



Lion Oil Trading & Transportation, Inc.

Manual ID: LOTT Paline Pipeline Spill Response Manual

Issue Date: August 11, 2010

Document #:

Revision Date:

Page 1 of 5

LTP-TC-005.00

Table of Contents

Section	Title	Page No.	Current Issue Date	Document Number
	Table of Contents	1	August 11, 2010	LTP-TC-005.00
1.0	INFORMATION SUMMARY	1	NA	NA
1.1	Availability of Publication in Foreign Language	1	NA	NA
1.2	Name and Address of Pipeline Operator	1	NA	NA
1.3	Listing and Description of Response Zones	1	NA	NA
1.4	Primary Qualified Company Contact	1	NA	NA
1.5	Alternate Qualified Company Contacts	1	NA	NA
1.6	Line Section Description	2	NA	NA
1.7	Determination of Significant and Substantial Harm	7	NA	NA
1.8	Type of Oil and Worst Case Discharge	12	NA	NA
1.9	Pipeline Specifications	13	NA	NA
1.10	Certification of Private Resources	13	NA	NA
2.0	STATE, AREA, & NATIONAL CONTINGENCY PLANS	14	NA	NA
3.0	ENVIRONMENTALLY & ECONOMICALLY SENSITIVE AREAS	15	NA	NA
4.0	NOTIFICATION PROCEDURES	16	NA	NA
4.1	Notification Procedures	16	NA	NA
4.2	Spill Characterization/Reporting	16	NA	NA
4.3	Regulatory Agency Contact Summary	16	NA	NA
4.3.1	General Land Office (GLO) Reporting Requirements	19	NA	NA
4.3.2	Railroad Commission of Texas Reporting Requirements	19	NA	NA
4.3.3	Local Emergency Planning Committee Reporting Requirements	21	NA	NA
4.3.4	Local Area Fire Departments Reporting	21	NA	NA



Lion Oil Trading & Transportation, Inc.

Manual ID: LOTT Paline Pipeline Spill Response Manual
 Issue Date: August 11, 2010

Document #:
 Revision Date:

Page 2 of 5
 LTP-TC-005.00

Table of Contents

		Requirements			
	4.3.5	National Response Center Reporting Requirements	21	NA	NA
	4.3.6	Bureau of Land Management Reporting Requirements	21	NA	NA
	4.3.7	Natural Resource Trustee Notification	21	NA	NA
	4.3.8	Wildlife Rescue and Rehabilitation Notification	23	NA	NA
	4.4	Follow-Up Notification Requirements	23	NA	NA
5.0		SPILL DETECTION AND MITIGATION	25	NA	NA
	5.1	Lion Oil Trading and Transportation, Inc. Spill Detection Team	25	NA	NA
	5.2	Methods of Spill and Potential Threat Detection	25	NA	NA
	5.3	Methods of Spill Location	25	NA	NA
	5.4	Identification and Mitigation of Substantial Threat of Discharge	25	NA	NA
	5.5	Equipment Available for Spill Mitigation – LOTT, Paline Pipeline Company	26	NA	NA
	5.6	Equipment Operators Available for Spill Response	27	NA	NA
	5.7	Line Section Response Strategies	27	NA	NA
	5.8	Booming Strategies	61	NA	NA
	5.9	Recovered Spill Storage	61	NA	NA
	5.10	Response Waste Disposal	61	NA	NA
	5.11	Dispersant Usage	62	NA	NA
6.0		TIERED RESPONSE TIMES	63	NA	NA
7.0		LION OIL TRADING AND TRANSPORTATION, INC. SPILL RESPONSE TEAM	64	NA	NA
8.0		SPILL RESPONSE OPERATIONS/INCIDENT COMMAND SYSTEM	65	NA	NA



Lion Oil Trading & Transportation, Inc.

Manual ID: LOTT Paline Pipeline Spill Response Manual
 Issue Date: August 11, 2010

Document #:
 Revision Date:

Page 3 of 5
 LTP-TC-005.00

Table of Contents

8.1	Incident and Unified Command	65	NA	NA
8.2	Qualified Individual	65	NA	NA
8.3	ICS Structure	66	NA	NA
8.4	ICS Key Responsibilities	67	NA	NA
8.5	ICS Implementation	68	NA	NA
8.6	ICS Documentation	68	NA	NA
8.7	Chronology for Oil Spill Response	68	NA	NA
9.0	RESPONSE EQUIPMENT RESOURCES	70	NA	NA
9.1	Lion Oil Trading and Transportation, Inc. Available Equipment	70	NA	NA
9.2	Equipment Location	70	NA	NA
9.3	OSRO Available Equipment	70	NA	NA
10.0	METHODS OF COMMUNICATION	71	NA	NA
11.0	EMERGENCY EQUIPMENT MAINTENANCE	72	NA	NA
11.1	LOTT Maintenance and Operability Procedure	72	NA	NA
11.2	OSRO Maintenance and Operability Procedure	72	NA	NA
12.0	RESPONSE PERSONNEL TRAINING	73	NA	NA
12.1	LOTT Paline Pipeline Company Employee Training	73	NA	NA
12.2	OSHA 29CFR 1910.120 Training	73	NA	NA
13.0	TRAINING RECORDS	74	NA	NA
13.1	Training Records Location	74	NA	NA
13.2	Training Log	74	NA	NA
13.3	Contractor Training Records	74	NA	NA
13.4	Instructor and Training Organization Records	74	NA	NA
13.5	Training Records Maintenance	74	NA	NA
14.0	DRILL PROCEDURES	75	NA	NA



Table of Contents

14.1	Quarterly Drills	75	NA	NA
14.2	Annual Drills	75	NA	NA
14.3	Triennial Drills	75	NA	NA
14.4	Annual OSRO Equipment Deployment Drill	75	NA	NA
14.5	Unannounced Drill	75	NA	NA
14.6	Responsibility for Drill Program	75	NA	NA
14.7	Drill Documentation	76	NA	NA
15.0	PIPELINE SPILL RESPONSE PLAN REVIEW	77	NA	NA
15.1	Operator Review of Response Plan	77	NA	NA
15.2	Re-submittal of Updated Plan	77	NA	NA
15.3	Reasons to Revise the Spill Response Plan	77	NA	NA
15.4	Drill Evaluation and Plan Revision	77	NA	NA
	Appendix A		NA	NA
	Contact List		NA	NA
	Appendix B		NA	NA
	Terms and Abbreviations		NA	NA
	Appendix C		NA	NA
	OSRO Written Agreements and Equipment Lists		NA	NA
	Appendix D		NA	NA
	Crude Oil Material Safety Data Sheet		NA	NA
	Appendix E		NA	NA
	ICS Forms		NA	NA
	Appendix F		NA	NA
	Pipeline Spill Response Plan Revision Letter Dated June 7, 2002		NA	NA



Table of Contents

Figure 1	NA	NA
Paline Pipeline Company Map	NA	NA
Sheets 1-17	NA	NA
Depicts Geographic Response Zones	NA	NA
Amendment 1	NA	NA
Wildlife and Environmental Sensitivity Index Map (Terry)	NA	NA
Oil Spill Planning and Response Atlas – Upper Coast of Texas	NA	NA
Map # 3 Terry	NA	NA
Map # 4 Beaumont East	NA	NA
Map # 5 West of Greens Bayou	NA	NA
Map # 6 Port Arthur North	NA	NA
Legend	NA	NA

Information Summary

Pipeline Information: Owner: Paline Pipeline Company
 RSPA Sequence Number: 125
 Geographical Stretch: Nederland, Texas to Longview, Texas
 Pipeline Length: 185 Miles of 10-inch Crude Oil Delivery Pipeline
 Destination: Lion Oil Company Refinery, El Dorado, Arkansas

Operator: Lion Oil Trading and Transportation, Inc.
 Paline Pipeline Company
 1001 School Street
 El Dorado, Arkansas 71730
 (870) 864-1451

Response Zone: One Response Zone – Port Arthur, Texas to Longview, Texas Hazardous Liquid Pipeline
 East Texas Response Zone – Jefferson, Orange, Hardin, Jasper, Tyler, Angelina, Nacogdoches, Rusk, and Gregg Counties, Texas

Line Sections:

Section A – Beginning at Smith's Bluff Station in Jefferson County, Texas, bisecting Orange County, Texas, and terminating at Evadale Station in Hardin County, Texas a distance of 34.2 miles. This line section poses a threat of significant and substantial harm as it is located within 1-mile radius of potentially affected environmentally sensitive area and could reasonably be expected to reach these areas. This section includes a 6.5-mile section of idle line from Smiths Bluff to the Petro Fina Refinery.

Section B – Beginning at Evadale Station and terminating at Woodville Station in Tyler County, Texas a distance of 31.0 miles. This line segment does not pose a threat of significant and substantial harm.

Section C – Beginning at the Woodville Station, bisecting Jasper County, Texas and terminating at Zavalla Station in Angelina County, Texas a distance of 30.8 miles. This line segment poses a threat of significant and substantial harm as it is located within 1-mile radius of potentially affected environmentally sensitive area and could reasonably be expected to reach these areas.

Section D – Beginning at the Zavalla Station and terminating at Nacogdoches Station in Nacogdoches County, Texas a distance of 33.8 miles. This line segment poses a threat of significant and substantial harm as it is located within 1-mile radius of potentially affected environmentally sensitive area and could reasonably be expected to reach these areas.

Section E – Beginning at the Nacogdoches Station and terminating at Laneville Station in Rusk County, Texas a distance of 28.3 miles. This line segment does not pose a threat of significant and substantial harm.

Section F – Beginning at Laneville Station and terminating at Mid-Valley Tank Farm in Gregg County, Texas a distance of 33.1 miles. This line segment poses a threat of significant and substantial harm as it is located within 1-mile radius of potentially affected environmentally sensitive area and could reasonably be expected to reach these areas.

(b) (7)(F)

Qualified Individual: David Wood, Maintenance Supervisor (Primary QI)
 Office 870-864-1324
 Home (b) (6)
 Cellular Phone 870-314-5621

Jack Kingrey, Maintenance Supervisor (Alternate QI)

Office 870-864-1216

Home (b) (6)

Cellular Phone 870-314-5610

Pager 870-864-3039

Glenn Green, Engineering Supervisor (Second Alternate QI)

Office 870-864-1372

Home (b) (6)

Cellular Phone 870-314-2848

Worst Case Discharge: Affected Line Section: (b) (7)(F)

n

Line Section Length: 33.78 miles

Worst Case Discharge Volume: (b) (7)(F)

Crude Oil

Combustible Liquid



PIPELINE
SPILL
RESPONSE
MANUAL

LION OIL TRADING AND
TRANSPORTATION, INC.

PALINE PIPELINE COMPANY
RSPA PLAN

RSPA Sequence No. 125



Prepared by:
C-K Associates, Inc.
17170 Perkins Road
Baton Rouge, LA 70810
(225) 755-1000
Project No. 15-0202



**LION OIL TRADING AND TRANSPORTATION,
INC.
PALINE PIPELINE COMPANY
PIPELINE SPILL RESPONSE MANUAL**

TABLE OF CONTENTS

	Page
1.0 INFORMATION SUMMARY	1
1.1 Availability of Publication in Foreign Language	1
1.2 Name and Address of Pipeline Operator	1
1.3 Listing and Description of Response Zones	1
1.4 Primary Qualified Company Contact	1
1.5 Alternate Qualified Company Contacts	1
1.6 Line Section Description.....	2
1.7 Determination of Significant and Substantial Harm	7
1.8 Type of Oil and Worst Case Discharge	12
1.9 Pipeline Specifications.....	13
1.10 Certification of Private Resources	13
2.0 STATE, AREA, & NATIONAL CONTINGENCY PLANS.....	14
3.0 ENVIRONMENTALLY & ECONOMICALLY SENSITIVE AREAS	15
4.0 NOTIFICATION PROCEDURES	16
4.1 Notification Procedures	16
4.2 Spill Characterization/Reporting	16
4.3 Regulatory Agency Contact Summary	16
4.3.1 General Land Office (GLO) Reporting Requirements	19
4.3.2 Railroad Commission of Texas Reporting Requirements	19
4.3.3 Local Emergency Planning Committee Reporting Requirements	21
4.3.4 Local Area Fire Departments Reporting Requirements	21
4.3.5 National Response Center Reporting Requirements.....	21
4.3.6 Bureau of Land Management Reporting Requirements.....	21
4.3.7 Natural Resource Trustee Notification	21
4.3.8 Wildlife Rescue and Rehabilitation Notification.....	23
4.4 Follow-Up Notification Requirements	23
5.0 SPILL DETECTION AND MITIGATION	25
5.1 Lion Oil Trading and Transportation, Inc. Spill Detection Team	25
5.2 Methods of Spill and Potential Threat Detection	25
5.3 Methods of Spill Location	25
5.4 Identification and Mitigation of Substantial Threat of Discharge	25
5.5 Equipment Available for Spill Mitigation – LOTT, Paline Pipeline Company.....	26
5.6 Equipment Operators Available for Spill Response.....	27
5.7 Line Section Response Strategies	27
5.8 Booming Strategies.....	61
5.9 Recovered Spill Storage	61
5.10 Response Waste Disposal	61
5.11 Dispersant Usage	62



**LION OIL TRADING AND TRANSPORTATION,
INC.
PALINE PIPELINE COMPANY
PIPELINE SPILL RESPONSE MANUAL**

6.0	TIERED RESPONSE TIMES	63
7.0	LION OIL TRADING AND TRANSPORTATION, INC. SPILL RESPONSE TEAM.....	64
8.0	SPILL RESPONSE OPERATIONS/INCIDENT COMMAND SYSTEM.....	65
8.1	Incident and Unified Command	65
8.2	Qualified Individual.....	65
8.3	ICS Structure.....	66
8.4	ICS Key Responsibilities.....	67
8.5	ICS Implementation	68
8.6	ICS Documentation.....	68
8.7	Chronology for Oil Spill Response	68
9.0	RESPONSE EQUIPMENT RESOURCES	70
9.1	Lion Oil Trading and Transportation, Inc. Available Equipment	70
9.2	Equipment Location	70
9.3	OSRO Available Equipment.....	70
10.0	METHODS OF COMMUNICATION.....	71
11.0	EMERGENCY EQUIPMENT MAINTENANCE	72
11.1	LOTT Maintenance and Operability Procedure	72
11.2	OSRO Maintenance and Operability Procedure.....	72
12.0	RESPONSE PERSONNEL TRAINING.....	73
12.1	LOTT Paline Pipeline Company Employee Training.....	73
12.2	OSHA 29CFR 1910.120 Training	73
13.0	TRAINING RECORDS.....	74
13.1	Training Records Location	74
13.2	Training Log	74
13.3	Contractor Training Records.....	74
13.4	Instructor and Training Organization Records	74
13.5	Training Records Maintenance.....	74
14.0	DRILL PROCEDURES	75
14.1	Quarterly Drills.....	75
14.2	Annual Drills.....	75
14.3	Triennial Drills.....	75
14.4	Annual OSRO Equipment Deployment Drill	75
14.5	Unannounced Drill.....	75
14.6	Responsibility for Drill Program.....	75
14.7	Drill Documentation.....	76
15.0	PIPELINE SPILL RESPONSE PLAN REVIEW.....	77
15.1	Operator Review of Response Plan	77
15.2	Re-submittal of Updated Plan.....	77



**LION OIL TRADING AND TRANSPORTATION,
INC.
PALINE PIPELINE COMPANY
PIPELINE SPILL RESPONSE MANUAL**

15.3 Reasons to Revise the Spill Response Plan 77
15.4 Drill Evaluation and Plan Revision..... 77



**LION OIL TRADING AND TRANSPORTATION,
INC.
PALINE PIPELINE COMPANY
PIPELINE SPILL RESPONSE MANUAL**

Appendix A

Contact List

Appendix B

Terms and Abbreviations

Appendix C

OSRO Written Agreements and Equipment Lists

Appendix D

Crude Oil Material Safety Data Sheet

Appendix E

ICS Forms

Appendix F

Pipeline Spill Response Plan Revision Letter Dated June 7, 2002

Figure 1

Paline Pipeline Company Map

Sheets 1-17

Depicts Geographic Response Zones

Amendment 1

Wildlife and Environmental Sensitivity Index Map (Terry)

Oil Spill Planning and Response Atlas – Upper Coast of Texas

Map # 3 Terry

Map # 4 Beaumont East

Map # 5 West of Greens Bayou

Map # 6 Port Arthur North

Legend



**LION OIL TRADING AND TRANSPORTATION,
INC.
PALINE PIPELINE COMPANY
PIPELINE SPILL RESPONSE MANUAL**

1.0 INFORMATION SUMMARY

1.1 Availability of Publication in Foreign Language

Lion Oil Trading and Transportation, Inc. (LOTT) has no foreign speaking employees that may be responsible for carrying out the responsibilities of the Response Plan. As such, the Response Plan is available only in English.

1.2 Name and Address of Pipeline Operator

Lion Oil Trading and Transportation, Inc.
Paline Pipeline Company
1001 School Street
El Dorado, AR 71730
(800) 344-5325 Phone
(870) 864-1341 Fax

1.3 Listing and Description of Response Zones

The 10-inch pipeline begins in Nederland, Texas and terminates in Longview, Texas (see Figure 1). The response zone is in the eastern portion of the state of Texas including the counties of Jefferson, Orange, Hardin, Jasper, Tyler, Angelina, Nacogdoches, Rusk, and Gregg. Because the entire pipeline system is in a single response zone, the response zone in which a worst-case discharge could occur is the East Texas Response Zone (see Sheets 1 - 17).

1.4 Primary Qualified Company Contact

David Wood, Maintenance Supervisor (Primary QI)

Office	870-864-1324
Home	(b) (6)
Cellular Phone	870-314-5621

1.5 Alternate Qualified Company Contacts

Jack Kingrey, Maintenance Supervisor (Alternate QI)

Office	870-864-1216
Home	(b) (6)
Cellular Phone	870-314-5610
Pager	870-864-3039



**LION OIL TRADING AND TRANSPORTATION,
INC.
PALINE PIPELINE COMPANY
PIPELINE SPILL RESPONSE MANUAL**

Glenn Green, Engineering Supervisor (Second Alternate QI)

Office 870-864-1372

Home (b) (6)

Cellular Phone 870-314-2848

1.6 Line Section Description

The pipeline is divided into six main operational sections with corresponding mile post (m.p.) locations, as follows:

- Section A - (b) (7)(F)
Beginning at Smith's Bluff Station in Jefferson County, Texas, bisecting Orange County, Texas, and terminating at Evadale Station in Hardin County, Texas a distance of 34.2 miles. This section includes a 6.5-mile section of idle line from Smiths Bluff to the Petro Fina Refinery.
- Section B - (b) (7)(F)
Beginning at Evadale Station and terminating at Woodville Station in Tyler County, Texas a distance of 31.0 miles.
- Section C - (b) (7)(F)
Beginning at the Woodville Station, bisecting Jasper County, Texas and terminating at Zavalla Station in Angelina County, Texas a distance of 30.8 miles.
- Section D - (b) (7)(F)
Beginning at the Zavalla Station and terminating at Nacogdoches Station in Nacogdoches County, Texas a distance of 33.8 miles.
- Section E - (b) (7)(F)
Beginning at the Nacogdoches Station and terminating at Laneville Station in Rusk County, Texas a distance of 28.3 miles.
- Section F - (b) (7)(F)
Beginning at Laneville Station and terminating at Mid-Valley Tank Farm in Gregg County, Texas a distance of 33.1 miles.

Although the pipeline is operationally divided into six main sections, these sections do not necessarily facilitate a spill response action, due to the multiple drainage areas in each section. For purposes of this Spill Response Manual, the following line sub-sections are delineated based on the drainage basins to which a potential spill would drain.



**LION OIL TRADING AND TRANSPORTATION,
INC.
PALINE PIPELINE COMPANY
PIPELINE SPILL RESPONSE MANUAL**

Section A

Line Section A-1 – Smith's Bluff Station in Nederland, Texas north 7.56 miles to the Neches River (Ship Channel)

A release of oil in this line section could flow north to the main channel of the Neches River via Block Bayou or other local drainage and overland flow. Line Section A-1 is located within the Beaumont Area Contingency Planning Area.

Line Section A-1a – Smith's Bluff Station in Nederland, Texas south 6.5 miles to the Petro Fina Refinery

This section of line is idle and is currently not in operation. Line Section A-1a is located within the Beaumont Area Contingency Planning Area.

Line Section A-2 – Neches River Crossing

(b) (7)(F) . Any release of oil from the pipeline at this point would flow southeastwardly along the river channel. Line Section A-2 is located within the Beaumont Area Contingency Planning Area.

Line Section A-3 – Neches River Crossing to the Evadale Station

This line section runs north from the Neches River to Evadale Station crossing several tributaries of the Neches River. These tributaries flow to the southwest to a point where they intersect with the main channel of the river. Should a release from the pipeline occur within this area, the oil is anticipated to flow to the southwest along one of these tributaries. The west boundary of the Lower Neches Wildlife Management Area – Bessie Heights is located approximately one mile east of the pipeline in this area. A release of oil from the pipeline, if it were to flow eastwardly, is anticipated to be intercepted by a canal running almost parallel with the pipeline between the WMA and the pipeline. This canal flows south to the Neches River. Line Section A-3 is located within the Beaumont Area Contingency Planning Area.

Section B

Line Section B-1 – Evadale Station to approximately one mile south of Silsbee Station

This line section drains toward the east via tributaries of the Neches River where they join with the main channel of the river that flows to the southeast.

Line Section B-2 – One mile south of Silsbee Station to Woodville Station

This line section of the pipeline flows southward via Beech Creek and Drakes Branch



**LION OIL TRADING AND TRANSPORTATION,
INC.
PALINE PIPELINE COMPANY
PIPELINE SPILL RESPONSE MANUAL**

to a point approximately 3 ½ miles southwest of Silsbee Station where the two creeks join Village Creek that flows to the Neches River.

Section C

Line Section C-1 – Woodville Station North 12.87 miles

This line section crosses several tributaries (Little Wolf Creek, Wolf Creek, Tompkins Mill Creek) that flow northeastwardly to the B. A. Steinhagen Lake. If a release occurs along this line section, the oil could flow northeasterly until it reached the lake approximately five miles away. The dam located on the south end of the lake would contain any release of oil along this section of the pipeline.

Line Section C-2 – Highway 255 to US 69

A release along the line section south of the Neches River could flow northeastward through either the Rawls Creek or Sugar Creek drainage areas to the Neches River east of the pipeline. Any spill at the crossing with the Neches River east of US 69 will flow toward the east. (b) (7)(F)

North of the Neches River to the point where the pipeline crosses US 69 drains southward via Graham Creek to the Neches River.

Line Section C-3 – US 69 to Zavalla Station

The pipeline area from US 69 to Zavalla Station (some 6.42 miles) flows south to the Neches River via Shawnee Creek.

Section D

Line Section D-1 – Zavalla Station to US 69

A release along this line section will flow either west to Shawnee Creek or east to Sam Rayborn Reservoir.

Line Section D-2 – (b) (7)(F)

This section flows toward the east to the Sam Rayborn Reservoir.

Line Section D-3 – (b) (7)(F)

This section of the pipeline drains toward the northeast via Odell Creek and Linston Creek to the Sam Rayborn Reservoir.

Line Section D-4 – Highway 103 north to Sam Rayborn Reservoir Crossing



**LION OIL TRADING AND TRANSPORTATION,
INC.
PALINE PIPELINE COMPANY
PIPELINE SPILL RESPONSE MANUAL**

This section of the pipeline flows toward the northeast to Sam Rayborn Reservoir via Anderson Creek.

Line Section D-5 – Sam Rayborn Reservoir Crossing

The pipeline crosses the Sam Rayborn Reservoir on the upper end of the reservoir.

(b) (7)(F)

Line Section D-6 – Sam Rayborn Reservoir Crossing to Nacogdoches

This line section runs from the (b) (7)(F)

. A release in this section could flow south to the upper end of the Sam Rayborn Reservoir via Dorr Creek.

Line Section D-7 – Highway 224 South, Nacogdoches to Nacogdoches Station

This section of pipeline runs from the (b) (7)(F) in Nacogdoches to the Nacogdoches Station on the north side of Nacogdoches (north of Highway 224 North). A release along this section could flow south via Bayou La Nanh to the upper end of the Sam Rayborn Reservoir.

Section E

Line Section E-1 – Nacogdoches Station to US 259

This section of the pipeline runs from the Nacogdoches Station to where the pipeline crosses US 259. A release along this section could flow south via Bayou La Nanh to the upper end of the Sam Rayborn Reservoir.

Line Section E-2 – US 259 to Highway 204

This section of the pipeline runs from where the pipeline crosses US 259 to where it crosses Highway 204. A release along this section of the pipeline could flow west via Bayou Loco to Lake Nacogdoches.

Line Section E-3 – Highway 204 to Mount Enterprise Station

This section of the pipeline runs from where the pipeline crosses Highway 204 to the Mount Enterprise Station. A release along the section could flow west via Penn Creek to the East Fork of the Angelina River.

Line Section E-4 – Mount Enterprise Station to US 84

This section of pipeline runs from the Mount Enterprise Station to where the pipeline crosses US 84. A release along this section could flow west via Wooten Creek and unnamed tributaries to the East Fork of the Angelina River.



**LION OIL TRADING AND TRANSPORTATION,
INC.
PALINE PIPELINE COMPANY
PIPELINE SPILL RESPONSE MANUAL**

Line Section E-5 – US 84 to Laneville Station

This section of pipeline runs from where the pipeline crosses US 84 to the Laneville Station. If a release occurs along the portion of the pipeline approximately 5.4 miles north of US 84, the oil could flow either west via the Anadarko Creek and unnamed tributaries or southeastward to the East Fork of the Angelina River. Should a release occur along the northern portion of this section, the oil could flow southwestward to the Angelina River.

Section F

Line Section F-1 – Laneville Station to Moores Junction

This line section runs from Laneville Station to Moores Junction located approximately 0.65 miles south of US 64. A release in this area could flow south to the Angelina River.

Line Section F-2 – Moores Junction to 4 miles North

A release along this section of the pipeline could flow either west to Johnson Creek and eventually reach Lake Striker where it would be contained or would flow east to the Angelina River.

Line Section F-3 – Four miles north of Moores Junction to 2 miles north US 259

This section of pipeline runs from four miles north of Moores Junction (approximately 4 miles south of where the pipeline crosses US 259) to 2 miles north of where the pipeline crosses US 259. A release along this section of the pipeline could flow toward the northeast to the Tiawichi Creek.

Line Section F-4 – Two miles north US 259 to 0.5 miles north of Horton's Station

This line section runs from two miles north of US 259 south of Longview, Texas to 0.5 miles north of Horton's Station located on the south side of Highway 31 south of Longview. A release along this section of pipeline could flow east via Rabby Creek to the Sabine River.

Line Section F-5 – Half mile north of Horton's Station to the Sabine River

This section of the pipeline runs from a point approximately a half mile north of Horton's Station to the south side of the Sabine River crossing. Should a release of oil occur in along this section of the pipeline, the oil could flow north toward the Sabine River via local drainage and overland flow.

Line Section F-6 – Sabine River Crossing



**LION OIL TRADING AND TRANSPORTATION,
INC.
PALINE PIPELINE COMPANY
PIPELINE SPILL RESPONSE MANUAL**

The pipeline crosses the Sabine River southwest of Longview, Texas. (b) (7)(F) . Should a release occur at the crossing the oil could flow toward the east and down current along the main channel of the river.

Line Section F-7 – Sabine River Crossing to Mid-Valley Tank Farm

The section of the pipeline runs from the (b) (7)(F) . If a release occurs along this section of the pipeline, the oil could flow south via local drainage and overland flow to the Sabine River.

1.7 Determination of Significant and Substantial Harm

The LOTT, Paline Pipeline has the potential to cause **significant and substantial harm** to the environment in the event of a discharge of oil into or on navigable waters or adjoining shorelines.

The following discussion is provided for each line section and sub-section regarding substantial harm to the environment:

Section A

Line Section A-1 – Smith's Bluff Station in Nederland, Texas north 7.56 miles to the Neches River (Ship Channel)

A release in this section would flow to a navigable waterway near an urban area. A high priority environmental area (marsh) has been identified in the Area Contingency Plan within (b) (7)(F)

Line Section A-1 has the potential to cause significant and substantial harm in the event of a discharge of oil into or on navigable waters or shorelines.

Line Section A-2 – Neches River Crossing

There are (b) (7)(F) . Any release of oil from the pipeline at this point would flow southeastwardly along the river channel. Oil could enter Grays Bayou, the canal west of Grays Bayou, Bessie Heights Canal, and the canal east of Bessie Heights Canal impacting a high priority environmental area (see the Beaumont Area Contingency Plan). (b) (7)(F)

Consequently, Line Section A-2 has the potential to cause significant and substantial harm in the event of a discharge of oil into or on navigable waters or shorelines.

Line Section A-3 – Neches River Crossing to Evadale Station



**LION OIL TRADING AND TRANSPORTATION,
INC.
PALINE PIPELINE COMPANY
PIPELINE SPILL RESPONSE MANUAL**

Should a release from the pipeline occur along this section, oil is anticipated to flow to the Neches River to the southwest via one of the river's tributaries. The west boundary of the Lower Neches Wildlife Management Area – Bessie Heights is located approximately one mile east of the pipeline in this area. A release of oil from the pipeline, if it were to flow eastwardly, is anticipated to be intercepted by a canal running almost parallel with the pipeline between the Wildlife Management Area (WMA) and the pipeline. This canal flows south to the Neches River. This line section also passes through the Beaumont-Vidor urban area and is within a mile of the Big Thicket WMA along portions of the line section. (b) (7)(F)

The Beaumont Area Contingency Plan indicates that the south half of this line section is located in a high priority protection area (marsh). The marsh is important habitat to birds providing nursery areas as well as providing abundant fish and crabs.

(b) (7)(F)

section. Consequently, Line Section A-3 has the potential to cause significant and substantial harm in the event of a discharge of oil into or on navigable waters or shorelines, and to environmentally sensitive environments.

Section B

Line Section B-1 – Evadale Station to approximately one mile south of Silsbee Station

Line Section B-1 passes through the Big Ticket WMA. (b) (7)(F)

one appears to be down slope of the line section and could be impacted by an oil release. Consequently, Line Section B-1 has the potential to cause significant and substantial harm to sensitive environmental receptors should an oil release occur.

Line Section B-2 – One mile south of Silsbee Station to Woodville Station

(b) (7)(F) n. However, a creek runs north and south between the pipeline and the intake acting as an interceptor for any oil should a release occur. Therefore, Line Section B-2 is not expected to cause significant and substantial harm to environmental receptors in the event of a discharge of oil.

Section C

Line Section C-1 – Woodville Station North 12.87 miles

(b) (7)(F)

miles and down slope of this line



**LION OIL TRADING AND TRANSPORTATION,
INC.
PALINE PIPELINE COMPANY
PIPELINE SPILL RESPONSE MANUAL**

section. A release of oil could travel via the creeks (Little Wolf Creek, Wolf Creek, Tompkins Mill Creek) in this Line Section to the B. A. Steinhagen Lake. Therefore, Line Section C-1 has the potential to cause significant and substantial harm to sensitive environmental receptors in the event of a discharge of oil.

Line Section C-2 – Highway 255 to US 69

Line Section C-2 crosses the Neches River a navigable waterway and the Angelina National Forrest. (b) (7)(F) . Therefore, Line Section C-2 has the potential to cause significant and substantial harm in the event of a discharge of oil into or on navigable waters or shorelines.

Line Section C-3 – US 69 to Zavalla Station

Line Section C-3 passes through the Angelina National Forrest. (b) (7)(F) . Therefore, Line Section C-3 has the potential to cause significant and substantial harm to sensitive environments in the event of a discharge of oil.

Section D

Line Section D-1 – Zavalla Station to US 69

A release along this line section will flow either west to Shawnee Creek or east to Sam Rayborn Reservoir. Since Sam Rayborn is a recreational reservoir, Line Section D-1 has the potential to cause significant and substantial harm in the event of a discharge of oil into or on navigable waters or shorelines.

Line Section D-2 – (b) (7)(F)

This section flows toward the east to the Sam Rayborn Reservoir. (b) (7)(F) . Therefore, Line Section D-2 has the potential to cause significant and substantial harm to sensitive environmental receptors in the event of a discharge of oil.

Line Section D-3 – (b) (7)(F)

This section of the pipeline drains toward the northeast via Odell Creek and Linston Creek to the Sam Rayborn Reservoir. No environmentally sensitive receptors have been identified along this line section. Therefore, Line Section D-3 has the potential to cause significant and substantial harm in the event of a discharge of oil into or on navigable waters or shorelines.

Line Section D-4 – Highway 103 north to Sam Rayborn Reservoir Crossing



**LION OIL TRADING AND TRANSPORTATION,
INC.
PALINE PIPELINE COMPANY
PIPELINE SPILL RESPONSE MANUAL**

This section of the pipeline flows toward the northeast to Sam Rayborn Reservoir via Anderson Creek. Because this line section is within one mile of the reservoir, Line Section D-4 has the potential to cause significant and substantial harm in the event of a discharge of oil into or on navigable waters or shorelines.

Line Section D-5 – Sam Rayborn Reservoir Crossing

The pipeline crosses the Sam Rayborn Reservoir on the upper end of the reservoir. Since Sam Rayborn Reservoir is a recreational lake with shoreline camps, houses, and boat launches, Line Section D-5 has the potential to cause significant and substantial harm in the event of a discharge of oil into or on navigable waters or shorelines.

Line Section D-6 – Sam Rayborn Reservoir to Nacogdoches

A release along this line section can be reasonably expected to reach the upper end of the Sam Rayborn Reservoir via Dorr Creek. (b) (7)(F) . Therefore, Line Section D-6 has the potential to cause significant and substantial harm to sensitive environmental receptors in the event of a discharge of oil.

