressed as resources are available to handle a worst case. Therefore, there is sufficient equipment to handle a discharge of a lesser amount.[3]

PLANNING VOLUME FOR ON-WATER RECOVERY

Group	Planning Volume (BBL)
Group I	(b) (7)(F), (b) (3)
Group III	
Group V	
TOTAL	

PLANNING VOLUME FOR SHORELINE RECOVERY

Group	Planning Volume (BBL)
Group I	(b) (7)(F), (b) (3)
Group III	
Group V	
TOTAL	

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

A.4 WORST CASE DISCHARGE ANALYSIS (Cont'd)

ON WATER RECOVERY FOR EACH TIER

TIER 1

Group	Cap (BBLS/Day)	Quantity Which Exceeds Cap (BBLS/Day)
Group I	(b) (7)(F), (b) (3)	0
Group III		0
Group V		0
TOTALS		

ON WATER RECOVERY FOR EACH TIER

TIER 2

Group	Cap (BBLS/Day)	Quantity Which Exceeds Cap (BBLS/Day)
Group I	(b) (7)(F), (b) (3)	0
Group III		0
Group V		0
TOTALS		

ON WATER RECOVERY FOR EACH TIER

TIER 3

Group	Cap (BBLS/Day)	Quantity Which Exceeds Cap (BBLS/Day)
Group I	(b) (7)(F), (b) (3)	0
Group III		0
Group V		0
TOTALS		

A.4 WORST CASE DISCHARGE ANALYSIS (Cont'd)

TEMPORARY STORAGE CAPACITY

TIER 1

Group	Cap (BBLS/Day)	Quantity Which Exceeds Cap (BBLS/Day)
Group I	(b) (7)(F), (b) (3)	0
Group III		0
Group V		0
TOTALS		

TEMPORARY STORAGE CAPACITY

TIER 2

Group	Cap (BBLS/Day)	Quantity Which Exceeds Cap (BBLS/Day)
Group I	(b) (7)(F), (b) (3)	0
Group III		0
Group V		0
TOTALS		

TEMPORARY STORAGE CAPACITY

TIER 3

Group	Cap (BBLS/Day)	Quantity Which Exceeds Cap (BBLS/Day)
Group I	(b) (7)(F), (b) (3)	0
Group III		0
Group V		0
TOTALS		

Additional tiers of resources are available to TOTAL PETROCHEMICAL PAR from cooperatives and contractors in outlying areas.

A.4 WORST CASE DISCHARGE ANALYSIS (Cont'd)

WORST CASE DISCHARGE EQUIPMENT PLANNING

FACILITY	COTP ZONE	HIGH VOLUME AREA?	VOLUME (BBL)[A]
Total PAR Port Arthur Refinery	Port Arthur	YES	(b) (7)(F), (b) (3)

GROUP - EMULSION FACTOR[B] (Circle Appropriate)			AREAS IMPACTED (Circle Appropriate)	
I - 1.0I	II - 2.0	V - 1.0	River	Offshore
II - 1.8	IV - 1.4		Inland/Nearshore	

« PLANNING VOLUMES FOR ON-WATER RECOVERY «

Area	Volume[A]	X	Percentage[1]	X	Emulsion Factor[B]	=	Planning Volume[C]
River/Canal	(b) (7)(F), (b) (3)						
Inland/Nearshore							
Offshore							

« PLANNING VOLUMES FOR SHORELINE RECOVERY «

Area	Volume[A]	X	Percentage[2]	X	Emulsion Factor[B]	=	Planning Volume
River/Canal	(b) (7)(F), (b) (3)						
Inland/Nearshore							
Offshore							

[1] From Table 2 - recovered floating oil.
[2] From Table 2 - oil on shore.

A.4 WORST CASE DISCHARGE ANALYSIS (Cont'd)

« ON WATER RECOVERY FOR EACH TIER «

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

[redacted]

A.4 WORST CASE DISCHARGE ANALYSIS (Cont'd)

WORST CASE DISCHARGE EQUIPMENT PLANNING

FACILITY	COTP ZONE	HIGH VOLUME AREA?	(A)
Total PAR Port Arthur Refinery	Port Arthur	YES	(b) (7)(F), (b) (3)

GROUP - EMULSION FACTOR(B) (Circle Appropriate)			AREAS IMPACTED (Circle Appropriate)	
I - 1.0	III - 2.0	V - 1.0	River	Offshore
II - 1.8	IV - 1.4		Inland/Nearshore	

« PLANNING VOLUMES FOR ON-WATER RECOVERY «

Area	Volume(A)	X	Percentage[6]	X	Emulsion Factor(B)	=	Planning Volume(C)
River/Canal	(b) (7)(F), (b) (3)						
Inland/Nearshore							
Offshore							

« PLANNING VOLUMES FOR SHORELINE RECOVERY «

Area	Volume(A)	X	Percentage[7]	X	Emulsion Factor(B)	=	Planning Volume
River/Canal		X		X		=	
Inland/Nearshore	(b) (7)(F), (b) (3)						
Offshore							

« ON WATER RECOVERY FOR EACH TIER «

TIER 1

(6 hours for high volume port/otherwise 12 hours)

Area and Sustainability	BBLS(C)	X	Factor	=	BBLS(U) (not to exceed 10,000 BBL/Day)
River/Canal 3 days	(b) (7)(F), (b) (3)				
Inland/Nearshore 4 days					
Offshore 6 days					

[6] From Table 2 - recovered floating oil.
[7] From Table 2 - oil on shore.

A.4 WORST CASE DISCHARGE ANALYSIS (Cont'd)

WORST CASE DISCHARGE EQUIPMENT PLANNING

« ON WATER RECOVERY FOR EACH TIER (Continued) «

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

[redacted]

[8] 1,500 BBLS/day for Rivers/Canals.
[9] 3,000 BBLS/day for Rivers/Canals.
[10] 6,000 BBLS/day for Rivers/Canals.

A.4 WORST CASE DISCHARGE ANALYSIS (Cont'd)

EPA WORST CASE DISCHARGE EQUIPMENT PLANNING

FACILITY	COTP ZONE	HIGH VOLUME AREA?	VOLUME (BBL)[A]
Total PAR Port Arthur Refinery	Port Arthur	YES	(b) (7)(F), (b) (3)

GROUP – EMULSION FACTOR[B] (Circle Appropriate)			AREAS IMPACTED (Circle Appropriate)
I – 1.0	III – 2.0	V – 1.0	River Offshore
II – 1.8	IV – 1.4		Inland/Nearshore

« PLANNING VOLUMES FOR ON-WATER RECOVERY «

Area	Volume[A]	X	Percentage[1]	X	Emulsion Factor[B]	=	Planning Volume[C]
River/Canal	(b) (7)(F), (b) (3)						
Inland/Nearshore							
Offshore							

« PLANNING VOLUMES FOR SHORELINE RECOVERY «

Area	Volume[A]	X	Percentage[1]	X	Emulsion Factor[B]	=	Planning Volume[C]
River/Canal	(b) (7)(F), (b) (3)						
Inland/Nearshore							
Offshore							

TIER 1
(6 hours for high volume port/otherwise 12 hours)

Area and Sustainability	BBLS[C]	X	Factor	=	BBLS[D] (not to exceed 10,000 BBL/Day)
River/Canal 3 days	(b) (7)(F), (b) (3)				
Inland/Nearshore 4 days					
Offshore 6 days					

A.4 WORST CASE DISCHARGE ANALYSIS (Cont'd)

WORST CASE DISCHARGE EQUIPMENT PLANNING ON WATER RECOVERY FOR EACH TIER (Cont'd) «

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

[redacted]

[13] 1,500 BBLS/day for Rivers/Canals.
[14] 3,000 BBLS/day for Rivers/Canals.
[15] 6,000 BBLS/day for Rivers/Canals.

A.4 WORST CASE DISCHARGE ANALYSIS (Cont'd)

EPA WORKSHEET TO PLAN VOLUME OF RESPONSE RESOURCES FOR WORST CASE DISCHARGE

Part I Background Information

Step (A) Calculate Worst Case Discharge in barrels (Appendix D) — (b) (7)(F), (b) (3) [redacted]

Step (B) Oil Group[16] (Table 3 and Section 1.2 of this Appendix) — Group III (Crude) (B)

Step (C) Operating Area (choose one) — [ ] Nearshore/Inland Great Lakes — [X] or River and Canal

Step (D) Percentages of Oil (Table 2 of this Appendix)

Percent Lost to Natural Dissipation	Percent Recovered Floating Oil	Percent Oil Onshore
20	15	65
(D1)	(D2)	(D3)

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

Step (E2) Shoreline Recovery — Step (D3) x Step (A) / 100 — (b) (7)(F), (b) (3) [redacted]

Step (F) Emulsification Factor (Table 3 of this Appendix) — 2.0 (F)

Step (G) On-Water Oil Recovery Resource Mobilization Factor (Table 4 of this Appendix)

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

[16] A facility that handles, stores, or transports multiple groups of oil must do separate calculations for each oil group on site except for those oil groups that constitute 10 percent or less by volume of the total oil storage capacity at the facility. For purposes of this calculation, the volumes of all products in an oil group must be summed to determine the percentage of the facility's total oil storage capacity.

A.4 WORST CASE DISCHARGE ANALYSIS (Cont'd)

EPA WORKSHEET TO PLAN VOLUME OF RESPONSE RESOURCES FOR WORST CASE DISCHARGE (Continued)

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

Tier 1	Tier 2	Tier 3
(b) (7)(F), (b) (3) [redacted]		
Step (E1) x Step (F) x Step (G1)	Step (E1) x Step (F) x Step (G2)	Step (E1) x Step (F) x Step (G3)

(b) (7)(F), (b) (3) [redacted]

(E2)

Part III Shoreline Cleanup Volume (barrels)

Part IV On-Water Response Capacity By Operating Area

(Table 5 of this Appendix)
(Amount needed to be contracted for in barrels/day)

(b) (7)(F), (b) (3) [redacted]		
(J1)	(J2)	(J3)

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

(b) (7)(F), (b) (3) [redacted]		
Part II Tier 1 - Step (J1)	Part II Tier 2 - Step (J2)	Part II Tier 3 - Step (J3)

NOTE: To convert from barrels/day to gallons/day, multiply the quantities in Parts II through V by 42 gallons/barrel.

FIGURE A.4 WORST CASE DISCHARGE SUMMARIES

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

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:

{[Maximum Discovery Time (hrs) + Maximum Shutdown Time (hrs)] * Maximum Flow Rate (bbls/hr)} + Total Line Fill (bbls) = WCD (bbls)

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

FIGURE A.4 WORST CASE DISCHARGE SUMMARIES (Cont'd)

DOT PIPELINE WORST CASE DISCHARGE SUMMARY TABLE
PHMSA SEQUENCE NO. 1081

Pipeline Name	Product (Group)	Diameter (Inches)	Pipeline Length (Feet)	Line Fill Volume (Bbls)	Pumping Rate Bbls/Hour	Maximum Discovery Time (Hours)	Maximum Shut Down Time (Hours)*	Worst Case Discharge (Bbls)
Bayou	Gasoline Diesel	10"	16,800	(b) (7)(F), (b) (3)		2 hours (max)	1 hour (max)	(b) (7)(F), (b) (3)
Explorer	Gasoline Jet Diesel	16"	19,240			2 hours (max)	0.5 hour (max)	
Explorer	Gasoline Jet Diesel	12"	2,787			2 hours (max)	2 hours (max)	
8" Condensate (formerly Neale)	Crude	8"	31,680**			2 hours	1 hour	
West Port Arthur	Gasoline Diesel	12"	38,685			2 hours	1 hour	
10" Crude (formerly Amdel)	Crude	10"	31,680**			2 hours (max)	1.5 hours (max)	

* Adverse weather would slightly affect the me; therefore, additional time has been included/co lation.

** Distance from Port A h's Bluff Manifold.

FIGURE A.4 WORST CASE DISCHARGE SUMMARIES (Cont'd)

DOT BREAKOUT TANK WORST CASE DISCHARGE SUMMARY TABLE

Tank #	Product	Safe Fill Level	High Level Alarm Settin	ches)	Normal Fill Level (bbls)
46TK4480	Diesel	(b) (7)(F), (b) (3)		(b) (7)(F), (b) (3)	(b) (7)(F), (b) (3)
46TK4481	Gasoline				
46TK4482	Gasoline				
46TK4483	Slop				

The WCD for tanks is calculated on the capacity of the single largest tank or battery of tanks within a single secondary containment system, adjusted for the capacity or size of the secondary containment system, expressed in barrels.

Under 49CFR§194.105(b)(4) Operators may claim prevention credits for breakout tank secondary containment and other specific spill prevention measures. The percentage (credits) is a maximum of 75%. Under this section, and with the following criteria, the Company is entitled to receive a 70% credit on their WCD volumes.

Prevention measure	Standard	Credit (%)
Secondary containment > 100%	NFPA 30	50%
Built/repaired to API standards	API STD 620/650/653	10%
Overfill protection standards	API 2350	5%
Testing/Cathodic Protection	API STD 650/651/653	5%
Tertiary containment/drainage/treatment	NFPA 30	5%
Maximum Allowable Credits		75%
Claimed credits		**70%**

Breakout Tank Worst Case Discharge					
Tank number	**Product**	**Tank Capacity (bbls)**	**100% Secondary Containment**	**Prevention Credit Taken**	**Final WCD (bbls)**
4481	Gasoline	(b) (7)(F),	Yes	70%	(b) (7)(F),

The following table is a comprehensive overview of the Worst Case Discharge Calculations in barrels. Detailed calculations can be found on the precedeing pages.

USCG	EPA	DOT – Pipeline	DOT – Breakout Tank	DOT - Historical
(b) (7)(F), (b) (3)				

A.5 VULNERABILITY ANALYSIS

The planning distance method for tidal influence navigable water is based on worst case discharges of persistent and non-persistent oils. For persistent oils discharged into tidal waters, the planning distance is fifteen (15) miles from the facility down current during ebb tide and to the point of maximum tidal influence or fifteen (15) miles, whichever is less, during flood tides. For non-persistent oils discharged into tidal waters, the planning distance is five (5) miles from the facility down current during ebb tide and to the point of maximum tidal influence or five (5) miles, whichever is less, during flood tide. The enclosed maps detail the environmental and economic sensitivities for the Total Port Arthur Refinery response area. This Annex contains a list of Environmentally/Economically sensitive Areas within Jefferson County. It also contains environmental mapping for fifteen (15) miles downstream from the Facility along with trajectories based upon a worst case discharge (WCD).

A.5.1 ANALYSIS FOR THE POTENTIAL OF A SPILL

Refer to the Potential Spills List in Annex G for tanks, quantities and substance stored

A.5.2 FACILITY ENVIRONMENTAL OVERVIEW

This Tactical Response Guide contains Environmental and Logistical Response Maps designed to assist in the initiation and development of spill response priorities and strategies prior to the deployment of spill response resources in/along the Port Arthur Texas area. The Maps and corresponding index pages are designed to assist spill responders with rapid access to the following information:

- critical areas to monitor and protect, including: water intakes; recreational areas; historical sites; cemeteries; residentially and commercially developed areas; marinas and yacht harbors; industrial port facilities; groundwater recharge basins; and educational institutions.
- shoreline composition.
- location and flow direction of major streams, creeks, inlets, wetlands, drainage ditches etc. within the watershed.
- terrestrial sensitivities, i.e. pipeline right-of-way.
- habitat description, including: native species identified within the location boundaries of each map, including the presence of rare, threatened, and endangered species; and the locations of migratory, nesting, spawning, and harvesting grounds of local species.
- water currents and tidal activities
- location and description of shoreline access sites and equipment staging areas.
- location of boat launching facilities.

A.5 VULNERABILITY ANALYSIS (Cont'd)

A.5.2 FACILITY ENVIRONMENTAL OVERVIEW (Cont'd)

The information represented on the following pages are suggestions only, and must be treated as such. Refer to Section 4 of the 2 volume Tactical Response Guide for the location boundaries of the Environmental Response Maps covering the Port Arthur area. Determination of the actual location of the spill, in addition to the formulation of a spill trajectory analysis, must be made prior to the final determination of which Response Maps may be adopted towards the development of a response strategy.

A.5.3 ENVIRONMENTAL RESPONSE MAPS

This facility requires mapping "for persistent oils discharged into tidal waters, fifteen miles from the facility down current during ebb tide and to the point of maximum tidal influence or fifteen miles, whichever is less, during flood tide," per the Texas General Land Office.

Descriptions of the information presented on both the Environmental Response Maps and the Index Pages are provided below:

A.5.4 CRITICAL AREAS TO MONITOR AND PROTECT

- Critical areas may be defined as those areas which, if impacted by spilled oil or hydrocarbons, may result in threats to public safety and health, or incur severe liabilities associated with the pollution of privately or commercially-owned properties.

- Critical areas include commercial, municipal, and industrial water intakes; recreational areas and parks; historical sites; cemeteries; residentially, commercially, and industrially developed areas; marinas and yacht harbors; groundwater recharge basins; and educational institutions (schools).

- Pertinent information associated with those critical areas identified on each of the Response Maps, is presented on the upper tier of the accompanying Index Page. Figure 6.5 (located within Section 4 of the 2 volume Tactical Response Guide) contains a list of the Environmentally/Economically Sensitive Areas in Jefferson County.

A.5.5 OIL MOVEMENT

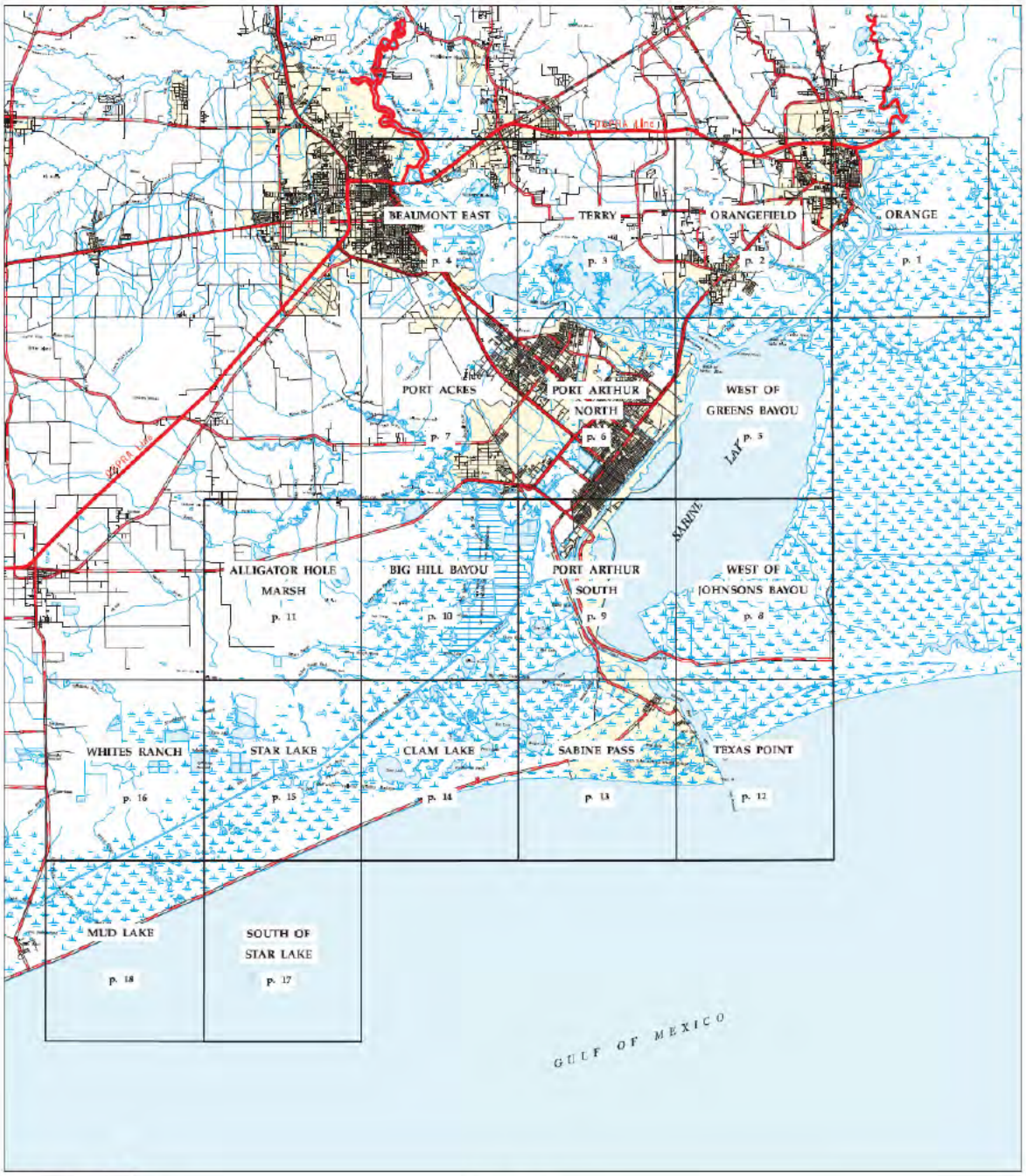
Immediate actions after a spill can minimize potential impact and damage since the spill will move with time and result in potential impact on a greater area. Oil moves across the surface of the water as a result of wind and current, therefore, it is important to have knowledge of tides, currents, prevailing winds, and other factors which will permit the prediction of how and where a slick will move.

A.6 ENVIRONMENTALLY SENSITIVE AREAS

The following maps and trajectories highlight areas of environmental sensitivity. The maps contain information relative to those sensitive areas. In addition, the maps identify which wildlife would be most impacted as well as containing biological resource data. The trajectories articulate the path of an oil spill based upon a WCD utilizing modern GIS technology. Actual spill events will be based upon real time conditions; these can include wind, current, weather, etc. Therefore the trajectories provided here are for planning purposes only.

Economically sensitive areas and their potential impact can be found in The Tactical Response Guide as well as strategic response methodology. Total PAR has contracted with Coast Guard approved Oil Spill Response Organizations (OSRO'S) that have both the equipment and personnel to protect environmentally sensitive areas as well as provide for sustain operations. This is in addition to response equipment located on the facility and the corresponding personnel (See Section 2 of this plan).

Sabine Lake Area Index Map



TEXAS GENERAL LAND OFFICE OIL SPILL PREVENTION & RESPONSE

NOAA NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION U.S. DEPARTMENT OF COMMERCE

N

SCALE 1:310,083

One Inch represents 4.89 miles

0 15 Miles

0 15 Nautical Miles

0 100,000 Feet

0 17 34 Kilometers

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

WEST OF GREENS BAYOU

Map #5

HUMAN USE RESOURCES

Boat Ramps

RARNUM	NAME
H672	Rainbow Ridge
H673	Bailey's Fish Camp
H684	Gulf States Canal

Marinas

RARNUM	NAME	ADDRESS	PHONE
H164	Rainbow Marina	P.O. Box 357 Groves	(409) 962-9578

Water Intake Points

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

BIOLOGICAL RESOURCES

Mammals

RARNUM	NAME	S/F	T/E	CONCEN	J	F	M	A	M	J	J	A	S	O	N	D
653	River otter				X	X	X	X	X	X	X	X	X	X	X	X

Birds

RARNUM	NAME	S/F	T/E	CONCEN	J	F	M	A	M	J	J	A	S	O	N	D	NESTING	LAYING	HATCHING	FLEDGING
678	Gadwall			HIGH	X	X	X	X					X	X	X	X	-	-	-	-
	Teals				X	X	X	X					X	X	X	X	-	-	-	-
	Rails				X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	-
679	Rails				X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	-
	Shorebirds				X	X	X	X	X			X	X	X	X	X	-	-	-	-
682	Black skimmer			100	X	X	X	X	X	X	X	X	X	X	X	X	APR-SEP	APR-SEP	APR-SEP	APR-SEP
685	Rails				X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	-
	Wading birds				X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	-
	Green-winged teal			HIGH	X	X	X	X					X	X	X	X	-	-	-	-
	Gadwall				X	X	X	X					X	X	X	X	-	-	-	-
	Teals				X	X	X	X					X	X	X	X	-	-	-	-
686	Black skimmer				X	X	X	X	X	X	X	X	X	X	X	X	APR-SEP	APR-SEP	APR-SEP	APR-SEP
	American white pelican				X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	-
689	Shorebirds				X	X	X	X	X			X	X	X	X	X	-	-	-	-
	Wading birds				X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	-
	Rails				X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	-
690	Waterfowl				X	X	X	X				X	X	X	X	X	-	-	-	-
698	American white pelican				X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	-
	Black skimmer				X	X	X	X	X	X	X	X	X	X	X	X	APR-SEP	APR-SEP	APR-SEP	APR-SEP
699	Rails				X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	-
	Shorebirds				X	X	X	X	X			X	X	X	X	X	-	-	-	-
701	Wading birds				X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	-
	Rails				X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	-
	Gadwall				X	X	X	X					X	X	X	X	-	-	-	-
	Waterfowl				X	X	X	X				X	X	X	X	X	-	-	-	-
	American wigeon				X	X	X	X						X	X	X	-	-	-	-
705	Shorebirds				X	X	X	X	X			X	X	X	X	X	-	-	-	-
	Caspian tern				X	X	X	X	X	X	X	X	X	X	X	X	MAR-JUN	MAR-JUN	MAR-JUN	MAR-JUL
	Black skimmer				X	X	X	X	X	X	X	X	X	X	X	X	APR-SEP	APR-SEP	APR-SEP	APR-SEP
	American white pelican				X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	-
	Waterfowl				X	X	X	X				X	X	X	X	X	-	-	-	-

Reptiles/Amphibians

RARNUM	NAME	S/F	T/E	CONCEN	J	F	M	A	M	J	J	A	S	O	N	D	NESTING	HATCHING
653	American alligator				X	X	X	X	X	X	X	X	X	X	X	X	JUN-SEP	JUN-DEC
690	American alligator				X	X	X	X	X	X	X	X	X	X	X	X	JUN-SEP	JUN-DEC
701	American alligator				X	X	X	X	X	X	X	X	X	X	X	X	JUN-SEP	JUN-DEC
771	Texas diamondback terrapin	F	C2															

Fish

RARNUM	NAME	S/F	T/E	CONCEN	J	F	M	A	M	J	J	A	S	O	N	D	SPAWNING	LARVAL/JUV
653	Pinfish				X	X	X	X	X	X	X	X	X	X	X	X	MAR-MAY	MAR-MAY
	Spotted seatrout				X	X	X	X	X	X	X	X	X	X	X	X	JAN-DEC	JAN-DEC
	Bay anchovy				X	X	X	X	X	X	X	X	X	X	X	X	JAN-DEC	JAN-DEC
	Atlantic croaker				X	X	X	X	X	X	X	X	X	X	X	X	-	APR-OCT
	Striped mullet				X	X	X	X	X	X	X	X	X	X	X	X	NOV-JAN	DEC-FEB
	Red drum				X	X	X	X	X	X	X	X	X	X	X	X	AUG-NOV	SEP-DEC
	Killifish				X	X	X	X	X	X	X	X	X	X	X	X	MAR-SEP	JAN-DEC
678	Red drum			HIGH	X	X	X	X	X	X	X	X	X	X	X	X	AUG-NOV	SEP-DEC
681	Pinfish				X	X	X	X	X	X	X	X	X	X	X	X	MAR-MAY	MAR-MAY
	Red drum				X	X	X	X	X	X	X	X	X	X	X	X	AUG-NOV	SEP-DEC
	Striped mullet				X	X	X	X	X	X	X	X	X	X	X	X	NOV-JAN	DEC-FEB
	Atlantic croaker				X	X	X	X	X	X	X	X	X	X	X	X	-	APR-OCT
	Bay anchovy				X	X	X	X	X	X	X	X	X	X	X	X	JAN-DEC	JAN-DEC
	Gulf menhaden				X	X	X	X	X	X	X	X	X	X	X	X	NOV-FEB	DEC-MAR
	Southern flounder				X	X	X	X	X	X	X	X	X	X	X	X	-	OCT-DEC
685	Red drum				X	X	X	X	X	X	X	X	X	X	X	X	AUG-NOV	SEP-DEC
686	Red drum			HIGH	X	X	X	X	X	X	X	X	X	X	X	X	AUG-NOV	SEP-DEC

WEST OF GREENS BAYOU CONTINUED

BIOLOGICAL RESOURCES CONT.

Fish Continued

RARNUM	NAME	S/E	T/E	CONCEN	J	F	M	A	M	J	J	A	S	O	N	D	SPAWNING	LARVAL/JUV
690	Red drum				X	X	X	X	X	X	X	X	X	X	X	X	AUG-NOV	SEP-DEC
	Southern flounder				X	X	X	X	X	X	X	X	X	X	X	X	-	OCT-DEC
	Spotted seatrout				X	X	X	X	X	X	X	X	X	X	X	X	JAN-DEC	JAN-DEC
	Pinfish				X	X	X	X	X	X	X	X	X	X	X	X	MAR-MAY	MAR-MAY
704	Spotted seatrout				X	X	X	X	X	X	X	X	X	X	X	X	JAN-DEC	JAN-DEC
	Red drum				X	X	X	X	X	X	X	X	X	X	X	X	AUG-NOV	SEP-DEC
	Striped mullet				X	X	X	X	X	X	X	X	X	X	X	X	NOV-JAN	DEC-FEB
	Sand seatrout				X	X	X	X	X	X	X	X	X	X	X	X	-	MAR-DEC
	Atlantic croaker				X	X	X	X	X	X	X	X	X	X	X	X	-	APR-OCT

Shellfish

RARNUM	NAME	S/E	T/E	CONCEN	J	F	M	A	M	J	J	A	S	O	N	D	SPAWNING	LARVAL/JUV
653	Brown shrimp				X	X	X	X	X	X	X	X	X	X	X	X	NOV-MAR	FEB-JUN
	Blue crab				X	X	X	X	X	X	X	X	X	X	X	X	APR-JUL	MAY-AUG
	White shrimp				X	X	X	X	X	X	X	X	X	X	X	X	MAY-OCT	MAY-OCT
	Grass shrimp				X	X	X	X	X	X	X	X	X	X	X	X	-	-
679	Blue crab				X	X	X	X	X	X	X	X	X	X	X	X	APR-JUL	MAY-AUG
681	Brown shrimp				X	X	X	X	X	X	X	X	X	X	X	X	NOV-MAR	FEB-JUN
	Blue crab				X	X	X	X	X	X	X	X	X	X	X	X	APR-JUL	MAY-AUG
	White shrimp				X	X	X	X	X	X	X	X	X	X	X	X	MAY-OCT	MAY-OCT
686	Brown shrimp				X	X	X	X	X	X	X	X	X	X	X	X	NOV-MAR	FEB-JUN
	White shrimp				X	X	X	X	X	X	X	X	X	X	X	X	MAY-OCT	MAY-OCT
	Blue crab				X	X	X	X	X	X	X	X	X	X	X	X	APR-JUL	MAY-AUG
690	Blue crab				X	X	X	X	X	X	X	X	X	X	X	X	APR-JUL	MAY-AUG
	Brown shrimp				X	X	X	X	X	X	X	X	X	X	X	X	NOV-MAR	FEB-JUN
	Grass shrimp			HIGH	X	X	X	X	X	X	X	X	X	X	X	X	-	-
699	Blue crab				X	X	X	X	X	X	X	X	X	X	X	X	APR-JUL	MAY-AUG
	White shrimp				X	X	X	X	X	X	X	X	X	X	X	X	MAY-OCT	MAY-OCT
704	White shrimp				X	X	X	X	X	X	X	X	X	X	X	X	MAY-OCT	MAY-OCT
	Brown shrimp				X	X	X	X	X	X	X	X	X	X	X	X	NOV-MAR	FEB-JUN
	Blue crab				X	X	X	X	X	X	X	X	X	X	X	X	APR-JUL	MAY-AUG

Plants/Communities

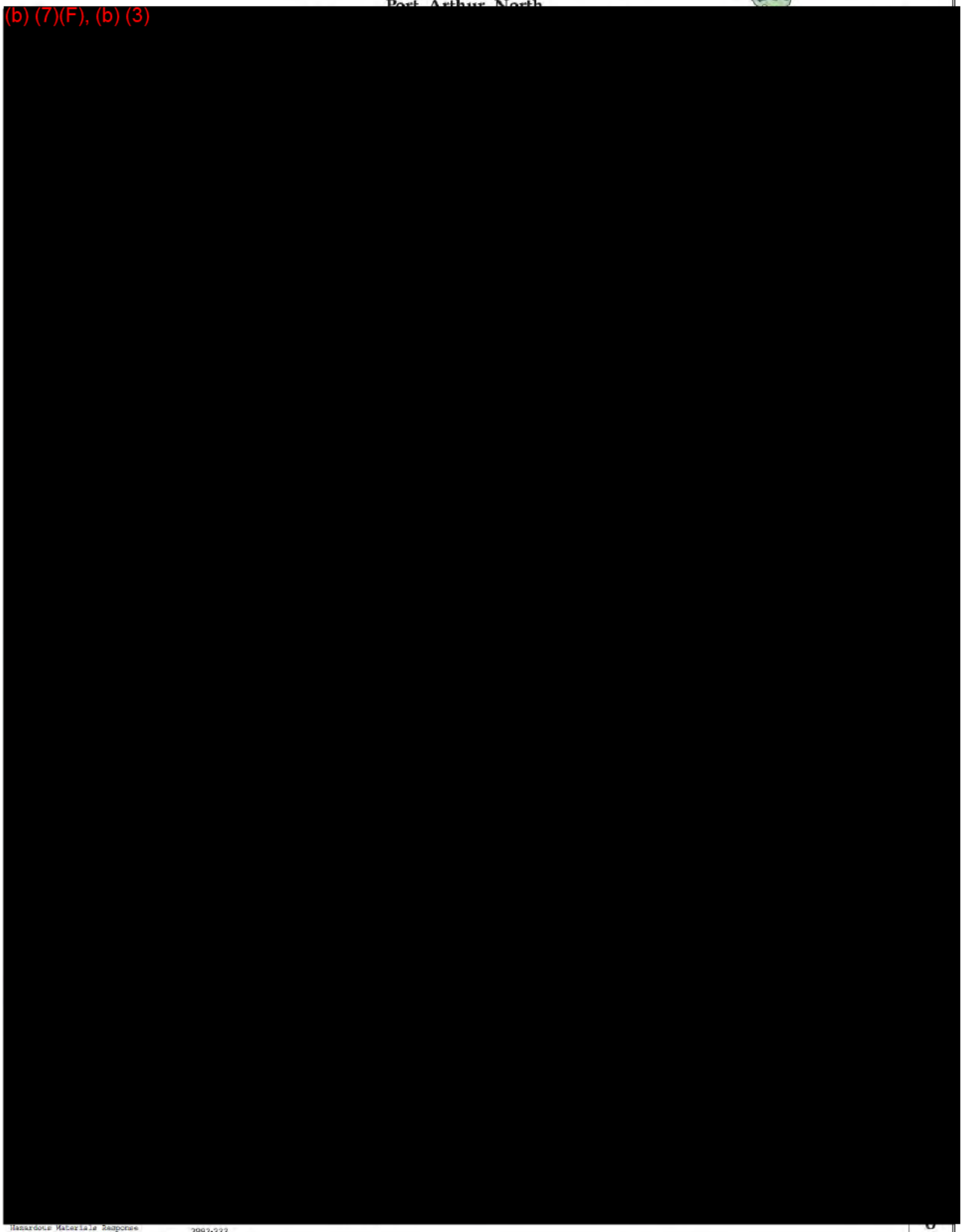
RARNUM	NAME	S/E	T/E
678	Salt meadow cordgrass (wiregrass)		
685	Salt meadow cordgrass (wiregrass)		
689	Bulrush		
699	Salt meadow cordgrass (wiregrass)		
701	Salt meadow cordgrass (wiregrass)		
	Spike-rushes		

WEST OF GREENS BAYOU

Map # 5

Polygon #	Priority	Description: what organism(s), habitat(s)?
1	Medium	**Marsh west of Route 87, north of Neches River.** Birds (medium), wetlands (high).
2	Low	**Marsh east of Route 87.** Birds (low), wetlands (high).
Pinchpoint at Route 87 crossing can be blocked polygon 3 and surrounding marsh from spills along highway or in canals.		
3	Low	**Canals parallel to Route 87.** Birds (high). Continued on Port Arthur North quad.
4	Low	**Marsh northwest of Sabine River.** Birds (high). Continued on Orangefield quad.
5	Medium	Canals and marsh parallel to Route 87. Birds (high), wetlands (high). Continued on Port Arthur North quad.
Pinchpoint under road along Hickory Cove can be blocked to protect Polygon 6 from spills in Hickory Cove or ICWW.		
Two pinchpoints under road east of Old River Bayou can be blocked to control spills between Polygons 6 and 12.		
6	Medium	**Marsh west of Hickory Cove.** Birds (high), wetlands (high). Continued on Orangefield quad.
7	Medium	**Little West Pass, mouth of Hickory River.** Birds (high), wetlands (high).
8	Medium	**Marsh east of Coffee Ground Cove.** Sabine NWR. Birds (high), wetlands (high).
9	Medium	**Pines Ridge area and marsh east of Grays Ditch.** Leveed area. Sabine NWR. Birds (high), wetlands (high).
10	Medium	**Leveed area south of Sabine Neches Canal.** Birds (high), wetlands (high). Note: Leveed area (polygon 10) south of seawall, shown as open water on USGS base map, is now marsh.
Pinchpoint at mouth of canal can be boomed to protect Polygon 11 and part of 12 from spills in Old River Cove.		
11	Medium	**Canal north of Old River Cove.** Bird (high), nursery (high).
Pinchpoint at mouth of unnamed canal north of Old River Cove can be boomed to protect Polygon 12 from spills in Old River Cove.		
12	High	**Old River Bayou and marsh to west.** Birds (high), nursery (high), wetlands (high). Continued on Orangefield quad.
Pinchpoints at (1) mouth of Black Bayou and (2, 3) mouths of unnamed bayous can be boomed to protect Polygons 13 from spills in East Pass or Black Bayou.		
13	High	**Marsh north of Black Bayou.** Birds (high), nursery (high), wetlands (high).
Pinchpoint at mouth of unnamed bayou can be boomed to protect Polygon 14 and part of 23 from spills in East Pass.		
14	High	**Marsh south of Black Bayou.** Sabine NWR. Birds (high), nursery (high), wetlands (high).
Pinchpoint at mouth of Pines Ridge Channel can be boomed to protect Polygons 15 and 24 from spills in Sabine Lake. 250' hard boom.		
15	High	**Marsh north of Black Bayou.** Birds (high), nursery (high), wetlands (high).
Pinchpoints at (1) Willow Bayou and (2) Willow Bayou Canal at Gray's Ditch can be boomed to protect southern part of Polygon 16 from spills in Grays Ditch.		
Pinchpoints at (1) mouth of Bridge Bayou and (2) mouth of Three Bayou can be boomed to protect parts of polygons 9, 16 and 25 from spills in Sabine Lake. 250' of hard boom.		
16	High	**Three Bayou and marsh west of Grays Ditch.** Sabine NWR. Birds (high), nursery (high), wetlands (high).
17	Low	**Mouth of Old River Bayou.** Birds (medium), nursery (high).
18	Low	**Black Bayou.** Birds (medium), nursery (high).
19	Low	**East shore of Hickory Cove, West Pass.** Wetlands (high).
20	Low	**Sabine Island.** Birds (medium), wetlands (high).
21	Low	**Coffee Ground Cove shoreline, Sabine NWR.** Birds (medium), wetlands (high).
22	Medium	**South shore of Sabine Island.** Birds (medium), nursery (low), wetlands (high).
23	High	**South shore of Black Bayou, east shore of East Pass.** Birds (medium), nursery (high), wetlands (high).
24	High	**Marsh west of Pines Ridge.** Sabine NWR. Birds (medium), nursery (high), wetlands (high).
25	High	**Sabine Lake shoreline south of Pines Ridge.** Birds (medium), nursery (high), wetlands (high).
26	Low	**Nearshore Sabine Lake.** Low commercial and recreational fishing, nursery (high).
27	High	**Marsh northwest of Hickory Cove.** Birds (high), wetlands (high), nursery (high). Continued on Orangefield quad.

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



PORT ARTHUR NORTH

Map #6

HUMAN USE RESOURCES

Boat Ramps

RARNUM	NAME
H671	Port Neches Park
H683	Sara Jane Road

Coast Guard Facilities

RARNUM	NAME	PHONE
H424	MSO Port Arthur	(409) 723-6513

Heliports

RARNUM	MANAGER	PHONE
H1323	Randy Draper	(713) 962-8536
H1324	Russ Simpkins	(409) 985-7431
H1325	James Mitchell Dir. of Engineering	(409) 985-0415
H1330	Chad R. Wyble Electrical Engineer	(409) 724-4543

Water Intake Points

(b) (7)(F), (b) (3) [redacted]

BIOLOGICAL RESOURCES

Mammals

RARNUM	NAME	S/E	T/E	CONCEN	J	F	M	A	M	J	J	A	S	O	N	D
629	River otter				X	X	X	X	X	X	X	X	X	X	X	X
630	River otter				X	X	X	X	X	X	X	X	X	X	X	X

Birds

RARNUM	NAME	S/E	T/E	CONCEN	J	F	M	A	M	J	J	A	S	O	N	D	NESTING	LAYING	HATCHING	FLEDGING
52	Waterfowl				X	X	X	X				X	X	X	X	X	-	-	-	-
629	Mottled duck				X	X	X	X	X	X	X	X	X	X	X	X	JAN-AUG	JAN-AUG	JAN-AUG	FEB-SEP
	Rails				X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	-
	Wading birds				X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	-
	Shorebirds				X	X	X	X	X			X	X	X	X	X	-	-	-	-
630	Rails				X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	-
	Shorebirds				X	X	X	X	X			X	X	X	X	X	-	-	-	-
	Wading birds				X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	-
	Mottled duck				X	X	X	X	X	X	X	X	X	X	X	X	JAN-AUG	JAN-AUG	JAN-AUG	FEB-SEP
632	Wading birds				X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	-
	Rails				X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	-
	Mottled duck				X	X	X	X	X	X	X	X	X	X	X	X	JAN-AUG	JAN-AUG	JAN-AUG	FEB-SEP
	Shorebirds				X	X	X	X	X			X	X	X	X	X	-	-	-	-
633	American white pelican				X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	-
	Waterfowl				X	X	X	X				X	X	X	X	X	-	-	-	-
	Common loon	S		SC	X	X	X	X					X	X	X	X	-	-	-	-
	Terns				X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	-
	Gulls				X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	-
634	Wading birds				X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	-
	Black skimmer				X	X	X	X	X	X	X	X	X	X	X	X	APR-SEP	APR-SEP	APR-SEP	APR-SEP

Fish

RARNUM	NAME	S/E	T/E	CONCEN	J	F	M	A	M	J	J	A	S	O	N	D	SPAWNING	LARVAL/JUV
630	Striped mullet				X	X	X	X	X	X	X	X	X	X	X	X	NOV-JAN	DEC-FEB
636	Southern flounder				X	X	X	X	X	X	X	X	X	X	X	X	-	OCT-DEC
	Atlantic croaker				X	X	X	X	X	X	X	X	X	X	X	X	-	APR-OCT

Shellfish

RARNUM	NAME	S/E	T/E	CONCEN	J	F	M	A	M	J	J	A	S	O	N	D	SPAWNING	LARVAL/JUV.
630	Blue crab				X	X	X	X	X	X	X	X	X	X	X	X	APR-JUL	MAY-AUG
636	White shrimp				X	X	X	X	X	X	X	X	X	X	X	X	MAY-OCT	MAY-OCT
	Blue crab				X	X	X	X	X	X	X	X	X	X	X	X	APR-JUL	MAY-AUG

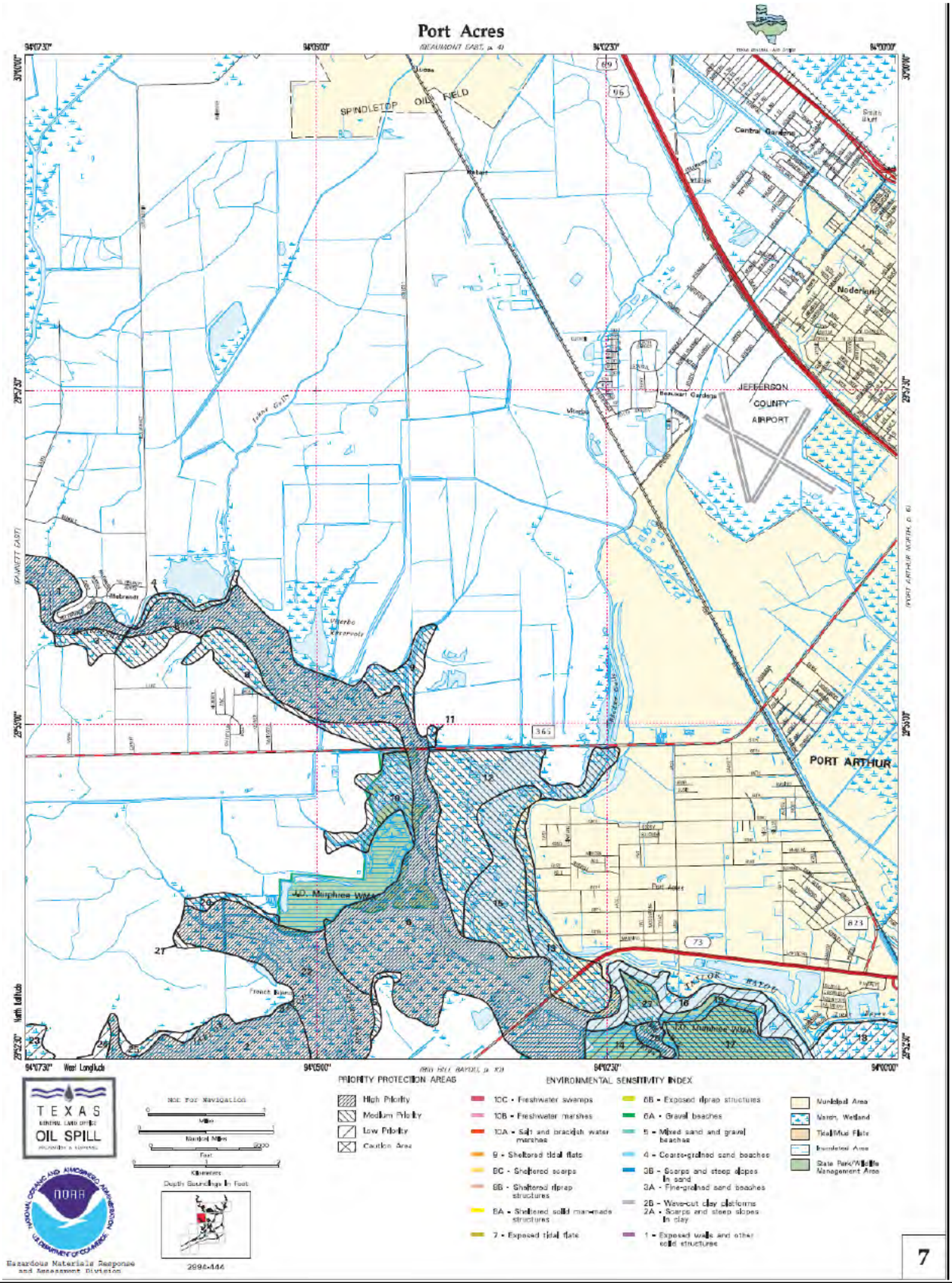
Plants/Communities

RARNUM	NAME	S/E	T/E
629	Bulrush		
630	Bulrush		
632	Common reed		
633	Common reed		

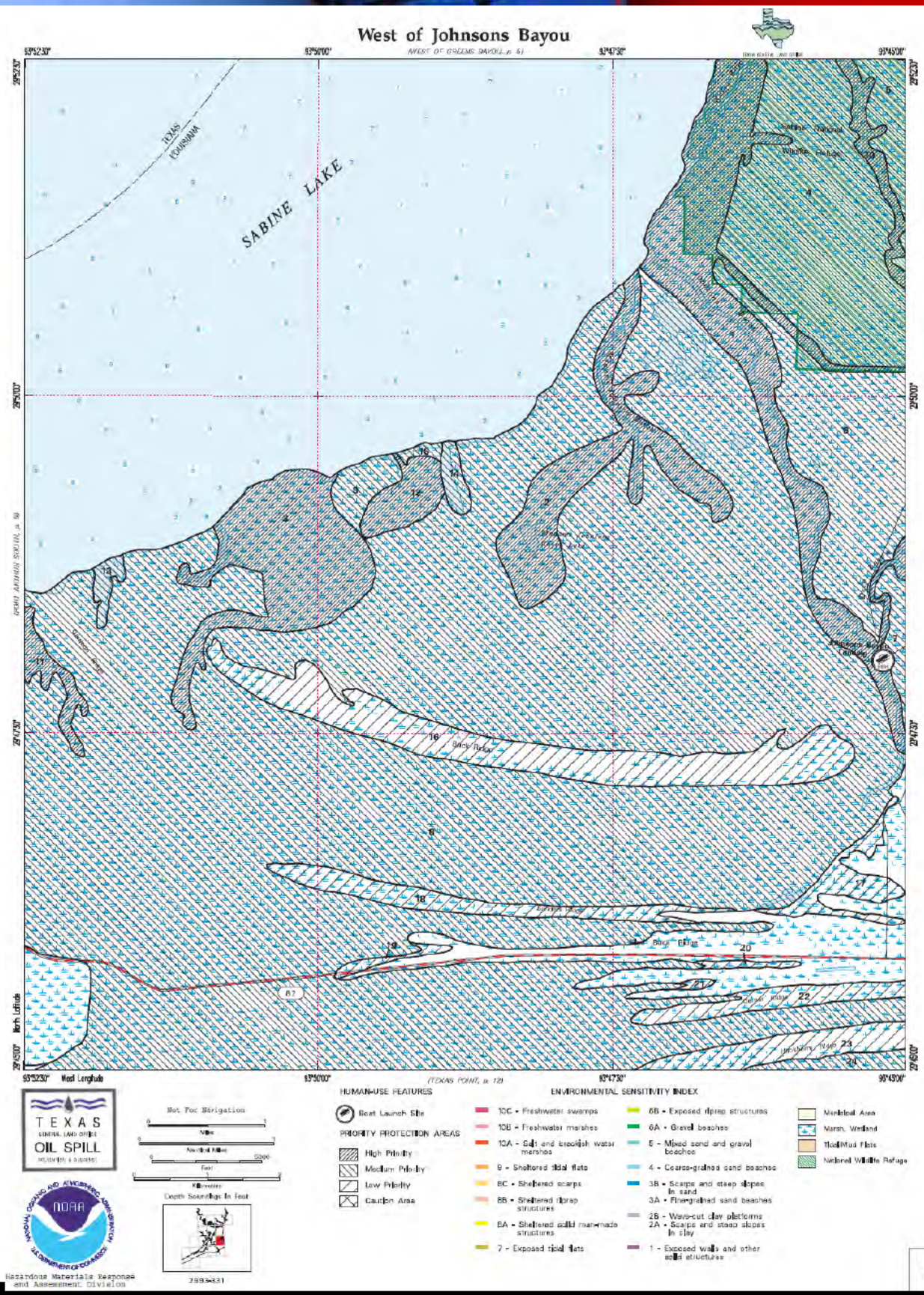
PORT ARTHUR NORTH

Map # 6

Polygon #	Priority	Description: what organism(s), habitat(s)?
Pinchpoints at (1) mouth of Bird Island Bayou, (2) mouth of canal north of Bird Island Bayou, (3) mouth of Nig Bayou, and (4) cut across Nig Bayou, can be boomed to protect parts of Polygons 1, 3, 4, and 5 from spills in Neches River.		
1	High	**North of Neches River (southern Bessie Heights Marsh); Bird Island Bayou - Nig Bayou drainage.** Birds (high), nursery (high), wetlands (high).
2	Low	**North shore of Neches River.** Wetlands (high).
3	Low	**North shore of Neches River.** Wetlands (high).
4	Low	**North shore of Neches River.** Wetlands (high).
5	Low	**North shore of Neches River.** Wetlands (high).
Two pinchpoints at canals south of Routes 73-96 cloverleaf can be boomed to protect Polygon 6 from spills in canals or along highway.		
6	Low	**Marsh south of Routes 73-96 cloverleaf.** Wetlands (high).
7	Medium	**Leveed area east of Nig Bayou.** Birds (high), wetlands (high).
8	Low	**Fill area east of oil refinery.** Birds (high).
9	Low	**Spoil area south of Atreco tanks.** Birds (high).
10	Medium	**Marsh west of Molasses Bayou.** Birds (high), wetlands (medium).
11	Medium	**Marsh east of Molasses Bayou.** Birds (high), wetlands (medium).
12	Medium	**Impounded area east of Port Arthur.** Birds (high), wetlands (medium)
13	Medium	**Molasses Bayou and marsh west of Atreco Cut.** Birds (high), recreational fishing (low), nursery (low), wetlands (medium).
Pinchpoints at canal parallel to Route 87 can be boomed to protect Polygon 14 from spills in canal or Neches River (West of Greens Bayou quad).		
15	Low	**Texaco Star Enterprises canal at Route 215.** Birds (high). Rookery.
16	Low	**Texaco Star Enterprises canal at New Orleans Ave.** Birds (high). Rookery.
17	Medium	**Perimeter of impounded area east of Port Arthur.** Birds (high), fishing (medium), wetlands (medium).
18	Low	**Southern part of impounded area.** Nursery (medium), wetlands (medium).
19	Low	**East of Southern Pacific Railroad.** Birds (medium), wetlands (low). Continued on Port Acres quad.


Port Acres
SPINDLETOP OIL FIELD
JEFFERSON COUNTY AIRPORT
PORT ARTHUR
J.D. Murphree WMA
Taylor Bayou
PRIORITY PROTECTION AREAS
High Priority
Medium Priority
Low Priority
Caution Area
ENVIRONMENTAL SENSITIVITY INDEX
10C - Freshwater swamps
10B - Freshwater marshes
10A - Salt and brackish water marshes
9 - Sheltered tidal flats
8C - Sheltered scarps
8B - Sheltered riprap structures
8A - Sheltered solid manmade structures
7 - Exposed tidal flats
6B - Exposed riprap structures
6A - Gravel beaches
5 - Mixed sand and gravel beaches
4 - Coarse-grained sand beaches
3B - Scarps and steep slopes in sand
3A - Fine-grained sand beaches
2B - Wave-cut clay platforms
2A - Scarps and steep slopes in clay
1 - Exposed walls and other solid structures
Mudflat Area
Marsh, Wetland
Tidal Mud Flats
Inundated Area
State Park/Wildlife Management Area
TEXAS
OIL SPILL
NOAA
Hazardous Materials Response and Assessment Division
Depth Soundings in Foot
2994-444

7


West of Johnsons Bayou
SABINE LAKE
TEXAS
LOUISIANA
93°52'30"
93°50'00"
93°47'30"
93°45'00"
29°52'30"
29°50'00"
29°47'30"
29°45'00"
West Longitude
North Latitude
(TEXAS POINT, pg 12)
HUMAN-USE FEATURES
Boat Launch Site
PRIORITY PROTECTION AREAS
High Priority
Medium Priority
Low Priority
Caution Area
ENVIRONMENTAL SENSITIVITY INDEX
10C - Freshwater swamps
10B - Freshwater marshes
10A - Salt and brackish water marshes
9 - Sheltered tidal flats
8C - Sheltered scarps
8B - Sheltered riprap structures
8A - Sheltered solid manmade structures
7 - Exposed tidal flats
6B - Exposed riprap structures
6A - Gravel beaches
5 - Mixed sand and gravel beaches
4 - Coarse-grained sand beaches
3B - Scarps and steep slopes in sand
3A - Fine-grained sand beaches
2B - Wave-cut clay platforms
2A - Scarps and steep slopes in clay
1 - Exposed walls and other solid structures
Undefined Area
Marsh, Wetland
Tidal Mud Flats
National Wildlife Refuge
Not For Navigation
Depth Soundings In Feet
TEXAS
OIL SPILL
NOAA
Hazardous Materials Response and Assessment Division
2885431

8

WEST OF JOHNSONS BAYOU

Map # 8

Polygon #	Priority	Description: what organism(s), habitat(s)?
Pinchpoint on Grays Ditch can be blocked to protect parts of Polygons 1 and 4 from spills in Grays Ditch or Willow Bay.		
Three pinchpoints at (1) mouth of Johnsons Bayou, (2) mouth of Willow Bayou, and (3) canal north of Willow Bayou can be boomed to protect Polygons 1 and 4 from spills in Sabine Lake.		
1	High	**Johnsons Bayou, Willow Bayou, Deep Bayou, Starks Canal.** Includes part of Sabine NWR. Birds (high), nursery (high), wetlands (high). Continued on West of Greens Bayou quad.
Pinchpoint at mouth of Madame Johnsons Bayou can be boomed to protect Polygon 2 from spills in Sabine Lake.		
2	High	**Madame Johnsons Bayou and Lake.** Birds (high), nursery (high), wetlands (high).
Three pinchpoints at (1) mouth of Greens Bayou, and (2) mouths of two unnamed canals to west can be boomed to protect Polygon 3 from spills in Sabine Lake.		
3	High	**Greens Bayou and marsh to west**. Birds (high), nursery (high), wetlands (high).
4	Medium	**Marsh north of Starks canal, east of Grays Ditch.** Sabine NWR. Birds (high), wetlands (high).
5	Medium	**Marsh east of Double Island Gully.** Sabine NWR. Birds (high), wetlands (high).
6	Medium	**Marsh east of Johnsons Bayou.** Birds (high), wetlands (high).
7	Medium	**Marsh east of Deep Bayou**. Birds (high), wetlands (high).
Pinchpoint at mouth of unnamed dredge channel can be boomed to protect Polygon 8 from spills in Sabine Lake.		
8	Medium	**Interchenier marshes.** Birds (high), wetlands (high). Continued on Port Arthur South and Texas Point quads.
9	Medium	**Marsh east of mouth of Greens Bayou.** Birds (high), wetlands (high).
10	High	**Double Island Gully.** Sabine NWR. Birds (high), nursery (medium), wetlands (high). Continued on West of Greens Bayou quad.
11	High	**Big Forge Bayou marsh**. Birds (high), nursery (medium), wetlands (high). Continued on Port Arthur South quad.
12	High	**Marsh east of mouth of Greens Bayou.** Birds (high), nursery (medium), wetlands (high).
Pinchpoint at mouth of unnamed dredge channel can be boomed to protect Polygon 12 from spills in Sabine Lake.		
13	Medium	**Shell dredging channel west of Greens Bayou.** Birds (high), nursery (low), wetlands (high).
14	Medium	**Shell dredging channel east of Greens Bayou.** Birds (high), nursery (low), wetlands (high).
Pinchpoint at mouth of unnamed dredge channel can be boomed to protect Polygon 14 from spills in Sabine Lake.		
15	Medium	**Sabine Lake shoreline east of mouth of Greens Bayou.** Birds (high), wetlands (high)
16	Low	**Buck Ridge and marshes.** Wetlands (high).
17	Low	**Interchenier marshes southeast of Buck Ridge.** Wetlands (high).
18	Low	**Sanders Ridge and marshes.** Wetlands (high).
19	Low	**Marsh at west end of Blue Buck Ridge.** Wetlands (high).
20	Low	**Marsh between Blue Buck Ridge and Garner Ridge.** Wetlands (high).
21	Low	**Marsh at west end of Garner Ridge**. Wetlands (high).
22	Low	**Salt Work Ridge.** Wetlands (high).
23	Low	**Hackberry Ridge.** Wetlands (high). Continued on Texas Point quad.
24	Medium	**Marsh south of Hackberry Ridge.** Birds (high), wetlands (high). Continued on Texas Point quad.