Line Section D-7 – Highway 224 South, Nacogdoches to Nacogdoches Station

This line section is within (b) (7)(F) . A release of oil is reasonably expected to reach the Sam Rayborn Reservoir. Therefore, Line Section D-7 has the potential to cause significant and substantial harm to sensitive environmental receptors in the event of a discharge of oil.

Section E

Line Section E-1 – Nacogdoches Station to US 259

Line Section E-1 is located within one mile of an urban area and (b) (7)(F)

Because of the close proximity to an urban area, Line Section E-1 has the potential to cause significant and substantial harm to a sensitive environment in the event of a discharge of oil.

Line Section E-2 – US 259 to Highway 204

Line Section E-2 is not expected to cause significant and substantial harm to any sensitive environmental receptors in the event of a discharge.



**LION OIL TRADING AND TRANSPORTATION,
INC.
PALINE PIPELINE COMPANY
PIPELINE SPILL RESPONSE MANUAL**

Line Section E-3 – Highway 204 to Mount Enterprise Station

Line Section E-3 is not expected to cause significant and substantial harm to any sensitive environmental receptors in the event of a discharge.

Line Section E-4 – Mount Enterprise Station to US 84

Line Section E-4 is not expected to cause significant and substantial harm to any sensitive environmental receptors in the event of a discharge.

Line Section E-5 – US 84 to Laneville Station

(b) (7)(F)

Therefore, Line Section E-5 has the potential to cause significant and substantial harm to any sensitive environmental receptors in the event of a discharge.

Section F

Line Section F-1 – Laneville Station to Moores Junction

(b) (7)(F)

Therefore, Line Section F-1 is expected to cause significant and substantial harm to any sensitive environmental receptors in the event of a discharge.

Line Section F-2 – Moores Junction to 4 miles North

(b) (7)(F)

2. Therefore, Line Section F-2 is expected to cause significant and substantial harm to any sensitive environmental receptors in the event of a discharge.

Line Section F-3 – Four miles north of Moores Junction to 2 miles north US 259

(b) (7)(F)

3. Therefore, Line Section F-3 is expected to cause significant and substantial harm to any sensitive environmental receptors in the event of a discharge.

Line Section F-4 – Two miles north US 259 to 0.5 miles north of Horton's Station

This line section is within one mile of an urban area and (b) (7)(F)

Therefore, Line Section F-4 is expected to cause significant and substantial harm to any sensitive environmental receptors in the event of a discharge.



**LION OIL TRADING AND TRANSPORTATION,
INC.
PALINE PIPELINE COMPANY
PIPELINE SPILL RESPONSE MANUAL**

Line Section F-5 – Half mile north of Horton’s Station to the Sabine River

Line Section F-5 is within one mile of an urban area. Any release of oil along this line section can reasonably be expected to reach the Sabine River. Therefore, Line Section F-5 is expected to cause significant and substantial harm to any sensitive environmental receptors in the event of a discharge.

Line Section F-6 – Sabine River Crossing

Line Section F-6 is within one mile of an urban area. Any release of oil along this line section can reasonably be expected to reach the Sabine River. Therefore, Line Section F-6 has the potential to cause significant and substantial harm to any sensitive environmental receptors in the event of a discharge.

Line Section F-7 – Sabine River Crossing to Mid-Valley Tank Farm

A release of oil along Line Section F-7 will flow south via local drainage and overland flow to the Sabine River. Therefore, Line Section F-7 has the potential to cause significant and substantial harm to sensitive environmental receptors.

1.8 Type of Oil and Worst Case Discharge

The oil transported through the Paline Pipeline is a medium petroleum crude oil with a specific gravity of 0.85 and an API gravity of 33 - 34 (see MSDS in Appendix D).

(b) (7)(F)

(b) (7)(F)

More detailed information on spill detection and shutdown can be found in Section 5 – Spill Detection and Mitigation.

(b) (7)(F)



**LION OIL TRADING AND TRANSPORTATION,
INC.
PALINE PIPELINE COMPANY
PIPELINE SPILL RESPONSE MANUAL**

(b) (7)(F)

1.9 Pipeline Specifications

The Paline Pipeline is comprised of a 10 inch steel line approximately 185 miles in length beginning at Smith's Bluff Station in Jefferson County, Texas and continuing to the Mid-Valley Station in Gregg County, Texas. Maximum pipeline operating pressure is 960 pounds per square inch (psi) and maximum rated pipeline pressure is 1200 psi. The line is buried except at pump and inspection stations.

1.10 Certification of Private Resources

LOTT has entered into agreements with Oil Spill Response Organizations (OSROs) to provide spill response resources including equipment and personnel in the event of a discharge of oil. Written agreements are provided in Appendix C with the lists of response resources. LOTT has qualified and entered into agreements with the following companies to provide spill control services in the event of a spill:

Primary OSRO

Garner Environmental Services, Inc.
Hotline All Offices (800) 424-1716

5048 Houston Ave.
Port Arthur, TX 77640
Office: (409) 983-5646

(Class A/B/C/D/E) – Rivers & Canals
(Class A/B/C/D/E) – Inland
Port Arthur Office

3929 California Parkway East
Fort Worth, Texas 76119
Office: (817) 535-7222

(Class A/B/C/D/E) – Rivers & Canals
(Class A/B/C/D/E) – Inland
Fort Worth Office

Additional OSROs

ES&H, Inc.
5905 Financial Plaza, Suite 100
Shreveport, Louisiana 71129
Hotline: (866) 444-4237
Office: (318) 688-4231

(Class E) – Inland
Shreveport Office

(Class A/B/C/D/E) – Rivers & Canals
(Class A/B) – Inland
Port Arthur Office

Ferguson Harbour Services
4110 East Highway 80
Pearl, MS 39208
Hotline: (800) 235-1344
Office: (601) 936-6321

(Class B/C/D/E) – Rivers & Canals
(Class B) – Inland
Memphis Office

(Class D) – Rivers & Canals
Memphis Office



**LION OIL TRADING AND TRANSPORTATION,
INC.
PALINE PIPELINE COMPANY
PIPELINE SPILL RESPONSE MANUAL**

2.0 STATE, AREA, & NATIONAL CONTINGENCY PLANS

The Area Contingency Plan (ACP) applicable to the Response Zone for the Paline Pipeline is the Port Arthur/Beaumont Area Contingency Plan and the USEPA Region VI Regional Integrated Contingency Plan, December 18, 2000. The On-Scene Commander listed in the plan is:

Karen McCormick, OSC
USEPA Region VI, Response and Prevention Branch – Dallas, TX
PHONE (214) 665-2270
FAX (214) 665-7447
EMAIL <mailto:mccormick.karen@epa.gov>

LOTT has reviewed the National Contingency Plan (40 CFR 300) and the applicable ACP to ensure consistency. This Oil Spill Response Plan has been prepared to be consistent with the **National Contingency Plan** (NCP), the USEPA Region VI Regional Integrated Contingency Plan, and The Port Arthur/Beaumont Area Contingency Plan.

The State of Texas Oil and Hazardous Substance Spill Contingency Plan, November 1997 was reviewed. This Oil Spill Response Plan has been modified to incorporate various aspects of the state contingency plan including identifying the disaster districts and Regional Liaison Officers for the state emergency management office. In the event of an emergency, the appropriate Regional Liaison Officer will be notified of the spill by the Texas Department of Public Safety Communications Center.

Disaster District Boundaries:

District	Counties	RLO's / Headquarters
District 1B	Gregg Co., Rusk Co.	Michael Brock – Tyler
District 2B	Tyler Co., Hardin Co., Orange Co., Jefferson Co.	Clay Kennelly – Beaumont
Sub 2B	Nacogdoches Co., Angelina Co.	Clay Kennelly - Lufkin



**LION OIL TRADING AND TRANSPORTATION,
INC.
PALINE PIPELINE COMPANY
PIPELINE SPILL RESPONSE MANUAL**

3.0 ENVIRONMENTALLY & ECONOMICALLY SENSITIVE AREAS

The Paline Pipeline traverses or is located in close proximity to environmentally and/or economically sensitive areas. Sheets 1 - 17 shows the water intakes that are located within a five-mile radius of the pipeline and the environmentally and/or economically sensitive areas identified within a one-mile radius of the pipeline. In addition, the following threatened or endangered species have been identified in the counties traversed by the pipeline.

Angelina County	Bald Eagle (Bird)	<i>Haliaeetus leucocephalus</i>
Gregg County	Bald Eagle (Bird) Louisiana Black Bear (Mammal)	<i>Haliaeetus leucocephalus</i> <i>Ursus americanus luteolus</i>
Jefferson County	Piping Plover (Bird) Bald Eagle (Bird) Brown Pelican (Bird)	<i>Charadrius melodus</i> <i>Haliaeetus leucocephalus</i> <i>Pelicanus occidentalis</i>
Orange County	Bald Eagle (Bird)	<i>Haliaeetus leucocephalus</i>
Hardin County	Bald Eagle (Bird) Texas Trailing Phlox (Plant)	<i>Haliaeetus leucocephalus</i> <i>Phlox nivalis ssp texensis</i>
Tyler County	Bald Eagle (Bird) Texas Trailing Phlox (Plant)	<i>Haliaeetus leucocephalus</i> <i>Phlox nivalis ssp texensis</i>
Jasper County	Bald Eagle (Bird) Ladies' Tresses, Navasota (Plant)	<i>Haliaeetus leucocephalus</i> <i>Spironthes parksii</i>
Nacogdoches County	Bald Eagle (Bird) Louisiana Black Bear (Mammal)	<i>Haliaeetus leucocephalus</i> <i>Ursus Americanus luteolus</i>
Rusk County	Bald Eagle (Bird) Louisiana Black Bear (Mammal)	<i>Haliaeetus leucocephalus</i> <i>Ursus Americanus luteolus</i>



**LION OIL TRADING AND TRANSPORTATION,
INC.
PALINE PIPELINE COMPANY
PIPELINE SPILL RESPONSE MANUAL**

4.0 NOTIFICATION PROCEDURES

4.1 Notification Procedures

Any LOTT employee who may discover or receive notification of any spill shall report the spill to the QI. In the event that the QI is unavailable, the spill should be reported to the Alternate QI. The QI is responsible for making additional regulatory notifications, as listed in this section. The QI is also responsible for notifying the Spill Management Team and members of the Incident Command System (ICS) as indicated in Section 8 of this document. The QI may delegate notification requirements in accordance with the ICS structure.

The following pages describe the regulatory agencies and other parties to which oil spill notification must be made. It details under what circumstances the notification should be made. The list should be followed in sequence beginning with number 1. Further information on the particular regulatory agencies involved is detailed in the pages following the Spill Characterization/Reporting Guideline in Section 4.

4.2 Spill Characterization/Reporting

State of Texas Environmental Emergency Hot Line [reporting spills to TNRCC and for coastal oil spills to the General Land Office (GLO) and Railroad Commission of Texas (RRC)]	1-800-832-8224 (24-hour)
Railroad Commission of Texas (RRC) (Crude Oil Spills)	512-463-6788 (24-hour)
National Response Center	1-800-424-8802
EPA Region VI – Dallas, Texas	214-665-2222
Local Police and Fire Departments	911

4.3 Regulatory Agency Contact Summary

Once the appropriate regulatory agencies that need to be notified have been determined using the checklist on the preceding page, actual notification should be made using the list below. All calls should be made in the same order as listed. Before calling each individual regulatory agency, the caller should reference the detailed information available on that agency as indicated by the appropriate page number. This will ensure that the caller is prepared with all information that may be asked by each respective agency.

AGENCY	PHONE	HOURS
State of Texas Environmental Emergency Hot Line (Notify immediately)	1-800-832-8224	24 hours



**LION OIL TRADING AND TRANSPORTATION,
INC.
PALINE PIPELINE COMPANY
PIPELINE SPILL RESPONSE MANUAL**

AGENCY	PHONE	HOURS
General Land Office (GLO) (Coastal Oil Spills) Region 1 2300 Highway 365, Suite 340 Nederland, TX 77627 (Orange Co., Jefferson Co.)	1-800-832-8224 409-727-7481	24 hours
Railroad Commission (RRC) (Inland Crude Oil Spills and Coastal Spills 240 bbl or less) Region 3 District Office – Houston (Jefferson, Orange, Tyler, Jasper, Hardin Counties) Region 6 District Office – Kilgore (Gregg, Rusk, Nacogdoches, Angelina Counties)	512-463-6788	24 hours
Local Emergency Planning Committee	318-425-5351	See Listing
Local Fire Department	911	24 hours
National Response Center (Immediate Notification)	800-424-8802 202-267-2675	24 hours
Texas Parks and Wildlife	512-389-4848	24 hours
Bureau of Land Management (BLM) (Notify within 24 hours if incident occurs on BLM or Indian Lands)	601-977-5400	See Listing
LOTT (Spill Response Team – David Wood, QI)	870-864-1372 (b) (6) 870-864-3036 870-314-5621	Office Home Pager Cellular

STATE OF TEXAS REPORTING REQUIREMENTS

1-800-832-8224, CALL IMMEDIATELY

Spills exceeding reportable quantities must be reported to the **Environmental Emergency Hot Line** immediately upon discovery. This 24 Hour Hotline has been created for this purpose. Callers dialing the hot line will be connected to the Texas Department of Public Safety Communications Center where dispatchers will record the incoming call, determine which state agency has jurisdiction, and relay the report to the agency with jurisdiction both verbally and by telefax. The TNRCC, GLO,



**LION OIL TRADING AND TRANSPORTATION,
INC.
PALINE PIPELINE COMPANY
PIPELINE SPILL RESPONSE MANUAL**

and RRC are part of this reporting system. The system will generate an incident report and establishes a common incident numbering system.

The Hotline operator will also extensively question the caller regarding the specifics of the spill in order to prepare the incident report and to determine which agency has jurisdiction. Review the questions as listed below and be prepared to answer them before calling the Hotline. Other regulatory agencies will ask these same questions. You will be given a control number upon completion as your confirmation that you did report the spill - record the control number for your own protection. In summary:

1. Be prepared to answer the questions as listed below.
2. Call the Environmental Emergency Hotline
3. Record the Control Number as issued by the Hot Line Operator.

Information Required by the Environmental Emergency Hot Line and Other Agencies:

- A. The name, address and telephone number of the person making the report;
- B. The date, time, and location of the spill or discharge;
- C. A specific description or identification of the oil, hazardous substance, or other substances discharged or spilled;
- D. An estimate of the quantity discharged or spilled;
- E. The duration of the incident;
- F. The name of the surface water or a description of the waters in the state affected or threatened by the discharge or spill;
- G. The source of the discharge or spill;
- H. A description of the extent of actual or potential water pollution or harmful impacts to the environment and an identification of any environmentally sensitive areas or natural resources at risk;
- I. The named, addresses, and telephone numbers of the responsible person and the contact person at the location of the discharge or spill;
- J. A description of any actions that have been taken, are being taken, and will be taken to contain and respond to the discharge or spill;
- K. Any known or anticipated health risks;
- L. The identity of any governmental representatives, including local authorities or third parties, responding to the discharge or spill; and
- M. Any other information that may be significant to the response action.



**LION OIL TRADING AND TRANSPORTATION,
INC.
PALINE PIPELINE COMPANY
PIPELINE SPILL RESPONSE MANUAL**

4.3.1 General Land Office (GLO) Reporting Requirements

Emergency Notification Number

1-800-832-8224

Notification must be made to the GLO immediately (within 1 hour of discovery). Notification, in order to be deemed complete, shall accurately describe the following:

1. the substance and quantity actually discharged or potentially discharged and the rate of discharge;
2. the time, location by latitude and longitude, N.A.D. 27 or N.A.D. 83, or by state plane coordinates indicating zone or by Universal Transverse Mercator coordinates indicating zone, if known, and the apparent cause of the actual or potential discharge;
3. the size of the area actually impacted by the discharge and the area potentially impacted and whether or not any environmentally sensitive areas will be affected;
4. the nature of any response actions undertaken and the identity of the person or discharge cleanup organization engaged or engaging in response activities;
5. the name and title of the responsible person, the person in charge, and the person reporting the discharge; and
6. the manner in which the responsible person and the facility or vessel involved in the actual or threatened discharge may be contacted.

4.3.2 Railroad Commission of Texas Reporting Requirements

**24 Hour Emergency Number
or Local District Office**

512-463-6788

Region 3

District Office – Houston

(Jefferson, Orange, Tyler, Jasper, Hardin Counties)

Region 6

District Office – Kilgore

(Gregg, Rusk, Nacogdoches, Angelina Counties)

The responsible party must immediately notify the Railroad Commission of any fire, leak, spill, or break from activities associated with exploration, development, and production of oil, gas, or geothermal resources. These include:

1. All spills of crude oil greater than five (5) barrels;
2. All spills of any quantity of crude oil that enters waters;



**LION OIL TRADING AND TRANSPORTATION,
INC.
PALINE PIPELINE COMPANY
PIPELINE SPILL RESPONSE MANUAL**

3. All blowouts and/or fires associated with oil, gas, and geothermal activities;
4. Any accidental release of hydrogen sulfide gas of sufficient volume to present a hazard and any hydrogen sulfide-related accident; or
5. Any injury, death, property damage from gas pipelines (\$5,000) or hazardous liquid pipelines (\$50,000) or other significant incident.

Spills should immediately be reported to the appropriate RCC division through the appropriate district office, or if necessary to the RRC 24-hour statewide emergency number.

Crude oil spills over 5 barrels: For each spill exceeding 5 barrels of crude oil, the responsible operator must comply with the notification and reporting requirements of 16 TAC §3.20 (relating to notification of fire, breaks, leaks, or blowouts) and submit a report on a Form H-8 to the appropriate district office. The following information must be included:

1. Area (square feet), maximum depth (feet), and volume (cubic yards) of soil contaminated with greater than 1.0% by weight total petroleum hydrocarbons;
2. A signed statement that all soil containing over 1.0% by weight total petroleum hydrocarbons was brought to the surface for remediation or disposal;
3. A signed statement that all soil containing over 5.0% by weight total petroleum hydrocarbons has been mixed in place to 5.0% by weight or less total petroleum hydrocarbons or has been removed to an approved disposal site or to a secure interim storage location;
4. A detail description of the disposal or remediation method used or planned to be used for cleanup of the site;
5. The estimated date of completion of site cleanup.

Crude oil spills over 25 barrels: For each spill exceeding 25 barrels of crude oil, in addition to the report required above, the operator must submit to the appropriate district office a final report upon completion of the cleanup of the site. Analyses of samples representative of the spill site must be submitted to verify that the final cleanup concentration has been achieved.

Crude oil spills of 5 barrels or less: Spills into the soil of 5 barrels or less of crude oil must be remediated to these standards, but are not required to be reported to the RRC. All spills of crude into water must be reported to the RRC.



**LION OIL TRADING AND TRANSPORTATION,
INC.
PALINE PIPELINE COMPANY
PIPELINE SPILL RESPONSE MANUAL**

4.3.3 Local Emergency Planning Committee Reporting Requirements

Notification must be made to the following if required:

Angelina County LEPC	936-633-0373
Nacogdoches LEPC	936-560-7755
Rusk County LEPC	903-652-0324
Jasper County LEPC	409-423-4200
Tyler County LEPC	409-283-2172
Hardin County LEPC	409-246-5119

4.3.4 Local Area Fire Departments Reporting Requirements

CALL 911

Applicable Fire Departments must be notified as required by dialing 911. Be prepared to give the 911 operator instructions to the location of the incident.

4.3.5 National Response Center Reporting Requirements

Any reportable quantity must be immediately called in to the National Response Center.

1-800-424-8802 **24 Hours**
or
1-202-267-2675

It is the responsibility of the National Response Center to inform other Federal Regulatory agencies such as the Environmental Protection Agency (EPA) as to the nature and extent of any incident you may report.

Be prepared to answer the same questions as detailed under the **Environmental Emergency Hot Line** Section.

4.3.6 Bureau of Land Management Reporting Requirements

For reportable spills occurring on BLM or Indian Lands, Call:

601-977-5400

4.3.7 Natural Resource Trustee Notification

The OSC shall notify the Natural Resource Trustees of "significant" discharges of oil as follows:

Coastal:	>	500 gallons (12 bbls)
Inland:	>	500 gallons (12 bbls)



**LION OIL TRADING AND TRANSPORTATION,
INC.
PALINE PIPELINE COMPANY
PIPELINE SPILL RESPONSE MANUAL**

The Natural Resource Trustees are:

Federal: NOAA, Department of Interior (DOI), Dept. of Energy, Dept. of Defense, Dept. of Agriculture

Notification Numbers:

DOI: Primary – Mr. Glenn Sekavec	Office:	505-766-3565
	24-hour:	505-797-0556
	Cellular:	505-249-2462
	Fax:	505-766-1059

Secondary – Dr. Steve Spencer	Office:	505-766-3565
	24-hour:	505-892-7305
	Cellular:	505-249-2462
	Fax:	505-766-1059

NOAA: Primary – CDR Gary Petrae	Office:	206-526-6949
	Pager:	800-759-7243 PIN 5798803
	24-hour:	206-526-6317
	Fax:	206-526-6329

Secondary – LCDR Wade Blake	Office:	206-526-6326
	Pager:	800-759-7243 PIN 2168798
	24-hour:	206-526-6317
	Fax:	206-526-6329

State: TCEQ, Texas Parks and Wildlife Department (TPWD), Texas General Land Office (GLO)

Notification Numbers:

TCEQ: Primary – Mr. Richard Seiler	Office:	512-239-2523
	Pager:	512-604-2141
	Fax:	512-239-2469
Secondary – Ms. Ginny King	Office:	512-239-2152
	Pager:	512-604-4407
	Fax:	512-239-2469

TPWD: Primary – Mr. Don Pitts	Office:	512-389-4640
	Pager:	512-896-2883
	24-hour:	512-389-4848
	Fax:	512-398-4799



**LION OIL TRADING AND TRANSPORTATION,
INC.
PALINE PIPELINE COMPANY
PIPELINE SPILL RESPONSE MANUAL**

Secondary – Mr. Dave Buzan	Office:	512-7016
	Pager:	512-896-2705
	24-hour:	512-389-4848
	Fax:	512-707-1358

GLO: Primary – Ms. Dianne Hyatt	Office:	512-475-1395
	Pager:	800-796-7363
		PIN 1002161
	Fax:	512-463-5367

Secondary – Mr. Peter Samuels	Office:	512-463-5047
	Pager:	512-473-5900
	Fax:	512-463-5367

4.3.8 Wildlife Rescue and Rehabilitation Notification

During a spill incident, notification will be made to the following two agencies within the Incident Command system structure. Personnel from these two agencies will determine when and if wildlife will be rescued or rehabilitated.

Texas Parks and Wildlife Department

24-hr. Communication Center:		512-389-4848
Dave Buzan	Office:	512-912-7013

U.S. Fish and Wildlife Service

Brian Cain	24-hr:	281-286-8282
	24-hr:	281-480-7418
	Pager:	281-505-4754

Wildlife Rehab & Education

Sharon Schmalz	24-hr:	281-332-8319
	Pager:	713-279-1417
Michele Johnson	Pager:	281-418-8100

4.4 Follow-Up Notification Requirements

Certain regulatory agencies require: A) updates during the course of spill response; B) mitigation efforts; C) follow-up information; and D) reports after clean-up efforts have been completed. Agencies requiring follow-up are indicated under each respective regulatory agencies information detail in this section, however, any agency may require ad hoc reports or follow-up reports as they deem necessary.

Follow-up notification information will include, but not be limited to the following:

1. Name of Pipeline Operator.
2. Time of discharge.
3. Location of discharge.



**LION OIL TRADING AND TRANSPORTATION,
INC.
PALINE PIPELINE COMPANY
PIPELINE SPILL RESPONSE MANUAL**

4. Name or type of oil spilled.
5. Reason for discharge.
6. Estimated volume of oil discharged.
7. Weather conditions on scene.
8. Actions taken by persons on scene.
9. Actions planned by persons on scene.

Job-in-progress reports or follow-up reports may include the following information in addition to that listed above:

1. Status of response actions.
2. Location of the spill, if changed.
3. Advice on health risks.
4. Details of the circumstances and events leading to the emergency condition.
5. Quantity of pollutant spilled, if new information becomes available affecting earlier estimates.
6. Method of disposing of the pollutant.
7. Procedures or measures enacted to prevent a recurrence of the incident.

It shall be the responsibility of the QI, or his designate, to prepare and otherwise communicate verbal or written reports as required by regulation or which may be requested by regulatory agencies from time to time.



**LION OIL TRADING AND TRANSPORTATION,
INC.
PALINE PIPELINE COMPANY
PIPELINE SPILL RESPONSE MANUAL**

5.0 SPILL DETECTION AND MITIGATION

5.1 Lion Oil Trading and Transportation, Inc. Spill Detection Team

The LOTT Spill Detection Team is composed of the same personnel that make up the Spill Response Team. They are;

1. David Wood - QI
2. Jack Kingrey - AQI
3. Glenn Green - AQI
4. Field Gaugers

5.2 Methods of Spill and Potential Threat Detection

1. (b) (7)(F)
2. Aerial or vehicular inspection of the pipeline. This occurs 26 times a year at a minimum of once every 3 weeks.
3. (b) (7)(F)
4. Periodic physical inspections by gaugers while performing routine maintenance and service.

5.3 Methods of Spill Location

Once a pressure drop occurs and the (b) (7)(F), aerial patrols and ground patrols of the pipeline will be conducted. In the event that weather conditions make air patrols of the pipeline impractical, the pipeline will be inspected using company vehicles only. Upon detection of a spill event via air patrols, the actual spill location will be identified through physical inspection of the pipeline by using company vehicles to locate the spill.

The throughput of the LOTT pipeline is measured from its origin, the Smith's Bluff Station in Jefferson County, Texas, to the termination point at Mid-Valley in Gregg County, Texas. (b) (7)(F)

5.4 Identification and Mitigation of Substantial Threat of Discharge

To identify and mitigate potential substantial threats of discharge, LOTT has identified certain events and conditions that can pose a threat of Worst Case Discharge. Based on those identified events and conditions, LOTT has taken action to mitigate the possibility of occurrence. The substantial threat conditions are



**LION OIL TRADING AND TRANSPORTATION,
INC.
PALINE PIPELINE COMPANY
PIPELINE SPILL RESPONSE MANUAL**

considered to be the same conditions which might otherwise be considered to be abnormal operations, as defined in 49 CFR 195.402(d). As a requirement of 49 CFR 195, LOTT has developed operating procedures and a Pipeline Operations Manual to document these procedures for conducting normal operations and handling abnormal operations. This manual is incorporated in this document by reference. The specific potential abnormal operations (substantial threat conditions) addressed in the manual include:

1. Responding to, investigating, and correcting the cause of:
 - i. Unintended closure of valves or shutdowns:
 - ii. Increase or decrease in pressure or flow rate outside normal operating limits
 - iii. Loss of communications
 - iv. Operation of any safety device
 - v. Any other malfunction of a component, deviation from normal operation, or personnel error which could cause a hazard to persons or property
2. Checking variations from normal operation after abnormal operation has ended at sufficient critical locations in the system to determine continued integrity and safe operation
3. Correcting variations from normal operation of pressure and flow equipment and controls
4. Notifying responsible operator personnel when notice of an abnormal operation is received
5. Periodically reviewing the response of operator personnel to determine the effectiveness of the procedures controlling abnormal operation and taking corrective action where deficiencies are found.

The mitigating and preventative measures to be taken by LOTT for these potential threats of a Worst Case Discharge are addressed as abnormal operations in the LOTT's Pipeline Operations Manual.

5.5 Equipment Available for Spill Mitigation – LOTT, Paline Pipeline Company

Nacogdoches:

1. One 35 ft. trailer for transporting equipment
2. One 15 ft. wide flat bottom boat with a 20 hp outboard motor
3. 300 ft. of absorbent boom
4. 4 rolls of non-woven oil absorbent pads
5. Piping and other required materials to construct an overflow dam

El Dorado, Arkansas:

1. 3 backhoes
2. 2 track-hoes



**LION OIL TRADING AND TRANSPORTATION,
INC.
PALINE PIPELINE COMPANY
PIPELINE SPILL RESPONSE MANUAL**

3. All terrain vehicle equipped with a vacuum truck
4. 3 vacuum trucks
5. Trailers for trucks
6. Cessna 180 aircraft
7. Jon boats and motors
8. Portable pumps

Magnolia, Arkansas

1. Weirs
2. Booms

5.6 Equipment Operators Available for Spill Response

<u>Response Resource</u>	<u>Phone</u>
1. Garner Environmental Services, Inc.	409-983-5646
2. Environmental Safety and Health, Inc.	318-688-4231
3. Ferguson Harbour, Inc.	800-235-1344

5.7 Line Section Response Strategies

Upon discovery of a spill, the QI, or one of the AQI's will be notified immediately. The QI or the AQI will initiate the Incident Command System (ICS), which is described in Section 8. The Response Team's first priority will be to contain the spill and protect environmentally and economically sensitive areas. For each of the Line Sections, the following strategy shall be implemented.

Section A

Line Section A-1 – Smith's Bluff Station in Nederland, Texas to the Neches River (Ship Channel)

The pipeline runs 7.56 miles north to the Neches River Crossing. A release of oil along this line section will flow north to the Neches River via Block Bayou, other local drainage or overland flow.

Strategy – (b) (7)(F)

If a spill occurs in the drainage areas in this line section, the first response will be to utilize existing land contours and to construct earthen dams to contain the spill and prevent overland flow to a water body. If the spill has flowed to a water body via overland flow, responders should go to accessible locations along the water body to identify the distance traveled by the spill. Booms should then be installed across the



**LION OIL TRADING AND TRANSPORTATION,
INC.
PALINE PIPELINE COMPANY
PIPELINE SPILL RESPONSE MANUAL**

water body to contain floating oil and convey the floating oil to the shoreline for collection using a vacuum truck or skimmer. If possible, a boom should be placed at the point where the water body enters the Neches River in order to prevent the oil from entering the faster flowing water of the river. If it appears that the oil will reach the river, protective booms must be placed at the mouth of Grays Bayou, the canal west of Grays Bayou, Bessie Heights Canal, and the canal south of Bessie Heights Canal. These booms are to be strategically placed to prevent oil from entering the marsh area north of the Neches River that has been designated as a high priority protection area in the Area Contingency Plan. Additional pinch points down stream to the mouth of the Neches River in Sabine Lake are 1) mouth of Bird Island, 2) mouth of canal north of Bird Island Bayou, 3) mouth of Nig Bayou, 4) cut across Nig Bayou, and 5) canal parallel to Route 87. Booms should be placed at these pinch points if it appears that the oil may go down river to Sabine Lake.

For oil accumulations on wave cut clay platforms and scraps/steep clay slopes, the oil should be removed along with oily debris. Usually oil will not adhere to the clay and additional cleanup is not required.

Oil that collects along the shoreline or on tidal/mud flats in pools should be recovered by using absorbents wherever possible. Oil from mud flats should be removed by flooding the area with water. The free oil should be directed to absorbent booms or collection points where a vacuum truck or absorbents can recover the oil. Mud flats are highly sensitive areas and require immediate attention in the event of a spill. Where possible, these areas should be protected with diversion booms prior to the oil reaching the mud flat.

Vegetated shorelines should be cleaned by flooding or low, pressure, cold-water flushing to force free oil out away from the vegetation. The flow of oil should be directed toward an absorbent boom or collection point where a vacuum truck can recover the oil. Badly soaked vegetation may have to be removed and disposed of in drum or a dumpster for off site disposal.

Oil stained debris along gravel, mixed sand and gravel, and sand shorelines should be removed. The shoreline should then be cleaned by flooding or low, pressure, cold-water flushing. The free oil should be directed to absorbent booms or to a central collection point where the oil can be recovered with a vacuum truck. On sandy shorelines, some physical removal of the oil and the saturated sand may be required. This sand and oil mix should be collected in drums or dumpsters for off site disposal.

Exposed walls, bridges, docks, or other man made structures should be cleaned by first collecting any pools of oil with absorbents or a vacuum truck. Debris that is stained with oil should be removed for off site disposal. The area can then be flooded with water or low, pressure, cold-water rinsed to remove the oil. The oil should be recovered using absorbents or a vacuum truck. High-pressure washing may be required for persistent oil. Cleanup of these surfaces is usually not required



**LION OIL TRADING AND TRANSPORTATION,
INC.
PALINE PIPELINE COMPANY
PIPELINE SPILL RESPONSE MANUAL**

as oil does not adhere to these surfaces for long. Exposed and sheltered riprap should be cleaned using high-pressure washing or flooding while the oil will still flow readily. Freed oil should be recovered using booms, skimmer, or a vacuum truck.

Wetland or marsh areas should be cleaned up using low, pressure, cold-water flushing or flooding to force free oil out of the vegetated areas. The free oil should be recovered with absorbents or vacuum. Care must be taken not to damage wetlands or marshes as they are highly sensitive environments. A survey of fauna should be made in case animal rescue efforts are required or booms need to be placed to deflect the oil away from critical flora and fauna.

Line Section A-2 – Neches River Crossing

The pipeline crosses the Neches River 7.56 miles north of Smith's Bluff Station in a navigable part of the river. The pipeline is buried in the river bottom. The Neches River is both an economically and environmentally sensitive area. Should a spill or release occur in this area, the river spill release scenario and cleanup strategy will be implemented.

Strategy – (b) (7)(F)

If a spill occurs in the drainage area of this line section, the first response will be to utilize existing land contours and to construct earthen dams to contain the spill and prevent overland flow to a water body. If the spill has made its way to the waterway, responders will need to respond in accordance with the River Response Strategy found in Section 5.8 of this plan. Booms should be positioned across the river at an angle appropriate for the velocity (<0.7 knots) of the water. During flood stage the river may be quite high and dangerously fast.

Protective booms should be placed across the inlet of Grays Bayou, the canal west of Grays Bayou, Bessie Heights Canal, and the canal south of Bessie Heights Canal in order to protect the marsh area north of the Neches River identified in the Area Contingency Plan as a high priority protection area. Additional pinch points down stream to the mouth of the Neches River in Sabine Lake are 1) mouth of Bird Island, 2) mouth of canal north of Bird Island Bayou, 3) mouth of Nig Bayou, 4) cut across Nig Bayou, and 5) canal parallel to Route 87. Booms should be placed at these pinch points if it appears that the oil may go down river to Sabine Lake. Additional protective booms should be used at the (b) (7)(F)

identification zone, additional sensitive environments will be encountered and the responder should refer to the Area Contingency Plan for additional areas to protect.

For oil accumulations on wave cut platforms and scraps/steep slopes, oil should be



**LION OIL TRADING AND TRANSPORTATION,
INC.
PALINE PIPELINE COMPANY
PIPELINE SPILL RESPONSE MANUAL**

removed along with oily debris. Usually oil will not adhere to the clay and additional cleanup is not required.

Oil that collects along the shoreline or on tidal/mud flats in pools should be recovered by using absorbents wherever possible. Oil from tidal/mud flats should be removed by flooding the area with water. The free oil should be directed to absorbent booms or collection points where a vacuum truck can recover the oil. Tidal/Mud flats are highly sensitive areas and require immediate attention in the event of a spill. Where possible, these areas should be protected with diversion booms prior to the oil reaching the mud flat.

Vegetated shorelines should be cleaned by flooding or low, pressure, cold-water flushing to force free oil out away from the vegetation. The flow of oil should be directed toward a collection point where a vacuum truck or boom can recover the oil. Badly soaked vegetation may have to be removed and disposed of in drum or a dumpster for off site disposal.

Oil stained debris along gravel, mixed sand and gravel, and sand shorelines should be removed. The shoreline should then be cleaned by flooding or low, pressure, cold-water flushing. The free oil should be directed to absorbent booms or to a central collection point where the oil can be recovered with a vacuum truck. On sandy shorelines, some physical removal of the oil and the saturated sand may be required. This sand and oil mix should be collected in drums or dumpsters for off site disposal.

Exposed walls, bridges, docks, or other man made structures should be cleaned by first collecting any pools of oil with absorbents or a vacuum truck. Debris that is stained with oil should be removed for off site disposal. The area can then be flooded with water or low, pressure, cold-water rinsed to remove the oil. The oil should be recovered using absorbents or a vacuum truck. High-pressure washing may be required for persistent oil. Cleanup of these surfaces is usually not required as oil does not adhere to these surfaces for long. Exposed and sheltered riprap should be cleaned using high-pressure washing or flooding while the oil will still flow readily. Freed oil should be recovered using booms, skimmers, or a vacuum.

Wetland or marsh areas should be cleaned up using low, pressure, cold-water flushing or flooding to force free oil out of the vegetated areas. The free oil should be recovered with absorbents or vacuum. Care must be taken not to damage wetlands or marshes as they are highly sensitive environments. A survey of fauna should be made in case animal rescue efforts are required or booms need to be place to deflect the oil away from critical flora and fauna.

Line Section A-3 – Neches River Crossing to Evadale Station

This line section runs from (b) (7)(F)

A release along



**LION OIL TRADING AND TRANSPORTATION,
INC.
PALINE PIPELINE COMPANY
PIPELINE SPILL RESPONSE MANUAL**

this line section will flow west and south toward the Neches River via smaller tributaries. The south half of the pipeline from the Neches River to Mansfield Ferry is located in a marsh that has been designated as a high priority protection area in the Area Contingency Plan. This area provides habitat for birds and nursery areas as well as abundant fish and crabs.

Strategy – If a release occurs between the (b) (7)(F)

(b) (7)(F)

nd.

If a spill occurs in the drainage areas in this line section, the first response will be to utilize existing land contours and to construct earthen dams to contain the spill and prevent overland flow to a water body. If the spill has flowed to a water body via overland flow, responders should go to accessible locations along the water body to identify the distance traveled by the spill. Booms will then be installed across the water body to contain floating oil and convey the floating oil to the shoreline for collection. Once a location ahead of the spill is found, the boom should be deployed and a vacuum truck or skimmer should be used to recover the oil from the water. Every effort should be made to contain the release prior to the water body merging with the Neches River. Once it enters the Neches River the River Response Strategy found in Section 5.8 of this plan should be implemented.

Booms should be placed at the point where the water body enters the Neches River in order to prevent the oil from entering the faster flowing water of the river. If it appears that the oil will reach the river, protective booms must be placed at the mouth of Grays Bayou, the canal west of Grays Bayou, Bessie Heights Canal, and the canal south of Bessie Heights Canal. These booms are to be strategically placed to prevent oil from entering areas of the marsh east of the canal that runs north and south of the pipeline on the east side. Additional pinch points down stream to the mouth of the Neches River in Sabine Lake are 1) mouth of Bird Island, 2) mouth of canal north of Bird Island Bayou, 3) mouth of Nig Bayou, 4) cut across Nig Bayou, and 5) canal parallel to Route 87. Booms should be placed at these pinch points if it appears that the oil may go down river to the Sabine Lake.

Oil accumulations on wave cut platforms and scraps/steep slopes should be removed along with oily debris. Usually oil will not adhere to the clay and additional cleanup is not required.

Oil that collects along the shoreline or on tidal/mud flats in pools should be recovered by using absorbents wherever possible. Oil from tidal/mud flats should be removed by flooding the area with water. The free oil should be directed to absorbent booms or collection points where a vacuum truck can recover the oil. Tidal/mud flats are



**LION OIL TRADING AND TRANSPORTATION,
INC.
PALINE PIPELINE COMPANY
PIPELINE SPILL RESPONSE MANUAL**

highly sensitive areas and require immediate attention in the event of a spill. Where possible, these areas should be protected with diversion booms prior to the oil reaching the tidal/mud flat.

Vegetated shorelines should be cleaned by flooding or low, pressure, cold-water flushing to force free oil out away from the vegetation. The flow of oil should be directed toward an absorbent boom or collection point where a vacuum truck can recover the oil. Badly soaked vegetation may have to be removed and disposed of in drum or a dumpster for off site disposal.

Oil stained debris along gravel, mixed sand and gravel, and sand shorelines should be removed. The shoreline should then be cleaned by flooding or low, pressure, cold-water flushing. The free oil should be directed to absorbent booms or to a central collection point where the oil can be recovered with a vacuum truck. On sandy shorelines, some physical removal of the oil and the saturated sand may be required. This sand and oil mix should be collected in drums or dumpsters for off site disposal.

Exposed walls, bridges, docks, or other man made structures should be cleaned by first collecting any pools of oil with absorbents or a vacuum truck. Debris that is stained with oil should be removed for off site disposal. The area can then be flooded with water or low, pressure, cold-water rinsed to remove the oil. The oil should be recovered using absorbents or a vacuum truck. High-pressure washing may be required for persistent oil. Cleanup of these surfaces is usually not required as oil does not adhere to these surfaces for long. Exposed and sheltered riprap should be cleaned using high-pressure washing or flooding while the oil will still flow readily. Freed oil should be recovered using booms, skimmers, or a vacuum.

Wetland and marsh areas should be cleaned up using low, pressure, cold-water flushing or flooding to force free oil out of the vegetated areas. The free oil should be recovered with absorbents. Care must be taken not to damage wetlands and marshes as they are highly sensitive environments. A survey of fauna should be made in case animal rescue efforts are required or booms need to be place to deflect the oil away from critical flora and fauna.

Section B

Line Section B-1 – Evadale Station to approximately one mile south of Silsbee Station

This line section runs from Evadale Station to approximately one mile south of Silsbee Station. (b) (7)(F)

Strategy – If a release occurs along this line section, the (b) (7)(F)



**LION OIL TRADING AND TRANSPORTATION,
INC.
PALINE PIPELINE COMPANY
PIPELINE SPILL RESPONSE MANUAL**

(b) (7)(F)

If a spill occurs in the drainage areas in this line section, the first response will be to utilize existing land contours and to construct earthen dams to contain the spill and prevent overland flow to a water body. If the spill has flowed to a water body via overland flow, responders should go to accessible locations along the water body to identify the distance traveled by the spill. Booms will then be installed across the water body to contain floating oil and convey the floating oil to the shoreline for collection. Once a location ahead of the spill is found, the boom should be deployed and a vacuum truck or skimmer should be used to recover the oil from the water. Every effort should be made to contain the release prior to the water body merging with the Neches River. Once it enters the Neches River the River Response Strategy in the next section should be implemented in accordance with the Area Contingency Plan. If the oil makes its way into a swampy vegetated portion of the drainage basin, the soil and vegetation should not be disturbed unless approved by the On-Scene Coordinator as this may damage the wetlands.

Line Section B-2 – One mile south of Silsbee Station to Woodville Station

This line section runs from one mile south of (b) (7)(F)

Strategy – If a release occurs south of Silsbee Station, the (b) (7)(F)

If a spill occurs in the drainage areas in this line section, the first response will be to utilize existing land contours and to construct earthen dams to contain the spill and prevent overland flow to a water body. If the spill has flowed to a water body via overland flow, responders should go to accessible locations along the water body to identify the distance traveled by the spill. Booms will then be installed across the water body to contain floating oil and convey the floating oil to the shoreline for collection. Once a location ahead of the spill is found, the boom should be deployed and a vacuum truck or skimmer should be used to recover the oil from the water. If the oil makes its way into a swampy vegetated portion of the drainage basin, the soil and vegetation should not be disturbed unless approved by the On-Scene Coordinator as this may damage the wetlands.



**LION OIL TRADING AND TRANSPORTATION,
INC.
PALINE PIPELINE COMPANY
PIPELINE SPILL RESPONSE MANUAL**

Section C

Line Section C-1 – Woodville Station North 12.87 miles

This line section runs from Woodville Station to a point 12.87 miles north of the station. A release of oil along this line section will flow via local drainage to the B. A. Steinhagen Lake where the release would be contained.

Strategy – If a release occurs along this line section, (b) (7)(F)

on the south side of the Neches River should be closed to stop backflow. Every effort should be made to intercept any oil released from the pipeline prior to entering the lake.

If a spill occurs in the drainage areas in this line section, the first response will be to utilize existing land contours and to construct earthen dams to contain the spill and prevent overland flow to a water body. If the spill has flowed to a water body via overland flow, responders should go to accessible locations along the water body to identify the distance traveled by the spill. Booms will then be installed across the water body to contain floating oil and convey the floating oil to the shoreline for collection. Once a location ahead of the spill is found, the boom should be deployed and a vacuum truck or skimmer should be used to recover the oil from the water. If the released oil makes its way to the lake, then containment booms should be placed in front of the moving oil spill to limit its extent into the lake in accordance with the Lake Response Strategy in Section 5.8 of this plan. Absorbents and skimmers should then be used to recover the oil.

Oil that collects along the shoreline or on mud flats in pools should be recovered by using absorbents wherever possible. Oil from mud flats should be removed by flooding the area with water. The free oil should be directed to absorbent booms or collection points where a vacuum truck can recover the oil. Mud flats are highly sensitive areas and require immediate attention in the event of a spill. Where possible, these areas should be protected with diversion booms prior to the oil reaching the mud flat.

Vegetated shorelines should be cleaned by flooding or low, pressure, cold-water flushing to force free oil out away from the vegetation. The flow of oil should be directed toward an absorbent boom or collection point where a vacuum truck can recover the oil. Badly soaked vegetation may have to be removed and disposed of in drum or a dumpster for off site disposal.

Oil stained debris along gravel, mixed sand and gravel, and sand shorelines should be removed. The shoreline should then be cleaned by flooding or low, pressure, cold-water flushing. The free oil should be directed to absorbent booms or to a central collection point where the oil can be recovered with a vacuum truck. On



**LION OIL TRADING AND TRANSPORTATION,
INC.
PALINE PIPELINE COMPANY
PIPELINE SPILL RESPONSE MANUAL**

sandy shorelines, some physical removal of the oil and the saturated sand may be required. This sand and oil mix should be collected in drums or dumpsters for off site disposal.

Bridges, docks, or other man made structures should be cleaned by first collecting any pools of oil with absorbents or a vacuum truck. Debris that is stained with oil should be removed for off site disposal. The area can then be flooded with water or low, pressure, cold-water rinsed to remove the oil. The oil should be recovered using absorbents or a vacuum truck.

Wetland areas should be cleaned up using low, pressure, cold-water flushing or flooding to force free oil out of the vegetated areas. The free oil should be recovered with absorbents. Care must be taken not to damage wetlands as they are highly sensitive environments. A survey of fauna should be made in case animal rescue efforts are required or booms need to be placed to deflect the oil away from critical flora and fauna.

Line Section C-2 – Highway 255 to US 69

This line section runs from where the pipeline crosses Highway 255 to where it crosses US 69. (b) (7)(F)

Strategy – (b) (7)(F)

If a spill occurs in the drainage areas in this line section, the first response will be to utilize existing land contours and to construct earthen dams to contain the spill and prevent overland flow to a water body. If the spill has flowed to a water body via overland flow, responders should go to accessible locations along the water body to identify the distance traveled by the spill. Booms will then be installed across the water body to contain floating oil and convey the floating oil to the shoreline for collection. Once a location ahead of the spill is found, the boom should be deployed and a vacuum truck or skimmer should be used to recover the oil from the water. Booms should be placed at the mouth of the tributary to prevent the oil from entering the Neches River. However, if oil should enter the Neches River, the River Response Strategy found in Section 5.8 of this plan should be employed immediately.

Oil that collects along the shoreline or on mud flats in pools should be recovered by



**LION OIL TRADING AND TRANSPORTATION,
INC.
PALINE PIPELINE COMPANY
PIPELINE SPILL RESPONSE MANUAL**

using absorbents wherever possible. Oil from mud flats should be removed by flooding the area with water. The free oil should be directed to absorbent booms or collection points where a vacuum truck can recover the oil. Mud flats are highly sensitive areas and require immediate attention in the event of a spill. Where possible, these areas should be protected with diversion booms prior to the oil reaching the mud flat.

Vegetated shorelines should be cleaned by flooding or low, pressure, cold-water flushing to force free oil out away from the vegetation. The flow of oil should be directed toward an absorbent boom or collection point where a vacuum truck can recover the oil. Badly soaked vegetation may have to be removed and disposed of in drum or a dumpster for off site disposal.

Oil stained debris along gravel, mixed sand and gravel, and sand shorelines should be removed. The shoreline should then be cleaned by flooding or low, pressure, cold-water flushing. The free oil should be directed to absorbent booms or to a central collection point where the oil can be recovered with a vacuum truck. On sandy shorelines, some physical removal of the oil and the saturated sand may be required. This sand and oil mix should be collected in drums or dumpsters for off site disposal.

Bridges, docks, or other man made structures should be cleaned by first collecting any pools of oil with absorbents or a vacuum truck. Debris that is stained with oil should be removed for off site disposal. The area can then be flooded with water or low, pressure, cold-water rinsed to remove the oil. The oil should be recovered using absorbents or a vacuum truck.

Wetland areas should be cleaned up using low, pressure, cold-water flushing or flooding to force free oil out of the vegetated areas. The free oil should be recovered with absorbents. Care must be taken not to damage wetlands as they are highly sensitive environments. A survey of fauna should be made in case animal rescue efforts are required or booms need to be place to deflect the oil away from critical flora and fauna.

Line Section C-3 – US 69 to Zavalla Station

This line section runs from where the pipeline crosses US 69 to the Zavalla Station

Strategy – (b) (7)(F)

If a spill occurs in the drainage areas in this line section, the first response will be to utilize existing land contours and to construct earthen dams to contain the spill and prevent overland flow to a water body. If the spill has flowed to a water body via overland flow, responders should go to accessible locations along the water body to



**LION OIL TRADING AND TRANSPORTATION,
INC.
PALINE PIPELINE COMPANY
PIPELINE SPILL RESPONSE MANUAL**

identify the distance traveled by the spill. Booms will then be installed across the water body to contain floating oil and convey the floating oil to the shoreline for collection. Once a location ahead of the spill is found, the boom should be deployed and a vacuum truck or skimmer should be used to recover the oil from the water.

Oil that collects along the shoreline or on mud flats in pools should be recovered by using absorbents wherever possible. Oil from mud flats should be removed by flooding the area with water. The free oil should be directed to absorbent booms or collection points where a vacuum truck can recover the oil. Mud flats are highly sensitive areas and require immediate attention in the event of a spill. Where possible, these areas should be protected with diversion booms prior to the oil reaching the mud flat.

Vegetated shorelines should be cleaned by flooding or low, pressure, cold-water flushing to force free oil out away from the vegetation. The flow of oil should be directed toward an absorbent boom or collection point where a vacuum truck can recover the oil. Badly soaked vegetation may have to be removed and disposed of in drum or a dumpster for off site disposal.

Oil stained debris along gravel, mixed sand and gravel, and sand shorelines should be removed. The shoreline should then be cleaned by flooding or low, pressure, cold-water flushing. The free oil should be directed to absorbent booms or to a central collection point where the oil can be recovered with a vacuum truck. On sandy shorelines, some physical removal of the oil and the saturated sand may be required. This sand and oil mix should be collected in drums or dumpsters for off site disposal.

Bridges, docks, or other man made structures should be cleaned by first collecting any pools of oil with absorbents or a vacuum truck. Debris that is stained with oil should be removed for off site disposal. The area can then be flooded with water or low, pressure, cold-water rinsed to remove the oil. The oil should be recovered using absorbents or a vacuum truck.

Wetland areas should be cleaned up using low, pressure, cold-water flushing or flooding to force free oil out of the vegetated areas. The free oil should be recovered with absorbents. Care must be taken not to damage wetlands as they are highly sensitive environments. A survey of fauna should be made in case animal rescue efforts are required or booms need to be place to deflect the oil away from critical flora and fauna.

Section D

Line Section D-1 – Zavalla Station to US 69

This line section runs from Zavalla Station to where the pipeline crosses US 69. A release along this line section will flow either west to Shawnee Creek or east to the



**LION OIL TRADING AND TRANSPORTATION,
INC.
PALINE PIPELINE COMPANY
PIPELINE SPILL RESPONSE MANUAL**

Sam Rayborn Reservoir.

Strategy – (b) (7)(F)

If a spill occurs in the drainage areas in this line section, the first response will be to utilize existing land contours and to construct earthen dams to contain the spill and prevent overland flow to a water body. If the spill has flowed to a water body via overland flow, responders should go to accessible locations along the water body to identify the distance traveled by the spill. Booms should then be installed across the water body to contain floating oil and convey the floating oil to the shoreline for collection. Once a location ahead of the spill is found, the boom should be deployed and a vacuum truck or skimmer should be used to recover the oil from the water. A containment boom should be placed across the inlet into the Sam Rayborn Reservoir to prevent the oil from spreading out across the lake. If, however, the oil makes its way into the lake, booms should be deployed in accordance with the Lake Response Strategy found in Section 5.8 of this plan and skimmers should be used to contain and collect the oil.

Oil that collects along the shoreline or on mud flats in pools should be recovered by using absorbents wherever possible. Oil from mud flats should be removed by flooding the area with water. The free oil should be directed to absorbent booms or collection points where a vacuum truck can recover the oil. Mud flats are highly sensitive and require immediate attention in the event of a spill. Where possible, these areas should be protected with diversion booms prior to the oil reaching the mud flat.

Vegetated shorelines should be cleaned by flooding or low, pressure, cold-water flushing to force free oil out away from the vegetation. The flow of oil should be directed toward an absorbent boom or collection point where a vacuum truck can recover the oil. Badly soaked vegetation may have to be removed and disposed of in drum or a dumpster for off site disposal.

Oil stained debris along gravel, mixed sand and gravel, and sand shorelines should be removed. The shoreline should then be cleaned by flooding or low, pressure, cold-water flushing. The free oil should be directed to absorbent booms or to a central collection point where the oil can be recovered with a vacuum truck. On sandy shorelines, some physical removal of the oil and the saturated sand may be required. This sand and oil mix should be collected in drums or dumpsters for off site disposal.

Bridges, docks, or other man made structures should be cleaned by first collecting any pools of oil with absorbents or a vacuum truck. Debris that is stained with oil should be removed for off site disposal. The area can then be flooded with water or low, pressure, cold-water rinsed to remove the oil. The oil should be recovered using



**LION OIL TRADING AND TRANSPORTATION,
INC.
PALINE PIPELINE COMPANY
PIPELINE SPILL RESPONSE MANUAL**

absorbents or a vacuum truck.

Wetland areas should be cleaned up using low, pressure, cold-water flushing or flooding to force free oil out of the vegetated areas. The free oil should be recovered with absorbents. Care must be taken not to damage wetlands as they are highly sensitive environments. A survey of fauna should be made in case animal rescue efforts are required or booms need to be placed to deflect the oil away from critical flora and fauna.

Line Section D-2 – (b) (7)(F)

This line section runs from where the pipeline crosses (b) (7)(E). A release along this line section would flow to the Sam Rayborn Reservoir.

Strategy – (b) (7)(F)

If a spill occurs in the drainage areas in this line section, the first response will be to utilize existing land contours and to construct earthen dams to contain the spill and prevent overland flow to a water body. If the spill has flowed to a water body via overland flow, responders should go to accessible locations along the water body to identify the distance traveled by the spill. Booms will then be installed across the water body to contain floating oil and convey the floating oil to the shoreline for collection. Once a location ahead of the spill is found, the boom should be deployed and a vacuum truck or skimmer should be used to recover the oil from the water. A containment boom should be placed across the inlet into the Sam Rayborn Reservoir to prevent the oil from spreading out across the lake. If, however, the oil makes its way into the lake, booms and skimmers are to be used to contain and collect the oil. If the released oil makes its way to the Sam Rayborn Reservoir, then the Lake Response Strategy found in Section 5.8 of this plan should be initiated.

Oil that collects along the shoreline or on mud flats in pools should be recovered by using absorbents wherever possible. Oil from mud flats should be removed by flooding the area with water. The free oil should be directed to absorbent booms or collection points where a vacuum truck can recover the oil. Mud flats are highly sensitive and require immediate attention in the event of a spill. Where possible, these areas should be protected with diversion booms prior to the oil reaching the mud flat.

Vegetated shorelines should be cleaned by flooding or low, pressure, cold-water flushing to force free oil out away from the vegetation. The flow of oil should be directed toward an absorbent boom or collection point where a vacuum truck can recover the oil. Badly soaked vegetation may have to be removed and disposed of in drum or a dumpster for off site disposal.



**LION OIL TRADING AND TRANSPORTATION,
INC.
PALINE PIPELINE COMPANY
PIPELINE SPILL RESPONSE MANUAL**

Oil stained debris along gravel, mixed sand and gravel, and sand shorelines should be removed. The shoreline should then be cleaned by flooding or low, pressure, cold-water flushing. The free oil should be directed to absorbent booms or to a central collection point where the oil can be recovered with a vacuum truck. On sandy shorelines, some physical removal of the oil and the saturated sand may be required. This sand and oil mix should be collected in drums or dumpsters for off site disposal.

Bridges, docks, or other man made structures should be cleaned by first collecting any pools of oil with absorbents or a vacuum truck. Debris that is stained with oil should be removed for off site disposal. The area can then be flooded with water or low, pressure, cold-water rinsed to remove the oil. The oil should be recovered using absorbents or a vacuum truck.

Wetland areas should be cleaned up using low, pressure, cold-water flushing or flooding to force free oil out of the vegetated areas. The free oil should be recovered with absorbents. Care must be taken not to damage wetlands as they are highly sensitive environments. A survey of fauna should be made in case animal rescue efforts are required or booms need to be placed to deflect the oil away from critical flora and fauna.

Line Section D-3 – (b) (7)(F)

This line section runs from the (b) (7)(F) the pipeline crosses Highway 103. This line section flows via Odell Creek and Linston Creek to the Sam Rayborn Reservoir where any release would be contained.

Strategy – (b) (7)(F)

If a spill occurs in the drainage areas in this line section, the first response will be to utilize existing land contours and to construct earthen dams to contain the spill and prevent overland flow to a water body. If the spill has flowed to a water body via overland flow, responders should go to accessible locations along the water body to identify the distance traveled by the spill. Booms will then be installed across the water body to contain floating oil and convey the floating oil to the shoreline for collection. Once a location ahead of the spill is found, the boom should be deployed and a vacuum truck or skimmer should be used to recover the oil from the water. A containment boom should be placed across the inlet into the Sam Rayborn Reservoir to prevent the oil from spreading out across the lake. If, however, the oil makes its way into the lake, booms should be deployed in accordance with the Lake Response Strategy found in Section 5.8 of this plan and skimmers should be used to contain and collect the oil.



**LION OIL TRADING AND TRANSPORTATION,
INC.
PALINE PIPELINE COMPANY
PIPELINE SPILL RESPONSE MANUAL**

Oil that collects along the shoreline or on mud flats in pools should be recovered by using absorbents wherever possible. Oil from mud flats should be removed by flooding the area with water. The free oil should be directed to absorbent booms or collection points where a vacuum truck can recover the oil. Mud flats are highly sensitive and require immediate attention in the event of a spill. Where possible, these areas should be protected with diversion booms prior to the oil reaching the mud flat.

Vegetated shorelines should be cleaned by flooding or low, pressure, cold-water flushing to force free oil out away from the vegetation. The flow of oil should be directed toward an absorbent boom or collection point where a vacuum truck can recover the oil. Badly soaked vegetation may have to be removed and disposed of in drum or a dumpster for off site disposal.

Oil stained debris along gravel, mixed sand and gravel, and sand shorelines should be removed. The shoreline should then be cleaned by flooding or low, pressure, cold-water flushing. The free oil should be directed to absorbent booms or to a central collection point where the oil can be recovered with a vacuum truck. On sandy shorelines, some physical removal of the oil and the saturated sand may be required. This sand and oil mix should be collected in drums or dumpsters for off site disposal.

Bridges, docks, or other man made structures should be cleaned by first collecting any pools of oil with absorbents or a vacuum truck. Debris that is stained with oil should be removed for off site disposal. The area can then be flooded with water or low, pressure, cold-water rinsed to remove the oil. The oil should be recovered using absorbents or a vacuum truck.

Wetland areas should be cleaned up using low, pressure, cold-water flushing or flooding to force free oil out of the vegetated areas. The free oil should be recovered with absorbents. Care must be taken not to damage wetlands as they are highly sensitive environments. A survey of fauna should be made in case animal rescue efforts are required or booms need to be place to deflect the oil away from critical flora and fauna.

Line Section D-4 – Highway 103 north to Sam Rayborn Reservoir Crossing

This line section runs from where the pipeline crosses Highway 103 to the Sam Rayborn Reservoir Crossing.

Strategy – (b) (7)(F)

If a spill occurs in the drainage areas in this line section, the first response will be to utilize existing land contours and to construct earthen dams to contain the spill and



**LION OIL TRADING AND TRANSPORTATION,
INC.
PALINE PIPELINE COMPANY
PIPELINE SPILL RESPONSE MANUAL**

prevent overland flow to a water body. If the spill has flowed to a water body via overland flow, responders should go to accessible locations along the water body to identify the distance traveled by the spill. Booms will then be installed across the water body to contain floating oil and convey the floating oil to the shoreline for collection. Once a location ahead of the spill is found, the boom should be deployed and a vacuum truck or skimmer should be used to recover the oil from the water. A containment boom should be placed across the inlet into the Sam Rayborn Reservoir to prevent the oil from spreading out across the lake. If, however, the oil makes its way into the lake, booms should be deployed in accordance with the Lake Response Strategy found in Section 5.8 of this plan and skimmers are to be used to contain and collect the oil.

Oil that collects along the shoreline or on mud flats in pools should be recovered by using absorbents wherever possible. Oil from mud flats should be removed by flooding the area with water. The free oil should be directed to absorbent booms or collection points where a vacuum truck can recover the oil. Mud flats are highly sensitive and require immediate attention in the event of a spill. Where possible, these areas should be protected with diversion booms prior to the oil reaching the mud flat.

Vegetated shorelines should be cleaned by flooding or low, pressure, cold-water flushing to force free oil out away from the vegetation. The flow of oil should be directed toward an absorbent boom or collection point where a vacuum truck can recover the oil. Badly soaked vegetation may have to be removed and disposed of in drum or a dumpster for off site disposal.

Oil stained debris along gravel, mixed sand and gravel, and sand shorelines should be removed. The shoreline should then be cleaned by flooding or low, pressure, cold-water flushing. The free oil should be directed to absorbent booms or to a central collection point where the oil can be recovered with a vacuum truck. On sandy shorelines, some physical removal of the oil and the saturated sand may be required. This sand and oil mix should be collected in drums or dumpsters for off site disposal.

Bridges, docks, or other man made structures should be cleaned by first collecting any pools of oil with absorbents or a vacuum truck. Debris that is stained with oil should be removed for off site disposal. The area can then be flooded with water or low, pressure, cold-water rinsed to remove the oil. The oil should be recovered using absorbents or a vacuum truck.

Wetland areas should be cleaned up using low, pressure, cold-water flushing or flooding to force free oil out of the vegetated areas. The free oil should be recovered with absorbents. Care must be taken not to damage wetlands as they are highly sensitive environments. A survey of fauna should be made in case animal rescue efforts are required or booms need to be placed to deflect the oil away from critical flora and fauna.



**LION OIL TRADING AND TRANSPORTATION,
INC.
PALINE PIPELINE COMPANY
PIPELINE SPILL RESPONSE MANUAL**

Line Section D-5 – Sam Rayborn Reservoir Crossing

The pipeline crosses the Sam Rayborn Reservoir on the western (upper) end of the reservoir. The pipeline is buried in the lakebed with a total direct exposure of the pipeline to the lake of approximately 0.9 miles. Sam Rayborn is a recreational lake with many houses located along the shore. It also has a public park and several public boat launches. Because the pipeline crosses the lake, this recreational area may potentially be impacted should a spill or release occur.

Strategy – (b) (7)(F)

If a release of oil occurs at the Sam Rayborn Reservoir Crossing, containment booms should be used to restrict the movement of the oil and skimmers should be used to recover the oil. Water intakes, camps, marinas, docks, swimming beaches, water bird nesting areas, and fisheries areas should be protected using containment booms.

Oil that collects along the shoreline or on mud flats in pools should be recovered by using absorbents wherever possible. Oil from mud flats should be removed by flooding the area with water. The free oil should be directed to absorbent booms or collection points where a vacuum truck can recover the oil. Mud flats are highly sensitive and require immediate attention in the event of a spill. Where possible, these areas should be protected with diversion booms prior to the oil reaching the mud flat.

Vegetated shorelines should be cleaned by flooding or low, pressure, cold-water flushing to force free oil out away from the vegetation. The flow of oil should be directed toward an absorbent boom or collection point where a vacuum truck can recover the oil. Badly soaked vegetation may have to be removed and disposed of in drum or a dumpster for off site disposal.

Oil stained debris along gravel, mixed sand and gravel, and sand shorelines should be removed. The shoreline should then be cleaned by flooding or low, pressure, cold-water flushing. The free oil should be directed to absorbent booms or to a central collection point where the oil can be recovered with a vacuum truck. On sandy shorelines, some physical removal of the oil and the saturated sand may be required. This sand and oil mix should be collected in drums or dumpsters for off site disposal.

Bridges, docks, or other man made structures should be cleaned by first collecting any pools of oil with absorbents or a vacuum truck. Debris that is stained with oil should be removed for off site disposal. The area can then be flooded with water or low, pressure, cold-water rinsed to remove the oil. The oil should be recovered using



**LION OIL TRADING AND TRANSPORTATION,
INC.
PALINE PIPELINE COMPANY
PIPELINE SPILL RESPONSE MANUAL**

absorbents or a vacuum truck.

Adjoining wetland areas should be cleaned up using low, pressure, cold-water flushing or flooding to force free oil out of the vegetated areas. The free oil should be recovered with absorbents. Care must be taken not to damage wetlands as they are highly sensitive environments. A survey of fauna should be made in case animal rescue efforts are required or booms need to be placed to deflect the oil away from critical flora and fauna.

Line Section D-6 – Sam Rayborn Reservoir to Highway 224 South at Nacogdoches

This line section runs from the (b) (7)(F)

Strategy – (b) (7)(F)

If a spill occurs in the drainage areas in this line section, the first response will be to utilize existing land contours and to construct earthen dams to contain the spill and prevent overland flow to a water body. If the spill has flowed to a water body via overland flow, responders should go to accessible locations along the water body to identify the distance traveled by the spill. Booms will then be installed across the water body to contain floating oil and convey the floating oil to the shoreline for collection. Once a location ahead of the spill is found, the boom should be deployed and a vacuum truck or skimmer should be used to recover the oil from the water. A containment boom should be placed across the inlet into the Sam Rayborn Reservoir to prevent the oil from spreading out across the lake. If, however, the oil makes its way into the lake, booms should be deployed in accordance with the Lake Response Strategy found in Section 5.8 of this plan and skimmers are to be used to contain and collect the oil.

Oil that collects along the shoreline or on mud flats in pools should be recovered by using absorbents wherever possible. Oil from mud flats should be removed by flooding the area with water. The free oil should be directed to absorbent booms or collection points where a vacuum truck can recover the oil. Mud flats are highly sensitive and require immediate attention in the event of a spill. Where possible, these areas should be protected with diversion booms prior to the oil reaching the mud flat.

Vegetated shorelines should be cleaned by flooding or low, pressure, cold-water flushing to force free oil out away from the vegetation. The flow of oil should be directed toward an absorbent boom or collection point where a vacuum truck can recover the oil. Badly soaked vegetation may have to be removed and disposed of in drum or a dumpster for off site disposal.