Port Arthur South

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

PORT ARTHUR SOUTH

Map #9

HUMAN USE RESOURCES

Boat Ramps

RARNUM	NAME
H665	Lake Sabine Causeway
H666	Lake Sabine Causeway
H669	Keith Lake
H670	Public Ramp

Marinas

RARNUM	NAME	ADDRESS	PHONE
H163	Pleasure Island Marina	520 Pleasure Island Blvd. Port Arthur 77641	(409) 982-4675

Water Intake Points

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

BIOLOGICAL RESOURCES

Birds

RARNUM	NAME	S/E	T/E	CONCEN	J	F	M	A	M	J	J	A	S	O	N	D	NESTING	LAYING	HATCHING	FLEDGING
821	Red-breasted merganser				X	X	X	X	X						X	X	-	-	-	-
	Diving birds				X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	-
824	Least tern	F	E				X	X	X	X	X	X	X				APR-SEP	APR-SEP	MAY-SEP	MAY-OCT
	Black skimmer				X	X	X	X	X	X	X	X	X	X	X	X	APR-SEP	APR-SEP	APR-SEP	APR-SEP
825	American white pelican				X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	-
	Lesser scaup				X	X	X						X	X	X	X	-	-	-	-
	Canvasback				X	X	X							X	X	X	-	-	-	-
	Gadwall				X	X	X	X					X	X	X	X	-	-	-	-
828	Northern shoveler				X	X	X	X						X	X	X	-	-	-	-
	Goose				X	X	X	X					X	X	X	X	-	-	-	-
	Waterfowl				X	X	X	X				X	X	X	X	X	-	-	-	-
	Green-winged teal				X	X	X	X					X	X	X	X	-	-	-	-
	Gadwall				X	X	X	X					X	X	X	X	-	-	-	-
830	Green-winged teal				X	X	X	X					X	X	X	X	-	-	-	-
	Waterfowl				X	X	X	X				X	X	X	X	X	-	-	-	-
	Gadwall				X	X	X	X					X	X	X	X	-	-	-	-
	Northern shoveler				X	X	X	X						X	X	X	-	-	-	-
	Geese				X	X	X	X					X	X	X	X	-	-	-	-
831	Waterfowl			HIGH	X	X	X	X				X	X	X	X	X	-	-	-	-
832	Roseate spoonbill				X	X	X	X	X	X	X	X	X	X	X	X	APR-AUG	APR-AUG	APR-AUG	MAY-SEP
	Tricolored heron				X	X	X	X	X	X	X	X	X	X	X	X	APR-AUG	APR-AUG	APR-AUG	MAY-SEP
	Snowy egret				X	X	X	X	X	X	X	X	X	X	X	X	APR-JUL	APR-JUL	APR-JUL	MAY-AUG
	Waterfowl			HIGH	X	X	X	X				X	X	X	X	X	-	-	-	-
	Canvasback			HIGH	X	X	X							X	X	X	-	-	-	-
	Wading birds				X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	-
835	Gadwall			HIGH	X	X	X	X					X	X	X	X	-	-	-	-
	Teals			HIGH	X	X	X	X					X	X	X	X	-	-	-	-
	Canvasback			VERY HIG	X	X	X							X	X	X	-	-	-	-
	Waterfowl			HIGH	X	X	X	X				X	X	X	X	X	-	-	-	-
	American wigeon				X	X	X	X						X	X	X	-	-	-	-
	Roseate spoonbill				X	X	X	X	X	X	X	X	X	X	X	X	APR-AUG	APR-AUG	APR-AUG	MAY-SEP
837	Waterfowl			HIGH	X	X	X	X				X	X	X	X	X	-	-	-	-
839	Waterfowl				X	X	X	X				X	X	X	X	X	-	-	-	-
841	Waterfowl				X	X	X	X				X	X	X	X	X	-	-	-	-
842	American wigeon				X	X	X	X						X	X	X	-	-	-	-
	Lesser scaup				X	X	X						X	X	X	X	-	-	-	-
	Gadwall				X	X	X	X					X	X	X	X	-	-	-	-
	Waterfowl				X	X	X	X				X	X	X	X	X	-	-	-	-
	Green-winged teal				X	X	X	X					X	X	X	X	-	-	-	-

Reptiles/Amphibians

RARNUM	NAME	S/E	T/E	CONCEN	J	F	M	A	M	J	J	A	S	O	N	D	NESTING	HATCHING
831	American alligator				X	X	X	X	X	X	X	X	X	X	X	X	JUN-SEP	JUN-DEC
835	American alligator				X	X	X	X	X	X	X	X	X	X	X	X	JUN-SEP	JUN-DEC
837	American alligator				X	X	X	X	X	X	X	X	X	X	X	X	JUN-SEP	JUN-DEC
773	Gulf saltmarsh snake	C2	N															

Fish

RARNUM	NAME	S/E	T/E	CONCEN	J	F	M	A	M	J	J	A	S	O	N	D	SPAWNING	LARVAL / JUV
820	Hardhead catfish				X	X	X	X	X	X	X	X	X	X	X	X	MAY-SEP	JUN-OCT
	Red drum				X	X	X	X	X	X	X	X	X	X	X	X	AUG-NOV	SEP-DEC
	Striped mullet				X	X	X	X	X	X	X	X	X	X	X	X	NOV-JAN	DEC-FEB
	Pinfish				X	X	X	X	X	X	X	X	X	X	X	X	MAR-MAY	MAR-MAY
	Bay anchovy				X	X	X	X	X	X	X	X	X	X	X	X	JAN-DEC	JAN-DEC
	Atlantic croaker				X	X	X	X	X	X	X	X	X	X	X	X	-	APR-OCT
821	Atlantic croaker				X	X	X	X	X	X	X	X	X	X	X	X	-	APR-OCT
	Bay anchovy				X	X	X	X	X	X	X	X	X	X	X	X	JAN-DEC	JAN-DEC

PORT ARTHUR SOUTH CONTINUED

BIOLOGICAL RESOURCES CONT.

Fish Continued

RARNUM	NAME	S/E	T/E	CONCEN	J	F	M	A	M	J	J	A	S	O	N	D	SPAWNING	LARVAL/JUV
829	Spotted seatrout				X	X	X	X	X	X	X	X	X	X	X	X	JAN-DEC	JAN-DEC
	Striped mullet				X	X	X	X	X	X	X	X	X	X	X	X	NOV-JAN	DEC-FEB
	Bay anchovy				X	X	X	X	X	X	X	X	X	X	X	X	JAN-DEC	JAN-DEC
833	Pinfish				X	X	X	X	X	X	X	X	X	X	X	X	MAR-MAY	MAR-MAY
	Spotted seatrout				X	X	X	X	X	X	X	X	X	X	X	X	JAN-DEC	JAN-DEC
836	Atlantic croaker				X	X	X	X	X	X	X	X	X	X	X	X	-	APR-OCT
839	Striped mullet				X	X	X	X	X	X	X	X	X	X	X	X	NOV-JAN	DEC-FEB
	Gulf menhaden				X	X	X	X	X	X	X	X	X	X	X	X	NOV-FEB	DEC-MAR
	Red drum			HIGH	X	X	X	X	X	X	X	X	X	X	X	X	AUG-NOV	SEP-DEC
	Pinfish				X	X	X	X	X	X	X	X	X	X	X	X	MAR-MAY	MAR-MAY
	Southern flounder				X	X	X	X	X	X	X	X	X	X	X	X	-	OCT-DEC
	Spotted seatrout			HIGH	X	X	X	X	X	X	X	X	X	X	X	X	JAN-DEC	JAN-DEC
841	Red drum				X	X	X	X	X	X	X	X	X	X	X	X	AUG-NOV	SEP-DEC
	Spotted seatrout				X	X	X	X	X	X	X	X	X	X	X	X	JAN-DEC	JAN-DEC
	Striped mullet				X	X	X	X	X	X	X	X	X	X	X	X	NOV-JAN	DEC-FEB
	Pinfish				X	X	X	X	X	X	X	X	X	X	X	X	MAR-MAY	MAR-MAY
	Southern flounder				X	X	X	X	X	X	X	X	X	X	X	X	-	OCT-DEC
	Gulf menhaden				X	X	X	X	X	X	X	X	X	X	X	X	NOV-FEB	DEC-MAR
842	Southern flounder				X	X	X	X	X	X	X	X	X	X	X	X	-	OCT-DEC
	Spotted seatrout			HIGH	X	X	X	X	X	X	X	X	X	X	X	X	JAN-DEC	JAN-DEC
	Striped mullet				X	X	X	X	X	X	X	X	X	X	X	X	NOV-JAN	DEC-FEB
	Red drum				X	X	X	X	X	X	X	X	X	X	X	X	AUG-NOV	SEP-DEC
	Pinfish				X	X	X	X	X	X	X	X	X	X	X	X	MAR-MAY	MAR-MAY
	Gulf menhaden				X	X	X	X	X	X	X	X	X	X	X	X	NOV-FEB	DEC-MAR

Shellfish

RARNUM	NAME	S/E	T/E	CONCEN	J	F	M	A	M	J	J	A	S	O	N	D	SPAWNING	LARVAL/JUV
68	Penaeid shrimp				X	X	X	X	X	X	X	X	X	X	X	X	-	-
	Blue crab				X	X	X	X	X	X	X	X	X	X	X	X	APR-JUL	MAY-AUG
820	White shrimp				X	X	X	X	X	X	X	X	X	X	X	X	MAY-OCT	MAY-OCT
	Blue crab				X	X	X	X	X	X	X	X	X	X	X	X	APR-JUL	MAY-AUG
	Brown shrimp				X	X	X	X	X	X	X	X	X	X	X	X	NOV-MAR	FEB-JUN
821	White shrimp				X	X	X	X	X	X	X	X	X	X	X	X	MAY-OCT	MAY-OCT
	Brown shrimp				X	X	X	X	X	X	X	X	X	X	X	X	NOV-MAR	FEB-JUN
828	American oyster (eastern)				X	X	X	X	X	X	X	X	X	X	X	X	MAR-JUL	APR-JUL
829	American oyster (eastern)				X	X	X	X	X	X	X	X	X	X	X	X	MAR-JUL	APR-JUL
	Brown shrimp				X	X	X	X	X	X	X	X	X	X	X	X	NOV-MAR	FEB-JUN
	White shrimp				X	X	X	X	X	X	X	X	X	X	X	X	MAY-OCT	MAY-OCT
833	American oyster (eastern)				X	X	X	X	X	X	X	X	X	X	X	X	MAR-JUL	APR-JUL
	White shrimp				X	X	X	X	X	X	X	X	X	X	X	X	MAY-OCT	MAY-OCT
	Brown shrimp			HIGH	X	X	X	X	X	X	X	X	X	X	X	X	NOV-MAR	FEB-JUN
	Blue crab				X	X	X	X	X	X	X	X	X	X	X	X	APR-JUL	MAY-AUG
	Grass shrimp				X	X	X	X	X	X	X	X	X	X	X	X	-	-
836	White shrimp				X	X	X	X	X	X	X	X	X	X	X	X	MAY-OCT	MAY-OCT
	Brown shrimp				X	X	X	X	X	X	X	X	X	X	X	X	NOV-MAR	FEB-JUN
	Blue crab				X	X	X	X	X	X	X	X	X	X	X	X	APR-JUL	MAY-AUG
838	Brown shrimp				X	X	X	X	X	X	X	X	X	X	X	X	NOV-MAR	FEB-JUN
	White shrimp				X	X	X	X	X	X	X	X	X	X	X	X	MAY-OCT	MAY-OCT
	American oyster (eastern)				X	X	X	X	X	X	X	X	X	X	X	X	MAR-JUL	APR-JUL
839	American oyster (eastern)				X	X	X	X	X	X	X	X	X	X	X	X	MAR-JUL	APR-JUL
	White shrimp			HIGH	X	X	X	X	X	X	X	X	X	X	X	X	MAY-OCT	MAY-OCT
	Blue crab				X	X	X	X	X	X	X	X	X	X	X	X	APR-JUL	MAY-AUG
	Brown shrimp				X	X	X	X	X	X	X	X	X	X	X	X	NOV-MAR	FEB-JUN
	Grass shrimp			HIGH	X	X	X	X	X	X	X	X	X	X	X	X	-	-
841	Grass shrimp			HIGH	X	X	X	X	X	X	X	X	X	X	X	X	-	-
	White shrimp			HIGH	X	X	X	X	X	X	X	X	X	X	X	X	MAY-OCT	MAY-OCT
	Brown shrimp			HIGH	X	X	X	X	X	X	X	X	X	X	X	X	NOV-MAR	FEB-JUN
	Blue crab				X	X	X	X	X	X	X	X	X	X	X	X	APR-JUL	MAY-AUG
842	Blue crab				X	X	X	X	X	X	X	X	X	X	X	X	APR-JUL	MAY-AUG
	White shrimp			HIGH	X	X	X	X	X	X	X	X	X	X	X	X	MAY-OCT	MAY-OCT
	Brown shrimp				X	X	X	X	X	X	X	X	X	X	X	X	NOV-MAR	FEB-JUN

Plants/Communities

RARNUM	NAME	S/E	T/E
828	Salt meadow cordgrass (wiregrass)		
830	Salt meadow cordgrass (wiregrass)		
831	Salt meadow cordgrass (wiregrass)		
832	Salt meadow cordgrass (wiregrass)		
837	Bulrush		
	Salt meadow cordgrass (wiregrass)		
839	Salt meadow cordgrass (wiregrass)		
841	Salt meadow cordgrass (wiregrass)		
842	Salt meadow cordgrass (wiregrass)		

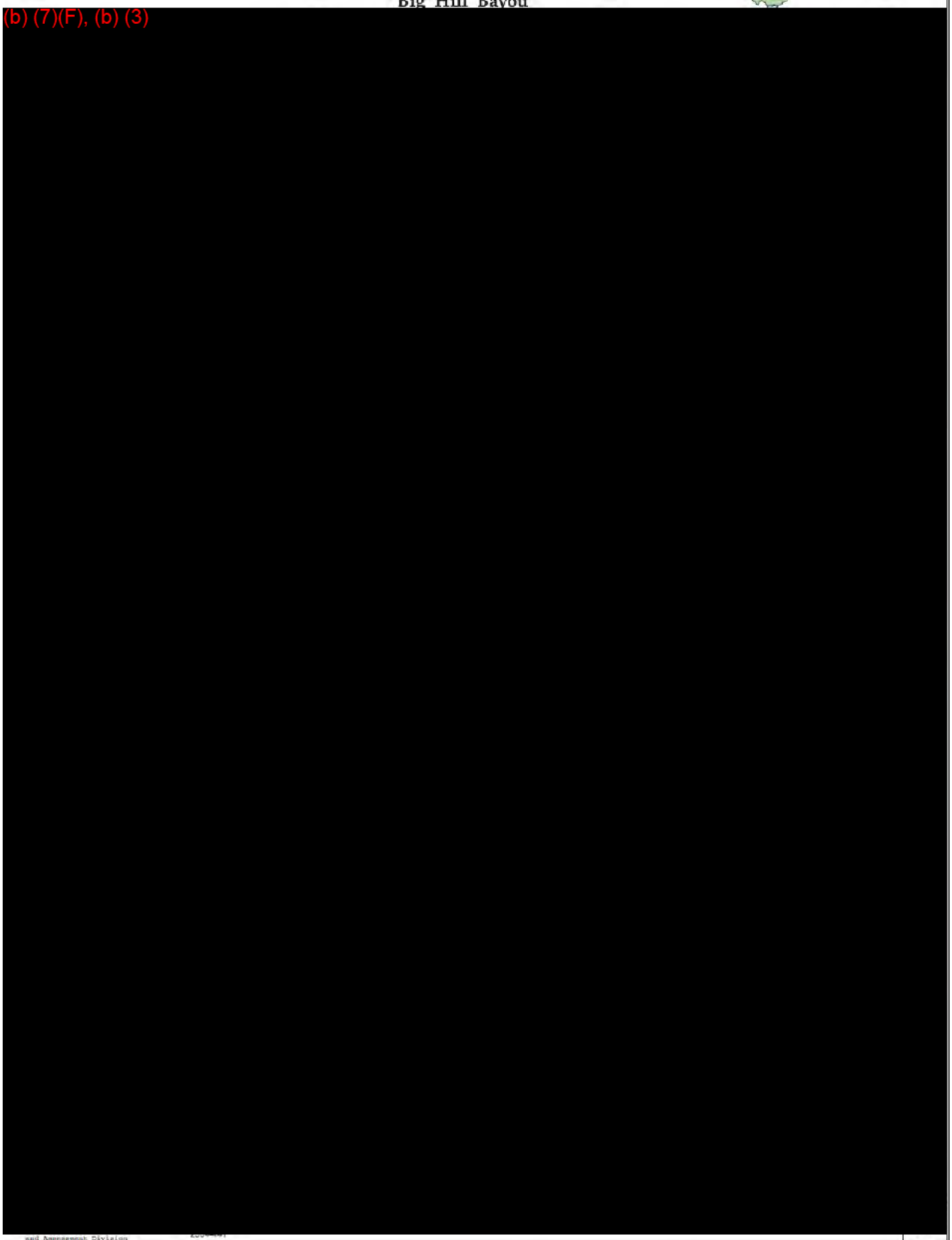
PORT ARTHUR SOUTH

Map # 9

Polygon #	Priority	Description: what organism(s), habitat(s)?
Mouth of Taylor Bayou canal on ICWW can be blocked to protect Taylor Bayou (polygon 1) from spills in ICWW.		
1	Low	**Port Arthur Canal, ICWW, West Basin, Sabine Neches Canal.** Lower Taylor Bayou. Nursery (high).
2	Low	**Sabine Pass north of Point Hunt.** Nursery (high).
3	Low	**Reservoir south of Taylor Bayou.** Wetlands (high).
4	Low	**Northern perimeter of marsh east of Keith Lake.** Wetlands (high).
5	Low	**Eastern perimeter of marsh east of Keith Lake.** Wetlands (high).
6	Low	**Marsh east of Pass Channel.** Wetlands (high). Continued on Sabine Pass, West of Johnsons Bayou quads.
Pinchpoint at mouth of unnamed cut on Taylor Bayou Canal can be boomed to protect Polygon 7 from spills in ICWW.		
7	Medium	**J.D. Murphree impoundments and area to north.** Birds (high), wetlands (high). Continued on Big Hill Bayou quad.
8	Medium	**Marsh east of Keith Lake.** Birds (high), wetlands (high). Continued on Sabine Pass quad.
9	Medium	**Sabine Pass shoreline north of Pass Channel.** Birds (high), wetlands (high).
Pinchpoint at mouth of canal on ICWW can be boomed to protect Polygon 10 from spills in ICWW.		
10	Low	**Diked area east of Port Arthur Basins.** Birds (high), nursery (medium).
Control structures at (1) mouth of canal on ICWW and (2) between Round Lake and Lost Lake can be closed to protect Polygons 11, 12, and 13 from spills in ICWW or other canals.		
11	Low	**Fill area south of ICWW.** Birds (high).
Pinchpoints at Keith Lake Pass can be boomed to protect Polygons 12, 14 and 15 from spills in Port Arthur Canal.		
12	Medium	**Round Lake, Lost Lake area.** Birds (high), nursery (medium), wetlands (high). Large population of wintering canvasbacks, alligators.
13	Low	**Impoundment west of Round Lake.** Birds (high).
14	High	**Keith Lake and marsh to north.** Birds (high), nursery (high), wetlands (high).
15	Medium	**Northeast shore of Keith Lake.** Birds (high), wetlands (high).
16	Low	**Marsh east of Route 87.** Wetlands (high).
17	Medium	**Cuts northeast of Route 87.** Nursery (high), wetlands (high).
18	Low	**Sabine Pass offshore of diked area.** Low recreational and commercial fishing.
19	Low	**Sabine Pass offshore of Blue Buck Point.** Low recreational and commercial fishing. Nursery (medium).
20	Low	**Marsh at Blue Buck Point.** Birds (high), wetlands (low).
Pinchpoints at mouths of (1) Big Forge Bayou and (2) unnamed creek to northeast can be blocked to protect Polygon 21 from spills in Sabine Lake.		
21	High	**Big Forge Bayou drainage.** Birds (high), nursery (high), wetlands (low).
22	Low	**Northeast corner.** Birds(low), wetlands (medium). Continued on Port Arthur North, Big Hill Bayou quads.

Big Hill Bayou

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



BIG HILL BAYOU

Map #10

HUMAN USE RESOURCES

Water Intake Points

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

BIOLOGICAL RESOURCES

Mammals

RARNUM	NAME	S/F	T/E	CONCEN	J	F	M	A	M	J	J	A	S	O	N	D
808	Mink				X	X	X	X	X	X	X	X	X	X	X	X
817	Mink				X	X	X	X	X	X	X	X	X	X	X	X

Birds

RARNUM	NAME	S/F	T/E	CONCEN	J	F	M	A	M	J	J	A	S	O	N	D	NESTING	LAYING	HATCHING	FLEDGING
52	Waterfowl				X	X	X	X				X	X	X	X	X	-	-	-	-
67	Migratory songbirds				X	X	X	X	X					X	X	X	-	-	-	-
805	Wading birds				X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	-
	Gadwall				X	X	X	X					X	X	X	X	-	-	-	-
	Green-winged teal				X	X	X	X					X	X	X	X	-	-	-	-
	Geese				X	X	X	X					X	X	X	X	-	-	-	-
805	Wading birds				X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	-
	Gadwall				X	X	X	X					X	X	X	X	-	-	-	-
	Green-winged teal				X	X	X	X					X	X	X	X	-	-	-	-
	Geese				X	X	X	X					X	X	X	X	-	-	-	-
806	Canvasback			HIGH	X	X	X							X	X	X	-	-	-	-
807	Northern harrier				X	X	X	X	X	X	X	X	X	X	X	X	APR-AUG	APR-AUG	APR-AUG	MAY-SEP
	Wading birds				X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	-
	Waterfowl				X	X	X	X				X	X	X	X	X	-	-	-	-
808	Waterfowl				X	X	X	X				X	X	X	X	X	-	-	-	-
	Geese				X	X	X	X					X	X	X	X	-	-	-	-
	Wading birds				X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	-
809	Waterfowl			HIGH	X	X	X	X				X	X	X	X	X	-	-	-	-
	Clapper rail				X	X	X	X	X	X	X	X	X	X	X	X	MAR-AUG	MAR-AUG	MAR-AUG	APR-SEP
810	Blue-winged teal				X	X	X	X					X	X	X	X	-	-	-	-
	Northern pintail				X	X	X	X				X	X	X	X	X	-	-	-	-
	American wigeon				X	X	X	X						X	X	X	-	-	-	-
	Common moorhen				X	X	X	X	X	X	X	X	X	X	X	X	MAR-AUG	MAR-AUG	MAR-AUG	APR-SEP
	Green-winged teal				X	X	X	X					X	X	X	X	-	-	-	-
	Lesser scaup				X	X	X						X	X	X	X	-	-	-	-
	Gadwall				X	X	X	X					X	X	X	X	-	-	-	-
	Clapper rail				X	X	X	X	X	X	X	X	X	X	X	X	MAR-AUG	MAR-AUG	MAR-AUG	APR-SEP
	Wading birds			HIGH	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	-
813	Gadwall				X	X	X	X					X	X	X	X	-	-	-	-
	American coot				X	X	X	X					X	X	X	X	-	-	-	-
	White-fronted goose				X	X	X						X	X	X	X	-	-	-	-
	Snow goose				X	X	X						X	X	X	X	-	-	-	-
	White-tailed kite				X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	-
	Blue-winged teal				X	X	X	X					X	X	X	X	-	-	-	-
	Waterfowl			HIGH	X	X	X	X				X	X	X	X	X	-	-	-	-
	Ring-necked duck				X	X	X							X	X	X	-	-	-	-
	Common moorhen				X	X	X	X	X	X	X	X	X	X	X	X	MAR-AUG	MAR-AUG	MAR-AUG	APR-SEP
	Mottled duck			HIGH	X	X	X	X	X	X	X	X	X	X	X	X	JAN-AUG	JAN-AUG	JAN-AUG	FEB-SEP
	Wading birds			HIGH	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	-
	Northern pintail				X	X	X	X				X	X	X	X	X	-	-	-	-
	Green-winged teal				X	X	X	X					X	X	X	X	-	-	-	-
	Pied-billed grebe				X	X	X	X	X	X	X	X	X	X	X	X	MAR-AUG	MAR-AUG	MAR-AUG	APR-SEP
	White-faced ibis	S	T		X	X	X	X	X	X	X	X	X	X	X	X	FEB-AUG	FEB-AUG	FEB-AUG	MAR-SEP
	White ibis				X	X	X	X	X	X	X	X	X	X	X	X	FEB-JUN	FEB-JUN	FEB-JUN	MAR-JUL
816	Mottled duck			HIGH	X	X	X	X	X	X	X	X	X	X	X	X	JAN-AUG	JAN-AUG	JAN-AUG	FEB-SEP
	Pied-billed grebe				X	X	X	X	X	X	X	X	X	X	X	X	MAR-AUG	MAR-AUG	MAR-AUG	APR-SEP
	White-tailed kite				X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	-
	Lesser scaup				X	X	X						X	X	X	X	-	-	-	-
	Green-winged teal				X	X	X	X					X	X	X	X	-	-	-	-
	Ring-necked duck				X	X	X							X	X	X	-	-	-	-
	Northern pintail				X	X	X	X				X	X	X	X	X	-	-	-	-
	Black-crowned night heron				X	X	X	X	X	X	X	X	X	X	X	X	APR-AUG	APR-AUG	APR-AUG	APR-SEP
	White-faced ibis	S	T		X	X	X	X	X	X	X	X	X	X	X	X	FEB-AUG	FEB-AUG	FEB-AUG	MAR-SEP
	White ibis				X	X	X	X	X	X	X	X	X	X	X	X	FEB-JUN	FEB-JUN	FEB-JUN	MAR-JUL
	Gadwall				X	X	X	X					X	X	X	X	-	-	-	-
	Ruddy duck				X	X	X							X	X	X	-	-	-	-
	Common moorhen				X	X	X	X	X	X	X	X	X	X	X	X	MAR-AUG	MAR-AUG	MAR-AUG	APR-SEP
	Northern shoveler				X	X	X	X						X	X	X	-	-	-	-
	Geese				X	X	X	X					X	X	X	X	-	-	-	-
	American coot				X	X	X	X					X	X	X	X	-	-	-	-
817	Geese				X	X	X	X					X	X	X	X	-	-	-	-
	Canvasback				X	X	X							X	X	X	-	-	-	-
	Waterfowl				X	X	X	X				X	X	X	X	X	-	-	-	-

BIG HILL BAYOU CONTINUED

BIOLOGICAL RESOURCES CONT.

Reptiles/Amphibians

RARNUM	NAME	S/E	T/E	CONCEN	J	F	M	A	M	J	J	A	S	O	N	D	NESTING	HATCHING
804	American alligator				X	X	X	X	X	X	X	X	X	X	X	X	JUN-SEP	JUN-DEC
812	American alligator				X	X	X	X	X	X	X	X	X	X	X	X	JUN-SEP	JUN-DEC
813	American alligator			HIGH	X	X	X	X	X	X	X	X	X	X	X	X	JUN-SEP	JUN-DEC
816	American alligator			HIGH	X	X	X	X	X	X	X	X	X	X	X	X	JUN-SEP	JUN-DEC

Fish

RARNUM	NAME	S/E	T/E	CONCEN	J	F	M	A	M	J	J	A	S	O	N	D	SPAWNING	LARVAL/JUV
804	Sunfish				X	X	X	X	X	X	X	X	X	X	X	X	-	-
810	Black drum				X	X	X	X	X	X	X	X	X	X	X	X	JAN-APR	JUL-MAR
	Sheepshead minnow				X	X	X	X	X	X	X	X	X	X	X	X	MAR-OCT	MAR-DEC
	Atlantic croaker				X	X	X	X	X	X	X	X	X	X	X	X	-	APR-OCT
	Spotted seatrout			HIGH	X	X	X	X	X	X	X	X	X	X	X	X	JAN-DEC	JAN-DEC
	Striped mullet				X	X	X	X	X	X	X	X	X	X	X	X	NOV-JAN	DEC-FEB
	Red drum				X	X	X	X	X	X	X	X	X	X	X	X	AUG-NOV	SEP-DEC
	Southern flounder			HIGH	X	X	X	X	X	X	X	X	X	X	X	X	-	OCT-DEC
	Pinfish				X	X	X	X	X	X	X	X	X	X	X	X	MAR-MAY	MAR-MAY
813	Largemouth bass				X	X	X	X	X	X	X	X	X	X	X	X	FEB-APR	MAR-MAY
	Gizzard shad				X	X	X	X	X	X	X	X	X	X	X	X	-	-
816	Gizzard shad				X	X	X	X	X	X	X	X	X	X	X	X	-	-
	White crappie				X	X	X	X	X	X	X	X	X	X	X	X	JAN-DEC	JAN-DEC
	Sunfish (bluegill)				X	X	X	X	X	X	X	X	X	X	X	X	-	-
818	Sand seatrout				X	X	X	X	X	X	X	X	X	X	X	X	-	MAR-DEC
	Spotted seatrout				X	X	X	X	X	X	X	X	X	X	X	X	JAN-DEC	JAN-DEC
	Southern flounder				X	X	X	X	X	X	X	X	X	X	X	X	-	OCT-DEC
	Atlantic croaker				X	X	X	X	X	X	X	X	X	X	X	X	-	APR-OCT
	Black drum				X	X	X	X	X	X	X	X	X	X	X	X	JAN-APR	JUL-MAR
	Red drum				X	X	X	X	X	X	X	X	X	X	X	X	AUG-NOV	SEP-DEC
	Gulf menhaden				X	X	X	X	X	X	X	X	X	X	X	X	NOV-FEB	DEC-MAR
819	Southern flounder				X	X	X	X	X	X	X	X	X	X	X	X	-	OCT-DEC
	Red drum				X	X	X	X	X	X	X	X	X	X	X	X	AUG-NOV	SEP-DEC
	Sand seatrout				X	X	X	X	X	X	X	X	X	X	X	X	-	MAR-DEC
	Atlantic croaker				X	X	X	X	X	X	X	X	X	X	X	X	-	APR-OCT
	Spotted seatrout				X	X	X	X	X	X	X	X	X	X	X	X	JAN-DEC	JAN-DEC
	Black drum				X	X	X	X	X	X	X	X	X	X	X	X	JAN-APR	JUL-MAR
	Gulf menhaden				X	X	X	X	X	X	X	X	X	X	X	X	NOV-FEB	DEC-MAR

Shellfish

RARNUM	NAME	S/E	T/E	CONCEN	J	F	M	A	M	J	J	A	S	O	N	D	SPAWNING	LARVAL/JUV
810	Blue crab				X	X	X	X	X	X	X	X	X	X	X	X	APR-JUL	MAY-AUG
	Brown shrimp				X	X	X	X	X	X	X	X	X	X	X	X	NOV-MAR	FEB-JUN
	Brackishwater clam				X	X	X	X	X	X	X	X	X	X	X	X	-	-
	White shrimp			HIGH	X	X	X	X	X	X	X	X	X	X	X	X	MAY-OCT	MAY-OCT
819	Blue crab				X	X	X	X	X	X	X	X	X	X	X	X	APR-JUL	MAY-AUG
	White shrimp				X	X	X	X	X	X	X	X	X	X	X	X	MAY-OCT	MAY-OCT
	Brown shrimp				X	X	X	X	X	X	X	X	X	X	X	X	NOV-MAR	FEB-JUN

Plants/Communities

RARNUM	NAME	S/E	T/E
804	Giant cutgrass (Southern wild rice)		
	Common reed		
806	Common reed		
	Salt meadow cordgrass (wiregrass)		
	Banana water lily		
807	Cutgrass		
	Salt meadow cordgrass (wiregrass)		
	Giant cutgrass (Southern wild rice)		
	Arrowhead		
	California bulrush		
809	Common reed		
	Salt meadow cordgrass (wiregrass)		
810	Widgeon grass		
812	White water lily		
	Maliciae		
	Water lotus		
	Giant cutgrass (Southern wild rice)		
813	Giant cutgrass (Southern wild rice)		
	Alligatorweed		
	White water lily		
	Pondweed		
	Water lotus		
816	California bulrush		
	Common reed		
	Maliciae		
	Giant cutgrass (Southern wild rice)		
	Water lotus		
	Salt meadow cordgrass (wiregrass)		
	Seashore paspalum		
817	Cordgrass		
	Banana water lily		
	Salt meadow cordgrass (wiregrass)		
	Common reed		
450	Rush-sedge series		

BIG HILL BAYOU

Map # 10

Polygon #	*Priority*	*Description: what organism(s), habitat(s)?*
1	Low	**Taylor Bayou Marsh and reservoirs**. Wetlands (high). Continued on Alligator Hole Marsh quad.
2	Low	**Marsh south of Route 73**. Wetlands (high). Note: Big Hill Reservoir, shown as open water on USGS quad map, is now impounded freshwater marsh.
3	High	**Big Hill Bayou Marsh**. Includes part of McFaddin NWR. Birds (high), wetlands (high). Largest freshwater marsh on upper coast. Waterfowl, alligators. Continued on Alligator Hole Marsh, Clam Lake, Port Arthur South quads.
4	Medium	**Willow Lake - Barnett Lake area**. McFaddin NWR. Continued on Clam Lake quad. Birds (high), wetlands (high).
5	Low	**Fill south of ICWW**. Sea Rim State Park. Birds (high). Continued on Port Arthur South quad.
6	Medium	**Willie Slough Gully**. Birds (high), wetlands (high). Continued on Alligator Hole Marsh quad.
7	Medium	**Willow Slough Marsh**. Birds (high), fishing (low), wetlands (high). Huge concentrations of geese, ducks, and alligators. Continued on Alligator Hole Marsh quad.
8	Medium	**ICWW**. Birds (high), nursery (medium).
9	Low	**J.D. Murphree impoundment**. Birds (high), wetlands (medium). J.D. Murphree WMA.
10	Low	**West of Big Hill Bayou.** J.D. Murphree WMA. Birds (high).
Pinchpoint at (1) mouth of Salt Bayou on ICWW and (2) mouth of Crane Bayou on Shell Lake can be boomed to protect parts of Polygon 11 from spills in ICWW, Shell Lake or unnamed canals		
11	High	**Shell Lake area**. Birds (high), nursery (high), wetlands (high). Continued on Clam Lake, Port Arthur South quads.

TEXAS GENERAL LAND OFFICE OIL SPILL PREVENTION & RESPONSE

UPPER COAST OF TEXAS

NOAA — National Oceanic and Atmospheric Administration — U.S. Department of Commerce

ENVIRONMENTAL SENSITIVITY INDEX

- 10C - FRESHWATER SWAMPS
- 10B - FRESHWATER MARSHES
- 10A - SALT AND BRACKISH WATER MARSHES
- 9 - SHELTERED TIDAL FLATS
- 8C - SHELTERED SCARPS
- 8B - SHELTERED RIPRAP STRUCTURES
- 8A - SHELTERED SOLID MAN-MADE STRUCTURES
- 7 - EXPOSED TIDAL FLATS
- 6B - EXPOSED RIPRAP STRUCTURES
- 6A - GRAVEL BEACHES
- 5 - MIXED SAND AND GRAVEL BEACHES
- 4 - COARSE-GRAINED SAND BEACHES
- 3B - SCARPS AND STEEP SLOPES IN SAND
  3A - FINE-GRAINED SAND BEACHES
- 2B - WAVE-CUT CLAY PLATFORMS
  2A - SCARPS AND STEEP SLOPES IN CLAY
- 1 - EXPOSED WALLS AND OTHER SOLID STRUCTURES

HYDROGRAPHY

- WATER
- INUNDATED AREA
- INTERMITTENT WATER BODY
- MARSH, WETLAND, OR SWAMP
- FLATS (MUD, SAND, GRAVEL, TIDAL)
- BEACH, BAR
- SUBMERGED AQUATIC VEGETATION

TRANSPORTATION

- DIVIDED HIGHWAY
- STATE/FEDERAL HIGHWAY
- CITY STREET/COUNTY ROAD
- AIRPORT
- RAILROAD
- SHIP CHANNEL/GULF INTRACOASTAL WATERWAY
- SHIPPING SAFETY FAIRWAY

BIOLOGICAL RESOURCES

- DIVING BIRDS
- GULLS/TERNS
- PASSERINE BIRDS
- PELAGIC BIRDS
- RAPTORS
- SHOREBIRDS
- WADING BIRDS
- WATERFOWL
- FISH
- DOLPHINS
- MUSTELIDS OR RODENTS
- UPLAND/WETLAND PLANTS
- SUBMERGED AQUATIC VEGETATION
- ALLIGATOR
- TURTLES
- OTHER REPTILES/AMPHIBIANS
- BIVALVES
- CRABS
- GASTROPODS
- SHRIMP
- THREATENED/ENDANGERED

POLITICAL BOUNDARIES

- COUNTY BOUNDARY
- MUNICIPAL BOUNDARY

PRIORITY PROTECTION AREAS

- HIGH PRIORITY
- MEDIUM PRIORITY
- LOW PRIORITY
- CAUTION AREA

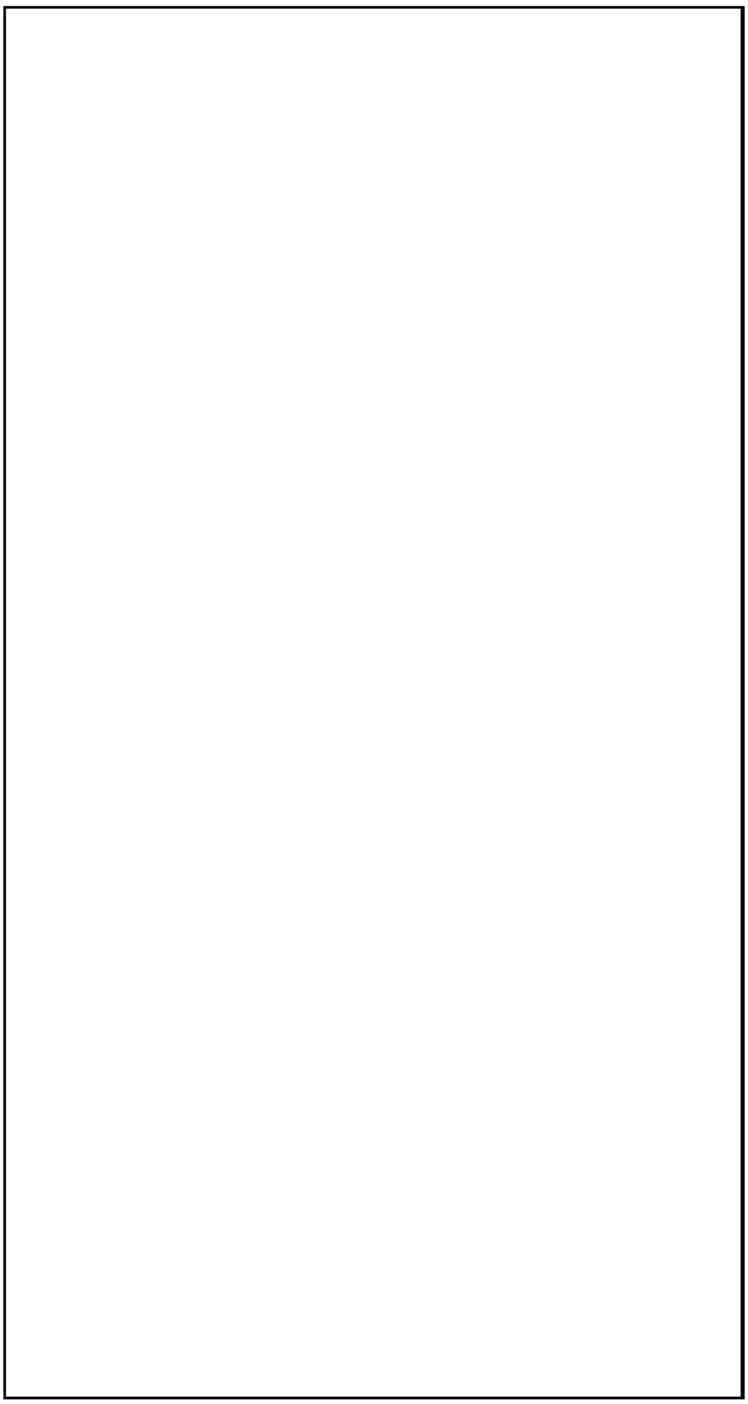
HUMAN USE FEATURES

- AQUACULTURE SITE
- BEACH ACCESS POINT
- BOAT LAUNCH SITE
- COAST GUARD STATION
- HELIPORT
- LIGHTHOUSE
- MARINA
- WATER INTAKE POINT

OTHER LAYERS

- ANCHORAGE AREA
- AUDUBON SANCTUARY
- BIRD ROOKERY AREA
- COASTAL PRESERVE
- MUNICIPAL AREA
- NATIONAL WILDLIFE REFUGE
- PARK - CITY OR COUNTY
- STATE PARK/WILDLIFE MANAGEMENT AREA
- WASHOVER AREA

The following is a legend to be used as a guide in the trajectories.



12 HOURS

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

[redacted]

24 HOURS

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

36 HOURS

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

48 HOURS

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

A.6 ENVIRONMENTALLY SENSITIVE AREAS (Cont'd)

A.6.1 SITE CONDITIONS

The Total Port Arthur Refinery is situated in Port Arthur, Jefferson County, Texas.

- The refinery is located adjacent to the Neches River, a tidally influenced river connected to Sabine Lake.
- The refinery dock is located on the Neches River approximately two miles west of Sabine Lake.
- The West Port Arthur Tank Farm is located in West Port Arthur, approximately eight miles west of the refinery.

The area surrounding the facilities consists of undeveloped marshland and developed industrial areas. The shorelines of the Neches River consists primarily of mud and marshland.

Weather patterns in the area include:

- Typically warm temperatures, high humidity, and prevailing winds from south.
- Wind speeds average 10-11 miles per hour (mph), with winds of 30 mph or greater occurring seldom (about 40 days a year).
- Seasonal rains occur during the winter months, with summer months being characterized by thunderstorms of short duration as a result of infrequent tropical storms.
- Currents in the Neches River increase during periods of higher rainfall due to runoff.

The tidally influenced Neches River and Sabine Lake typically experiences two high tides and two low tides daily. Flow in the Neches River averages 5,500 cubic feet per second (cfs), with a maximum recorded flow of 92,000 cfs. Tidal currents at Port Arthur Canal entrance average 0.9 knot per hour maximum flood tide and 1.3 knots per hour ebb tide.

A.6 ENVIRONMENTALLY SENSITIVE AREAS (Cont'd)

A.6.2 GEOGRAPHIC BOUNDARIES

The location boundaries where oil may be expected to impact during the first day of a spill for the Port Arthur facility, are developed based on:

- NOAA Tidal Current Tables for Sabine Pass.
- The USCG Port Arthur Marine Safety Office Spill Contingency Plan and personal communications with the Texas Water Development Board (Estuary Program) and the NOAA River Forecast Center.
- The prevailing 10-11 mph wind pattern and the tidal influence of the Neches River and Sabine Lake are factors strongly considered in establishing these location boundaries.

A.6.3 TRAJECTORY ANALYSIS GENERAL ASSUMPTIONS

- Oil slicks move with the wind at approximately 3 to 4 percent of the wind velocity.
- When the wind velocity is low or wind is absent, the slick will tend to move with the current at about the same velocity and in the same direction as the current.
- When the wind is blowing, the slick will be affected by both water and wind currents, and the movement of the slick will be a function of both forces.
- When the wind direction is opposite to the current, the wind may reduce or possibly reverse the oil slick velocity at the surface.

A.6.4 TIDES AND CURRENTS

The Refinery Environmental Department receives the **Gulf Coast Fisherman** on a quarterly basis which lists the tide tables and current charts for the area.

A.6.5 SPILL CONTAINMENT AND RECOVERY

After initial response actions have been taken to stop further spillage and required agencies notified, Total Petrochemical will begin spill containment, recovery, and disposal operations in accordance with PAR's 2 volume Tactical Response Guide (i.e., preplanned response action for various pre-determined sites). Volume 1 of the Tactical Response Guide addresses spills to Navigable Waterways (i.e., PAR's Boat Canal, Molasses Bayou, Neches River, Sabine Lake, Intracoastal Waterway, Taylor's Bayou, and Port Arthur Ship Canal). Whereas, Volume 2 addresses spills to land areas that drain to DD-7 (Jefferson County Drainage District No. 7) canals (i.e., Star Lake, A-3 Ditch, Main A, Main B, Main C, North Lateral 1-A, South Lateral 1-A, Atlantic Main, Crane Bayou, El Vista, Main Outfall, and Alligator Bayou).

A.6 ENVIRONMENTALLY SENSITIVE AREAS (Cont'd)

A.6.5 SPILL CONTAINMENT AND RECOVERY (Cont'd)

The Deputy Incident Commander will make an assessment of the size and hazards of the spill. The type of oil plus its location and predicted movement will be considered. This will allow a determination as to which sites in the Tactical Response Guide should be given the highest priority.

Based on this assessment, additional clean-up personnel and equipment will be dispatched to the site and deployed so as to control and contain the spill. Containment booms may be used to surround the spill and contain it. They may also be deployed between the spill and environmentally sensitive areas. Booms may also be used in areas of strong currents to deflect or guide the spill to locations where it can more effectively be cleaned up using skimmers, vacuum trucks, or sorbent materials. Clean-up equipment and material will be initially placed in accordance with the Tactical Response Guide specific site sheets. Be sure to use equipment and material in the most effective manner for rapid and complete cleanup of the spill.

Response and cleanup will continue until all of the recoverable oil or chemical is recovered, the environment is returned to its pre-spill state, and/or the unified command of the Incident Commander, Federal On-Scene Coordinator (FOSC), and State On-Scene Coordinator (SOSC) have determined that further response and cleanup is either no longer necessary or advisable.

Total PAR 's team will interface and regularly communicate with the Federal On-Scene Coordinator (FOSC) and his/her staff. The FOSC will coordinate the clean-up activities to insure that it is being done to his/her satisfaction and that of the various other agencies involved. The following guidelines are based on the type of product involved. The guidelines are as follows:

Guideline 1: Crudes/Distillates (Flash point over 100° F)

These materials are not extremely hazardous and will float on the water. Although evaporation of these products can be significant, **the preferred response is containment and recovery.** Extreme caution should be exercised in order to assure that the area is safe and free of explosive vapors prior to commencement of containment and recovery activities. For crude leaks/discharges, use explosimeter and other air sampling equipment to assure areas are safe to enter for continued response operations.

Guideline 2: Gasoline's/Light Hydrocarbons (Flash point lower than 100° F)

These materials float on the water and are extremely flammable. **Containment of these products may be extremely hazardous** as containment may allow explosive concentrations to form. **The preferred response is to knock down any vapors; then protect shorelines and marshes by diversionary booming and allowing the remaining product to evaporate.** Use explosimeter and other air sampling equipment to assure areas are safe to enter for continued response operations.

A.6 ENVIRONMENTALLY SENSITIVE AREAS (Cont'd)

A.6.5 SPILL CONTAINMENT AND RECOVERY (Cont'd)

Guideline 3: Asphalt

Asphalt's main components are heavier than water. This material will therefore sink, leaving a sheen from its lighter components. **The preferred response is channel the asphalt to shallow water and recover as soon as possible.**

Guideline 4: Land

Start confinement operations immediately to prevent oil from reaching waterways or groundwater. Allow oil to spread out versus pool as pooling provides hard pressure, which causes soil penetration.

Guideline 5 contains site specific booming strategies for the Total Petrochemical Port Arthur Refinery. Clean-up equipment and material will be used in the manner most effective for rapid and complete cleanup of the spill.

Please refer to PAR's 2 volume Tactical Response Guide for specific response actions with regard to these 5 guidelines. Total Petrochemical will utilize all of the personnel and material available locally. If more is required, then it will be brought in from other locations throughout the state and nation if necessary.

Response and cleanup will continue until all of the recoverable oil or chemical is recovered, the environment is returned to its pre-spill state, and/or the unified command of the Incident Commander, Federal On-Scene Coordinator, and Regional Response Team Chairman have determined that further response and cleanup is either no longer necessary or advisable.

A.6.6 GUIDELINES FOR SHORELINE CLEANUP

Guideline 6 summarizes various spill response clean-up techniques for cleanup of the various types of shoreline near the Port Arthur Refinery. Prior to implementing a shoreline response operation, it is suggested that:

- input be obtained from government agencies, and
- the landowner's approval be obtained prior to beginning the clean-up operation.

Note: In sensitive shoreline areas where the clean-up operation will do more damage to the environment than the oil, it may be prudent to take limited or no action. This decision should be based on input from government agencies, the landowner, and the local government which has jurisdiction over the area.

B.1 NOTIFICATION PROCEDURES

B.1.1 INTERNAL NOTIFICATION & ACTIVATION OF SAFER / AREA RAE MONITORING

The following internal notifications should be made for each emergency incident to the extent that the incident demands. In no event shall notification be delayed because the immediate supervisor is inaccessible. Authorization is given to bypass management levels if necessary to provide timely notification to appropriate management.

The first Total Port Arthur Refinery (PAR) individual who discovers a spill will be responsible for initiating response procedures. A flow chart showing the logical steps to be followed by the Incident Management Team is shown in Figure 2.4. Additional details are discussed in Section 2.2. **Refer to Section B.2, which present the various emergency level notifications used by Total Port Arthur Refinery. PAR's pager system is used to notify the appropriate PAR personnel of an emergency level that is being implemented. The various PAR emergency levels are as follows:**

EMERGENCY LEVEL A NOTE: Requires internal refinery personnel only Operational upset or incident that may contribute to a larger event

EMERGENCY LEVEL B NOTE: Requires internal refinery Incident Management Team resources & more refinery personnel as required to respond to an upset or incident

EMERGENCY LEVEL C NOTE: Requires internal refinery Incident Management Team resources & off-duty refinery Incident Management Team personnel as required to stabilize the situation

EMERGENCY LEVEL 1 SHELTER NOTE: Requires outside emergency response resources. The public outside the refinery are being adversely affected. A possibility exists for people outside the refinery to shelter in place

EMERGENCY LEVEL 2 EVACUATION NOTE: Requires outside emergency response resources. Requires evacuation of the public outside of the refinery. Requires evacuation of non-essential refinery personnel

The Shift Supervisor (as acting Deputy Incident Commander) or the Deputy IC can request activation of PAR's SAFER System and / or monitoring within PAR (as well as along PAR's fence line) utilizing the various AREA RAE monitors (located within PAR's Health Services Department).

FIGURE B-1 INTERNAL NOTIFICATIONS

POSITION	JOB TITLE	FIRST NAME	LAST NAME	WORK PHONE	EMERGENCY CONTACT #	ON-CALL ROTATION
Incident Commander	Refinery Mgr	Nigel	Tranter	(409) 963-6858	(409) 963-6800	Y
	Operations Mgr	Jack	Holden	(409) 985-0154	(409) 963-6800	Y
	HSE Mgr	Eric	Miller	(409) 963-6030	(409) 963-6800	Y
	Finc & Bus Mngr	Tom	Henry	(409) 985-0362	(409) 963-6800	Y
	Mechanical Mgr	Keith	Kelly	(409) 985-0477	(409) 963-6800	Y
	Planning & Logistic Mgr	Amber	Skinner	(409) 963-6887	(409) 963-6800	Y
	Tech Manager	Michel	Masson			Y
	T&I Mngr	Bradley	Zeig	(409) 985-0212	(409) 963-6800	Y
Deputy Incident Commander	Environmental Supv	Jeff	Baker	(409) 963-6828	(409) 963-6800	Y
	Area 3 Supt	Roger	Smith	(409) 963-6975	(409) 963-6800	Y
	Area 2 Supt	Frankie	Beasley	(409) 963-6044	(409) 963-6800	Y
	Project Development Supv	Rick	Cary	(409) 963-6839	(409) 963-6800	Y
	Area 1 Supt	Becky	Fussell	(409) 963-8394	(409) 963-6800	Y
	Superintendent IE	Allen	Runte	(409) 985-0394	(409) 963-6800	Y
	Area 5 Superintendant	Steven	Dunigan			
Public Information Officer	HR & Comm Mngr	Wendy	Ashworth		(409) 963-6800	Y
	HR Supervisor			(409) 985-0273	(409) 963-6800	Y
	JIC	Connie	Allison	(409) 963-6819	(409) 963-6800	Y
IC Communications Control Officer	Admin Assistant	Joni	Newton	(409) 963-6040	(409) 963-6800	N
Liaison Officer						
	Env. Engineer	Corbin	Smith	(409) 963-8319	(409) 963-6800	N

	Env. Engineer	Teo	Costin-Rawls	(409) 963-4140	(409) 963-6800	N
	Env. Engineer	Buck	Griffith	(409) 963-6914	(409) 963-6833	N
	Env. Engineer	Mark	Werkheiser	(409) 963-8319	(409) 963-6800	N
Safety Officer	Safety Supv.	Charlie	Kosh	(409) 958-0237	(409) 963-6800	Y
	Health Supv.	Alan	Brown	(409) 985-0227	(409) 963-6800	Y
	Medical Specialist	Marla	Jordan	(409) 985-0333	(409) 963-6800	Y
	Safety Specialist	Aric	Mouton	(409) 985-0234	(409) 963-6800	Y
Fire Chief	Safety Supv.	Charlie	Kosh	(409) 958-0237	(409) 963-6800	Y
	Health Supv.	Alan	Brown	(409) 985-0227	(409) 963-6800	Y
	Safety Specialist	Aric	Mouton	(409) 985-0234	(409) 963-6800	Y
	Security Supv			(409) 963-6956	(409) 963-6800	Y
Medical/Industrial Hygiene	Medical Specialist	Marla	Jordan	(409) 985-0333	(409) 963-6800	N
	Health Supv.	Alan	Brown	(409) 963-6806	(409) 963-6800	N
Operations Section Chief	Mech Eng Supv	Mark	Walker	(409) 963-6923	(409) 963-6800	Y
	Mech. Engineer	Mark	Ramsey	(409) 963-6934	(409) 963-6800	Y
	Rotating Equip Eng	Geoffrey	Kret	(409) 963-6979	(409) 963-6800	Y
	Proj Mngmt Supt	Cliff	Cunningham	(409) 963-4139	(409) 963-6800	Y
	Mech. Engineer	Ryan	Brandenburg	(409) 985-0323	(409) 963-6801	Y
	Rot. Equip. Rel Supv	David	Fontenot	(409) 963-6912	(409) 963-6800	Y
	Maj Maint Plan Sup	Sed	Freeman	(409) 985-0356	(409) 963-6800	Y
Field Operations Branch	Turn Around Coord.	Kevin	Boyd	(409) 985-0213	(409) 963-6800	N
	Mech. Planner	Barry	Blevins	(409) 963-4298	(409) 963-6800	N
	Turn Around Plan.	Danny	Tinkle	(409) 985-0211	(409) 963-6800	N
	Mech Planner	Carl	Boyd	(409) 963-8361	(409) 963-6800	N
	Maint Coord	Keith	Naquin	(409) 963-6873	(409) 963-6800	N
	Mech. Planner	Art	Lewis	(409) 963-8346	(409) 963-6800	N
	Rotating Equ. Plan	Dale	Winters	(409) 963-6049	(409) 963-6800	N
	Instrument Supv.	Poochie	Stevenson	(409) 963-6980	(409) 963-6800	N
	Rotating Equip.	David	DeYoung	(409) 963-6942	(409) 963-6800	N

	Rotating Equip.	David	Burge	(409) 963-6075	(409) 963-6800	N
	Rotating Equip.	Tommy	Sturrock	(409) 963-6868	(409) 963-6800	N
	Maint. Coord	Robert	Rodriquez	(409) 963-6988	(409) 963-6800	N
	Rot. Equip. Plan	Henry	Darder	(409) 963-6021	(409) 963-6800	N
	Electical Supv.	John	Martin	(409) 963-6983	(409) 963-6800	N
	Mach Shop Supv.	Lance	Guidry	(409) 963-8381	(409) 963-6800	N
	Power Dist Supv	Richard	Placette	(409) 963-6889	(409) 963-6800	N
	Mech Plann. Proj.	Tracy	Horn	(409) 963-6965	(409) 963-6800	N
Operations Branch Field Safety	Safety Inspector	Jim	Cormier	(409) 985-0359	(409) 963-6800	N
	Safety Inspector	Andrew	Sigur	(409) 985-0399	(409) 963-6800	N
	Safety Inspector	Tad	Terrell	(409) 985-0395	(409) 963-6800	N
	Safety Inspector			(409) 985-0312	(409) 963-6800	N
	Safety Inspector	Aric	Mouton	(409) 985-0234	(409) 963-6800	N
	Safety Inspector	Art	Langelier	(409) 985-0202	(409) 963-6800	N
	Safety Inspector	Chad	Garlington	(409) 985-0409	(409) 963-6800	N
	Safety Inspector	Steve	Foreman	(409) 985-0408	(409) 963-6800	N
	Safety Inspector	Tommy	Kruft	(409) 985-0311	(409) 963-6800	N
Field Safety / IH Support		Total Safety	Health & Safety			N
Inspection Department (Pipeline Events Only)	Senior Inspector	Brad	O'Neal	(409) 985-0226	(409) 963-6800	N
	Inspection	Lemar	Vincent	(409) 985-0224	(409) 963-6800	N
Pipeline Coordinator	Pipeline Coor.	Mike	Rich	(409) 540-3442	(409) 963-6800	N
	Senior Inspector	Brad	O'Neal	(409) 985-0227	(409) 963-6800	N
	Cust Transf Meas.	Charlie	Mitchell	(409) 963-6015	(409) 963-6800	N
	Proc Supvr OM&S	Gene	Broussard	(409) 963-6017	(409) 963-6800	N
Planning Section Chief	Security Supv			(409) 963-6956	(409) 963-6800	Y
	Compliance Assur Supr			(409) 985-0464	(409) 963-6800	Y
	Compliance Coordin	James	Hawkins	(409) 985-4140	(409) 963-6800	Y

	Consent Decree Env Eng	Jannetta	Bowden-Ned	(409) 963-6972	(409) 963-6800	Y
Disposal Specialist	Env. Engineer	Corbin	Smith	(409) 963-6825	(409) 963-6800	Y
	Env. Engineer	Buck	Griffith	(409) 963-6914	(409) 963-6800	Y
Environmental Unit Leader	Env. Eniineer	Teo	Costin-Rawls	(409) 985-0205	(409) 963-6800	Y
	Env. Engineer	Mark	Werkheiser	(409) 963-8319	(409) 963-6800	Y
	Env. Engineer	Corbin	Smith	(409) 963-6825	(409) 963-6800	Y
	Env. Engineer	Buck	Griffith	(409) 963-6914	(409) 963-6800	Y
Documentation	Eng. Support	Paula	Goody	(409) 963-6959	(409) 963-6800	Y
	HSE Admin Assistant	Erin	Reed	(409) 985-0168	(409) 963-6800	Y
	Cost Analyst	Lisa	Rodriquez	(409) 963-6610	(409) 963-6800	Y
	HR/Training	Connie	Allison	(409) 963-6819	(409) 963-6800	Y
	HSE Admin Assistant	Julie	Salvagio	(409) 963-6931	(409) 963-6800	Y
	Finc Staff Assist	Traci	Edgerly	(409) 985-0363	(409) 963-6800	Y
	Eng. Staff Assist.	Pam	Jones	(409) 963-4159	(409) 963-6800	Y
Resource Unit Leader	Project Engineer	James	Riley	(409) 985-0405	(409) 963-6801	N
	Project Engineer	Bert	Labath	(409) 963-6616	(409) 963-6802	N
Situation Unit Leader	Application Solution Supervisor	Gail	Labath	(409) 985-0364	(409) 963-6803	N
Logistics Section Chief	Mat'l/Purch Supv	Randy	Sonnier	(409) 985-0374	(409) 963-6800	N
	Warehouse Supv	Bobby	Cherry	(409) 963-6813	(409) 963-6800	N
Procurement Unit Leader	Purchasing	Sherry	Majors	(409) 985-0379	(409) 963-6800	N
	Purchasing	Karen	Cawley	(409) 985-0376	(409) 963-6800	N
	Purchasing	Nancy	Dallas	(409) 985-0116	(409) 963-6800	N
Security	Security Supv			(409) 963-6808	(409) 963-6800	N
	Security	Larry	Roush	(409) 963-6608	(409) 963-6800	N
Finance Section Chief / Cost Unit Leader	Cost Accountant	Babette	Oakley	(409) 985-0369	(409) 963-6800	N
	Accts Payable	Pansey	Lamson	(409) 985-0367	(409) 963-6800	N

	Accounting Supv	Mary	Hardy	(409) 985-0366	(409) 963-6800	N
	Cost Accountant	Kayla	Haley	(409) 985-0372	(409) 963-6800	N
Staging Area Manager	Foreign Trade	Rebekah	Foster	(409) 963-6836	(409) 963-6800	Y
	Fac. Dev. Eng.	Donald	Sullivan	(409) 963-0406	(409) 963-6800	Y
	Process Coord.	LO	Ardoin	(409) 963-6034	(409) 963-6800	Y
	Process Coord	Virginia	Jordan	(409) 963-6857	(409) 963-6800	Y
	Cust Transf Meas.	Charlie	Mitchell	(409) 963-6885	(409) 963-6800	Y
	Process Coord	Leslie	Stuart	(409) 963-6916	(409) 963-6800	Y
Communications	Inf. Systems	Jim	Crain	(409) 985-0249	(409) 963-6800	N
	Inf. Syst. Supv	Darin	Cross	(409) 985-0247	(409) 963-6800	N
IT	Inf. Systems	Ryan	Richard	(409) 985-0246	(409) 963-6800	N
Insurance Claims – Houston		Corporate Insurance				N
Legal Officer - Houston		Corporate Legal				N

The Main Gate will contact team members using the MIR 3 system. The Main Gate has a list of all team members cell phones in the event that a team member needs to be contacted.