**LION OIL TRADING AND TRANSPORTATION,
INC.
PALINE PIPELINE COMPANY
PIPELINE SPILL RESPONSE MANUAL**

Oil stained debris along gravel, mixed sand and gravel, and sand shorelines should be removed. The shoreline should then be cleaned by flooding or low, pressure, cold-water flushing. The free oil should be directed to absorbent booms or to a central collection point where the oil can be recovered with a vacuum truck. On sandy shorelines, some physical removal of the oil and the saturated sand may be required. This sand and oil mix should be collected in drums or dumpsters for off site disposal.

Bridges, docks, or other man made structures should be cleaned by first collecting any pools of oil with absorbents or a vacuum truck. Debris that is stained with oil should be removed for off site disposal. The area can then be flooded with water or low, pressure, cold-water rinsed to remove the oil. The oil should be recovered using absorbents or a vacuum truck.

Wetland areas should be cleaned up using low, pressure, cold-water flushing or flooding to force free oil out of the vegetated areas. The free oil should be recovered with absorbents. Care must be taken not to damage wetlands as they are highly sensitive environments. A survey of fauna should be made in case animal rescue efforts are required or booms need to be placed to deflect the oil away from critical flora and fauna.

Line Section D-7 – Highway 224 South, Nacogdoches to Nacogdoches Station

(b) (7)(F)

This line section runs through the urban portion of Nacogdoches.

Strategy – (b) (7)(F)

If a spill occurs in the drainage areas in this line section, the first response will be to utilize existing land contours and to construct earthen dams to contain the spill and prevent overland flow to a water body. If the spill has flowed to a water body via overland flow, responders should go to accessible locations along the water body to identify the distance traveled by the spill. Booms will then be installed across the water body to contain floating oil and convey the floating oil to the shoreline for collection. Once a location ahead of the spill is found, the boom should be deployed and a vacuum truck or skimmer should be used to recover the oil from the water.

Oil that collects along the shoreline or on mud flats in pools should be recovered by using absorbents wherever possible. Oil from mud flats should be removed by flooding the area with water. The free oil should be directed to absorbent booms or collection points where a vacuum truck can recover the oil. Mud flats are highly sensitive and require immediate attention in the event of a spill. Where possible,



**LION OIL TRADING AND TRANSPORTATION,
INC.
PALINE PIPELINE COMPANY
PIPELINE SPILL RESPONSE MANUAL**

these areas should be protected with diversion booms prior to the oil reaching the mud flat.

Vegetated shorelines should be cleaned by flooding or low, pressure, cold-water flushing to force free oil out away from the vegetation. The flow of oil should be directed toward an absorbent boom or collection point where a vacuum truck can recover the oil. Badly soaked vegetation may have to be removed and disposed of in drum or a dumpster for off site disposal.

Oil stained debris along gravel, mixed sand and gravel, and sand shorelines should be removed. The shoreline should then be cleaned by flooding or low, pressure, cold-water flushing. The free oil should be directed to absorbent booms or to a central collection point where the oil can be recovered with a vacuum truck. On sandy shorelines, some physical removal of the oil and the saturated sand may be required. This sand and oil mix should be collected in drums or dumpsters for off site disposal.

Bridges, docks, or other man made structures should be cleaned by first collecting any pools of oil with absorbents or a vacuum truck. Debris that is stained with oil should be removed for off site disposal. The area can then be flooded with water or low, pressure, cold-water rinsed to remove the oil. The oil should be recovered using absorbents or a vacuum truck.

Wetland areas should be cleaned up using low, pressure, cold-water flushing or flooding to force free oil out of the vegetated areas. The free oil should be recovered with absorbents. Care must be taken not to damage wetlands as they are highly sensitive environments. A survey of fauna should be made in case animal rescue efforts are required or booms need to be place to deflect the oil away from critical flora and fauna.

Section E

Line Section E-1 – Nacogdoches Station to US 259

This line section runs from the Nacogdoches Station to where the pipeline crosses US 259. A release along this line section will flow to Bayou La Nanh.

Strategy – (b) (7)(F)

If a spill occurs in the drainage areas in this line section, the first response will be to utilize existing land contours and to construct earthen dams to contain the spill and prevent overland flow to a water body. If the spill has flowed to a water body via overland flow, responders should go to accessible locations along the water body to identify the distance traveled by the spill. Booms will then be installed across the



**LION OIL TRADING AND TRANSPORTATION,
INC.
PALINE PIPELINE COMPANY
PIPELINE SPILL RESPONSE MANUAL**

water body to contain floating oil and convey the floating oil to the shoreline for collection. Once a location ahead of the spill is found, the boom should be deployed and a vacuum truck or skimmer should be used to recover the oil from the water.

Oil that collects along the shoreline or on mud flats in pools should be recovered by using absorbents wherever possible. Oil from mud flats should be removed by flooding the area with water. The free oil should be directed to absorbent booms or collection points where a vacuum truck can recover the oil. Mud flats are highly sensitive and require immediate attention in the event of a spill. Where possible, these areas should be protected with diversion booms prior to the oil reaching the mud flat.

Vegetated shorelines should be cleaned by flooding or low, pressure, cold-water flushing to force free oil out away from the vegetation. The flow of oil should be directed toward an absorbent boom or collection point where a vacuum truck can recover the oil. Badly soaked vegetation may have to be removed and disposed of in drum or a dumpster for off site disposal.

Oil stained debris along gravel, mixed sand and gravel, and sand shorelines should be removed. The shoreline should then be cleaned by flooding or low, pressure, cold-water flushing. The free oil should be directed to absorbent booms or to a central collection point where the oil can be recovered with a vacuum truck. On sandy shorelines, some physical removal of the oil and the saturated sand may be required. This sand and oil mix should be collected in drums or dumpsters for off site disposal.

Bridges, docks, or other man made structures should be cleaned by first collecting any pools of oil with absorbents or a vacuum truck. Debris that is stained with oil should be removed for off site disposal. The area can then be flooded with water or low, pressure, cold-water rinsed to remove the oil. The oil should be recovered using absorbents or a vacuum truck.

Wetland areas should be cleaned up using low, pressure, cold-water flushing or flooding to force free oil out of the vegetated areas. The free oil should be recovered with absorbents. Care must be taken not to damage wetlands as they are highly sensitive environments. A survey of fauna should be made in case animal rescue efforts are required or booms need to be place to deflect the oil away from critical flora and fauna.

Line Section E-2 – US 259 to Highway 204

This line section runs from where the pipeline crosses US 259 to where it crosses Highway 204. A release of oil along this line section will flow via Bayou Loco to Lake Nacogdoches.

Strategy – If (b) (7)(F)



**LION OIL TRADING AND TRANSPORTATION,
INC.
PALINE PIPELINE COMPANY
PIPELINE SPILL RESPONSE MANUAL**

(b) (7)(F)

If a spill occurs in the drainage areas in this line section, the first response will be to utilize existing land contours and to construct earthen dams to contain the spill and prevent overland flow to a water body. If the spill has flowed to a water body via overland flow, responders should go to accessible locations along the water body to identify the distance traveled by the spill. Booms will then be installed across the water body to contain floating oil and convey the floating oil to the shoreline for collection. Once a location ahead of the spill is found, the boom should be deployed and a vacuum truck or skimmer should be used to recover the oil from the water. A containment boom should be placed across the inlet into Lake Nacogdoches to prevent the oil from spreading out across the lake. If, however, the oil makes its way into the lake, booms should be deployed in accordance with the Lake Response Strategy found in Section 5.8 of this plan and skimmers are to be used to contain and collect the oil.

Oil that collects along the shoreline or on mud flats in pools should be recovered by using absorbents wherever possible. Oil from mud flats should be removed by flooding the area with water. The free oil should be directed to absorbent booms or collection points where a vacuum truck can recover the oil. Mud flats are highly sensitive and require immediate attention in the event of a spill. Where possible, these areas should be protected with diversion booms prior to the oil reaching the mud flat.

Vegetated shorelines should be cleaned by flooding or low, pressure, cold-water flushing to force free oil out away from the vegetation. The flow of oil should be directed toward an absorbent boom or collection point where a vacuum truck can recover the oil. Badly soaked vegetation may have to be removed and disposed of in drum or a dumpster for off site disposal.

Oil stained debris along gravel, mixed sand and gravel, and sand shorelines should be removed. The shoreline should then be cleaned by flooding or low, pressure, cold-water flushing. The free oil should be directed to absorbent booms or to a central collection point where the oil can be recovered with a vacuum truck. On sandy shorelines, some physical removal of the oil and the saturated sand may be required. This sand and oil mix should be collected in drums or dumpsters for off site disposal.

Bridges, docks, or other man made structures should be cleaned by first collecting any pools of oil with absorbents or a vacuum truck. Debris that is stained with oil should be removed for off site disposal. The area can then be flooded with water or low, pressure, cold-water rinsed to remove the oil. The oil should be recovered using absorbents or a vacuum truck.



**LION OIL TRADING AND TRANSPORTATION,
INC.
PALINE PIPELINE COMPANY
PIPELINE SPILL RESPONSE MANUAL**

Wetland areas should be cleaned up using low, pressure, cold-water flushing or flooding to force free oil out of the vegetated areas. The free oil should be recovered with absorbents. Care must be taken not to damage wetlands as they are highly sensitive environments. A survey of fauna should be made in case animal rescue efforts are required or booms need to be placed to deflect the oil away from critical flora and fauna.

Line Section E-3 – Highway 204 to Mount Enterprise Station

Line Section 3 runs from the point where the pipeline crosses Highway 204 to the Mount Enterprise Station. A release from this line section would flow to the east fork of the Angelina River via Penn Creek.

Strategy – (b) (7)(F)

If a spill occurs in the drainage areas in this line section, the first response will be to utilize existing land contours and to construct earthen dams to contain the spill and prevent overland flow to a water body. If the spill has flowed to a water body via overland flow, responders should go to accessible locations along the water body to identify the distance traveled by the spill. Booms will then be installed across the water body to contain floating oil and convey the floating oil to the shoreline for collection. Once a location ahead of the spill is found, the boom should be deployed and a vacuum truck or skimmer should be used to recover the oil from the water. A containment boom should be placed across the inlet into the Angelina River where Penn Creek enters the channel to prevent the oil from spreading down stream. If, however, the oil makes its way into the river, booms and skimmers are to be used to contain and collect the oil.

Oil that collects along the shoreline or on mud flats in pools should be recovered by using absorbents wherever possible. Oil from mud flats should be removed by flooding the area with water. The free oil should be directed to absorbent booms or collection points where a vacuum truck can recover the oil. Mud flats are highly sensitive and require immediate attention in the event of a spill. Where possible, these areas should be protected with diversion booms prior to the oil reaching the mud flat.

Vegetated shorelines should be cleaned by flooding or low, pressure, cold-water flushing to force free oil out away from the vegetation. The flow of oil should be directed toward an absorbent boom or collection point where a vacuum truck can recover the oil. Badly soaked vegetation may have to be removed and disposed of in drum or a dumpster for off site disposal.

Oil stained debris along gravel, mixed sand and gravel, and sand shorelines should be removed. The shoreline should then be cleaned by flooding or low, pressure,



**LION OIL TRADING AND TRANSPORTATION,
INC.
PALINE PIPELINE COMPANY
PIPELINE SPILL RESPONSE MANUAL**

cold-water flushing. The free oil should be directed to absorbent booms or to a central collection point where the oil can be recovered with a vacuum truck. On sandy shorelines, some physical removal of the oil and the saturated sand may be required. This sand and oil mix should be collected in drums or dumpsters for off site disposal.

Bridges, docks, or other man made structures should be cleaned by first collecting any pools of oil with absorbents or a vacuum truck. Debris that is stained with oil should be removed for off site disposal. The area can then be flooded with water or low, pressure, cold-water rinsed to remove the oil. The oil should be recovered using absorbents or a vacuum truck.

Wetland areas should be cleaned up using low, pressure, cold-water flushing or flooding to force free oil out of the vegetated areas. The free oil should be recovered with absorbents. Care must be taken not to damage wetlands as they are highly sensitive environments. A survey of fauna should be made in case animal rescue efforts are required or booms need to be placed to deflect the oil away from critical flora and fauna.

Line Section E-4 – Mount Enterprise Station to US 84

This line section runs from the Mount Enterprise Station to US 84. A release along this line section would flow to the east fork of the Angelina River via Wooten Creek and local drainage.

Strategy – (b) (7)(F)

If a spill occurs in the drainage areas in this line section, the first response will be to utilize existing land contours and to construct earthen dams to contain the spill and prevent overland flow to a water body. If the spill has flowed to a water body via overland flow, responders should go to accessible locations along the water body to identify the distance traveled by the spill. Booms will then be installed across the water body to contain floating oil and convey the floating oil to the shoreline for collection. Once a location ahead of the spill is found, the boom should be deployed and a vacuum truck or skimmer should be used to recover the oil from the water. Containment booms should be placed across the inlet into the Angelina River where Wooten Creek enters the channel to prevent the oil from spreading down stream. If, however, the oil makes its way into the river, booms and skimmers are to be used to contain and collect the oil.

Oil that collects along the shoreline or on mud flats in pools should be recovered by using absorbents wherever possible. Oil from mud flats should be removed by flooding the area with water. The free oil should be directed to absorbent booms or collection points where a vacuum truck can recover the oil. Mud flats are highly



**LION OIL TRADING AND TRANSPORTATION,
INC.
PALINE PIPELINE COMPANY
PIPELINE SPILL RESPONSE MANUAL**

sensitive and require immediate attention in the event of a spill. Where possible, these areas should be protected with diversion booms prior to the oil reaching the mud flat.

Vegetated shorelines should be cleaned by flooding or low, pressure, cold-water flushing to force free oil out away from the vegetation. The flow of oil should be directed toward an absorbent boom or collection point where a vacuum truck can recover the oil. Badly soaked vegetation may have to be removed and disposed of in drum or a dumpster for off site disposal.

Oil stained debris along gravel, mixed sand and gravel, and sand shorelines should be removed. The shoreline should then be cleaned by flooding or low, pressure, cold-water flushing. The free oil should be directed to absorbent booms or to a central collection point where the oil can be recovered with a vacuum truck. On sandy shorelines, some physical removal of the oil and the saturated sand may be required. This sand and oil mix should be collected in drums or dumpsters for off site disposal.

Bridges, docks, or other man made structures should be cleaned by first collecting any pools of oil with absorbents or a vacuum truck. Debris that is stained with oil should be removed for off site disposal. The area can then be flooded with water or low, pressure, cold-water rinsed to remove the oil. The oil should be recovered using absorbents or a vacuum truck.

Wetland areas should be cleaned up using low, pressure, cold-water flushing or flooding to force free oil out of the vegetated areas. The free oil should be recovered with absorbents. Care must be taken not to damage wetlands as they are highly sensitive environments. A survey of fauna should be made in case animal rescue efforts are required or booms need to be place to deflect the oil away from critical flora and fauna.

Line Section E-5 – US 84 to Laneville Station

This line section runs from where the pipeline crosses US 84 to the Laneville Station. A release of oil along this line section would flow via overland flow to the Anadarko Creek and via local drainage to the east fork of the Angelina River.

Strategy – (b) (7)(F)

If a spill occurs in the drainage areas in this line section, the first response will be to utilize existing land contours and to construct earthen dams to contain the spill and prevent overland flow to a water body. If the spill has flowed to a water body via overland flow, responders should go to accessible locations along the water body to identify the distance traveled by the spill. Booms will then be installed across the



**LION OIL TRADING AND TRANSPORTATION,
INC.
PALINE PIPELINE COMPANY
PIPELINE SPILL RESPONSE MANUAL**

water body to contain floating oil and convey the floating oil to the shoreline for collection. Once a location ahead of the spill is found, the boom should be deployed and a vacuum truck or skimmer should be used to recover the oil from the water. A containment boom should be placed across the inlet into the Angelina River if the oil flows eastward or on the Anadarko Creek if the oil flows west. If, however, the oil makes its way into either water body, booms and skimmers are to be used to contain and collect the oil.

Oil that collects along the shoreline or on mud flats in pools should be recovered by using absorbents wherever possible. Oil from mud flats should be removed by flooding the area with water. The free oil should be directed to absorbent booms or collection points where a vacuum truck can recover the oil. Mud flats are highly sensitive and require immediate attention in the event of a spill. Where possible, these areas should be protected with diversion booms prior to the oil reaching the mud flat.

Vegetated shorelines should be cleaned by flooding or low, pressure, cold-water flushing to force free oil out away from the vegetation. The flow of oil should be directed toward an absorbent boom or collection point where a vacuum truck can recover the oil. Badly soaked vegetation may have to be removed and disposed of in drum or a dumpster for off site disposal.

Oil stained debris along gravel, mixed sand and gravel, and sand shorelines should be removed. The shoreline should then be cleaned by flooding or low, pressure, cold-water flushing. The free oil should be directed to absorbent booms or to a central collection point where the oil can be recovered with a vacuum truck. On sandy shorelines, some physical removal of the oil and the saturated sand may be required. This sand and oil mix should be collected in drums or dumpsters for off site disposal.

Bridges, docks, or other man made structures should be cleaned by first collecting any pools of oil with absorbents or a vacuum truck. Debris that is stained with oil should be removed for off site disposal. The area can then be flooded with water or low, pressure, cold-water rinsed to remove the oil. The oil should be recovered using absorbents or a vacuum truck.

Wetland areas should be cleaned up using low, pressure, cold-water flushing or flooding to force free oil out of the vegetated areas. The free oil should be recovered with absorbents. Care must be taken not to damage wetlands as they are highly sensitive environments. A survey of fauna should be made in case animal rescue efforts are required or booms need to be placed to deflect the oil away from critical flora and fauna.

Section F

Line Section F-1 – Laneville Station to Moores Junction



**LION OIL TRADING AND TRANSPORTATION,
INC.
PALINE PIPELINE COMPANY
PIPELINE SPILL RESPONSE MANUAL**

This line section runs from the Laneville Station to Moores Junction. A release along this line section would flow to the Angelina River via overland flow.

Strategy – (b) (7)(F)

If a spill occurs in the drainage areas in this line section, the first response will be to utilize existing land contours and to construct earthen dams to contain the spill and prevent overland flow to a water body. If the spill has flowed to a water body via overland flow, responders should go to accessible locations along the water body to identify the distance traveled by the spill. Booms will then be installed across the water body to contain floating oil and convey the floating oil to the shoreline for collection. Once a location ahead of the spill is found, the boom should be deployed and a vacuum truck or skimmer should be used to recover the oil from the water.

Oil that collects along the shoreline or on mud flats in pools should be recovered by using absorbents wherever possible. Oil from mud flats should be removed by flooding the area with water. The free oil should be directed to absorbent booms or collection points where a vacuum truck can recover the oil. Mud flats are highly sensitive and require immediate attention in the event of a spill. Where possible, these areas should be protected with diversion booms prior to the oil reaching the mud flat.

Vegetated shorelines should be cleaned by flooding or low, pressure, cold-water flushing to force free oil out away from the vegetation. The flow of oil should be directed toward an absorbent boom or collection point where a vacuum truck can recover the oil. Badly soaked vegetation may have to be removed and disposed of in drum or a dumpster for off site disposal.

Oil stained debris along gravel, mixed sand and gravel, and sand shorelines should be removed. The shoreline should then be cleaned by flooding or low, pressure, cold-water flushing. The free oil should be directed to absorbent booms or to a central collection point where the oil can be recovered with a vacuum truck. On sandy shorelines, some physical removal of the oil and the saturated sand may be required. This sand and oil mix should be collected in drums or dumpsters for off site disposal.

Bridges, docks, or other man made structures should be cleaned by first collecting any pools of oil with absorbents or a vacuum truck. Debris that is stained with oil should be removed for off site disposal. The area can then be flooded with water or low, pressure, cold-water rinsed to remove the oil. The oil should be recovered using absorbents or a vacuum truck.



**LION OIL TRADING AND TRANSPORTATION,
INC.
PALINE PIPELINE COMPANY
PIPELINE SPILL RESPONSE MANUAL**

Wetland areas should be cleaned up using low, pressure, cold-water flushing or flooding to force free oil out of the vegetated areas. The free oil should be recovered with absorbents. Care must be taken not to damage wetlands as they are highly sensitive environments. A survey of fauna should be made in case animal rescue efforts are required or booms need to be placed to deflect the oil away from critical flora and fauna.

Line Section F-2 – Moores Junction to 4 miles north

This line section runs from Moores Junction to approximately four miles north of Moores Junction. A release of oil from the pipeline along this line section would flow either east to the Angelina River or west to Lake Striker via Johnson Creek.

Strategy – (b) (7)(F)

If a spill occurs in the drainage areas in this line section, the first response will be to utilize existing land contours and to construct earthen dams to contain the spill and prevent overland flow to a water body. If the spill has flowed to a water body via overland flow, responders should go to accessible locations along the water body to identify the distance traveled by the spill. Booms will then be installed across the water body to contain floating oil and convey the floating oil to the shoreline for collection. Once a location ahead of the spill is found, the boom should be deployed and a vacuum truck or skimmer should be used to recover the oil from the water. A protective boom should be placed at the inlet of Johnson Creek into Lake Striker if the oil flows toward the west.

Oil that collects along the shoreline or on mud flats in pools should be recovered by using absorbents wherever possible. Oil from mud flats should be removed by flooding the area with water. The free oil should be directed to absorbent booms or collection points where a vacuum truck can recover the oil. Mud flats are highly sensitive and require immediate attention in the event of a spill. Where possible, these areas should be protected with diversion booms prior to the oil reaching the mud flat.

Vegetated shorelines should be cleaned by flooding or low, pressure, cold-water flushing to force free oil out away from the vegetation. The flow of oil should be directed toward an absorbent boom or collection point where a vacuum truck can recover the oil. Badly soaked vegetation may have to be removed and disposed of in drum or a dumpster for off site disposal.

Oil stained debris along gravel, mixed sand and gravel, and sand shorelines should be removed. The shoreline should then be cleaned by flooding or low, pressure, cold-water flushing. The free oil should be directed to absorbent booms or to a central collection point where the oil can be recovered with a vacuum truck. On



**LION OIL TRADING AND TRANSPORTATION,
INC.
PALINE PIPELINE COMPANY
PIPELINE SPILL RESPONSE MANUAL**

sandy shorelines, some physical removal of the oil and the saturated sand may be required. This sand and oil mix should be collected in drums or dumpsters for off site disposal.

Bridges, docks, or other man made structures should be cleaned by first collecting any pools of oil with absorbents or a vacuum truck. Debris that is stained with oil should be removed for off site disposal. The area can then be flooded with water or low, pressure, cold-water rinsed to remove the oil. The oil should be recovered using absorbents or a vacuum truck.

Wetland areas should be cleaned up using low, pressure, cold-water flushing or flooding to force free oil out of the vegetated areas. The free oil should be recovered with absorbents. Care must be taken not to damage wetlands as they are highly sensitive environments. A survey of fauna should be made in case animal rescue efforts are required or booms need to be placed to deflect the oil away from critical flora and fauna.

Line Section F-3 – Four miles north of Moores Junction to 2 miles north US 259

This line section runs from four miles north of Moores Junction to two miles south of where the pipeline crosses US 259. A release along this line section will flow toward the Tiawichi Creek.

Strategy – (b) (7)(F)

If a spill occurs in the drainage areas in this line section, the first response will be to utilize existing land contours and to construct earthen dams to contain the spill and prevent overland flow to a water body. If the spill has flowed to a water body via overland flow, responders should go to accessible locations along the water body to identify the distance traveled by the spill. Booms will then be installed across the water body to contain floating oil and convey the floating oil to the shoreline for collection. Once a location ahead of the spill is found, the boom should be deployed and a vacuum truck or skimmer should be used to recover the oil from the water.

Oil that collects along the shoreline or on mud flats in pools should be recovered by using absorbents wherever possible. Oil from mud flats should be removed by flooding the area with water. The free oil should be directed to absorbent booms or collection points where a vacuum truck can recover the oil. Mud flats are highly sensitive and require immediate attention in the event of a spill. Where possible, these areas should be protected with diversion booms prior to the oil reaching the mud flat.

Vegetated shorelines should be cleaned by flooding or low, pressure, cold-water flushing to force free oil out away from the vegetation. The flow of oil should be



**LION OIL TRADING AND TRANSPORTATION,
INC.
PALINE PIPELINE COMPANY
PIPELINE SPILL RESPONSE MANUAL**

directed toward an absorbent boom or collection point where a vacuum truck can recover the oil. Badly soaked vegetation may have to be removed and disposed of in drum or a dumpster for off site disposal.

Oil stained debris along gravel, mixed sand and gravel, and sand shorelines should be removed. The shoreline should then be cleaned by flooding or low, pressure, cold-water flushing. The free oil should be directed to absorbent booms or to a central collection point where the oil can be recovered with a vacuum truck. On sandy shorelines, some physical removal of the oil and the saturated sand may be required. This sand and oil mix should be collected in drums or dumpsters for off site disposal.

Bridges, docks, or other man made structures should be cleaned by first collecting any pools of oil with absorbents or a vacuum truck. Debris that is stained with oil should be removed for off site disposal. The area can then be flooded with water or low, pressure, cold-water rinsed to remove the oil. The oil should be recovered using absorbents or a vacuum truck.

Wetland areas should be cleaned up using low, pressure, cold-water flushing or flooding to force free oil out of the vegetated areas. The free oil should be recovered with absorbents. Care must be taken not to damage wetlands as they are highly sensitive environments. A survey of fauna should be made in case animal rescue efforts are required or booms need to be place to deflect the oil away from critical flora and fauna.

Line Section F-4 – Two miles north US 259 to 0.5 miles north of Horton's Station

This line section runs from two miles north of US 259 to 0.5 miles north of Horton's Station.

Strategy – (b) (7)(F)

If a spill occurs in the drainage areas in this line section, the first response will be to utilize existing land contours and to construct earthen dams to contain the spill and prevent overland flow to a water body. If the spill has flowed to a water body via overland flow, responders should go to accessible locations along the water body to identify the distance traveled by the spill. Booms will then be installed across the water body to contain floating oil and convey the floating oil to the shoreline for collection. Once a location ahead of the spill is found, the boom should be deployed and a vacuum truck or skimmer should be used to recover the oil from the water.



**LION OIL TRADING AND TRANSPORTATION,
INC.
PALINE PIPELINE COMPANY
PIPELINE SPILL RESPONSE MANUAL**

Oil that collects along the shoreline or on mud flats in pools should be recovered by using absorbents wherever possible. Oil from mud flats should be removed by flooding the area with water. The free oil should be directed to absorbent booms or collection points where a vacuum truck can recover the oil. Mud flats are highly sensitive and require immediate attention in the event of a spill. Where possible, these areas should be protected with diversion booms prior to the oil reaching the mud flat.

Vegetated shorelines should be cleaned by flooding or low, pressure, cold-water flushing to force free oil out away from the vegetation. The flow of oil should be directed toward an absorbent boom or collection point where a vacuum truck can recover the oil. Badly soaked vegetation may have to be removed and disposed of in drum or a dumpster for off site disposal.

Oil stained debris along gravel, mixed sand and gravel, and sand shorelines should be removed. The shoreline should then be cleaned by flooding or low, pressure, cold-water flushing. The free oil should be directed to absorbent booms or to a central collection point where the oil can be recovered with a vacuum truck. On sandy shorelines, some physical removal of the oil and the saturated sand may be required. This sand and oil mix should be collected in drums or dumpsters for off site disposal.

Bridges, docks, or other man made structures should be cleaned by first collecting any pools of oil with absorbents or a vacuum truck. Debris that is stained with oil should be removed for off site disposal. The area can then be flooded with water or low, pressure, cold-water rinsed to remove the oil. The oil should be recovered using absorbents or a vacuum truck.

Wetland areas should be cleaned up using low, pressure, cold-water flushing or flooding to force free oil out of the vegetated areas. The free oil should be recovered with absorbents. Care must be taken not to damage wetlands as they are highly sensitive environments. A survey of fauna should be made in case animal rescue efforts are required or booms need to be place to deflect the oil away from critical flora and fauna.

Line Section F-5 – Half mile north of Horton’s Station to the Sabine River

This line section runs from a half mile north of Horton’s Station to the Sabine River. A release of oil from this line section would flow to the Sabine River.

Strategy – (b) (7)(F)

If a spill occurs in the drainage areas in this line section, the first response will be to utilize existing land contours and to construct earthen dams to contain the spill and



**LION OIL TRADING AND TRANSPORTATION,
INC.
PALINE PIPELINE COMPANY
PIPELINE SPILL RESPONSE MANUAL**

prevent overland flow to a water body. If the spill has flowed to a water body via overland flow, responders should go to accessible locations along the water body to identify the distance traveled by the spill. Booms will then be installed across the water body to contain floating oil and convey the floating oil to the shoreline for collection. Once a location ahead of the spill is found, the boom should be deployed and a vacuum truck or skimmer should be used to recover the oil from the water. If the oil makes its way into the Sabine River, booms should be deployed in accordance with the River Response Strategy found in Section 5.8 of this plan and skimmers are to be used to contain and collect the oil.

Oil that collects along the shoreline or on mud flats in pools should be recovered by using absorbents wherever possible. Oil from mud flats should be removed by flooding the area with water. The free oil should be directed to absorbent booms or collection points where a vacuum truck can recover the oil. Mud flats are highly sensitive and require immediate attention in the event of a spill. Where possible, these areas should be protected with diversion booms prior to the oil reaching the mud flat.

Vegetated shorelines should be cleaned by flooding or low, pressure, cold-water flushing to force free oil out away from the vegetation. The flow of oil should be directed toward an absorbent boom or collection point where a vacuum truck can recover the oil. Badly soaked vegetation may have to be removed and disposed of in drum or a dumpster for off site disposal.

Oil stained debris along gravel, mixed sand and gravel, and sand shorelines should be removed. The shoreline should then be cleaned by flooding or low, pressure, cold-water flushing. The free oil should be directed to absorbent booms or to a central collection point where the oil can be recovered with a vacuum truck. On sandy shorelines, some physical removal of the oil and the saturated sand may be required. This sand and oil mix should be collected in drums or dumpsters for off site disposal.

Bridges, docks, or other man made structures should be cleaned by first collecting any pools of oil with absorbents or a vacuum truck. Debris that is stained with oil should be removed for off site disposal. The area can then be flooded with water or low, pressure, cold-water rinsed to remove the oil. The oil should be recovered using absorbents or a vacuum truck.

Wetland areas should be cleaned up using low, pressure, cold-water flushing or flooding to force free oil out of the vegetated areas. The free oil should be recovered with absorbents. Care must be taken not to damage wetlands as they are highly sensitive environments. A survey of fauna should be made in case animal rescue efforts are required or booms need to be place to deflect the oil away from critical flora and fauna.

Line Section F-6 – Sabine River Crossing



**LION OIL TRADING AND TRANSPORTATION,
INC.
PALINE PIPELINE COMPANY
PIPELINE SPILL RESPONSE MANUAL**

This line section extends from the south bank of the Sabine River to the north bank.

Strategy – (b) (7)(F)

If a spill occurs in the drainage area of this line section, the first response will be to utilize existing land contours and to construct earthen dams to contain the spill and prevent overland flow to a water body. If the spill has made its way to the waterway, Booms should be positioned across the river at an angle appropriate for the velocity (<0.7 knots) of the water. During flood stage the river may be quite high and dangerously fast.

Oil that collects along the shoreline or on mud flats in pools should be recovered by using absorbents wherever possible. Oil from mud flats should be removed by flooding the area with water. The free oil should be directed to absorbent booms or collection points where a vacuum truck can recover the oil. Mud flats are highly sensitive and require immediate attention in the event of a spill. Where possible, these areas should be protected with diversion booms prior to the oil reaching the mud flat.

Vegetated shorelines should be cleaned by flooding or low, pressure, cold-water flushing to force free oil out away from the vegetation. The flow of oil should be directed toward an absorbent boom or collection point where a vacuum truck can recover the oil. Badly soaked vegetation may have to be removed and disposed of in drum or a dumpster for off site disposal.

Oil stained debris along gravel, mixed sand and gravel, and sand shorelines should be removed. The shoreline should then be cleaned by flooding or low, pressure, cold-water flushing. The free oil should be directed to absorbent booms or to a central collection point where the oil can be recovered with a vacuum truck. On sandy shorelines, some physical removal of the oil and the saturated sand may be required. This sand and oil mix should be collected in drums or dumpsters for off site disposal.

Bridges, docks, or other man made structures should be cleaned by first collecting any pools of oil with absorbents or a vacuum truck. Debris that is stained with oil should be removed for off site disposal. The area can then be flooded with water or low, pressure, cold-water rinsed to remove the oil. The oil should be recovered using absorbents or a vacuum truck.

Wetland areas should be cleaned up using low, pressure, cold-water flushing or flooding to force free oil out of the vegetated areas. The free oil should be recovered with absorbents. Care must be taken not to damage wetlands as they are highly sensitive environments. A survey of fauna should be made in case animal rescue



**LION OIL TRADING AND TRANSPORTATION,
INC.
PALINE PIPELINE COMPANY
PIPELINE SPILL RESPONSE MANUAL**

efforts are required or booms need to be placed to deflect the oil away from critical flora and fauna.

Line Section F-7 – Sabine River Crossing to Mid-Valley Tank Farm

This line section runs from the north side of the Sabine River Crossing to the Mid-Valley Tank Farm. If a release occurs along this line section, oil will travel overland and via local drainage to the Sabine River.

Strategy – (b) (7)(F)

If a spill occurs in the drainage areas in this line section, the first response will be to utilize existing land contours and to construct earthen dams to contain the spill and prevent overland flow to a water body. If the spill has flowed to a water body via overland flow, responders should go to accessible locations along the water body to identify the distance traveled by the spill. Booms will then be installed across the water body to contain floating oil and convey the floating oil to the shoreline for collection. Once a location ahead of the spill is found, the boom should be deployed and a vacuum truck or skimmer should be used to recover the oil from the water.

Oil that collects along the shoreline or on mud flats in pools should be recovered by using absorbents wherever possible. Oil from mud flats should be removed by flooding the area with water. The free oil should be directed to absorbent booms or collection points where a vacuum truck can recover the oil. Mud flats are highly sensitive and require immediate attention in the event of a spill. Where possible, these areas should be protected with diversion booms prior to the oil reaching the mud flat.

Vegetated shorelines should be cleaned by flooding or low, pressure, cold-water flushing to force free oil out away from the vegetation. The flow of oil should be directed toward an absorbent boom or collection point where a vacuum truck can recover the oil. Badly soaked vegetation may have to be removed and disposed of in a drum or a dumpster for off site disposal.

Oil stained debris along gravel, mixed sand and gravel, and sand shorelines should be removed. The shoreline should then be cleaned by flooding or low, pressure, cold-water flushing. The free oil should be directed to absorbent booms or to a central collection point where the oil can be recovered with a vacuum truck. On sandy shorelines, some physical removal of the oil and the saturated sand may be required. This sand and oil mix should be collected in drums or dumpsters for off site disposal.

Bridges, docks, or other man made structures should be cleaned by first collecting any pools of oil with absorbents or a vacuum truck. Debris that is stained with oil



**LION OIL TRADING AND TRANSPORTATION,
INC.
PALINE PIPELINE COMPANY
PIPELINE SPILL RESPONSE MANUAL**

should be removed for off site disposal. The area can then be flooded with water or low, pressure, cold-water rinsed to remove the oil. The oil should be recovered using absorbents or a vacuum truck.

Wetland areas should be cleaned up using low, pressure, cold-water flushing or flooding to force free oil out of the vegetated areas. The free oil should be recovered with absorbents. Care must be taken not to damage wetlands as they are highly sensitive environments. A survey of fauna should be made in case animal rescue efforts are required or booms need to be placed to deflect the oil away from critical flora and fauna.

5.8 **Booming Strategies**

Lake Response Strategy - Boom will be applied to encircle the spill area to protect as much shoreline as possible. Due to the nature of this area, loss of containment is improbable but boom should be applied regardless. Every effort should be made to boom off tributaries discharging to the lake prior to commingling with the lake and to protect environmentally sensitive receptors within the path of migrating oil.

River Response Strategy - Should the spill occur at one of the pipeline river crossing (100' to 500' wide) boom should be applied at a 20 degree angle with the southern most end of the boom located on the west shore of the river, preferably at a point that allows the easiest access by vehicle. Every effort should be made to boom off tributaries prior to entering the main channel of the river. Every effort should be used to protect environmentally sensitive receptors and navigable waterways.

5.9 **Recovered Spill Storage**

Spilled oil and contaminated water collected during the spill response will be stored in frac tanks on location of the release or moved to one of the pumping stations until properly disposed of either at the refinery or at a permitted waste oil handling facility.

5.10 **Response Waste Disposal**

After transport to one of the locations listed above, collected oil and contaminated water will be stored. The water, oil, and residual solids will then be separated via gravity and mechanical means as necessary. The separated oil and water will be either treated and disposed at the refinery or at a permitted waste oil handling facility. Any oil that can be recovered for use in the refinery will be stored at the refinery until it can be utilized in the refinery processes. The separated solids will be segregated



**LION OIL TRADING AND TRANSPORTATION,
INC.
PALINE PIPELINE COMPANY
PIPELINE SPILL RESPONSE MANUAL**

for storage pending characterization and disposal either off-site or land farmed on site.

Contaminated soil and debris from spill path and shoreline cleanup will be staged at the scene in contained areas and/or roll-off containers as needed until the solids can be characterized for off-site disposal at a permitted facility or land farmed at an approved site.

The actual disposal will be depended on the characteristics of the waste materials. Potential disposal methodologies will include:

- Landfill,
- Land farm,
- Reprocessing, or
- Reclamation/Recycling.

5.11 Dispersant Usage

The use of dispersants of other chemicals will be implemented only after approval from the USEPA and TCEQ. The USEPA Environmental Response Team has expertise in the use of dispersants, which can be utilized in identifying appropriate use and application.

To expedite the approval process, only dispersants listed in the current NCP Product Schedule Notebook will be considered for use. As required by the NCP, the Federal On-Scene Coordinator is responsible for determining, whether and in what quantities; a dispersant may be used to control a spill.



**LION OIL TRADING AND TRANSPORTATION,
INC.
PALINE PIPELINE COMPANY
PIPELINE SPILL RESPONSE MANUAL**

6.0 TIERED RESPONSE TIMES

The Neches River is listed in 49 CFR 194 Appendix B as a high volume area. However, since the Paline Pipeline is only 10-inch diameter, the designation of high volume area does not apply. Therefore, the response time for the Lion Oil Trading and Transportation, Inc. Response Zone is listed below.

	<u>Tier 1</u>	<u>Tier 2</u>	<u>Tier 3</u>
Response Time	12 Hrs	36 Hrs	60 Hrs

Based on the tiered response times listed, all of the equipment listed in this plan available at the Nacogdoches Station, Nacogdoches, Texas, at the El Dorado, Arkansas facility, and the Magnolia, Arkansas facility can respond within the Tier 1 (12 hr) response time along with the OSROs.



**LION OIL TRADING AND TRANSPORTATION,
INC.
PALINE PIPELINE COMPANY
PIPELINE SPILL RESPONSE MANUAL**

7.0 LION OIL TRADING AND TRANSPORTATION, INC. SPILL RESPONSE TEAM

The LOTT, Oil Spill Response Team/Incident Command System is comprised of the following employees:

TEAM MEMBER	RESPONSE TIME (Minutes)	DAYTIME CONTACT PROCEDURE	EVENING CONTACT PROCEDURE
David Wood Maint. Supervisor Qualified Individual 40 Hr. Hazwoper Trained	Daytime/Evening 3-6 Hours Depending on Location	Phone: (870) 864-1324 Cellular: (870) 314-5621	(b) (6) [Redacted] Cellular: (870) 314-5621
Jack Kingrey Maint. Supervisor Alternate QI 40 Hr. Hazwoper Trained	Daytime/Evening 3-6 Hours Depending on Location	Phone: (870) 864-1216 Pager: (870) 864-3039 Cellular: (870) 314-5610	(b) (6) [Redacted] Pager: (870) 864-3039 Cellular: (870) 314-5610
Glenn Green Eng. Supervisor Alternate QI 40 Hr. Hazwoper Trained	Daytime/Evening 3-6 Hours Depending on Location	Phone (870) 864-1372 Cellular: (870) 314-2848	(b) (6) [Redacted] Cellular: (870) 314-2848
John H. Warren Manager of Pipeline 40 Hr. Hazwoper Trained	Daytime/Evening 3-6 Hours Depending on Location	Phone: (870) 864-1451 Cellular: (870) 510-2164	(b) (6) [Redacted] Cellular: (870) 310-8630
Larry Hartness Senior V.P. Engineering and Operations 40 Hr. Hazwoper Trained	Daytime/Evening 3-6 Hours Depending on Location	Phone: (601) 933-3000 Pager: (800) 443-7243 PIN 005700	(b) (6) [Redacted] Pager: (800) 443-7243 PIN 005700
Kyle Michael Management Control Supervisor / Safety 40 Hr. Hazwoper Trained	Daytime/Evening 3-6 Hours Depending on Location	Phone: (870) 864-1323 Cellular: (870) 310-6840	(b) (6) [Redacted] Cellular: (870) 310-6840
Jimmy Dennis Operations Supervisor / Safety 40 Hr. Hazwoper Trained	Daytime/Evening 3-6 Hours Depending on Location	Phone: (870) 864-1347 Cellular: (870) 310-8637	(b) (6) [Redacted] Cellular: (870) 310-8637
Lamar Bryant Title Logistics/Finance 40 Hr. Hazwoper Trained	Daytime/Evening 3-6 Hours Depending on Location	Phone: (870) 864-1374	(b) (6) [Redacted] Pager: (870) 864-4912 Cellular: (870) 314-0005

The members of the Spill Response Team are available at the LOTT phone number or their home numbers on a 24-hour basis. In the event of sickness or vacation, an alternate employee will be named as part of the spill response team by the QI.

It is the responsibility of the QI to notify all team members of an incident by any means deemed necessary, e.g., cellular phone, home phone, or physical contact.



**LION OIL TRADING AND TRANSPORTATION,
INC.
PALINE PIPELINE COMPANY
PIPELINE SPILL RESPONSE MANUAL**

8.0 SPILL RESPONSE OPERATIONS/INCIDENT COMMAND SYSTEM

The LOTT, Pipeline Incident Command System (ICS) is patterned after the National Interagency Incident Management System (NIIMS) Incident Command System (ICS). The ICS has the capabilities to expand or contract to meet the needs of the incident. For small spills or releases, the Incident Commander (Qualified Individual) can manage all of the components of the ICS.

8.1 Incident and Unified Command

For small response actions, a sole incident command will adequately address the needs of the response. In this case, the LOTT's, QI is the Incident Commander (IC) until or unless a state or federal agency assumes authority as the IC.

For larger response actions that may require extensive resources, a Unified Command System (UCS) and control support mechanism may be implemented. The UCS may include the Federal On-Scene Coordinator, the State On-Scene Coordinator, and LOTT's QI. The UCS allows for open and frank discussion to utilize all available resource and knowledge in the response action.

Under the UCS, LOTT's personnel and resources will act under direct supervision of the UCS and IC. This may include working and interfacing directly with state and local responders and the Federal On-Scene Coordinator.

8.2 Qualified Individual

The QI is the Incident Commander and is responsible for the on-scene management of the ICS until command authority is transferred to another person (state or federal agency OSC), who then becomes the Incident Commander.

The QI will be one of the following personnel:

Primary QI

David Wood
LOTT
(870) 864-1324 (Office)
(870) 314-5621 (Cellular)
(b) (6)

Alternate QI

Jack Kingrey
LOTT
(870) 864-1216 (Office)
(870) 864-3039 (Pager)
(870) 314-5610 (Cellular)
(b) (6)



**LION OIL TRADING AND TRANSPORTATION,
INC.
PALINE PIPELINE COMPANY
PIPELINE SPILL RESPONSE MANUAL**

Alternate QI

Glenn Green
LOTT
(870) 864-1372 (Office)
(870) 314-2848 (Cellular)
(b) (6)

Each of these Qualified Individuals are English-speaking representatives of LOTT, located in the United States, available on a 24-hour basis, and have full authority for the following responsibilities:

1. Activate and contract with required Oil Spill Response Organizations;
2. Activate personnel and equipment maintained by LOTT;
3. Act as liaison with the OSC; and
4. Obligate any funds required to carry out all required or directed oil response activities.

The IC is responsible for the overall success and safety of the response. His or her priorities will be to ensure the safety of human health and life, stabilize the situation, and provide an effective response to stop the discharge or release. These priorities may be accomplished through:

- Directing and coordinating strategic and tactical response activities.
- Assessing the situation based on the magnitude, severity, and threat to public health and welfare that the situation poses.
- Defining the class of threat.
- Determining what resources are available and how to procure them.
- Coordinating during response actions with all stakeholders for review of progress and results. This may include other agency trustees, the public, and the business community.
- Determining the applicability of various response and removal options.
- Determining when the situation no longer poses a threat .

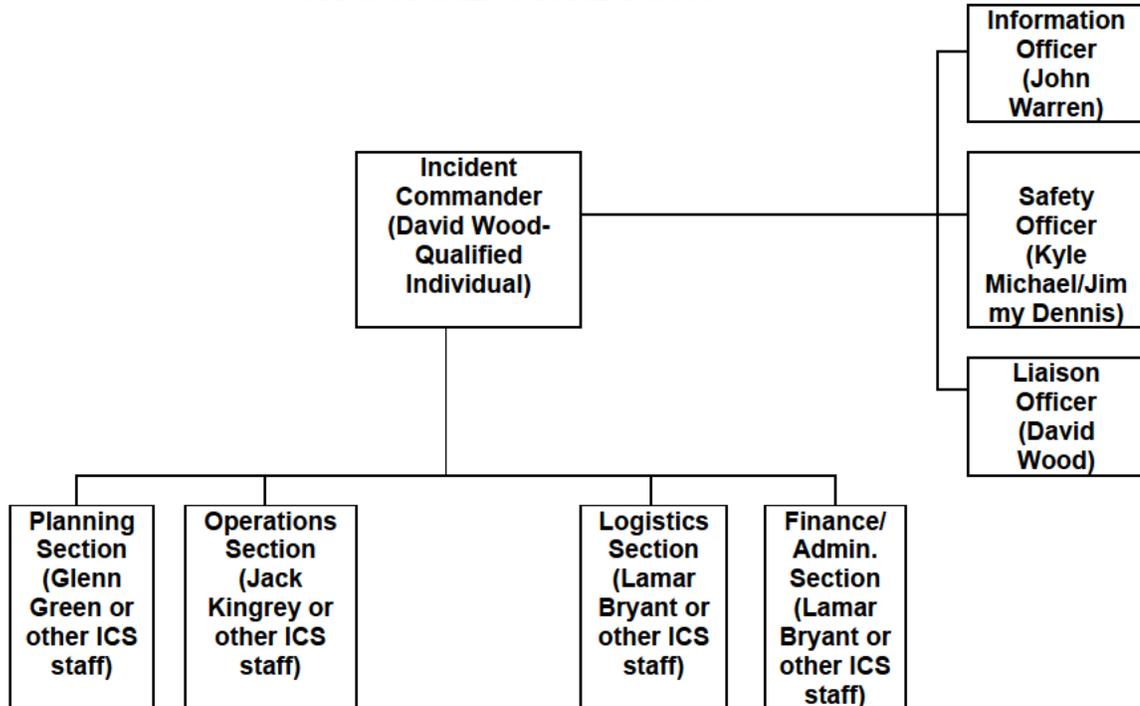
8.3 ICS Structure

For large-scale situations, the QI delegate authority and tasks in the five major ICS components:

1. Command – management of the ICS.
2. Planning – collect, evaluate, disseminate, and use information on the incident.
3. Operations – carry out response activities.
4. Logistics – provide materials, services, and facilities for response.
5. Finance/administration – track incident costs and reimbursement, accounting.



ICS ORGANIZATIONAL CHART



The QI will expand or contract the ICS and delegate responsibility based on the following hierarchy of incident priorities:

1. Life Safety
2. Incident Stability
3. Property Conservation

The QI may also delegate staff functions in the following areas:

1. Information Officer – handle media inquiry and coordinate information release.
2. Safety Officer – monitor conditions and implement measures to protect assigned personnel.
3. Liaison – on scene contact for other agencies.

8.4 ICS Key Responsibilities

If deemed necessary by the QI, the assigned personnel will assume the following Section Chief responsibilities:

Operation Section Chief

The Operation Section Chief is responsible for the implementation of plans and response activities directed by the Incident Commander. The activities will include recovery and protection, emergency response, and wildlife recovery. The Operations Section Chief must oversee daily activities and ensure coordination with other Section Chiefs.



**LION OIL TRADING AND TRANSPORTATION,
INC.
PALINE PIPELINE COMPANY
PIPELINE SPILL RESPONSE MANUAL**

Planning Section Chief

The Planning Section Chief is responsible for the collection, evaluation, dissemination, and implementation of all information related to the incident and functions as a strategic member of the ICS. The Planning Section Chief develops effective plans for near-term and long-term response to the incident. The activities will include accurate assessment of the incident, and maintenance of information about the resources, event impacts, and the effectiveness of response actions. The Planning Section Chief must oversee daily information handling activities and ensure coordination with other Section Chiefs.

Logistics Section Chief

The Logistics Section Chief is responsible for providing tangible resources and manpower for the response. Tangible resources will include facilities, equipment, and other physical inventory. Logistics is a supply group supporting the operations authorized by the IC. The Operations Section Chief must oversee daily activities and ensure coordination with other Section Chiefs.

Finance Section Chief

The Finance Section Chief is responsible for tracking all incident costs, providing contract oversight, coordinating financial claims information, and evaluating the financial impact of the incident. Finance is the financial accounting group for all sections in support of the actions authorized by the IC.

8.5 ICS Implementation

The ICS will immediately go into effect upon activation of the system by the QI after initial evaluation of the incident. The QI will assume responsibility over any emergency event. He will coordinate and direct all joint efforts of employees and outside responders. The QI is the Incident Commander and is responsible for the on-scene management until command authority is transferred to another person, who then becomes the Incident Commander. When the ICS is activated, LOTT employees will be under the direction of their Supervisor who will be directed by the QI or his designee. Employees are to respond as directed by their supervisor.

8.6 ICS Documentation

Response actions will be documented using ICS Forms from the USEPA Region 6, Regional Integrated Contingency Plan. The forms will be used to document response decisions, activities, and costs.

The forms that may be used, at the direction of the IC, are included in Appendix E.

8.7 Chronology for Oil Spill Response

In the event of a reportable spill, the following chronology or response will be followed in sequence. When notified of a spill event, the LOTT's Spill Response Team (LSRT) should not waste valuable time in putting together the material and equipment necessary for clean up operations. The purpose of the first response by



**LION OIL TRADING AND TRANSPORTATION,
INC.
PALINE PIPELINE COMPANY
PIPELINE SPILL RESPONSE MANUAL**

the LSRT is mitigation through shutdown and containment, not clean up. This chronology is intended as a quick reference to guide personnel quickly and efficiently through a first response to a spill incident. It is an abbreviated chronology with more detailed information on each step located throughout this Response Plan.

1. Notify the QI or AQI of the spill event.
2. The QI or the AQI will instruct the employees in the most advantageous position for shutting down the pipeline and begin shutdown procedures.
3. The QI, or the AQI, will then notify the remaining members of the ICS. Appropriate instructions will be given for coordinating the response effort based on the location of the individual LSRT members and the unique nature of the particular spill.
4. Team members will load up the oil spill containment equipment and supplies and transport them to the spill location.
5. Upon arrival at the spill location, the QI, or AQI, will assess the spill and all appropriate regulatory agencies will be notified as per applicable reportable quantities and circumstances.
6. The QI or AQI will determine whether outside support for spill containment is required. If so, the contracted OSROs will be notified.
7. Spill containment and mitigation procedures will be implemented.
8. Once containment is achieved, the QI or AQI will begin planning cleanup operations in concert with the regulatory agencies and the OSRO(s).
9. Once a cleanup operating plan is agreed upon between the QI (or AQI) and the Oil Spill Response Organization (OSRO), the appropriate cleanup supplies and equipment will be ordered. All independent contractors identified within this plan are set up to deliver equipment and materials as needed. Manpower needs will be assessed and ordered.
10. A Command Center convenient to the spill site will be chosen along with an employee(s) to man the Command Center at all times that spill operations are in progress.
11. Manpower will be organized into teams, and team leaders chosen where the spill event is of such size as to require this level of response.
12. Establish method of communication between the team leaders, the FOSC (if applicable), and Regulatory Agency personnel in order to provide a continuing and coordinated effort in the field.
13. Once all parties are present, hold short tailgate meeting to confirm chain of command. This will be determined on a case-by-case basis depending on the size and unique characteristics of any given spill. There should be a definite understanding between all parties as to the chain of command when the tailgate meeting is completed.
14. Another brief tailgate meeting should be scheduled at the end of each day between QI, the OSRO, state and local regulatory agencies and the team leaders to discuss strategies, logistics, and response planning and current status of the spill.
15. After the spill cleanup is complete, a final meeting will be held between all team leaders, OSRO leaders, the QI and AQI, State and Local Regulatory



**LION OIL TRADING AND TRANSPORTATION,
INC.
PALINE PIPELINE COMPANY
PIPELINE SPILL RESPONSE MANUAL**

Agency officials. Discussion of problems encountered and how to avoid them in the future will be discussed as well as successful strategies and how to ensure their continuance. Final reports, where required, will be completed.

9.0 RESPONSE EQUIPMENT RESOURCES

9.1 Lion Oil Trading and Transportation, Inc. Available Equipment

Nacogdoches Station, Nacogdoches, Texas:

1. One 35 ft. trailer for transporting equipment
2. One 15 ft. wide flat bottom boat with a 20 hp outboard motor
3. 300 ft. of absorbent boom
4. 4 rolls of non-woven oil absorbent pads
5. Piping and other required materials to construct an overflow dam

El Dorado, Arkansas:

1. 3 backhoes
2. 2 track-hoes
3. All terrain vehicle equipped with a vacuum truck
4. 3 vacuum trucks
5. Trailers for trucks
6. Cessna 180 aircraft
7. Jon boats and motors
8. Portable pumps

Magnolia, Arkansas

1. Weirs
2. Booms

9.2 Equipment Location

The above listed equipment is based at the Magnolia St., Magnolia, Arkansas, El Dorado Field Office in El Dorado, Arkansas and at the Nacogdoches Pump Station in Nacogdoches, Texas.

9.3 OSRO Available Equipment

See Appendix C for Equipment List and Location



**LION OIL TRADING AND TRANSPORTATION,
INC.
PALINE PIPELINE COMPANY
PIPELINE SPILL RESPONSE MANUAL**

10.0 METHODS OF COMMUNICATION

The following methods of communication are available during a spill event:

1. Telephone landline service.
2. Cellular Telephone Service - all LOTT's pipeline personnel maintain a company cellular telephone.
3. LOTT maintains a company radio system as well as a cellular telephone for use in the field.

Due to the distances involved and the remote locations that may be involved in the response action, FM radios are not included in this plan.

It is the responsibility of the Planning and Logistics Section to ensure:

1. Outside response agencies (federal, state, local, or private) and all parties involved in the response action are equipped with communications equipment (cell phones) compatible with the systems currently utilized by LOTT, or provide communications equipment (cell phones) to the response agencies to ensure communications can be maintained during response actions; and provide a list of contact phone numbers for the ICS.



**LION OIL TRADING AND TRANSPORTATION,
INC.
PALINE PIPELINE COMPANY
PIPELINE SPILL RESPONSE MANUAL**

11.0 EMERGENCY EQUIPMENT MAINTENANCE

11.1 LOTT Maintenance and Operability Procedure

1. The QI is responsible for tracking maintenance and operability schedules.
2. Preventive maintenance is performed on all vehicles every month or 3000 miles for road vehicles and every month or 75 hours for field equipment.
3. Operability checks are performed on all equipment not operated during any month on a monthly basis.

11.2 OSRO Maintenance and Operability Procedure

1. *Elbert Sirmons* is responsible for tracking maintenance and operability schedules for Garner Environmental Services, Inc.
2. *David Nichols* is responsible for tracking maintenance and operability schedules for ES&H, Inc.
3. *Russ Grimes* is responsible for tracking maintenance and operability schedules for Ferguson Harbour Services.
4. Preventive maintenance is performed on all vehicles every month or 3500 miles for road vehicles and every month or 60 hours for spill equipment.
5. Operability checks are performed on all equipment not operated in any given quarter once every three months.

Other contractors specified in this Spill Response Manual are material suppliers and do not require maintenance procedures.



**LION OIL TRADING AND TRANSPORTATION,
INC.
PALINE PIPELINE COMPANY
PIPELINE SPILL RESPONSE MANUAL**

12.0 RESPONSE PERSONNEL TRAINING

12.1 LOTT Paline Pipeline Company Employee Training

All LOTT, Paline Pipeline Company field personnel will be made aware of all aspects of the Pipeline Spill Response Plan, from reporting requirements to response activities. Each year, after the yearly review and updates, all field employees will be refreshed on the plan and any updates that have occurred during the end of the year review. This refresher will include, but not be limited to the following:

1. Each employees' individual responsibility under the Pipeline Spill Response Plan.
2. The name, address, and phone number of the QI and AQI and the procedure for contacting them on a 24 hour basis.
3. Contents of the information summary in Section 1.
4. The National Response Center telephone number.
5. The Regulatory Agency notification procedure.
6. Characteristics and Hazards of Crude Oil.
7. Conditions likely to worsen emergencies and appropriate corrective actions.
8. Steps necessary to control the discharge and minimize the potential for fire, explosion, or other environmental danger.
9. The proper firefighting procedures and related equipment.

Should changes to the plan occur during the year that necessitate filing an amended plan with the RSPA, a special training session will be held to update all field personnel on changes made to the Spill Response Plan.

If no changes are made to the Spill Response plan during the year, or at the end of the year review, a special refresher will still be made for the benefit of all field employees.

12.2 OSHA 29CFR 1910.120 Training

Since all LOTT, Paline Pipeline Company field employees are required to become intimately involved in the containment, mitigation, and remediation of oil spills, all personnel will be required to train in the 40 hour Hazardous Material Technician Level. The QI will be trained at the 48 hour Supervisor Level of Hazardous Materials Specialist.

All employees must take the 8 hour HAZWOPER refresher on a yearly basis.



**LION OIL TRADING AND TRANSPORTATION,
INC.
PALINE PIPELINE COMPANY
PIPELINE SPILL RESPONSE MANUAL**

13.0 TRAINING RECORDS

13.1 Training Records Location

All training records for LOTT, Paline Pipeline Company personnel responsible for the Pipeline Spill Response Plan will be kept at the main office in El Dorado, Arkansas.

13.2 Training Log

A file will be maintained on each employee with a cover sheet to indicate:

1. Employee Name.
2. Position Title
3. Courses Taken
4. Date Courses Completed
5. Training Courses and Hours Required
6. Training Provider
7. Course Test Results (where applicable)

All certificates of course completion, test copies, and other training records are to be contained within.

13.3 Contractor Training Records

LOTT, Paline Pipeline Company will require all contract personnel who respond, or may respond, to an oil spill, to ensure their employees have received the proper training, including HAZWOPER. During the yearly Pipeline Spill Response Plan review, Lion will make a written request to all contractors named in the plan to send a Training Certification Letter. This letter will contain a list of all current spill response personnel, training received, and dates of training. All contractor training records will be maintained by the contractor.

13.4 Instructor and Training Organization Records

LOTT will request and keep all instructor and training organization records at its main office in El Dorado, Arkansas.

13.5 Training Records Maintenance

Training records will be kept on all LOTT employees for as long as that employee is assigned duties under the Response Plan.



**LION OIL TRADING AND TRANSPORTATION,
INC.
PALINE PIPELINE COMPANY
PIPELINE SPILL RESPONSE MANUAL**

14.0 DRILL PROCEDURES

14.1 Quarterly Drills

The LOTT Internal Notification drill for unmanned pipelines will be conducted on a quarterly basis. This drill will involve the notification procedures required in the event of an as-yet undetermined spill event. The spill event will be changed on a quarterly basis. Assigned operating personnel will make notification to the QI, and the QI will make all proper notifications to the appropriate regulatory agencies, announcing at the beginning of the call that this is a drill. The QI will record the spill type and the procedures followed in a report to include areas needing improvement.

14.2 Annual Drills

The following drills will be done on an annual basis:

1. Table Top Spill Management Team Drills
2. LOTT Equipment Deployment Drills-deployment of representative key LOTT equipment to a Worst Case Discharge.

14.3 Triennial Drills

Once every 3 years, a drill will be held involving actual deployment of LiOTT, OSRO, and other contractor equipment to a mock spill site. This drill will test the entire response plan for the Response Zone. The drill will include notification, equipment deployment (OSRO and LOTT), tabletop exercises, and an evaluation of the drill effectiveness.

14.4 Annual OSRO Equipment Deployment Drill

On an annual basis, contracted OSROs will conduct an equipment deployment drill. The equipment deployment drill will include the deployment of representative key equipment listed in the plan to a potential spill location.

14.5 Unannounced Drill

At least one unannounced drill will be implemented every three years. The drill may be any type, except for the Quarterly notification drills.

14.6 Responsibility for Drill Program

It shall be the responsibility of the QI to operate and maintain the Drill program.



**LION OIL TRADING AND TRANSPORTATION,
INC.
PALINE PIPELINE COMPANY
PIPELINE SPILL RESPONSE MANUAL**

14.7 Drill Documentation

Documentation of all drills shall be kept for a period of 3 years at the main office in El Dorado, Arkansas, and be available to representatives of the RSPA. This documentation shall include a list of conducted drills, accomplished objectives, and evaluations of results. This documentation will be signed by the QI.



**LION OIL TRADING AND TRANSPORTATION,
INC.
PALINE PIPELINE COMPANY
PIPELINE SPILL RESPONSE MANUAL**

15.0 PIPELINE SPILL RESPONSE PLAN REVIEW

15.1 Operator Review of Response Plan

LOTT, Paline Pipeline Company will review this Response Plan at least once every five years after the last plan approval date by RSPA and modify the plan to address new or different operating conditions and/or information.

15.2 Re-submittal of Updated Plan

Upon review and updating, the updated Spill Response Plan will be submitted to the RSPA for review and approval. If the plan did not require updating, a letter to RSPA can be submitted to document that no plan revisions were required.

15.3 Reasons to Revise the Spill Response Plan

1. New Pipeline construction or purchase;
2. Changes to worst-case discharge volume;
3. Change in commodities transported;
4. Change in Oil Spill Response Organizations
5. Change in Qualified Individual
6. Change in an NCP or ACP that have a significant impact on the appropriateness of response equipment or response strategies.
7. Change in Response Procedures
8. Change in Pipeline Ownership

15.4 Drill Evaluation and Plan Revision

Should drill procedures result in needed changes to the Spill Response Plan, the improvements must be incorporated into the plan. Post-incident evaluation results must also be incorporated into the plan. When completed, the Spill Plan must be resubmitted within 30 days to the RSPA for review and approval.



**LION OIL TRADING AND TRANSPORTATION,
INC.
PALINE PIPELINE COMPANY
PIPELINE SPILL RESPONSE MANUAL**

**PLAN APPENDIX A
CONTACT LIST**

David Wood	LOTT, Paline Pipeline Company	870-864-1324 Office (b) (6) 870-314-5621 Cellular
Jack Kingrey	LOTT, Paline Pipeline Company	870-864-1216 Office (b) (6) 870-864-3039 Pager 870-314-5610 Cellular
Glenn Green	LOTT, Paline Pipeline Company	870-864-1372 Office (b) (6) 870-314-2848 Cellular
John H. Warren Manager of Pipeline	LOTT, Paline Pipeline Company	870-864-1451 Office (b) (6) 870-310-8630 Cellular
Lee Lampton President	Lion Oil Company	601-933-3000 Office (b) (6)
Larry Hartness Senior V.P. Engineering & Operations	LOTT, Paline Pipeline Company	601-933-3000 Office (b) (6) 870-443-7243 Pager PIN 005700
Paul Young V.P. EH&S Affairs	ERGON, Inc.	601-933-3000 Office (b) (6) 800-443-7243 Pager PIN 074108
Garner Environmental Services		409-983-5646 Office 800-424-1716 Hotline
ES&H, Inc.		318-688-4231 Office 866-444-4237 Hotline
Ferguson Harbour Incorporated		901-345-7500 Office 800-235-1344 Hotline



Insurance Contact: Steadfast Insurance Company (Policy # BOG93039)
1400 American Lane
Schaumburg, Illinois 60196-1056
(847) 605-6429



**APPENDIX B
TERMS AND ABBREVIATIONS**

FRP	Facility Response Plan
IFR	Interim Final Rule
ACP	Area Contingency Plan
NCP	National Contingency Plan
RSPA	Research and Special Programs Administration
FOSC	Federal On-Scene Coordinator
CFR	Code of Federal Regulations
QI	Qualified Individual
AQI	Alternate Qualified Individual
LCSMT	Lion Oil Trading and Transportation, Inc.'s Spill Management Team
OSRO	Oil Spill Response Organization
WCD	Worst Case Discharge
LOTT	Lion Oil Trading and Transportation



APPENDIX C
OSRO WRITTEN AGREEMENTS AND EQUIPMENT LISTS

COPY

GARNER ENVIRONMENTAL SERVICES WORK AGREEMENT

This Work Agreement to provide as an independent contractor clean-up services, under OPA-90 guidelines meeting Tier 1, Tier 2 and Tier 3* requirements, on an as needed first come first serve basis, for the El Dorado, AR geographic area with a Tier 2 response, not to exceed 10.5 hours, between LION OIL COMPANY, 1001 School Street, El Dorado, AR 71730, hereinafter called "Owner", and GARNER ENVIRONMENTAL SERVICES INC., a Texas Corporation, with offices at 314 Allen Genoa Road, Houston, Texas, 77017, hereinafter called "Contractor", from 15 July 1994 to 14 July 1995, and as long thereafter as necessity for same continues; it being understood and agreed that either party may cancel this contract by giving the other party thirty (30) days written notice of cancellation, but neither party hereto shall, by the termination of this contract, be relieved of such party's respective liabilities arising from, growing out of, or incident to work performed hereunder prior to the time such contract is terminated. It is specifically understood that Garner Environmental Services, Inc. intends to commit response resources to Lion Oil Company in the event of an oil spill response, provided that Garner Environmental Services, Inc. has not committed all its resources to another on going spill response. It is further understood that if resources are committed to an on going spill that the response resources may not be immediately available. Further, it is understood that by signing this agreement that Garner Environmental Services, Inc. will permit the U.S. Coast Guard to verify the availability of the response resources through tests, inspections and drills. The types of work contemplated to be done by Contractor are: Spill Response Control/Clean-Up, and such other work as is generally performed by Contractor in its usual line of service. The work to be performed will be as requested by an authorized representative of Owner and directed to you as "Contractor, and shall be performed under the following terms and conditions:

1. BEGIN WORK

This contract being a time and materials contract, Contractor will begin each part of the work covered by this contract at such time as Owner initiates a request for response to a spill of a substance by a direct telephone call to Contractor at (713) 920-1300. The person initiating the response shall provide Contractor with:

- His or her name and title
- Owner's name, address, telephone number
- The location of the spill
- The nature of the substances involved in the spill
- The approximate time of the spill
- Any other pertinent information relating to the spill

Upon receiving the call, Contractor will use due diligence to mobilize resources within two (2) hours.