B.1 NOTIFICATION PROCEDURES (Cont'd)

B.1.2 COMMUNITY NOTIFICATION & MONITORING

A telephone listing of selected residents in the Fairlea Addition and Rainbow Haven will be maintained. In the event community notification is required, the Jefferson County Emergency Alerting System / Southeast Texas Alerting Network (STAN) will be implemented in accordance with the flow chart on the next page. PAR's Health Services Department with help from site monitoring service contactor who will conduct offsite monitoring along PAR's fence line and proceeding away from PAR as needed.

B.1.3 EXTERNAL NOTIFICATION

Refer to Figure B.8 if external notification of federal, state, or local regulatory/governmental agencies is required. PAR's Management Team is committed to providing timely notifications to regulatory agencies in accordance with all regulatory policies. In the event of any incident occurring that requires notification of any agency, the appropriate PAR representative will initiate the notification process. The Port Arthur Refinery response teams are staffed with personnel who are tasked with providing relevant information to the local elected officials. For incidents occurring at the Port Arthur Refinery, these response team members will act in a proactive manner to governmental agencies.

TOTAL PETROCHEMICALS, INC. – HOUSTON NOTIFICATION
When necessary to do so, notification to Houston can be accomplished by calling the emergency number (1-800-322-3462).

EMERGENCY PHONE LIST
Figures 2.2, 2.5 and B.8 consist of the various telephone numbers that will be utilized in the event of an emergency (a spill, release, etc.) for contacting the appropriate federal, state and local agencies / authorities as well as the appropriate response contractors, ambulance service, hospitals, support consultants, and media.

SPILL NOTIFICATION CHECKLIST
Figure 2.1 will be utilized by Total PAR Main Gate personnel if it has been determined that a spill/release event is indeed reportable.

B.1 NOTIFICATION PROCEDURES (Cont'd)

B.1.4 EMERGENCY ALARM SYSTEM

During CY 2002, a new emergency alarm system was put into service. The new alarm system allows an announcement to be made over the refinery's radio communication system, intercom system, intranet system, and pager system. The announcement will include:

- The location of the emergency
- The nature of the emergency
  1. Fire or
  2. Loss of containment
     a. Spill
     b. Release (explosive and/or vapor cloud conditions)
- What actions are to be taken by all personnel

TOTAL PAR

Total Petrochemicals & Refining, Inc.
A subsidiary of TOTAL

To Report an Emergency:
Radio is Preferred . . .

Total PARChannel (b) (7)
(Main Gate)

Or Telephone . . . 2222
(Outside 963-6800)

Report . . .

- **Location of Emergency**
- **Type of Emergency**
- **Name of Person Reporting**
- **Company Affiliation**

Note: In the event, the person discovering the emergency situation does not have access to a plant radio or phone, then contact any Total PAR employee and advise them of the emergency situation. They will then relay the information to the security personnel. The

security personnel will then activate the appropriate emergency alarm. This will include the general alarm, activation of strobe lights (in high noise areas), an announcement over the intercom system, radio system, e-mail messages, and pages.

B.1 NOTIFICATION PROCEDURES (Cont'd)

B.1.4 EMERGENCY ALARM SYSTEM (Cont'd)

General Tones Are: Attack Tone = Fire; Wail Tone = Loss of containment; Chimes Tone = All clear

This tone will be communicated over tower mounted speaker systems strategically located within the facility. The locations of the towers are as follows:

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

In addition, emergency related information will be communicated via the plant radio system. Pre-recorded messages will be broadcast over all radio channels by utilizing the "all call" function. Alarms will also be verbally communicated to personnel in buildings using the intercom speakers The messages will be the same as the one broadcast over the radio system.

The "All Clear" signal will be the chimes alarm on the general alarm system. It will be followed by messages on the radio system and on the intercom system. The Safety Department will give the all clear signal. The Process Shift Supervisor is responsible for giving the "All Clear" in the absence of the Safety Department personnel.

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

The test will alternate from week to week as to whether it will test a fire emergency or loss of containment emergency. The locations of the simulated emergencies will be selected randomly by the Security Personnel performing the test.

The weekly test will include the following:

- An announcement prior to the test
- Activation of the general alarm
- An announcement of the pre-recorded messages of the radio system
- An e-mail announcement to all users that the system was activated.
- Activation of the pager system
- Activation of the All Clear
- An announcement concluding the test

Should the system fail to function properly during the test, the appropriate department shall be notified of the location and type of failure.

B.1 NOTIFICATION PROCEDURES (Cont'd)

B.1.5 COMMUNICATIONS PLAN

LINES OF COMMUNICATION

Provisions for direct working communications between various Incident Management Team members and their related responsibilities are included in ERAP.9.6 and are specific for each job description. The following plan highlights the communication equipment the facility maintains and the protocols to be used.

RADIO COMMUNICATIONS

Channel assignments have been made to facilitate routine, day to day operations, as well as emergency response management. Field communications during an emergency will be via the existing Port Arthur Refinery Communications Network.

(A) Equipment

The existing radio system utilizes "base" units and hand-held portable units, as well as mobile units. All area/functions within the refinery have assigned radio units.

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

The radio system's main base station is located at the Main Gate guard house and is manned twenty-four hours per day. If the Security Post at the Main Gate is relocated, due to an emergency, Security personnel should use portable hand-held radios.

The Port Arthur Refinery Communications Network consists of the following components:

- (b) (7)(F), (b) (3) , with a 20 mile range when communicating with other hand-held portable radios or the base unit.
- Desk top radios located in Central Control, also with a 20 mile range.
- Mobile units located in the emergency vehicle and the fire trucks.
- 800 MHZ portable radios with telephone links: [(1)]Security, [(1)]Fire and Safety. (Mutual Aid Radios)
- VHF 2 watt marine band portable radios located at the dock.
- VHF 35 watt marine base radio with a 10 mile range to ships incoming or outbound from the refinery.

B.1 NOTIFICATION PROCEDURES (Cont'd)

B.1.5 COMMUNICATIONS PLAN (Cont'd)

(B) Channel/Frequency

Total PAR's radio system channel assignments have been made as follows and are applicable for "normal" operating conditions:

Channels	A	B	C
(b) (7)(F), (b) (3)	CRUDE	ELECTRICAL	SAFETY
	RPC	INSTRUMENTS	ENVIRONMENTAL
	EAST END	MACHINISTS	RELIABILITY
	NAC	AREA 1	BASE
	FCCU	AREA 2	TECHNICAL
	PWTC	AREA 3	EMERGENCY 1
	OM&S	AREA 5	EMERGENCY 2
	PROCESS	MECHANICAL	T/A 1
	PLANNING	ANALYZERS	T/A 2
	LOOP CHECK	CONSTRUCTION	T/A 3
	BARGE	INSPECTION	T/A 4
	COMM	STORES	T/A 5
	SULFUR BLOCK	WPATF	T/A 6
	COKER		

(C) Emergency Use

Communications during emergency incidents are vital for conducting effective response operations. The use of TOTAL PAR's emergency radio channels is discussed below.

- In an effort to enhance communications, TOTAL PAR has designated radio channel Emergency 1 (b) (7)(F), (b) (3) as the primary emergency response channel. Channel Emergency 2 (b) (7)(F), (b) (3) is also set aside for use during an emergency.
- No routine communications are to be conducted over Emergency 1 (b) (7)(F), (b) (3)
- In the event of an incident requiring emergency response, all responding TOTAL PAR teams will tune their radios to Emergency 1 channel (b) (7)(F), (b) (3).
- Central Control will monitor Emergency 1 (b) (7)(F), (b) (3) in the Control Room and keep affected, or potentially affected units informed of issues that may affect operations or personnel.

B.1 NOTIFICATION PROCEDURES (Cont'd)

B.1.5 COMMUNICATIONS PLAN (Cont'd)

(C) Emergency Use

- Operations personnel are encouraged to limit non-essential radio communications during emergency response to critical issues.
- The emergency channels will only be used by those directly involved with the emergency.

The base unit located at the Main Gate has the capability for making priority plant wide radio transmissions which will be used for emergency announcements to all refinery radios at one time.

TELEPHONE NETWORK

(A) In-Plant System

The in-plant telephone system is designed so that virtually all areas of the refinery are in communication with each other, as needed.

- The In-Plant Emergency Number Extension is "2222" or "6800". Any incident requiring emergency response should be reported on this extension or via the plant radio.
- Total PAR personnel are encouraged to use the telephone system, rather than the radio, for all "routine" communications.
- The general telephone number for the refinery, which will access the voice automated attendant, is:
  - 409-962-4421
- The Main Gate answers telephone phone calls that do not go through the automated menu system. The Main Gate telephone number is:
  - 409-963-6800

B.1 NOTIFICATION PROCEDURES (Cont'd)

B.1.5 COMMUNICATIONS PLAN (Cont'd)

(B) Telephone Use During Emergency Incidents

It is logical to assume that the volume of calls to the refinery switchboard will increase; therefore, telephone communications with the main gate should be limited.

- Personal calls should not be made until the emergency has terminated.
- Additional personnel will be needed for Emergency Levels 1 and/or 2 and will be provided to the Main Gate to assist with routine duties and relieve the communications load from gate personnel when needed.
- The Security Supervisor will provide telephone assistance during an emergency.
- Should power be lost, the refinery telephone system is backed-up with a battery power source.
- **Family members or other relatives are asked not to call to inquire about employees, but if a call does come into the refinery, and the switchboard is open, the call should be directed to the Human Resources Office until the emergency is over.**
- Under Total PAR's standard procedures, the Main Gate serves as the "hub" of all communications at the refinery. In the event that the Main Gate area is endangered or threatened by an incident, gate personnel will relocate a safe location determined by the Security Supervisor working in conjunction with the IMT and re-establish communications at that point. Secondary telephone and radio equipment will be installed at the determined location for use during emergencies.

PAGER SYSTEM

All members of the Incident Management Team (IMT) are issued pagers or company cell phones to alert them to incidents at the refinery. Weekly schedules are maintained at the main gate which outlines the team members on-call for that week. In the event of an incident requiring activation of the IMT, the pre-programmed list will be activated to alert or recall the IMT.

TOTAL PAR will conduct a notification test each month to verify that the system operates as designed. This test message will be sent to the on-call IMT members who will respond to the page and verify their receipt of the page. Main gate personnel should attempt to place the alert call at 12:30 pm on the first Wednesday of each month and record the response in the Emergency Pager Test Response Form which will be maintained at the main gate.

COMMUNICATIONS FOR OIL SPILL RESPONSE

Radio Channels (b) (7)(F), (b) (3) have been designated as emergency channels and will be utilized in major spill response operations.

Overall oil spill response and planning communications between TOTAL personnel and responsible government agencies in the Federal Regional Response Team (RRT) will occur formally between the TOTAL Incident Commander and the Federal On-Scene Coordinator.

B.2 EMERGENCY LEVELS

There are five (5) overall emergency levels at Total Port Arthur Refinery. These levels are generally categorized into those emergencies affecting only the Refinery (A, B, C) and potentially the public (1, 2).

- Levels A, B, and C are Emergency Levels that can be handled by the Refinery personnel and that do not require outside assistance.
- Levels 1 and 2 involve those Emergency Levels that require outside assistance (i.e., response contractors, mutual aid, local government officials, fire, police, etc., and / or state and federal agencies/officials) and are such a magnitude that they could potentially affect the public.

Each Emergency Level:

- has a descriptive definition.
- lists examples of the possible emergency situations that would take place at that level.
- lists the evacuation considerations for each level.
- lists the notification and/or callout of Total PAR personnel.
- Figure 2.5 illustrates the Southeast Texas Alerting Network (STAN) implementation / notification process, when it becomes necessary, for Levels 1 and/or 2.

B.2.1 EMERGENCY LEVEL A

Definition: An operational upset or incident that may contribute to a larger event, but has not escalated to a point where a general call-out is necessary.

Possible Emergency Situations:

- Recordable injury as defined in the Incident Investigation Policy.
- Potentially catastrophic.
- Minor environmental event. (A minor environmental event is one that is reportable to the regulatory agencies and to the Incident Commander, as defined in the procedures, but would not require any activation of the Incident Management Team.)
- Small fire that can be quickly extinguished. The Shift Supervisor has the option to activate callout.

Evacuation Considerations: **May** require unit evacuation of non-essential personnel.

Total PAR Response:

- Callout is left to the discretion of the on duty PAR Shift Supervisor.
- Notification of affected area Supervisory Personnel and Operations Manager and Incident Management Team / Emergency Response Personnel, as deemed appropriate by the Operations Manager.
- Will require Impact Safety Report to be submitted in accordance with Incident Investigation Policy.

B.2 EMERGENCY LEVELS (Cont'd)

B.2.1 EMERGENCY LEVEL A

Activation Process:

- Shift Supervisor will instruct the Main Gate to notify appropriate personnel in the appropriate affected area(s) by phone or pager.
- If using pager, will:
  - designate a Level A emergency.
  - identify the appropriate affected area (i.e., Area 1, Area 2, and/or Area 3, or any combination).
  - include a brief description of the event.
  - Example pager message could read: Level A1 - NAC Small fire

FIGURE B-2 OPERATIONAL PERSONNEL

OPERATIONAL PERSONNEL IN AREAS 1, 2, 3
APPLICABLE TO CALLOUTS LEVELS A & B ONLY

Position	Name	Contact No.
Area 1 Unit Personnel that would respond:		
Area 1 Superintendent –	Becky Fussell	963-6800
Process Supervisor – NAC	Lynn Meredith	963-6800
Process Supervisor– (Sulfur Block)	TBA	963-6800
Process Supervisor HDPS –	TBA	963-6800
Process Coordinator	Virginia Jordan	749-2767
Area 2 Unit Personnel that would respond:		
Area 2 Superintendent –	Frankie Beasley	963-6800
Process Supervisor – (Crude & Alky)	Jon Fleener	963-6800
FCCU & GHT –	Sam Holt	963-6800
Process Coordinator –	L.O. Ardoin	963-6800
Area 3 Unit Personnel that would respond:		
Area 3 Superintendent -	Ralph Jordan	963-6800
Process Supervisor - (Utility/Waste)	Jack Sekinger	963-6800
Process Supervisor - (OM&S/WPATF/Dock)	Gene Broussard	963-6800
Process Coordinator -	Leslie Stuart	963-6800
Area 5 Unit Personnel that would respond:		
Area 5 Superintendent –	TBA	963-6800
Process Supervisor - DCU	Scott Nunley	963-6800
Process Supervisor– RPC (Sulfur Block)	Mihir Shah	963-6800
Process Supervisor HDPS –	TBA	963-6800
Process Coordinator	Charlie Wells	963-6800

B.2 EMERGENCY LEVELS (Cont'd)

B.2.2 EMERGENCY LEVEL B

Definition: Incidents that can be handled safely by operations personnel and the on-duty Incident Management Team / emergency response personnel with on-site emergency resources.

- There is no activation of external emergency response resources of any type. Total PAR personnel only are activated.
- The On-Scene Deputy Incident Commander or his/her alternate will be notified to assist if the incident escalates.
- Level B differs from Level A in that more Total PAR personnel, i.e. safety, fire, and emergency response resources are generally needed.
- Events may potentially require assembly of Incident Investigation Team within 48 hours to comply with OSHA 1910.119. See Incident Investigation Policy.
- Events of a Level B category would, in all cases, require an Impact Safety report to be submitted in accordance with the Incident Investigation Policy (OSHA 1910.119). See Incident Investigation Policy.

Possible Emergency Situations:

- Major fuel gas loss affecting the refinery.
- Major electrical/steam outage affecting the refinery.
- Pump seal/flange fire where fire brigade is activated.
- Toxic gas leaks, contained within the unit, representing a fire or health hazard (generally affecting an area of less than 200 square feet).
- Significant hydrocarbon leak that requires additional refinery on duty resources to respond (contained within the unit, representing a fire hazard).
- Bomb Threat.

Evacuation Considerations: **May** require unit evacuation of non-essential personnel.

Total PAR Response:

- Total PAR's response will be by area Supervisors, Area Superintendent, Operations Manager, Incident Commander and personnel deemed appropriate by the Incident Commander and/or Operations Manager.

Activation Process:

- Shift Supervisor will instruct the Main Gate to activate the pager system of the personnel in the appropriate affected area(s).
- The pager message will:
  - designate a Level B emergency.
  - identify the appropriate affected area: Area 1, Area 2, and/or Area 3, or any combination.
  - include a brief description of the event.
  - Example pager message could read: Level B1 react to flange fire at NAC.
  - All such individuals who receive the pager message are expected to proceed immediately to the refinery.

B.2 EMERGENCY LEVELS (Cont'd)

B.2.3 EMERGENCY LEVEL C

Definition: Incidents that are significant and substantial enough, such as an operational upset, fire, spill or release of either a liquid or hydrocarbon vapor, that on-duty operations response team personnel, and off-duty personnel are required to stabilize the situation.

Possible Emergency Situations:

- Significant fire that disrupts (or potentially disrupts) operations or one causing substantial damage.
- Significant uncontrolled, uncontained hydrocarbon leak resulting in environmental impact or disruption in operations that may lead to fire. (Tank rupture, line rupture)
- Toxic gas leak affecting an entire unit and/or adjacent personnel.
- Major utility (electric, water, steam, fuel gas) loss that severely affects the refinery.
- Tank fires.
- Any interruption/damage to the Refinery flare system.

Evacuation Considerations: **Will** require unit evacuation of non-essential and/or contract personnel.

Total PAR Response:

- Total PAR response will be by all Incident Management Team / emergency response personnel and supervisory personnel.
- Contractors, mutual aid, or other outside agencies may be placed in a stand-by mode as outside resources.

Activation Process:

- Shift Supervisor or Incident Commander will instruct the Main Gate to activate the pager system of all area operational personnel.
- Shift Clerk should begin the callout list.
- The pager message will:
  - designate a Level C emergency.
  - identify the affected area(s).
  - include a brief description of the event.
  - Example pager message could read: Level C1, NAC reactor fire.
  - All those who receive pages should proceed immediately to the refinery.
  - Gate personnel shall immediately begin callout of all personnel who do not have pagers.

B.2 EMERGENCY LEVELS (Cont'd)

B.2.4 EMERGENCY LEVEL 1 - SHELTER

Definition: Emergency that is significant enough that the people in Total PAR's vulnerable zones are being adversely affected and the possibility exists for a shelter in place evacuation of those individuals. Those people affected will have to take protective measures as a minimum.

STAN Notification: STAN notification at a Level 1 category represents a significant and potentially uncontrolled situation that is affecting the public. At Level 1, the possibility exists that an evacuation may be required., STAN notification is for the purpose of informing the appropriate Emergency Management Coordinator of site emergency and determine what action by the public, if any, should be taken. Notification will be as follows:

- At the instruction of the Incident Commander or Person-In-Charge, a STAN notification will be completed by filling in the appropriate information for the pre-programmed messages and made available to the general public.
- Information will be completed by the On-Duty Guards with information provided by the IMT or shirt supervisor.
- Completed Information will be transmitted to the STAN web-based site.
- STAN site will allow general public to access the issue appropriate programmed messages / information.

Evacuation Considerations: (b) (7)(F), (b) (3) [redacted]

Total PAR's Response:

- Total PAR's response will consist of all available Incident Management Team / emergency response personnel plus outside resources such as mutual aid, fire department, etc., to control and contain the emergency and to begin preparation in the event of escalation to a Level 2 or full-scale evacuation.

Activation Process:

- Shift Supervisor or Incident Commander will instruct the Main Gate to activate the pager system of all personnel, if not already on site, identified in the Level 1 Emergency Notification Process Chart.
- STAN notification should be as instructed by the Incident Commander or as deemed appropriate by the Shift Supervisor.
- The pager message will:
  - designate a Level 1 emergency,
  - identify the affected area(s), and
  - include a brief description of the event.
  - Example pager message could read: Level 1 NAC ALKY reactor fire affecting off-site personnel and other units.

B.2 EMERGENCY LEVELS (Cont'd)

B.2.4 EMERGENCY LEVEL 1 - SHELTER

Possible Emergency Situations:

- Process Unit Fire
- Loading Rack Fire
- Toxic Gas Release that (does) / (does not) represent a fire hazard
- Dock/Ship Fire
- Flammable Non-Toxic Hydrocarbon Release
- Spill on Facility Grounds
- Truck or Railcar Spill
- Spill into Neches River
- Pipeline Rupture
- Tank Overflow or Rupture

LEVEL ONE SHELTER: Communication to the general public to take any actions i.e., shelter-in-place, evacuate must be determined by the area's Emergency Management Coordinator working with site personnel. Refer to STAN procedure.

ALL CLEAR: "The event at the Total Port Arthur Refinery, located at Highway 366 and 32nd Street in Port Arthur, is over. Repeat, the event at the Total Port Arthur Refinery is over."

B.2.5 EMERGENCY LEVEL 2 - EVACUATION

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

[redacted]

B.2 EMERGENCY LEVELS (Cont'd)

B.2.5 EMERGENCY LEVEL 2 - EVACUATION

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

[redacted]

B.3 PERSONNEL ACCOUNTING / EVACUATION PROCEDURE

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

[redacted]

B.3 PERSONNEL ACCOUNTING / EVACUATION PROCEDURE (Cont'd)

B.3.3 DEFINITIONS

DEFINITIONS	
All Clear	Announcement made once a situation is under control and normal activity may resume. The on scene person in charge of the Command Post makes all clear determination.
ICC – Incident Command Center	The Incident Command Center is the location at which primary support activities are performed. Location of the Command Center is in the Jefferson or Beaumont conference rooms of the Main Office. Alternate locations are the Training Trailers or a site determined to be appropriate by the Incident Commander.
Fire Brigade / ERT Members	Employees who have been selected or volunteered and trained to serve as a member of the Port Arthur Refinery Emergency Response Team.
Hot Zone	An area, which immediately surrounds a hazardous materials incident, which extends far enough to prevent adverse effects from hazardous materials releases to personnel outside the zone. This zone will be established though the use of LEL & IH testing and will be recognized by red safety cones.
Incident Commander (IC)	The Incident Commander operates at the strategic level and will be located at the Command Post (CP).
Deputy Incident Commander	The DIC is in charge of the incident and is responsible for strategy and coordination of resources.
Command Post (CP)	A location near the emergency scene from which all emergency control activities are coordinated with the Incident Command Center. The Command Post provides on scene information and requirements related to the incident.
Level "A" Incident	An operational upset or incident that may contribute to a larger event, but has not escalated to a point where a general call-out is necessary.
Level "B" Incident	Emergency Incidents that can be handled safely by operations personnel and on-duty Incident Management Team / emergency response personnel with on-site emergency resources
Level "C" Incident	Incidents that are significant and substantial enough, such as an operational upset, fire, spill or release of either a liquid or hydrocarbon vapor, that on-duty operations response team personnel, and off-duty personnel are required to stabilize the situation.
Level "D" Incident	Emergency that is significant enough that the people in TOTAL PAR in vulnerable zones are being adversely affected and the possibility exists for a shelter in place evacuation of those individuals. Those people affected will have to take protective measures at a minimum.
Level "E" Incident	Emergency that requires the evacuation of the public and non-essential Refinery personnel.

FIGURE B-4 PERSONNEL HEAD COUNT FORM

B.3.4 PERSONNEL ACCOUNTABILITY

See Safety Procedures Sec. IV Security Practices and Procedures - #8 Personnel Accountability.

FIGURE B-6 TOTAL PETROCHEMICALS USA, INC. INITIAL CORPORATE NOTIFICATION REPORT

DRILL? (CHECK ONE) ☐ **YES** ☐ **NO**

EMERGENCY MANAGEMENT SYSTEM
Initial Notification Report
800-322-TOTAL PETROCHEMICALS

Contact Information on Notification

Called Received By: _____ Time: _____ (AM/PM) Date _____

Called Information

Name: _____ Title _____

Organization: _____ Location: _____

Primary Phone # (_____) _____ - _____ Secondary Phone # (_____) _____ _____

Location of Facility/Incident

Date and Time of Incident

Date: _____ Time _____ (AM/PM)

(X) Type of Facility Involved		(X) Emergency Type	(X) Community Impact
( ) Barge	( ) Ship	( ) Accident	( ) Evacuation
( ) C-Store	( ) Tank Truck	( ) Fire/Explosion	( ) Known//Poss ble Casualties
( ) Pipeline	( ) Terminal	( ) Release or Spill	( ) Impacted Waterways
( ) Rail Car	( ) E&P Lease	( ) Vapor Cloud Releases	( ) Utility outages
( ) Refinery	( ) Chemical Plant	( ) Well Control	( ) Damage
( ) Remediation Sites	( ) Other	( ) Emergency Shutdowns	( ) Unknown
		( ) Other_____	( ) None

(X) Site Casualties (Known/Possible)		(X) Current Status	(X) Material Released	
( ) Fatality	( ) Missing	( ) All Clear	( ) Gasoline	( ) Plastic
( ) Hospitalized	( ) Unknown	( ) Out of Control	( ) Oil	( ) Natural Gas
( ) Injury/Illness	( ) None	( ) Under Control	( ) Chemical	( ) Other____
		( ) Unknown	( ) Quantity	

(X) Public Emergency Response Groups and Outside Officials & Agencies Notification

( ) Ambulance	( ) Hazmat/OSRO	( ) Local	( ) DOT	( ) TNRCC
( ) Fire	( ) Police	( ) Media	( ) EPA	( ) RRC)
( ) Other_____	( ) None	( ) State	( ) OSHA	( ) NRC
_____		( ) Other_____	( ) USCG	
_____		_____	( ) None	

(X) Resources Requested/Required

( ) Away Team	( ) Legal	( ) Security
( ) Environmental	( ) Purchasing	( ) Spill Control
( ) Human Resources	( ) Medical	( ) Toxicology
( ) Industrial Hygiene	( ) Public Affairs	( ) Transportation
( ) Insurance Claims	( ) Safety	( ) Other_____
( ) Fire	( ) Communications	( ) None)

Additional Information _____

( ) Security requested Material Safety Data Sheets to be faxed to (214) 750-2340
( ) Initial Pager Notification Sent Date_____/_____/_____ Time_____:_____ am/pm
Reviewed By:_____ Date_____/_____/_____
Time_____:_____ am/pm

FIGURE B-7 EVACUATION DIAGRAM

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

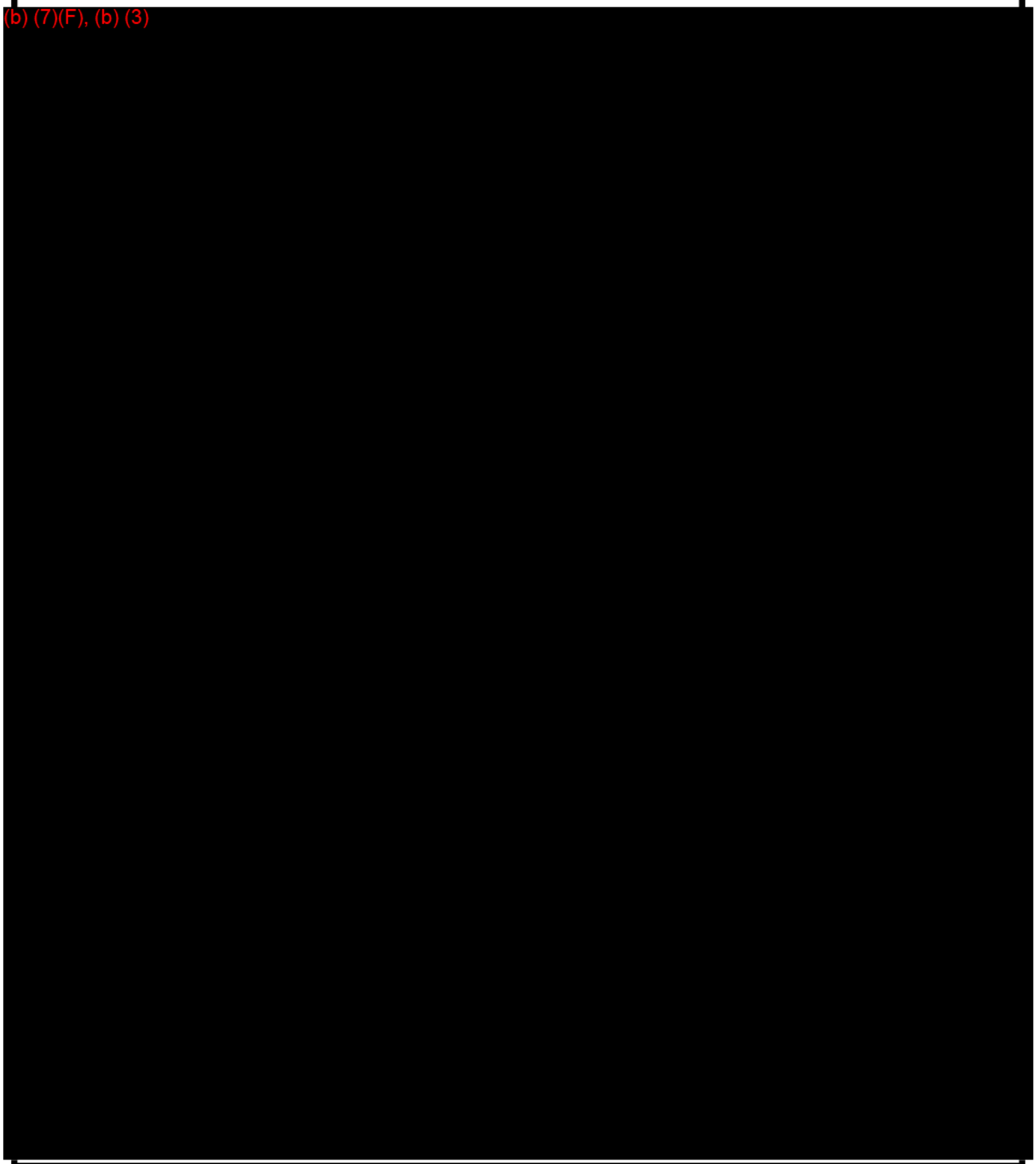


FIGURE B-8 AGENCY NOTIFICATIONS

NATIONAL RESPONSE CENTER

NRC

24 Hour Phone	800-424-8802

The NRC is the **sole** federal point of contact for reporting oil and chemical spills which enter or threaten to enter the navigable waters of the United States. If you have a spill to report, contact the NRC via the toll-free number or visit the NRC Web Site (http://www.nrc.uscg.mil) for additional information on reporting requirements and procedures. For those without 800 access, please contact the NRC at 202-267-2675.

INCIDENT REPORTING CRITERIA FOR FEDERAL DEPARTMENT OF TRANSPORTATION – Report to NRC above

An event that involves a release of gas from a pipeline or of liquefied natural gas or gas from an LNG facility and

1. A death, or personal injury necessitating in-patient hospitalization; or
2. Estimated property damage, including cost of gas lost, of the operator or others, or both, of $50,000 or more.
3. An event that results in an emergency shutdown of an LNG facility.
4. An event that is significant, in the judgment of the operator, even though if did not meet the previous criteria.

ENVIRONMENTAL PROTECTION AGENCY

EPA Region 6

EPA 24 Hour Reporting Hotline / NRC	866-372-7745
Type & Magnitude of Incident	Crude oil spill (As regulated by SPCC Plan) or Two crude oil spills, within one year, in the water (sheen or greater)

The Environmental Protection Agency must be notified of the following:

1. Any unanticipated bypass exceeding effluent limitation by permit.
2. Any upset condition, which exceeds any effluent limitation in permit.
3. Violation of maximum daily discharge limitation or daily minimum toxicity limitation.
4. Chemical spills of a reportable quantity.

Oral notification is required within 24 hours of the incident.

FIGURE B-8 AGENCY NOTIFICATIONS (Cont'd)

DEPARTMENT OF TRANSPORTATION – PIPELINE AND HAZARDOUS MATERIALS SAFETY ADMINISTRATION

DOT - PHMSA

Department of Transportation – Pipeline and Hazardous Materials Safety Administration (DOT-PHSMA)	202-366-4433

In addition to the reporting of accidents to the NRC, a written accident report (PHMSA Form 7000-1, provided in Annex H must be submitted for releases resulting in any of the following:

1. Explosion or fire not intentionally set by the operator.
2. Release of five gallons or more of hazardous liquid or carbon dioxide, except that no report is required for a release of less than five barrels resulting from a pipeline maintenance activity if the release is:
   a. not one described under the NRC's reporting conditions.
   b. confined to company property or pipeline right-of-way; and
   c. cleaned up promptly.
3. Death of any person.
4. Personal injury necessitating hospitalization.
5. Estimated property damage, including cost of cleanup and recovery, value of lost product, and damage to the property of the operator or others, or both, exceeding $50,000.

OCCUPATIONAL SAFETY & HEALTH ADMINISTRATION

OSHA

Occupational Safety & Health Administration (OSHA)	800-321-6742

Basic requirement. Within eight (8) hours after the death of any employee from a work-related incident or the in-patient hospitalization of three or more employees as a result of a work-related incident, you must orally report the fatality/multiple hospitalization by telephone or in person.

FIGURE B-8 AGENCY NOTIFICATIONS (Cont'd)

TEXAS EMERGENCY RESPONSE CENTER

TERC

Texas Emergency Response Center (TERC) *(Part of Texas Commission on Environmental Quality (TCEQ)*	**512-463-7727**

Immediately report all spills of petroleum products into waters of the state and discharges onto land that meet or exceed 210 gallons (25 gallons for Non-PST exempt facilities) or exceed a RQ.

TEXAS RAILROAD COMMISSION

TRRC

Texas Railroad Commission (TRRC)	**713-869-9621** **512-463-6788 (24 Hr. Emergency)**

Immediately report to District Office in the case of a fire, leak, spill or break causing a loss of over 210 gallons. For pipeline incidents reportable to the NRC, notify the TRRC Pipeline Safety Section.

TEXAS GENERAL LAND OFFICE

TGLO

Texas General Land Office (TGLO)	**512-475-1575** **800-832-8224 (Alternate)**

Report any unauthorized discharge or threat of discharge into the coastal environment within at least one (1) hour of discovery.

FIGURE B-9– OSRO CLASSIFICATIONS

USCG CLASSIFIED OIL SPILL RESPONSE ORGANIZATION (OSRO)							
OSRO Name	Response Time	Environment Type	Facility Classification Level				High Volume Port
			MM	W1	W2	W3	
Miller Environmental Services, Inc.	1 Hour	River/Canal				X	Yes
		Inland				X	
		Open Ocean					
		Offshore					
		Nearshore				X	
Oil Mop , LLC	2 Hours	River/Canal	X	X	X	X	Yes
		Inland	X	X	X	X	
		Open Ocean					
		Offshore					
		Nearshore					
Clean Harbors Environmental Services, Inc.	2 Hours	River/Canal	X		X	X	Yes
		Inland	X			X	
		Open Ocean					
		Offshore					
		Nearshore					
Garner Environmental Services	2 Hours	River/Canal	X	X	X	X	Yes
		Inland	X	X	X	X	
		Open Ocean			X	X	
		Offshore			X	X	
		Nearshore			X	X	

Additional Response Equipment:

OSRL/EARL (Oil Spill Response Limited./ East Asia Response Limited) with bases in Southampton (UK) and Singapore is a cooperative from which marine pollution response equipment can be sent out and deployed on our site when additional resources are necessary. TOTAL is a member of OSRL-EARL.

In case of need, OSRL-EARL is mobilized in 2 steps:

1- Notification Phase (Pre-Alert): Anybody from TOTAL may activate OSRL-EARL in Pre-Alert mode with help of the document "Notification Form". The document "Notification Form" should be used.
2- Mobilization Phase: Only a nominated CALL OUT Authority recognized by OSRL-EARL has the authority to activate the mobilization. The document "Mobilization Authorization Form" should then be used.

FIGURE B-10 OSRO CONTRACTS

(a) Miller Environmental Service, Inc.

(b) Oil Mop, LLC

(c) Clean Harbors

(d) Garner Environmental Services

FIGURE B-10(a) MILLER ENVIRONMENTAL SERVICES

TOTAL PETROCHEMICALS USA, INC.

Contract Number: 6600003514 **Date: June 15, 2010**

Multi-State Blanket Contract for Contractor Services

This Contract is made, entered into, and effective as of the 15th day of June 2010 (Effective Date), by and between TOTAL PETROCHEMICALS USA, INC., acting individually and as agent for its subsidiaries (collectively TOTAL) and Miller Environmental Services, Inc. (Company), whose address is P.O. Box 5233, Corpus Christi, Texas 78465.

1. WORK: Company shall perform the work (Work) as outlined in the bid specifications, other bid documents, and Company's proposal, if agreed to and applicable (collectively Documentation), and pursuant to a TOTAL purchase order issued for each project. Such Documentation shall be incorporated as Exhibit A to this Contract as if fully set forth and attached hereto. Such Work shall be performed on property owned or controlled by TOTAL or as otherwise directed by TOTAL (Work Site) or if applicable, certain consulting Work may be performed on Company's facilities.

2. TIME SCHEDULE: Company agrees to commence the Work promptly upon TOTAL's acceptance of Company's proposal and to proceed with the Work as rapidly as may be consistent with good work practices. Company shall complete the Work in the manner herein provided as expeditiously as possible. In addition, if applicable, Company will adhere to any time deadlines in the job schedule, purchase order, or Documentation, unless such time shall be extended by Force Majeure or mutual written agreement.

3. REPRESENTATIVES: For TOTAL: Don Miller, Maintenance Manager
For Company: Clint Mikulencak, Beaumont Branch Manager

4. PRICE AND TERMS OF PAYMENT: For full and satisfactory performance of all the Work, TOTAL shall pay Company, subject to changes in the scope of Work, either on a fixed price basis, time and materials basis or on a cost plus basis as set forth in Company's proposal and TOTAL's purchase order. If on a time and materials or cost plus basis, Company shall provide TOTAL, if requested, supporting documentation for Company's costs and expenses. Company's proposal must price labor and material separately. Company's invoice should include an itemized list of materials.

Company shall bill TOTAL bi-monthly and TOTAL shall pay such invoice within sixty (60) days after receipt of the invoice, reference Exhibit X-4 Invoicing Standards. In the event that TOTAL, acting in good faith, disputes any invoiced amount, TOTAL shall timely pay the undisputed amount. Upon resolution of any such dispute by the parties, any previously unpaid amount agreed by TOTAL to be owed to Company will be promptly paid by TOTAL. Company must submit all invoices within one hundred twenty (120) days following completion of the Work covered thereby and thereafter TOTAL shall have no

FIGURE B-10(b) OIL MOP, LLC

TOTAL PETROCHEMICALS USA, INC.

Contract Number: PAC 6600001918 **Date: June 13, 2006**

Blanket Contract For Contractor Services

This Contract is made, entered into, and effective as of the 13th day of June 2006, (Effective Date) by and between TOTAL PETROCHEMICALS USA, INC. (TOTAL) and Oil Mop, LLC (Company), whose address is 145 Keating Drive, Belle Chasse, LA 70037.

1. WORK: Company shall perform the work (Work) as outlined in the bid specifications, other bid documents, and Company's proposal, if agreed to and applicable (collectively Documentation), and pursuant to a TOTAL purchase order issued for each project. Such Documentation shall be incorporated as Exhibit A to this Contract as if fully set forth and attached hereto. Such Work shall be performed on property owned or controlled by TOTAL or as otherwise directed by TOTAL (Work Site) or if applicable, certain consulting Work may be performed on Company's facilities.

2. TIME SCHEDULE: Company agrees to commence the Work promptly upon TOTAL's acceptance of Company's proposal and to proceed with the Work as rapidly as may be consistent with good work practices. Company shall complete the Work in the manner herein provided as expeditiously as possible. In addition, if applicable, Company will adhere to any time deadlines in the job schedule, purchase order, or Documentation, unless such time shall be extended by Force Majeure or mutual written agreement.

3. REPRESENTATIVES: For TOTAL: Robert Fischer, Environmental Supervisor
For Company: Joe Christiana

4. PRICE AND TERMS OF PAYMENT: For full and satisfactory performance of all the Work, TOTAL shall pay Company, subject to changes in the scope of Work, either on a fixed price basis, time and materials basis or on a cost plus basis as set forth in Company's proposal and TOTAL's purchase order. If on a time and materials or cost plus basis, Company shall provide TOTAL, if requested, supporting documentation for Company's costs and expenses. Company's proposal must price labor and material separately. Company's invoice should include a more detailed listing of materials.

Company shall bill TOTAL monthly and TOTAL shall pay invoice within forty-five (45) days after receipt of invoice. In the event that TOTAL, acting in good faith, disputes any invoiced amount, TOTAL shall timely pay the undisputed amount. Upon resolution of any such dispute by the parties, any previously unpaid amount agreed by TOTAL to be owed to Company will be promptly paid by TOTAL.

5. INSPECTION OF SITE: Company represents that for each project under each purchase order hereunder it has examined the Work Site and is acquainted with all conditions relevant to the Work, the Work Site and its surroundings, and assumes the risk of variances between actual conditions relevant to the Work and the same as shown or represented in this Contract and Exhibits.

FIGURE B-10(c) CLEAN HARBORS EVIRONMENTAL SERVICES

TOTAL PETROCHEMICALS
TOTAL PETROCHEMICALS USA, INC.

PURCHASE ORDER

To:
CLEAN HARBORS ENVIRONMENTAL
SERVICES INC
2202 GENOA RED BLUFF
HOUSTON TX 77034
Telephone: 281-478-7700
Your fax: 281-478-7701
Your Vendor Number with us: 80113232

Invoice To:
TOTAL PETROCHEMICALS USA, INC.
P.O. Box 849
Port Arthur, TX 77641-0849
ATTN: Accounts Payable

Purchase order no : PAC 6500214202 *P.O.Date:* 08/07/2006
(to be included on all documents).
PO Revision Number:
Terms of delivery: FOB TOTAL PETROCHEM PAR PPD&ADD
Terms of payment: 5 days from shipment date
Delivery date : 08/10/2006
Please deliver to:
Buyer
TOTAL PETROCHEMICALS USA, INC.
[PA] - Port Arthur Refinery
Hwy 366 and 32nd Street
PORT ARTHUR TX 77640

Authorized By: PAR Contract Grp
Lisa Smith, Associate Buyer 409-963-6833
Delbert Arendale, Mtls & Svcs Supv 409-963-6810
Purchasing/Contract Fax: 409-963-6977

Requester: Robert Fischer, Environmental Supervisor

All work under this contract shall be performed under and subject to all terms and conditions of Standby Emergency Response Agreement between TOTAL PETROCHEMICALS USA, INC. (TOTAL) and COMPANY, and in accordance with the attached exhibits:

Exhibit A: Clean Harbors Environmental Services, Inc. Standby Emergency Response Agreement dated 8-10-2006
Exhibit B: Schedule of Emergency Response Labor, Equipment and Material Rates dated 6-23-2006
Exhibit C: Clean Harbors Emergency Response Locations Revised 6-14-2006
Exhibit D: Annual Fee Schedule Agreement Effective 8-10-2006

If expressly stated in this Purchase Order that this Purchase Order is given pursuant to another written contract between Seller and Buyer, the terms and conditions of that contract shall apply to this Purchase Order. Otherwise TOTAL PETROCHEMICALS USA, INC.'s Standard Purchase Order Terms and Conditions, Revised 2-17-04, sent to Seller on or around 12/02/2005 for purchase order number 6500173453 are incorporated herein and govern this transaction and Seller's performance under this Purchase Order constitutes Seller's agreement to these terms and conditions.

TOTAL PETROCHEMICALS USA, INC.'s RECEIVING HOURS:
TOTAL PETROCHEMICALS USA, INC. PO's/Warehouse Receiving: The Port Arthur Refinery's regular receiving hours are between 7:30AM to 11:45AM

FIGURE B-10(c) CLEAN HARBORS EVIRONMENTAL SERVICES (CONT'D)

covering such inventions and discoveries and any copyrights in such works which are conceived and/or made by officers, directors, employees, representatives and agents of Contractor (1) during the course of, in connection with, or as result of or incident to Contractor performing Services for Customer, and (2) as a result of confidential information obtained from Customer, shall be the sole and exclusive property of Customer to use in whatever way Customer may choose and without accounting to Contractor, and that Contractor will upon request of Customer promptly execute any and all applications, assignments and other instruments that Customer shall deem necessary and useful in order to apply for and obtain Letters Patent and/or copyright registration in the United States and all foreign countries for such inventions, discoveries, and works and in order to assign and convey to Customer the sole, exclusive right, title and interest in and to said works, inventions and patent applications and patents thereof. Customer shall bear the cost of preparation, filing, prosecution and maintenance of all such copyright registration and/or patent applications, and patents in the United States and foreign countries. For purposes of this clause, "Customer" shall include all subsidiaries and affiliates of Customer and all such works, inventions and discoveries shall be treated by Contractor as Customer confidential information under this Contract.

It is further understood and agreed that Contractor hereby grants Customer an irrevocable, paid up, non-exclusive worldwide license to (i) use for itself and others materials, products and/or services supplied by Contractor or its agent or representative under any and all past, present or future patent rights owned, controlled or licensed to Contractor, (ii) display, use, reproduce, distribute, and prepare derivative works based in whole or in part on copyrightable works in any medium supplied by Contractor under any and all past, present and future copyrights owned, controlled by or licensed to Contractor that protect such works, and (iii) disclose and use any and all information, designs, documents or tangible materials supplied by Contractor.

IN WITNESS WHEREOF, the parties have caused this Agreement to be executed by their duly authorized representatives as of the day and year first above written.

CUSTOMER	CLEAN HARBORS ENVIRONMENTAL SERVICES, INC.
TOTAL PETROCHEMICALS USA, INC.	
Signature: Lisa Smith	Signature: Will F Connors
By: Lisa Smith PRINT NAME	By: William F. Connors PRINT NAME
Title: Buyer	Title: Vice President

FIGURE B-10(d) GARNER ENVIRONMENTAL SERVICES

TOTAL PETROCHEMICALS

AMENDMENT
TO
Blanket Contract
CAS-1188-02

This "SECOND AMENDMENT" to BLANKET CONTRACT CAS-1188-02 (The "SECOND AMENDMENT"), shall serve to amend the Original Blanket Contract, (the "Original Contract"), dated 6/15/2004, between Atofina Petrochemicals , Inc. now TOTAL PETROCHEMICALS USA, INC. (the "Buyer"), and Garner Environmental Services, Inc. (the "Contractor"), as follows:

TERM – The term of the Original Contract is hereby extended through June 15, 2007

2. **PRICE** – The Attached Exhibit "A" – Amendment 2 will serve as the service rates effective June 15, 2006.

3. **ENTIRE AGREEMENT** – The changes as detailed herein represent the entire amendment to the Blanket Contract as agreed to by both Buyer and Seller. Except as modified and amended herein, the remaining terms and conditions of the Blanket Contract shall remain in full force and effect.

4. **EFFECTIVE DATE** – This "SECOND AMENDMENT" shall become effective on June 15, 2006, when executed below by both parties.

AGREED and ACCEPTED:

Garner Environmental Services, Inc.
INC.

By: Otis Chambers Jr

Title: Executive Vice President

Date: 6/6/2006

TOTAL PETROCHEMICALS USA,

By: The Vu
The Vu

Title: Senior Buyer

Date: 6/1/2006

TOTAL PETROCHEMICALS USA, INC.
1201 Louisiana St., Ste 1800 - Houston, TX 77002
P.O. Box 674411 - Houston, TX 77267-4411
www.totalpetrochemicalsusa.com

C.1 IMT ORGANIZATION/COMMAND STRUCTURE

The command aspects / team organization adopted for Total Port Arthur Refinery is a modified version of the National Interagency Incident Management System (NIIMS) Incident Command System. PAR's Qualified Individuals also serve as Incident Commanders (IC) and Deputy IC.

- The organization of the Port Arthur Refinery Incident Management Team is modular, depending on the size and scope of the incident. Response team positions will be filled by personnel from the Port Arthur Refinery on an as-needed basis depending on the circumstances of the spill situation.

- The maximum staffing level needed to cover all task assignments that might be required to respond to an incident are shown in the Incident Management Team organizational chart and the Incident Management Team roster **(Refer to Figure 2.5).**

- It is the responsibility of the primary designee for each job position to notify the alternate in the event that he/she is unavailable.

During the course of an emergency response, a number of tasks and problems will be identified that will require full support from any number of company response personnel. Any and all of the various Incident Management Team members are available to assist in accomplishing these tasks.

In some instances, the sequence of emergency procedures and the personnel responsible for the response actions may vary, based on when the emergency occurs, the number of people on duty, and various other circumstances. Good judgment must be exercised at the time of the emergency to decide if the appropriate personnel are available for the actual conditions of the emergency. Close communication and coordination is critical between the emergency response personnel to initiate the appropriate actions needed to mitigate the damage potential of the emergency incident.

The Incident Command Team will meet in one of the following designated areas, utilizing adjacent available conference rooms for the PIO and staff to handle media relations:

- Beaumont Conference Room/Jefferson Conference Room
- Large Training Trailer/Small Training Trailer
- Emergency Response Trailer/ TBD based on location of the trailer

C.2 CRISIS MANAGEMENT TEAM

The purpose of this Crisis Management Team will be to provide support and to respond to oil and hazardous substance spills (as well as other emergencies) which are beyond the response capability of the Port Arthur Refinery Incident Management Team. (Refer to Figure 2.5, Crisis Management Team (CMT) Organization Chart)

C.3 INCIDENT MANAGEMENT TEAM RESPONSIBILITIES

The various team positions are described along with their respective responsibilities checklists below. The Deputy Incident Commander with the various support sections (i.e., Safety, Liaison, Operations, Planning, Logistics, Security) will be set up in a separate location within the Command Post / Emergency Operations Center. Finance and Purchasing could be set up in the Command Post or operate from the Business and Finance office.

Refer to the Total PAR Incident Management Handbook (IMH) for further information on the responsibilities of IMT personnel. The IMH is maintained on the Total Petrochemical Houston Corporate intranet website (NIC).

TOTAL PETROCHEMICAL PIPELINE EMERGENCIES

Refer to Figure 2.3 for a list of the PAR contacts in the event of an emergency involving our crude, condensate or finished product pipelines.

C.3 INCIDENT MANAGEMENT TEAM RESPONSIBILITIES (Cont'd)

QI RESPONSIBILITIES
(Incident Commander / Deputy IC)

1. Act as point of contact between federal government and the owner of the facility (i.e., Total Petrochemical &Refining USA, Inc.).

2. The QI is also referred to as the Emergency Response Coordinator by EPA and within EPA regulations.

3. Per the OPA-90 (Oil Pollution Act of 1990) regulations, the QI is that person having "full authority to implement removal actions on behalf of the plan holder (i.e., Total Petrochemical). Per OPA-90, within 1 hour of discovery, the spill must be contained and within 2 hours of discovery, recovery of the spill must commence.

4. The QI must have the authority to commit financial resources of Total Petrochemical & Refining USA, Inc.to prevent a spill or else clean up a spill.

5. One of the primary responsibilities of the QI is, upon learning of a spill of an oil or hazardous substance, to immediately communicate with the appropriate federal, state and local officials as well as Total PAR's Oil Spill Removal Organizations (OSROs) / Discharge Cleanup Organizations (DCOs).

6. This communication procedure must ensure timely notification of federal officials so that they may activate the Area Contingency Plan, activate governmental response resources when necessary, and ensure adequate measures are taken by the responsible party (RP, i.e., Total Petrochemical & Refining USA, Inc.).

7. The QI must ensure that available response resources (i.e., Total PAR Incident Management Team, OSROs, & DCOs) will commence with appropriate response actions in a timely manner.

8. The QI must ensure adequate steps are taken to mitigate the situation and should know the capabilities of any OSRO that is contracted to respond on behalf of Total PAR.

9. The QI should be thoroughly familiar with the procedures to activate and contract with Total PAR's OSROs.

10. Finally, the QI is not expected to be a technical expert in clean-up technology, but must be familiar enough with Total PAR's response Plan (i.e., Integrated Contingency Plan) to know what measures must be taken under the given circumstances.

C.3.1 COMMAND STAFF RESPONSIBILITIES

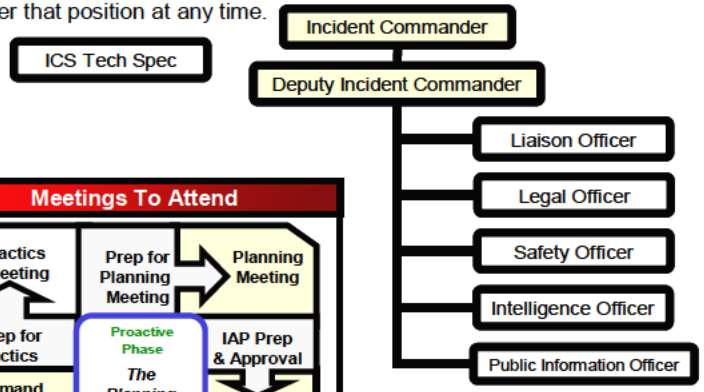
Incident Commander - IC & Deputy IC

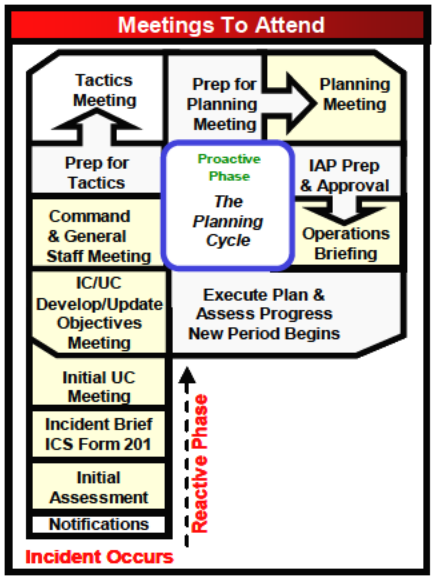
Revised Jan 2006

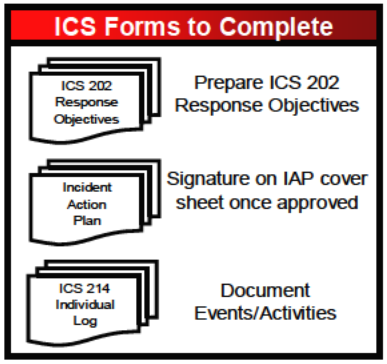
The Response Group

Responsibilities

The IC(s) responsibility is the overall management of the incident. On most incidents, the command activity is carried out by a single IC. The IC is selected by qualifications and experience. The IC may have a deputy, who may be from the same agency, or from an assisting agency. Deputies may also be used at section and branch levels of the ICS organization. Deputies must have the same qualifications as the person for whom they work, as they must be ready to take over that position at any time.







Checklist

	Review Common Responsibilities
	Obtain a briefing from the prior IC (201 Briefing)
	Determine Incident Objectives & general direction for managing the incident.
	Establish the immediate priorities.
	Establish an ICP.
	Brief Command Staff and General Staff.
	Establish an appropriate organization.
	Ensure planning meetings are scheduled as required.
	Approve and authorize the implementation of an IAP.
	Ensure that adequate safety measures are in place.
	Coordinate activity for all Command and General Staff.
	Coordinate with key people and officials.
	Approve requests for additional resources or for the release of resources.
	Keep agency administrator informed of incident status.
	Approve the use of trainees, volunteers, and auxiliary personnel.
	Authorize release of information to the news media.
	Ensure ICS 209 is completed and forwarded to appropriate higher authority.
	Order the demobilization of the incident when appropriate.

C.3.1 COMMAND STAFF RESPONSIBILITIES (Cont'd)

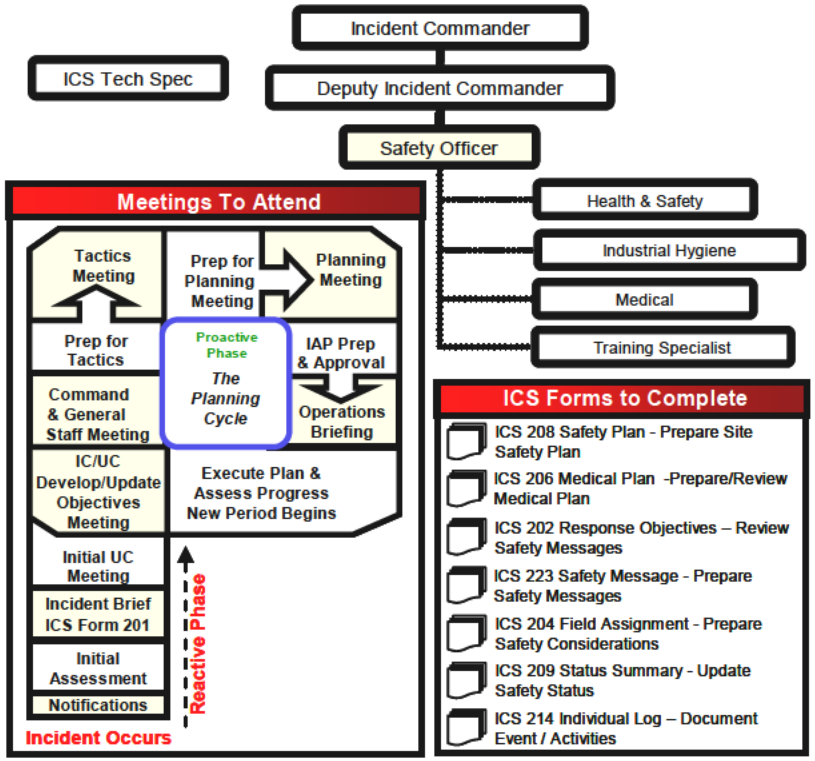
Safety Officer - SOFR

Revised Jan 2006

The Response Group

Responsibilities

The SOFR function is to develop and recommend measures for assuring personnel safety, and to assess and/or anticipate hazardous and unsafe situations. Only one primary SOFR will be assigned for each incident. The SOFR may have specialists, as necessary, and the assistants may also represent assisting agencies or jurisdictions. Safety assistants may have specific responsibilities, such as air operations, hazardous materials, etc.



Checklist

	Review Common Responsibilities
	Participate in tactics and planning meetings, and other meetings and briefings as required.
	Identify hazardous situations associated with the incident.
	Review the IAP for safety implications.
	Provide safety advice in the IAP for assigned responders.
	Exercise emergency authority to stop and prevent unsafe acts.
	Investigate accidents that have occurred within the incident area.
	Assign assistants, as needed.
	Review and approve the medical plan (ICS Form 206).
	Develop the Site Safety Plan and publish Site Safety Plan summary (ICS Form 208) as required.

C.3.1 COMMAND STAFF RESPONSIBILITIES (Cont'd)

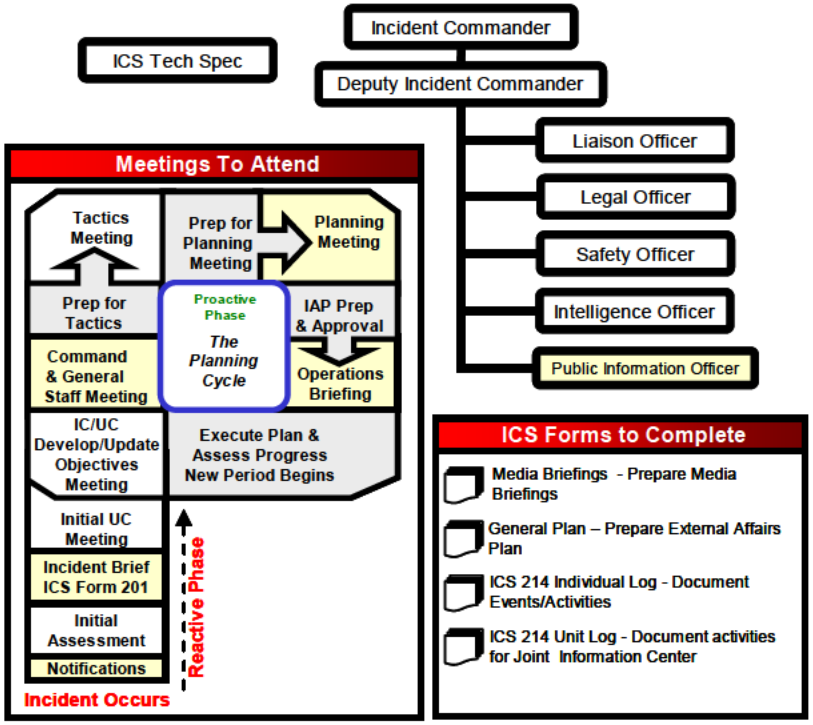
Public Information Officer - PIO

Revised Jan 2006

The Response Group

Responsibilities

The Public Information Officer (PIO) is responsible for developing and releasing information about the incident to the news media, to incident personnel, and to other appropriate agencies and organizations. Only one primary PIO will be assigned for each incident, including incidents operating under UC and multi-jurisdiction incidents. The PIO may have assistants as necessary, and the assistants may also represent assisting agencies or jurisdictions. Agencies have different policies and procedures relative to the handling of public information.



ICS Forms to Complete

- Media Briefings - Prepare Media Briefings
- General Plan – Prepare External Affairs Plan
- ICS 214 Individual Log - Document Events/Activities
- ICS 214 Unit Log - Document activities for Joint Information Center

Checklist

	Review Common Responsibilities
	Determine from the IC if there are any limits on information release.
	Develop material for use in media briefings.
	Obtain IC approval of media releases.
	Inform media and conduct media briefings.
	Arrange for tours and other interviews or briefings that may be required.
	Manage a Joint Information Center (JIC) if established.
	Obtain media information that may be useful to incident planning.
	Maintain current information summaries and/or displays on the incident and provide information on the status of the incident to assigned personnel.

C.3.1 COMMAND STAFF RESPONSIBILITIES (Cont'd)

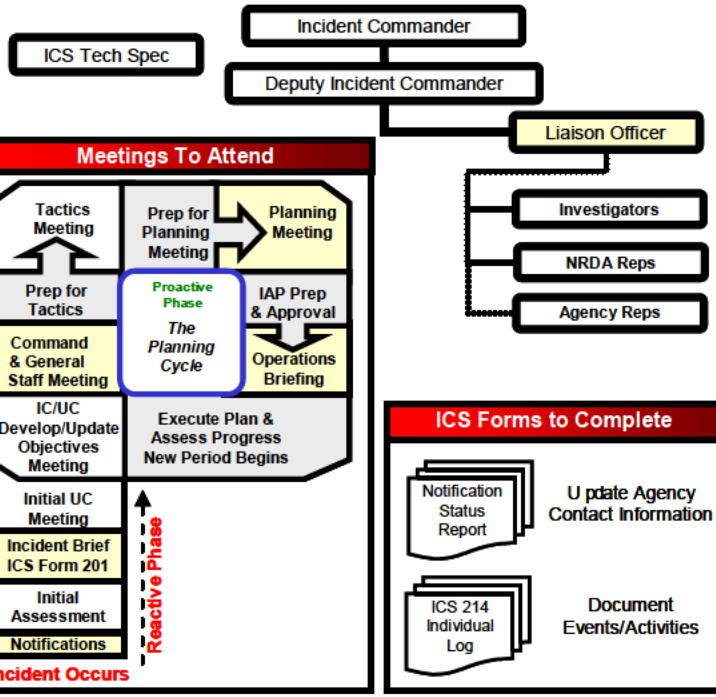
Liaison Officer - LNO

Revised Jan 2006

The Response Group

Responsibilities

Incidents that are multi-jurisdictional, or have several agencies involved, may require the establishment of the LNO position on the Command Staff. Only one primary LNO will be assigned for each incident, including incidents operating under UC and multi-jurisdiction incidents. The LNO may have assistants as necessary, and the assistants may also represent assisting agencies or jurisdictions. The LNO is assigned to the incident to be the contact for assisting and/or cooperating Agency Representatives.



Checklist

	Review Common Responsibilities
	Be a contact point for Agency Representatives.
	Maintain a list of assisting and cooperating agencies and Agency Representatives, including name and contact information. Monitor check-in sheets daily to ensure that all Agency Representatives are identified.
	Assist in establishing and coordinating interagency contacts.
	Keep agencies supporting the incident aware of incident status.
	Monitor incident operations to identify current or potential inter-organizational problems.
	Participate in planning meetings, providing current resource status, including limitations and capability of assisting agency resources.
	Coordinate response resource needs for Natural Resource Damage Assessment and Restoration (NRDAR) activities with the OSC during oil and HAZMAT responses.
	Coordinate response resource needs for incident investigation activities with the OSC.
	Ensure that all required agency forms, reports and documents are completed prior to demobilization.
	Brief Command on agency issues and concerns.
	Have debriefing session with the IC prior to departure.
	Coordinate activities of visiting dignitaries

C.3.1 COMMAND STAFF RESPONSIBILITIES (Cont'd)

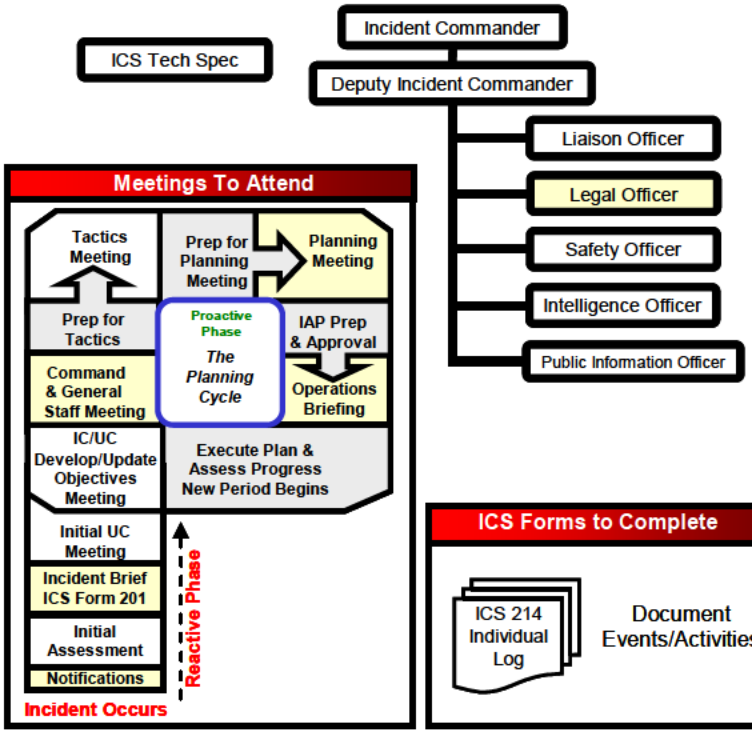
Legal Officer

Revised Jan 2006

The Response Group

Responsibilities

The Legal Officer is respons ble for providing advice and direction on all matters of a legal nature including claims, legal requirements relating to the emergency response, investigations, Natural Resource Damage assessment (NRDA), major procurement contracts, insurance coverage, and review of information releases to the media, government agencies and the public.



Checklist

	Review Common Responsibilities
	Obtain briefing from the Incident Commander
	Advise the Incident Commander (IC) and the Unified Command (UC), as appropriate, on all legal issues associated with response operations
	Establish documentation guidelines for and provide advise regarding response activity documentation to the response team
	Provide legal input to the Documentation Unit, the Compensation/Claims Unit, and other appropriate Units as requested
	Review press releases, documentation, contracts and other matters that may have legal implications for the Company
	Participate in Incident Command System (ICS) meetings and other meetings, as requested
	Participate in incident investigations and the assessment of damages (including natural resource damage assessments)
	Maintain Individual/Activity Log (ICS Form 214a).

C.3.1 COMMAND STAFF RESPONSIBILITIES (Cont'd)

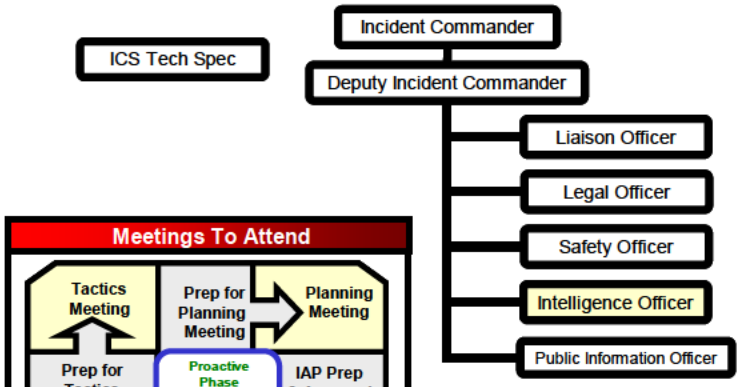
Intelligence/Security Officer - INTO

Revised Jan 2006

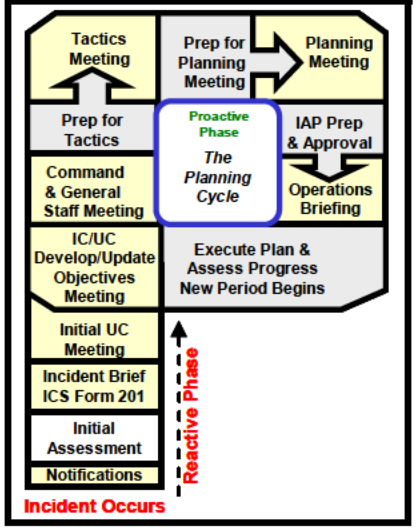
The Response Group

Responsibilities

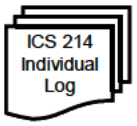
The responsibility of the INTO is to provide Command intelligence information that can have a direct impact on the safety of response personnel and influence the disposition of maritime security assets involved in the response.



Meetings To Attend



ICS Forms to Complete



Document Events/Activities

Checklist

	Collect and analyze incoming intelligence information from all sources.
	Determine the applicability, significance, and reliability of incoming intelligence information.
	As requested, provide intelligence briefings to the IC/UC.
	Provide intelligence briefings in support of the Incident Command System Planning Cycle.
	Provide Situation Unit with periodic updates of intelligence issues that impact consequence management operations.
	Answer intelligence questions and advise Command and General Staff as appropriate.
	Supervise, coordinate, and participate in the collection, analysis, processing, and dissemination of intelligence.
	Assist in establishing and maintaining systematic, cross-referenced intelligence records and files.
	Establish liaison with all participating law enforcement agencies including the CGIS, FBI/JTTF, State and Local police departments.
	Conduct first order analysis on all incoming intelligence and fuse all applicable incoming intelligence with current intelligence holdings in preparation for briefings.
	Prepare all required intelligence reports and plans.
	As the incident dictates, determine need to implant Intelligence Specialists in the Planning and Operations Sections.

C.3.2 OPERATIONS SECTION RESPONSIBILITIES

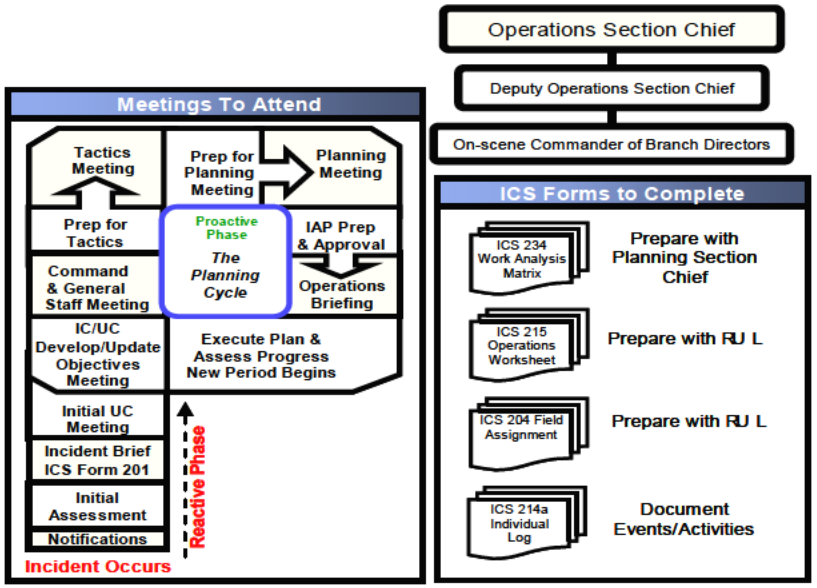
Operations Section Chief - OSC

Revised Jan 2006

The Response Group

Responsibilities

The Operations Section Chief (OSC), a member of the General Staff, is responsible for the management of all operations directly applicable to the primary mission. The OSC will normally be selected from the organization/agency with the most jurisdictional responsibility for the incident and will work in the ICP.
The OSC activates and supervises organization elements in accordance with the IAP and directs its execution. The OSC also directs the preparation of Unit operational plans, requests or releases resources, makes expedient changes to the IAP, as necessary; and reports such to the IC.



Checklist

	Review Common Responsibilities.
	Obtain briefing from IC.
	Request sufficient Section supervisory staffing for both ops & planning activities
	Convert operational incident objectives into strategic and tactical options through a work analysis matrix.
	Coordinate and consult with the PSC, SOFR technical specialists, modeling scenarios, trajectories, etc., on selection of appropriate strategies and tactics to accomplish objectives.
	Identify kind and number of resources required to support selected strategies.
	Subdivide work areas into manageable units.
	Develop work assignments and allocate tactical resources based on strategy requirements.
	Coordinate planned activities with the SOFR to ensure compliance with safety practices.
	Prepare ICS 234 Work Analysis Matrix with PSC to ensure Strategies & Tactics and task are in line with ICS 202 Response Objectives to develop ICS 215
	Participate in the planning process and the development of the tactical portions (ICS 204 and ICS 220) of the IAP.
	Assist with development of long-range strategic, contingency, and demobilization plans.
	Supervise Operations Section personnel.
	Monitor need for and request additional resources to support operations as necessary.
	Coordinate with the LOFR and AREP's to ensure compliance with approved safety practices.
	Evaluate and monitor current situation for use in next operational period planning.
	Interact and coordinate with Command on achievements, issues, problems, significant changes special activities, events, and occurrences.
	Troubleshoot operational problems with other IMT members.

C.3.2 OPERATIONS SECTION RESPONSIBILITIES (Cont'd)

Operations Section Chief - OSC (Continued)

Revised Jan 2006

The Response Group

Checklist (Continued)

	Supervise and adjust operations organization and tactics as necessary.
	Participate in operational briefings to IMT members as well as briefings to media, and visiting dignitaries.
	Develop recommended list of Section resources to be demobed and initiate recommendation for release when appropriate.
	Receive and implement applicable portions of the incident Demobilization Plan.

C.3.3 PLANNING SECTION RESPONSIBILITIES

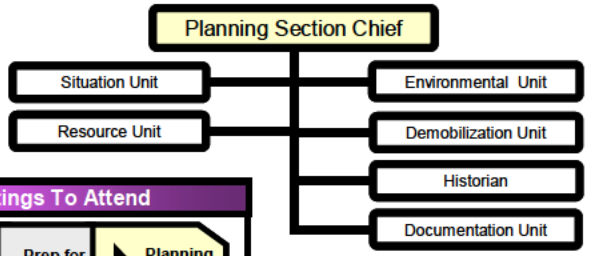
Planning Section Chief - PSC

Revised Jan 2006

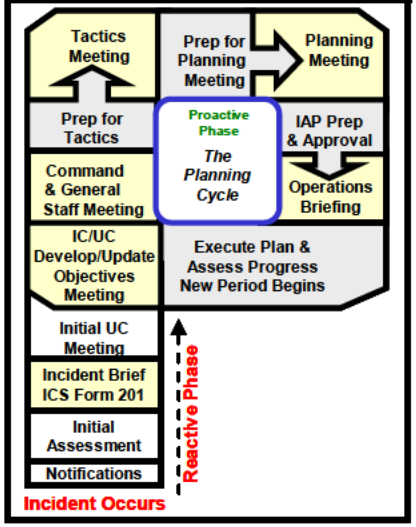
The Response Group

Responsibilities

The PSC, a member of the General Staff, is responsible for the collection, evaluation, dissemination and use of incident information and maintaining status of assigned resources. Information is needed to: 1) understand the current situation; 2) predict the probable course of incident events; 3) prepare alternative strategies for the incident; and 4) submit required incident status reports.



Meetings To Attend



ICS Forms to Complete

- ICS 202 Response Objectives – Prepare Response Objectives
- ICS 234 Work Analysis Matrix with OPS
- IAP Cover Sheet – Prepare IAP Cover Sheet
- General Plan – Prepare General Plan
- Executive Summary – Prepare Executive Summary

Checklist

	Review Common Responsibilities.
	Collect, process, and display incident information.
	Assist OSC in the development of response strategies.
	Supervise preparation of the IAP.
	Facilitate planning meetings and briefings.
	Assign personnel already on-site to ICS organizational positions as appropriate.
	Establish information requirements and reporting schedules for Planning Section Units (e.g., Resources, Situation).
	Determine the need for any specialized resources in support of the incident.
	Establish special information collection activities as necessary (e.g., weather, environmental, toxics, etc.).
	Assemble information on alternative strategies.
	Provide periodic predictions on incident potential.
	Keep IMT apprised of any significant changes in incident status.
	Compile and display incident status information.
	Oversee preparation and implementation of the Incident Demobilization Plan.
	Incorporate plans (e.g., Traffic, Medical, Communications, and Site Safety) into the IAP.
	Develop other incident supporting plans (e.g., salvage, transition, security).
	Assist Operations with development of the ICS 234 Work Analysis Matrix
	Maintain Unit Log (ICS 214).

C.3.4 BUSINESS INTERRUPTION SECTION RESPONSIBILITIES

Business Interruption Section Chief

Revised Jan 2006

The Response Group

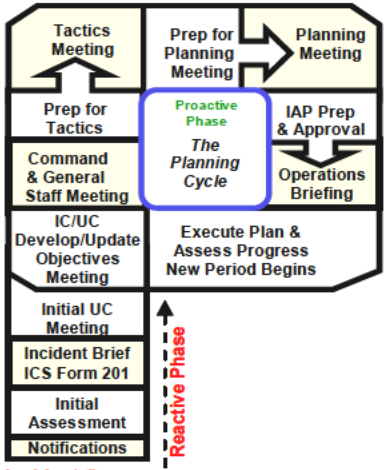
Responsibilities

Business Interruption Section Chief ensures that a major incident will not cause undue disruption to any of the businesses from a personnel, business asset management or supply chain perspective.

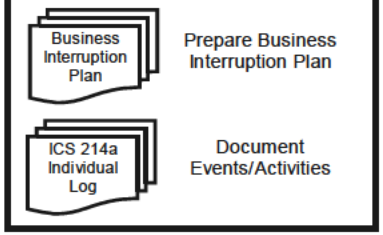
1. Must quickly assess the incident situation, it's short and long term impacts throughout the organization, including partners & customers. It must act to handle those issues and problems identified.

2. Assess whether the incident will have an impact on the current management of the non-impacted businesses and if so, determine those needs and address.

Meetings To Attend



ICS Forms to Complete



Checklist

	Review Common Responsibilities.
	Sign in on the Incident Command System Roster Board.
	Assess incident situation.
	Conduct initial briefing with Incident Commander or Site Manager's direct reports.
	Identify, contact and consult with all internal and external groups whose business is impacted by the incident.
	Determine staffing needs for impacted business while continuing to manage the daily operations.
	Address and communicate agreements for prior commitments or contracts that are related to the impacted business.
	Approve requests for additional resources and requests for release of resources.
	Maintain a Individual Log (ICS Form 214).

C.3.4 BUSINESS INTERRUPTION SECTION RESPONSIBILITIES (Cont'd)

Business Interruption Section Chief

Revised Jan 2006

PRE-INCIDENT RESPONSIBILITIES
1. Receive incident position training.
2. Review all pre-incident responsibilities of incident job classifications to determine necessary manpower, equipment and supplies to carry out assigned incident classification responsibilities.
3. Develop a postal system for processing correspondence related to the incident at hand, as well as all employees' personal mail.
4. Identify all customers, suppliers, joint venture interests, etc., that would have to be contacted in the event of a significant incident that disrupt asset operations.
5. Review all pre-incident planning with appropriate legal representative. Identify name, address and phone number of legal counsel representative.
6. Have all supplies, personal protective equipment, etc., pre-packed to expedite travel time.
7. Review existing job responsibilities and pre-incident responsibilities periodically.
8. Conduct periodic table top exercises with those incident classifications you will be expected to work with.
9. Seek out and identify counterparts in other oil companies in the industry with this same emergency response position and develop a partnership system for sharing of resources and technology.
10. Identify and coordinate with the other departments and positions of this plan that are involved with this particular position for necessary services and support.
11. For Those Who Supervise: Review and understand your subordinate's responsibilities.
12. Review, in advance, the personnel to fill the positions of Operations, Mechanical, Safety, Finance/Accounting, Environmental, and Employee Relations support at the IC posts at the site.
13. Ensure that plans reflect current employee names per incident classification listed.
14. Ensure that subordinates understand their incident and pre-incident responsibilities before the incident occurs.
15. A TOP RESPONSIBILITY: You are only responsible for duties assigned to this job classification --- no others, unless otherwise specified.

C.3.4 BUSINESS INTERRUPTION SECTION RESPONSIBILITIES (Cont'd)

Business Interruption Section Chief

Revised Jan 2006

The Response Group

PRE-INCIDENT RESPONSIBILITIES

16. Coordinate with other department personnel to maintain a state of readiness before plan activation.

SITE	OPERATIONS	MECHANICAL	SAFETY	FINANCE ACCTG.	ENVIRONMENTAL	EMPLOYEE RELATIONS
NORMAL JOB CLASSIFICATION						
INCIDENT JOB CLASSIFICATION						
PERSON(S) NAME						
REGION	OPERATIONS	MECHANICAL	SAFETY	FINANCE ACCTG.	ENVIRONMENTAL	EMPLOYEE RELATIONS
NORMAL JOB CLASSIFICATION						
INCIDENT JOB CLASSIFICATION						
PERSON(S) NAME						
HEADQUARTERS	OPERATIONS	MECHANICAL	SAFETY	FINANCE ACCTG.	ENVIRONMENTAL	EMPLOYEE RELATIONS
NORMAL JOB CLASSIFICATION						
INCIDENT JOB CLASSIFICATION						
PERSON(S) NAME						

17. Refer to pre-developed scheduled meetings that will take place when the plan is activated. Determine whether your function is required at the meeting or not.

18. Maintain a current level of understanding of your responsibilities concerning the Incident Action Plan.

19. Pre-develop meeting agendas and recognize those that need to be in attendance, both inside and outside, of the department.

20. If applicable, ensure that all international import/export requirements are met, i.e., immunizations, passports, etc.

C.3.5 LOGISTICS SECTION RESPONSIBILITIES

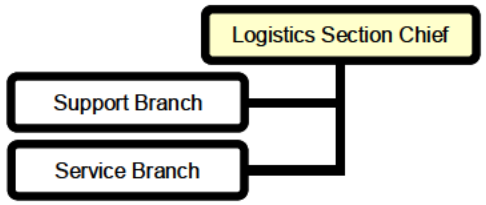
Logistics Section Chief - LSC

Revised Jan 2006

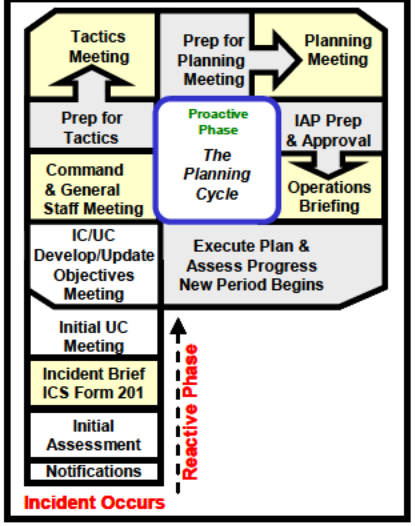
The Response Group

Responsibilities

The LSC, a member of the General Staff, is responsible for providing facilities, services, and material in support of the incident. The LSC participates in the development and implementation of the IAP and activates and supervises the Branches and Units within the Logistics Section.



Meetings To Attend



ICS Forms to Complete

- ICS 205 Comms Plan – Review Communication Plan
- Security Plan – Review Security Plan
- Transportation Plan – Review Transportation Plan
- Traffic & Vessel Routing – Review Traffic & Vessel Routing Plan
- ICS 214a Individual Log – Document Event/Activities

Checklist

	Review Common Respons bilities
	Plan the organization of the Logistics Section.
	Assign work locations and preliminary work tasks to Section personnel.
	Notify the Resources Unit of the Logistics Section Units activated, including names and locations of assigned personnel.
	Assemble and brief Logistics Branch Directors and Unit Leaders.
	Determine and supply immediate incident resource and facility needs.
	In conjunction with Command, develop and advise all Sections of the IMT resource approval and requesting process.
	Review proposed tactics for upcoming operational period for ability to provide resources and logistical support.
	Identify long-term service and support requirements for planned and expected operations.
	Advise Command and other Section Chiefs on resource availability to support incident needs.
	Provide input to and review the Communications Plan, Medical Plan and Traffic Plan.
	Identify resource needs for incident contingencies.
	Coordinate and process requests for additional resources.
	Track resource effectiveness and make necessary adjustments.
	Advise on current service and support capabilities.
	Develop recommended list of Section resources to be demobed and initiate recommendation for release when appropriate.
	Receive and implement applicable portions of the incident Demobilization Plan.
	Ensure the general welfare and safety of Logistics Section personnel.
	Maintain Unit Log (ICS 214).

C.3.6 FINANCE SECTION RESPONSIBILITIES

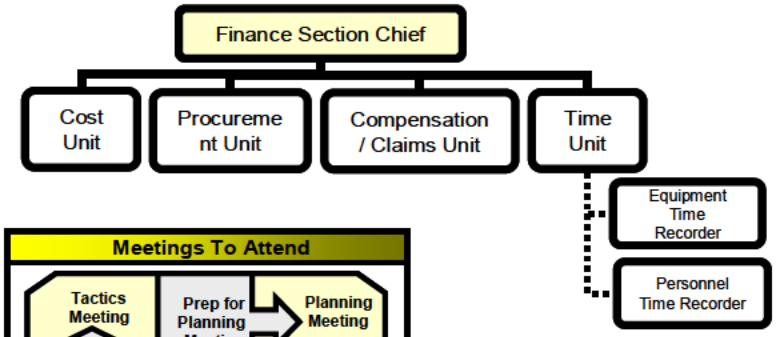
Finance Section Chief

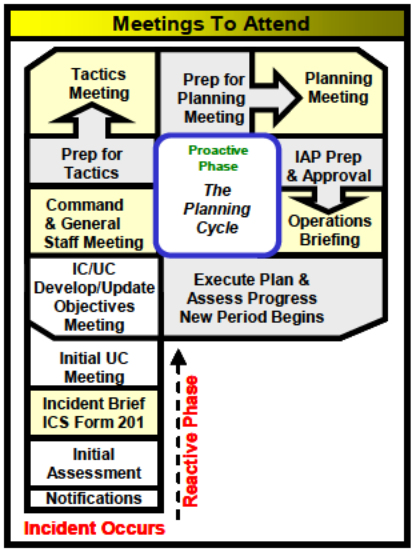
Revised Jan 2006

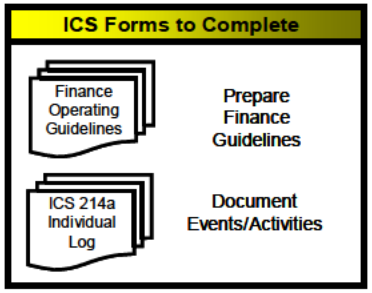
The Response Group

Responsibilities

The FSC, a member of the General Staff, is responsible for all financial, administrative and cost analysis aspects of the incident and for supervising members of the Finance/Admin Section.







Checklist

	Review Common Responsibilities
	Participate in incident planning meetings and briefings as required.
	Review operational plans and provide alternatives where financially appropriate.
	Manage all financial aspects of an incident.
	Provide financial and cost analysis information as requested.
	Gather pertinent information from briefings with responsible agencies.
	Develop an operating plan for the Finance/Admin Section; fill supply and support needs.
	Determine the need to set up and operate an incident commissary.
	Meet with Assisting and Cooperating Agency Representatives, as needed.
	Maintain daily contact with agency(s) administrative headquarters on Finance/Admin matters.
	Ensure that all personnel time records are accurately completed and transmitted to home agencies, according to policy.
	Provide financial input to demobilization planning.
	Ensure that all obligation documents initiated at the incident are properly prepared and completed.
	Brief agency administrative personnel on all incident-related financial issues needing attention or follow-up prior to leaving incident.
	Develop recommended list of Section resources to be demobed and initial recommendation for release when appropriate.
	Receive and implement applicable portions of the incident Demobilization Plan.
	Maintain Unit Log (ICS 214).

D.1 POST-ACCIDENT INVESTIGATION

Investigations of a spill / release incident or any other emergency event which occurred at Total Port Arthur Refinery (PAR) will utilize the refinery's Impact Safety Reporting Procedure. This procedure consists of the preparation of an incident report utilizing the Impact Safety Software Program. The Impact Safety Software Program has been loaded on all of the refinery's computers and all PAR personnel trained on the use of Impact Safety. The incident investigation will require the completion of additional attachments within Impact Safety as deemed necessary. Depending upon the magnitude of the event / incident, the Refinery Manager may deem it necessary to organize an investigative team to perform a comprehensive investigation. However, all Impact Safety Reports / Entries are reviewed by the Refinery Incident Investigation Review (IIR) Committee. All refinery Impact Safety Reports and comprehensive investigations shall remain open until they are reviewed by the IIR Committee and determined that no further action is required.

D.2 DISPOSAL PLAN

D.2.1 SAMPLING AND WASTE ANALYSIS PROCEDURES

The Disposal Specialist is responsible for sampling and waste analysis procedures in the event of a spill. Total PAR's sampling and waste analysis practices are governed by the Port Arthur Refinery Waste Analysis Plan (WAP). The WAP is located in the Disposal Specialist's office. The WAP describes methods and procedures for determining the chemical and physical characteristics of wastes generated by the refinery, including waste associated with spills, so that they may be properly stored, treated, or disposed of. The guidelines contained in this plan meet the requirements of 40 CFR 265.13 and 265.17 and the requirements of 31 TAC 335.152.

D.2.2 STORAGE/DISPOSAL

Strict rules designed to ensure safe and secure handling of waste materials govern Total PAR's waste disposal activities. To ensure proper disposal of recovered oil or hazardous substances and associated debris, the following guidelines should be considered:

- In the event of an oil or hazardous substance spill, the Port Arthur Refinery has the capability to recycle recovered oil through the recovered oil system. Separated oil is pumped back to the refinery for processing and separated water is pumped to the refinery's waste water treatment system for further processing.
- Oily debris will be segregated on site and containerized for temporary storage prior to disposal in accordance with RCRA/CERCLA regulations.
- Temporary storage of oily debris and oil or hazardous substances is available at the Port Arthur Refinery (PAR) in accordance with the refinery's Texas Water Commission permit.

D.2 DISPOSAL PLAN – (Cont'd)

D.2.2 STORAGE/DISPOSAL – Cont'd

- Transportation of waste material will be performed in accordance with all applicable DOT, RCRA, TAC, and RRC guidelines.
- Waste associated with oil and hazardous substance spills will be disposed of at predetermined sites approved by PAR that have the necessary permits to accept the type of waste to be discharged.
- The PAR Disposal Plan should be used to document that the proper steps are taken for disposal of the spilled material and the Disposal Status Update to be used after the Port Arthur Refinery Disposal Plan has been initiated.

The Disposal Specialist will coordinate activities and obtain necessary permits to ensure proper disposal or recycling of recovered product and debris. Key issues to be addressed during a spill to ensure proper handling and effective disposal of recovered product and debris are included as checklist items in the Disposal Specialist's job description.

D.3 Site Safety and Health Plan

PAR uses the IAP Software to create a Site Safety and Security Plan during an incident. The IAP Software is a process driven software so the plan that's created is unique to the particular incident which is occurring at the time, thus providing a much more accurate plan.

D.4 INCIDENT HISTORY

The following tables summarize the various reportable spills that have occurred at Total Petrochemical PAR since 1990.

PORT ARTHUR COMPLEX

REPORTABLE SPILL HISTORY

Spill Date	Cause of Spill	Material Spilled	Amount of Spill (gals.)	Amount reaching Navigable Waters (gals.)	Effectiveness of Secondary Containment	Capacity of Secondary Containment	Clean Up Action Taken	Steps Taken to Reduce Recurrence	Capacity of Tanks Impoundments from Which Spill Occurred	Enforcement Action Taken Yes/No + Fines	Effectiveness of Monitoring Equipment	How Was Spill Detected?
1990												
1/1/1990	Dock operator left bleeder valve open at Dock I	Crude Oil	42									
1/3/1990	Heavy rain washed oil out of units & into 001 ditch with sheen exiting Outfall 001	Oil	<42									
1/21/1990	Tank 516 ran over	#6 Oil	2100									
1/24/1990	Sheen exited Outfall 001	Oil Sheen	<1									
1/24/1990	Leaking drain at Dock I	Slop Oil	2									
1/29/1990	Valve on TK 925 left open	#6 Fuel	8,400									
2/8/1990	Sump pit at Dock B ran over due to leaking valve	Slop Oil	210									
2/12/1990	1/2" line broke at Dock A	Toluene	42									
2/21/1990	Unknown source for sheen that exited Outfall 002	Oil	Unknown									
3/3/1990	Leaking drain valve on suction line TK 905	Recovered Oil	10	0			Recover	Repaired Valve				Visual
3/9/1990	Overfilled tank on barge DM391 at Dock A - Fina not responsible	Xylene	2	2 - Neches River			Recover					Visual
3/15/1990	Runoff due to high rain activity at Vac. Truck Unloading area TK 905	Light Oil	<5	<5 - Boat Canal			Recover			Yes - $150		Visual

PORT ARTHUR COMPLEX

REPORTABLE SPILL HISTORY

Spill Date	Cause of Spill	Material Spilled	Amount of Spill (gals.)	Amount reaching Navigable Waters (gals.)	Effectiveness of Secondary Containment	Capacity of Secondary Containment	Clean Up Action Taken	Steps Taken to Reduce Recurrence	Capacity of Tanks Impoundments from Which Spill Occurred	Enforcement Action Taken Yes/No + Fines	Effectiveness of Monitoring Equipment	How Was Spill Detected?
3/23/1990	Floating roof on TK 505 stuck & product leaked out roof drain	Naphtha	1,050	0	Firewall drain left open		Recover	Repair roof/review firewall drain procedure				Visual
4/23/1990	Pipeline failure along Dock Road	JP4	210	~42 - Boat Canal			Recover	Repaired pipeline				Visual
5/3/1990	Mystery sheen that apparently was carried in with the tide to Outfall 002 discharge point. Fina not responsible	Oil Sheen	<1	N/A (unknown source carried in with tide)			Recover					Visual
5/4/1990	Loss of storm pumps due to lightning & power failure at Waste Treatment Facility	Light Oil	Unknown	Unknown - Boat Canal			Recover					Visual
5/4/1990	Petrogas Wastewater basin overflow to Outfall 001 ditch system	Oil & Stormwater	210	0	Excellent - 001 Basin Contained Spill		Recover					Visual
5/4/1990	South Stormwater Retention Basin overflow	Oil & Stormwater	8,400	0			Recover					Visual
5/4/1990	Unknown source entered collection ditch during rain event with sheen exiting Outfall 001	Oil Sheen	<5	~4 -DD-7 Ditch / Molasses Bayou			Recover					Visual
5/4/1990	Diesel fuel infiltration into Outfall 002 ditch during heavy rain event with sheen exiting Outfall 002	Oil Sheen	<5	~4 - DD-7 Ditch / Molasses Bayou			Recover					Visual
5/8/1990	Breaker tripped at Stormwater pumps resulting in south ditch overflow to Boat Canal	Process Water & Rain Water (Sheen)	Unknown	Unknown - Boat Canal			Recover					Visual

PORT ARTHUR COMPLEX

REPORTABLE SPILL HISTORY

Spill Date	Cause of Spill	Material Spilled	Amount of Spill (gals.)	Amount reaching Navigable Waters (gals.)	Effectiveness of Secondary Containment	Capacity of Secondary Containment	Clean Up Action Taken	Steps Taken to Reduce Recurrence	Capacity of Tanks Impoundments from Which Spill Occurred	Enforcement Action Taken Yes/No + Fines	Effectiveness of Monitoring Equipment	How Was Spill Detected?
5/9/1990	Heavy rain caused tank to over-flow with rainbow sheen exiting Outfall 004	Crude Oil & #6 Oil Mixture	<5	~4 - DD-7 Ditch			Recover					Visual
5/11/1990	Dock Pit overflow at Dock 1	#2 Fuel Oil	210	Unknown - Neches River			Recover			Yes - $800		Visual
5/15/1990	Out of service crude line leak at Dock B	Crude Oil	2	2 - Neches River			Recover					Visual
5/18/1990	Hole in run-in line at TK 907	Alkylate	420	0	Excellent - spill contained within TK 907 Firewall		Recover	Repair line				Visual
6/1/1990	TK 531 overflow	Naphtha	840	0	Excellent - spill contained within TK 531 Firewall		Recover					Visual
6/6/1990	Human error - wrong valve opened at Dock B	Cosden Oil 150	4	4 - Neches River			Recover					
6/13/1990	16" line ruptured due to sun pressure at Dock I	#2 Fuel Oil	84	Neches River			Recover			Yes - $600		Visual
6/22/1990	Heavy rain washed diesel & oil into 002 ditch with sheen exiting Outfall 002	Oil Sheen	<42	Unknown - DD-7 Ditch / Molasses Bayou			Recover					Visual
6/22/1990	Heavy rain caused sump pump overflow thus oil entered 004 ditch with sheen exiting Outfall 004	Oil Sheen	210	Unknown - DD-7 Ditch			Recover					Visual
7/5/1990	Blowing out sulfuric acid line into railcar when it blew onto ground at Acid Rack	Spent Sulfuric Acid	210	0			Neutralize/ Recover					Visual

PORT ARTHUR COMPLEX

REPORTABLE SPILL HISTORY

Spill Date	Cause of Spill	Material Spilled	Amount of Spill (gals.)	Amount reaching Navigable Waters (gals.)	Effectiveness of Secondary Containment	Capacity of Secondary Containment	Clean Up Action Taken	Steps Taken to Reduce Recurrence	Capacity of Tanks Impoundments from Which Spill Occurred	Enforcement Action Taken Yes/No + Fines	Effectiveness of Monitoring Equipment	How Was Spill Detected?
7/15/1990	Bleeder valve left open on Crude header causing pit to overflow at Dock I	Crude Oil	25	Neches River			Recover					Visual
7/19/1990	Leak in line to flare drum with sheen exiting Outfall 002	Hydrocarbons & Sheen	2	2 - DD-7 Ditch / Molasses Bayou			Recover					Visual
9/2/1990	Removed flange off hose & product leaked out at Dock B	Crude Oil	42	Neches River			Recover			Yes - $800		Visual
9/4/1990	Dockman washing out raffinate hose resulted in spill at Dock B	Raffinate	Unknown	Unknown - Neches River			Recover					Visual
9/5/1990	Unknown source - possibly a drip from line under Dock 1	Oil Sheen	Unknown	Unknown - Neches River			Recover					Visual
9/13/1990	Rainwater runoff carried petroleum fuel product with it resulting in sheen exiting Outfall 004	Oil Sheen	Unknown	Unknown - DD-7 Ditch						Yes - $200		Visual
10/2/1990	Leaking flange at Dock B	Waste Oil	0.125	0.125 - Neches River			Recover	Tightened flange				Visual
10/3/1990	Overflow of railcar while loading at Acid Rack	Sulfuric Acid	84	0			Neutralize/ Recover					Visual
11/27/1990	Crack in pipeline along Dock Rd	Gasoline	<1	<1 - Marsh			Recover	Repaired Pipeline				Visual
11/28/1990	Spill occurred during removal of pipeline along Dock Road	#6 Fuel Oil	2	2 - Marsh			Recover	Remove pipeline				Visual

PORT ARTHUR COMPLEX

REPORTABLE SPILL HISTORY

Spill Date	Cause of Spill	Material Spilled	Amount of Spill (gals.)	Amount reaching Navigable Waters (gals.)	Effectiveness of Secondary Containment	Capacity of Secondary Containment	Clean Up Action Taken	Steps Taken to Reduce Recurrence	Capacity of Tanks Impoundments from Which Spill Occurred	Enforcement Action Taken Yes/No + Fines	Effectiveness of Monitoring Equipment	How Was Spill Detected?
12/6/1990	Mechanical Dept. was working on a line when gasoline spilled out of line along Dock Road	Gasoline	420	Marsh			Recover					Visual
12/11/1990	Line pressure caused pop-off relief valve to release resulting in spill to ditch behind clay filters at Gasoline Pump Station	Jet-A	2,100	0			Recover					Visual
12/12/1990	Unknown source for sheen exiting Outfall 001	Oil Sheen	<1	<1 - DD-7 Ditch / Molasses Bayou								Visual
12/14/1990	Line blew out during pressure test along Dock Road	Gasoline	2	2 - Marsh			Recover	Repaired line				Visual
12/25/1990	Operator opened bleeder on discharge of pump to see if product was pumping at Transfer Pump Area outside TK 929 firewall	Benzene	20	0			Recover					Visual
12/26/1990	Upset in activated sludge process occurred due to non-typical amount of oil loading resulting in sheen exiting Outfall 003	Oil Sheen	<1	<1 - Boat Canal			Recover	Clarifier replaced with two new clarifiers complete with oil skimmers				Visual
12/26/1990	Unknown source for sheen exiting Outfall 001	Oil Sheen	<1	<1 - DD-7 Ditch / Molasses Bayou			Recover					Visual

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Figure D.1: REPORTABLE SPILL HISTORY

Spill Date	Cause of Spill	Material Spilled	Amount of Spill (gals.)	Amount reaching Navigable Waters (gals.)	Effectiveness of Secondary Containment	Capacity of Secondary Containment	Clean Up Action Taken	Steps Taken to Reduce Recurrence	Capacity of Tanks Impoundments from Which Spill Occurred	Enforcement Action Taken Yes/No + Fines	Effectiveness of Monitoring Equipment	How Was Spill Detected?
1991												
1/8/1991	Malfunction in TK 1000 roof drain resulted in sour water spill	Sour Water with trace of Ammonia	420 (4.5 lbs NH3)	0			Recover	Roof drain repaired				Visual
1/10/1991	Excessive rain washed sheen (from main parking lot) out Outfall 005 into 32nd St. drainage ditch	Oil Sheen	4	0			Recover					Visual
1/10/1991	Excessive rain washed oil out of south process ditch to Boat Canal	Oil / Sheen	Unknown	4 - Boat Canal			Recover					Visual
1/13/1991	Excessive rain washed oil out of NOWB (due to pump check valve failure) and sheen exited Outfall 002	Oil / Sheen	Unknown	21 - DD-7 Ditch / Molasses Bayou			Recover					Visual
1/15/1991	Excessive rain washed oil out of units & exited Outfall 002	Oil / Sheen	Unknown	4 - DD-7 Ditch / Molasses Bayou			Recover					Visual
1/18/1991	Transfer hose between TKs 1000 & 1001 came loose	Sour Water with trace of Ammonia	420 (23 lbs NH3)	0			Recover	Secured transfer hose properly				Visual
1/23/1991	Hole formed in bottom of TK 450	Crude Oil	21,000	0	Excellent - spill contained within TK 450 firewall		Recover	TK 450 taken out of service and later demolished.				Visual
2/2/1991	2 bleeder valves on no-lead line at Dock 1 were left open while barge was loading at Dock B	Naphtha	5	4 - Neches River			Recover	Bleeder valves were closed				Visual
2/3/1991	While loading barge NM5-1455 at Dock A, splashing occurred	Cosdenol 150	4	1 - Neches River			Recover					Visual
3/4/1991	Firewater used to extinguish 813 heater fire carried product to	Furnace Oil/ Sheen	<42	21 - DD-7 Ditch / Molasses Bayou			Recover					Visual

PORT ARTHUR COMPLEX

Figure D.1: REPORTABLE SPILL HISTORY

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3/11/1991	Separator canal north of Hurricane Levee - excavated material from Explorer pipeline trench was contaminated	Oil Sheen	Unknown	4 - Molasses Bayou			Recover					Visual
3/19/1991	TK 304 at Asphalt Sales caught fire and ruptured	Asphalt / Asphaltenes	55,146	0	Excellent - spill contained within TK 304 firewall		Recover					Visual
3/25/1991	Dock I drain line developed a hole (due to corrosion)	Gasoline	4	1 - Neches River			Recover	Dock I drain line was repaired				Visual
4/11/1991	Petrogas wastewater pump discharge line broke	Oily Process Water	2,100	Unknown - DD-7 Ditch			Recover	Repaired discharge line				Visual
4/15/1991	Drums used to store cleanings from TK 05 vacuum strainers over flowed during heavy rain event	Oily Sludge / Wastewater	21	Unknown - Boat Canal			Recover					Visual
4/23/1991	Intermittent leak developed on 16" recovered oil line that runs between TKs 522 & 524	Recovered Oil	2,100	0			Recover	Repaired 16" line				Visual
5/7/1991	Safety valve malfunctioned allowing blow down system to empty TK 905 & overfill it	Recovered Oil	4,200	0	Excellent - spill contained within TK 905 firewall		Recover	Repaired/replaced safety valve				Visual
5/7/1991	South stormwater transfer pump was left off during heavy rain event thus south wastewater sewer emergency bypass	Wastewater / Oil	210	Unknown - Boat Canal			Recover					Visual
5/8/1991	Excessive rains washed oil out of units to 001 ditch with sheen exiting 001	Recovered Oil	<42	1 - DD-7 Ditch / Molasses Bayou			Recover					Visual

PORT ARTHUR COMPLEX

Figure D.1: REPORTABLE SPILL HISTORY

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5/9/1991	Excessive rains resulted in oil sheen exiting Outfall 002	Oil / Sheen	<42	4 - DD-7 Ditch / Molasses Bayou			Recover					Visual
5/9/1991	Excessive rains resulted in oil sheen exiting Outfall 004	Oil / Sheen	<42	4 - DD-7 Ditch			Recover					Visual
5/10/1991	Excessive rain resulted in oil sheen exiting Outfall 001	Oil Sheen	Unknown	1 - DD-7 Ditch / Molasses Bayou			Recover					Visual
5/10/1991	Excessive rain resulted in oil sheen exiting Outfall 002	Oil Sheen	Unknown	1 - DD-7 Ditch / Molasses Bayou			Recover					Visual
5/10/1991	Excessive rain resulted in oil sheen exiting Outfall 004	Oil Sheen		1 - DD-7 Ditch			Recover					Visual
5/10/1991	Heavy rains washed oil/sheen out of Petrogas Facility	Oil Sheen	Unknown	4 - Grandview Drainage Ditch			Recover					Visual
5/12/1991	During heavy rain event, south process ditch overflowed	Oil / Sheen	<42	4 - Boat Canal			Recover					Visual
5/15/1991	Excessive rain resulted in oil sheen exiting Outfall 001	Oil Sheen	Unknown	5 - DD-7 Ditch / Molasses Bayou			Recover					Visual
5/15/1991	Excessive rain resulted in oil sheen exiting Outfall 002	Oil Sheen	Unknown	5 - DD-7 Ditch / Molasses Bayou			Recover					Visual
5/16/1991	Excessive rain resulted in oil sheen exiting Outfalls 001 & 002	Oil Sheen	Unknown	Unknown - DD-7 Ditch / Molasses Bayou			Recover					Visual
5/16/1991	Underground 8" West Texas Crude Pipeline near TK 477 started leaking	Crude Oil	210	0			Recover	8" line taken out of service & repaired				Visual
5/16/1991	Excessive rain washed oil into Outfall 004	Oil Sheen	Unknown	Unknown - DD-7 Ditch			Recover					Visual
5/17/1991	Excessive rain washed oil out of units into Outfalls 001 & 002	Oil Sheen	Unknown	8 total - DD-7 Ditch / Molasses Bayou			Recover					Visual

PORT ARTHUR COMPLEX

Figure D.1: REPORTABLE SPILL HISTORY

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5/17/1991	Excessive rain washed oil into Outfall 004	Oil Sheen	Unknown	4 - DD-7 Ditch			Recover					Visual
5/29/1991	Excessive rain washed oil into Outfall 004	Oil Sheen	Unknown	4 - DD-7 Ditch			Recover					Visual
5/29/1991	Heavy rain washed oil out of Jiskoot sampler or F122 pump station at Dock I	Recovered Oil	4	1 - Neches River			Recover					Visual
5/29/1991	Excessive rain washed oil out of units into Outfalls 001 & 002	Oil Sheen	Unknown	8 total - DD-7 Ditch / Molasses Bayou			Recover					Visual
5/29/1991	TK 905 unloading area containment overflowed during heavy rain event	Recovered Oil	<42	4 - Boat Canal			Recover					Visual
6/4/1991	Leak developed in wastewater line between TK 905 & diversion box	Recovered Oil / Naphtha / Water Mixture	Unknown	4 - Boat Canal			Recover	Wastewater line was repaired				Visual
6/5/1991	Tricil (contractor) was cleaning plate press when they spilled Alphachem degreaser (Fina not responsible)	Alphachem 2042c Degreaser	42	<42 - Boat Canal			Recover					Visual
6/10/1991	Excessive rain washed oil into Outfall 004	Oil Sheen	Unknown	4 - DD-7 Ditch			Recover					Visual
6/10/1991	Excessive rain washed oil into Outfall 002	Oil Sheen	Unknown	4 - DD-7 Ditch / Molasses Bayou			Recover					Visual
6/13/1991	Excessive rain washed oil into Outfall 004	Oil Sheen	Unknown	4 - DD-7 Ditch			Recover					Visual
6/13/1991	Excessive rain washed oil out of units into Outfalls 001 & 002	Oil Sheen	Unknown	8 total - DD-7 Ditch / Molasses Bayou			Recover					Visual

PORT ARTHUR COMPLEX

Figure D.1: REPORTABLE SPILL HISTORY

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6/13/1991	Excessive rain washed oil out of processing units into Boat Canal	Oil Sheen	Unknown	4 - Boat Canal			Recover					Visual
6/17/1991	8" Neale pipeline started leaking in numerous places near TK 415 due to over pressuring	Crude Oil	420	0			Recover	8" Neale was taken out of service & repaired				Visual
6/22/1991	Hatch gasket blew on barge DB-26 during topping off - Fina not responsible	JP-4	5	5 - Neches River			Recover	Gasket was replaced & hatch tightened				Visual
6/27/1991	Contractor pulled a blind flange on 20" line at TK 467 at the same time pumpers did a line displacement	Gas Oil	42,000	0			Recover	Installed spool/valve & reviewed coordination proced.				Visual
7/23/1991	Excessive rain washed diesel/oil out of units into Outfall 001	Diesel / Oil Sheen	Unknown	4 - DD-7 Ditch / Molasses Bayou			Recover					Visual
7/25/1991	Dike at surge basin broke coupled with leak in wastewater treatment line north of surge basin	Recovered Oil	504	Unknown - boat Canal			Recover	Repair wastewater line & repair surge basin dike				Visual
7/27/1991	TK 559 overfilled due to human error	Gas Oil	5,460	0	Excellent - spill contained within TK 559 firewall		Recover	Individual involved held accountable				Visual
7/30/1991	TK 479 side mount mixer seal failed	Crude Oil	4,620	0	Excellent - spill contained within TK 479 firewall		Recover	Replaced seal				Visual
7/31/1991	Explorer Pipeline along Dock Road developed flange leak	Jet Fuel	21	21 - Marsh			Recover	Tightened flange				Visual
8/5/1991	Excessive rain washed oil out of units into Outfalls 001 & 002	Oil Sheen	Unknown	8 total - DD-7 Ditch / Molasses Bayou			Recover					Visual
8/5/1991	Excessive rain washed oil into Outfall 004	Oil Sheen	Unknown	4 - DD-7 Ditch			Recover					Visual

PORT ARTHUR COMPLEX

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8/7/1991	TK 929 developed leak around manway gasket	Benzene	5	0	Excellent - spill contained within TK 929 firewall		Recover	Replace gasket & tighten manway				Visual
8/10/1991	Clamp failed on 18" gasoline pipeline along Dock Road	Gasoline	4	4 - Marsh			Recover	Replace clamp				Visual
8/11/1991	TK 905 Wilden pump diaphragm broke spraying oil outside of containment	Recovered Oil	42	Unknown - Boat Canal			Recover	Repair pump				Visual
8/19/1991	During the line flush at Dock A containment area a gasket failed on the Ram pump	Diesel / #2 Fuel Oil	420	0	Excellent - spill contained within Dock A contain-ment area		Recover	Replace gasket within Ram pump				Visual
8/22/1991	Gasket failed on 6" pipeline south of Bunker C Station	Diesel	840	0			Recover	Replace pipeline gasket				Visual
8/23/1991	Suction line to Ram Pump broke at foot of Dock B & exited open valve	#2 Fuel Oil / Diesel	420	Unknown - Neches River	Poor - Secondary containment block valve left open		Recover	Repaired Ram pump suction line / closed drain valve		Yes - $1500		Visual
8/29/1991	Dock A manifold drip pan had crack in welded seam	Xylene	Unknown	4 - Neches River	Poor - crack in welded seam		Recover	Repair drip pan				Visual
9/2/1991	Loading hose on tank car disconnected at Acid Loading Rack	Spent Sulfuric Acid	10.5	0			Neutralize & Recover	Reconnected hose				Visual
9/3/1991	Gasket blew on 12" crude line at Dock B	Crude Oil	Unknown	42 - Neches River			Recover	Replace gasket				Visual
9/5/1991	Dock B drip pan overflowed during heavy rain event as sump pump was not in automatic	Crude Oil	Unknown	4 - Neches River			Recover	Place sump pump in automatic setting				Visual

PORT ARTHUR COMPLEX

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9/16/1991	#6 Fuel Oil line gasket developed leak at Dock B due to sun pressure	#6 Fuel Oil	Unknown	4 - Neches River			Recover	Replace gasket				Visual
9/22/1991	TK 450 run-in line ruptured when under pressure due to tie-in with 8" crude line	Crude Oil	189,000	0	Excellent - spill contained within TK 450 firewall		Recover	Repair TK 450 run-in line; later TK 450 demolished				Visual
10/5/1991	High Level alarm malfunctioned South Process Sewer ran over	Process Oil Sheen	84	84 - Boat Canal	N/A	N/A	Recover	Repair/replace high level alarm/switch system	N/A	Yes - $1,000	N/A	Visual
10/7/1991	Underground crude charge line developed leak by Tank 587.	Crude Oil	420	0	N/A	N/A	Recover	Repair Crude Charge line	N/A			Visual
10/8/1991	Contractor (TIS) removal of vac. hose resulted in spill - Fina not responsible	Oil / Sheen	4	1 - Boat Canal	N/A	N/A	Recover	TIS personnel retrained on vac. truck procedures	N/A		N/A	Visual
10/12/1991	Tank 302 overfilled during latexing due to human error	Asphalt	840	0	Excellent		Recover	Personnel involved held accountable	NA contained within Tank 302 firewall			Visual
10/17/1991	Due to mechanical failure to oil recovery equipment, North CPI overflowed	Recovered Oil	294	0	N/A	N/A	Recover	Repair North CPIs	N/A			Visual
11/11/1991	Oil transfer allowed oil to exit clarifier through Ref. Outfall 003 (now Outfall 007)	Visible Sheen	42	4 - Boat Canal	N/A	N/A	Recover	Personnel involved held accountable			N/A	Visual
11/15/1991	6" wastewater line ruptured north of gasoline station in tank farm	Wastewater	840	0	N/A	N/A	Recover	Repair 6" wastewater line	N/A		N/A	Visual

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11/16/1991	00S 18" gasoline pipeline next to Dock Road developed leak on expansion joint	Gasoline / Recovered Oil	42	42 - Marsh	N/A	N/A	Recover	Repaired expansion joint/developed Spill Prevention Procedure	N/A		N/A	Visual
11/22/1991	While hooking up loading hose at Dock 1, oil spilled into river	Arabian Light Crude Oil / Sheen	4	2 - Neches River	N/A	N/A	Recover	Personnel involved held accountable/ new containment pans installed	N/A	Yes - $500	N/A	Visual
12/10/1991	TIS contractor disconnected vac. hose which drained into Boat Canal (Fina not responsible)	Oil / Sheen	4	<1 - Boat Canal	N/A	N/A	Recover	Procedure reviewed with contractor	N/A		N/A	Visual
12/11/1991	Tank 930 valve developed leak (during filling operation)	Benzene	10	0	Excellent - spill contained within TK 930 firewall		Recover	Valve repaired / set correctly	NA - contained within Tank 930 firewall		N/A	Visual
12/11/1991	Unknown source for oil sheen exiting Outfall 002	Oil Sheen	4	<0.125 - DD-7 Ditch / Molasses Bayou	N/A	N/A	Recover	Repaired valve	N/A		N/A	Visual
12/12/1991	Vac. truck unloading station outside TK 905 containment area overflowed during heavy rain event with sheen exiting Outfall 006	Oil Sheen	4	<0.125 - Boat Canal		~70 gal.	Recover	Installed spill containment basin & later installed new storm-water sump that discharges to PWTC				Visual
12/13/1991	Heavy rain event washed oil into Outfall 004	Oil Sheen	5	4 - DD-7 Ditch	N/A	N/A	Recover		N/A		N/A	Visual
12/16/1991	Pipeline leak at Crude Unit was carried with boilerhouse water to Outfall 002 & exited	Oil Sheen	4	<1 - DD-7 Ditch / Molasses Bayou	N/A	N/A	Recover	Repair pipeline	N/A	Yes - $600	N/A	Visual
12/28/1991	Underground pipeline in tank farm developed leak (near Gasoline Station)	Unfinished Jet A	15,750	0	N/A	N/A	Recover	Repaired pipeline	N/A			Visual