- Tier 1 - 6 hrs. arrival time
- Tier 2 - 30 hrs. arrival time
- Tier 3 - 54 hrs. arrival time

2. LABOR VERIFICATION

Time sheets will be filled out daily by the Contractor for services performed. Daily time sheets will be verified and signed by the Contractor's Supervisor and attached to the invoice.

3. RATE SCHEDULE

Owner will pay Contractor for work performed or services rendered hereunder in accordance with the Rate Schedule attached hereto as "Attachment 1" and made a part of this contract within fifteen days of receipt of invoice by and approval of Owner. It is understood that the rates and prices set forth in the attached Rate Schedule are subject to change by Contractor upon ten days written notice to Owner. Any change shall not apply to work then in progress or on order. The rates to be paid to Contractor by Owner shall be for the actual performance of the work and shall be in lieu of any charges for materials or supplies furnished by Contractor for use in the work and any charges for transportation of tools, equipment and labor or time required to transport tools, equipment and labor to and from the job, unless otherwise specified in the Rate Schedule.

4. SUPERVISION, LABOR, EQUIPMENT, SUPPLIES, AND SAFETY

Contractor shall at Contractor's expense and in a diligent and workmanlike manner, furnish supervision, labor, equipment, machinery, tools, material, and supplies necessary for the performance of the work herein contemplated. At the time of signing of this agreement, Contractor has the equipment and personnel identified in attachment "2" which it agrees to utilize, subject to the conditions of availability and necessity, within the tiered response time, in the event of a spill and call out by Lion Oil Company, El Dorado, AR facility. In the event the number of personnel or equipment falls substantially below that listed, Contractor agrees to provide immediate notification, in writing, to Lion Oil Company, 1001 School Street, El Dorado, AR 71730.

5. INDEPENDENT CONTRACTOR RELATIONSHIPS

In the performance of the work herein contemplated Contractor is an independent contractor, with the authority to control and direct the performance of the details of the work, Owner being interested only in the results obtained; but the work contemplated herein shall meet the approval of Owner and be subject to the general right of Owner to inspect the work to secure the satisfactory completion thereof.

6. INDEMNITIES AND INSURANCE

A. Contractor agrees to:

1. Pay and satisfy all just claims for labor, materials and supplies furnished to Contractor hereunder; to pay all carrier's and cartman's charges, and to allow no lien or charge to become fixed upon any property of Owner;
2. Pay and satisfy all claims for damage to property in any manner arising from Contractor's operations hereunder;

3. Comply with all laws, rules, and regulations, Federal, State, and Municipal, which are now, or in the future may become, applicable to Contractor, Contractor's business, equipment, and personnel engaged in operations covered by this instrument, or accruing out of the performance of such operations; and

4. Pay and satisfy any and all claims which may be asserted or assessed against Owner because of any infraction or violation of any Federal, State, or Municipal law, rule, or regulation, or for nonpayment of taxes, which are now, or in the future may become, applicable to Contractor, Contractor's business or personnel, arising from Contractor's operations hereunder, or operations of any subcontractor to whom Contractor may have sublet any phase of it;

B. Contractor and Owner agree that:

1. **Garner Environmental Services, Inc.** agrees to protect, defend, indemnify and hold harmless Owner, its officers, directors and employees, and any of Owner's contractors or subcontractors and their employees, from and against all claims, demands, causes of action of every kind and character without limit and without regard to the cause or causes thereof or the negligence or fault (active or passive) of any person or entity (including the sole, joint or concurrent negligence or fault of Owner on any theory), and any theory of strict liability and any defect of premises or unseaworthiness of any vessel (whether or not pre-existing the date of the Agreement) made, brought by or on behalf of **Garner Environmental Services, Inc.** employees, subcontractors or invitees or employees of such subcontractors or invitees, arising out of this Agreement on account of personal injury, illness or death.

2. Owner agrees to protect, indemnify and hold harmless **Garner Environmental Services, Inc.** its officers, directors and employees, and any of **Garner Environmental Services, Inc.** subcontractors and their employees from and against all claims, demands causes or action of every kind and character without limit and without regard to the cause or causes thereof or the negligence or fault (active or passive) of any person or entity (including the sole, joint or concurrent negligence or fault of **Garner Environmental Services, Inc.** on any theory), and any theory of strict liability and any defect of premises or the unseaworthiness of any vessel (whether or not pre-existing the date of the Agreement) made, brought by or on behalf of Owner's employees, subcontractors or invitees or employees of such subcontractors or invitees, arising out of this Agreement on account of personal injury, illness or death.

3. With respect to property damage sustained by **Garner Environmental Services, Inc.** or Owner or their employees, subcontractors, or invitees or employees of such kind and character shall be determined at law, except as otherwise expressly provided within this Agreement.

4. In the event that bodily injury, death or property damage is sustained by a person or entity not referred to above, the rights and obligations between the parties to this Agreement shall be determined at law, except as otherwise provided in this Agreement.

C. Contractor agrees to carry or will cause to be carried with an insurance company or companies satisfactory to Owner and authorized to do business in the State wherein work is to be performed for Owner by Contractor, insurance coverage with limits of not less than those set forth in the next succeeding paragraph hereof, such coverage to include Contractor's liability assumed under the indemnity and hold harmless provisions in this Section 6. A certificate of such coverage shall be furnished to Owner by Contractor's carrier. Such certificate shall contain an agreement that carrier shall not cancel such coverage without giving ten days notice to Owner.

Worker's Compensation and Employer's Liability Insurance covering all of Contractor's employees.

Comprehensive General Liability including Contractual Liability:

General Aggregate	\$1,000,000.00
Products-Comp.Ops Aggregate	\$1,000,000.00
Each Occurrence	\$1,000,000.00

Automobile Liability, including all owned, non-owned and hired automotive equipment used in connection with Contractor's operations hereunder:

Combined Single Limit	\$1,000,000.00
-----------------------	----------------

Pollution Legal Liability:

Each Occurrence	\$1,000,000.00
-----------------	----------------

Excess Liability (Umbrella Form):

Each Occurrence	\$4,000,000.00
Aggregate	\$4,000,000.00

Worker's Compensation and Employer's Liability Insurance covering all of Contractor's employees:

Each Accident	\$1,000,000.00
Disease-Policy Limit	\$1,000,000.00
Disease-Each Employee	\$1,000,000.00

D. In addition, for all work performed in the Gulf of Mexico, or in any other navigable waters, including but not limited to any bay, lake, river or stream, the following insurance requirements are applicable:

1. Endorsements to the Worker's Compensation and Employers' Liability Policy extending the policy to provide when applicable:
 - a. Federal Longshoremen's and Harbor Worker's Compensation Insurance and extended to the Outer Continental Shelf.
 - b. Extension of Coverage B to provide Employer's Liability under Admiralty jurisdiction including the Jones Act, with Marine and Voluntary Compensation endorsed for transportation, maintenance and wages with limits of not less than \$1,000,000.00 per occurrence.
 - c. In Rem Endorsement.
 - d. Extension of territorial limits to include the Gulf of Mexico.

2. Endorsements to the Comprehensive General Liability Policy extending the policy to provide:
 - a. Deletion of watercraft exclusion provision to cover all vessels not insured under a Protection and Indemnity Policy.
 - b. In Rem Endorsement.
 - c. Extension of territorial limits to include the Gulf of Mexico.

3. Hull and Machinery Insurance including collision liability equal at least to the full value of the vessel naming Owner as additional insured and providing adequate navigation limits to perform the work contracted hereunder.

4. Protection and Indemnity Insurance in an amount not less than the value of the vessel or \$200,000, whichever is greater, naming Owner as additional insured and providing adequate navigation limits to perform the work contracted hereunder. Contractor may cover Contractor's obligation for loss of life or bodily injury to the crew of the vessel by extension of the Worker's Compensation Policy under Paragraph C.1.b.

7. ACCIDENT REPORTS TO BE FURNISHED BY CONTRACTOR

Contractor shall furnish Owner a copy of Contractor's accident report covering each accident occurring on the premises covered by this contract during the performance of this contract.

8. RETENTION OF RECORDS

Contractor agrees to retain all pertinent books, payrolls, and records relating to work performed hereunder for a period of not less than three years after completion thereof, and Owner and its duly authorized representatives shall have access at all times to the books, payrolls, and records maintained by Contractor relating to any of the work performed hereunder, and shall have the right to audit books, payrolls, and records at any reasonable time or times.

9. CONFLICT WITH OTHER CONTRACTS OR UNDERTAKINGS

In the event there should be any conflict between the provisions of this contract and any filed work order, Contractor's work ticket, invoice, statement, purchase order, or any other type of written memoranda, or with any other contracts, whether written or oral, between Owner and Contractor pertaining to the subject matter hereof, the provisions of this contract shall control.

10. ASSIGNMENT OF CONTRACT

Should Contractor attempt to sublet or assign this contract without the written consent of Owner, this contract may be terminated at the option of the Owner.

11. NON-EXCLUSIVITY

Owner will use Contractor's services as Owner elects and nothing in this Agreement should be construed as a commitment to purchase services on the part of Owner. However, should Owner request by telephone or in writing Contractor's services, and acting on this request Contractor mobilize its equipment and personnel, and Owner subsequently terminates this request before services are performed, then Owner is obligated to those equipment and personnel fees, on a portal-to-portal basis, in accordance with Contractor's Rate Schedule.

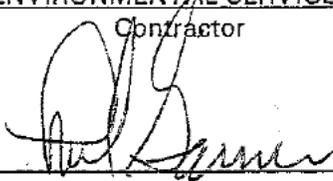
12. ACCEPTANCE OF CONTRACT

The foregoing contract is signed by the undersigned as Contractor, this _____ day of _____ 19____, subject to all of its terms and provisions, including the attached Certificate of Compliance, with the understanding that it will not be binding upon Owner until Owner has noted its acceptance, and with the further understanding that unless contract is thus executed by Owner, Contractor shall be in no manner bound by Contractor's signature hereto.

ACCEPTED:

GARNER ENVIRONMENTAL SERVICES, INC.

Contractor

Signature: 

By: ~~Nelson J. Fetgatter~~ LYNDAL D. GARNER

Title: ~~Vice-President Operations~~ PRESIDENT

LION OIL COMPANY

Owner

Signature: 

By: R.E. PERKINS

Title: Manager of Pipeline

LION OIL COMPANY

GARNER ENVIRONMENTAL SERVICES, INC.

ADDENDUM #1
MSA (July 15, 1994)

Lion Oil Company desires to clarify the above-referenced Master Service Agreement as contained herein. The first paragraph of the above-referenced MSA provides that the agreement is between Garner Environmental Services, Inc. and Lion Oil Company (the Parties). The Parties agree that Garner Environmental Services, Inc. will provide those services set forth in the Master Service Agreement for Lion Oil Company. The purpose of this letter is to evidence our mutual agreement that the referenced services agreement be amended to provide that in addition to Lion Oil Company, Garner Environmental Services, Inc. agrees to provide the services contemplated by the agreement to Lion Oil Company's subsidiary companies listed below, whether same be at Lion Oil Company's request in its capacity as administrative services provider to those subsidiary companies, or pursuant to a direct request for services by such companies. In terms of executing the contract, each of these companies is authorized to procure emergency response and general industrial service contracting in addition to and on behalf of Lion Oil Company. The companies include:

Lion Oil Trading and Transportation, Inc.
Paline Pipeline Company
Magnolia Pipeline Company
El Dorado Pipeline Company
J. Christy Construction Company

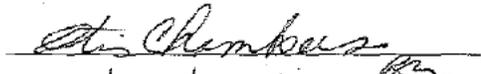
In witness whereof, the parties listed below have caused this agreement to be executed as of the 31 day of May, 2002.

WITNESS:


 FAITH LOUGHNER

GARNER ENVIRONMENTAL SERVICES, INC.

By:


 Otis Chambers

Title:

Executive Vice President

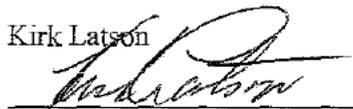
WITNESS:


 JOHN RYAN

LION OIL COMPANY

By:

Kirk Latson


 V.P. Product Distribution and Supply

ORIGINAL

GARNER ENVIRONMENTAL SERVICES, INC.

1717 West 13th Street
Deer Park, Texas 77536
(280) 930-1200
(800) 424-1716

RESPONSE EQUIPMENT SCHEDULE

Corporate	Response Equipment Schedule	Schedule
Operations		Rev. 08/01

BOOM EQUIPMENT									
Name of Manufacturer	Model Number	Boom Type Code	Invent Length (feet)	Skirt Size (in.)	Float Size (in.)	End Connector Type Code	Time to Deploy	Storage Location	Owner
Acme Products Co., Inc.	"OK CORRAL"	R	32,000	12	6	Z	6.0	Deer Park	Garner
Acme Products Co., Inc.	"OK CORRAL"	R	750	12	12	Z	6.0	Deer Park	Garner
Acme Products Co., Inc.	"SUPER-MINI"	R	200	4	2.5	BOLT	2.0	Deer Park	Garner
Acme Products Co., Inc.	"OK CORRAL"	R	8,700	12	6	Z	6.0	La Marque	Garner
Acme Products Co., Inc.	"OK CORRAL"	R	1,000	28	8	Z	2.0	La Marque	Garner
Acme Products Co., Inc.	"OK CORRAL"	R	1,400	34	8	Z	2.0	La Marque	Garner
Acme Products Co., Inc.	"SUPER-MINI"	R	50	4	2.5	BOLT	1.0	La Marque	Garner
Expandi	"EXPANDI"	SI	200	34	8	OT	2.0	La Marque	Garner
Petro Boom	"PETRO-BOOM"	R	1,400	34	8	Z	3.0	La Marque	Garner
Acme Products Co., Inc.	"OK CORRAL"	R	4,000	12	6	Z	2.5	Port Arthur	Garner
Acme Products Co., Inc.	"SUPER-MINI"	R	100	4	2.5	BOLT	0.5	Port Arthur	Garner
Acme Products Co., Inc.	"OK CORRAL"	R	7,000	12	6	Z	6.0	N. Orleans	Garner
Acme Products Co., Inc.	"OK CORRAL"	R	2,000	12	6	Z	2.0	Freeport	Garner
Acme Products Co., Inc.	"OK CORRAL"	R	3,000	12	6	Z	2.0	Fort Worth	Garner
Acme Products Co., Inc.	"SUPER-MINI"	R	450	4	2.5	BOLT	2.0	Fort Worth	Garner
Acme Products Co., Inc.	"OK CORRAL"	R	1,000	18	6	Z	2.0	San Antonio	Garner
Acme Products Co., Inc.	"SUPER-MINI"	R	300	4	2.5	BOLT	2.0	San Antonio	Garner

Corporate	Response Equipment Schedule	Schedule
Operations		Rev. 08/01

COMMUNICATIONS TYPE CODES

AF	Aviation Frequency	MF	Marine Frequency
CP	Cellular Phone	PAG	Pager
COM	Command Post	PHH	Portable Hand Held
MOD	Computer w/modem	SSB	Single Side Band
FAX	Facsimile	TP	Telephone
FBS	Fixed Base Station	OT	Other

COMMUNICATIONS EQUIPMENT

Name of Manufacturer	Model Number	Comm Type	Nr. of Units	Frequency	Band	Range (miles)	Field Tunable		Storage Location	Owner
							Yes	No		
Motorola	A05J	PAG	40	931.462	FM	150		✓	Deer Park	Garner
Motorola	F09LF	CP	30	152.840	FM	200		✓	Deer Park	Garner
Motorola	MTX900	PHH	10	896.901	FM	30		✓	Deer Park	Garner
26' Communications Trailer		COM	1				✓		Deer Park	Garner
Motorola	A05J	PAG	13	931.462	FM	150		✓	La Marque	Garner
NEXTEL		PHH	22					✓	La Marque	Garner
Motorola	A05J	PAG	19	931.462	FM	150		✓	Port Arthur	Garner
Motorola	F09LF	CP	8	152.840	FM	200		✓	Port Arthur	Garner
NEXTEL		PHH	12	896.901	FM	30		✓	Port Arthur	Garner
Motorola	MTX8000	PHH	6	896.901	FM	100		✓	N. Orleans	Garner
Nextel		CP	12					✓	Fort Worth	Garner

Corporate	Response Equipment Schedule	Schedule
Operations		Rev. 08/01

HEAVY EQUIPMENT RESPONSE VEHICLES

Name of Manufacturer	Heavy Equipment / Response Vehicle	Number of Units	Wide Load Permit Needed		Storage Location	Owner
			Yes	No		
Ford	Pick-up Truck, 1 ton, w/mobile phone	24		✓	Deer Park	Garner
Sooner	Emergency Response Trailer, 28'	1		✓	Deer Park	Garner
Sooner	Emergency Response Trailer, 32'	2		✓	Deer Park	Garner
Modern Mfg.	Spill Trailer, 16' Lo-Boy	3		✓	Deer Park	Garner
Unknown	Emergency Haz-Mat Response Van, 20'	1		✓	Deer Park	Garner
Mercedes-Benz	Automobile, Superintendent, w/mobile phone	1		✓	Deer Park	Garner
Falcon	Trailer, Drum Skimmer, 20', Stand-by/Rescue	1		✓	Deer Park	Garner
Ford	Pick-up Truck, 1 ton, w/mobile phone	10		✓	La Marque	Garner
Garner	Roll-Off Box, 20 yd ³	6		✓	La Marque	Garner
Sooner	Emergency Respons Trailer, 32'	1		✓	La Marque	Garner
Sooner	Boom Trailer, 28' Gooseneck	4		✓	La Marque	Garner
Modern Mfg.	Spill Trailer, 16' Lo-Boy	2		✓	La Marque	Garner
Ford	Pick-up Truck, 1 ton, w/mobile phone	7		✓	Port Arthur	Garner
Sooner	Emergency Response Trailer, 28'	1		✓	Port Arthur	Garner
Modern Mfg.	Trailer, Spoill Response, 16' Lo-Boy	1		✓	Port Arthur	Garner
Modern Mfg.	Trailer, Boom, Gooseneck, 24'	2		✓	Port Arthur	Garner
Gemini Cargo	Trailer, Ham-Mat, 19'	1		✓	Port Arthur	Garner
Garner	Trailer Cage, Ship to Shore, 8'	1		✓	Port Arthur	Garner
Garner	Roll-Off Box, 20 yd ³	7		✓	Port Arthur	Garner
Ford	Pick-up Truck, 1 ton, w/mobile phone	6		✓	N. Orleans	Garner
Modern Mfg.	Spill Trailer, 20' Lo-Boy	2		✓	N. Orleans	Garner

Corporate	Response Equipment Schedule	Schedule
Operations		Rev. 08/01

HEAVY EQUIPMENT RESPONSE VEHICLES

Name of Manufacturer	Heavy Equipment / Response Vehicle	Number of Units	Wide Load Permit Needed		Storage Location	Owner
			Yes	No		
Ford	Pick-up Truck, 1 ton, w/mobile phone	3		✓	Freeport	Garner
Modern Mfg.	Boom Trailer, 20' Lo-Boy	1		✓	Freeport	Garner
Modern Mfg.	Boom Trailer, 20' Lo-Boy	1		✓	Freeport	Garner
Ford	Pick-up Truck, 1 ton w/mobile phone	7		✓	Fort Worth	Garner
Freightliner	Truck, Bobtail	1		✓	Fort Worth	Garner
Kenworth	Truck, Tractor	1		✓	Fort Worth	Garner
ESP	Roll-Off Trailer, Double Hauler	1		✓	Fort Worth	Garner
Breco	Roll-Off Box, 20 yd ³	32		✓	Fort Worth	Garner
Breco	Roll-Off Box, 40 yd ³	1		✓	Fort Worth	Garner
Modern Mfg.	Trailer, Boat, Gooseneck, 3 deck	1		✓	Fort Worth	Garner
C&S Trailer	Trailer, 16', Flatbed	2		✓	Fort Worth	Garner
Wells Cargo	Emergency Response Trailer, 14'	1		✓	Fort Worth	Garner
Wells Cargo	Emergency Response Trailer, 16'	1		✓	Fort Worth	Garner
Sooner	Emergency Response Trailer, 28' Gooseneck	1		✓	Fort Worth	Garner
Kenworth	Emergency Response Trailer, 22', 4 door	1		✓	Fort Worth	Garner
Sooner	Flatbed Trailer, 24' Gooseneck	1		✓	Fort Worth	Garner
JCB	Backhoe, 4-Wheel Drive	1		✓	Fort Worth	Garner
Ford	Pick-up Truck, 1 ton w/mobile phone	2		✓	San Antonio	Garner
Breco	Roll-Off Box, 20 yd ³	7		✓	San Antonio	Garner
Wells Cargo	Emergency Response Trailer, 16'	1		✓	San Antonio	Garner
Modern Mfg.	Trailer, Roll-Off	1		✓	San Antonio	Garner
Modern Mfg.	Trailer, Boat, 3 deck	1		✓	San Antonio	Garner
C&S Trailer	Trailer, 16', Flatbed	1		✓	San Antonio	Garner

Corporate	Response Equipment Schedule	Schedule
Operations		Rev. 08/01

MISCELLANEOUS BOOM EQUIPMENT

Name of Manufacturer	Model Number	Equipment Type	Quantity	Storage Location	Owner
Norfloat	A2	Buoy, Anchor Marker, Inflatable, 18" dia.	30	Deer Park	Garner
Polycord	600x¼	Rope, Polypropylene, ¼" x 600'	20	Deer Park	Garner
Polycord	600x½	Rope, Polypropylene, ½" x 600'	20	Deer Park	Garner
Polycord	600x¾	Rope, Polypropylene, ¾" x 600'	2	Deer Park	Garner
U.S. Anchor Mfg., Inc.	18#	Anchor, Galvanized Steel, 18 lb., Danforth Style	50	Deer Park	Garner
U.S. Anchor Mfg., Inc.	22#	Anchor, Galvanized Steel, 22 lb., Danforth Style	11	Deer Park	Garner
U.S. Anchor Mfg., Inc.	40#	Anchor, Galvanized Steel, 40 lb., Danforth Style	11	Deer Park	Garner
U.S. Anchor Mfg., Inc.	55#	Anchor, Galvanized Steel, 55 lb., Danforth Style	4	Deer Park	Garner
U.S. Anchor Mfg., Inc.	75#	Anchor, Galvanized Steel, 75 lb., Danforth Style	2	Deer Park	Garner
U.S. Anchor Mfg., Inc.	18#	Anchor, Galvanized Steel, 18 lb., Danforth Style	1	La Marque	Garner
U.S. Anchor Mfg., Inc.	22#	Anchor, Galvanized Steel, 22 lb., Danforth Style	14	La Marque	Garner
U.S. Anchor Mfg., Inc.	40#	Anchor, Galvanized Steel, 40 lb., Danforth Style	5	La Marque	Garner
U.S. Anchor Mfg., Inc.	75#	Anchor, Galvanized Steel, 75 lb., Danforth Style	39	La Marque	Garner
U.S. Anchor Mfg., Inc.	100#	Anchor, Galvanized Steel, 75 lb., Danforth Style	4	La Marque	Garner
U.S. Anchor Mfg., Inc.	18#	Anchor, Galvanized Steel, 18 lb., Danforth Style	5	N. Orleans	Garner
U.S. Anchor Mfg., Inc.	22#	Anchor, Galvanized Steel, 22 lb., Danforth Style	20	N. Orleans	Garner

Corporate	Response Equipment Schedule	Schedule
Operations		Rev. 08/01

MISCELLANEOUS EQUIPMENT						
Name of Manufacturer	Heavy Equipment / Response Vehicles	Number of Units	Wide Load Permit Needed		Storage Location	Owner
			Yes	No		
Drager	Pump & Large Variety of Tubes	4		✓	Deer Park	Garner
Inficon	Portable Gas Chromatograph/Mass Spectrometer	1		✓	Deer Park	Garner
Isuzu	Diesel Steam Cleaner, 20 hp	1		✓	Deer Park	Garner
MSA	4-Gas Monitor, LEL, H ₂ S, O ₂ , CO	6		✓	Deer Park	Garner
MSA	Personnel Sampling Pump	5		✓	Deer Park	Garner
Rae	5-Gas Photo-Ionization Detector	4		✓	Deer Park	Garner
Rae	Multi-Rae Photo-Ionization Detector	4		✓	Deer Park	Garner
Rae	Personnel/Area Photo-Ionization Detector	7		✓	Deer Park	Garner
Scott & MSA	Self-Contained Breathing Apparatus	12		✓	Deer Park	Garner
Honda	Generator / Light Plant	2		✓	Deer Park	Garner
Honda	Generator	1		✓	Deer Park	Garner
Drager	Accuro Pump	1		✓	Deer Park	Garner
Unknown	Weed Eater	6		✓	Deer Park	Garner
Unknown	Chain Saw	2		✓	Deer Park	Garner
Unknown	Scare Gun, Bird	1		✓	Deer Park	Garner
MSA	4-Gas Meter	3		✓	La Marque	Garner
Honda	Generator / Light Plant	2		✓	La Marque	Garner
Drager	Accuro Pump	1		✓	La Marque	Garner
Rae	Photo-Ionization Detector	1		✓	La Marque	Garner
MSA	4-Gas Meter	1		✓	Port Arthur	Garner
Drager	Accuro Pump	1		✓	Port Arthur	Garner
Rae	Photo-Ionization Detector	1		✓	Port Arthur	Garner
Ingersol-Rand / Power Profile	Air Compressor, 3.5 hp	2		✓	Port Arthur	Garner

Corporate	Response Equipment Schedule	Schedule
Operations		Rev. 08/01

MISCELLANEOUS EQUIPMENT						
AIM	4-Gas Monitor	2	✓	N. Orleans	Garner	
Draeger	Accuro Pump	2	✓	N. Orleans	Garner	
Draeger	CMS Meter	1	✓	N. Orleans	Garner	
Various	Weedeater	5	✓	N. Orleans	Garner	
Various	Generator, 4 kw	3	✓	N. Orleans	Garner	
Rae	Mini-Rae 2000 Portable VOC Meter	2	✓	N. Orleans	Garner	
Quest	Single Gas Personal Meter	1	✓	N. Orleans	Garner	
MSA	Escort Particulate Air Monitor	1	✓	N. Orleans	Garner	
Sper Scientific	ph Meter	1	✓	N. Orleans	Garner	
Dexsil	PetroFlag Hydrocarbon Test Kit	1	✓	N. Orleans	Garner	
Various	Steam Cleaner	3	✓	N. Orleans	Garner	
Campbell/Hausfeld	Air Compressor, 10.3 cfm	2	✓	N. Orleans	Garner	
Various	Light Stand, Portable	2	✓	N. Orleans	Garner	
Coppus	Coppus Blower	1	✓	N. Orleans	Garner	
Casio	Digital Camera	1	✓	N. Orleans	Garner	
Paulan	Chain Saw	1	✓	N. Orleans	Garner	
Chlorine Institute	"C" Kit	1	✓	N. Orleans	Garner	
Various	Self-Contained Breathing Apparatus (SCBA)	9	✓	N. Orleans	Garner	
Betz	Tank Truck Emergency Transfer Valve	1	✓	N. Orleans	Garner	
Toftejorg	Tank/Railcar Wash Head Systeme	1	✓	N. Orleans	Garner	
	Tank/Railcar Injector Vessel	1	✓	N. Orleans	Garner	
	Tank/Railcar Manifold	1	✓	N. Orleans	Garner	
	Air Horn, 6"	1	✓	N. Orleans	Garner	
	Decontamination Pool, 16' x 55'	1	✓	N. Orleans	Garner	
	Fan, Ventilation, 48"	1	✓	N. Orleans	Garner	
	Fan, Ventilation, 16" Port-A-Cool with water mister	1	✓	N. Orleans	Garner	
	Drop Light, Explosion Proof, 100w	2	✓	N. Orleans	Garner	
Homelite	Blower, Hand	6	✓	Fort Worth	Garner	
Ryobi	Weedeater	6	✓	Fort Worth	Garner	

Corporate	Response Equipment Schedule	Schedule
Operations		Rev. 08/01

MISCELLANEOUS EQUIPMENT						
Honda	Pressure Washer, 2500 psi	2	✓	Fort Worth	Garner	
Minuteman	Hepa Vacuum	3	✓	Fort Worth	Garner	
ARO	M2 Poly Pump	3	✓	Fort Worth	Garner	
Craftsman	Drum Head Vacuum	2	✓	Fort Worth	Garner	
MSA	Self-Contained Breathing Apparatus	8	✓	Fort Worth	Garner	
MSA	4-Gas Meter	4	✓	Fort Worth	Garner	
Orion	pH Meter	1	✓	Fort Worth	Garner	
Rae	Photo-Ionization Detector	3	✓	Fort Worth	Garner	
Drager	CMS Unit	2	✓	Fort Worth	Garner	
Drager	CMS Chip Meter	1	✓	Fort Worth	Garner	
Environmental Instruments	Photo Ionization Detector	1	✓	Fort Worth	Garner	
Multiquip	Generator, 3600	2	✓	Fort Worth	Garner	
Honda	Generator, 6500	2	✓	Fort Worth	Garner	
MSA	Escape Pack	4	✓	Fort Worth	Garner	
Coppus	Ventilation Fan	3	✓	Fort Worth	Garner	
Drager	Accuro Pump	2	✓	Fort Worth	Garner	
DBI/SALA	Tripod w/retrieval device	3	✓	Fort Worth	Garner	
AMS	Subsurface Sample Equipment	2	✓	Fort Worth	Garner	
Kidde	Fire Extinguisher, ABC	12	✓	Fort Worth	Garner	
Allis Chalmers	Forklift	1	✓	Fort Worth	Garner	
Kappler	Personal Protective Equipment, Level A Suit	10	✓	Fort Worth	Garner	
Gage Equipment	Pressure Washer, 3,500 psi, heated	1	✓	Fort Worth	Garner	
MSA	4-Gas Meter	2	✓	San Antonio	Garner	
Minuteman	HEPA Vacuum	1	✓	San Antonio	Garner	
MSA	Self-Contained Breathing Apparatus	4	✓	San Antonio	Garner	
Orion	ph Meter	1	✓	San Antonio	Garner	
Rae	Photo-Ionization Detector	1	✓	San Antonio	Garner	

Corporate	Response Equipment Schedule	Schedule
Operations		Rev. 08/01

PUMP CODES		DRIVE CODES	
A	Auger/Screw	D	Diesel
C	Fire	E	Electric
P	Parastolic	G	Gasoline
R	Reciprocating	H	Hydraulic
I	Rotary/Flexible Impeller	P	Pneumatic
OT	Other	OT	Other

PUMP EQUIPMENT								
Name of Manufacturer	Model Number	Pump Type Code	Drive Type Code	Suction/ Disch Size (inches)	Mfg. Pump Rate (gpm)	Quantity	Storage Location	Owner
Acme Products Co., Inc.	FS-150A	I	G	1.5	275	3	Deer Park	Garner
Honda	WXT-20	C	G	2.0	180	3	Deer Park	Garner
Wilden	Model M.	OT	P	3.0	240	2	Deer Park	Garner
Yanmar	LD-40/2	C	D	2.0	180	9	Deer Park	Garner
Honda	WXT-20	C	G	2.0	180	7	La Marque	Garner
Wilden	Model M	OT	P	3.0	240	7	La Marque	Garner
Acme Products Co., Inc.	FS-150A	I	G	1.5	275	1	Port Arthur	Garner
Honda	WXT-20	C	G	2.0	180	2	Port Arthur	Garner
Yanmar	LD-40/3	C	D	2.0	200	1	Port Arthur	Garner
Versa-Matic		OT	p	2.0		1	Port Arthur	Garner
Versa-Matic		OT	p	1.5		1	Port Arthur	Garner
Honda	EPT2	C	G	3.0		1	New Orleans	Garner
Honda	FLOTO	C	G	2.0		2	New Orleans	Garner
Wisconsin/Multi Quip		C	D	3.0	85	1	New Orleans	Garner
Yamada	POLY	C	P	3.0		1	New Orleans	Garner
Various		C	D	2.0	200	5	New Orleans	Garner
Various		C	G	2.0	190	2	New Orleans	Garner

Corporate	Response Equipment Schedule	Schedule
Operations		Rev. 08/01

RESPONSE BOAT TYPE CODES		TRANSPORTATION METHOD CODES	
BAY	Bay Waters	NT	Normal Trailer
JB	Jon Boat	WO	Water Only
LFB	Large Flat Bottom	WL	Wideload Trailer
OFF	Offshore	OT	Other
PRO	Protected Waters		
TC	Towing Capable		
OT	Other		

RESPONSE BOATS										
Name of Manufacturer	Model Number	Boat Type Code	Horse Power	Normal Crew Size	Length/Beam	Draft Limit	Number of Boats	Transport Method Code	Storage Location	Owner
Alumaweld	1650	JB	30	3	16'6"	1'	4	NT	Deer Park	Garner
Alumaweld	21	LFB	90	3	21'6"	2'	1	NT	Deer Park	Garner
Bayhawk	21	BAY	90	3	21'6"	3'	3	NT	Deer Park	Garner
Deck Barge Boat		OT	2-200		30'10"		1	WL	Deer Park	Garner
Alumaweld	1650	JB	30	3	16'6"	1'	4	NT	La Marque	Garner
Custom Boat Mfg.	1649R	JB	25	2	16'6"	2'	1	NT	La Marque	Garner
Monarch	21	BAY	300	2	21'6"	2'	1	NT	La Marque	Garner
Alumaweld	1650	JB	30	2	16'6"	1'	5	NT	Port Arthur	Garner
Alumaweld	20	BAY	4	3	20'0"	4'	1	NT	Port Arthur	Garner
Alumaweld	1650	JB	25	2	14'0"	2"	1	NT	Port Arthur	Garner
Air Boat/Trial Boss	20	LFB	500	2	20'0"	6"	1	NT	Port Arthur	Garner
Custom Boat Mfg.	1650	JB	25	3	16'6"	1'	4	NT	New Orleans	Garner
Deck Barge Boat		OT	150		30'10"		1	WL	New Orleans	Garner
Duracraft	21	LFB	40	3	21'6"	2'	1	NT	New Orleans	Garner
Pirogue		OT	0	1	12'2"	3"	1	NT	New Orleans	Garner
Various		JB	25	1	12'3"	1'	2	NT	New Orleans	Garner