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1992												
1/8/1992	Tank overfilled due to human error (Tank 466)	Gas Oil	420	0	Excellent - spill contained within TK 466 firewall		Recover	Personnel involved held accountable	N/A Contained within Tank 466 Firewall			Visual
1/10/1992	Gasket on sandpiper pump failed at TK 905	Recovered Oil/ Gas Oil	126	<42 - Boat Canal	Oil sprayed out of containment area	N/A	Recover	Replaced gasket	N/A		N/A	Visual
1/21/1992	Leak developed on TK 478 floor shell	Crude Oil	8,400	0	Excellent - spill contained within TK 478 firewall		Recover	TK 478 taken out of service & repaired	N/A Contained within Tank 478 firewall			Visual
1/28/1992	TK 679 overfilled for unknown reason since RQ for oil not exceeded, not a reportable spill	Recovered Oil	15	0	Spill got out of TK 679 firewall containment area		Recover		N/A Contained within Tank 679 firewall	THIS IS NOT A REPORTABLE SPILL		Visual
2/4/1992	Unknown source, exit Outfall 002	Oil Sheen	<1	<1 gal.	N/A	N/A	Recover	Installed Spill Containment Basin	N/A		N/A	Visual
2/4/1992	Unknown source, exit Outfall 006	Oil Sheen	<1	<1 gal.	N/A	N/A	Recover	Installed Spill Containment Basin	N/A		N/A	Visual
2/8/1992	Leak between flange and xylene loading hose at Dock A	Xylene	1	1 - Neches River	N/A	N/A	Recover	Tightened flange	N/A		N/A	Visual
2/10/1992	Sump pump discharge line leak at Dock A	Ballast Water	0.5	.5 - Neches River	N/A	N/A	Recover	Repaired union	N/A		N/A	Visual
2/17/1992	Unknown source	Oil Sheen	4	4 - Boat Canal	N/A	N/A	Recover	Installed Spill Containment Basin	N/A		N/A	Visual
2/22/1992	813 Unit sewer back up, sump pump failure with sheen exiting Outfall 002	Diesel / Lube Mix / Sheen	<42	4 - DD-7 Ditch / Molasses Bayou		~5,000 gals.	Recover	Installed Spill Containment Basin	N/A		N/A	Visual
3/22/1992	Crude pipeline developed leak inside TK 588 firewall	Crude Oil	1,050	0	Excellent - spill contained within			Repaired pipeline				Visual

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Figure D.1: REPORTABLE SPILL HISTORY

Spill Date	Cause of Spill	Material Spilled	Amount of Spill (gals.)	Amount reaching Navigable Waters (gals.)	Effectiveness of Secondary Containment	Capacity of Secondary Containment	Clean Up Action Taken	Steps Taken to Reduce Recurrence	Capacity of Tanks Impoundments from Which Spill Occurred	Enforcement Action Taken Yes/No + Fines	Effectiveness of Monitoring Equipment	How Was Spill Detected?
4/6/1992	Split in hose at Dock B	Slop Oil	1	1 - Neches River	N/A	Drip pans	Dissipated	Replaced hose	N/A		N/A	Visual
4/7/1992	Bleeder valve at Dock left open on sump	Crude	5	2 - Neches River		Drip pans	Recover	New procedures	N/A	Yes - $750	N/A	Visual
4/10/1992	Tank 930 overfilled when outlet valve on TK 930 was left partially open & TK 928 gravitated to TK 930 (930 & 928 have a common pump suction)	Benzene	21	0	Excellent - spill contained within TK 463 firewall		Recover	Reviewed procedures & personnel involved held accountable	N/A Contained within TK 930 firewall			Visual
4/21/1992	Crack/hole in drip pan at Dock A	Gasoline/ Water Mix	<42	<42 - Neches River		Drip pans	Recover	Repaired, replaced pan	N/A	Yes - $800	N/A	Visual
5/2/1992	Unknown source	Oil Sheen	1	1 - Neches River	N/A	N/A	Recover	N/A	N/A		N/A	Visual
6/1/1992	Heavy rains overflowed the North Oily Water Basin to Outfall 003 (formerly Refinery 001) drainage ditch. Not reportable; RQ for oil was not exceeded & sheen did not exit Outfall 003.	CBO (Carbon Black Oil)	25	0			Recover	NOWB later replaced by new Process Stormwater sump & NOWB then clean closed & backfilled				Visual
6/2/1992	Heavy rain runoff contacted unknown source resulting in sheen exiting Outfall 002	Oil Sheen	4	4 - DD-7 Ditch / Molasses Bayou	N/A	N/A	Recover	Installed Spill Containment Basin	N/A		N/A	Visual
6/3/1992	Hose rupture at Dock B	#6 Fuel Oil	126	126 - Neches River	N/A	N/A	Recover	Replaced hose	N/A	Yes - $1400	N/A	Visual
6/11/1992	Unknown source during heavy rain event	Oil Sheen	5	4 - Neches River		2500 gals.	Recover	Repair sump pump	N/A	Yes - $700	N/A	Visual

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Figure D.1: REPORTABLE SPILL HISTORY

Spill Date	Cause of Spill	Material Spilled	Amount of Spill (gals.)	Amount reaching Navigable Waters (gals.)	Effectiveness of Secondary Containment	Capacity of Secondary Containment	Clean Up Action Taken	Steps Taken to Reduce Recurrence	Capacity of Tanks Impoundments from Which Spill Occurred	Enforcement Action Taken Yes/No + Fines	Effectiveness of Monitoring Equipment	How Was Spill Detected?
6/13/1992	Tank 463 was overfilled during ship to shore transfer due to human error	Olmeca Crude Oil	42,000	0	Excellent - spill contained within TK 463 firewall		Recover	Personnel involved held accountable	N/A Contained within TK 463 firewall			Visual
6/18/1992	Plug blew on 8" ballast line undergoing pressure test a Dock I	Recovered Oil	<1	0.125 - Neches River	N/A	2500 gals Drip Pan	Recover	Replaced plug	N/A		N/A	Visual
6/18/1992	Residue leaked from old line at Dock I during demolition by Laurel Construction	#6 Fuel Oil	42	42 - Neches River	N/A	N/A	Recover	Removed line & reviewed procedures	N/A	Yes - Reduced fine of $4000	N/A	Visual
6/23/1992	Ruptured bonnet gasket on flush line at Dock B	Furnace Oil	5	4 - Neches River	N/A	N/A	Recover	Replaced gasket	N/A	Yes - $1500	N/A	Visual
6/30/1992	Heavy rain event flushed oil into 002 stormwater ditch & exited Outfall 002	Furnace Oil	5	4 - DD-7 Ditch / Molasses Bayou	N/A	N/A	Recover	Installed additional containment	N/A		N/A	Visual
7/15/1992	Hole in Dock A drip pan	Slop Oil	42	42 - Neches River		2500 gals Drip Pan	Recover	Repair, replace Drip Pan	N/A		N/A	Visual
8/14/1992	Demolition of line at Dock 1	Crude	126	126 - Neches River	N/A	N/A	Recover	Line removed procedure reviewed	N/A		N/A	Visual
8/17/1992	While draining water from West Port Arthur Tank Farm (WPATF) storage TK 4480, the check valve failed causing sump to overflow inside TK 4480 firewall	Diesel	1,890	0	Excellent - spill contained within TK 4480 firewall		Recover	Repaired/replaced check valve				Visual
8/21/1992	Plunger plug broke when line flushed	Bunker C/Diesel	4	4 - Neches River	N/A	N/A Drip Pan	Recover	Developed Spill Prevention Procedure	N/A		N/A	Visual
8/23/1992	Tank 584 pressured up during a transfer rupturing TK 584 and spilling Carbon Black Oil (CBO) inside TK 584 firewall	CBO	21,000	0	Excellent - spill contained within TK 584 firewall		Recover & bioremediate soil	Tank 584 taken out of service				Visual

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Figure D.1: REPORTABLE SPILL HISTORY

Spill Date	Cause of Spill	Material Spilled	Amount of Spill (gals.)	Amount reaching Navigable Waters (gals.)	Effectiveness of Secondary Containment	Capacity of Secondary Containment	Clean Up Action Taken	Steps Taken to Reduce Recurrence	Capacity of Tanks Impoundments from Which Spill Occurred	Enforcement Action Taken Yes/No + Fines	Effectiveness of Monitoring Equipment	How Was Spill Detected?
8/29/1992	Tank 479's bottom ruptured spilling crude inside TK 479 irewall	Crude Oil	3,150	0	Excellent -spill contained within TK 479 firewall		Recover	TK 479 taken out of service & repaired				
9/2/1992	Bleeder valve leak on JP-4 line	Gasoline	0.125	0.125 - Neches River		2500 gals. Drip Pan	Recover	Repaired valve	N/A		N/A	Visual
9/22/1992	Process sewer backed up	Lt. Hydrocarbons Sheen	<5	4	N/A	N/A	Recover	Installed additional pumpout system	N/A		N/A	Visual
9/24/1992	TK 407 overflowed due to eaking valve and spilled inside TK 407 firewall	Olmeca Crude Oil	1,050	0	Excellent -spill contained within TK 407 firewall		Recover	Repaired valve				Visual
9/26/1992	Loading hose leak	Coker feed	30	30 - Neches River	N/A	N/A	Recover	Replace containment pans/replaced hose	N/A		N/A	Visual
10/3/1992	Water draw on TK 526 left open allowing gasoline to flow to TK 540 overfilling it & spilling inside TK 540 irewall (TK 540 RIL was open)	Gasoline	6,300	0	Spill exited TK 540 firewall & entered adjacent ditch		Recover					Visual
10/18/1992	Bleeder valve left open	Gasoline	0.125	0.125 - Neches River		2500 gals. Drip Pan		Developed procedure trained personnel	N/A		N/A	Visual
10/19/1992	Pipeline ruptured inside TK 588 irewall	Gasoline	420	0	Excellent -spill contained within TK 588 firewall		Recover					Visual
10/21/1992	Spilled crude from TK 446 into irewall due to leak in roof drain	Crude Oil	420	0	Excellent -spill contained within TK 446 firewall		Recover					Visual
10/27/1992	Flange leak	JP-4	5	4 - Marsh	N/A	N/A	Recover	Repaired flange	N/A	Yes - $1500	N/A	Visual

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Figure D.1: REPORTABLE SPILL HISTORY

Spill Date	Cause of Spill	Material Spilled	Amount of Spill (gals.)	Amount reaching Navigable Waters (gals.)	Effectiveness of Secondary Containment	Capacity of Secondary Containment	Clean Up Action Taken	Steps Taken to Reduce Recurrence	Capacity of Tanks Impoundments from Which Spill Occurred	Enforcement Action Taken Yes/No + Fines	Effectiveness of Monitoring Equipment	How Was Spill Detected?
11/3/1992	Crude charge line developed a leak underground	Crude Oil	420	0			Recover					Visual
11/3/1992	Hose ruptured at Dock A	Toluene	4.2	4.2	N/A	N/A		Alarm for high pressure on all dock systems. Install thermal reliefs	N/A			Visual
11/23/1992	Rain runoff from pump area contacting oil which created sheen at foot of Dock I	Furnace Oil	4.2	0.25 - Neches River		~750 gals	Recover	Install secondary containment pumpout system	N/A	Yes - $500	N/A	Visual
12/4/1992	Seal blown on Vacuum Truck	Oil Sheen	<42	4 - Boat Canal	N/A	N/A	Recover		N/A		N/A	Visual
12/8/1992	Contractors removed section of piping when material in open end of pipe spilled to ground in Dock A area (NOT A REPORTABLE SP LL)	Furnace Oil	42	0 (Incorrectly reported to agencies as impacting river/wetlands-spill was to land & contained by walk-ways around Dock A - NOT REPORTABLE			Recover			NOT A REPORTABLE SPILL		
12/9/1992	Steam clean runoff from Crude Unit	Oil Sheen	<0.125	<0.125 - Marsh	N/A	N/A	Recover	Developed Spill Prevention Procedure	N/A		N/A	Visual

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Figure D.1: REPORTABLE SPILL HISTORY

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1993												
1/7/1993	Suspect leak in 6" pipeline valve east of Terminal Lab (TK 411 tie-in to Barbers Hill Pipeline) with a sheen entering & exiting Refinery Outfall 004	Oil Sheen	<5	<5	N/A	N/A	Recover & excavated soil	Replaced packing	N/A		N/A	Visual
2/10/1993	Tank 941 overflowed due to malfunctioning gauge	Benzene	420	0	Excellent		Recover	Repaired/replaced gauge	N/A Contained within Tk 941 firewall			Visual
2/12/1993	During Tk 941 clean up, TIS laborer disconnected vacuum hose from truck. (Fina not respon-sible plus this spill was originally reported as benzene in error - actually not reportable.	Xylene	15	0			Recover	TIS employees retrained				
2/19/1993	Hydraulic line leak on electrical truck	Hydraulic Fluid	1	0.125 - Boat Canal	N/A	N/A	Recover	Developed Spill Prevention Procedure for vehicle	N/A		N/A	Visual
2/20/1993	Leaking control valve at DAF spilled DAF return water	DAF Return Water (Analysis later re-vealed non-hazardous - thus not reportable)	42	0			Recover	Repaired valve				Visual
2/25/1993	Sump overflow at MHC Unit after intense rain event	Sheen	<4 2	Unknown		~5000 gals. sump	Recover	Installed additional pumpout system	N/A	Yes - $500	N/A	Visual
4/8/1993	Fire at Crude Unit during heavy rain event	Sheen	<42	<42	N/A	N/A	Recover	Installed spill containment basin upstream	N/A	Dismissed	N/A	Visual

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4/14/1993	Unknown sheen at Dock B - suspected to be coming off of new piling	Sheen	0.125 (1 pint)	0.125			Recover	upstream				
5/9/1993	Underground 10" East Texas Pipeline developed leak (south of Tk 415)	Crude	210	0	N/A	N/A	Recover	Repaired pipeline	N/A			
6/22/1993	24" Cast Iron valve between Tks. 909 & 544 split open	Jet Fuel	33,600	0			Recover		N/A			
7/6/1993	Broken bleeder valve on #6 Fuel Oil line at Dock A	Recovered Oil	0.125	0.125		2500 gals. Drip Pan	Recover	Bleeder Valve replaced	N/A	Yes - $1500	N/A	Visual
7/10/1993	NOWB overflowed due to mechanical failure of pump during heavy rain event upstream of outfall 001 (back up pump down for maintenance)	Recovered Oil	420	0			Recover	Pumps repaired and later NOWB replaced by new process stormwater pump				Visual
8/21/1993	Leaking air valve at Dock B resulted in barge drip pan overflow	Benzene	50	50 - Neches River		Unknown Barge Drip Pan	Recover	Valve replaced and retrained dock personnel to double block a line	N/A	Yes - $1500	N/A	Visual
9/3/1993	Wilder pump hose came off during skimming operation at Waste Treat barrel pump	Oily Water	126	0	N/A	N/A	Recover		N/A			Visual
9/9/1993	Overhead recovered oil line near plate press developed leak	Recovered Oil (F037/FO38)	2	0	N/A	N/A	Recover		N/A			Visual
9/13/1993	High tide entering emergency bypass sewer combined with break down of berm	Sheen	<42	4 - Boat Canal	N/A	N/A	Recover	Entrance blocked	N/A	Yes - $1000	N/A	Visual

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Figure D.1: REPORTABLE SPILL HISTORY

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10/4/1993	811 sump pump float switch mal-functioned causing overflow to new Refinery outfall 002 basin where spill was contained - process water analysis later revealed non-hazar-dous thus NOT REPORTABLE		210	0			Recover	Repaired/replaced float switch		NOT A REPORTABLE SPILL		Visual
10/21/1993	Gasket blew on strainer in WPATF vertical pump suction at Gasoline Station	Gasoline	420	0	N/A	N/A	Recover		N/A			Visual
11/4/1993	During water draw of Gasoline Sales tank, sump overflowed	Gasoline	8,400	0	Excellent		Recover		N/A Contained within firewall			Visual
11/7/1993	Flange left off hose during vapor recovery pre-check	Benzene	126	3 - Neches River	Majority in Drip Pans	2500 Drip Pan	Recover	Developed proc. trained personnel	N/A	Yes - $1500	N/A	Visual
11/23/1993	West Texas 8" line to Tk 445 ruptured 3 places (near Tk 446) due to valve inadvertently being closed during transfer	Sour Crude	4,200	0			Recover/ bioremediate soil	Repaired line				Visual
12/21/1993	Underground 2" line from Crude line pit to 4" recovered oil line leaked at coupling due to area construction behind pipeline lab firewall (Reported as K049 waste in error - NOT REPORTABLE)	Crude/Water Mix	<42	0			Recover/ bioremediate soil	Repaired line/ replaced coupling	N/A Contained within Tank 588 firewall	NOT A REPORTABLE SPILL		Visual
12/30/1993	Flange in 12" Barbers Hill Line developed a leak inside Tk 588 firewall	Olmeca Crude	420	0	Excellent		Recover	Tightened flange	N/A Contained within Tk 586 firewall			Visual

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Figure D.1: REPORTABLE SPILL HISTORY

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1994												
1/10/1994	Pipeline leak at Paline Pump Station results in oil/water to fill up spill pan and overflow.	Crude Oil	210	0			Recover	Paline area upgraded Piping replaced, soil removed, concrete pad/curbing installed and roof installed over entire area				Visual
1/26/1994	Due to heavy rains, North Oily Water Basin (NOWB) overflowed Originally reported as D018 hazardous waste bypass. How-ever, analytical data indicated non-hazardous material and since RQ for oil not exceeded, NOT REPORTABLE.	Oil and Process Water	42 - Oil 210 - Process Water	0			Recover	NOWB was later replaced with new Process Water/Storm-water sump. NOWB was clean closed and backfilled		NOT A REPORTABLE SPILL		Visual
5/16/1994	Bypass of process stormwater sewer during heavy rain event which capacity of Unit 813 process water lift station and/or conveyance system may have been exceeded	Visible Sheen	4	4 - Molasses Bayou	N/A	N/A	Recover	Modify DHT-2 Area ISBL/813 sump to serve DHT-2 solely	N/A		N/A	Visual
5/16/1994	Bypass of process stormwater sewer during heavy rain event at Outfall 006 during which capa-city of South Process Sewer may have been exceeded.	Visible Sheen	4	4 - Boat Canal	N/A	N/A	Recover	Tk 905 Sump Upgrade 006 Replacement w/SW Sump	N/A	Yes - $700	N/A	Visual

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1994												
5/17/1994	Crude oil appears to have leaked from old Barbers Hill pipeline south of Tk 924 (Note: USCG & TGLO did not issue a State or Federal Notice of Oil Pollution Incident as this area has been slated for remediation previously in agreement with EPA and U.S. Army Corps of Engineers	Crude Oil	4,200	0			Recover	005 pipeline removed and area is currently being remediated				Visual
7/22/1994	Emulsified oil suspected to have entered biological treatment unit eventually enters clarifier and discharged out Outfall 007	Rainbow Sheen	<1	<1 - Boat Canal	N/A	N/A	Recover	Replaced old clarifier with 2 new clarifiers with oil skimmers	N/A	Yes - $500	N/A	Visual
8/24/1994	End plug failed on 16' pipe	#6 Fuel Oil	42	5 - Marsh	N/A	N/A	Recover	Pipeline demolished	N/A		N/A	Visual
9/12/1994	Tk 560 overfills & exits through uncapped foam laterals due to partially open run in line valve (from debris /obstruction	Gas Oil	28,350	0	Gas Oil exits containment via Tk 560 foam lat.		Recover	Repaired/capped foam laterals and removed obstruction from run in line valve				Visual
10/17/1994	During heavy rain event, oil/sheen washed out of process area sumps into stormwater surface drain & exits outfall 004	Hydrocarbon/ Process Stormwater	5	1			Recover					Visual
10/17/1994	During heavy rain event, oil/sheen is suspected to have washed out of Jiskoot sump near Dock 1	Rainbow Sheen	1	1			Recover	Jiskoot sump was upgraded with curbing raised 2 feet in				Visual

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1995												
2/9/1995	Dock A valve drip pan over-flowed - suspect Dock A process liquids/stormwater drainage system flooding	Recovered Oil	5	5			Recover			Yes - $1000		Visual
4/11/1995	Suspect roof drain hose developed leak allowing oil to enter Tk 446 firewall	Crude Oil	25,200	0	Firewall drain left open - ~50% of spill exits contain-ment		Recover	Tk 446 taken out of service and repaired				Visual
7/29/1995	Tk 443 bottom failed due to corrosion	Kuwait Crude	630	0	Firewall drain left open - 21 gals. exit containment		Recover	Demolished Tk 443 - firewall drain proce-dures reviewed				Visual
10/6/1995	During Dock 1 transfer, contrac-tors (SGS) sampling gauge blew out	Forties Crude	10	2			Recover	Repaired sampling device		Yes - $500		Visual
11/10/1995	Human error results in #6 Fuel Oil to spill into drip pan and onto Dock B	Vacuum Gas Oil (VGO)	50	O.25			Recover	Counseled/disciplined employee - trained personnel implement tagout/lockout procedure		Yes - $500		Visual
12/1/1995	67P-14/14A sump overflowed into Tk 905 firewall when auto sump level control system malfunctioned	Recovered Oil	1,050	0	Excellent - spill contained inside Tk 905 firewall		Recover		N/A Spill contained inside Tk 905 firewall			Visual
12/18/1995	During heavy rain event, wind blown hydrocarbon exits flooded ACU#2 ISBL and eventually exits outfall 004	Hydrocarbon/ Process Stormwater	5	5			Recover			Yes - $500		Visual
12/18/1995	During heavy rain event, process stormwater Tk 927 overflows eventually exiting	Process Stormwater	5	5			Recover			Yes - $500		Visual

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Figure D.1: REPORTABLE SPILL HISTORY

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1996												
2/27/1996	Out of service 8" underground pipeline installed in the 1940s & abandoned in 1970s started leaking.	Rainbow Sheen	5	5 (West End of Fina's Boat Canal)	Contained w/booms Never reached Neches River 1 mile away	N/A	Recover	Cleaned line & plugged each end with concrete	N/A	Yes - $500	N/A	Visual
3/23/1996	Hole developed in 6' loading hose due to rubbing against a nut welded to side of barge	Naphtha	0.5	0 5 (Neches River)	N/A	N/A	Recover	Hose replaced. Placement of hose to avoid sharp objects.	N/A	Yes - $500	N/A	Visual
7/13/1996	TK 660 Overflow	DAF Float Material (K048)	210	0	Excellent - Contained within TK 660 Firewall	2,362 Bbls.	Recover	Installed plates to seal gauging device.	N/A		N/A	Visual
7/16/1996	South Flare puked liquid into nearby marsh	Rainbow Sheen	21	21 (Marsh)	N/A	N/A	Recover	Installed new cleanouts on flare pipeline header.	N/A		N/A	Visual
7/29/1996	TK 660 Overflow	DAF Float Material (K048)	126	0	Excellent - Contained within TK 660 Firewall	2,362 Bbls.	Recover	Install plates to seal gauging device.	N/A		N/A	Visual
9/14/1996	Tank railcar at Acid Railcar Loading Rack overflowed	Spent Sulfuric Acid	220	0	N/A	N/A	Neutralized & Recover	Modified loading procedures - Meetings held with Acid Railcar Loading Rack Operators	N/A		N/A	Visual
9/30/1996	TK 907 Bottom Seam Failed	Alkylate	420	0	Very good - Contained within	13,672 Bbls.	Recover	Repaired tank	N/A		N/A	Visual

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1997												
6/17/1997	TK 467 Bottom Seam Failed Due To Corrosion	VGO (Vacuum Gas Oil)	21,000	0	Very good - Contained within TK 467 Firewall	40,134 Bbls.	Recover	TK 467 was taken out of service & is being repaired	N/A		N/A	Visual
9/5/1997	TK 448 Bottom Seam Failed Due To corrosion	Crude Oil	1,050	0	Very good - Contained within Tk 448 Firewall	63,019	Recover	TK 448 was already OOS & is awaiting demolition	N/A		N/A	Visual
9/23/1997	Extremely heavy rainfall event overwhelmed Tk 927 pumping/ transfer system	Benzene comingled with process stormwater	14 lbs 436,002 gallons	0	Very good - Contained within Tk 927 Firewall	49,657 Bbls.	Recover	A rainfall event of this intensity (>7"/hr) is rare - This is only 2nd time in 1990s that Tk 927 overflowed	N/A		N/A	Visual

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1998												
1/2/1998	OOS/inactive 8" pipeline within Fina PAR Tank Farm developed a pinhole leak due to corrosion	Crude	344 Bbls	0	N/A - However contained within Dock Rd Ditch	N/A (Dock Rd Ditch)	Recover	Damaged portion of 8" pipeline was removed & blind flanges installed thus isolating 8" pipeline from 10" Amdel Pipeline	N/A		N/A	Visual
2/10/1998	20" crude oil pipeline east of Tank 451 within Fina PAR's Tankfarm developed a leak due to corrosion during a heavy thunderstorm event	Crude	< 10 Bbls	0	009 Outfall Control Structure was open at the time of the thunderstorm which resulted in sheen exiting past the monitoring point of permitted Outfall 013 on 2/11/98.	970 Bbls (009 Outfall Control Structure)	Recover	Damaged portion of 20" crude oil pipeline was clamped. During August 1998, PAR will remove approximately 4,350 feet of various crude oil pipelines within the southwest corner of PAR's TKFM.	N/A		N/A	Visual
2/11/1998	Following a heavy thunderstorm event, sheen exited past the monitoring point of permitted Outfall 013.	Sheen	< 10 gals	0	N/A	N/A	Recover	Damaged portion of 20" crude oil pipeline was clamped. During August 1998, PAR will remove approximately 4,350 feet of various crude oil pipelines within the southwest corner of PAR's TKFM.	N/A		N/A	Visual

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Figure D.1: REPORTABLE SPILL HISTORY

Spill Date	Cause of Spill	Material Spilled	Amount of Spill (gals.)	Amount reaching Navigable Waters (gals.)	Effectiveness of Secondary Containment	Capacity of Secondary Containment	Clean Up Action Taken	Steps Taken to Reduce Recurrence	Capacity of Tanks Impoundments from Which Spill Occurred	Enforcement Action Taken Yes/No + Fines	Effectiveness of Monitoring Equipment	How Was Spill Detected?
1998												
4/5/1998	8" relief line developed a pinhole leak due to corrosion (North of Tank 303)	Crude	8 Bbls	0	Spill was contained within two downturned pipe oil traps within Dock Road Drainage Ditch	N/A	Recover	Damaged portion of 8" relief line was clamped. During August 1998, PAR will remove approximately 4,350 feet of various crude oil pipelines within the southwest corner of PAR's TKFM.	N/A		N/A	Visual
6/12/1998	Appears block valves were not completely closed (possibly due to debris) as blinds were being installed by contractors @ the Sulfalone Unit	Benzene	21 gallons (0 5 Bbls)	0	Spill was contained within North Process Sewer @ North Barrel Pumps	N/A (ISBL & North Process Sewer)	Recover	Operators tightened up block valves & blinds were installed	N/A		N/A	Visual
9/30/1998	OOS 16" underground crude line developed leak underneath Dock I approach where 16" line ends at Neches River shoreline	Rainbow Sheen	1gallon (0.024 Bbls)	0	N/A - OOS 16" line was located next to Neches River & spill entered river	N/A	Recover	Fina PAR had all OOS lines located underneath Dock I Approach removed & then backfilled the site with concrete	N/A		N/A	Visual
12/22/1998	Appears Fire Pump 83J-24 had a Trico lubrication bulb develop a seal leak resulting in lube oil/sheen entering Fina PAR's Boat Canal	Lube Oil/ Rainbow Sheen	2 Ounces (<0 0004 Bbls)	0	Spill was contained within extreme west end of PAR's Boat Canal	N/A	Recover	MWO# 44506 was prepared & all lubrication bulbs on Fire Pump 83J-24 were replaced	N/A		N/A	Visual

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1999												
2/6/1999	Temporary clamp on 8" transfer line leaked after completion of UFFO transfer on 2/5/99.	Unfinished Furnace Oil	4,200	0	N/A	N/A	Contained & recovered spill	Replaced clamp with heavy duty clamp & welded clamp seams & holes	N/A	No	N/A	Visual
3/13/1999	Heavy rain event overwhelmed ACU-2 process sewers & entered stormwater drainage system to Outfalls 003 & 004 resulting in rainbow sheen exiting outfalls	Rainbow Sheen	10 total (5 gals exited each outfall)	0	N/A	N/A	Contained & recovered sheen	Cleaned out ACU-2 process sewer system	N/A	$500 USCG $250 TGLO	N/A	Visual
9/8/1999	During routine test of portable firewater pump next to Neches River shore near PAC's Dock A, lube oil leak occurred & entered river & caused a visible sheen	Rainbow Sheen	0.03125	0 03125 - Neches River	N/A	N/A	Contained & recovered sheen	Provide secondary containment for portable firewater pump when testing in the future	N/A	Yes - $500 (USCG)	N/A	Visual
10/6/1999	Tank 923 developed a small slit at the 22' level due to corrosion	Alkylate	546	0	Excellent - spill was contained inside firewall	10,500 Bbls (441,000 Gals)	Recovered spill	Repaired Tk 923	18,000 Bbls	No	N/A	Visual
10/28/1999	16" yard crude line developed a leak due to corrosion	VGO/Crude Oil	630	0	N/A	N/A	Contained & recovered spill	Repaired line	N/A	No	N/A	Visual

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2000												
4/7/2000	Material Failure: 16" yard line developed leaks in two separate locations due to corrosion.	Crude Oil	21,000	0	N/A	N/A	Contained spill & recovered	Repaired line	N/A	No	N/A	Visual
5/3/2000	During heavy rain event, south process sewer pump station auto level instrument controller failed resulting in oil & process water bypassing into PAC's Boat Canal	Untreated process water, oil & rainbow sheen	40	40 (However, spill never passed beyond PAC's side of DD-7 Hurricane Levee)	N/A	N/A	Contained spill within extreme west end of Boat Canal & recovered	Instrument level controller was replaced	N/A	Yes - $1,500.00 ($1,250 USCG) ($250 TGLO)	N/A	Visual
11/12/2000	Equipment Failure: Mixer on Tank 480 developed a leak.	Crude Oil	1,050	0	Excellent - spill was fully contained within firewall	14,380,128 Gals (342,384 Bbls)	Recovered spill	Mixer was replaced	(b) (7)(F), 0) (14,364,000 Gals)	No	N/A	Visual

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2001												
1/6/2001	Equipment Failure: Line blew out probably due to internal corrosion & overpressurization.	Sulfuric Acid	84	0	N/A	N/A	Contain, neutralize & recover	Line was replaced (relief valve to be installed on line)	N/A	No	N/A	Visual
1/7/2001	Equipment Failure: Tank 923 shell developed a leak due to internal corrosion.	Sulfuric Acid	6,300	0	Excellent - spill was contained inside firewall	10,500 Bbls (441,000 Gals)	Neutralize & recover	Hole was patched (A new Tank 923 has been constructed)	18,000 Bbls	No	N/A	Visual
2/7/2001	Equipment Failure: Contractor trackhoe slid off TK 477 firewall & hit a concrete slab which then slid over & broke off a 1" plug on an old ACU-2 charge line sample loop that was under pressure.	Crude Oil	16,800	0	N/A - Spill was outside firewall	N/A	Secured charge line, contained & recovered spill followed by bioremediation of affected soil	Plug/nipple was replaced.	N/A	No	N/A	Visual
5/1/2001	Human Error: Contractor was parting flange connection on discharge line from pH Adjustmen Splitter Tank (TK 402) allowing F037 wastewater to flow out & overtop 1/2 barrel drip pan.	F037 Wastewater	30	0	N/A - Spill was inside Process Water Treatment Complex (PWTC) battery limits but soil not concrete	N/A	Spill was contained within PWTC battery limits and recovered	Contractor was retrained in procedure to follow when parting flanges	N/A	No	N/A	Visual
6/16/2001	Human Error: Pipeline Coordinator did not notice bleeder valve was open during transfer resulting in crude oil metering station sump to overfill into surrounding soil/ditch area	Crude Oil	3,150	0	N/A	N/A	Spill was contained & recovered	A tagging procedure for all pipeline transfer equipment mechanical work was implemented & personnel retrained	N/A	No	N/A	Visual

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2001												
8/6/2001	Human Error: MV Eagle Charlotte passed by PAR's Docks at high rate of speed while MV Genmar Constantine was transferring crude oil at Dock I, causing MV Genmar Constantine to pull away resulting in spill to Neches River	Crude Oil	1,260	1,260 (Neches River)	N/A	N/A	Spill was contained & recovered		N/A	Yes - $1,250 fine	N/A	Visual
8/30/2001	Equipment Failure: Consecutive heavy rainfall events (approx 8 5" over 5 days) resulted in TK 927 pumping/transfer system & TK 500B pumping/transfer system being overwhelmed resulting in both tanks overflowing into their respective firewalls/secondary containment	Benzene (D018 hazardous waste) comingled with untreated process stormwater	approx 0 5 lbs Benzene with 46,200 gals (TK 927) & approx 18 lbs Benzene w/ 36,771,000 gals (TK 500B)	0	Excellent at TK 927 firewall where spill was contained N/A for TK 500B as adjacent firewalls had to be used to contain the spill		Spill was contained & recovered followed by bioremediation of affected soil	Effluent line to Neches River was pigged which regained approx 600 gpm flow rate. Thus, can dewater Tank 500B faster	N/A	No	N/A	Visual
9/9/2001	Human Error: Operator overfilled TK 313 into its firewall	Asphalt	420	0	Excellent - spill was contained within firewall		Spill was contained & recovered	Operator was counseled & retrained in filling/transfer procedures	N/A	No	N/A	Visual

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2001												
10/8/2001	Equipment Failure: TK 543 roof drain developed a leak coupled with clousre of the roof drain prior to heavy rain event resulted in tank roof collapse. During subsequent dewatering of collapsed roof, jet fuel mixed with rainwater was released inside the firewall/secondary containment	Jet Fuel	2,814	0	Excellent - spill was contained inside firewall		Spill was contained & recovered	TK 543 roof & roof drain were repaired		No	N/A	Visual
11/23/2001	Human Error: Operator mistakenly opened wrong valve during transfer operation and overfilled TK 302 into its firewall	Asphalt	58,800	0	Excellent - spill was contained within firewall		Spill was contained & recovered	Operator was counseled & retrained in filling/transfer procedures	N/A	No	N/A	Visual

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2002												
3/25/2002 (PAR NOT Responsible since ATOFINA Pipeline Co spill)	Human Error: Contractor operator left rear valve open on vacuum truck while disconnecting hose at PAR Pipeline Metering Station	Crude Oil	42 (new DOT Pipeline RQ = 5 gals)	0	N/A	N/A	Spill contained & recovered	Operator was counseled & retrained	N/A	No	N/A	Visual
4/12/2002	Equipment Failure: Part of Alky's sump has deteriorated allowing sulfuric acid & process water to be released into the subsurface soils.	Process Water & Sulfuric Acid Mixture	Sulfuric Acid RQ of 65 gallons was exceeded (Approx 20 barrels but exact volume unknown)	0	N/A	N/A	RFA to be done	RFA to be done	N/A	Unknown	N/A	Visual
6/28/2002	Equipment Failure: Tk 920 foam lateral developed leak plus roof sunk below product level.	Naphtha	8,778 outside Tk firewall & 276,360 inside firewall.	0	N/A - as spill exited firewall via foam lateral		Spill contained & recovered	TK 920 foam lateral & roof will be repaired	N/A	No	N/A	Visual
7/9/2002	Equipment Failure: Tk 902 underground run-in line developed a leak outside Tk 938 firewall	LCO	4,200	0	N/A	N/A	Spill contained & recovered	Repaired underground line	N/A	No	N/A	Visual

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2002												
7/12/2002	Human Error: Operator left sample port open on Tk 303 resulting in spill	Asphalt	6,300	0	Excellent - as spill did not exit firewall		Spill contained & recovered	Operator was counseled & retrained	N/A	No	N/A	Visual
8/15/2002	Equipment Failure: Heavy rainfall events (approx. 8.06 inches over 6 days) resulted in TK 927 & TK 500 A&B pumping / transfer system being overwhelmed & causing TK 927 to overflow and TKS 500 A&B to be dewatered from their lower section into their respective firewalls	Untreated process water & containing a combined total of 15 lb of Benzene comingled with 87,690 barrels of process stormwater	3,683,000 of process stormwater containing 15 lbs of BZ	0	Excellent - as spill did not exit firewall	N/A	Spill contained & recovered	Stormwater Mgmt Study being conducted	N/A	Unknown	N/A	Visual

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2002												
9/19/2002	Human Error: During extremely heavy rain event, PWTC Operator inadvertently shutdown the wrong pump within Tank 927's pumping / transfer system causing an overflow into firewall.	Oil comingled with untreated process stormwater	210 gals of oil comingled with approx. 927,000 of untreated process stormwater	0	N/A - as firewall drain was opened to allow drainage to process sewer but 811 sump was overwhelmed resulting in untreated process stormwater exiting manholes upstream of 811 sump and entering stormwater control structures B & C and then exiting stormwater Outfall 003	N/A	Spill contained & recovered	Operator was counseled & retrained Mgmt Study being conducted	N/A	Unknown	N/A	Visual
11/8/2002	Equipment Failure: During transfer at Dock B, 8" stainless steel transfer hose developed a pinhole leak roughly 10' from dock manifold.	Furnace Oil	< 1 gallon of sheen into Neches River	< 1 gallon as sheen	N/A	N/A	Sheen was recovered	Transfer hose was immediately replaced with a new transfer hose	N/A	Yes - $250.00 fine	N/A	Visual
11/16/2002	Human Error: TK 523 Pump P-522 was changed out by maintenance dept personnel but forgot to install plugs into pump casing resulting in spill	Asphalt	10 barrels (420 gallons)	N/A	N/A (However, spill was contained within PAR's tankfarm)	N/A	Spill was contained & recovered	Plugs were installed in P-522 casing	N/A	Unknown	N/A	Visual

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2003												
2/21/2003	Equipment Failure: South Stormwater Pumps failed to activate resulting in south barrel pump bypass into PAR's Boat Canal / Outfall 003	Untreated process water	357	21	N/A - as spill exited south barrel pump sump	N/A	Spill contained & recovered within overflow culvert & PAR's Boat Canal	South Stormwater Sump was cleaned as well as south barrel pump sump & diversion box	N/A	Yes - TGLO $500.00	N/A	Visual
3/10/2003	Equipment Failure: A pinhole leak developed within Tank 910 24" suction line due to corrosion	Alkylate	420	0	N/A - as firewall drain was partially open allowing spill to enter ditch	N/A	Spill contained & recovered within ditch & Tk 910 firewall	Line was taken out of service permanently	N/A	No	N/A	Visual
6/13/2003	Equipment Failure: Clamp previously installed on underground transfer line began to leak due to corrosion near old Automotive Shop & south of Tank 478 firewall	Crude Oil	336	0	N/A - as this was an underground transfer line outside of firewalls / containment	N/A	Spill was contained using sump pit & filter cage in nearby ditch	Line was permanently removed from service	N/A	No	N/A	Visual
6/19/2003	Equipment Failure: Mixer on Tank 479 developed a leak due to corrosion	Crude Oil	504	0	Excellent - as spill did not exit firewall	N/A	Spill contained & recovered	Mixer was repaired	N/A	No	N/A	Visual
7/23/2003	Equipment Failure: Thermo coupling weld failed at Dock 2 allowing crude oil to exit conduit into Neches River	Crude Oil	5	5	N/A	N/A	Spill contained & recovered	Thermo coupling was repaired & other docks checked	N/A	Yes - TGLO $500.00	N/A	Visual

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2004												
1/5/2004	Human Error: 3/4" bleeder valve was left open at Dock A by contractor after welding work completed resulting in release of furnace oil into Neches River during transfer line fill operation	Furnace Oil	0.125 (1 pint)	0.125	N/A	N/A	N/A - as sheen quickly dissipated	Contractor was reminded of requirement to make sure all valves are closed	N/A	Yes - TGLO $250.00	N/A	Visual
1/8/2004	Equipment Failure: A power outage occurred which resulted in Dock 2 firewater system activating after power was restored resulting in Dock 2's oily water in rerun sump / containment to overflow into Neches River	oil / water mixture	1	1	N/A - as firewater caused overflow of Dock 2 rerun sump		Spill contained & recovered	Check valves were installed on fire water system to prevent activation of firewater after a power outage	N/A	Yes - TGLO $250.00	N/A	Visual
5/11/2004	Equipment Failure: Leak on underground transfer line on blind flange (line is located between Tank 942 and Tank 530 firewalls	Raffinate	840	0	N/A - as this was an underground transfer line outside of firewalls / containment	N/A	Spill was contained & recovered	Blind flange was tigthened to stop leak	N/A	No	N/A	Visual

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2004												
5/13/2004	Human Error: During heavy rain events (approx. 9 inches over 72 hours), PWTC operator shut off Cosden Process Stormwater Pond pump to reduce amount of water entering Tank 927 but this resulted in an overflow of Cosden Pond emergency overflow weir into permitted Stormwater Outfall 003 drainage system and thus a bypass of untreated process stormwater occurred	Untreated process stormwater (no oil / any hydrocarbons present based on lab analysis	Unknown	0	N/A - as overflow weir was breached	N/A	N/A as no oil / sheen was present	PWTC Operators were retrained in operation of Cosden Pond Pump	N/A	No	N/A	Visual
5/13/2004	Equipment Failure: During heavy rain events (approx. 9 inches over 72 hours), one of two operating South Stormwater Pumps tripped off at South Process Stormwater Sump resulting in overflow of South Barrel Pump Sump overflow weir and discharge of untreated process stormwater and oil	Untreated process stormwater and oil	Unknown	0 - As oil / sheen was contained within west end of PAR's Boat Canal and never exited through DD-7 Hurricane Levee underflow culvert	N/A - as overflow weir at South Barrel Pump Sump was breached	N/A	Spill contained & recovered	Pump breaker was reset and restarted (Investigation into pump shutdown still ongoing)	N/A	No	N/A	Visual

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2004												
5/13/2004	Equipment Failure: During heavy rain events (approx. 9 inches over 72 hours), PWTC (Process Water Treatment Complex) was at 5.04 - 5.18 MGD flow rate when float tank overflowed and entered permitted Stormwater Outfall 003 drainage system resulting in bypass of Treated Process Water Outfall 001 monitoring point	treated process water	Unknown	0 - this was treated process water with no oil or sheen present	N/A- as firewall was compromised due to leak following transfer lines	N/A	N/A - as this was treated process water TPDES Permit violation ONLY	A written procedure will be prepared to prevent an overflow of the float tank in the future	N/A	No	N/A	Visual
5/17/2004	Equipment Failure: Due to hole in Tank 475 roof drain, crude oil leaked into secondary containment surrounding Tank 475 but was able to exit TK 475 firewall alongside transfer lines that passed through firewall and entered TK802 firewall plus nearby ditch next to Tk475 spill also exited TK 802 firewall alongside transfer lines that passed through 802 firewall and entered ditch next to TK 802	Crude Oil	42,000	0 (spill was contained within PAR's tankfarm)	N/A		Spill contained & recovered	Roof drain will be repaired and gaps around transfer lines were sealed using bentonite pellots	N/A	No	N/A	Visual
5/29/2004	Equipment Failure: Due to a hole (caused by corrosion) in 8 inch underground Tk 476 run-in line, oil was released inside firewall	Crude Oil	4,200	0 (spill was contained within TK 476 firewall)	N/A		Spill contained & recovered	Line will be repaired	N/A	No	N/A	Visual

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2004												
5/13/2004	Equipment Failure: During heavy rain events (approx. 9 inches over 72 hours), PWTC (Process Water Treatment Complex) was at 5.04 - 5.18 MGD flow rate when float tank overflowed and entered permitted Stormwater Outfall 003 drainage system resulting in bypass of Treated Process Water Outfall 001 monitoring point	treated process water	Unknown	0 - this was treated process water with no oil or sheen present	N/A- as firewall was compromised due to leak following transfer lines	N/A	N/A - as this was treated process water TPDES Permit violation ONLY	A written procedure will be prepared to prevent an overflow of the float tank in the future	N/A	No	N/A	Visual
5/17/2004	Equipment Failure: Due to hole in Tank 475 roof drain, crude oil leaked into secondary containment surrounding Tank 475 but was able to exit TK 475 firewall alongside transfer lines that passed through firewall and entered TK802 firewall plus nearby ditch next to Tk475 spill also exited TK 802 firewall alongside transfer lines that passed through 802 firewall and entered ditch next to TK 802	Crude Oil	42,000	0 (spill was contained within PAR's tankfarm)	N/A		Spill contained & recovered	Roof drain will be repaired and gaps around transfer lines were sealed using bentonite pellots	N/A	No	N/A	Visual
5/29/2004	Equipment Failure: Due to a hole (caused by corrosion) in 8 inch underground Tk 476 run-in line, oil was released inside firewall	Crude Oil	4,200	0 (spill was contained within TK 476 firewall)	N/A		Spill contained & recovered	Line will be repaired	N/A	No	N/A	Visual

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2005												
2/24/2005	6 oil spill @ dock 3b spilled from hose after disconnect from barge header		10	10			Boom Deployed – PSC performed cleanup activities		N/A		N/A	Visual by dockman
12/16/2005	Crude Oil spill @ Dock 2 due to Fire monitor malfunction		> 1	> 1	Containment sump Flooded, spilled oil to river		N/A		N/A		N/A	Visual
12/18/2005	Light cycle oil spill @ Dock 1a Due to failed barge pump seal during discharge		> 1	> 1			N/A		N/A			
2006												
1/10/2006	Spent acid spilled into stormwater ditch when it sprayed outside of tank containment.	Spent Acid	1,940 lbs		Sprayed outside of containment		Spill contained – PSC performed cleanup activities		N/A		N/A	Visual
4/22/2006	Crude Oil spill @ Dock 1 due to gasket failure	Crude	25	25			Containment boom deployed. PSC cleaned up.		N/A		N/A	Visual
9/15/2006	Crude Oil spill @ Dock 2 due to thermowell failure	Crude	.5	.5			Containment boom deployed. PSC cleaned up.		N/A		N/A	Visual

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2007												
9/16/2007	Roof drains on tank 1001 plugged and roof sank. Caused sour water to spill into dike area.	Sour Water	5-10 bbls		Completely contained		Spill contained – PSC performed cleanup activities		N/A		N/A	Visual
2008												
1/26/08	Heavy reformate spill at the sulfolane unit. Most of the product went to the process drains, some of it went to the stormwater drains.	Heavy Reformate	20 bbl		Some got into Stormwater drains.		Stormwater basin And lines are Being cleaned		N/A		N/A	Visual
1/14/08	Tank 317 was over filled and Product spilled into dike area.	FAS 150	200		Completely contained		PSC performed cleanup activities					Visual
3/30/08	PFO/PGO spill at dock 3B, caused by a hose rupture.	PFO/PGO	10		~5 bbls on dock ~ 5 bbls in river		PSC performed cleanup activities					Visual
8/9/08	Sheen discovered downstream Of Outfall 003 after heavy rain. Structure C was source of sheen	Oil sheen	<1 gal		Some oil got past containment		PSC performed cleanup activities					Visual
9/13/08	Hurricane Ike. Process sewers overflowed to stormwater system due to complete power failure.	Slop Oil	5 bbls		Loss of containment		PSC performed cleanup activities					Visual
2009												
8/24/09	Flange on the diesel product line at Dock 3B over pressured due to thermal expansion and leaked approximately one gallon of product into the river. The pressure was relieved by opening the diesel run-around to crude. Boom and spill response teams were activated.	Diesel	< 1 gal	< 1 gal	N/A	N/A	Spill response team was activated. Spill was contained and absorbent pads were used to clean it up.	Updated Safety procedure to add provision for thermal relief to Log Out Tag Out Procedure	N/A	Fine	N/A	Visual

PORT ARTHUR COMPLEX

Figure D.1: REPORTABLE SPILL HISTORY

Spill Date	Cause of Spill	Material Spilled	Amount of Spill (gals.)	Amount Reaching Navigable Waters (gals.)	Effectiveness of Secondary Containment	Capacity of Secondary Containment	Clean Up Action Taken	Steps Taken to Reduce Recurrence	Capacity of Tanks Impoundments from Which Spill Occurred	Enforcement Action Taken Yes/No + Fines	Effectiveness of Monitoring Equipment	How Was Spill Detected?
2009												
12/29/2009	24 inch Transfer line in Tank 481 area leaking	Crude	230 bbls	0	Completely contained		Spill contained – PSC performed cleanup activities		N/A	No	N/A	Visual
2010												
5/13/2010	Sump dripping at Dock 3A when performing dock testing.	Oily water (slop)	1 qt	1 qt	Contained sheen under dock		Contained sheen under dock and used absorbent pads to soak up	Changed procedure for dock testing.	N/A	Yes/Fine	N/A	Visual
9/7/10	A DCP tie-in valve developed a bonnet leak while a #6 Oil barge was loading. The valve is under the pump shed at the Bunker "C" Station on the new ATRES bypass line.	# 6 oil	89 bbls	0	Completely contained		PSC performed cleanup activities			No	N/A	Visual

E.1 OVERALL TRAINING

E.1.1 PURPOSE AND SCOPE OF EMERGENCY RESPONSE TRAINING

The training of Total Port Arthur Refinery's (PAR) incident management team personnel is vital to provide members with the ability to respond to any/all incidents safely and effectively. All members regardless of team position must receive training that provides a means in which they can increase their knowledge and practice their skills in realistic training exercises.

The training shall provide employees the emergency readiness that if confronted by an emergency that they can respond promptly and efficiently to save lives and protect the environment and property.

PAR personnel / employees will be retrained when there are significant changes to the ICP. Only properly trained team members or contractors are allowed to respond to incidents. No volunteers are allowed.

Each PAR employee presently involved in operating a process, and each employee before being involved in operating a newly assigned process, shall be trained in an overview of the process and in the operating procedures specified in 29 CFR 1910.119(f). The training shall include emphasis on the specific safety and health hazards, emergency operations including shutdown, safe work practices applicable to the employee's job tasks.

Training provided shall meet or exceed all federal, state, and corporate standards and policies.

Total PAR management shall support the training system to ensure its effective and durable and above all provides members of the team the ability to respond safely to an incident. The ultimate goal is to provide training that can eliminate injuries and illnesses when responding to incidents.

The following training is a guideline to be followed but is not limited to only those topics. All training needs to be properly documented and supervised by trained instructors/supervisors where applicable per state and federal guidelines.

E.2 SPECIAL TRAINING

E.2.1 FIRE PREVENTION/DRILLS

- Evacuation and personnel accounting drills.
- Maintaining housekeeping practices.
- Hot work procedures, programs.

E.2 SPECIAL TRAINING (Cont'd)

E.2.2 FIRE EXTINGUISHERS

- All Total PAR employees will train on the following:
- Types and locations.
- Instruction/use of all portable and wheeled extinguishers, A, B, C, D, hands on instruction/ practice.

E.2.3 PROTECTIVE BREATHING APPARATUS (SCBA)

- Inspection and use and maintenance.
- Types and components.
- Safety precautions, stresses.

E.3 INCIDENT MANAGEMENT TEAM

E.3.1 PURPOSE OF TRAINING THE INCIDENT MANAGEMENT TEAM

The purpose of this standard is to specify minimum requirements of competence for those who will respond to hazardous materials incidents. Training personnel in emergency response procedures will provide personnel a means by which all members increase their knowledge and practice their hands-on-skills in practical applications. One of the purposes of the qualification requirements contained herein is to reduce the number of accidents, injuries, and illnesses during response to hazardous materials incidents and to help prevent exposure to hazardous materials to reduce the probability of fatalities, illnesses, and disabilities affecting emergency response personnel.

E.3.2 TRAINING SCOPE OF INCIDENT MANAGEMENT TEAM

- All members of the Incident Management Team will be trained in accordance with the following requirements: OSHA 29 CFR 1910.120 (HAZWOPER Standard); 29 CFR 1910.134 (Respiratory Protection Standard); NIMS training per FEMA standards.
- All members of the team will be trained per their Incident Management Team position as shown in Figure E.1 in accordance with HAZWOPER.
- All members are required to complete the NIMS training needed for their team position as a condition of continued membership on the Incident Management Team. Please refer to the Training Matrix on the training department web site for a listing of the overall training required to be completed.

E.3 INCIDENT MANAGEMENT TEAM (Cont'd)

E.3.3 INFORMATION MANAGEMENT

- Record systems
- Documentation filing systems
- Information transfer (i.e. forms)
- Public Relations and information
- Media training

E.3.4 SAFETY

- Attitudes and background
- Safety as an economic issue
- Contractor Safety/Documentation
- Medical Surveillance
- Safety Officer

E.4 FREQUENCY OF INCIDENT MANAGEMENT TEAM TRAINING

E.4.1 BASELINE TRAINING

All members of PAR's Incident Management Team regardless of team position must receive baseline training that provides a means in which they can increase their knowledge of their assigned team position and practice their skills in realistic training exercises / drills.

E.4.2 ANNUAL REFRESHER TRAINING

All members of PAR's Incident Management Team will be provided with annual refresher training regarding their team position, the Integrated Contingency Plan (ICP)/ Tactical Response Guide (TRG), Incident Action Plan (IAP) Software (if applicable), QI training (if applicable), and / or crisis communications.

E.4.3 RETRAINING UPON ASSIGNMENT TO NEW TEAM POSITION

All members of PAR's Incident Management Team must be retrained when they have been assigned to a new position or there have been significant changes to the Integrated Contingency Plan (ICP) and / or the Tactical Response Guide (TRG).

E.5 DRILLS

E.5.1 FACILITY/OPERATIONS DRILLS

Incident Management Team members, various agencies, contractors, and others will participate in emergency response simulation drills as required by federal, state, and local regulations, as detailed in the "National Preparedness for Response Exercise Program" (PREP). Total PAR will utilize announced and unannounced notification exercises, equipment deployment exercises, tabletop exercises, and/or various combinations to ensure that each component of the Plan is exercises as required. It is the responsibility of the Security Supervisor to coordinate the drill program with the Total Port Arthur Refinery terminal personnel and Total Petrochemical Pipeline Company personnel.

Drill simulation exercises will be conducted by various methods, such as call out drills, "tabletop" simulations, equipment mobilization, and field simulation exercises. It is important to exercise each group's functional responsibilities within the Total PAR Incident Management Team under (e.g. Fire Brigade, Medical, etc.) the Incident Command Management System.

Various methods will be utilized to conduct oil spill exercises in accordance with regulatory requirements for drills and exercises. Total PAR will utilize "tabletop" simulations, notification exercises, field deployment drills and/or combinations of all to ensure that each component of the response manual is exercised as required. This would include emergency procedures for shutting down pipelines under the jurisdiction of this Integrated Contingency Plan (ICP).

E.5.2 TOTAL PAR INCIDENT MANAGEMENT TEAM DRILL MATRIX

Figure E.2 illustrates the minimum triennial cycle for exercises at the Total Port Arthur Refinery. Total will conduct exercises to ensure that the Incident Management Team is properly organized and is responding in accordance with the Integrated Contingency Plan. Periodic announced and unannounced drills will be conducted according to the OPA-90/PREP Guidelines.

E.5 DRILLS (Cont'd)

E.5.3 QUARTERLY QI NOTIFICATION EXERCISE

Each quarter, Total Port Arthur Refinery will conduct an exercise to test the notification procedures and processes of the Incident Management Team within the facility. All personnel receiving notification of the alert shall respond to the individual initiating the drill and verify the receipt of the notification. Personnel not responding shall be contacted to determine whether or not they received the notification. If it is determined that equipment failure or problems resulted in notification being delayed or prevented, such problems will be identified and corrected prior to the next exercise. Notification response shall be logged and maintained for a period of at least five (5) years.

Scope: Exercise communication between facility personnel and the Qualified Individual(s) and/or designated alternate(s). At least once each year, one of the notification exercises should be conducted during non-business hours. Figure E.3 summarizes the training requirements for a Qualified Individual.

Objective: Contact must be made with a Qualified Individual or designated alternate, as identified in the Integrated Contingency Plan (ICP).

General: All personnel receiving notification shall respond to the notification and verify their receipt of the notification. Personnel who do not respond should be contacted to determine whether or not they received the notification.

E.5.4 SEMI-ANNUAL EQUIPMENT DEPLOYMENT EXERCISE

Total PAR will conduct semiannual oil spill equipment deployment drills in accordance with the regulations. During these exercises, PAR's response equipment will be deployed to simulate local response to a spill occurring at the Total Port Arthur Refinery. Deployment should reflect strategies included in the Total Port Arthur Refinery Tactical Response Guide (TRG) for protecting adjacent interests and areas. Records of the equipment deployed, personnel involved, and other information regarding the exercise shall be maintained for a period of at least five (5) years.

Scope: Deploy and operate PAR's response equipment identified in the Integrated Contingency Plan. The equipment to be deployed must include the following at a minimum:

Objective: Demonstrate the ability of the personnel to deploy and operate response equipment. Ensure that the response equipment is in proper working order.

General: Total PAR may take credit for actual equipment deployment to a spill or training sessions as long as the activities are properly documented.

E.5 DRILLS (Cont'd)

E.5.5 ANNUAL RESPONSE TEAM TABLETOP EXERCISE

Annually, Total PAR will conduct at least one (1) unannounced oil spill exercise for the Incident Management Team and appropriate response contractor(s). The Total PAR Incident Management Team and selected contractor personnel will be notified and should respond as to a discharge at the Total Port Arthur Refinery. Goals and objectives for the exercise will be prepared in advance and the response will be evaluated against the goals/objectives set. Records for these exercises shall indicate personnel and contractors participating, scenario for the exercise, and results obtained and must be maintained for at least five (5) years. If equipment is deployed during this exercise, it may be counted as one of the "semiannual" deployment drills.

Scope: Exercise the Incident Management Team's organization, communication, and decision making in managing a spill response. The Incident Management Team identified within the Integrated Contingency Plan is required to conduct an annual Incident Management Team Tabletop Exercise.

Objective: Exercise the Incident Management Team in a review of the following:

- Knowledge of the contents of the Integrated Contingency Plan (ICP), including the Emergency Response Action Plan (contained within the front of the ICP), and the DOT Response Zone Information Summary.
- Proper notifications.
- Communications system.
- Ability to access an OSRO (Oil Spill Removal Organization).
- Coordination of Incident Management Team personnel (internal).
- Review of the transition from a local Incident Management Team to a regional, and national.Ability to effectively coordinate response activity with the National Response System (NRS) Infrastructure.
- Ability to access information in the Area Contingency Plan.

General: A minimum of one Incident Management Team Tabletop Exercise in a triennial cycle will involve simulation of the Worst Case Discharge scenario.

E.5.6 OSRO ANNUAL EQUIPMENT DEPLOYMENT EXERCISE

Total PAR will request from each of its contracted OSROs (Oil Spill Removal Organization) a copy of their annual equipment deployment exercise. In addition, if possible, Total PAR will make a representative available to attend one annual OSRO equipment deployment drill each year. The following year, if possible, PAR will send a representative to a different annual OSRO equipment deployment drill. At present, PAR's contracted OSROs are Miller Environmental, Garner, and Oil Mop with each located in the Port Arthur, TX area. These records / copies of the annual contracted OSRO equipment deployment drills shall be maintained at PAR for a period of at least five (5) years.

E.6 TOTAL PETROCHEMICAL PAR TRAINING RECORDS

Training records for each Incident Management Team member will be maintained at the Refinery and will reflect training activities for as long as the member serves on the Incident Management Team. These records will be available to all agencies, including the USCG, EPA, RSPA-DOT, and other state and local agencies. The Refinery utilizes a Training Coordinator to coordinate and document the training activities for all team members, response personnel, instructors, and outside training organizations. All training records for Incident Management Team members are maintained within the Total PAR Training Department's computerized TRIM (Training Records Information Manager) File System.

FIGURE E.1

TOTAL PETROCHEMICAL PORT ARTHUR COMPLEX
INCIDENT MANAGEMENT TEAM TRAINING

TEAM POSITION	TRAINING CLASS			
	40 Hr	24 Hr	4-8 Hr Intro with Annual Refresher*	8 Hr Annual Refresher
Incident Commander (FR)			X	X
Deputy Incident Commander (IC)	X			X
Public Affairs/Information Officer (FR)			X	
Liaison Officer (HMS)		X		X
Safety Officer (HMT)	X			X
Operations Section Chief (HMT)		X		X
Operations Branch Director (HMT)	X			X
Planning Section Chief (FR)			X	X
Environmental Unit Leader (HMS)		X		X
Disposal Specialist (HMS)		X		X
Documentation Unit Leader (FR)			X	X
Logistics Section Chief (FR)			X	X
Procurement Unit Leader (FR)			X	X
Medical Unit Leader (HMS)		X		X
Industrial Hygiene Unit Leader (HMT)		X		X
Security/Communications Unit Leader (FRO)			X	X

NOTE: FR = First Responder; FRO = First Responder Operations;
HMT = Hazardous Materials Technician; HMS = Hazardous Materials Specialist;
IC = Incident Commander

* 8 Hour Annual Refresher applies to FRO, whereas annual refresher for FR may require up to 8 hours to ensure sufficient training of stated requirements in 29 CFR 1910.120 (q)(6)(i) likewise for initial FR training.

FIGURE E.2

TOTAL PETROCHEMICAL PAC
INCIDENT MANAGEMENT TEAM DRILL MATRIX

TRIENNIAL CYCLE		
Total Number	**Frequency**	**Exercise Type / Description**
12	Quarterly	QI Notification Exercise
6	Semi-Annual	Equipment Deployment Exercise *(Facility owned equipment)*
3	Annual	Response Team Tabletop Exercise

Note: *1. Each component of the response plan must be exercised at least once in the Triennial Cycle.*

2. At least one exercise / drill must be unannounced during the calendar year.

FIGURE E.3

TRAINING REQUIREMENTS FOR QUALIFIED INDIVIDUALS

Suggested training elements for Qualified Individuals:

Demonstrate knowledge of the following:

- Captain of the Port (COTP) Zones or Environmental Protection Agency (EPA) Regions in which the vessel will operate or facility is located.
- Notification procedure and requirements for vessel or facility owners or operators; internal response organizations; federal and state agencies; and contracted oil spill removal organizations (OSRO's) and the information required for those organizations.
- Communication system used for the notifications.
- Information on the cargoes carried by the vessel or transferred, stored, or used by the facility, including familiarity with the material safety data sheets, special handling procedures, health and safety hazards, spill and fire fighting procedures.
- Procedures the crew or facility personnel may use to mitigate or prevent any discharge or a substantial threat of a discharge of oil resulting from shipboard or facility operational activities associated with internal or external cargo transfers, storage, or use.
- Procedures for both the internal and ship-to-ship transfers of cargo in an emergency.
- Vessel crew or facility personnel responsibilities, and procedures for use of shipboard or facility equipment that may be carried to mitigate an oil discharge.
- Operational capabilities of the contracted OSROs to respond to the following:
    - Average most probable discharge (small discharge);
    - Maximum most probable discharge (medium discharge); and
    - Worst case discharge.
- Responsibilities and authorities of the qualified individual as described in the Integrated Contingency Plan (ICP) and company response organization/Incident Management Team.

FIGURE E.3 (Cont'd)

TRAINING REQUIREMENTS FOR QUALIFIED INDIVIDUALS (Cont'd)

- Procedures, if applicable, for transferring responsibility for direction of response activities from the Incident Commander to the Deputy Incident Commander to the Operations Section Chief.
- The organizational structure that will be used to manage the response actions, including:
  - Command and control;
  - Public information;
  - Safety;
  - Liaison with government agencies;
  - Spill response operations;
  - Planning;
  - Logistics support; and
  - Finance.
- The responsibilities and duties of each oil spill management team member within the organizational structure.
- The drill and exercise program to meet federal and state regulations as required under OPA-90/PREP.
- The role of the qualified individual in the post discharge review of the Integrated Contingency Plan to evaluate and validate its effectiveness.
- Area Contingency Plans (ACP's) for the areas in which the vessel operates or the facility is located.
- The National Contingency Plan (NCP).
- Roles and responsibilities of federal and state agencies in pollution response.
- Available response resources identified on response plan.
- Contracting and ordering procedures to acquire oil spill removal organization resources identified in the response plan.
- Occupational Safety and Health Administration (OSHA) requirements for worker health and safety (29 CFR 1910.120).
- Incident Command System/Unified Command System.

FIGURE E.3 (Cont'd)

TRAINING REQUIREMENTS FOR QUALIFIED INDIVIDIUALS (Cont'd)

- Public affairs.
- Crisis management.
- Procedure for the plan holder's ship salvage arrangements.
- Procedures for obtaining approval for dispersant use or in-situ burning of the spill.
- Oil spill trajectory analyses.
- Sensitive biological areas.

F.1 PLAN REVIEW AND UPDATE PROCEDURES

F.1.1 REVISION RECORD AND DISTRIBUTION LIST

See Figure F-1 for Record of Revisions. The distribution list of the Plan can be accessed electronically on the Total PAR intranet, on the Environmental Department web site.

F.1.2 REVISIONS TO PLAN

This plan will be reviewed and updated annually by PAR's Security Supervisor and will be updated only when necessary to reflect new personnel, equipment, or response requirements / procedures.

- Revisions will be approved by the HS&E Manager and placed on the environmental web page by the HS&E Secretary. Applicable instructions concerning those revisions will be included.
- When received, the revisions should be immediately reviewed and inserted into the Plan and the obsolete pages discarded. This action should then be recorded on the "Record of Revisions" in Figure F.1.
- The HS&E group will perform annual audits to verify the accuracy of the Distribution List.

Any revisions to the ICP must be submitted to all applicable regulatory agencies and be posted on the PAR intranet. At anytime a new or different operating condition or information would substantially affect the implementation of the Integrated Contingency Plan (ICP), the plan must be modified and submitted within 30 days to the United States Coast Guard (USCG), Environmental Protection Agency (EPA), DOT Pipeline Hazardous Materials Safety Administration (PHMSA), Texas General Land Office (GLO) and plan holders.

- A change in the facility's configuration or Total Petrochemical Pipeline Company's pipelines that significantly affects information in the plan
- A change in the type of oil handled, stored, or transported that affects the required response resources
- A change in the name(s) or capabilities of the oil spill removal organizations
- A change in the facility's emergency response procedures
- A change in the facility's operating area
- New pipeline construction or purchase
- Change in Qualified Individual(s)
- Change in NCP/ACP that have a significant impact on the appropriateness of response equipment or response strategies
- Any other changes that significantly affect the implementation of the plan

F.1 PLAN REVIEW AND UPDATE PROCEDURES (Cont'd)

F.1.2. REVISIONS TO PLAN (Cont'd)

In addition, this Integrated Contingency Plan (ICP) will be updated to reflect personnel and telephone number changes, oil spill containment and cleanup equipment availability, and other new and relevant information. Suggestions for correction and modifications are solicited from all users of the plan (a **Distribution List** is included in the **Foreword**) and should be submitted directly to Total PAR HSE Dept.'s Spill Response Program Rep or appointed designee. Modifications to the Integrated Contingency Plan will be submitted to the appropriate agencies for review and approval.

If a new or different operating condition would substantially affect the implementation of the ICP, the ICP will be modified to address such a change and, within thirty (30) days of making such a change, submit the change to the appropriate agencies for approval. The following key factors require revision to this Integrated Contingency Plan:

- A change in the refinery's configuration that significantly affects information in the Integrated Contingency Plan
- A change in the type of oil handled, stored, or transported that affects the required response resources
- A change in the name(s) or capabilities of the oil spill removal organizations (OSROs)
- A change in the refinery's emergency response procedures
- A change in the refinery's operating area
- New pipeline construction or purchase
- Change in Qualified Individual(s)
- Change in NCP/ACP that have a significant impact on the appropriateness of response equipment or response strategies
- Any other changes that significantly affect the implementation of the ICP

Plan review and update will be the responsibility of the Total PAR HSE Department's Spill Response Program representative or his/her designee.

Finally, at specific intervals, this plan will be reviewed by Total Refinery and Total Petrochemical Pipeline Company personnel and the above listed factors will be revised to match the current operational status of the Facility and off-site pipelines. Every 5 years (from the last plan approval date), the Integrated Contingency Plan (ICP) which contains the Emergency Response Action Plan (ERAP) will be submitted to DOT PHMSA for review and approval. A copy of the ICP / ERAP will be provided to the USCG MSO Port Arthur every 5 years as well.

F.2 RESPONSE CRITIQUE

Simulated responses will be critiqued promptly after each exercise is completed. The spill team's knowledge of equipment and call out procedures, individual responsibilities, internal and external notifications, weather and trajectory analysis, etc., will be documented during the spill simulation, and critiqued in a post-drill meeting with the response team (Refer to Figure F.2 - Suggested Critique Guideline). The appropriate PREP Internal Exercise Documentation Form will be completed, certified, and retained for future reference for a period of five years.

Actual responses will have all events thoroughly documented so that management cannot only keep informed, but also so that accurate reports can be provided to regulatory agencies and used as documentation for critique after the event is over.

F.3 DOCUMENTATION OF EVENTS DURING A SPILL

Documentation of an oil spill will provide a record of the events as they occur. It will provide the necessary data to determine the accuracy of trajectory analysis, spill size predictions, success of containment, and clean up operations. Thorough documentation of all events will aid in determining adequacy of a spill response plan, modifications needed, and potential improvements for future response operations.

Documentation should begin immediately upon notification of an oil spill and continue until post spill assessments have been made. A daily log of events (utilize either ICS 201-2 or ICS 214 from the Incident Action Plan) should be kept from the time the spill is first noticed until cleanup operations are complete. Each entry should record the date, time, place, action and signature(s) of the witness(es). Because of its value particularly as potential legal evidence, the log form(s) must be kept in a secure place. Any information that could be of importance should be recorded while the spill is in progress. Small, portable tape recorders allow a supervisor to verbally document operations as he views them from the air, water or land. Tapes should be transcribed daily. Large spills may necessitate each supervisor keeping a personal log. A member of the Incident Management Team (Documentation Unit Leader) will be assigned the duty of documentation for the duration of the spill event. This will include compiling notes and other documentation from other members of the spill team.

F.3 DOCUMENTATION OF EVENTS DURING A SPILL (Cont'd)

(A) Spill Scenario / Event

All information pertaining to the oil spill and why it occurred should be documented throughout the event. Information should include the following:

- Person(s) and equipment that caused the spill.
- Details on equipment failure and/or human error.
- Person(s) discovering the spill.
- Date and time spill occurred.
- Location(s) of spill area covered by oil, and estimated volume.
- Product spilled.
- Effectiveness of containment and recovery operations.

(B) Correspondence with Government Agencies

The person in charge of documentation should record all correspondence with government agencies. This correspondence may include permitting, requests for permitting, notifications, and orders from the agencies. Because the spiller is officially responsible to government agency personnel, the spiller should be careful to record all of his/her orders and directions from the on-scene coordinator in the log. After recording the information, the government representative should be asked to sign the logbook next to the spiller's signature to ensure that both parties understand what has been said.

(C) Costs Incurred

Documentation of all costs incurred should be recorded. This may include claims, legal services, equipment rental and purchases, contract services, and support costs (transportation, meals, lodging). OSROs should be required to submit time sheets each day listing manpower, equipment, and materials used. These documents should be signed after the close of each working day by a representative of the company and the OSRO. The OSRO should understand that only charges so verified and authorized will be accepted for payment. This will help avoid disagreements at the completion of the job.

(D) Photographs

Photographs provide excellent documentation of oil spill response operations and should be utilized if conditions permit. Aerial photographs of the spill taken for planning and surveillance purposes are also useful for documentation purposes. In order to ensure adequate documentation, all photographs should be labeled to include location, date, time and direction.

F.3 DOCUMENTATION OF EVENTS DURING A SPILL (Cont'd)

(E) Spill Response Status

Information relating to status of ongoing response operations should be maintained and posted in the central and field command posts, if possible. The use of status boards is a valuable tool to ensure that all response team members are kept informed of the status of the response operation in a timely manner. This aids in efficiency and communications between team members as it reduces length and number of informational briefings required, helps to reduce duplicated efforts or ordering of services, and improves the ability of team members to function effectively, since they are able to stay informed without being interrupted from their required duties. Type of information that is useful to maintain includes:

(1) Maps, which detail slick size and location, trajectories, location of environmental and socioeconomic sensitivities, and location of deployed equipment.
(2) Activity logs
(3) Resource availability and status
(4) Recovered oil volumes
(5) Wildlife impact
(6) Personnel counts
(7) Current and forecasted weather information

FIGURE F.1 RECORD OF REVISIONS

Record of Revisions

REVISION DATE	PAGE(S)		REASON FOR REVISION
	REMOVED	INSERTED	
June 2006	Entire Plan	Entire Plan	New Plan
July 2007	Pages in Figure A.1 (Substantial Expansions)	Recent expansion projects	Figure had projects listed that did not meet def. of "substantial", removed those items, added new items.
July 2007	Ex-employees	New hires	Updated list in figure 2.2.
December 2007	Existing WCD	Revised WCD	Updated WCD scenario.
December 2007	Ex-employees	New hires	Updated list in figure 2.2.
December 2008	Ex-employees	New hires	Updated list in section 3.
January 2009	Call out list in 2.2	Call out list in section 3	Improve ease of documentation
April 2010	Incorrect alternate QI's	Correct QI's	Updates needed due to personnel changes
June 2010	Monthly Pager Excercise		No longer have pagers.
June 2010	Incorrect Alternate QI's		Decided to list only one alternate QI
June 2010	Old WCD	New WCD	Updated WCD
January 2011	Sections 3, A.6		Inserted these sections into Sections A/B as appropriate
January 2011		A.6	Inserted information to meet reg. requirements
March 2011	Old internal notification diagram	Section 3 (KM coke handling), new internal notification diagram	New coke handling facilities and updated internal notification diagrams.
February 2013	Entire Plan	Entire Plan	Revised

FIGURE F.2 SUGGESTED CRITIQUE GUIDELINES

SUGGESTED CRITIQUE GUIDELINE

Purpose of Follow-Up Critique

A critique following an emergency response is beneficial to evaluate the actions taken or omitted. Recommendations and modifications should be made to prepare for the possibility of another emergency.

Outline of Post Emergency Critique

Given below are items a team composed of outside people knowledgeable in emergency response and key members of the response teams should examine. These questions are intended as guidelines only; many other questions are likely to be appropriate at each stage of a critique.

Detection

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

Notification

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

Assessment/Evaluation

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

Mobilization

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

FIGURE F.2 SUGGESTED CRITIQUE GUIDELINES (Cont'd)

Response - strategy

Is there an adequate emergency response plan for the location?
Is it flexible enough to cope with unexpected emergency events?
Does the plan include clear understanding of local environmental sensitivities?
What was the initial strategy for response to this emergency?
Is this strategy defined in the emergency plan?
How did the strategy evolve and change during this emergency and how were these changes implemented?
What caused such changes?
Are there improvements needed? More training?

Response - resources used

What resources were mobilized?
How were they mobilized?
How did resource utilization change with time? Why?
Were resources used effectively?

- Contractors
- Government agencies
- Company resources
- Cooperatives
- Volunteers
- Consultants
- Other (e.g., bird rescue centers)

What changes would have been useful?
Do we have adequate knowledge of resource availability?

Response - effectiveness

Was the response effective and prompt?
How could it have been improved?
Should the location have additional resources for a better response?
Was contaminated equipment disposed of promptly and safely?
If this was a spill, was there adequate in-house containment, recovery, oil separation, and disposal?
How could it have been improved?

Command structure

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

FIGURE F.1 SUGGESTED CRITIQUE GUIDELINES (Cont'd)

Measurement of a spill or release

Was there adequate measurement or estimation of the volume of released material?
Was there adequate measurement or estimation of the volume of released material recovered?
Was there adequate measurement or estimation of the volume of released material disposed of?
Should better measurement procedures be developed for any phase of operations?
If so, what would be appropriate and acceptable?

Government relations

What are the roles and effects of the various government agencies which were involved?
Was there a single focal point among the government agencies for contact?
Should there have been better focus of communications to the agencies?
Were government agencies adequately informed at all stages?
Were too many agencies involved?
Are any changes needed in procedures to manage government relations?

Examples of affected U.S. agencies (there may be others):

- U.S. Coast Guard
- Environmental Protection Agency
- National Oceanographic Atmospheric Administration
- Dept of Fish and Wildlife
- State Parks
- Harbors and Marinas
- States
- Cities
- Counties

Was there adequate agreement with the government agencies?
How was this agreement developed?
If this is a spill, should there be advance planning of criteria for cleanup, aimed at specific local environmentally sensitive areas? (Such criteria should probably also be designed for different types or oils.)

Public relations

How were relations with the media handled?
What problems were encountered?
Are improvements needed?
How could public outcry have been reduced? Was it serious?
Would it be useful to undertake a public information effort to "educate" reporters about refinery operations?

These areas should be investigated shortly after the incident to assure that actions taken are fresh in peoples' minds.

The SPCC Plan is incorporate by reference and is available from Total upon request.

H.1 COMPANY FORMS

The forms contained in this Annex are intended for use by Total Port Arthur Refinery personnel.

FIGURE H.1 SPILL RESPONSE NOTIFICATION FORM

TOTAL PETROCHEMICALS & Refining USA, INC.
P.O. BOX 849
PORT ARTHUR, TEXAS 77641-0849

DATE, TIME, AND DURATION OF SPILL:

IF HAZARDOUS SUBSTANCE SPILL: CAS # _____

FORM: LIQUID [ ]
GAS [ ]
SOLID [ ]

NAME AND PHONE NUMBER OF INDIVIDUAL WHO REPORTED SPILL:

LOCATION OF SPILL:

DID SPILL REACH BODY OF WATER: YES [ ] NO [ ]
IF YES, IDENTIFY BODY OF WATER:

REFINERY COORDINATES:

WEST PORT ARTHUR TANK FARM COORDINATES:

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

TYPE OF OIL OR SPILLED PRODUCT:

ESTIMATED QUANTITY SPILLED:

DISCRIPTION OF SLICK (COLOR, LENGTH, WIDTH):

SOURCE OF SPILL (SHIP, PIPELINE, REFINERY):

FIGURE H.1 SPILL RESPONSE NOTIFICATION FORM (Cont'd)

DESCRIPTION OF SPILL INCIDENT (NOTE ANY INJURIES OR POTENTIAL HUMAN OR ENVIRONMENTAL HAZARDS):

DESCRIBE INITIAL CONTAINMENT/CLEAN-UP ACTIONS:

NAME OF CONTRACTOR, IF USED:

WEATHER CONDITIONS:

NAME OF PERSON COMPLETING THIS FORM:

NOTIFICATION REQUIRED:	TELEPHONE:	PERSON NOTIFIED:	TIME:
NATIONAL RESPONSE CENTER	(800) 424-8802		
U. S. COAST GUARD MSU-PORT ARTHUR	(409) 723-6500		
TEXAS GENERAL LAND OFFICE	(512) 424-2277 (800) 832-8224		
TCEQ REGION 10 (Formerly TNRCC)	(409) 898-3838		
JEFFERSON COUNTY ENVIRONMENTAL CONTROL	(409) 722-0292		
TEXAS RAILROAD COMMISSION (OFFSITE PIPELINE SPILLS)	(512) 463-6788 (24 HR)		

FIGURE H.1 SPILL RESPONSE NOTIFICATION FORM (Cont'd)

NOTIFICATION REQUIRED FOR SPILLS THAT MAY ENDAGER PUBLIC HEALTH:

PORT ARTHUR FIRE DEPT.	(409) 983-8700		
PORT ARTHUR POLICE DEPT.	(409) 983-8600		
GROVES FIRE DEPT.	(409) 962-4460		
GROVES POLICE DEPT.	(409) 962-0244		
JEFFERSON COUNTY LEPC	(409) 835-8757		
PORT ARTHUR DEPARTMENT OF HEALTH	(409) 983-8835		

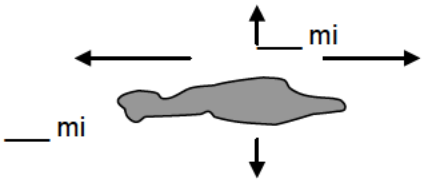
OTHER AGENCIES AS REQUIRED:

U.S. EPA - REGION 6 DALLAS, TEXAS	866-372-7745 (24 HR)		
TEXAS PARKS AND WILDLIFE	(512) 389-4848 (24 HR)		

FIGURE H.2 SPILL VOLUME ESTIMATION FORM

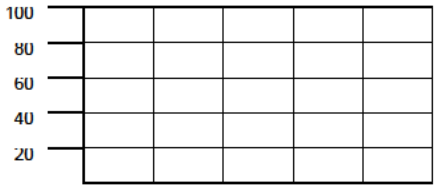
Spill size and volume estimations are essential for identifying potential oil spill impact zones and shoreline arrival times. To estimate the quantity of oil on water you must establish the size of the area affected by pollution, the percent of oil coverage within that area, and the appearance of oil. The appearance of oil determines gallons per square mile (based on the U.S. Coast Guard's field operations guide estimations table).

1) To establish the area affected by pollution.
   - Determine spill size (use aircraft if possible).
   - Draw an imaginary box around the oil.
   - Measure the length and width of the box (5,280 feet = 1 mile).
   - Multiply the length x width = (a) m^2.



= ___ mi^2
(a)

2) Extent of Oil Coverage
   - Envision the oil pushed together into one part of the box.
   - Estimate % of box containing oil = (b) % coverage.



= ___% coverage
(b)

3) Multiply estimated area (a) x estimated coverage (b) = (c) total m^2:

___ mi^2 x ___ % coverage = ___ total mi^2
(a) (b) (c)

4) Appearance of Oil:
   - Estimate the percent of the oil matching each color under appearance. Enter that number in the percentage blank (e.g. 50% dull, 30% brightly colored, 20% slightly colored).
   - Enter total mi^2 (Item c).
   - Multiply % appearance x gal/mi^2 x mi^2 for each appearance.
   - Enter sum for total gallons.

ESTIMATION TABLE

Appearance	%	x	Gal/ mi^2	x	mi^2 (c)	=	Gal.
Barely Visible		x	25	x		=	
Silvery		x	50	x		=	
Slightly Colored		x	100	x		=	
Brightly Colored		x	200	x		=	
Dull		x	666	x		=	
Dark		x	1332	x		=	
						Total Gallons	

5) Final Calculation (divide gallons by 42):

____ Total gal/42 = _____ bbls

FIGURE H.3 FIREWALL DRAINING PROCEDURE CHECKLIST

Purpose: To explain the steps necessary to sample, drain, and seal tank firewalls.

Safety: Proper PPE for the procedure being performed is required.

INITIAL	DATE/ TIME	
_____	_____	1. **CATCH** a 1 quart sample of water from inside the tank firewall. **ENSURE** there is no visible oil sheen on the water. **ENSURE** that the sample is properly labeled.
_____	_____	2. **FILL OUT** Section 1 on the "**RECORD OF CONTAINMENT AREA STORMWATER DRAINAGE"** form. *Refer to sample form (Figure 1.2.S.1) shown opposite.*
_____	_____	3. **DETACH** the "**SAMPLER COPY**" (Gold). **PLACE** this copy on the Clipboard in the Control Room.
_____	_____	4. **BRING** the sample and paperwork to the Quality Lab.

*NOTE: The Quality Lab will test the sample, fill out Section 2, detach the **LABORATORY COPY** (Pink), and forward the paperwork to the PWTC Supervisor. The PWTC Operator/Supervisor will fill out Section 3, detach the **WASTE TREATMENT AREA PROCESS SUPERVISOR COPY** (Yellow), and return the paperwork to the OMS Supervisor.*

_____	_____	5. **ENSURE** all paperwork has been filled out properly and **CHECK** for special instructions in Section 3.
_____	_____	6. **BREAK** seal and **OPEN** the firewall drain.
_____	_____	7. **RECORD** the Seal Number, Name, Time, and Date in Section 4.
_____	_____	8. **CLOSE** and **SEAL** the Firewall drain when the following occurs: • The water is completely drained. • Rain begins to fall. • The water becomes contaminated (i.e. leak, fire).
_____	_____	9. **RECORD** Name, Time, Date and the new Seal Number in Section 4.
_____	_____	10. **RETURN** completed paperwork to OMSF.

FIGURE H.4 OFFSITE LEAK MONITORING LOG

Date: _____
Operator: _____
(print)

	Location checked	Time	Leak Exists? Yes/No	Temporary Containment or Repair Method Used (Booms, Vac Truck, Adj. Packing)	Supervision Notified Name & Time	Repair MO#	Notes
1	Gasoline sales						
2	Incoming Crude area						
3	Tank 591 Manifold						
4	22P587 Area						
5	22P10 Area						
6	Bunker “C” Area						
7	Explorer Pump						
8	Old/New TET Pump						
9	Gasoline Station						
10	Manifold East of Tk 524						
11	Behind Terminal Lab						
12	Tank 415 Manifold						
13	Crude Blend Area						
14	#4 Crude Pump Area						
15	45P200 Area						
16	Paline Pump Area						
17	#2 Crude Pump Area						
18	22P440 Area						
19	Dock Area						

See inserts that follow.

FIGURE H.5 PHMSA-DOT FORM 7000-1

FIGURE H.6 SPILL RESPONSE BOAT PM

TOTAL PETROCHEMICALS
TOTAL PETROCHEMICALS USA, INC.

Spill Response Boat PM

Boat Number: TX7898EZ **Date:**_____
SPILL RESP BOAT SILVER 2-70HP WO#5000815 PA-VHCL-REF-PROD-45BT3

Action Item	OK	Needs Repair	Date	Comments
Running Lights				
Interior Lights				
Fire Extinguisher				
Bildge Pump				
Trim & Tilt				
Gas & Oil				
Plug (Rear)				
Life Jackets (5-Req.'d)				
Rope				
Paddle (4-Req.'d)				
Air Horn (1-Req.'d)				
Battery Charger				
Turn Over Motor				
Trailer				
TYPE IV: Throwable Device				
18 lb danforth anchors (2-Req.'d)				
500 ft 1/2 diameter polypropylene rope spool -(1) Spool Required				
Round red buoys or white bumper buoys (for marking the anchor retrival line)				
8 ft boat hook (for retrieving buoys / anchor rope, etc.) (1-Req.'d)				
Tow bridle for the 18" round boom (1-Req.'d)				
Box of 2 dozen spare push bins for hooking boom sections together & attaching tow bridle				
Tool Box				
Q beam spotlight (1-Req.'d)				
Other				

Spill Response Boat PM

Boat Number: TX2788EX **Date:**_____
SPILL RESP BOAT GREEN MERCURY 60HP WO#5000814 PA-VHCL-REF-PROD-45BT2

Action Item	OK	Needs Repair	Date	Comments
Running Lights				
Interior Lights				
Fire Extinguisher				
Bildge Pump				
Trim & Tilt				
Gas & Oil				
Plug (Rear)				
Life Jackets (6-Req.'d)				
Rope				
Paddle (4-Req.'d)				
Air Horn (1-Req.'d)				
Battery Charger				
Turn Over Motor				
Trailer				
TYPE IV: Throwable Device				
18 lb danforth anchors (2-Req.'d)				
500 ft 1/2 diameter polypropylene rope spool -(1) Spool Required				
Round red buoys or white bumper buoys (for marking the anchor retrival line)				
8 ft boat hook (for retrieving buoys / anchor rope, etc.) (1-Req.'d)				
Tow bridle for the 18" round boom (1-Req.'d)				
Box of 2 dozen spare push bins for hooking boom sections together & attaching tow bridle				
Tool Box				
Q beam spotlight (1-Req.'d)				
Other				

H.2 ICS FORMS

Incident Command System (ICS)Instructions & Forms	
ICS Form	**Name**
IAP Cover Sheet	IAP Cover Sheet
Annex 1 Tab A	General Incident Report
Notifications	Notification Report
Weather	Weather Report
ICS 201 (-1, -2, -3, -4)	Incident Briefing Forms
ICS 202	Response Objectives
ICS 203	Organization Assignment List
ICS 204	Assignment List
ICS 205	Communications Plan
ICS 206	Medical Plan
ICS 207	Incident Organization Chart
ICS 208	Site Safety Plan
ICS 209	Incident Status Summary
ICS 210	Change Status
ICS 211p & e	Check-In List (Personnel & Equipment)
ICS 213	Requisition/Procurement Report
ICS 214	Unit Log
ICS 214a	Individual Log
ICS 215	Operational Planning Worksheet
ICS 220	Air Operations Plan
ICS 221	Demobilization Check Out
ICS 223	Health and Safety Message
ICS 230	Daily Meeting Schedule
ICS 231	Meeting Description
ICS 232	Resources At Risk Summary
ICS 232a	ACP Site Index
ICS 233	Action Tracker Report
ICS 234	Work Analysis Matrix

IAP Cover Sheet

Incident Name:	**Operational Period to be covered by IAP:** Period (/ / to / /)

Approved by:

FOSC: _____

SOSC: _____

RPIC: _____

Incident Action Plan

Prepared By:	**Prepared Date/Time:**

General Incident Report

Incident:	**Incident Date/Time:**
Person Reporting Incident:	**Prepared:** **at:**
Person Contact Number(s): ( ) -	**Version:**

Platform Information and Points of Contact

Platform Name:	
Type of Platform:	
Number of People at Platform:	
Contact:	**Phone: ( ) -**
Owner:	**Phone: ( ) -**
Operator:	**Phone: ( ) -**

Platform Specific Information

Type(s) of Product:	
Equipment Involved:	
Max Production Rate:	
Max Rate Oil (bbls/day):	
Max Rate Gas (mcf/day):	

Incident Information

Incident Location:	**Latitude:**	**Longitude:**
Type of Casualty:	**Number of Tanks on Platform:**	
Number of Tanks Impacted:	**Total Capacity of Common Container:**	
Material(s) Spilled:	**API Gravity:**	
Estimated Quantity Spilled:	**Potential for Additional Spillage:**	
Source Secured?:	**If not, Estimated Spill Rate:**	
	Classification:	
Notes:		

Incident Status

Injuries/Casualties:		
Fire:	**Fire Status:**	**Fire Assistance:**
Notes:		

General Incident Report (Platform)		**© 1997-2006 TRG/dbSoft, Inc.**

General Incident Report

Incident:	**Incident Date/Time:**
Person Reporting Incident:	**Prepared:** **at:**
Person Contact Number(s): ( ) -	**Version:**

Pipeline Information and Points of Contact

Pipeline Name:	
Contact:	**Phone: ( ) -**
Owner:	**Phone: ( ) -**
Operator:	**Phone: ( ) -**

Pipeline Specific Information

Type(s) of Product:		
Equipment Involved:		
P/L Marker of Release	**Nearest Upstream Block Valve**	**Nearest Downstream Block Valve**

Incident Information

Incident Location:	**Latitude:**	**Longitude:**
Type of Casualty:		
Total Capacity of Pipeline:	**Potential for Additional Spillage:**	
Material(s) Spilled:	**API Gravity:**	
Estimated Quantity Spilled:	**Classification:**	
Source Secured?:	**If not, Estimated Spill Rate:**	
Notes:		

Incident Status

Injuries/Casualties:		
Fire:	**Fire Status:**	**Fire Assistance:**
Holed:	**Hole Location:**	**Hole Size:**
Notes:		

General Incident Report (Pipeline)		**© 1997-2006 TRG/dbSoft, Inc.**

General Incident Report

Incident:	**Incident Date/Time:**
Person Reporting Incident:	**Prepared:** **at:**
Person Contact Number(s): ( ) -	**Version:**

Facility Information and Points of Contact

Facility Name:	
Type of Facility:	
Number of People at Facility:	
Contact:	**Phone: ( ) -**
Owner:	**Phone: ( ) -**
Operator:	**Phone: ( ) -**

Facility Specific Information

Type(s) of Product:	
Equipment Involved:	

Incident Information

Incident Location:	**Latitude:**	**Longitude:**
Type of Casualty:		
Total Capacity of Common Container:	**Potential for Additional Spillage:**	
Material(s) Spilled:	**API Gravity:**	
Estimated Quantity Spilled:	**Classification:**	
Source Secured?: ☐ **Yes** ☐ **No**	**If not, Estimated Spill Rate:**	

Notes:

Incident Status

Injuries/Casualties:

Fire: ☐ **Yes** ☐ **No**	**Fire Status:**	**Fire Assistance:**

Notes:

General Incident Report (Facility)		**© 1997-2006 TRG/dbSoft, Inc.**

General Incident Report

Incident:	**Incident Date/Time:**
Person Reporting Incident:	**Prepared:** **at:**
Person Contact Number(s): ( ) -	**Version:**

Vessel Information and Points of Contact

Vessel A		Vessel B	
Vessel Name:		**Vessel Name:**	
Type of Vessel:		**Type of Vessel:**	
Number of People Onboard:		**Number of People Onboard:**	
Contact:	**Phone: ( ) -**	**Contact:**	**Phone: ( ) -**
Owner:	**Phone: ( ) -**	**Owner:**	**Phone: ( ) -**
Operator:	**Phone: ( ) -**	**Operator:**	**Phone: ( ) -**

Vessel A Specific Information

Last Port of Call:		**Destination:**			**Flag:**
Particulars	**Length:**	**Tonnage:**	**Draft Fwd:**	**Aft:**	**Year Built:**

Type of Hull:	**Hull Material:**
Type of Propulsion:	
Petroleum Products Onboard:	**Classification:**
Type(s) of Cargo:	**Total Number of Tanks on Vessel:**
Total Quantity:	**Total Capacity:**
Type of Fuel:	**Quantity Onboard:**

Incident Information

Incident Location:	**Latitude:**	**Longitude:**
Type of Casualty:		
Total Capacity of Common Container:	**Number of Tanks Impacted:**	
Material(s) Spilled:	**Potential for Additional Spillage:** ☐ Yes ☐ No	
Estimated Quantity Spilled:	**API Gravity:**	
Source Secured?: ☐ Yes ☐ No	**If not, Estimated Spill Rate:**	
Notes:		

Incident Status

Injuries/Casualties:		
Vessel Status:		**Set and Drift:**
If Under Tow–Est. Time to Dock/Anchor: **HR**	**If Enroute to Anchorage/Berth Under Own Power–Est. Time of Arrival:** **HR**	
Holed:	**Hole Location:**	**Hole Size:**
Fire: ☐ Yes ☐ No	**Fire Status:**	**Fire Assistance:**
Flooded: ☐ Yes ☐ No	**Flood Status:**	**Flood Assistance:**
Notes:		

General Incident Report (Vessel)

Notification Status Report

Incident:	Prepared By: at:
Period: to	Version Name:

Organization Notified	Phone	Date /Time Notified	Person Contacted	Person Contacted Email	Case No.	Follow Up	ETA On Site	Notified By
	( ) -					☐ Y ☐ N	HR	
Notes:								
	( ) -					☐ Y ☐ N	HR	
Notes:								
	( ) -					☐ Y ☐ N	HR	
Notes:								
	( ) -					☐ Y ☐ N	HR	
Notes:								
	( ) -					☐ Y ☐ N	HR	
Notes:								
	( ) -					☐ Y ☐ N	HR	
Notes:								
	( ) -					☐ Y ☐ N	HR	
Notes:								
	( ) -					☐ Y ☐ N	HR	
Notes:								
	( ) -					☐ Y ☐ N	HR	
Notes:								
	( ) -					☐ Y ☐ N	HR	
Notes:								
	( ) -					☐ Y ☐ N	HR	
Notes:								

Notification Status Report

Weather Report

Incident:	Prepared By: at
Period:	Version Name:

Present Conditions

Wind Speed:		Wave Height:	
Wind Direction From The:		Wave Direction:	
Air Temperature:		Swell Height:	
Barometric Pressure:		Swell Interval:	
Humidity:		Current Speed:	
Visibility:		Current Direction Toward:	
Ceiling:		Water Temperature:	
Next High Tide (Time):		Next Low Tide (Time):	
Next High Tide (Height):		Next Low Tide (Height):	
Sunrise:		Sunset:	

Notes:

24 Hour Forecast

Sunrise:		Sunset:	
High Tide (Time):		High Tide (Time):	
High Tide (Height):		High Tide (Height):	
Low Tide (Time):		Low Tide (Time):	
Low Tide (Height):		Low Tide (Height):	

Notes:

48 Hour Forecast

Sunrise:		Sunset:	
High Tide (Time):		High Tide (Time):	
High Tide (Height):		High Tide (Height):	
Low Tide (Time):		Low Tide (Time):	
Low Tide (Height):		Low Tide (Height):	

Notes:

Weather Report			

ICS 201-1 Incident Briefing Map/Sketch	
Incident:	**Prepared By:** **at**
Period:	**Version Name:**

ICS 201-1 Incident Briefing Map/Sketch			**© 1997-2006 TRG/dbSoft, Inc.**

ICS 201-2 – Summary of Current Actions	
Incident:	**Prepared By:** **at:**
Period: **to**	**Version Name:**

Incident Information

Initial Incident Objectives

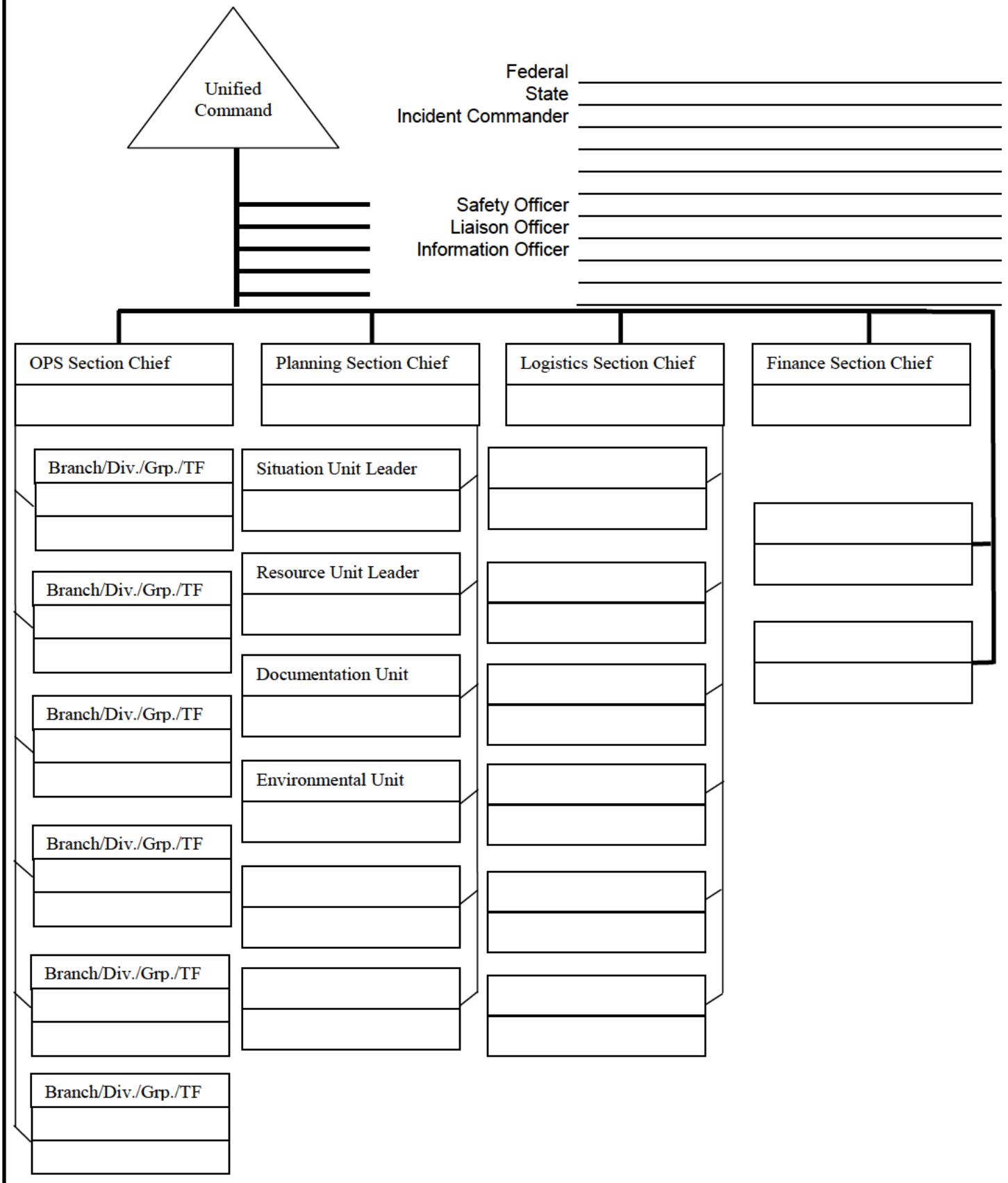
Summary of Current Actions

Date/Time	Action/Note

ICS 201-2 Summary of Current Actions			© 1997-2006 TRG/dbSoft, Inc.

ICS 201-3 Current Organization

Incident:	**Prepared By:** **at:**
Period:	**Version Name:**



ICS 201-3 – Current Organization			**© 1997-2006 TRG/dbSoft, Inc.**

ICS 201-4 – Resource Summary

Incident:	Period:

ID	Supplier	Resource Type	Description	Quantity	Size	Area of Operation	Status	Status Date/Time

ICS 201-4 Resource Summary			© 1997-2006 TRG/dbSoft, Inc.

ICS 202 - General Response Objectives

Incident:	**Prepared By:** **at:**
Period:	**Version Name:**

Overall and Tactical Objectives

	Assigned to:	Status
1. Ensure the Safety of Citizens and Response Personnel		
☐ 1a. Identify hazard(s) of spilled material		
☐ 1b. Establish site control (hot zone, warm zone, cold zone, & security)		
☐ 1c. Consider evacuations if needed		
☐ 1d. Establish vessel and/or aircraft restrictions		
☐ 1e. Monitor air in impacted areas		
☐ 1f. Develop site safety plan for personnel & ensure safety briefings are conducted		
2. Control the Source of the Spill		
☐ 2a. Complete emergency shutdown		
☐ 2b. Conduct firefighting		
☐ 2c. Initiate temporary repairs		
☐ 2d. Transfer and/or lighter product		
☐ 2e. Conduct salvage operations, as necessary		
3. Manage a Coordinated Response Effort		
☐ 3a. Complete or confirm notifications		
☐ 3b. Establish a unified command organization and facilities (command post, etc.)		
☐ 3c. Ensure local and tribal officials are included in response organizations		
☐ 3d. Initiate spill response Incident Action Plans (IAP)		
☐ 3e. Ensure mobilization & tracking of resources & account for personnel & equip		
☐ 3f. Complete documentation		
4. Maximize Protection of Environmentally-Sensitive Areas		
☐ 4a. Implement pre-designated response strategies		
☐ 4b. Identify resources at risk in spill vicinity		
☐ 4c. Track oil movement and develop spill trajectories		
☐ 4d. Conduct visual assessments (e.g., overflights)		
☐ 4e. Development/implement appropriate protection tactics		

ICS 202 General Response Objectives			**© 1997-2006 TRG/dbSoft, Inc.**

ICS 202 - GENERAL RESPONSE OBJECTIVES			
Incident:	**Prepared By:**	**at:**	
Period:	**Version Name:**		
Overall and Tactical Objectives			
		Assigned to:	Status
5. Contain and Recover Spilled Material			
☐ 5a. Deploy containment boom at the spill site & conduct open-water skimming			
☐ 5b. Deploy containment boom at appropriate collection areas			
☐ 5c. Evaluate time-sensitive response technologies (e.g., dispersants, in-situ burning)			
☐ 5d. Develop disposal plan			
6. Recover and Rehabilitate Injured Wildlife			
☐ 6a. Establish oiled wildlife reporting hotline			
☐ 6b. Conduct injured wildlife search and rescue operations			
☐ 6c. Setup primary care unit for injured wildlife			
☐ 6d. Operate wildlife rehabilitation center			
☐ 6e. Initiate citizen volunteer effort for oiled bird rehabilitation			
7. Remove Oil from Impacted Areas			
☐ 7a. Conduct appropriate shoreline cleanup efforts			
☐ 7b. Clean oiled structures (piers, docks, etc.)			
☐ 7c. Clean oiled vessels			
8. Minimize Economic Impacts			
☐ 8a. Consider tourism, vessel movements, & local economic impacts			
☐ 8b. Protect public and private assets, as resources permit			
☐ 8c. Establish damage claims process			
9. Keep Stakeholders and Public Informed of Response Activities			
☐ 9a. Provide forum to obtain stakeholder input and concerns			
☐ 9b. Provide stakeholders with details of response actions			
☐ 9c. Identify stakeholder concerns and issues, and address as practical			
☐ 9d. Provide timely safety announcements			
☐ 9e. Establish a Joint Information Center (JIC)			
☐ 9f. Conduct regular news briefings			
☐ 9g. Manage news media access to spill response activities			
☐ 9h. Conduct public meetings, as appropriate			
ICS 202 General Response Objectives			**© 1997-2006 TRG/dbSoft, Inc.**

ICS 203 - Organization Assignment

Incident:	**Prepared By:** **at:**
Period:	**Version Name:**

Command Staff

Title	Name	Mobile	Pager	Other	Radio
Federal (FOSC)		( ) -	( ) -	( ) -	
State (SOSC)		( ) -	( ) -	( ) -	
RP(s)		( ) -	( ) -	( ) -	
Incident Commander		( ) -	( ) -	( ) -	
Deputy Incident Commander		( ) -	( ) -	( ) -	
Safety Officer		( ) -	( ) -	( ) -	
Information Officer		( ) -	( ) -	( ) -	
Liaison Officer		( ) -	( ) -	( ) -	
Intelligence Officer		( ) -	( ) -	( ) -	

Operations Section

Title	Name	Mobile	Pager	Other	Radio
Operations Section Chief		( ) -	( ) -	( ) -	
Deputy Operations Section Chief		( ) -	( ) -	( ) -	
Staging Area Manager		( ) -	( ) -	( ) -	
Recovery & Prot. Branch Director		( ) -	( ) -	( ) -	
Emergency Resp. Branch Director		( ) -	( ) -	( ) -	
Air Ops Branch Director		( ) -	( ) -	( ) -	
Wildlife Branch Director		( ) -	( ) -	( ) -	
Branch Director		( ) -	( ) -	( ) -	
Division/Group Supervisor		( ) -	( ) -	( ) -	
Disposal Group Supervisor		( ) -	( ) -	( ) -	

Planning Section

Title	Name	Phone	Fax	Other	Radio
Planning Section Chief		( ) -	( ) -	( ) -	
Deputy Planning Section Chief		( ) -	( ) -	( ) -	
Situation Unit Leader		( ) -	( ) -	( ) -	
Resource Unit Leader		( ) -	( ) -	( ) -	
Documentation Unit Leader		( ) -	( ) -	( ) -	
Technical Specialist		( ) -	( ) -	( ) -	
Demobilization Unit Leader		( ) -	( ) -	( ) -	
Check In Recorder		( ) -	( ) -	( ) -	

ICS 203 Organization Assignment			**© 1997-2006 TRG/dbSoft, Inc.**

ICS 203 - Organization Assignment (Continued)

Incident:	**Prepared By:** **at**
Period:	**Version Name:**

Logistics section

Title	Name	Phone	Fax	Other	Radio
Logistics Section Chief		( ) -	( ) -	( ) -	
Deputy Logistics Section Chief		( ) -	( ) -	( ) -	
Service Branch Director		( ) -	( ) -	( ) -	
Medical Unit Leader		( ) -	( ) -	( ) -	
Food Unit Leader		( ) -	( ) -	( ) -	
Communication Unit Leader		( ) -	( ) -	( ) -	
Support Branch Director		( ) -	( ) -	( ) -	
Supply Unit Leader		( ) -	( ) -	( ) -	
Facilities Unit Leader		( ) -	( ) -	( ) -	
Ground Support Unit Leader		( ) -	( ) -	( ) -	
Vessel Support Unit Leader		( ) -	( ) -	( ) -	
		( ) -	( ) -	( ) -	
		( ) -	( ) -	( ) -	
		( ) -	( ) -	( ) -	
		( ) -	( ) -	( ) -	

Finance Section

Title	Name	Phone	Fax	Other	Radio
Finance Section Chief		( ) -	( ) -	( ) -	
Deputy Finance Section Chief		( ) -	( ) -	( ) -	
Time Unit Leader		( ) -	( ) -	( ) -	
Procurement Unit Leader		( ) -	( ) -	( ) -	
Compensation/Claims Unit Leader		( ) -	( ) -	( ) -	
Cost Unit Leader		( ) -	( ) -	( ) -	
		( ) -	( ) -	( ) -	
		( ) -	( ) -	( ) -	
		( ) -	( ) -	( ) -	
		( ) -	( ) -	( ) -	

Source Control Section

Title	Name	Phone	Fax	Other	Radio
Salvage/Source Control Group		( ) -	( ) -	( ) -	
		( ) -	( ) -	( ) -	
		( ) -	( ) -	( ) -	
		( ) -	( ) -	( ) -	
		( ) -	( ) -	( ) -	
		( ) -	( ) -	( ) -	

ICS 203 Organizational Assignment			**© 1997-2006 TRG/dbSoft, Inc.**

ICS 204 - Assignment List

Incident:	**Branch:**
Period:	**Division:**

Operations Personnel

Title	Name	Affiliation	Contact Number(s)
Operations Section Chief			( ) - ( ) -
Branch Director			( ) - ( ) -
Division/Group/STAM			( ) - ( ) -
			( ) - ( ) -

Incident Resources – Equipment

Supplier	Resource Type	Description	Quantity	Size	Status

Assignments

Special Instructions for Division/Group

Communications

Name/Function	Radio: Frequency/System/Channel	Phone	Cell/Pager
		( ) -	( ) -
		( ) -	( ) -
		( ) -	( ) -

Emergency Communications

Medical	Evacuation	Other

Prepared by (Resource Unit Leader):	Approved by (Planning Section Chief):	Date/Time Approved:

ICS 204 Assignment List **© 1997-2006 TRG/dbSoft, Inc.**

ICS 204 - Assignment List	
Incident:	**Branch:**
Period:	**Division:**
Prepared by Signature:	**Task Force:**
Approved by Signature:	**Group:**
Tactical Objective	
Description of Work	
Location of Work	
Work Assignment Special Instructions	
Special Equipment/Supplies Needed for Assignment	
Special Environmental Considerations	
Special Site-Specific Safety Considerations	
Shoreline Cleanup Assessment Team (SCAT) Considerations	

Prepared by (Resource Unit Leader):	Approved by (Planning Section Chief):	Date/Time Approved:

ICS 204 Assignment List			© 1997-2006 TRG/dbSoft, Inc.

ICS 205 – Communications Plan

Incident:	**Prepared By:** **at:**
Period:	**Version Name:**

Phone Listing

Name	Main Phone	Fax	Other No. – Desc.	Other No. – Desc.	Radio

Radio Utilization

System	Channel	Function	Frequency	Assignment	Notes

ICS 205 Communications Plan			**© 1997-2006 TRG/dbSoft, Inc.**

ICS 206 – Medical Plan

Incident:	Prepared By: at:
Period:	Version Name:

First Aid Stations

Name	Location	EMT (On-Site)	Phone	Radio

Transportation (Ground and/or Ambulance Services)

Name	Location	EMT	Phone	Radio

Air Ambulances

Name	Location	Doctor/Nurse EMT	Phone	Radio

Hospitals

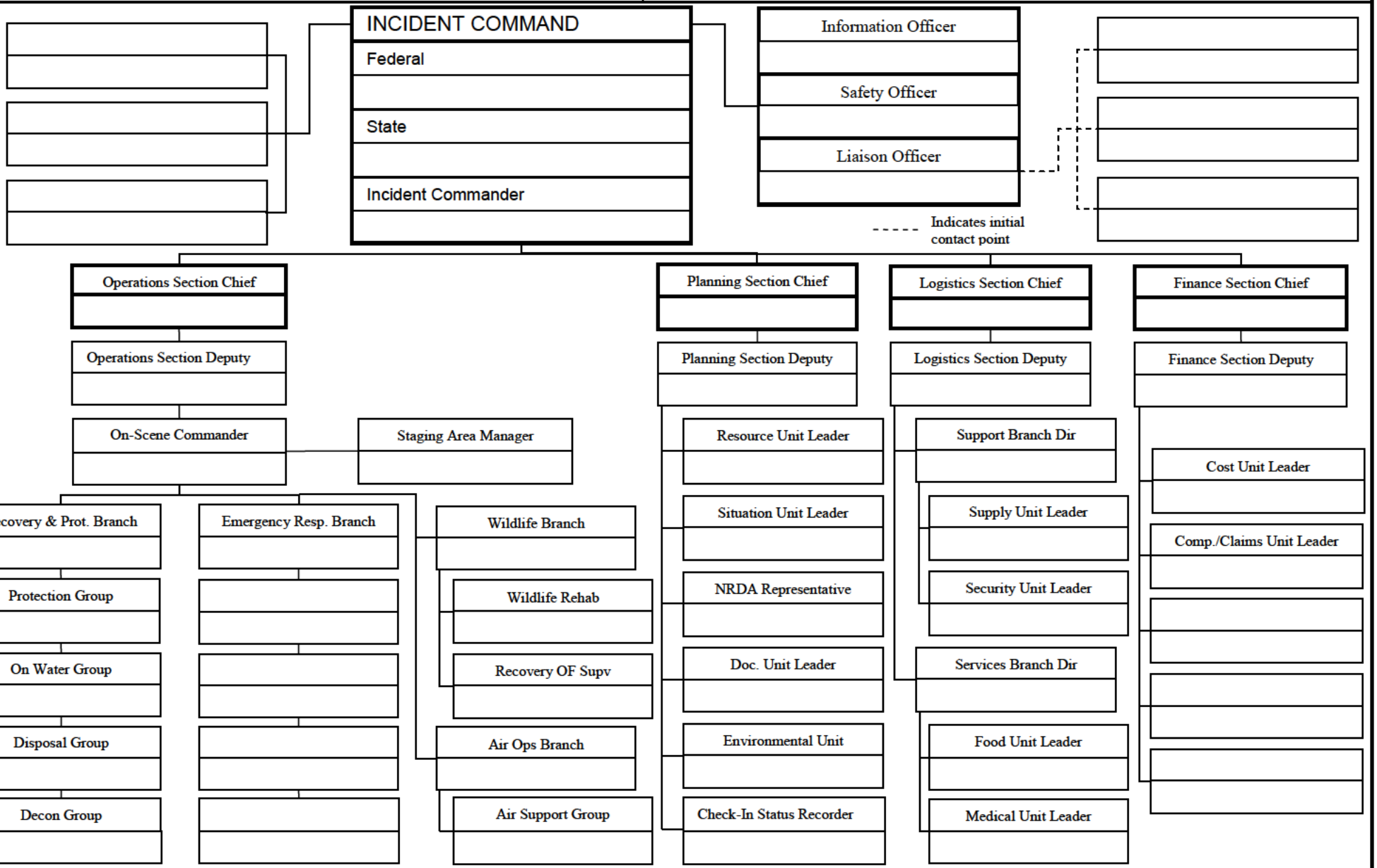
Name	Location	Helipad Burn Center	Phone	Radio

Special Medical Emergency Procedures

ICS 206 Medical Plan			© 1997-2006 TRG/dbSoft, Inc.

ICS 207 – Organization Chart

Incident:	**Prepared By:** **at:**
Period:	**Version Name:**



ICS 207 – Organization Chart			**© 1997-2006 TRG/dbSoft, Inc.**

ICS 208 – Site Safety Plan

Incident:	**Prepared by:** **at:**
Period:	**Version Name:**

Revision:

Applies To Site:

Products: (Attach MSDS)

SITE CHARACTERIZATION

Water:
Wave Height:
Current Speed:
Land:
Weather:
Wind Speed:
Wave Direction:
Current Direction:
Use:
Temp:
Wind Direction:

Pathways for Dispersion:

Site Hazards

- ☐ Boat Safety
- ☐ Chemical hazards
- ☐ Cold Stress
- ☐ Confined Spaces
- ☐ Drum handling
- ☐ Equipment operations
- ☐ Electrical operations
- ☐ Fatigue
- ☐ Other
- ☐ Fire, explosion, in-situ burning
- ☐ Heat stress
- ☐ Helicopter operations
- ☐ Lifting
- ☐ Motor vehicles
- ☐ Noise
- ☐ Overhead/buried utilities
- ☐ Plants/wildlife
- ☐ Other
- ☐ Pump hose
- ☐ Slips, trips, and falls
- ☐ Steam and hot water
- ☐ Trenching/Excavation
- ☐ UV Radiation
- ☐ Visibility
- ☐ Weather
- ☐ Work near water
- ☐ Other

Air Monitoring

%02: **%LEL:** **ppm Benzene:**
ppm H2S: ☐ **Other (Specify):**

CONTROL MEASURES

Engineering Controls

- ☐ Source of release secured
- ☐ Site secured
- ☐ Valve(s) closed
- ☐ Facility shut down
- ☐ Energy source locked/tagged out
- ☐ Other

Personal Protective Equipment

- ☐ Impervious suit
- ☐ Inner gloves
- ☐ Outer gloves
- ☐ Flame resistance clothing
- ☐ Hard hats
- ☐ Respirators
- ☐ Eye protection
- ☐ Personal floatation
- ☐ Boots
- ☐ Other

Additional Control Measures

- ☐ Decontamination
- ☐ Sanitation
- ☐ Illumination
- ☐ Medical Surveillance
- ☐ Stations established
- ☐ Facilities provided – OSHA 29 CFR 1910.120n
- ☐ Facilities provided – OSHA 29 CFR 1910.120m
- ☐ Provided – OSHA 29 CFR 1910.120fq

ICS 208 Site Safety Plan			**© 1997-2006 TRG/dbSoft, Inc.**

ICS 208 – Site Safety Plan

Incident:	Prepared By: at:
Period:	Version Name:

WORK PLAN

☐ Booming ☐ Skimming ☐ Vac trucks ☐ Pumping ☐ Excavation
☐ Heavy equipment ☐ Sorbent pads ☐ Patching ☐ Hot work ☐ Appropriate permits used
☐ Other

TRAINING

☐ Verified site workers trained per OSHA 29 CFR 1920.120

ORGANIZATION

Title	Name	Telephone/Radio
Incident Commander:		
Deputy Incident Commander:		
Safety Officer:		
Public Affaire Officer:		
Other:		

EMERGENCY PLAN

☐ Alarm system: _____
☐ Evacuation plan: _____
☐ First aid location _____

Notified

☐ Hospital		Phone:	
☐ Ambulance		Phone:	
☐ Air ambulance		Phone:	
☐ Fire		Phone:	
☐ Law enforcement		Phone:	
☐ Emergency response/rescue		Phone:	

PRE-ENTRY BRIEFING

☐ Initial briefing prepared for each site

INCLUDING ATTACHMENTS/APPENDICES

Attachments

☐ Site Map
☐ Hazardous Substance Information Sheets
☐ Site Hazards
☐ Monitoring Program
☐ Training Program
☐ Confined Space Entry Procedure
☐ Safe Work Practices for Boats
☐ PPE Description
☐ Decontamination
☐ Communication and Organization
☐ Site Emergency Response Plan

Appendices

☐ Site Safety Program Evaluation Checklist
☐ Confined Space Entry Checklist
☐ Heat Stress Consideration
☐ Cold Stress and Hypothermia Consideration
☐ First Aid for Bites, Stings, and Poisonous Plant Contact
☐ Safe Work Practice for Oily Bird Rehabilitation
☐ SIPI Site Pre-Entry Briefing
☐ Personnel Tracking System

ICS 208 – Site Safety Plan			

ICS 209 - Incident Status Summary

Incident:	Prepared By:	at:
Period:	Version Name:	

Type of Incident

☐ Oil Spill	☐ HAZMAT	☐ AMIO
☐ SAR/Major SART	☐ SI/Terrorism	☐ Natural Disaster
☐ Marine Disaster	☐ Civil Disturbance	☐ Military Outload
☐ Planned Event	☐ Maritime HLS/Prevention	☐ Other

Situation Summary as of Time of Report

Future Outlook/Goals/Needs/Issues

Safety Status/Personnel Casualty Summary

Casualty Type	Since Last Report	Adjustments to Previous Op. Period	Total
Responder Injury			
Responder Death			
Public Missing (Active Search)			
Public Missing (Presumed Lost)			
Public Uninjured			
Public Injured			
Public Dead			
Total Public Involved			

Property Damage Summary

Property Type	Est. Damage Amount
Vessel	
Cargo	
Facility	
Other	

ICS 209 Incident Status Summary			© 1997-2006 TRG/dbSoft, Inc.