Corporate	Response Equipment Schedule	Schedule
Operations		Rev. 08/01

SKIMMER TYPE CODES			
FS	Floating Suction	HIP	Hydrodynamic Inclined Plane
IV	Induced Vortex	OB	Oleophilic Belt
OD	Oleophilic Disk	OR	Oleophilic Rod
PW	Paddle-Wheel	SK	Sock
W	Weir	OT	Other

SKIMMER EQUIPMENT								
Name of Manufacturer	Model Number	Skimmer Type Code	Number of Units	Mfg. Recovery Rate (gpm)	Hose Size Suction/ Discharge (inches)	Time to Deploy	Storage Location	Owner
Acme Products Co., Inc.	FS400ASK-39T	W	3	275	3.0	1.5	Deer Park	Garner
Containment Systems, Inc.	MW-41	OT	1	35			Deer Park	Garner
DiscOil Company	DISCOIL	OD	1	70	2.0	.5	Deer Park	Garner
Crucial Inc.	1D18P-23	OT	2	25	2.0	.5	Deer Park	Garner
Crucial Inc.	1D18P-36	OT	1	36	2.0	.5	Deer Park	Garner
Marco	Sidewinder 14	OB	1	70		.5	Deer Park	Garner
Acme Products Co., Inc.	FS400ASK-39T	W	4	275	3.0	1.0	La Marque	Garner
DiscOil Company	DISCOIL	OD	1	70	2.0	.5	La Marque	Garner
Crucial Inc.	1D18P-23	OT	2	25	2.0	.5	La Marque	Garner
Acme Products Co., Inc.	FS400ASK-39T	W	1	275	3.0	.5	Port Arthur	Garner
Crucial Inc.	1D18P-23	OT	1	25	2.0	.5	Port Arthur	Garner
De Smithske (DESMI)	D-2	FS	2	500	6.0	1.5	Port Arthur	Garner
DiscOil Company	DISCOIL	OD	1	70	2.0	.5	New Orleans	Garner
Douglas Engineering	4200SH Skim-Pak	FS	1	5 - 68	2.0	.5	New Orleans	Garner
Marco	Harbor 28	OB	1	70		.5	New Orleans	Garner
Elastec	Mini Max	OT	1	20			New Orleans	Garner
De Smithske (DESMI)	D-2	FS	1	500	6.0	1.5	New Orleans	Garner/DEMS
Acme Products Co., Inc.	FS400ASK-39T	W	1	275	3.0	1.0	Fort Worth	Garner

Corporate	Response Equipment Schedule	Schedule
Operations		Rev. 08/01

SORBENT TYPE CODE		COMPOSITION CODE	
B	Boom	M	Mineral
PAD	Pad	NO	Natural Organic
PT	Particulate	S	Synthetic
ST	Sheet	OT	Other
SW	Sweep		
OT	Other		

SORBENTS										
Name of Manufacturer	Model Number	Sorbeht Type Code	Composition Type Code	Normal Inventory	Special Appl. Equip. Needed		Special Rcvg. Equip. Needed		Storage Location	Owner
					Yes	No	Yes	No		
Int'l Permalite Corp.	GES-DICA18	PT	MS	1500		✓		✓	Deer Park	Garner
Oil Mop, Inc.	OS-15	OT	S	1000		✓		✓	Deer Park	Garner
Complete Environmental	GES-P100	PAD	S	1000		✓		✓	Deer Park	Garner
Complete Environmental	GES-P200	PAD	S	250		✓		✓	Deer Park	Garner
Complete Environmental	GES-EP100	PAD	S	500		✓		✓	Deer Park	Garner
Complete Environmental	GES-P500	PAD	S	150		✓		✓	Deer Park	Garner
Complete Environmental	GES-B510	B	S	300		✓		✓	Deer Park	Garner
Complete Environmental	GES-B810	B	S	500		✓		✓	Deer Park	Garner
Complete Environmental	GES-R144	ST	S	150		✓		✓	Deer Park	Garner
Complete Environmental	GES-SW100	SW	S	300		✓		✓	Deer Park	Garner
Complete Environmental	GES-PART25	PT	S	10		✓		✓	Deer Park	Garner
Int'l Permalite Corp.	GES-DICA18	PT	MS	550		✓		✓	La Marque	Garner
Oil Mop, Inc.	OS-15	OT	S	150		✓		✓	La Marque	Garner
Complete Environmental	GES-P100	PAD	S	250		✓		✓	La Marque	Garner
Complete Environmental	GES-P200	PAD	S	100		✓		✓	La Marque	Garner
Complete Environmental	GES-P50	PAD	S	100		✓		✓	La Marque	Garner
Complete Environmental	GES-B510	B	S	100		✓		✓	La Marque	Garner

Corporate	Response Equipment Schedule	Schedule
Operations		Rev. 08/01

SORBENTS										
Name of Manufacturer	Model Number	Sorbent Type Code	Composition Type Code	Normal Inventory	Special Appl. Equip. Needed		Special Rcvg. Equip. Needed		Storage Location	Owner
					Yes	No	Yes	No		
Complete Environmental	GES-B810	B	S	125		✓		✓	La Marque	Garner
Complete Environmental	GES-R144	ST	S	125		✓		✓	La Marque	Garner
Complete Environmental	GES-SW100	SW	S	150		✓		✓	La Marque	Garner
Complete Environmental	GES-PART25	P	S	10		✓		✓	La Marque	Garner
Int'l Permalite Corp.	GES-DICA18	PT	MS	500		✓		✓	Port Arthur	Garner
Oil Mop, Inc.	OS-15	OT	S	150		✓		✓	Port Arthur	Garner
Complete Environmental	GES-P100	PAD	S	100		✓		✓	Port Arthur	Garner
Complete Environmental	GES-P200	PAD	S	75		✓		✓	Port Arthur	Garner
Complete Environmental	GES-B510	B	S	50		✓		✓	Port Arthur	Garner
Complete Environmental	GES-B810	B	S	50		✓		✓	Port Arthur	Garner
Complete Environmental	GES-R144	ST	S	25		✓		✓	Port Arthur	Garner
Complete Environmental	GES-SW100	SW	S	50		✓		✓	Port Arthur	Garner
Int'l Permalite Corp.	GES-DICA18	PT	MS	600		✓		✓	New Orleans	Garner
Oil Mop, Inc.	OS-15	OT	S	250		✓		✓	New Orleans	Garner
Complete Environmental	GES-P100	PAD	S	325		✓		✓	New Orleans	Garner
Complete Environmental	GES-P200	PAD	S	200		✓		✓	New Orleans	Garner
Complete Environmental	GES-EP100	PAD	S	500		✓		✓	New Orleans	Garner
Complete Environmental	GES-B510	B	S	100		✓		✓	New Orleans	Garner
Complete Environmental	GES-B810	B	S	150		✓		✓	New Orleans	Garner
Complete Environmental	GES-R144	ST	S	50		✓		✓	New Orleans	Garner
Complete Environmental	GES-SW100	SW	S	100		✓		✓	New Orleans	Garner

Corporate	Response Equipment Schedule	Schedule
Operations		Rev. 08/01

SORBENTS										
Name of Manufacturer	Model Number	Sorbent Type Code	Composition Type Code	Normal Inventory	Special Appl. Equip. Needed		Special Rcvg. Equip. Needed		Storage Location	Owner
					Yes	No	Yes	No		
Int'l Permalite Corp.	GES-DICA18	PT	MS	150		✓		✓	Fort Worth	Garner
Complete Environmental	GES-P100	PAD	S	75		✓		✓	Fort Worth	Garner
Complete Environmental	GES-P200	PAD	S	20		✓		✓	Fort Worth	Garner
Complete Environmental	GES-B810	B	S	30		✓		✓	Fort Worth	Garner
Complete Environmental	GES-B510	B	S	20		✓		✓	Fort Worth	Garner
Complete Environmental	GES-SW100	SW	S	10		✓		✓	Fort Worth	Garner
Int'l Permalite Corp.	GES-DICA18	PT	MS	50		✓		✓	San Antonio	Garner
Complete Environmental	GES-P100	PAD	S	50		✓		✓	San Antonio	Garner
Complete Env.	GES-P200	PAD	S	10		✓		✓	San Antonio	Garner
Complete Environmental	GES-B810	B	S	25		✓		✓	San Antonio	Garner
Complete Environmental	GES-B510	B	S	10		✓		✓	San Antonio	Garner
Complete Environmental	GES-SW100	SW	S	5		✓		✓	San Antonio	Garner

GARNER ENVIRONMENTAL SERVICES, INC.

**1717 West 13th Street
Deer Park, Texas 77536
(281) 930-1200
(800) 424-1716**

**RESPONSE RATE SCHEDULE
DOMESTIC**

Corporate	Response Rate Schedule Domestic	Schedule
Operations		Rev. January 2002

Tables of Contents

SPILL PERSONNEL PHONE LIST	iii
DEER PARK	iii
Spill Response	iii
Haz-Mat Incidents	iii
Dispatcher	iii
PORT ARTHUR	iii
LA MARQUE/GALVESTON	iii
FORT WORTH	iii
NEW ORLEANS	iii
SAN ANTONIO	iii
Automotive Equipment	iv
Equipment Decontamination / Washout	iv
Haz-Mat Rates	iv
Insurance	iv
Personnel	iv
Replacement of Damaged or Contaminated Equipment	iv
Roll-Off Boxes	iv
Stand-By Rates	v
Subcontract Services / Third-Party Services	v
Taxes	v
Terms	v
Place of Performance	v
Travel, Lodging and Per Diem	vi
PERSONNEL	1
EQUIPMENT	1
Automotive	1
Communications Equipment	2
Containment Boom	2
Marine Equipment	3
Miscellaneous	3
Monitoring	4
Personal Protective Equipment	5
Boots	5

Corporate	Response Rate Schedule Domestic	Schedule
Operations		Rev. January 2002

Gloves	5
Respiratory Protection	5
Pumps and Hoses	6
Sampling and Testing	6
Skimmers	7
MATERIAL	7
Chemicals	7
Miscellaneous	7
Sorbent Material	8
EQUIPMENT, MATERIAL AND SUPPLIES AT COST PLUS	9

Corporate	Response Rate Schedule Domestic	Schedule
Operations		Rev. January 2002

SPILL PERSONNEL PHONE LIST

	<u>HOME</u>	<u>PAGER</u>	<u>MOBILE</u>
DEER PARK – Office / Phone: (281) 930-1200 / (800) 424-1716 Fax: (281) 478-0296			
Spill Response			
John Pavlicek	(b) (6)	(888) 278-8146	(713) 817-1395
Clyde McKissack	(b) (6)	(281) 322-5527	(713) 724-4862
Seddrick Taylor	(b) (6)	(281) 322-0295	
David Asher	(b) (6)	(281) 322-5506	(281) 898-3922
Haz-Mat Incidents			
John Temperilli	(b) (6)	(877) 295-0440	(713) 254-7985
Mike Carpenter	(b) (6)	(281) 322-0089	(281) 728-5745
Mikie Sopczak	(b) (6)	(281) 322-1660	(713) 823-3867
Dispatcher			
Bruce Dumesnil	(b) (6)	(281) 322-5623	(713) 252-2262
PORT ARTHUR – Office / Phone: (409) 983-5646 / (800) 983-7634 Fax: (409) 983-5851			
Elbert Simons	(b) (6)	(409) 723-7772	(409) 963-7994
Tony Waldrop	(b) (6)	(409) 723-7774	(409) 718-6420
Curtis Galloway	(b) (6)	(409) 933-7101	(409) 766-0428
LA MARQUE/GALVESTON – Office / Phone: (409) 935-0308 / (800) 935-0308 Fax: (409) 935-0678			
Kim Albright	(b) (6)	(888) 509-2929	(409) 682-3623
Ricky Ybarra	(b) (6)	(409) 933-7172	(409) 682-3686
FORT WORTH – Office / Phone: (817) 535-7222 / (888) 654-0111 Fax: (817) 535-8187			
J. Saizer	(b) (6)	(888) 983-0512	(817) 614-2823
Kevin Brant	(b) (6)	(888) 856-8397	(817) 614-5983
NEW ORLEANS – Office / Phone: (504) 254-2444 / (800) 975-2444 Fax: (504) 254-3004			
Kenny Sconza	(b) (6)	(504) 423-9940	(504) 453-4143
Larry Fonte	(b) (6)	(504) 423-9941	(504) 722-2665
Sammy Jones	(b) (6)	(504) 423-9942	(504) 453-4144
Walter Diamond	(b) (6)	(504) 423-9944	(504) 722-6814
SAN ANTONIO – Office / Phone: (888) 818-5310 Fax: (210) 496-5312			
Todd Johnson	(b) (6)	(888) 702-1453	(210) 260-1714
Brent Camfield	(b) (6)	(888) 278-3197	(210) 219-7436

Corporate	Response Rate Schedule Domestic	Schedule
Operations		Rev. January 2002

Automotive Equipment

Automotive Equipment Hourly Rates charges are portal to portal. A four (4) hour minimum time will be charged on all call-outs. A mileage charge of \$0.50 per mile after the first 50 miles will be added for all automotive equipment, except for automobiles and pick-up trucks which will have a mileage charge of \$0.35 per mile added.

Equipment Decontamination / Washout

Time and Material charges are portal to portal and will continue through decontamination and/or washout of any and all equipment used on the job.

Haz-Mat Rates

Haz-Mat rates will be charged when the material being dealt with has a hazard rating of two or greater on the NFPA 704 labeling system or hazardous material identifying system, or if a job requires the use of respiratory protection.

Insurance

The rates in this RATE SCHEDULE include insurance coverage for Worker's Compensation, General Liability, Pollution and Automobile Liability. A Certificate of Insurance will be forwarded upon request. These rates do not include work performed under the U.S. Longshoremen's and Harbor Workers Act (33 USC ss 901-950). For work performed under this statute, an additional 69% surcharge per \$100.00 of wages will be assessed on labor **only**.

Personnel

Experienced consulting, supervisory, technical instructor and equipment operating personnel are available for complete emergency spill response and spill cleanup operations and vacuum service, 24 hours a day, 7 days a week. Normal hours of operation are from 0730 (7:30 a.m.) through 1600 (4:00 p.m.) daily, Monday through Friday.

All labor charges will be in accordance with Garner Environmental Services, Inc. service receipts. Charges for personnel are portal-to-portal. Garner Environmental Services, Inc. will invoice for personnel and the time required to mobilize, service, repair, and restock all vehicles and equipment used in the performance of the services for customer. Overtime for personnel will be charged at time and a half between 1600 (4:00 pm) through 0730 (7:30 am) Monday through Thursday; weekends from 1600 (4:00 p.m.) Friday through 0730 (7:30 am) Monday. **DOUBLE TIME RATES** will be charged for all National Holidays. **4-Hour Minimum Service Charge On All Labor Call-Outs.**

In the event Garner Environmental Services, Inc. responds to a request from Customer and/or on behalf of Customer for record gathering and/or litigation support services, Customer will pay for personnel provided and/or requested in the amount corresponding to the personnel designation in the rate sheet.

Replacement of Damaged or Contaminated Equipment

If, during performance of a service and/or services for a customer, equipment and/or material sustain damage which renders the equipment and/or material beyond repair or renders decontamination impossible, said equipment and/or material will be subject to a replacement charge at Garner Environmental Services, Inc.'s cost plus 15% unless said damage was sustained as a result of misuse by Garner Environmental Services, Inc. personnel.

Roll-Off Boxes

Roll-Off Box delivery and pickup charges vary according to the distance from the site location. The cost for roll-off box liners is \$50.00 each. Box Liners are not mandatory, but if the Roll-Off Box requires cleaning at the end of the rental period, the customer will incur the cleaning charges.

Corporate	Response Rate Schedule Domestic	Schedule
Operations		Rev. January 2002

Stand-By Rates

Stand-By Rates will be equal to the daily rates in this schedule unless otherwise agreed to in writing on a case-by-case basis. Full rates will apply for personnel and per diem.

Subcontract Services / Third-Party Services

When Garner Environmental Services, Inc.'s equipment is available, Garner Environmental Services, Inc. will use and bill Customer for said equipment at rates published in the rate schedule. For any item that is identified on Garner Environmental Services, Inc.'s rate sheet and which Garner acquires through or from a third party vendor or supplier, Customer will pay to Garner Environmental Services, Inc. the higher of Garner Environmental Services, Inc.'s rate or Garner Environmental Services, Inc.'s cost plus a 20% handling charge.

A 20% handling charge will apply and be invoiced for all shipping and transportation of equipment, materials and goods regardless of whether such equipment, materials and goods appear on Garner Environmental Services, Inc.'s rate schedule. In addition, for all items not listed on Garner Environmental Services, Inc.'s rate schedule, including but not limited to personnel, equipment, materials and goods, laboratory services, testing services, damage waivers and/or other services, said items will be billed at Garner Environmental Services, Inc.'s cost plus a 20% handling charge.

Cost, as used herein, is defined as the amount invoiced to Garner Environmental Services, Inc. by a third-party supplier of material and/or goods and/or material and/or labor and/or equipment and/or services.

Taxes

All domestic federal, state and municipal taxes, except income taxes and ad-valorem taxes, now and hereinafter imposed with respect to services rendered, to rental equipment, to the processing, manufacture, repair, and to the delivery and transportation of equipment and supplies will be added to and become part of the total price payable by the Customer. If a Customer claims an exemption from payment of Texas Sales and Use Tax, the Customer will be required to render an Exemption Certificate or a Resale Certificate to Garner Environmental Services, Inc. for said exemption to apply to the services rendered. If for any reason the services rendered result in the assessment of foreign income taxes, excise taxes, or other fees alleged as owing to a foreign state or government, the Customer will pay directly the amount of any assessment or fee. In the event Company pays any such foreign tax or fee directly, Customer will promptly reimburse Company for same.

Terms

The term of payment for all invoices is *Net 30 Days* from the date of invoice. The balance of any invoice not timely paid will accrue a finance charge computed at the periodic rate of one and one-half percent (1.5%) per month (18% per annum) beginning on the thirty-first (31st) day from the date of the invoice. Customer is obligated to make payment to Garner Environmental Services, Inc. at its principal office at 1717 West 13th Street, Deer Park, TX 77536 in Harris County, Texas.

Place of Performance

The procurement of Garner Environmental Services, Inc.'s services may not be in the same county as the work site area. Customer is obligated to make payment to Garner Environmental Services, Inc. in Harris County, Texas for services provided. Because this agreement has been procured in Harris County, Texas and is being managed and administered from Garner Environmental Services, Inc.'s central office in Harris County, Texas, this agreement is being performed in Harris County, Texas. The validity, interpretation and performance of the services and payment and the contents herein are to be interpreted and enforced pursuant to the laws of the State of Texas and any suit in connection herewith will be filed in Harris County, Texas.

Corporate	Response Rate Schedule Domestic	Schedule
Operations		Rev. January 2002

Travel, Lodging and Per Diem

For all employees who do not reside in the local commuting area for the work site, Garner Environmental Services, Inc. will be reimbursed for costs incurred for employee travel to and from the work site on the basis of Garner Environmental Services, Inc.'s incurred costs plus 20% for all commercial transportation. A minimum Per Diem charge of \$90.00 per day for all employees who do not reside in the local commuting area of the work site will be due for each day that such employee is present in the locale of the work site.

Corporate	Response Rate Schedule Domestic	Schedule
Operations		Rev. January 2002

HOUSTON - FORT WORTH - LaMARQUE - PORT ARTHUR - SAN ANTONIO - NEW ORLEANS

PERSONNEL

		Hourly Rate	
		Regular	Overtime
PERS-1001	Project/Operations Manager	125.00	187.50
PERS-1002	Health & Safety Manager	100.00	150.00
PERS-1003	Site Manager/Superintendent	70.00	105.00
PERS-1004	Site Safety Officer	55.00	82.50
PERS-1005	Supervisor	50.00	75.00
PERS-1005-HM	Supervisor, Haz-Mat	75.00	112.50
PERS-1006	EMT / Paramedics	45.00	67.50
PERS-1007	Foreman	40.00	60.00
PERS-1007-HM	Foreman, Haz-Mat	55.00	82.50
PERS-1008	Industrial Hygiene Supervisor	55.00	82.50
PERS-1009	Industrial Hygiene Technician	45.00	67.50
PERS-1010	Mechanic	40.00	60.00
PERS-1011	Rescue Supervisor	55.00	82.50
PERS-1012	Rescue Technician	50.00	75.00
PERS-1018	Rescue Attendant	45.00	67.50
PERS-1013	Resource Coordinator	40.00	60.00
PERS-1014	Operator, Heavy Equipment	40.00	60.00
PERS-1014-HM	Operator, Heavy Equipment, Haz-Mat	55.00	82.50
PERS-1015	Operator, Response Equipment	35.00	52.50
PERS-1015-HM	Operator, Response Equipment, Haz-Mat	50.00	75.00
PERS-1016	Technician	27.00	40.50
PERS-1016-HM	Technician, Haz-Mat	45.00	67.50
PERS-1016-TO	Technician/Operator	35.00	52.50
PERS-1016-TS	Technician, Sampling	45.00	67.50
PERS-1017	Field Clerk	30.00	45.00

EQUIPMENT

Automotive Equipment

		Hourly Rate
AUTO-1001	Super Sucker, 80 bbl Capacity (See Note)	125.00
AUTO-1002	Cyclone Unit	50.00
AUTO-1003	Vacuum Truck, 80 bbl Capacity, Stainless Steel Unit (See Note)	95.00
AUTO-1004	Vacuum Truck, 80 bbl Capacity (See Note)	70.00
AUTO-1005	Vacuum Truck, 130 bbl Capacity (See Note)	85.00
AUTO-1006	Vacuum Truck, Liquid Ring (See Note)	150.00
AUTO-1007	Roll-Off Truck (See Note)	75.00
AUTO-1008	Meyers Unit, Truck Mounted (See Note)	60.00
AUTO-1009	Mini Roll-Off Unit (See Note)	60.00
(Note: Operator Included)		
		Daily Rate
AUTO-1017	Meyers Unit, Trailer Mounted	350.00
AUTO-1010	ATV, 4-Wheel	225.00
AUTO-1011	ATV Utility Trailer	75.00
AUTO-1012	Automobile	75.00

All rates listed in this schedule are subject to change without notice.

Corporate	Response Rate Schedule	Schedule
Operations	Domestic	Rev. January 2002

Automotive Equipment (cont.)**Daily Rate**

AUTO-1012	Automobile.....	75.00
AUTO-1013	Backhoe	425.00
AUTO-1018	Pick-Up Truck, 1 ton or smaller	115.00
AUTO-1019	Pick-Up Truck, 1 ton, Haz-Mat Quick-Response Unit.....	200.00
AUTO-1020	Pick-Up Truck, 1 ton, w/liftgate.....	130.00
AUTO-1023	Pick-Up Truck, 1 ton, 4x4	220.00
AUTO-1024	Skid-Steer Loader.....	350.00
AUTO-1028	Tractor/Trailer, Haz-Mat Response Unit, 32'	750.00
AUTO-1025	Trailer, Boom, 20 foot.....	75.00
AUTO-1026	Trailer, Equipment Hauler, Gooseneck, 24 foot	75.00
AUTO-1029	Trailer, Haz-Mat Response, 24'.....	350.00
AUTO-1033	Trailer, Haz-Mat Transfer	500.00
AUTO-1035	Trailer, Rescue/Emergency Response.....	150.00
AUTO-1030	Trailer, Response, Gooseneck, 32' Oil Response	300.00
AUTO-1021	Trailer, Response, 18'.....	200.00
AUTO-1031	Trailer, Transfer, Ship to Shore	125.00
AUTO-1032	Trailer, Utility.....	75.00
AUTO-1034	Truck, Bobtail.....	300.00

Communications Equipment**Daily Rate**

COMM-1001	Cellular Telephone (Each)	25.00
COMM-1002	Computer, Laptop/Desktop w/Printer	125.00
COMM-1003	Fax Machine	25.00
COMM-1004	GPS, Hand Held	25.00
COMM-1005	ICOM Aircraft Radio, Hand Held	25.00
COMM-1006	MCC #1 Mobile Command & Control Trailer + Fuel.....	1,700.00

(NOTE: Any items not returned to the Command Unit upon completion of work will be charged back to the customer at cost plus 20%.)

COMM-1007	Radio Portable.....	25.00
COMM-1008	VHF Marine Radio, Hand Held	25.00
COMM-1009	VHF Mobile Radio Marine Radio w/8' Antenna	30.00

Containment Boom**Daily Rate**

CBM-1001	Containment Boom, 48" Offshore.....	6.00 ft/day
CBM-1002	Containment Boom, 42" Offshore.....	6.00 ft/day
CBM-1003	Containment Boom, 36".....	3.00 ft/day
CBM-1004	Containment Boom, 18".....	1.40 ft/day
CBM-1005	Mini-Boom.....	.75 ft/day
CBM-1006	Containment Boom, 12".....	1.00 ft/day
CBMA-100	Boom Anchor, 100 lb.	100.00/day
CBMA-18	Boom Anchor, 18 lb.	18.00/day
CBMA-22	Boom Anchor, 22 lb.	22.00/day
CBMA-40	Boom Anchor, 40 lb.	40.00/day
CBMA-75	Boom Anchor, 75 lb.	75.00/day

All rates listed in this schedule are subject to change without notice.

Corporate	Response Rate Schedule Domestic	Schedule
Operations		Rev. January 2002

Haz-Mat**Unit Rate**

MSE-1005	Betz Emergency Off-Loading Valve	500.00
HMS-1001	Cylinder Refill, Nitrogen	50.00
HMS-1002	Chlorine Emergency Kit "A"	500.00
HMS-1004	Chlorine Emergency Kit "B"	750.00
HMS-1005	Chlorine Emergency Kit "C"	1000.00
MSE-1010	Compressor, Corken, 2"	1,500.00
MSE-1018	Decontamination Kit (Personnel, Pool, Brush, Bucket, Soap)	50.00
MSE-1025	Railcar Transfer Equipment	500.00
HME-1005	Vacuum Cleaner, Stainless Steel, Mercury, HEPA	250.00

Marine Equipment**Daily Rate**

MAR-1001	Airboat	500.00
MAR-1002	Deck Barge, 30', w/twin 150hp engines, radar	800.00
MAR-1003	Fast Response Boat, 30', w/twin 200hp engines, radar, 14 bbl store cap ..	800.00
MAR-1004	Flat Boat, w/o motor	115.00
MAR-1005	Flat Boat, 14' to 16' w/motor	225.00
MAR-1006	Piroque	30.00
MAR-1007	Fast Response Boat, 17' to 23'	250.00
MAR-1008	Work Boat, 24', 150 hp Twin Engine	500.00

Miscellaneous Equipment**Daily Rate**

MSE-1004	Back-Pack Blower	30.00
MSE-1006	Camera, Digital	50.00
MSE-1006-1	Photo-Processing, Digital Camera, Each Frame	2.50
MSE-1007	Camera, Video, Event Recording	250.00
MSE-1008	Cargo Lights	12.50
MSE-1009	Chain Saw	75.00
MSE-1049	Compressor, Air, 11.8 cfm, 90 psi output	185.00
MSE-1011	Compressor, Hydraulic, 2"	200.00
MSE-1012	Confined Space Rescue Kit	50.00
MSE-1045	Coppus Blower	50.00
MSE-1048	Drum Crusher	250.00
MSE-1013	Drum Dolly	25.00
MSE-1014	Drum Grabber	25.00
MSE-1015	Drum Gripper, Forklift	100.00
MSE-1016	Drum Pump, Poly	25.00
MSE-1017	Drum Sling	25.00
MSE-1019	Generator w/work lights	110.00
MSE-1020	Generator, 4 kw	100.00
MSE-1046	Hand Tool (Pitch Fork, Rake, Shovel, Squeegee, etc)	17.00
MSE-1023	Power Pack, Hydraulic, 50 hp or less	500.00
MSE-1024	Pressure Washer, 3,000 psi or less	250.00
MSE-1026	Saw, Air Powered	75.00
MSE-1027	Saw, Portable	75.00
MSE-1028	Scare Cannon plus Fuel	60.00
MSE-1029	Sewer Plug	100.00

All rates listed in this schedule are subject to change without notice.

Corporate	Response Rate Schedule Domestic	Schedule
Operations		Rev. January 2002

Miscellaneous Equipment**Daily Rate**

MSE-1030	Sprayer, Pump, Hand-Held	30.00
MSE-1001	Stainless Steel Stinger, 2"	50.00
MSE-1031	Steam Cleaner (3,000 psi or less)	250.00
MSE-1032	Vacuum Cleaner, Wet/Dry	50.00
MSE-1033	Vapor Lights, High Intensity	65.00
MSE-1034	Weed Eater	75.00
MSE-1035	Wheelbarrow	25.00
MSE-1047	Hose, ADS, 6" (Foot)	1.75

Monitoring Equipment**Daily Rate**

MTE-1014	3M 3500 Passive VOC Monitoring Badges	35.00
MTE-1021	25mm Particulate Sampling Cassette	4.00
MTE-1022	37mm Three Piece HEPA Particulate Sampling Cassette	5.00
MTE-1001	4-Gas Meters	95.00
MTE-1004	Anemometer / Mass Air Sensor	75.00
MTE-1005	Audio Dosimeter	75.00
MTE-1006	Black Light, Mercury Detection	40.00
MTE-1023	Chemsticks / Chemstrips	10.00
MSE-1024	Coconut Charcoal VOC Sampling Tubes	5.00
MTE-1007	Crowcon Monitor, 5 gas	150.00
MTE-1008	Drager CMS Unit	300.00
MTE-1015	Drager Pump	30.00
MTE-1034	FID Detector, Handheld	200.00
ST-1005	Head Space Analyzer for GC / MS	300.00
ST-1012	Gas Chromatograph / Mass Spectrometer w/computer, Portable	1,500.00
MTE-1026	Gas Chromatograph / Mass Spectrometer Carrier Gas	147.45
MTE-1035	Gas Chromatograph / Mass Spectrometer Internal Gas Standard	140.00
MTE-1009	Infrared Sensor	25.00
MTE-1003	Jerome Mercury Vapor Analyzer	175.00
MTE-1011	ph Meter	30.00
MTE-1012	Photoionization Detector (PID), MiniRae	75.00
MTE-1036	Photoionization Detector, Ultra (PID), Ultra MiniRae	100.00
MTE-1010	Radiation Monitor	75.00
MTE-1013	Wibget - Portable Heat Stress Monitor	100.00

Unit Rate

MTE-1037	FID Detector Hydrogen Refill	35.00
MTE-1029	Head Space 40ml Teflon Septa Vials	4.00
MTE-1020	Intrinsically Safe Thermometer	15.00
MTE-1030	Pentane Calibration Gas - One (1) Calibration	20.00
MTE-1018	Sensodyne Pump	30.00
MTE-1031	Quad Gas Calibration Gas - One (1) Calibration	25.00
MTE-1032	Tedlar Bag w/Stainless Fittings - 1 Liter	26.00
MTE-1033	Tedlar Bag w/Stainless Fittings - 5 Liter	40.00

All rates listed in this schedule are subject to change without notice.

Corporate	Response Rate Schedule Domestic	Schedule
Operations		Rev. January 2002

Personal Protective Equipment

Daily Rate

PPE-1005	Bunker Gear (Pants, Coat, Gloves, Helmet, Boots)	150.00
PPE-1006	Chest Waders	35.00
PPE-1007	Cool Vest	50.00
PPE-1020	Harness, Safety, w/lanyard	25.00
PPE-1030	Safety Lifeline	15.00

Unit Rate

PPE-1001	Apron, Tyvek	1.50
PPE-1008	Coveralls, Poly-Coated Tyvek Hood and Boots	16.00
PPE-1009	Coveralls, Saranex	18.00
PPE-1010	Coveralls, Tyvek	10.00
PPE-1021	Level A, Responder, Each	900.00
PPE-1022	Level B, Fully-Encapsulated (CPF 4), Each	225.00
PPE-1023	Level B, Encapsulated (CPF 3), Each	90.00
PPE-1024	Level C, Hood, Boot, Splash Guard (CPF 3), Each	75.00
PPE-1025	Level C, Hood, Boot (CPF 3), Each	60.00
PPE-1026	Level C, Hood, Boot (CPF 2), Each	45.00
PPE-1027	Level C, Hood, Boot (CPF 1), Each	20.00
PPE-1034	Level D, PPE	35.00
PPE-1033	Slicker Suit, Rain	25.00

Boots

Unit Rate

PPE-1002	Boot, Chemical, NFPA Approved, Pair	90.00
PPE-1003	Boot, Rubber, Steel-toe, Pair	45.00
PPE-1004	Booties, Latex, Pair	7.00

Gloves

Unit Rate

PPE-1011	Glove, Latex, Sample, Pair	1.00
PPE-1012	Glove, Leather, Pair	5.95
PPE-1013	Glove, Neoprene, Pair	5.95
PPE-1014	Glove, NEOX, Pair	3.75
PPE-1029	Glove, Nitrile, Inner, Pair	1.00
PPE-1015	Glove, Nitrile, Outer, Pair	3.75
PPE-1016	Glove, Petroflex, Pair	3.50
PPE-1017	Glove, "Black Knight", Pair	3.25
PPE-1018	Glove, "Silver Shield", Pair	8.00
PPE-1019	Glove Liner, Cotton, Pair	1.00

Respiratory Protection

Unit Rate

HME-1001	Air Regulator	50.00
HME-1002	Breathing Air Cylinder	10.00
HME-1011	Breathing Air Compressor	500.00
HME-1012	Breathing Air Compressor Cool Pack	50.00
HME-1011	Breathing Air Hose, 50' Section	12.00

All rates listed in this schedule are subject to change without notice.