ICS 209 - Incident Status Summary

Incident:	**Prepared By:** **at:**
Period:	**Version Name:**

Equipment Resources

Type	Notes	Ordered	Available / Staged	Assigned	Out-of-Service
Aircraft – Fixed-Wing					
Aircraft – Helo					
Pollution Equip – Boom					
Pollution Equip – OSRV					
Pollution Equip – Portable Storage					
Pollution Equip – Skimmers					
Pollution Equip – Tank Vsl/Barge					
Pollution Equip – VOSS/SORS					
Vehicles – Ambulance					
Vehicles – Car					
Vehicles - Fire/Rescue/HAZMAT					
Vehicles – Truck					
Vehicles – Vac/Tank Truck					
Vessels – Boat					
Vessels – Deck Barge					
Vessels – Pilot Boat					
Vessels – SAR/LE Boat					
Vessels – Tug/Tow Boat					
Vessels – USCG Cutter					
Vessels – Work/Crew Boat					

Personnel Resources

Agency	Total # of People
USCG	
DHS (other than USCG)	
NOAA	
FBI	
DOD (USN Supsalv, CST, etc.)	
DOI (US Fish & Wildlife, Nat Parks, BLM, etc.)	
RP	
State	
Local	
Total:	

ICS 209 Incident Status Summary			**© 1997-2006 TRG/dbSoft, Inc.**

ICS 209 - Incident Status Summary

Incident:	Prepared By:	at:
Period:	Version Name:	

HAZMAT/Oil Spill Status (Estimated)

Common Name(s):

UN Number:	Source Status: ☐ Secured ☐ Unsecured
CAS Number:	Remaining Potential:
	Rate of Spillage:

All estimates are in:

	Adjustments to Previous Operational Period	Since Last Report	Total
Volume Spilled/Released			
Mass Balance – HAZMAT/Oil Budget			
Recovered HAZMAT/Oil			
Evaporation/Airborne			
Natural Dispersion			
Chemical Dispersion			
Burned			
Floating, Contained			
Floating, Uncontained			
Onshore			
		Total HAZMAT/Oil Accounted for:	

Comments:

HAZMAT/Oil Waste Management (est., since last report)

Waste Type	Recovered	Disposed	Stored
Oil			
Oily Liquid			
Liquid			
Oily Solid			
Solid			

Comments:

HAZMAT/Oil Shoreline Impacts (Estimated)

Degree of Impact	Affected	Cleaned	To be Cleaned
Very Light			
Light			
Medium			
Heavy			
Total:			

Comments:

HAZMAT/Oil Wildlife Impacts (Since last report)

Wildlife Type	Captured	Cleaned	Released	DOA	Died in Facility	
					Euthanized	Other
Bird						
Mammal						
Reptile						
Fish						
Total:						

Comments:

ICS 209 Incident Status Summary			

ICS 209 - Incident Status Summary

Incident:	Prepared By:	at:
Period:	Version Name:	

Evacuation Status

	Since Last Report	Adjustments to Previous Op. Period	Total
Total to be Evacuated			
Number Evacuated			

Migrant Interdiction

	Since Last Report	Adjustments to Previous Op. Period	Total
Vessels Interdicted			
Migrants Interdicted at Sea			
Migrants Interdicted Ashore			
Injured			
MEDEVAC'd			
Deaths			
Migrants Repatriated			

Sorties/Patrols Summary

Air	**Since Last Report**	**Total**
Number of Sorties/Patrols		
Area Covered (square miles)		
Total Time On-Scene (In Hours)		
Surface	**Since Last Report**	**Total**
Number of Sorties/Patrols		
Area Covered (square miles)		
Total Time On-Scene (In Hours)		

Use of Force Summary

Category	Since Last Report	Total
III - Soft Empty Hand Control		
IV - Hard Empty Hand Control		
V - Intermediate Weapons		
VI - Deadly Force		
VSL - Force to Stop Vessel from Cutter/Boat		
A/C - Force to Stop Vessel from Aircraft		
Arrests		
Seizures		
Deaths		

Operational Controls

Currently in Force

Type	Initiating Unit	Initiated Date	Activity #

Removed Since Last Report

Type	Initiating Unit	Initiated Date	Date Removed	Activity #

ICS 209 Incident Status Summary

ICS 210 – Change Status

Incident:	**Prepared By:** **at:**
Period:	**Version Name:**

Incident Resources to Change

ID	Supplier	Resource Type	Description	Quantity	Size	Current Location	Current Status

New Status and/or Location

New Status: _____

New Location: _____

Date/Time of Change: _____

Notes (Special Instructions, Safety Notes, Hazards, Priorities)

ICS 210 – Change Status			**© 1997-2006 TRG/dbSoft, Inc.**

ICS 211p – Check-In List (Personnel)					
Incident:			**Prepared By:**		**at:**
Period:	**to**		**Version Name:**		
Check-In Location - - ☐ **Command Post** ☐ **Staging Area** ☐ **Other** **-->** **Location Name:**					
Personnel Check-In Information					
Name (Last, First) & Contact Information	**Classification & Company/Agency**	**Assigned Section & Position**	**Quantity & UOM**	**Check-In Date/Time**	**Check-Out Date/Time Destination**
ICS 211P Check-In List (Personnel)					**© 1997-2006 TRG/dbSoft, Inc.**

ICS 211e – Check-In List (Equipment)					
Incident:				**Prepared By:**	**at:**
Period:				**Version Name:**	
Check-In Location: ☐ Command Post ☐ Staging Area ☐ Other --> **Location Name:**					
Equipment Check-In Information					
Equipment Description & Identifier	**Supplier & Contact Information**	**Quantity & UOM**	**Size & UOM**	**Check-In Date/Time & Assignment**	**Check-Out Date/Time & Destination**
ICS 211e Check-In List (Equipment)					**© 1997-2006 TRG/dbSoft, Inc.**

ICS 213 – Resource Request

Incident:		**Period:**
Requisition Number:	**Status:**	**Created Date/Time:**
Requested By: **Priority:** **Completed By:**		**Requested Delivery Date/Time:** **Requested Delivery Location:** **Final Destination:**
Notes:		

Requested (Requestor)				Procured (Logistics)						
Quantity	**Supplier**	**Description**	**Size**	**ID**	**Supplier**	**Quantity**	**Size**	**ETA**	**Unit Price**	**P.O. #**

Requisitions/Procurement Report

ICS 214 – Unit Log

Incident:	**Prepared By:** **at:**
Period: **to**	**Version Name:**

Personnel Roster Assigned

Name	ICS Position	Home Base

Activity Log

Date/ Time	Events/Notes

ICS 214 Unit Log			**© 1997-2006 TRG/dbSoft, Inc.**

ICS 214a – Individual Log		
Incident:	**Prepared By:**	**at:**
Period:	**Version Name:**	

Activity Log

Date/Time	Events/Notes

ICS 214 Individual Log			© 1997-2006 TRG/dbSoft, Inc.

ICS 215 – Operational Planning Worksheet

Incident:	Prepared By: at:
Period:	Version Name:

Branch/ Division/Area of Operation	Work Assignments	Resource							Reporting Location	Requested Arrival Date/Time
		Req								
		Have								
		Need								
		Req								
		Have								
		Need								
		Req								
		Have								
		Need								
		Req								
		Have								
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		Req								
		Have								
		Need								
		Req								
		Have								
		Need								

ICS 215 Operational Planning Worksheet

ICS 220 - Air Operations

Incident:	**Prepared By:**	**at:**
Period:	**Version Name:**	

Personnel and Communications

Title/Position	Name	Air/Air Frequency	Air/Ground Frequency	Phone

Planned Flight Information

Type Of Aircraft	Operating Base	Aircraft Company	Passenger Capacity	Purpose	Scheduled Flights

Notes (Special Instructions, Safety Notes, Hazards, Priorities)

ICS 220 - Air Operations			**© 1997-2006 TRG/dbSoft, Inc.**

ICS 221 – Demob. Check Out

Incident:	**Prepared By:** **at:**
Period:	**Version Name:**

Unit/Personnel Released:

Released Date/Time:

You and your resources have been released, subject to signoff from the following:

Resources

Resource Type	Description	Supplier	Quantity	Size

Signatures

- ☐ _____
- ☐ _____
- ☐ _____
- ☐ _____
- ☐ _____
- ☐ _____
- ☐ _____
- ☐ _____
- ☐ _____
- ☐

Comments

ICS 221 Demobilization Check Out			**© 1997-2006 TRG/dbSoft, Inc.**

ICS 223 – Health and Safety Message		
Incident:	**Prepared By:**	**at:**
Period:	**Version Name:**	

Major Hazards and Risks

Narrative

Signature:

ICS 223 Health and Safety Message			**© 1997-2006 TRG/dbSoft, Inc.**

ICS 230 – Daily Meeting Schedule			
Incident:		**Prepared By:**	**at:**
Period:		**Version Name:**	
Meeting Name & Date/Time	***Purpose***	**Attendees**	**Location**
ICS 230 – Daily Meeting Schedule			**© 1997-2006 TRG/dbSoft, Inc.**

ICS 231 – Meeting Summary

Incident:	**Prepared By:**	**at:**
Period:	**Version Name:**	

Meeting Information

Meeting Name:	
Meeting Date/Time:	
Meeting Location:	
Meeting Facilitator:	

Purpose and Attendees

Purpose:	
Attendees:	

Agenda Outline

Meeting Minutes

ICS 231 Meeting Summary			**© 1997-2006 TRG/dbSoft, Inc.**

ICS 232 – Resources at Risk			
Incident:		**Prepared By:**	**at:**
Period:		**Version Name:**	

Environmentally Sensitive Areas and Wildlife Issues

Site #	Priority	Site Name and/or Physical Location	Site Issues
Notes:			
Notes:			
Notes:			
Notes:			
Notes:			

Archaeo-cultural and Socio-economic Issues

Site #	Priority	Site Name and/or Physical Location	Site Issues
Notes:			
Notes:			
Notes:			
Notes:			

ICS 232 Resources at Risk			© 1997-2006 TRG/dbSoft, Inc.

ICS 232a – ACP Site Index

Incident:	**Prepared By:** **at:**
Period:	**Version Name:**

Index to ACP/GRP sites shown on Situation Map

Site #	Priority	Site Name and/or Physical Location	Action	Status
Notes:				
Notes:				
Notes:				
Notes:				
Notes:				
Notes:				
Notes:				
Notes:				
Notes:				
Notes:				
Notes:				

ICS 232a ACP Site Index			**© 1997-2006 TRG/dbSoft, Inc.**

ICS 233 – Open Action Tracker

Incident:	**Prepared By:** **at:**
Period:	**Version Name:**

Item Number	Description	Responsible Section/Person	Status	Start Date	Briefed	Target Date
					☐	
					☐	
					☐	
					☐	
					☐	
					☐	
					☐	
					☐	
					☐	
					☐	
					☐	
					☐	
					☐	
					☐	

ICS 233 – Open Action Tracker			**© 1997-2006 dbSoft, Inc.**

ICS 234 – Work Analysis Matrix		
Incident:	**Prepared By:**	**at:**
Period:	**Version Name:**	

Objectives

Operations Objectives	Optional Strategies	Tactics/Work Assignments

ICS 234 – Work Analysis Matrix			

REGULATORY CROSS REFERENCE

This regulatory cross reference contains the following applicable regulations:

- U.S. EPA -OPA 90
- U.S. EPA –SPCC
- USCG OPA 90 Final Rule
- U.S. DOT/PHMSA 49 CFR Part 194
- OSHA Emergency Action Plans
- OSHA HAZWOPER

U.S. EPA -OPA 90 *Appendix F to Part 112 – Facility Specific Response Plan*		
Appendix F	**BRIEF DESCRIPTION**	**LOCATION**
1.0	***Model Facility-Specific Response Plan***	---
1.1	***Emergency Response Action Plan***	---
	1. Qualified Individual Information	Fig B.1, 1.2
	2. Emergency Notification Phone List	Fig 2.2, Fig B.1 & B.8
	3. Spill Response Notification Form	Fig 2.1
	4. Response Equipment List and Location	2.3.2
	5. Response Equipment Testing and Deployment	2.3.2
	6. Facility Response Team	Fig 2.5
	7. Evacuation Plan	Fig. 2.9, Annex B Fig. B.7, B.2.5
	8. Immediate Actions	2.2
	9. Facility Diagram	Fig 2.9, Fig 2(a)(b)&(c), A.1
1.2	***Facility Information***	---
1.2.1	Facility name and location	1.7
1.2.2	Latitude and Longitude	1.7
1.2.3	Wellhead Protection Area	1.7
1.2.4	Owner/operator	1.7
1.2.5	Qualified Individual	1.2
1.2.6	Date of Oil Storage Start-up	1.7
1.2.7	Current Operation	1.7, A.2
1.2.8	Dates and Types of Substantial Expansion	Annex A, Fig. A.1
1.3	***Emergency Response Information***	---
1.3.1	Notification	Fig. 2.2, Annex B-1
1.3.2	Response Equipment List / Location	2.3.2
1.3.3	Response Equipment Testing/Deployment	2.3.2
1.3.4	Personnel	---
	➢ A description of information to pass to response personnel	2.2, A.3.1
	➢ duties of persons at the Facility during a response action	Annex B, Sec. 2.2
	➢ Evidence of contractual arrangements	Annex B, Figure B.5
1.3.5	Evacuation Plans	Annex B
	Plans for evacuation…and community evacuation plans, as appropriate	Annex B2.5,B3.4, B3.8
1.3.6	Qualified Individual's Duties	C.3
	A description of the duties of the qualified individual that include:	C.3

U.S. EPA -OPA 90
Appendix F to Part 112 – Facility Specific Response Plan (Cont'd)

Appendix F	BRIEF DESCRIPTION	LOCATION
1.3.6	Activate internal alarms and hazard communication systems to notify all facility personnel;	B.1.4, C.3
	Notify all response personnel, as needed;	B.1, C.3
	Identify the character, exact source, amount, and extent of the release, as well as the other items needed for notification;	2.2.5, C.3
	Notify and provide necessary information to the appropriate Federal, State, and local authorities with designated response roles, including the National Response Center, State Emergency Response Commission, and Local Emergency Planning Committee;	Annex B Fig. B.8
	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);	A.3.1, B.1.2
1.4	***Hazard Evaluation***	---
1.4.1	Hazard Identification	Annex G – SPCC Table 3-1
1.4.2	Vulnerability Analysis	A.5
1.4.3	Analysis of the Potential for an Oil Spill	A.5.1
1.4.4	Facility Reportable Oil Spill History	D.3
1.5	***Discharge Scenarios***	---
1.5.1	Small and Medium Discharges	Annex A.3, A.4
1.5.2	Worst Case Discharge	Annex A.3, A.4
1.6	***Discharge Detection Systems***	---
1.6.1	Discharge Detection by Personnel	2.2.1
1.6.2	Automated Discharge Detection	2.2.1
1.7	***Plan Implementation***	---
1.7.1	Response Resources for Small, Medium, and Worst Case Spills	Fig. 2.10 (a)(b)(c)
1.7.2	Disposal Plans	Annex D.1
1.7.3	Containment and Drainage Planning	Annex G – SPCC 2.3

U.S. EPA -OPA 90 *Appendix F to Part 112 – Facility Specific Response Plan (Cont'd)*		
Appendix F	**BRIEF DESCRIPTION**	**LOCATION**
1.8	***Self-Inspection, Drills/Exercises, and Response Training***	---
1.8.1	Facility Self-Inspection	Annex G – SPCC 8.0
	1.8.1.1 Tank Inspection	Annex G – SPCC 8.0
	1.8.1.2 Response Equipment Inspection	Annex H
	1.8.1.3 Secondary Containment Inspection	Annex G – SPCC 8.0,
1.8.2	Facility Drills/Exercises	E.5
	1.8.2.1 Qualified Individual Notification Drill Log	E.5
	1.8.2.2 Crisis Management Team Tabletop Exercise Log	E.5
1.8.3	Response Training	E.3.2
	1.8.3.1 Personnel Response Training Log	Fig E.1
	1.8.3.2 Discharge Prevention Meeting Log	Annex G – SPCC 10.0
1.9	***Diagrams***	---
	(1) Site Plan Diagram	Fig A
	(2) Site Drainage Plan Diagram	Annex G
	(3) Site Evacuation Plan Diagram	Fig 2.9
1.10	***Security***	Annex G – SPCC 9.0
2.0	***Response Plan Cover Sheet***	FWD, Fig 1.2
3.0	***Acronyms***	Annex J
4.0	***References***	Annex I
40 CFR § 112.21	**BRIEF DESCRIPTION**	**LOCATION**
(a)	Develop a training and drill program that satisfies the requirements of this section	Annex E
(b)	Develop a facility response training program to train personnel involved in response activities.	Annex E
(b)(1)	Proper instruction of facility personnel in the procedures to respond to discharges of oil and in applicable oil spill response laws, rules, and regulations	Annex E
(b)(2)	Training shall be functional in nature according to job tasks for both supervisory and non-supervisory operational personnel	Annex E
(b)(3)	Trainers shall develop specific lesson plans on subject areas relevant to facility personnel involved in oil spill response and cleanup	Annex E
(c)	Develop a program of facility response drills/exercises, including evaluation procedures. Can follow PREP.	Annex E

U.S. EPA –SPCC
40 CFR § 112.3,5,7,8

40 CFR § 112	BRIEF DESCRIPTION	LOCATION
112.3	Requirements for preparation and implementation of Spill Prevention Control and Countermeasure Plan	---
(a,b,c)	Owners or operators of onshore or offshore facilities... could reasonably be expected to have a discharge as described…must prepare and implement a Plan…	SPCC 1.0
(d)	A licensed Professional Engineer must review and certify a Plan for it to be effective to satisfy the requirements of this part.	SPCC 1.0
(e)	Maintain a complete copy of the Plan at the facility if the facility is normally attended at least 4 hours per day, or at the nearest field office if the facility is not so attended...	SPCC 1.0
112.5	Amendment of Spill Prevention Control and Countermeasures Plans by owners or operators	SPCC 1.3
(a)	Amend the SPCC...when there is a change in facility design, construction, operation or maintenance which materially affects its potential as described...	SPCC 1.3
(b)	...complete a review and evaluation of the SPCC at least once every five years...As a result…amend the SPCC within six months of the review ...implement within six months of preparation of any amendment.	SPCC 1.3
(c)	Have a Professional Engineer certify any technical amendment to the Plan…	SPCC 1.3
112.7	Guidelines for the preparation and implementation of a Spill Prevention Control and Countermeasures Plan	---
-----	...owner or operator…must prepare a Plan…must have full approval of management…in writing.	Annex G – SPCC Eng Cert Page
-----	If the plan calls for additional facilities or procedures, methods, or equipment not yet fully operational, these items should be discussed in separate paragraphs, and the details of installation and operational start-up should be explained separately.	---
-----	…follow the sequence specified (or cross-reference) for the Plan…	Annex I
(a)(2)	Comply with all applicable requirements in this part… [or] state reasons for non-conformance … and describe in detail alternate methods… [for] equivalent environmental protection.	---
(a)(3)	Describe in your Plan the physical layout … and include diagram …	Annex G – SPCC 2.2, Attachment C
(a)(3)(i)	… [address in your Plan] ... the type of oil in each container and its storage capacity …	Annex G – SPCC 3.0
(a)(3)(ii)	… discharge prevention measures including procedures for routine handling of products …	Annex G – SPCC 5.0
(a)(3)(iii)	...Discharge or drainage controls … around containers … and procedures for control of a discharge …	Annex G – SPCC 6.0
(a)(3)(iv)	Countermeasures for discharge discovery, response, and cleanup (both … facility's capability … and contractor …)	Annex G – SPCC 6.0
(a)(3)(v)	Methods of disposal of recovered materials … in accordance with … legal requirements; and	Annex G – SPCC 6.0
(a)(3)(vi)	Contact list and phone numbers for … [those] who must be contacted …	Fig 2.2, Fig 2.3, Annex B

U.S. EPA -SPCC
40 CFR § 112.3,5,7,8 (Cont'd)

40 CFR § 112	BRIEF DESCRIPTION	LOCATION
(a)(4)	Unless you have submitted a response plan … relate information … [on a discharge] …	Annex G – SPCC 7.0
(a)(5)	Organize portions of the Plan … that will make them readily usable in an emergency…	Tabs, Core Plan
(b)	Where experience indicates a reasonable potential for equipment failure…, include in your Plan a prediction of the direction, rate of flow, and total quantity of oil which could be discharged …	Annex G – SPCC 3.0
(c)(1)	For onshore facilities:	---
(c)(1)(i)	Dikes, berms or retaining walls sufficiently impervious to contain spilled oil	Annex G – SPCC 5.0, Attachment D
(c)(1)(ii)	Curbing	N/A
(c)(1)(iii)	Culverting, gutters or other drainage systems	N/A
(c)(1)(iv)	Weirs, booms or other barriers	N/A
(c)(1)(v)	Spill diversion ponds	N/A
(c)(1)(vi)	Retention ponds	N/A
(c)(1)(vii)	Sorbent materials	N/A
(c)(2)	For offshore facilities:	---
(c)(2)(i)	Curbing, drip pans	N/A
(c)(2)(ii)	Sumps and collection systems	N/A
(d)	If you determine that the installation any of the of structures or equipment listed in paragraphs (c) and (h)(1) of this section…is not practicable…you must clearly explain in your Plan…and provide…	N/A
(d)(1)	A strong oil spill contingency plan following the provisions of...40 CFR 109.	Entire ICP
(d)(2)	A written commitment of manpower, equipment and materials required to expeditiously control and remove any quantity of oil discharged that may be harmful.	Annex G – SPCC 1.6
(e)	*Inspections and records*	---
	…required by this part...in accordance with written procedures that you or the certifying engineer develop…with the SPCC Plan for a period of three years.	Annex G – SPCC 8.6
(f)	*Personnel, training and spill prevention procedures*	---
(f)(1)	...train your oil-handling personnel in the operation and maintenance of equipment to prevent the discharges...and the contents of the SPCC	Annex G – SPCC 10.0
(f)(2)	Designate a person at each applicable facility…accountable for oil spill prevention...	Annex G – SPCC 10.1
(f)(3)	Schedule and conduct spill prevention briefings…once a year...highlight and describe known spill discharges…or failures, malfunctioning components, and recently developed precautionary measures.	Annex G – SPCC 9.0
(g)	*Security (excluding oil production facilities)*	---
(g)(1)	Fully fence each facility…and lock and/or guard entrance gates...when the facility is not in production or is unattended.	Annex G – SPCC 9.1
(g)(2)	Ensure that the master flow and drain valves…have adequate security measures … remain in the closed position when in non-operating status…	Annex G – SPCC 9.1

U.S. EPA -SPCC
40 CFR § 112.3,5,7,8 (Cont'd)

40 CFR § 112	BRIEF DESCRIPTION	LOCATION
(g)(3)	Lock the starter control on each oil pump in the "off" position and locate at a site accessible only to authorized personnel when the pump is in non-operating or non-standby status.	Annex G – SPCC 9.1
(g)(4)	Securely cap or blank flange loading/unloading connections of oil pipelines…when not in service or when in standby service for an extended time.	Annex G – SPCC 9.1
(g)(5)(i)(ii)	Provide facility lighting commensurate with the type and location of the facility that will assist in the: (i) Discovery of spills occurring during hours of darkness...by operating personnel (ii) Prevention of discharges occurring through acts of vandalism.	Annex G – SPCC 9.1
(h)	*Facility tank car and tank truck loading/unloading rack*	---
(h)(1)	Where loading/unloading area drainage does not flow into a catchment basin or treatment facility …, use a quick drainage system… …design any containment system to hold at least maximum capacity of … a tank car or tank truck loaded or unloaded at the facility.	Annex G – SPCC 5.6
(h)(2)	Provide an interlocked warning light or physical barrier system, warning signs, wheel chocks, or vehicle break to prevent vehicular departure before complete disconnect … .	Annex G – SPCC 5.6
(h)(3)	Prior to filling and departure …, closely inspect for discharges the lowermost drain and all outlets … should be closely examined for leakage, … that they are tightened, adjusted, or replaced to prevent liquid leakage while in transit.	Annex G – SPCC 5.6
(i)	If a field-constructed aboveground container undergoes a repair, alteration, reconstruction, or change in service that might affect the risk of a discharge or failure due to brittle fracture…evaluate the container for risk of discharge or failure…	Annex G – SPCC 8.2
(j)	In addition...include a complete discussion of conformance with applicable requirements…or any applicable more stringent State rules, regulations and guidelines.	Annex G – SPCC 1.0
112.8	Spill Prevention, Control, and Countermeasure Plan requirements for onshore facilities (excluding production facilities)	---
(a)	Meet the general requirements for the Plan listed under § 112.7, and the specific discharge prevention and containment procedures…	---
(b)(1)	Restrain drainage from diked storage areas by valves … to prevent a spill...into the drainage system or inplant effluent treatment system, except where plan systems are designed to handle such leakage. … empty diked areas by pumps or ejectors; however you must be manually activate these pumps…and inspect the condition of the accumulation before starting...	Annex G – SPCC 2.3
(b)(2)	Use valves of manual, open-and-closed design... If your facility drainage drains directly into water course…you must inspect and may drain uncontaminated retained stormwater, as provided in...paragraphs (c)(3)(ii)(iii), and (iv).	Annex G – SPCC 2.3
(b)(3)	Design facility drainage systems from undiked areas with a potential for discharge … to flow into ponds, lagoons or catchment basins, designed to retain oil or return it to the facility. You must not locate catchment basins in areas subject to periodic flooding.	Annex G – SPCC 2.3

U.S. EPA -SPCC
40 CFR § 112.3,5,7,8 (Cont'd)

40 CFR § 112	BRIEF DESCRIPTION	LOCATION
(b)(4)	If ... drainage not engineered as in paragraphs (b)(3), equip the final discharge of all ditches with a diversion system that would...retain the oil in the facility.	Annex G – SPCC 2.3
(b)(5)	Where drainage waters are treated in more than one treatment unit… provide two "lift" pumps and permanently install at least one of the pumps. Whatever techniques are used … must engineer facility drainage … to prevent a discharge as described in § 112.1(b) in case there is an equipment failure or human error...	Annex G – SPCC 2.3.2
(c)	*Bulk storage containers (onshore)*	---
(c)(1)	Not use a container for the storage of oil unless its material and construction are compatible with the material stored and conditions of storage such as pressure or temperature.	Annex G – SPCC 5.11
(c)(2)	Construct all bulk storage container installations … provide a secondary means of containment for the entire contents … plus sufficient freeboard to allow for precipitation. You must ensure that diked areas are sufficiently impervious to contain discharged oil.	Annex G – SPCC 5.0, Attachment D
(c)(3)	Not allow drainage of uncontaminated rainwater…into a storm drain or discharge of an effluent discharge into an open water course, lake, or pond, bypassing the in-plant treatment system unless you:	Annex G – SPCC 5.2
(c)(3)(i)	… keep the bypass valve sealed closed.	Annex G – SPCC 5.5
(c)(3)(ii)	Inspect the retained rainwater to ensure … will not cause a discharge as described in § 112.1(b).	Annex G – SPCC 2.3
(c)(3)(iii)	Open the bypass valve and reseal it following drainage under responsible supervision.	Annex G – SPCC 5.3
(c)(3)(iv)	Keep adequate records of such events.	Annex G – SPCC 5.7
(c)(4)	Protect any completely buried metallic storage tank installed on or after January 10,1974 from corrosion by coatings or cathodic protection… . You must regularly leak test…	Annex G – SPCC 5.12
(c)(5)	Not use partially buried … metallic tanks for the storage of oil, unless you protect the buried section … from corrosion…	Annex G – SPCC 5.12
(c)(6)	Test each aboveground container for integrity testing on a regular schedule. …keep comparison records…frequently inspect the outside of the container for signs of deterioration, discharges, or accumulation of oil inside diked areas. Records … kept under usual and customary business practices will suffice...	Annex G – SPCC 8.2
(c)(7)	Control leakage through defective internal heating coils by monitoring the steam return and exhaust lines for contamination...	Annex G – SPCC 3.4
(c)(8)	Engineer or update each container installation … to avoid discharges [and] provide at least one of the following devices:	---
(c)(8)(i)	High liquid level alarms with an audible or visual signal at a constantly attended operation or surveillance station. In smaller facilities, an audible air vent may suffice.	Annex G – SPCC 5.11
(c)(8)(ii)	High liquid level pump cutoff devices set to stop flow at a predetermined container content level.	Annex G – SPCC 5.11
(c)(8)(iii)	Direct audible or code signal communication between the container gauger and the pumping station.	Annex G – SPCC 5.11

U.S. EPA -SPCC
40 CFR § 112.3,5,7,8 (Cont'd)

40 CFR § 112	BRIEF DESCRIPTION	LOCATION
(c)(8)(iv)	A fast response system for determining the liquid level of each bulk storage container such as digital computers, telepulse, or direct vision gauges.	Annex G – SPCC 5.11
(c)(8)(v)	You must regularly test liquid level sensing devices to ensure proper operation.	Annex G – SPCC 8.0
(c)(9)	Observe effluent treatment facilities … to detect possible system upsets that could cause a discharge…	Annex G – SPCC 2.3
(c)(10)	… correct visible discharges which result in a loss of oil from container including…seam, gaskets, piping, pumps, valves…	Annex G – SPCC 8.2, SPCC 8.4
(c)(11)	Position or locate mobile or portable oil storage container to prevent a discharge … furnish a secondary means of containment...for the largest single compartment or container with sufficient freeboard.	Annex G – SPCC 5.9
(d)	*Facility transfer operations, pumping, and facility process*	---
(d)(1)	Provide buried piping that is installed or replaced on or after August 16, 2002, with a protective wrapping and coating…also cathodically protect … If a section of buried line is exposed...inspect it for deterioration. If you find corrosion damage…undertake additional examination and corrective action as indicated...	Annex G – SPCC 2.3.4, SPCC 5.12
(d)(2)	Cap or blank-flange the terminal connection at the transfer point and mark it as to origin when piping is not in service or in standby service for an extended time.	Annex G – SPCC 9.1
(d)(3)	Properly design pipe supports to minimize abrasion and corrosion and allow for expansion and contraction.	Annex G – SPCC 5.12
(d)(4)	Regularly inspect all aboveground valves, piping, and appurtenances. … You must also conduct integrity and leak testing on buried piping at the time of installation, modification, construction, relocation, or replacement.	Annex G – SPCC 8.4
(d)(5)	Warn all vehicles entering the facility to be sure that no vehicle will endanger aboveground piping or other oil transfer operations.	Annex G – SPCC 5.12

USCG OPA 90 FINAL RULE
33 CFR §154.1030 and §154.1035

33 CFR §154.1030	LOCATION
(a) The plan must be written in English.	Entire ICP
(b) A response plan must be divided into the sections listed in this paragraph and formatted in the order specified herein unless noted otherwise. It must also have some easily found marker identifying each section listed below. The following are the sections and subsections of a facility response plan:	Tabs, TOC, Cross Reference
(1) Introduction and plan contents.	TOC, Sec. 1
(2) Emergency response action plan:	---
(i) Notification procedures.	Fig. 2.1, Annex B
(ii) Facility's spill mitigation procedures.	Sec. 2.2.2.
(iii) Facility's response activities.	Annex A, Annex B
(iv) Fish and wildlife and sensitive environments.	Annex A.6
(v) Disposal plan.	Annex D.2
(3) Training and Exercises:	---
(i) Training procedures.	Annex E
(ii) Exercise procedures.	Annex E
(4) Plan review and update procedures.	Annex F
(5) Appendices.	---
(i) Facility-specific information.	Annex A
(ii) List of contacts.	Annex B
(iii) Equipment lists and records.	2.3.2, Annex B
(iv) Communications plan.	Sec. B.1.5
(v) Site-specific safety and health plan.	Annex D.3
(vi) List of acronyms and definitions.	Annex J
(vii) A geographic-specific appendix for each zone in which a mobile facility operates.	N/A

USCG OPA 90 FINAL RULE
33 CFR §154.1030 and §154.1035 (Cont'd)

CFR §154.1035	LOCATION
(a) *Introduction and plan content.* This section of the plan must include facility and plan information as follows:	---
(1) The facility's name, street address, city, county, state, ZIP code, facility telephone number, and telefacsimile number, if so equipped. Include mailing address if different from street address.	Sec. 1.7, Annex A.1, A.2
(2) The facility's location described in a manner that could aid both a reviewer and a responder in locating the specific facility covered by the plan, such as, river mile or location from a known landmark that would appear on a map or chart.	Sec. 1.7, Annex A.1, A.2
(3) The name, address, and procedures for contacting the facility's owner or operator on a 24-hour basis.	Sec. 1.7, Annex A.1, A.2
(4) A table of contents.	TOC
(5) A record of change(s) to record information on plan updates.	Annex F
(b) *Emergency Response Action Plan.* This section of the plan must be organized in the subsections described in this paragraph:	---
(1) *Notification procedures.* (i) This subsection must contain a prioritized list identifying the person(s), including name, telephone number, and their role in the plan, to be notified of a discharge or substantial threat of a discharge of oil. The telephone number need not be provided if it is listed separately in the list of contacts required in the plan. This Notification Procedures listing must include --	Sec. 2
(A) Facility response personnel, the spill management team, oil spill removal organizations, and the qualified individual(s) and the designated alternate(s); and	Fig 2.2
(B) Federal, State, or local agencies, as required.	Fig 2.2
(ii) This subsection must include a form, such as that depicted in Figure 1, which contains information to be provided in the initial and follow-up notifications to Federal, State, and local agencies. The form shall include notification of the National Response Center as required in part 153 of this chapter. Copies of the form also must be placed at the location(s) from which notification may be made. The initial notification form must include space for the information contained in Figure 1. The form must contain a prominent statement that initial notification must not be delayed pending collection of all information.	Fig 2.1
(2) *Facility's spill mitigation procedures.* (i) This subsection must describe the volume(s) and oil groups that would be involved in the --	---
(A) Average most probable discharge from the MTR facility;	Annex A
(B) Maximum most probable discharge from the MTR facility;	Annex A
(C) Worst case discharge from the MTR facility; and	Annex A
(D) Where applicable, the worst case discharge from the non-transportation-related facility. This must be the same volume provided in the response plan for the non-transportation-related facility.	Annex A
(ii) This subsection must contain prioritized procedures for facility personnel to mitigate or prevent any discharge or substantial threat of a discharge of oil resulting from operational activities associated with internal or external facility transfers including specific procedures to shut down affected operations. Facility personnel responsible for performing specified procedures to mitigate or prevent any discharge or potential discharge shall be identified by job title. A copy of these procedures shall be maintained at the facility operations center. These procedures must address actions to be taken by facility personnel in the event of a discharge, potential discharge, or emergency involving the following equipment and scenarios:	Section 2

USCG OPA 90 FINAL RULE
33 CFR §154.1030 and §154.1035 (Cont'd)

CFR §154.1035 (Cont'd)	LOCATION
(A) Failure of manifold, mechanical loading arm, other transfer equipment, or hoses, as appropriate;	2.2
(B) Tank overfill;	2.2
(C) Tank failure;	2.2
(D) Piping rupture;	2.2
(E) Piping leak, both under pressure and not under pressure, if applicable;	2.2
(F) Explosion or fire; and	2.2
(G) Equipment failure (e.g. pumping system failure, relief valve failure, or other general equipment relevant to operational activities associated with internal or external facility transfers.)	2.2
(iii) This subsection must contain a listing of equipment and the responsibilities of facility personnel to mitigate an average most probable discharge.	2.2
(3) *Facility's response activities.*	---
(i) This subsection must contain a description of the facility personnel's responsibilities to initiate a response and supervise response resources pending the arrival of the qualified individual.	2.2, Fig. 2.5, Annex C
(ii) This subsection must contain a description of the responsibilities and authority of the qualified individual and alternate as required in § 154.1026.	Annex C
(iii) This subsection must describe the organizational structure that will be used to manage the response actions. This structure must include the following functional areas.	Fig. 2.5, Annex C
(A) Command and control;	Annex C
(B) Public information;	Annex C
(C) Safety;	Annex C
(D) Liaison with government agencies;	Annex C
(E) Spill Operations;	Annex C
(F) Planning;	Annex C
(G) Logistics support; and	Annex C
(H) Finance.	Annex C
(iv) This subsection must identify the oil spill removal organizations and the spill management team to:	Fig 2.5, 2.10(a)(b)(c), Annex B
(A) Be capable of providing the following response resources:	---
(*1*) Equipment and supplies to meet the requirements of §§ 154.1045, 154.1047 or subparts H or I of this part, as appropriate; and	Fig. 2.5, f.10(a)(b)(c), Annex B
(*2*) Trained personnel necessary to continue operation of the equipment and staff of the oil spill removal organization and spill management team for the first 7 days of the response.	Figure 2.10(a),(b),(c)
(B) This section must include job descriptions for each spill management team member within the organizational structure described in paragraph (b)(3)(iii) of this section. These job descriptions should include the responsibilities and duties of each spill management team member in a response action.	Annex C

USCG OPA 90 FINAL RULE
33 CFR §154.1030 and §154.1035 (Cont'd)

CFR §154.1035 (Cont'd)	LOCATION
(4) *Fish and wildlife and sensitive environments.* (i) This section of the plan must identify areas of economic importance and environmental sensitivity, as identified in the ACP, which are potentially impacted by a worst case discharge. ACPs are required under section 311(j)(4) of the FWPCA to identify fish and wildlife and sensitive environments. The applicable ACP shall be used to designate fish and wildlife and sensitive environments in the plan. Changes to the ACP regarding fish and wildlife and sensitive environments shall be included in the annual update of the response plan, when available.	Annex A.5 & A.6
(ii) For a worst case discharge from the facility, this section of the plan must	---
(A) List all fish and wildlife and sensitive environments identified in the ACP which are potentially impacted by a discharge of persistent oils, non-persistent oils, or non-petroleum oils.	Annex A.5 & A.6
(B) Describe all the response actions that the facility anticipates taking to protect these fish and wildlife and sensitive environments.	Annex A.5 & A.6
(C) Contain a map or chart showing the location of those fish and wildlife and sensitive environments which are potentially impacted. The map or chart shall also depict each response action that the facility anticipates taking to protect these areas. A legend of activities must be included on the map page.	Fig A.5 & A.6
(5) *Disposal Plan.* This subsection must describe any actions to be taken or procedures to be used to ensure that all recovered oil and oil contaminated debris produced as a result of any discharge are disposed according to Federal, state, or local requirements.	Annex D.2
(c) *Training and exercises.* This section must be divided into the following two subsections:	---
(1) *Training procedures.* This subsection must describe the training procedures and programs of the facility owner or operator to meet the requirements in § 154.1050.	Annex E
(2) *Exercise procedures.* This subsection must describe the exercise program to be carried out by the facility owner or operator to meet the requirements in § 154.1055.	Annex E
(d) *Plan review and update procedures.* This section must address the procedures to be followed by the facility owner or operator to meet the requirements of §154.1065 and the procedures to be followed for any post-discharge review of the plan to evaluate and validate its effectiveness.	Annex F
(e) *Appendices.* This section of the response plan must include the appendices described in this paragraph.	---
(1) *Facility-specific information.* This appendix must contain a description of the facility's principal characteristics.	A.1
(i) There must be a physical description of the facility including a plan of the facility showing the mooring areas, transfer locations, control stations, locations of safety equipment, and the location and capacities of all piping and storage tanks.	Annex A.2, Figure 1.7 Annex G – SPCC Table 3-1
(ii) The appendix must identify the sizes, types, and number of vessels that the facility can transfer oil to or from simultaneously.	Annex A.2

USCG OPA 90 FINAL RULE
33 CFR §154.1030 and §154.1035 (Cont'd)

CFR §154.1035 (Cont'd)	LOCATION
(iii) The appendix must identify the first valve(s) on facility piping separating the transportation-related portion of the facility from the non transportation-related portion of the facility, if any. For piping leading to a manifold located on a dock serving tank vessels, this valve is the first valve inside the secondary containment required by 40 CFR part 112.	Annex A
(iv) The appendix must contain information on the oil(s) and hazardous material handled, stored, or transported at the facility in bulk. A material safety data sheet meeting the requirements of 29 CFR 1910.1200, 33 CFR 154.310(a)(5) or an equivalent will meet this requirement. This information can be maintained separately providing it is readily available and the appendix identifies its location. This information must include --	Annex G – SPCC
(A) The generic or chemical name;	Sec. 2, A.3.1
(B) A description of the appearance and odor;	Sec. 2, A.3.1
(C) The physical and chemical characteristics;	Sec. 2, A.3.1
(D) The hazards involved in handling the oil(s) and hazardous materials. This shall include hazards likely to be encountered if the oil(s) and hazardous materials come in contact as a result of a discharge; and	Sec. 2, A.3.1
(E) A list of firefighting procedures and extinguishing agents effective with fires involving the oil(s) and hazardous materials.	Sec. 2, A.3.1
(v) The appendix may contain any other information which the facility owner or operator determines to be pertinent to an oil spill response.	Annex G – SPCC
(2) *List of contacts.* This appendix must include information on 24-hour contact of key individuals and organizations. If more appropriate, this information may be specified in a geographic-specific appendix. The list must include -	---
(i) The primary and alternate qualified individual(s) for the facility;	1.2
(ii) The contact(s) identified under paragraph (b)(3)(iv) of this section for activation of the response resources; and	Annex B, Fig B.1
(iii) Appropriate Federal, State, and local officials.	Fig 2.2, Annex B
(3) *Equipment list and records.* This appendix must include the information specified in this paragraph.	---
(i) The appendix must contain a list of equipment and facility personnel required to respond to an average most probable discharge, as defined in § 154.1020. The appendix must also list the location of the equipment.	SEC. 2.3
(ii) The appendix must contain a detailed listing of all the major equipment identified in the plan as belonging to an oil spill removal organization(s) that is available, by contract or other approved means as described in § 154.1028(a), to respond to a maximum most probable or worst case discharge, as defined in § 154.1020. The detailed listing of all major equipment may be located in a separate document referenced by the plan. Either the appendix or the separate document referenced in the plan must provide the location of the major response equipment.	Annex B

USCG OPA 90 FINAL RULE
33 CFR §154.1030 and §154.1035 (Cont'd)

CFR §154.1035 (Cont'd)	LOCATION
(4) *Communications plan.* This appendix must describe the primary and alternate method of communication during discharges, including communications at the facility and at remote locations within the areas covered by the response plan. The appendix may refer to additional communications packages provided by the oil spill removal organization. This may reference another existing plan or document.	Annex B.1.5
(5) *Site-specific safety and health plan.* This appendix must describe the safety and health plan to be implemented for any response location(s). It must provide as much detailed information as is practicable in advance of an actual discharge. This appendix may reference another existing plan requiring under 29 CFR 1910.120.	Annex H.2 ICS Forms 206/208
(6) *List of acronyms and definitions.* This appendix must list all acronyms used in the response plan including any terms or acronyms used by Federal, State, or local governments and any operational terms commonly used at the facility. This appendix must include all definitions that are critical to understanding the response plan.	Annex J

USCG OPA 90 FINAL RULE
33 CFR §154.1030 and §154.1035 (Cont'd)

CFR §154.1050	LOCATION
(a) A response plan submitted to meet the requirements of §154.1035 or §154.1040, as appropriate, must identify the training to be provided to each individual with responsibilities under the plan. A facility owner or operator must identify the method to be used for training any volunteers or casual laborers used during a response to comply with the requirements of 29 CFR 1910.120.	Annex E
(b) A facility owner or operator shall ensure the maintenance of record sufficient to document training of facility personnel; and shall make them available for inspection upon request by the U.S. Coast Guard. Records of facility personnel must be maintained that the facility for 3 years.	Annex E
(c) Where applicable, a facility owner or operator shall ensure that an oil spill removal organization identified in a response plan to meet the requirements of this subpart maintains records sufficient to document training for the organization's personnel and shall make them available for inspection upon request by the facility's management personnel, the qualified individual, and U.S. Coast Guard. Records must be maintained for 3 years following the completion of training.	Annex E
(d) The facility owner or operator remains responsible for ensuring that all private response personnel are trained to meet the Occupation Safety and Health Administration (OSHA) standards for emergency response operations in 29 CFR 1910.120.	Annex E

CFR §154.1055	LOCATION
(a)(1) Qualified individual notification exercises (quarterly).	Annex E
(a)(2) Spill management team tabletop exercises (annually). In a 3-year period, at least one of these exercises must include a worst case discharge scenario.	Annex E
(a)(3)(i) Equipment deployment exercises. Semi-annually for facility owned and operated equipment.	Annex E
(a)(3)(ii)Equipment deployment exercises. Annually for oil spill removal organization equipment.	Annex E
(a)(4) Emergency procedures exercises (optional).	Annex E

DOT/PHMSA 49 CFR PART 194 CROSS REFERENCE

§ 194.105	BRIEF DESCRIPTION	LOCATION
(a)	Each operator shall determine the worst case discharge for each of its response zones and provide the methodology, including calculations, used to arrive at the volume.	Annex A.4
(b)	The worst case discharge is the largest volume, in barrels, of the following:	---
(b)(1)	The pipeline's maximum release time in hours, plus the maximum shutdown response time in hours (based on historic discharge data or in the absence of such historic data, the operator's best estimate), multiplied by the maximum flow rate expressed in barrels per hour (based on the maximum daily capacity of the pipeline), plus the largest line drainage volume after shutdown of the line section(s) in the response zone expressed in barrels; or	Annex A.4
(b)(2)	The largest foreseeable discharge for the line section(s) within a response zone, expressed in barrels, based on the maximum historic discharge, if one exists, adjusted for any subsequent corrective or preventive action taken; or	Annex A.4
§ 194.107	**BRIEF DESCRIPTION**	**LOCATION**
(a)	Each response plan must plan for resources for responding, to the maximum extent practicable, to a worst case discharge, and to a substantial threat of such a discharge.	2.3, Annex B - Fig B.9, Fig B.10
(b)	An operator must certify in the response plan that it reviewed the NCP and each applicable ACP and that its response plan is consistent with the NCP and each applicable ACP as follows:	1.6
(b)(1)	As a minimum to be consistent with the NCP as a facility response plan must:	---
(b)(1)(i)	Demonstrate an operator's clear understanding of the function of the Federal response structure, including procedures to notify the National Response Center reflecting the relationship between the operator's response organization's role and the Federal On Scene Coordinator's role in pollution response;	Annex C
(b)(1)(ii)	Establish provisions to ensure the protection of safety at the response site; and	Annex C and Annex H.2
(b)(1)(iii)	Identify the procedures to obtain any required Federal and State permissions for using alternative response strategies such as in-situ burning and dispersants as provided for in the applicable ACPs; and	Annex A.5
(b)(2)	At a minimum, to be consistent with the applicable ACP the plan must:	---
(b)(2)(i)	Address the removal of a worst case discharge and the mitigation or prevention of a substantial threat of a worst case discharge;	Sec. 2, Annex A
(b)(2)(ii)	Identify environmentally and economically sensitive areas;	Annex A.5, Annex A.6
(b)(2)(iii)	Describe the responsibilities of the operator and operator and of Federal, State and local agencies in removing a discharge and in mitigating or preventing a substantial threat of a discharge; and	Annex C
(b)(2)(iv)	Establish the procedures for obtaining an expedited decision on use of dispersants or other chemicals.	Annex A.5
(c)	Each response plan must include:	---
(c)(1)	A core plan consisting of --	Section 2 Core Plan
(c)(1)(i)	An information summary as required in § 194.113,	1.7
(c)(1)(ii)	Immediate notification procedures,	2.2.3
(c)(1)(iii)	Spill mitigation procedures and response/checklist	2.2.2
(c)(1)(iv)	The name, address, and telephone number of the oil spill response organization, if appropriate,	Fig 2.10(a)(b)(c)

DOT/PHMSA 49 CFR PART 194 CROSS REFERENCE (Cont'd)

§ 194.107	BRIEF DESCRIPTION	LOCATION
(c)(1)(v)	Response activities and response resources,	2.2
(c)(1)(vi)	Names and telephone numbers of Federal, state, and local agencies which the operator expects to have pollution control responsibilities or support,	Fig 2.2, Annex B
(c)(1)(vii)	Training procedures,	Annex E
(c)(1)(viii)	Equipment testing,	Annex E
(c)(1)(ix)	Drill program – an operator will satisfy the requirement for a drill program by following the National Preparedness for Response Exercise Program (PREP) guidelines. An operator choosing not to follow PREP guidelines must have a drill program that is equivalent to PREP. The operator must describe the drill program in the response plan and OPS will determine if the program is equivalent to PREP.	Annex E
(c)(1)(x)	Plan review and update procedures;	Annex F
(c)(3)	A description of the operator's response management system including the functional areas of finance, logistics, operations, planning, and command. The plan must demonstrate that the operator's response management system uses common terminology and has a manageable span of control, a clearly defined chain of command, and sufficient trained personnel to fill each position.	2.2.5, Annex C
§ 194.111	**BRIEF DESCRIPTION**	**LOCATION**
(a)	Each operator shall maintain relevant portions of its response plan at the operator's headquarters and at other locations from which response activities may be conducted, for example, in field offices, supervisor's vehicles, or spill response trailers.	Distribution List (FWD)
§ 194.113	**BRIEF DESCRIPTION**	**LOCATION**
(a)	The information summary for the core plan, required by § 194.107, must include:	---
(a)(1)	The name and address of the operator.	1.7
(a)(2)	For each response zone which contains one or more line sections that meet the criteria for determining significant and substantial harm as described in § 194.103, a listing and description of the response zones, including county(s) and state(s).	1.7
(b)	The information summary for the response zone appendix, required in § 194.107, must include:	---
(b)(1)	The information summary for the core plan.	1.7
(b)(2)	The names or titles and 24-hour telephone numbers of the qualified individual(s) and at least one alternate qualified individual(s);	1.7
(b)(3)	The description of the response zone, including county(s) and state(s), for those zones in which a worst case discharge could cause substantial harm to the environment.	1.7
(b)(4)	A list of line sections for each pipeline contained in the response zone, identified by milepost or survey station number, or other operator designation.	1.7, Fig. A.2(c)
(b)(5)	The basis for the operator's determination of significant and substantial harm.	1.3
(b)(6)	The type of oil and volume of the worst case discharge.	Annex A.4

DOT/PHMSA 49 CFR PART 194 CROSS REFERENCE (Cont'd)

§ 194.115	BRIEF DESCRIPTION	LOCATION
(a)	Each operator shall identify and ensure, by contract or other approved means, the resources necessary to remove, to the maximum extent practicable, a worst case discharge and to mitigate or prevent a substantial threat of a worst case discharge.	2.3.2, Annex B, Fig B.9, Fig B.10
(b)	An operator shall identify in the response plan the response resources which are available to respond within the time specified, after discovery of a worst case discharge, or to mitigate the substantial threat of such a discharge.	2.3.2, Annex B, Fig B.9, Fig B.10
§ 194.117	**BRIEF DESCRIPTION**	**LOCATION**
(a)	Each operator shall conduct training to ensure that:	---
(a)(1)	All personnel know --	---
(a)(1)(i)	Their responsibilities under the response plan	Annex C
(a)(1)(ii)	The name and address of, and the procedure for contacting, the operator on a 24-hour basis	Sec. 1
(a)(1)(iii)	The name of, and procedures for contacting, the qualified individual on a 24-hour basis	1.2, Fig 2.5
(a)(2)	Reporting personnel know --	---
(a)(2)(I)	The content of the information summary of the response plan.	1.7
(a)(2)(ii)	The toll-free telephone number of the National Response Center	Fig B.8
(a)(2)(iii)	The notification process	Annex B
(a)(3)	Personnel engaged in response activities know --	---
(a)(3)(I)	The characteristics and hazards of the oil discharged	2.2
(a)(3)(ii)	The conditions that are likely to worsen emergencies, including the consequences of facility malfunctions or failures, and the appropriate corrective actions.	2.2
(a)(3)(iii)	The steps necessary to control any accidental discharge of oil and to minimize the potential for fire, explosion, toxicity, or environmental damage	2.2, A.3.1
(a)(3)(iv)	The proper firefighting procedures and use of equipment, fire suits, and breathing apparatus	2.2, A.3.1
(b)	Each operator shall maintain a training record for each individual that has been trained as required by this section. Theses records must be maintained in the following manner as long as the individual is assigned duties under the response plan	Annex E
(b)(1)	Records for operator personnel must be maintained at the operator's headquarters	Annex E
(b)(2)	Records for personnel engaged in response, other than operator personnel, shall be maintained as determined by the operator.	Annex E
(c)	Nothing in this section relieves an operator from the responsibility to ensure that all response personnel are trained to meet the OSHA standards for emergency response operations in 29 CFR 1910.120 ...	Annex E

DOT/PHMSA 49 CFR PART 194 CROSS REFERENCE (Cont'd)

§ 194.119	BRIEF DESCRIPTION	LOCATION
(a)	Each operator shall submit two copies of the response plan required by this part. Copies of the response plan shall be submitted to: Pipeline Response Plans Officer, Pipeline and Hazardous Material Safety Administration, Department of Transportation, 400 Seventh Street, SW., Washington, DC 20590–0001. Note: Submission of plans in electronic format is preferred.	1.4
(b)	If PHMSA determines that a response plan requiring approval does not meet all the requirements of this part, PHMSA will notify the operator of any alleged deficiencies, and to provide the operator an opportunity to respond, including the opportunity for an informal conference, on any proposed plan revisions and an opportunity to correct any deficiencies.	---
(c)	If PHMSA determines that a response plan requiring approval does not meet all the requirements of this part, PHMSA will notify the operator of any alleged deficiencies, and to provide the operator an opportunity to respond, including the opportunity for an informal conference, on any proposed plan revisions and an opportunity to correct any deficiencies.	---
(d)	An operator who disagrees with the PHMSA determination that a plan contains alleged deficiencies may petition PHMSA for reconsideration within 30 days from the date of receipt of PHMSA's notice. After considering all relevant material presented in writing or at an informal conference, PHMSA will notify the operator of its final decision. The operator must comply with the final decision within 30 days of issuance unless PHMSA allows additional time.	---
(e)	If OPS has not approved a response plan for a pipeline described in §194.103(c), the operator may submit a certification to OPS that the operator has obtained, through contract or other approved means, the necessary personnel and equipment to respond, to the maximum extent practicable, to a worst case discharge or a substantial threat of such a discharge. The certificate must be signed by the qualified individual or an appropriate corporate officer.	1.3
(f)	If OPS receives a request from a FOSC to review a response plan, OPS may require an operator to give a copy of the response plan to the FOSC. OPS may consider FOSC comments on response techniques, protecting fish, wildlife and sensitive environments, and on consistency with the ACP. OPS remains the approving authority for the response plan.	---

OSHA EMERGENCY ACTION PLANS
(29 CFR 1910.38(a)) and (29 CFR 1910.119)

29 CFR	BRIEF DESCRIPTION	LOCATION
1910.38(a)	***Emergency action plan:***	
(1)	Scope and applicability	1.6
(2)	Elements:	---
(i)	Emergency escape procedures and emergency escape route assignments.	Annex B.3
(ii)	Procedures to be followed by employees who remain to operate critical terminal operations before they evacuate.	Annex B.3
(iii)	Procedures to account for all employees after emergency evacuation has been completed.	Annex B.3
(iv)	Rescue and medical duties for those employees who are to perform them.	2.1
(v)	The preferred means of reporting fires and other emergencies.	2.1
(vi)	Names or regular job titles of persons or departments who can be contacted for further information or explanation of duties under the plan.	Fig 2.2
(3)	Alarm system	Annex B.1.4
(4)	Evacuation	Annex B.3
(5)	Training	Annex E
1910.165	***Employee alarm systems:***	---
(b)	General requirements	Annex B.1.4
(b)(1)	Purpose of alarm system	Annex B.1.4
(b)(4)	Preferred means of reporting emergencies	2.2.3, Annex B
(d)	Maintenance and testing	Annex B.1.4

OSHA HAZWOPER
(29 CFR 1910.120)

29 CFR	BRIEF DESCRIPTION	LOCATION
1910.120(q)	***Emergency response to hazardous substance releases:***	---
(1)	Emergency response plan	Entire ICP
(2)	Elements of an emergency response plan:	---
(i)	Pre-emergency planning and coordination with outside parties	Annex B
(ii)	Personnel roles, lines of authority, training, and communication	Annex C
(iii)	Emergency recognition and prevention	2.1, Annex G - SPCC
(iv)	Safe distances and places of refuge	Annex A.6
(v)	Site security and control	Annex G – SPCC 9.0
(vi)	Evacuation routes and procedures	Annex B.3
(vii)	Decontamination procedures	2.1
(viii)	Emergency medical treatment and response procedures	2.1
(ix)	Emergency alerting and response procedures	2.1, 2.2
(x)	Critique of response and follow-up	Annex F
(xi)	PPE and emergency equipment	2.3.2
(xii)	Emergency response plan coordination and integration	Fig 1.6
(3)	Procedures for handling emergency response:	---
(i)	The senior emergency response official responding to an emergency shall become the individual in charge of a site-specific Incident Command System (ICS).	Annex C
(ii)	The individual in charge of the ICS shall identify, to the extent possible, all hazardous substances or conditions, present and shall address as appropriate site analysis, use of engineering controls, maximum exposure limits, hazardous substance handling procedures, and use of any new technologies.	Annex C
(iii)	Implementation of appropriate emergency operations and use of PPE.	2.3.2
(iv)	Employees engaged in emergency response and exposed to hazardous substances presenting an inhalation hazard or potential inhalation hazard shall wear positive pressure self-contained breathing apparatus while engaged in emergency response.	Annex E
(v)	The individual in charge of the ICS shall limit the number of emergency response personnel at the emergency site, in those areas of potential or actual exposure to incident or site hazards, to those who are actively performing emergency operations.	2.2.4, Annex C
(vi)	Backup personnel shall stand by with equipment ready to provide assistance or rescue.	Annex C
(vii)	The individual in charge of the ICS shall designate a safety official, who is knowledgeable in the operations being implemented at the emergency response site.	Annex C

OSHA HAZWOPER *(29 CFR 1910.120) (Cont'd)*		
29 CFR	**BRIEF DESCRIPTION**	**LOCATION**
(viii)	When activities are judged by the safety official to be an IDLH condition and/or to involve an imminent danger condition, the safety official shall have authority to alter, suspend, or terminate those activities.	Annex C
(ix)	After emergency operations have terminated, the individual in charge of the ICS shall implement appropriate decontamination procedures.	2.1, Annex C
(x)	When deemed necessary for meeting the tasks at hand, approved self-contained compressed air breathing apparatus may be used with approved cylinders from other approved self-contained compressed air breathing apparatus provided that such cylinders are of the same capacity and pressure rating.	Annex E
(4)	Skilled support personnel	Annex E
(5)	Specialist employees	Annex E
(6)	Training	Annex E
(7)	Trainers	Annex E
(8)	Refresher training	Annex E
(9)	Medical surveillance and consultation	Annex E
(10)	Chemical protective clothing	Annex E
(11)	Post-emergency response operations	Annex E

J.1 ACRONYMS

ACP	Area Contingency Plan
ASTM	American Society of Testing Materials
BBLS	Barrels, Barrels per Day, Barrels per Hour
BLM	Bureau of Land Management (USDOI)
CEMP	Comprehensive Emergency Management Plan
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended
CHRIS	Chemical Hazards Response Information System
CFR	Code of Federal Regulations
CHEMTREC	Chemical Transportation Emergency Center
COTP	Captain of the Port (USCG)
CWA	Clean Water Act (Federal)
DCO	Discharge Clean-up Organization
DD-6	Jefferson County Drainage District No. 6
DD-7	Jefferson County Drainage District No. 7
DEM	Governor's Division of Emergency Management
DIC	Deputy Incident Commander
DLI	Department of Labor & Industries
DOC	Department of Commerce
DOI	Department of Interior
DOT	Department of Transportation
DPS	Texas Department of Public Safety
EBS	Emergency Broadcast System
EMS	Emergency Medical Services
EOC	Emergency Operations Center
EPA	U.S. Environmental Protection Agency
EQ	Environmental Quality
ERAP	Emergency Response Action Plan
FAA	Federal Aviation Administration
FEMA	Federal Emergency Management Agency
FOSC	Federal On-Scene Coordinator
FR	Federal Register
FRDA	Freshwater Resource Damage Assessment
FRF	Federal Revolving Fund
FRP	Facility Response Plan
GAL	Gallons
GIS	Geographic Information System
GLO	General Land Office
GPM	Gallons per Minute
HAZMAT	Hazardous Materials
HAZWOPER	Hazardous Waste Operations and Emergency Response Personnel Training (29 CFR Part 1910.1200)
HMIS	Hazardous Material Information System
IAP	Incident Action Plan
IC	Incident Commander
ICP	Integrated Contingency Plan (PAR's Emergency Response Plan)
ICS	Incident Command System
JIC	Joint Information Center
LEL	Lower Explosive Limit
LEPC	Local Emergency Planning Committee

J.1 ACRONYMS (Cont'd)

LEPD	Local Emergency Planning District
LOSC	Local On-Scene Coordinator
LNVA	Lower Neches Valley Authority
MAF	Sabine-Neches Mutual Aid -- Frequency 154.280 MHz.
MMS	Minerals Management Service (part of DOI)
MSDS	Material Safety Data Sheets
MSO	Marine Safety Office (USCG)
MSRC	Marine Spill Response Corporation
MTR	Marine Transportation-Related (Facility, for OPA 90)
NCP	National Contingency Plan
NIIMS	National Interagency Incident Management System
NOAA	National Oceanic and Atmospheric Administration
NRC	National Response Center (USCG)
NRDA	Natural Resource Damage Assessment
NRT	National Response Team
OCI	Office of Criminal Investigation (EPA)
OPA 1990	Federal Oil Pollution Act of 1990
OSC	On-Scene Coordinator/Commander
OSHA	Occupational Safety and Health Administration (USDL)
OSPRA	Oil Spill Prevention and Response Act of 1991
OSRO	Oil Spill Removal Organization
PAPS	Port Arthur Pipeline System
PAR	Port Arthur Refinery
PFD	Personal Flotation Device
PHMSA	Pipeline and Hazardous Materials Safety Administration
PIAT	USCG Public Information Assist Team
PPE	Personal Protective Equipment
PREP	Preparedness for Response Exercise Program
QI	Qualified Individual
RA	Regional Administrator
RCP	Oil & Hazardous Substance Pollution Contingency Plan for Federal (EPA) Region
RCRA	Resource Conservation and Recovery Act of 1976
RP	Responsible Party
RRC	Railroad Commission of Texas
RRT	Regional Response Team (Federal)
RQ	Reportable Quantity
RSPA	Research and Special Programs Administration
SARA	Superfund Amendments and Reauthorization Act
SCAT	Shoreline Cleanup Assessment Team
SDHPT	State Department of Highways and Public Transportation
SERC	State Emergency Response Commission
SIC	Standard Industrial Classification
SOSC	State On-Scene Coordinator
SPCC	Spill Prevention Control and Countermeasures
SSC	Scientific Support Coordinator (NOAA)
SUPSALV	U.S. Navy Supervisor of Salvage
TAC	Texas Administrative Code
TCEQ	Texas Commission Of Environmental Quality (formerly TNRCC)
TACB	Texas Air Control Board
TDH	Texas Department of Health
TGLO	Texas General Land Office

J.1 ACRONYMS (Cont'd)

TRRC	Texas Railroad Commission
TPWD	Texas Parks and Wildlife Department
USACE	U.S. Army Corps of Engineers
USCOE	U.S. Army Corps of Engineers
USCG	U.S. Coast Guard
USDL	U.S. Department of Labor
USDOD	U.S. Department of Defense
USDOL	U.S. Department of Labor
USDOE	U.S. Department of Energy
USDOI	U.S. Department of Interior
USDOJ	U.S. Department of Justice
USDOT	U.S. Department of Transportation
USFWS	U.S. Fish & Wildlife Service (USDOI)
USHHS	U.S. Department of Health & Human Services
USN	U.S. Navy
VTS	Vessel Traffic System
WPATF	West Port Arthur Tank Farm

J.2 GLOSSARY

ACCESS/STAGING AREAS: Designated areas near the spill site accessible for gathering and deploying equipment and/or personnel.

ALERTING ZONES: Operational areas that broadly divide the Primary Exposure Zone up into individually selectable response zones. Each such zone shares the same characteristics such as within the same jurisdiction (city).

AREA TORNADO ALERT: An Area Tornado Alert is one that is issued for the entire Golden Triangle Area. It is considered to be a Level B Emergency.

BARREL: Measure of space occupied by 42 U.S. gallons at 60 degrees Fahrenheit.

BOILOVER: Boilover may occur spontaneously in fires involving crude oils where the tank top has been damaged or blows off due to an explosion. A common cause of such incidents is lightning striking the tank.

A boilover occurs when oil is suddenly ejected or overflows from the tank top. This happens as a result of water, or water/oil emulsion at the bottom of the tank boiling and forming a rapidly expanding steam and oil froth.

BOOMING STRATEGIES: Strategic techniques which identify the location and quantity of boom required to protect certain areas. These techniques are generated by identifying a potential spill source and assuming certain conditions which would affect spill movement on water.

BULK: Material that is stored or transported in a loose, unpackaged liquid, powder, or granular form capable of being conveyed by a pipe, bucket, chute, or belt system.

CLEAN-UP CONTRACTOR: Persons contracted to undertake a response action to contain and clean up a spill.

CLEANUP: For the purposes of this document, cleanup refers to the removal and/or treatment of oil, hazardous substances, and/or the waste or contaminated materials generated by the incident. Cleanup includes restoration of the site and its natural resources.

COASTAL WATERS: All tidally influenced waters extending from the head of tide in the arms of the Gulf of Mexico seaward to the three marine league limit of Texas' jurisdiction; and nontidally influenced waters extending from the head of tide in the arms of the Gulf of Mexico inland to the point at which navigation by regulated vessels is naturally or artificially obstructed.

J.2 GLOSSARY (Cont'd)

COMMAND POST:	A site located at a safe distance from the spill site where response decisions are made, equipment and manpower deployed, and communications handled. The Incident Commander and the On-Scene Coordinators may direct the on-scene response from this location.
COMMISSIONER:	The commissioner of the General Land Office.
COMMUNICATIONS EQUIPMENT:	Equipment that will be utilized during response operations to maintain communication between Fina employees, contractors, Federal/State/Local agencies. (Radio/telephone equipment and links)
CONTAINMENT BOOM:	A flotation/freeboard device, made with a skirt/curtain, longitudinal strength member, and ballast unit/weight designed to entrap and contain the product for recovery.
CONTAMINATION REDUCTION ZONE:	The transition area between the contaminated area and the clean area. This zone is designed to reduce the probability that the clean support zone will become contaminated or affected by other site hazards.
CONTINGENCY PLAN:	A document used by (1) federal, state, and local agencies to guide their planning and response procedures regarding spills of oil, hazardous substances, or other emergencies; (2) a document used by industry as a response plan to spills of oil, hazardous substances, or other emergencies occurring upon their vessels or at their facilities.
CONTRACT OR OTHER APPROVED MEANS:	For OPA 90, a written contract with a response contractor; certification by the facility owner or operator that personnel and equipment are owned, operated, or under the direct control of the facility, and available within the stipulated times; active membership in a local or regional oil spill removal organization; and/or the facility's own equipment.
COVERED FLOATING ROOF TANKS:	Covered floating-roof tanks are defined as those with a floating deck and ventilation.
CPCS-1:	CPCS-1 Common Point Control Station - The central emergency message originating station in the Emergency Broadcast System. In the GTAN Alerting and Notification System, it is the principal station transmitting the RDS subcarrier on which all digital messages and actuation messages are broadcasted.
CRITICAL AREAS TO MONITOR:	Areas which if impacted by spilled oil may result in threats to public safety or health.

J.2 GLOSSARY (Cont'd)

CULTURAL RESOURCES: Current, historic, prehistoric and archaeological resources which include deposits, structures, ruins, sites, buildings, graves, artifacts, fossils, or other objects of antiquity which provide information pertaining to the historical or prehistorical culture of people in the state as well as to the natural history of the state.

DAMAGE ASSESSMENT: The process of determining and measuring damages and injury to the human environment and natural resources, including cultural resources. Damages include differences between the conditions and use of natural resources and the human environment that would have occurred without the incident, and the conditions and use that ensued following the incident. Damage assessment includes planning for restoration and determining the costs of restoration.

DECONTAMINATION: The removal of hazardous substances from personnel and their equipment necessary to prevent adverse health effects.

DIGITAL DATA: Alphanumeric messages transmitted over the RDS subcarrier as digitized signals for decoding and display on pagers, Mobile Data Receivers, Stationary Terminals, Digital Displays at broadcast stations, traffic signs, etc.

DIGITAL DISPLAY: A device used at a radio, TV or cable station which displays for the viewing of appropriate personnel the decoded digital data messages that are transmitted over the RDS subcarrier.

DISCHARGE: Any spilling, leaking, pumping, pouring, emitting, emptying, or dumping.

DISCHARGE CLEAN-UP ORGANIZATION: A corporation partnership, proprietorship, organization, or association that intends to make itself available to engage in response actions to abate, contain, or remove an unauthorized discharge or pollution or damage from an unauthorized discharge.

DISPERSANTS: Those chemical agents that emulsify, disperse, or solubilize oil into the water column or promote the surface spreading of oil slicks to facilitate dispersal of the oil into the water column.

DIVERSION BOOM: A floatation/freeboard device, made with a skirt/curtain, longitudinal strength member, and ballast unit/weight designed to deflect or divert the product towards a pick up point, or away from certain areas.

ELECTRONIC SIGN: A traffic sign which displays a digital message that it receives from the GTAN Alerting and Notification System for the alerting and information of motorists.

ELECTRONIC SIREN: A definition which is loosely used to describe any siren that does use compressed gas, a pneumatic sounder or a motor driven noisemaker to create the siren tone. Electronic sirens are capable of public address operation.

J.2 GLOSSARY (Cont'd)

EMERGENCY EVACUATION:	Evacuation is defined as the removal of people because hazardous conditions are present.
EMERGENCY LEVEL A:	An operational upset that may contribute to a larger incident, but has not escalated to a point where a general call-out is necessary.
EMERGENCY LEVEL B:	Incidents that can be handled safely by operations personnel and the on-duty emergency response personnel with on-site emergency resources. There is no activation of external emergency response resources of any type. Operations personnel only are activated.
EMERGENCY LEVEL C:	Incidents that are significant and substantial enough, such as an operational upset, fire, spill or release of either a liquid or hydrocarbon vapor, that on-duty operations response team personnel, and off-duty personnel are required to stabilize the situation.
EMERGENCY LEVEL 1:	Emergency that is significant enough that the people in Fina's vulnerable zones are being adversely affected and the possibility exists for a shelter in place evacuation of those individuals. Those people affected are having to take protective measures as a minimum.
EMERGENCY LEVEL 2 EVACUATION:	Emergency that requires the evacuation of the public and non-essential Refinery personnel.
EMERGENCY SERVICE:	Those activities provided by state and local government to prepare for and carry out any activity to prevent, minimize, respond to, or recover from an emergency.
ENVIRONMENTALLY SENSITIVE AREAS:	Streams and water bodies, aquifer recharge zones, springs, wetlands, agricultural areas, bird rookeries, endangered or threatened species (flora and fauna) habitat, wildlife preserves or conservation areas, parks, beaches, dunes, or any other area protected or managed for its natural resource value.
ESTUARY:	Unique environment at the mouth of coastal rivers where fresh water and seawater meet, providing important habitat for marine life, birds, and other wildlife.
EXCLUSION ZONE:	The area where contamination does or could occur.
FACILITY:	Any pipeline, structure, equipment, or device used for handling oil, including, but not limited to, underground and aboveground tanks, impoundments, mobile or portable drilling or workover rigs, barge mounted drilling or workover rigs, and portable fueling facilities located offshore or on or adjacent to coastal waters or any place where a discharge of oil from the facility could enter coastal waters or threaten to enter coastal waters.
FEDERAL FUND:	The oil spill liability trust fund established under OPA.

J.2 GLOSSARY (Cont'd)

FIRST RESPONDERS,

FIRST RESPONSE AGENCY:

A public health or safety agency (e.g., fire service or police department) charged with responding to a spill during the emergency phase and alleviating immediate danger to human life, health, safety, or property.

FLOATING-ROOF TANKS CONTAINING LOW-FLASH-POINT STOCKS OR CRUDE OILS:

Open-top and covered floating-roof tanks are designed for storage of low flash volatile stocks and crude oils.

FROTHOVER:

Frothover occurs when a tank which is not on fire overflows due to water boiling beneath the surface of a hot, viscous oil. This commonly occurs where slop tanks storing liquids at below 200 ☐F receive substantial additions of hot materials exceeding 300 ☐F This may result in prolonged boiling of the water which may result in froth being spread over a wide area and causing injury to personnel.

FUND:

The coastal protection fund established under OSPRA.

GALE:

Winds of 33 to 48 mph.

GAS PIPELINE EMERGENCIES:

A gas pipeline emergency is defined as an unplanned escape of natural gas from a pipeline caused by any unseen incident.

HANDLE:

To transfer, transport, pump, treat, process, store, dispose of, drill for, or produce.

HARMFUL QUANTITY OF OIL:

The presence of oil from an unauthorized discharge in a quantity sufficient either to create a visible film or sheen upon or discoloration of the surface of the water or a shoreline, tidal flat, beach, or marsh, or to cause a sludge or emulsion to be deposited beneath the surface of the water or on a shoreline, tidal flat, beach, or marsh.

HAZARDOUS MATERIAL:

Any nonradioactive solid, liquid, or gaseous substance which, when uncontrolled, may be harmful to humans, animals, or the environment. Including but not limited to substances otherwise defined as hazardous wastes, dangerous wastes, extremely hazardous wastes, oil, or pollutants.

HAZARDOUS SUBSTANCE:

Any substance designed as such by the Administrator of the EPA pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act; regulated pursuant to Section 311 of the Federal Water Pollution Control Act, or discharged by the TWC.

J.2 GLOSSARY (Cont'd)

HAZARDOUS WASTE:	Any solid waste identified or listed as a hazardous waste by the Administrator of the EPA pursuant to the federal Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act (RCRA), 42 U.S.C., Section 6901, et seq as amended. The EPA Administrator has identified the characteristics of hazardous wastes and listed certain wastes as hazardous in Title 40 of the Code of Federal Regulations, Part 261, Subparts C and D respectively.
HEAT STRESS:	Dangerous physical condition caused by over exposure to extremely high temperatures.
HORIZONTAL, ABOVEGROUND, LOW-PRESSURE STORAGE TANKS:	These tanks generally are used for storing gasoline, naphtha, or fuel oil at small bulk plants or laboratories.
HURRICANE:	A tropical storm that has developed winds of 74 mph or more.
HURRICANE SEASON:	The period from June 1 through October 31 each year. This is the period during which most hurricanes exist.
HURRICANE WARNING:	A warning that hurricane conditions are expected within 24 hours. Precautionary actions should be taken immediately.
HURRICANE WATCH:	An announcement that hurricane conditions are a real possibility for the area, usually within 24-48 hours.
HYPOTHERMIA:	Dangerous physical condition caused by over exposure to freezing temperatures.
IMMEDIATE RESPONSE STEPS:	The immediate steps that are to be taken by the spill observer after detection of a spill.
INCIDENT:	Any event that results in a spill or release of oil or hazardous materials. Action by emergency service personnel may be required to prevent or minimize loss of life or damage to property and/or natural resources.
INCIDENT COMMANDER (IC):	The one individual in charge at any given time of an incident. The incident commander will be responsible for establishing a unified command with all on-scene coordinators.
INCIDENT COMMAND SYSTEM:	A method by which the response to an extraordinary event, including a spill, is categorized into functional components and responsibility for each component assigned to the appropriate individual or agency.

J.2 GLOSSARY (Cont'd)

INITIAL CLEANUP: Remedial action at a site to eliminate acute hazards associated with a spill. An Initial Cleanup action is implemented at a site when a spill of material is an actual or potentially imminent threat to public health or the environment, or difficulty of cleanup increases significantly without timely remedial action. All sites must be evaluated to determine whether Initial Cleanup is total cleanup, however, this will not be possible in all cases due to site conditions (i.e., a site where overland transport or flooding may occur).

INITIAL NOTIFICATION: The process of notifying necessary Fina personnel and Federal/State/Local agencies that a spill has occurred, including all pertinent available information surrounding the incident.

INLAND AREA: For OPA 90, 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 defined in §§ 80.740 - 80.850 of title 33 of the CFR. The inland area does not include the Great Lakes.

INLAND WATERS: State waters not considered coastal waters; lakes, rivers, ponds, streams, underground water, et. al.

INTERIM STORAGE SITE: A site used to temporarily store recovered oil or oily waste until the recovered oil or oily waste is disposed of at a permanent disposal site. Interim storage sites include trucks, barges, and other vehicles, used to store waste until the transport begins.

LEAD AGENCY: The government agency that assumes the lead for directing response activities.

LEAD FEDERAL AGENCY: The agency which coordinates the federal response to incidents on navigable waters. The lead federal agencies are:

United States Coast Guard (USCG):	Oil and chemically hazardous materials incidents on navigable waters.
United States Environmental Protection Agency (EPA):	Oil and chemically hazardous materials incidents on inlandwaters.

LEAD STATE AGENCY: The agency which coordinates state support to federal and/or local governments or assumes the lead in the absence of federal response.

LIFTER-ROOF STORAGE TANKS: Lifter-roof storage tanks are those designed and constructed to permit variable vapor space above the liquid surface.

LIMITED EVACUATION: The evacuation of unnecessary personnel from areas affected by a dangerous situation that is isolated in a particular area of the refinery, e.g. small fire in a process unit or fire in a refinery building.

J.2 GLOSSARY (Cont'd)

LOCATION BOUNDARIES: Areas where oil may be expected to impact during the first day of a spill based on tidal currents and prevailing winds.

LOWER EXPLOSIVE LIMIT: Air measurement utilized to determine the lowest concentration of vapors that support combustion. This measurement must be made prior to entry into a spill area.

MARINAS: Small harbors with docks, services, etc. for pleasure craft.

MARINE FACILITY: Any facility used for tank vessel wharfage or anchorage, including any equipment used for the purpose of handling or transferring oil in bulk to or from a tank vessel.

MARINE TRANSPORTATION-RELATED FACILITY: For OPA 90, 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.

NATIONAL CONTINGENCY PLAN: The plan prepared under the Federal Water Pollution Control Act (33 United State Code §1321 et seq) and the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (42 United State Code §9601 et seq), as revised from time to time.

NATURAL RESOURCE: Land, fish, wildlife, biota, air, water, ground water, drinking water supplies, and other such resources belonging to, managed by, held in trust by, appertaining to or otherwise controlled by the state, federal government, private parties, or a municipality.

NEARSHORE AREA: For OPA 90, 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 defined in §§ 80.740 - 80.850 of title 33 of the CFR.

NON-PERSISTENT OR GROUP I OIL: For OPA 90, a petroleum-based oil that, at the time of shipment, consists of hydrocarbon fractions: 1) At least 50% of which by volume, distills at a temperature of 340 degrees C (645 degrees F), and 2) At least 95% of which by volume, distills at a temperature of 370 degrees C (700 degrees F).

OCEAN: For OPA 90, the offshore area and nearshore area as defined in this glossary.

OFFSHORE AREA: For OPA 90, the area beyond 12 nautical miles measured from the boundary lines defined in 46 CFR Part 7 extending seaward to 50 nautical miles, except in the Gulf of Mexico. In the Gulf of Mexico, it is the area beyond 12 nautical miles of the line of demarcation defined in §§ 80.740 - 80.850 of title 33 of the CFR extending seaward to 50 nautical miles.

J.2 GLOSSARY (Cont'd)

OIL OR OILS:	Naturally occurring liquid hydrocarbons at atmospheric temperature and pressure coming from the earth, including condensate and natural gasoline, and any fractionation thereof, including, but not limited to, crude oil, petroleum gasoline, fuel oil, diesel oil, oil sludge, oil refuse, and oil mixed with wastes other than dredged spoil. Oil does not include any substance listed in Table 302.4 of 40 CFR Part 302 adopted August 14, 1989, under Section 101(14) of the federal comprehensive environmental response, compensation, and liability act of 1980, as amended by P.L. 99-499.
OIL SPILL RESPONSE CONTRACTORS:	Persons/Companies contracted to undertake a response action to contain and/or clean up a spill.
OILY WASTE:	Oil contaminated waste resulting from an oil spill or oil spill response operations.
OPEN-TOP FLOATING-ROOF TANKS:	The open-top design, which has a good fire record, is of the pontoon or double-deck floating-roof type and is equipped with a tube seal.
OWNER OR OPERATOR:	Any person, individual, partnership, corporation, association, governmental unit, or public or private organization of any character.
PERSISTENT OIL:	For OPA 90, a petroleum-based oil that does not meet the distillation criteria for a non-persistent oil. Persistent oils are classified by specific gravity as follows: Group II - specific gravity less than .85; Group III - specific gravity between .85 and less than .95; Group IV - specific gravity of .95 to and including 1.0; Group V - specific gravity greater than 1.0.
PERSON:	Any political subdivision, government agency, municipality, industry, public or private corporation, co-partnership, association, firm, individual, or any other entity whatsoever.
PLAN:	Oil spill response, clean-up, and disposal contingency plan.
PLANT TORNADO ALERT:	A Tornado Alert is issued when a Tornado or severe winds threatens the Refinery. An alert will be issued upon notification from Jefferson County Emergency Management or when advised by a plant weather observer of an actual visual sighting of a Tornado **in or near the Refinery**. This alert is considered to be a Level C Emergency.
PORT ARTHUR REFINERY INCIDENT MANAGEMENT TEAM:	Designated Fina PAR individuals who will fulfill the roles determined in the Integrated Contingency Plan in the event of an oil or hazardous substance spill. They will supervise and control all response and clean-up operations.
POST-EMERGENCY RESPONSE:	The portion of a response performed after the immediate threat of a release has been stabilized or eliminated and cleanup of the sites has begun.

J.2 GLOSSARY (Cont'd)

PRIMARY EXPOSURE ZONE:	An area of vulnerability around a facility that can release hazardous materials in which a heightened degree of preparedness is warranted.
PRIMARY RESPONSE CONTRACTORS OR CONTRACTORS	An individual, company, or cooperative that has contracted directly with the plan holder to provide equipment and/or personnel for the containment or cleanup of spilled oil. For use in contingency plans, primary response contractors must be approved.
QUALIFIED INDIVIDUAL:	For OPA 90, an English speaking representative of the facility, located in the United States, available on a 24 hour basis, who is familiar with and trained on the response plan, and has full written authority to implement the facility's plan.
RECREATION AREAS:	Publicly accessible locations where social/sporting events take place.
REFINERY SHELTER IN PLACE:	The evacuation of personnel from areas affected by the release of a toxic substance.
REGIONAL RESPONSE TEAM:	The federal response organization (consisting of representatives from selected federal and state agencies) which acts as a regional body responsible for planning and preparedness before an oil spill occurs and providing advice to the FOSC in the event of a major or substantial spill.
REGULATED VESSEL:	A vessel with a capacity to carry 10,000 U.S. gallons or more of oil as fuel or cargo.
RESPONSE CONTRACTORS:	Persons/companies contracted to undertake a response action to contain and/or clean up a spill.
RESPONSE GUIDELINES:	Guidelines for initial response that are based on the type of product involved in the spill, these guidelines are utilized to determine clean-up methods and equipment.
RESPONSE PLAN:	A practical manual used by industry for responding to a spill. Its features include: (1) identifying the notifications sequence, responsibilities, response techniques, etc. in a easy to use format; (2) using decision trees, flowcharts, and checklists to insure the proper response for spills with varying characteristics; and (3) segregating information needed during the response from data required by regulatory agencies to prevent confusion during a spill incident.
RESPONSE RESOURCES:	For OPA 90, the personnel, equipment, supplies, and other capability necessary to perform the response activities identified in a response plan.

J.2 GLOSSARY (Cont'd)

RESPONSIBLE PARTY:	Any person, owner/operator, or facility that has control over an oil or hazardous substance immediately before entry of the oil or hazardous substance into the atmosphere or in or upon the water, surface, or subsurface land of the state.
RESTORATION:	The actions involved in returning a site to its former condition.
RIVERS AND CANALS:	For OPA 90, a body of water confined within the inland area that has a project depth of 12 feet or less, including the Intracoastal Waterway and other waterways artificially created for navigation.
SECURING THE SOURCE:	Steps that must be taken to stop discharge of oil at the source of the spill.
SEVERE THUNDERSTORM WARNING:	Severe thunderstorms have been sighted or indicated by radar.
SEVERE THUNDERSTORM WATCH:	Severe thunderstorms are possible.
SHIP:	Any boat, ship, vessel, barge, or other floating craft of any kind.
SIGNIFICANT AND SUBSTANTIAL HARM:	For OPA 90, any fixed MTR facility that is capable of transferring oil, in bulk, to or from a vessel with a capacity of 250 barrels or more that must submit response plans and have plans approved by the USCG.
SITE SECURITY AND CONTROL:	Steps that must be taken to provide safeguards needed to protect personnel and property, as well as the general public, to ensure an efficient clean-up operation.
SITE CONDITIONS:	Details of the area surrounding the facility, including shoreline descriptions, typical weather conditions, socioeconomic break-downs, etc.
SKIMMERS:	Mechanical devices used to skim the surface of the water and recover floating oil. Skimmers fall into four basic categories (suction heads, floating weirs, oleophilic surface units, and hydrodynamic devices) which vary in efficiency depending on the type of oil and size of spill.
SLOPOVER:	Slopover occurs when water is applied directly on the surface of burning oil that is viscous and where the oils temperature exceeds the boiling point of water. This will result in the surface oil being ejected from the tank. Such an occurrence is generally less hazardous than a boilover, to responders, due to the reduced quantity of oil being ejected from the tank.
SORBENTS:	Materials ranging from natural products to synthetic polymeric foams placed in confined areas to soak up small quantities of oil. Sorbents are very effective in protecting walkways, boat decks, working areas, and previously uncontaminated or cleaned areas.

J.2 GLOSSARY (Cont'd)

SPILL: An unauthorized discharge of oil or hazardous substance into the waters of the state.

SPILL OBSERVER: The first Fina individual who discovers an oil spill. This individual must function as the responsible person-in-charge until relieved by an authorized supervisor.

SPILL RESPONSE: All actions taken in responding to spills of oil and hazardous materials, e.g.: receiving and making notifications; information gathering and technical advisory phone calls; preparation for and travel to and from spill sites; direction of clean-up activities; damage assessments; report writing, enforcement investigations and actions; cost recovery; and program development.

SPILL RESPONSE PERSONNEL: Federal, state, local agency, and industry personnel responsible for participating in or otherwise involved in spill response. All spill response personnel will be preapproved on a list maintained in each region.

STATE EMERGENCY RESPONSE COMMISSION (SERC): A group of officials appointed by the Governor to implement the provisions of Title III of the Federal Superfund Amendments and Reauthorization Act of 1986 (SARA). The SERC approves the State Oil and Hazardous Substance Discharge Prevention and Contingency Plan and Local Emergency Response Plans.

SUBCARRIER: An FM broadcast technology which utilizes an area of unused spectrum of an FM radio station, outside of the area of the spectrum devoted to the broadcast of the station program, used for the purpose of carrying a special signal normally unrelated to the station's program. In the case of the GTAN Alerting and Notification System, the RDS subcarrier is situated at 57 kHz.

SUBSTANTIAL HARM: For OPA 90, any mobile MTR facility (tank trucks and railroad tank cars) that is capable of transferring oil, in bulk, to or from a vessel with a capacity of 250 barrels or more that must submit a response plan to the USCG.

SUPPORT ZONE: The location of the administrative and other support functions needed to keep the operation in the Exclusion and Contamination Reduction Zones running smoothly.

THUNDERSTORMS: Severe Thunderstorms: Winds more than 57 mph or hail 3/4 inch or more in diameter.

TIDAL CURRENT CHARTS: Comprehensive charts which contain the predicted tidal current movement for each day of the year for designated areas. These charts specify the direction and speed of the current in specific areas.

TIDAL CURRENT TABLES: Tables which contain the predicted times and heights of the high and low waters for each day of the year for designated areas.

J.2 GLOSSARY (Cont'd)

TORNADO: A tornado is a violently rotating column of air in contact with the ground. The air column may be seen when it contain condensation in the form of a cloud or when it contains surface dust and debris. Often its appearance is a result of both. When a tornado touches the ground there usually is a swirl of dust and debris even when the visible cloud portion is missing or fails to reach all the way to the ground. When the column of air is aloft and does not produce damage, the visible portion is properly called a funnel cloud.

TORNADO WARNING: Tornado Warnings are issued when a Tornado has actually been sighted in the area or indicated on radar. Warnings indicate the location of the Tornado at the time of detection, the area through which it is expected to move, and the time period during which the Tornado will move through area warned. When a Tornado Warning is issued, persons in the path of the storm should take immediate safety precautions. Tornado Warnings are considered to be a Level B Emergency.

TORNADO WATCH: Tornado Watches are issued to alert personnel to the possibility of Tornadoes developing in a specified area for a specified period of time. Until a Tornado Warning is issued, persons in a watch area should not interrupt their normal routine except to watch for threatening weather.

TOTAL EVACUATION A Total Evacuation should be implemented for the most severe emergencies along with other evacuation plans as required by each emergency situation. The order to implement a Total Evacuation may be made at the onset of a serious emergency or as the severity of an emergency escalates.

TRAJECTORY ANALYSIS: Estimates made concerning spill size, location, and movement through aerial surveillance or computer models.

TRANSITIONAL EVACUATION: Transitional evacuation should be implemented to respond to an emergency which is becoming more serious.

TROPICAL STORM: A warm core tropical cyclone with a sustained surface wind range of 39 to 74 mph.

TROPICAL STORM WATCH: An announcement that tropical storm conditions are a possible threat to the area within 24-36 hours.

UNAUTHORIZED DISCHARGE: Discharges excluding those of authorized by and in compliance with a government permit, seepage from the earth solely from natural causes, and unavoidable, minute discharges of oil from a properly functioning engine, of a harmful quantity of oil from a vessel or facility either: a) into coastal waters; or b) on any waters or land adjacent to coastal waters where harmful quantity of oil may enter coastal waters or threaten to enter coastal waters if the discharge is not abated nor contained and the oil is not removed.

J.2 GLOSSARY (Cont'd)

UNDERWRITER: An insurer, a surety company, a guarantor, or any other person, other than on owner or operator of a vessel or facility, that undertakes to pay all or part of the liability of an owner or operator.

UNIFIED COMMAND: The method by which local, state, and federal agencies and the responsible party will work with the Incident Commander to:

- Determine their roles and responsibilities for a given incident.
- Determine their overall objectives for management of an incident.
- Select a strategy to achieve agreed-upon objectives.
- Deploy resources to achieve agreed-upon objectives.

VOLUNTEERS: An individual who donates their services or time without receiving monetary compensation.

WASTE: Oil or contaminated soil, debris, and other substances removed from coastal waters and adjacent waters, shorelines, estuaries, tidal flats, beaches, or marshes in response to an unauthorized discharge. Waste means any solid, liquid, or other material intended to be disposed of or discarded and generated as a result of an unauthorized discharge of oil. Waste does not include substances intended to be recycled if they are in fact recycled within 90 days of their generation or if they are brought to a recycling facility within that time.

WILDLIFE RESCUE: Efforts made in conjunction with Federal and State agencies to retrieve, clean, and rehabilitate birds and wildlife affected by an oil spill.

WORST CASE UNAUTHORIZED DISCHARGE: The largest foreseeable unauthorized discharge under adverse weather conditions. For facilities located above the high water line of coastal waters, a worst case discharge includes those weather conditions most likely to cause oil discharged from the facility to enter coastal waters.

EMERGENCY RESPONSE ACTION PLAN (ERAP)

This Emergency Response Action Plan (ERAP) has been prepared according to guidelines in 40 CFR 112, Appendix F. Please keep this document with your Integrated Contingency Plan (ICP), as is required by regulation

This document contains the following information:

- Qualified Individual
- Emergency Notification Phone List
- Spill Response Notification Form
- Response Equipment and Location List
- Response Equipment Testing and Deployment
- Facility Response Team
- Evacuation Plan
- Immediate Actions
- Facility Diagrams

QUALIFIED INDIVIDUALS

Qualified Individual: (24 hour basis)	Nigel Tranter Incident Commander
Work:	Total Petrochemicals & Refining USA, Inc. Highway 366 and 32 Street Port Arthur, TX 77640 (409) 985-0478 (409) 963-6807 (FAX)
Emergency Contact Telephone No.:	(409) 963-6800
Training:	8 Hr. Intro w/ Annual Refresher

Alternate Qualified Individuals: (24 hour basis)	**Name:**	
	Ryan Riffer	(409) 985-0154
	Dorothy Bartol	(409) 985-0353
	Tom Henry	(409) 985-0362
	Hugues Morain	(409) 985-0400
	Amber Skinner	(409) 985-0643
	Keith Kelly	(409) 985-0477

Work:	Total Petrochemicals & Refining USA, Inc. Highway 366 and 32nd Street Port Arthur, TX 77640
Emergency Contact Telephone No.:	(409) 963-6800
Training:	8 Hr. Intro w/ Annual Refresher

INTERNAL TELEPHONE NOTIFICATION LIST

See Incident Command Team List – Section 3 of the ICP

EXTERNAL TELEPHONE NOTIFICATION LIST

AGENCY NOTIFICATIONS	
National Response Center (NRC)	(800) 424-8802
Federal On-Scene Coordinator - USCG MSU Port Arthur (Port Arthur COTP Zone)	(409) 723-6500
EPA Region VI – Dallas	(800) 424-8802
Texas Railroad Commission	(512) 463-6788
Texas Commission on Environmental Quality (TCEQ) (after hours)	(409) 898-3838
TCEQ Austin (After Hours Spill Notification) Also known as TX Emergency Response Ctr)	(512) 463-7727
TX Dept of State Health Services	(512) 458-7111
Jefferson County Environmental Control	(409) 719-5910
Texas General Land Office (TGLO) TGLO - Nederland	(800) 832-8224 (409) 727-7481
Lower Neches Valley Authority (LNVA)	(409) 892-4011
Texas Parks and Wildlife Dept.	(512) 389-4848
Jefferson County LEPC	(409) 835-8757
Jefferson County Drainage District 7 (DD-7) DD-7 Data Center (24 hour)	(409) 985-4369
U.S. Fish and Wildlife Service	(409) 861-4436
U.S. Army Corps of Engineers	(409) 766-3899
Port Arthur Dept. of Health	(409) 983-8835
City of Port Arthur	(409) 983-8100

OIL SPILL REMOVAL ORGANIZATIONS (OSROs)	
Miller Environmental 1560 West Cardinal Drive (Beaumont, TX 77705)	(409) 842-6900
Oil Mop Inc. River/Canal: Level W3* (131 Keating Dr. Belle Chasse, LA) Inland/Near Shore: Level W3*	(800) 645-6671
Garner Environmental Services River/Canal: Level W3* (5048 Houston Ave Port Arthur, TX) Inland/Near Shore: Level W3*	(409) 983-5646

Refer to Figure B.3 for OSRO Classification information.

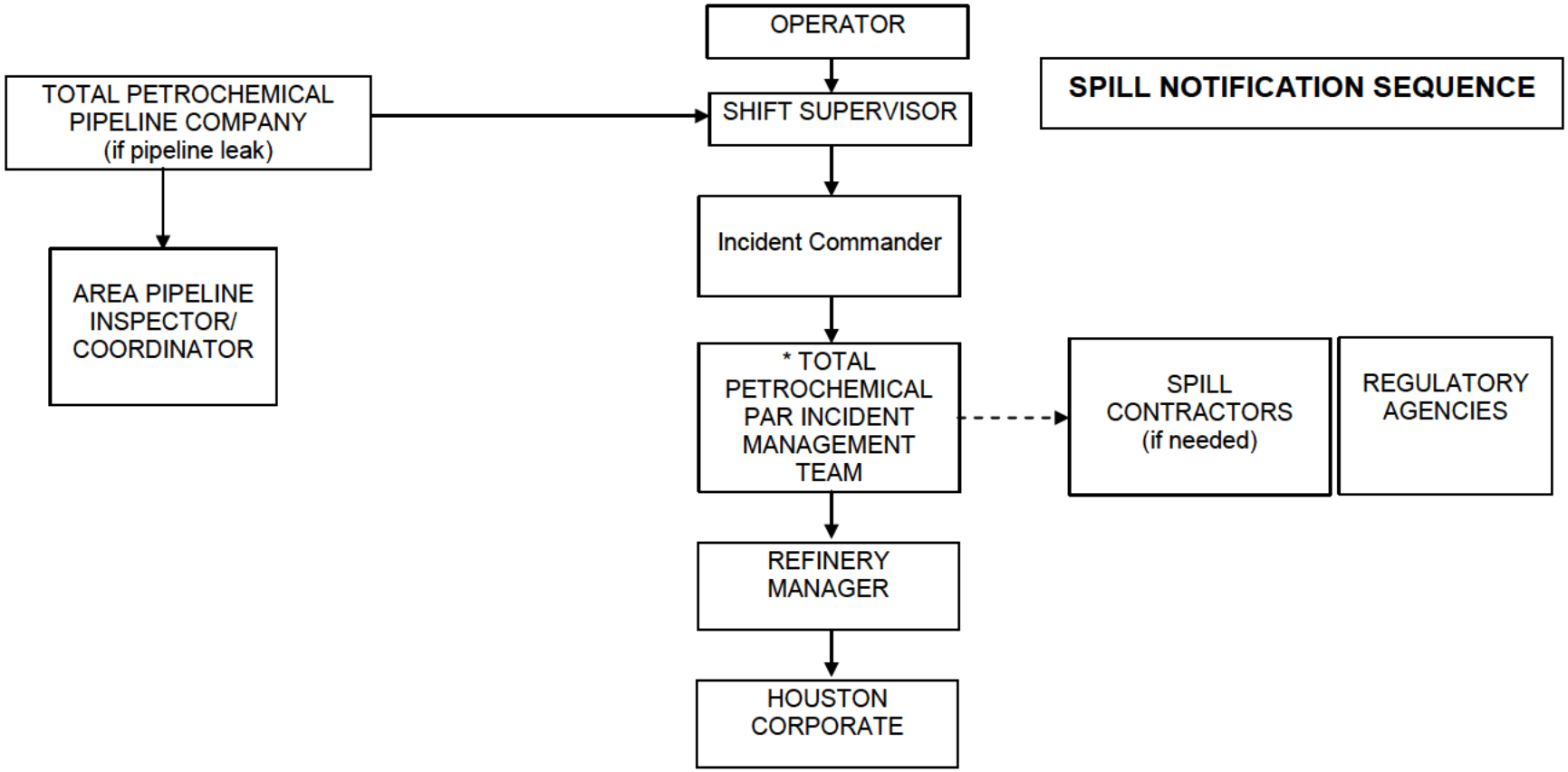
EXTERNAL TELEPHONE NOTIFICATION LIST (Cont'd)

EMERGENCY NOTIFICATIONS	
Police Departments	
Port Arthur Texas Department of Public Safety	(409) 983-8616 (409) 898-0770
Jefferson County Sheriff	(409) 835-8411
Groves	(409) 962-0244
Fire Departments	
Port Arthur	(409) 983-8700
Groves	(409) 962-4460
Sabine-Neches Chiefs Association (Bmt. Fire Dept.)	(409) 838-6371
Emergency Medical Services	
Acadian Ambulance	(409) 729-9300
Herman Life Flight	(800) 392-4397
Hospitals	
Medical Center of SE TX	(409) 724-7389
Occucare International	(409) 724-0600
Other	
TOTAL – Emergency Notification Line	(800) 322-3462
BASF-FINA Main Gate	(409) 960-5293 / 5294
KCS	(409) 832-5442

EXTERNAL TELEPHONE NOTIFICATION LIST (Cont'd)

WEATHER / MEDIA / MISC SUPPORT	
Weather Report	
NOAA – Port Arthur	(337) 477-5285
National Climatic Data Center	(828) 271-4800
Local Television Station	
KFDM (CBS) Ch. 6	(409) 892-6622
KBTV (NBC) Ch. 4	(409) 840-4444
KBMT (ABC) Ch. 12	(409) 833-7512
Local Radio Station	
KLVI/KYKR 560 AM/95.1FM	(409) 838-3388
KQXY Q 94	(409) 899-4994
KYKR	(409) 896-5957
KLVI	(409) 896-5584
K-106 FM	(409) 212-1061
Newspapers	
Port Arthur News	(409) 729-6397
Beaumont Enterprise & Journal	(409) 833-3311
Houston Chronicle	(713) 220-7171
Other	
Sherwood Veterinary Associates	(409) 842-3681
Wildlife Rehab & Education	(281) 332-8319 (713) 643-9453 (24 Hr.)
Witt O'Brien's Oil Pollution Service (OOPS)	(281) 320-9796

INTERNAL EMERGENCY NOTIFICATION SEQUENCE



SPILL RESPONSE NOTIFICATION FORM

TOTAL PETROCHEMICALS, INC.
P.O. BOX 849
PORT ARTHUR, TEXAS 77641-0849

DATE, TIME, AND DURATION OF SPILL:

IF HAZARDOUS SUBSTANCE SPILL: CAS # _____

FORM: LIQUID [ ]
GAS [ ]
SOLID [ ]

NAME AND PHONE NUMBER OF INDIVIDUAL WHO REPORTED SPILL:

LOCATION OF SPILL:

DID SPILL REACH BODY OF WATER: YES [ ] NO [ ]
IF YES, IDENTIFY BODY OF WATER:

REFINERY COORDINATES:

WEST PORT ARTHUR TANK FARM COORDINATES:

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

TYPE OF OIL OR SPILLED PRODUCT:

ESTIMATED QUANTITY SPILLED:

DISCRIPTION OF SLICK (COLOR, LENGTH, WIDTH):

SOURCE OF SPILL (SHIP, PIPELINE, REFINERY):

SPILL RESPONSE NOTIFICATION FORM (Cont'd)

DESCRIPTION OF SPILL INCIDENT (NOTE ANY INJURIES OR POTENTIAL HUMAN OR ENVIRONMENTAL HAZARDS):

DESCRIBE INITIAL CONTAINMENT/CLEAN-UP ACTIONS:

NAME OF CONTRACTOR, IF USED:

WEATHER CONDITIONS:

NAME OF PERSON COMPLETING THIS FORM:

NOTIFICATION REQUIRED:	TELEPHONE:	PERSON NOTIFIED:	TIME:
NATIONAL RESPONSE CENTER	(800) 424-8802		
U. S. COAST GUARD MSU-PORT ARTHUR	(409) 723-6500		
TEXAS GENERAL LAND OFFICE	(512) 424-2277 (800) 832-8224		
TCEQ REGION 10	(409) 898-3838 (24 hr) 800-832-8224		
JEFFERSON COUNTY ENVIRONMENTAL CONTROL	(409) 719-5910		
TEXAS RAILROAD COMMISSION (OFFSITE PIPELINE SPILLS)	(512) 463-6788 (24 HR)		

SPILL RESPONSE NOTIFICATION FORM (Cont'd)

NOTIFICATION REQUIRED FOR SPILLS THAT MAY ENDAGER PUBLIC HEALTH:

PORT ARTHUR FIRE DEPT.	(409) 983-8700		
PORT ARTHUR POLICE DEPT.	(409) 983-8600		
GROVES FIRE DEPT.	(409) 962-4460		
GROVES POLICE DEPT.	(409) 962-0244		
JEFFERSON COUNTY LEPC	(409) 835-8757		
PORT ARTHUR DEPARTMENT OF HEALTH	(409) 983-8835		

OTHER AGENCIES AS REQUIRED:

U.S. EPA - REGION 6 DALLAS, TEXAS	1-800-424-8802 (24 HR)		
TEXAS PARKS AND WILDLIFE	(512) 389-4848 (24 HR)		

NOTIFICATION FOR INCIDENTS INVOLVING RAIL LINES

KCS	409-832-5442		

FACILITY RESPONSE EQUIPMENT TESTING & DEPLOYMENT

Boom Equipment

Manufacturer	Model #	Boom Type Code	Inventory Length (Feet)	Skirt Size (Inches)	Float Size (Inches)	End Connector Type Code	Storage Location
More Boom Co.			1,000	12"	6"	International quick connect	Boom House 1
More Boom Co.			1,000	12"	6"	International quick connect	Boom House 2
More Boom Co.			1,000	12"	6"	International quick connect	Boom House 3
More Boom Co.			1,100	12"	6"	International quick connect	Boom House 4
More Boom Co.			1,100	12"	6"	International quick connect	Trailer

* Stored within the four boom storage pads (North, Middle & South) at Docks 2, B, A, and 1.
** Permanent "fence" boom.

Response Boats

Manufacturer	Model #	Boat Type Code	Horse Power	Normal Crew Size	Length /Beam	Draft Limitations	Location
Aluma Weld	Commercial	LFB	70	4	18' / 7'	1'	Port Arthur Refinery
Custom Craft-Lobell's	Commercial	Bay	150	4 to 8	20' / 8'	1'	Port Arthur Refinery

Firefighting Equipment

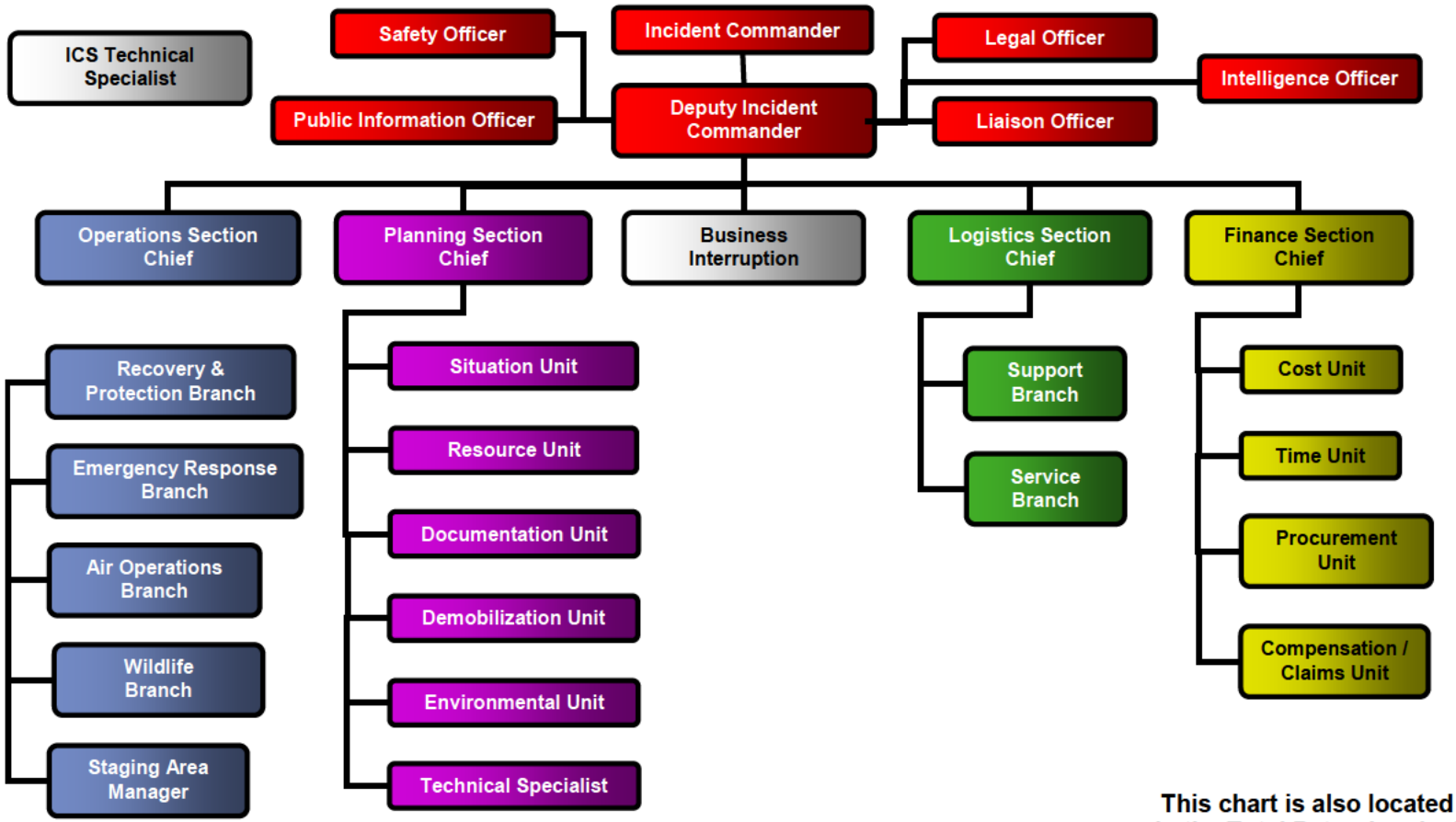
The Facility is equipped with adequate firefighting equipment. The services of local fire departments and mutual aid organizations shall be called for any uncontrolled fire.

Equipment Deployment and Testing

The Qualified Individual/Incident Commander or his designee will call out Total Petrochemical PAR resources and/or OSRO response equipment listed below.

Total Petrochemical PAR will conduct semiannual oil spill equipment deployment drills in accordance with the regulations. During these exercises, PAR's response equipment will be deployed to simulate local response to a spill occurring at the Total Petrochemical Port Arthur Refinery. Deployment should reflect strategies included in the Total Petrochemical Port Arthur Refinery Tactical Response Guide (TRG) for protecting adjacent interests and areas. Records of the equipment deployed, personnel involved, and other information regarding the exercise shall be maintained for a period of at least five (5) years.

TOTAL PETROCHEMICALS PORT ARTHUR REFINERY INCIDENT MANAGEMENT TEAM (IMT)



This chart is also located in the Total Petrochemical Incident Management Handbook.

PERSONNEL ACCOUNTING / EVACUATION PROCEDURE

EVACUATION LEVELS

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

[redacted]

PERSONNEL ACCOUNTING / EVACUATION PROCEDURE (Cont'd)

AREA OR SITE-WIDE EVACUATION

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

[redacted]

PERSONNEL ACCOUNTING / EVACUATION PROCEDURE (Cont'd)

See Total Safety Procedures, Sec IV, Security Practices and Procedures #8 Personnel Accountability.

PERSONNEL ACCOUNTING / EVACUATION PROCEDURE (Cont'd)

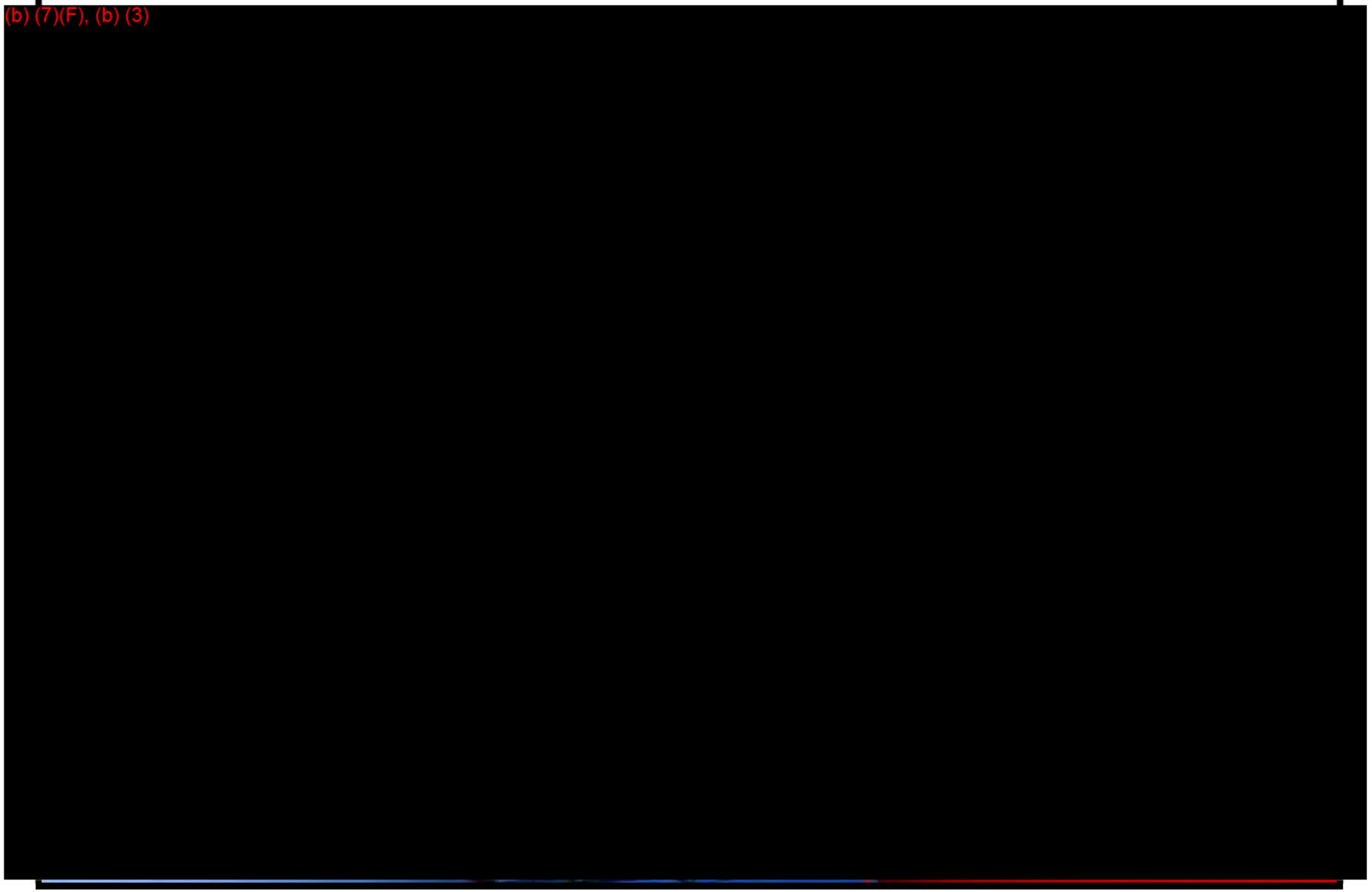
EVACUATION ROUTES AND ASSEMBLY AREAS

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

[redacted]

EVACUATION DIAGRAM

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



IMMEDIATE ACTIONS

This section is a guide for response actions to be taken when an oil or hazardous substance spill is first reported or observed. All Total Petrochemical PAR employees are familiar with and trained in the procedures to be followed in an emergency. Specific procedures to be followed for responding will vary depending on the location of the spill and the operations taking place.

INITIAL DISCOVERY / RESPONSE CHECKLIST

This section is a guide for response actions to be taken when an oil or hazardous substance spill, is first reported or observed.

SPILL DISCOVERER	Initiate Internal Notification/Response Procedures (Refer to **Section 2.2**). Refer to **FIGURE 2.4** for a flowchart showing logical steps to be followed by the Incident Management Team.

PORT ARTHUR REFINERY EMPLOYEES

All Port Arthur Refinery employees are trained in emergency response procedures. Specific response procedures will vary depending on the spill location and operational considerations in the area.

PERSON-IN-CHARGE OF FACILITY RESPSONSE GUIDELINES

The appropriate response to a particular incident may vary depending on the nature and severity of the incident.

1		Stop the flow of oil	Act quickly to shut in source, close valves, etc. (**IF SAFE TO DO SO, PROPERLY TRAINED & HAVE PROPER PPE**).
2		Consider safety of personnel / call for medical assistance if needed.	Sound alarm via radio (b) (7)(F), (b) telephone (call extension 2222). **EVACUATE IF NECESSARY**.
3		Shut off ignition sources.	Motors, open flames, electrical circuits.
4		Call for medical assistance if needed / Coordinate rescue and medical response actions.	Perform this task only if trained to do so (i.e., member of medical & rescue teams) Refer to Hospital Listing in Figure 2.3.
5		Identify pollutant and assess possible hazards to human health and the environment.	Identify source and volume, characterize oxygen levels, explosive character, toxicity of air on scene, splash and ingestive hazards.
6		Initiate containment if safe to do so.	Contact PSC (b) (7)(F), (b) (3) OSROs or DCOs if necessary (per Figure 2.3 listing).
7		Report all spills to your immediate supervisor, the Shift Supervisor or the Main Gate (b) (7)(F), (b) (3)	Follow Notification Flowchart, **FIGURE 2.4** and Immediate Action Flowchart in **SECTION 2.2**.

FACILITY DIAGRAMS

(a) 750-D-01-782 (Refinery and Docks)

(b) WPATF Diagram (4-Tank Farm)

(c) 750-589 (Pipelines outside Refinery)

REFINERY/DOCKS DIAGRAM

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

[redacted]

WEST PORT ARTHUR TANK FARM DIAGRAM

WEST PORT ARTHUR TANK FARM SIMPLIFIED PLOT PLAN

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

NON-REFINERY PIPELINES DIAGRAM

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