Corporate	Response Rate Schedule Domestic	Schedule
Operations		Rev. January 2002

Respiratory Protection**Unit Rate**

PPE-1028	Respirator Cartridge, HEPA	7.50
PPE-1031	Respirator Cartridge, HEPA/OV/AG, Pair	24.00
PPE-1032	Respirator Cartridge, Mercury Vapor	30.00
HME-1003	Escape Mask	25.00
HME-1004	Escape Pack	125.00
HME-1007	Full-Face Respirator	25.00
HME-1008	Half-Face Respirator (Organic Mask, Disposable)	25.00
HME-1010	Half-Face Respirator w/o cartridges	12.50
HME-1009	Self-Contained Breathing Apparatus (SCBA)	125.00

Pumps and Hoses**Daily Rate**

PUMP-1001	Pump, 1"	100.00
PUMP-1002	Pump, 2" Blackmere Vane, (Hydraulic)	200.00
PUMP-1003	Pump, 2" Diaphragm	90.00
PUMP-1004	Pump, 2"	90.00
PUMP-1006	Pump, 2" Stainless Steel Diaphragm	250.00
PUMP-1007	Pump, 2" Acme Mdl 39-G4 Floating Wash Pump	150.00
PUMP-1009	Pump, 3" Diaphragm	100.00
PUMP-1010	Pump, 3"	100.00
PUMP-1011	Rebuild Kit, Diaphragm Pump	350.00

Unit Rate

MSE-1038	Hose, Chemical Resistant, 3" x 20'	20.00
MSE-1039	Hose, Chemical Resistant, Hard Gum Rubber, 6" x 25'	28.00
MSE-1040	Hose, Fire, 50' section	50.00
MSE-1041	Hose, Metal, Flex, 6" x 25'	25.00
MSE-1042	Hose, Solid Metal, Joint Pipe, 6" x 12'	22.00
MSE-1043	Hose, Suction/Discharge, 2" x 25'	8.00
MSE-1044	Hose, Suction/Discharge, 3" x 20'	8.00

Sampling and Testing Equipment and Supplies**Unit Rate**

ST-1003	Drum Thief Sampling Tubes	16.00
ST-1004	Haz-Cat Sampling Kit, per test	35.00
ST-1007	Mercury Test Kit	225.00
ST-1008	PCB Wipe Test Kit	30.00
ST-1009	Personnel Sampling Pump	50.00
ST-1010	Pipettes, Glass	2.00
ST-1011	pH Paper (Roll or Box)	20.00
ST-1013	Sample Bomb	120.00
ST-1014	Sample Jars	5.00
ST-1015	Sample Storage	15.00
ST-1016	Soil Sampling Kit	35.00
ST-1017	Hydrocarbon Test Kit	47.65

All rates listed in this schedule are subject to change without notice.

Corporate	Response Rate Schedule	Schedule
Operations	Domestic	Rev. January 2002

Sampling and Testing Equipment and Supplies (cont.)

		Unit Rate
ST-1017	Hydrocarbon Test Kit.....	47.65

Skimmers

		Daily Rate
SKIM-1001	DiscOil Skimmer, w/Power Pack	2,250.00
SKIM-1002-70	Drum Skimmer, 70 gpm.....	600.00
SKIM-NO-1003-20	Drum Skimmer, 20 gpm.....	450.00
SKIM-1005	Skimmer, Acme Mdl 39-TG4, Gasoline Powered.....	200.00
SKIM-1006	Skimmer, Acme Mdl 39-T, Vacuum / or Douglas Engineering Skim Pak.....	150.00
SKIM-1007	Skimmer, Desmi	5,000.00
SKIM-1008	Skimmer, Marco, "Harbor 28"	5,000.00
SKIM-1009	Skimmer, Marco, "Sidewinder 14"	4,200.00

Storage

		Daily Rate
STR-1008	Frac Tank, 10,000 gl (Company Owned)	25.00
STR-1003	Roll-Off Box, Open Top	15.00
STR-1004	Roll-Off Box, Roll Top.....	30.00
STR-1005	Roll-Off Box, Vacuum Box.....	50.00
STR-1006	Storage Tank, Poly, 500 gl capacity.....	30.00
STR-1007	Tarp, Roll-Off Box.....	8.00
STR-1009	Tote, Poly, 250 gl.....	15.00

MATERIAL

Chemicals

		Unit Rate
GES-ACETIC-5	Acetic Acid, Glacial, 5 gl pail	87.35
GES-BA50	Boric Acid, 5%, 50 lb bag	96.55
GES-CAUSOD55DRY	Caustic Soda, Pearls, 50 lb bag	50.15
GES-COREXIT-9500-55	Corexit EC9500A Oil Spill Dispersant, 55 gl drum	1,121.45
GES-COREXIT-9527-55	Corexit EC9527A Oil Spill Dispersant, 55 gl drum	1,070.85
GES-COREXIT-9580-55	Corexit EC9580A Oil Spill Beach Cleaner, 55 gl drum.....	683.65
GES-CITRIC50B	Citric Acid, 50%, Grade B, 575 lb drum.....	1,048.40
GES-FW-MRED	Degreaser, "Mighty Red".....	9.20
GES-DGR1	Degreaser/Solvent, 1 gl container	46.35
GES-MAGOXI-50	Magnesium Oxide (50 lb bag)	45.00
GES-MBELSC1	Micro-Blaze, Emergency Liquid Spill Control, 1 gl	26.50
GES-MBOL5	Micro-Blaze Out, Firefighting Agent, 5 gl pail	215.15
GES-SA50D	Soda Ash, Dense, 50 lb bag.....	22.80
GES-SB50	Sodium Bicarbonate, 50 lb bag	36.20
GES-FW-SODHCH	Sodium Hypochlorite, Liquid.....	2.10

All rates listed in this schedule are subject to change without notice.

Corporate	Response Rate Schedule	Schedule
Operations	Domestic	Rev. January 2002

Miscellaneous Material

Unit Rate

MSS-1006	Rope, Polypro, 1/2" x 600'	75.00
MSS-1007	Rope, Polypro, 1/4" x 600'	26.25
MSS-1008	Box Liner, Roll-Off Box	50.00
MSS-1009	Epoxy Stick, Sealant	9.45
GES-DLPB55-6	Drum Liner, Plastic Bag, 55 gl x 6 ml, 50 per roll	53.50
GES-DLPB55-6-ea	Drum Liner, Plastic Bag, 55 gl x 6 ml, each	1.05
GES-LP5	Drum, Poly, 5 gl, w/lid	16.10
GES-PD30	Drum, Poly, 30 gl, w/lid	45.00
GES-PDOH25	Drum, Poly, O/H, R/C, Nestable, 25 gl	58.30
GES-PDOH55	Drum, Poly, O/H, R/C, Nestable, 55 gl	55.00
GES-PDTH55	Drum, Poly, T/H, w/bungs, 55 gl	55.00
GES-OP110	Drum, Poly, Overpack, 110 gl	350.00
GES-OP95	Drum, Poly, Overpack, 95 gl	200.00
GES-OP95M	Drum, Poly, Overpack, Metric, 95 gl	327.50
GES-CTSD55	Drum, Steel, T/H, 55 gl	59.00
GES-OTSD55	Drum, Steel, O/H, R/C, 55 gl	55.00
GES-SOP110	Drum, Steel, Overpack, 110 gl	670.30
GES-SOP85	Drum, Steel, Overpack, 85 gl	175.00
GES-PC1	Pollution Can, 20 gl, Each	20.10

Sorbent Material

Unit Rate

GES-BMC	BMC Absorb-N-Dry Absorbent	8.00
GES-B510	Boom, Sorbent, 5" x 10', 4 boom bale	102.05
GES-B810	Boom, Sorbent, 8" x 10', 4 boom bale	180.50
GES-UB510	Boom, Sorbent, Universal, 5" x 10', 4 boom bale	134.05
GES-UB810	Boom, Sorbent, Universal, 8" x 10', 4 boom bale	201.10
GES-GS-22	Floor Gator, Granular, 50 lb bag	26.95
GES-GS-25	Cell-U-Sorb, 20 lb bag	31.00
GES-IM0077	Imbiber Bead Packet, 36 per case	231.65
GES-IM1421	Imbiber Bead Pillow, 3 per case	217.20
GES-IM2142	Imbiber Bead Blanket, 2 per case	235.30
GES-GATOR030	Oil Gator, 30 lb bag	45.05
GES-OSGP30	Oil Sponge GP, General Purpose, 30 lb bag	28.75
GES-P100	Pad, Sorbent, 17" x 19" x 3/8", 100 pad bale	72.00
GES-P200	Pad, Sorbent, 17" x 19" x 3/16", 200 pad bale	76.00
GES-UQ100	Pad, Sorbent, Universal, Gray, 17" x 19" x 3/8", 100 pad bale	104.60
GES-HAZPIL10	Pillow, Haz-Mat, Universal, 3 1/2" x 18" x 24", 10 pillow bale	120.65
GES-HAZPIL17	Pillow, Haz-Mat, Universal, 3" x 11" x 17", 17 pillow bale	134.05
GES-PIL10	Pillow, Sorbent, 14" x 25", 10 pillow bale	101.90
GES-R144	Roll, Sorbent, 38" x 144" x 3/8", 1 roll bale	144.30
GES-OS15	Snare, Viscous Oil, 30 count	60.00
GES-OSB50	Snare Boom, Viscous Oil, 50'	73.75
GES-OSB100	Snare Boom, Viscous Oil, 100'	186.50
GES-OD40	Sorbent, All-Purpose, Oil-Dry	12.90
GES-SPHAGSORB2	Sphag Sorb, 2 cf x 24 lb bag	42.25
GES-SW100	Sweep, Sorbent, 17" x 100', 1 sweep bale	110.60
GES-2950	Zorbent, Absorbent Material	62.50

All rates listed in this schedule are subject to change without notice.

Corporate	Response Rate Schedule Domestic	Schedule
Operations		Rev. January 2002

EQUIPMENT, MATERIAL AND SUPPLIES AT COST PLUS

Unit Rate

MTE-1002	5-Gas Meters	Cost +20%
MSE-1002	Air Compressor, 375 cfm, + fuel	Cost +20%
MSE-1003	Air Compressor, 185 cfm, + fuel	Cost +20%
AUTO-1015	Breathing Air Trailer	Cost +20%
HME-1002-RF	Breathing Air Cylinder Refill, 4500 psi	Cost +20%
ST-1002	Concrete Coring Device	Cost +20%
AUTO-1014	Crane (Rental, Mobilization & Demobilization)	Cost +20%
MTE-1025	Drager PID Chips, Test Specific	Cost +20%
MTE-1016	Drager Colorimetric Tubes	Cost +20%
MTE-1017	Drager Haz-Cat Identification Kit	Cost +20%
HME-1006	Filters and Decontamination, HEPA Mercury Vacuum Cleaner	Cost +20%
STR-1001	Frac Tank	Cost +20%
STR-1002	Frac Tank Mobilization, Decontamination and Demobilization	Cost +20%
ST-1001	Gas Detection Tubes	Cost + 20%
MTE-1028	Glassware, Additional	Cost +20%
ST-1006	Lab Analysis, Accredited Third Party	Cost +20%
SKIM-1010	Oleophilic Pad Replacement, <i>Marco Skimmer</i>	Cost +20%
MTE-1017	Passive Badges, Other	Cost +20%
GES-REAGENT	Reagent, Miscellaneous	Cost +20%
MTE-1019	Sensodyne Tubes	Cost +20%

All rates listed in this schedule are subject to change without notice.

Corporate	Disaster Response Rate Schedule Domestic	Schedule
Operations		Rev. 01/02

GARNER ENVIRONMENTAL SERVICES, INC.

1717 West 13th Street
Deer Park, Texas 77536
(281) 930-1200
(800) 424-1716

**DISASTER RESPONSE RATE SCHEDULE
DOMESTIC**

Corporate	Disaster Response Rate Schedule Domestic	Schedule
Operations		Rev. 01/02

Tables of Contents

Automotive Equipment	ii
Equipment Decontamination / Washout	ii
Fuel Surcharge	ii
Haz-Mat Rates	ii
Insurance	ii
Personnel	ii
Replacement of Damaged or Contaminated Equipment	ii
Roll-Off Boxes	iii
Stand-By Rates	iii
Subcontract Services	iii
Taxes	iii
Terms	iii
Travel, Lodging and Per Diem	iii

EQUIPMENT

Generators, Light Towers	1
Pumps, Hoses, Fittings	3
Miscellaneous (Tents, Modular Units, Etc.)	4
Water & Ice	4
Coolers & Freezers	4
Heavy Equipment	5
Chillers, Warmers, Air Handling Equip	6
Field Catering Equipment	7
Personnel	8
Transportation & Other	9
Field Invoice Summary	10

Corporate	Disaster Response Rate Schedule Domestic	Schedule
Operations		Rev. 09/01

Automotive Equipment

Automotive Equipment Daily Rates charges are portal to portal. A four (4) hour minimum time will be charged on all call-outs. A daily charge of \$95.00 per day will be assessed on all automotive equipment.

Equipment Decontamination / Washout

Time and Material charges are portal to portal and will continue through decontamination and/or washout of any and all equipment used on the job.

Fuel

Fuel cost will be invoiced on all equipment at our Cost plus a 15% Handling Charge consumed by both automotive and non-automotive equipment due to the increased fuel prices.

Haz-Mat Rates

Haz-Mat rates will be charged when the material being dealt with has a hazard rating of two or greater on the NFPA 704 labeling system or hazardous material identifying system, or if a job requires the use of respiratory protection.

Insurance

The rates in this RATE SCHEDULE include insurance coverage for Worker's Compensation, General Liability, Pollution and Automobile Liability. A Certificate of Insurance will be forwarded upon request. These rates do not include work performed under the U.S. Longshoremen's and Harbor Workers Act (33 USC ss 901-950). For work performed under this statute, an additional 69% surcharge per \$100.00 of wages will be assessed on labor **only**.

Insurance Waivers or Additional Equipment Insurance cost incurred on leased equipment (i.e., Generators, Forklifts, Pumps, etc.) will be billed at Cost plus a 15% Handling Charge. This insurance coverage will be for damage, theft, fire or other items.

Personnel

Experienced consulting, supervisory, technical instructor and equipment operating personnel are available for complete Disaster Emergency Response, Emergency HazMat/Oil Spill Response, Spill Cleanup Operations and Vacuum Service Operations; 24 hours a day, 7 days a week. Normal hours of operation are from 0730 (7:30 a.m.) through 1600 (4:00 p.m.) daily, Monday through Friday.

All labor charges will be in accordance with Garner Environmental Services, Inc. service receipts. Charges for personnel are portal-to-portal. Garner Environmental Services, Inc. will invoice for personnel and the time required to mobilize, service, repair, and restock all vehicles and equipment used in the performance of the services for customer.

Overtime for personnel will be charged at time and a half between 1600 (4:00 pm) through 0730 (7:30 am) Monday through Thursday; weekends from 1600 (4:00 p.m.) Friday through 0730 (7:30 am) Monday. **DOUBLE TIME RATES** will be charged for all National Holidays. **4-Hour Minimum Service Charge On All Labor Call-Outs.**

Replacement of Damaged or Contaminated Equipment

If, during performance of a service and/or services for a customer, equipment and/or material sustain damage which renders the equipment and/or material beyond repair or renders decontamination impossible, said equipment and/or material will be subject to a replacement charge at Garner Environmental Services, Inc.'s cost plus a 15% Handling Charge unless said damage was sustained as a result of misuse by Garner Environmental Services, Inc. personnel.

Corporate	Disaster Response Rate Schedule Domestic	Schedule
Operations		Rev. 09/01

Roll-Off Boxes

Roll-Off Box delivery and pickup charges vary according to the distance from the site location and location of the job. These charges will be billed at Cost plus a 15% Handling Charge. The cost for roll-off box liners is \$50.00 each. Box Liners are not mandatory, but if the Roll-Off Box requires cleaning at the end of the rental period, the customer will incur the cleaning charges.

Subcontract Services

The compensation paid Garner Environmental Services, Inc. for all equipment services, third party freight and third party rental equipment and personnel not listed in the Rate Schedule, whether requested by the Company or needed to complete work in progress will be subject to a 15% Handling Charge.

Taxes

All federal, state and municipal taxes, except income taxes and ad-valorem taxes, now and hereinafter imposed with respect to services rendered; to rental equipment; to the processing, manufacture, repair, delivery, transportation of equipment and supplies shall be added to and become part of the total price payable by the client. If a client claims an exemption from payment of Texas Sales and Use Tax, the client will be required to render an Exemption Certificate or a Resale Certificate to Garner Environmental Services, Inc. This includes all Federal, State, County and local Agencies while under Disaster Response Protocols.

Terms

The term of payment for all invoices is *Net 30 Days* from the date of invoice., unless prior arrangements for earlier payments are made. A Finance Charge computed at the periodic rate of one and one-half percent (1.5%) per month (18% per annum) will be applied to all invoices with an unpaid balance beginning on the thirty-first (31st) day from the date of invoice. All payments will be made to Garner Environmental Services, Inc., 1717 West 13th Street, Deer Park, TX 77536. Disaster Response Invoices will be completed weekly.

Travel, Lodging and Per Diem

For all employees who do not reside in the local commuting area for the work site, Garner Environmental Services, Inc. will be reimbursed for costs incurred for employee travel to and from the work site on the basis of Garner's incurred costs plus 15% Service Fee for all commercial transportation. A minimum Per Diem charge of \$90.00 per day for all employees who do not reside in the local commuting area of the work site will be due for each day that such employee is present in the locale of the work site.

Debris Removal Contractors

Debris Removal Contractors will be required to submit a competitive bid based on the estimated debris amount, local disposal cost, local resources available to them. The most competitive bid that meets standards set by the Robert T. Stafford Act will be contracted to perform services in this area. Debris Contractor Invoices to Garner Environmental Services will be billed to the customer at Cost plus a 15% Handling Charge.

Revised: January 2002

**Garner Environmental
Disaster Response
Rate Schedule**

Qty	Description	WK RT	U	Amt	Approved
	10 kW Generator	\$460.00	WK		
	15 kW Generator	\$562.50	WK		
	20 kW Generator	\$950.00	WK		
	25 kW Generator	\$950.00	WK		
	30 kW Generator	\$950.00	WK		
	35 kW Generator	\$1,061.25	WK		
	40 kW Generator	\$1,100.00	WK		
	45 kW Generator	\$1,150.00	WK		
	50 kW Generator	\$1,260.00	WK		
	60 kW Generator	\$1,300.00	WK		
	70 kW Generator	\$1,350.00	WK		
	75 kW Generator	\$1,400.00	WK		
	80 kW Generator	\$1,450.00	WK		
	90 kW Generator	\$1,500.00	WK		
	100 kW Generator	\$1,600.00	WK		
	110 kW Generator	\$1,650.00	WK		
	125 kW Generator	\$1,900.00	WK		
	150 kW Generator	\$2,100.00	WK		
	175 kW Generator	\$2,350.00	WK		
	180 kW Generator	\$2,500.00	WK		
	200 kW Generator	\$2,750.00	WK		
	250 kW Generator	\$3,100.00	WK		
	300 kW Generator	\$3,500.00	WK		
	350 kW Generator	\$3,700.00	WK		
	400 kW Generator	\$4,000.00	WK		
	450 kW Generator	\$4,250.00	WK		
	500 kW Generator	\$4,575.00	WK		
	675 kW Generator	\$6,000.00	WK		
	750 kW Generator	\$6,750.00	WK		
	800 kW Generator	\$7,250.00	WK		
	1000 kW Generator	\$7,750.00	WK		
	1250 kW Generator	\$8,225.00	WK		
	1400 kW Generator	\$9,000.00	WK		
	1500 kW Generator	\$10,531.70	WK		
	1750 kW Generator	\$12,525.80	WK		
	Page #1 Total			\$0.00	

Revised: January 2002

**Garner Environmental
Disaster Response
Rate Schedule**

Qty	Description	WK RT	U	Amt	
	<i>Pumps, Hose & Fittings</i>				
	2" x 2" Diesel Pump	\$325.00	E/W		
	3" x 3" Diesel Pump	\$375.00	E/W		
	4" x 4" Diesel Pump	\$535.00	E/W		
	8" x 8" Diesel Pump	\$1,035.00	E/W		
	10" x 10" Diesel Pump	\$1,625.00	E/W		
	12" x 12" Diesel Pump	\$2,025.00	E/W		
	24" Diesel Pump	\$3,040.00	E/W		
	2" Suction / Discharge Hose 50' Section	\$32.50	E/W		
	3" Suction / Discharge Hose 50' Section	\$38.75	E/W		
	4" Suction / Discharge Hose 50' Section	\$53.75	E/W		
	6" Suction / Discharge Hose 50' Section	\$111.25	E/W		
	8" Suction / Discharge Hose 50' Section	\$180.00	E/W		
	10" Suction / Discharge Hose 50' Section	\$222.50	E/W		
	12" Suction / Discharge Hose 50' Section	\$265.00	E/W		
	24" Suction / Discharge Hose (Per Foot)	\$12.00	P/F		
	6" Vacuum Assist Pump	\$1,500.00	E/W		
	12" Vacuum Assist Pump	\$2,600.00	E/W		
	4 Inch Submersible Hydraulic Pump	\$1,000.00	E/W		
	6 Inch Submersible Hydraulic Pump	\$1,350.00	E/W		
	8 Inch Submersible Hydraulic Pump	\$1,800.00	E/W		
	12 Inch Submersible Hydraulic Pump	\$2,200.00	E/W		
	100 GPM Pump	\$172.50	WK		
	200 GPM Pump	\$225.00	WK		
	300 GPM Pump	\$276.00	WK		
	400 GPM Pump	\$211.00	WK		
	500 GPM Pump	\$380.00	WK		
	750 GPM Pump	\$466.00	WK		
	800 GPM Pump	\$621.00	WK		
	1000 GPM Pump	\$795.00	WK		
	1200 GPM Pump	\$932.00	WK		
	1500 GPM Pump	\$1,242.00	WK		
	2000 GPM Pump	\$1,656.00	WK		
	3000 GPM Pump	\$2,875.00	WK		
	12" x 6" Custom Manifolds	QUOTE	WK		QUOTED BY AREA OF THE U.S.
	24 Inch Hydraulic Pump	\$18,200.00	MO		
	20 Inch Hydraulic Pump	\$18,200.00	MO		
	<i>Page #3 Total</i>				
				\$0.00	

Revised: January 2002

Garner Environmental Disaster Response Rate Schedule

Qty	Description	WK RT	U	Amt	
	MISCELLANEOUS				
	Portable Fence; 8' x 200' Section	QUOTE	WK		QUOTED BY AREA OF THE U.S.
	Power Cords - High Voltage	\$252.00	WK		
	Pallet Grabbers w/Chain	\$35.00	WK		
	Chain Saws	\$550.00	WK		
	Miscellaneous Hand Tools	\$125.00	WK		
	Comfort Station - 10 Stall Unit	QUOTE	E/W		QUOTED BY AREA OF THE U.S.
	Comfort Station - 26 ft. BT Unit	QUOTE	E/W		QUOTED BY AREA OF THE U.S.
	Shower Units - 4 Stall	QUOTE	E/W		QUOTED BY AREA OF THE U.S.
	Shower Units - 6 Stall	QUOTE	E/W		QUOTED BY AREA OF THE U.S.
	Shower Units - 12 Stall with 6 Sinks	QUOTE	E/W		QUOTED BY AREA OF THE U.S.
	Tents - 60' x 100' x 7'; Seats 500	QUOTE	E/W		QUOTED BY AREA OF THE U.S.
	Tents - 30' x 90' x 7' ; Sleeps 125	QUOTE	E/W		QUOTED BY AREA OF THE U.S.
	Tents - 30' x 60' x 7' ; Sleeps 100	QUOTE	E/W		QUOTED BY AREA OF THE U.S.
	Tent Setup Fee	QUOTE	EA		QUOTED BY AREA OF THE U.S.
	8' x 28' Modular Unit	\$250.00	E/W		
	10' x 44' Modular Unit	\$450.00	E/W		
	12' x 60' Modular Unit	\$600.00	E/W		
	Partition Installation	QUOTE	P/U		QUOTED BY AREA OF THE U.S.
	Block / Unblock Unit	QUOTE	EA		QUOTED BY AREA OF THE U.S.
	Anchor / Unanchor Unit	QUOTE	EA		
	4000 PSI Pressure Washer	\$1,250.00	WK		
	20,000 PSI Pressure Washer	\$1,750.00	WK		
	Cots for Shelters	QUOTE	EA		QUOTED BY AREA OF THE U.S.
	Water / Ice				
	Water; 1 Gallon Bottles; 6 per Case	\$5.00	CS		
	Water; Truckload; 5,040 Gallon Bottles	\$4,200.00	TL		
	Ice; 8 LB. Bag	\$1.00	BAG		
	Ice; 8 LB. Bag; Lots of 500 Bags	\$500.00	LOT		
	Coolers / Freezers				
	Walk In Cooler	QUOTE	WK		QUOTED BY SIZE & AREA OF U.S.
	Walk In Freezer	QUOTE	WK		QUOTED BY SIZE & AREA OF U.S.
	Sand Bagging Equipment				
	Dump Truck with Sandbagging Unit Attachment / With Operator	\$1,500.00	DY		
	Sandbags (No Sand)	\$0.17	EA		
	Sand Bagging Truck w/ Bagger / NO Operator	\$6,900.00	WK		
	Page #4 Total			\$0.00	

Revised: January 2002

Garner Environmental Disaster Response Rate Schedule

FIELD INVOICE SUMMARY				
	<i>Page #1 Total</i>			
	<i>Page #2 Total</i>			
	<i>Page #3 Total</i>			
	<i>Page #4 Total</i>			
	<i>Page #5 Total</i>			
	<i>Page #6 Total</i>			
	<i>Page #7 Total</i>			
	<i>Page #8 Total</i>			
	<i>Page #9 Total</i>			
	Total Field Invoice			\$0.00

Please Note that this is an Estimation only and applies to the quantities shown on this form. Actual charges will be reflected on this type form.

Garner Representative: _____

Date: _____

Customer Representative: _____

Date: _____

MASTER SERVICE CONTRACT - #LOC-ESH-001

THIS CONTRACT, made and entered into on this the 3rd day of June, 2002, by and between **LION OIL COMPANY** hereinafter referred to as "Company" and **ES&H CONSULTING SERVICES, INC.** hereinafter referred to as "Contractor". In consideration of services provided or work to be performed by Contractor, as herein contemplated, and in consideration of the payments which are to be made by Company to Contractor therefore, Company and Contractor agree as follows:

1. WORK TO BE PERFORMED: It is contemplated that Company will, from time to time, through its duly-authorized representatives, request Contractor to perform certain work or furnish certain services to Company (the "Work"). The Work shall include all work or services performed by Contractor from time to time for Company. Contractor shall, at its sole cost, risk, and expense, furnish all labor and materials (unless otherwise specified) necessary to do the Work, and shall diligently pursue the Work to completion in a good and workmanlike manner to Company's satisfaction in accordance with Company's specifications. Company and Contractor shall endeavor to document the details of each item of Work pursuant to written work order or purchase order, which work or purchase orders shall become a part of this Contract. In the event of a conflict between any work or purchase order and this Contract, this Contract shall control. All Work shall be performed in accordance with and subject to the terms and conditions of this Contract, regardless of whether or not such Work is further documented by written work or purchase order. Time is of the essence as to all aspects of this Contract.

2. INDEPENDENT CONTRACTOR: It is expressly understood that Contractor is an independent contractor and that neither Contractor nor Contractor's principals, partners, employees, or subcontractors are servants, agents or employees of Company. Contractor shall control the manner and method of executing the Work and shall permit Company's representatives to inspect the Work. As an independent contractor, Contractor agrees to comply with all laws, rules, and regulations, whether federal, state, or municipal, which now or in the future may be applicable to all Work performed hereunder or applicable to Contractor's business, equipment, or employees engaged in or in any manner connected with its performance hereunder. Contractor warrants that it has all requisite skill, knowledge and experience necessary to perform the Work it will perform, that its employees and agents have been trained to follow all applicable laws, rules, and regulations and work safely, and that all of its equipment has been thoroughly tested and inspected and is safe, sufficient and free of defects, latent or otherwise. Contractor acknowledges that Company will rely upon these representations.

3. INSURANCE:

3.1. Coverage: Contractor agrees to procure and maintain, at its sole expense, with solvent insurers acceptable to Company, policies of insurance in the coverages and minimum amounts set forth below. The insurance provisions of this Contract are intended to assure that certain minimum standards of insurance protection are maintained by Contractor, and the specification herein of any limits or amounts shall be construed to support but not in any way to limit the liabilities and indemnity obligations of Contractor. Coverage under all insurance required to be carried by Contractor will be primary insurance and exclusive of any other existing valid and collectible insurance, and each policy will be endorsed to name Company (together with its affiliated companies, agents, directors, officers, agents and employees, collectively referred to herein as "affiliates") as additional insureds (except Workers' Compensation) and waive subrogation against Company, its affiliates and its insurers. Company and its affiliates reserve the right to make a claim against Contractor and/or Contractor's insurers for the account of themselves or others and shall be neither precluded nor denied the right to recover because of being named as additional insured under Contractor's policies of insurance.

COMMERCIAL GENERAL LIABILITY: Premises/Operations; Independent Contractors Personal Injury; Products/Completed Operations; Blanket Contractual Liability Sudden and Accidental Pollution Liability Limits: \$1,000,000	AUTOMOBILE LIABILITY: Owned, Non-Owned, Hired Vehicles Limits: \$1,000,000	WORKERS' COMPENSATION / EMPLOYER'S LIABILITY: Statutory Workers' Compensation for state of hire/operation Employers' Liability: Limits: \$1,000,000 Other States Insurance; Alternate Employer/Borrowed Servant
---	--	---

3.2. Certificates of Insurance. Contractor shall furnish to Company Certificates of Insurance evidencing that all insurance required by §3.1 has been secured; and no Work shall be commenced or monies paid for Work performed by Contractor until the proper certificates are furnished to Company (provided that commencement of Work or any payment for Work without a properly completed Certificate of Insurance shall not constitute a waiver of any rights of Company hereunder.) Such insurance policies and certificates must provide that not less than thirty (30) days written notice will be given to Company at the address provided herein prior to the effective date of any material change in or cancellation of said insurance policies. Upon receipt of such notice, Company shall have the right to promptly terminate this Contract, the provisions of Paragraph 7 regarding a thirty (30) day cancellation notice period notwithstanding.

3.3. Accident Reports. Contractor will provide immediate written notice to Company of any accidents or occurrences resulting in injuries to persons or property in any way arising out of or related to Contractor's operations or the operation of any Subcontractor of Contractor in connection with the Work or otherwise occurring on Company's property.

4. INDEMNITY:

4.1. Contractor agrees to indemnify, defend, and save harmless Company and its affiliates from and against any and all claims, demands, judgments, defense costs (including reasonable attorneys fees), or suits for property damage, bodily injury, (including illness, disease, death or for loss of services, or wages or for loss of consortium or society or other losses of any kind): (a) by Contractor or its Subcontractors or their respective employees (or their spouses, relatives, or dependents) in any way arising out of or related to the performance of this Contract or the use by Contractor, its Subcontractors, or their respective employees of, or their presence on, any premises owned, operated, or controlled by Company or its affiliates or used for transportation; and/or (b) which may be asserted against Company or its affiliates by any person or entity in any way arising out of or related to the performance of this Contract or the use by Contractor or its employees of, or their presence on, any premises owned, operated or controlled by Company or its affiliates or use of vehicles incident thereto, provided, however, that Contractor shall not be required to indemnify Company or its affiliates for claims, demands, or suits to the extent attributable to the negligence of the Company or such affiliates.

4.2. Contractor represents that none of the tools, equipment, materials and processes which may be used or furnished by Contractor in connection with the Work infringe on any license or patent, and Contractor agrees to defend, indemnify, and hold Company and its affiliates harmless from any and all claims, demands, judgments, defense costs, or suits of every kind and character in favor of, or asserted by or in connection with, any patentee, licensee or claimant of any right or priority, whether for patent infringement, trade secret misappropriation, or otherwise.

5. SUBCONTRACTING: Contractor shall not assign this Contract or subcontract any portion of the Work covered hereby, in whole or in part, without Company's prior written consent. Contractor shall not assign any part of the sums payable to Contractor by Company without prior written consent from Company, and any attempted assignment thereof without such consent will not be honored by or be binding upon Company. Any assignment or subcontracting permitted by Company shall not relieve Contractor of its obligations hereunder, and Contractor warrants that any assignee will assume all obligations hereunder including the provisions of Paragraphs 3, 4, 8, and 9. Subject to the foregoing, any contracts made by Contractor for the furnishing of any services or material by a Subcontractor in connection with the Work shall contain indemnity protection and insurance protection for Company, a conflicts provision, and an applicable law provision, all identical to those of Paragraphs 3, 4, 8, and 9. Unless such contracts contain such identical provisions, any personnel engaged and property used in the furnishing of such service or Work shall be deemed agent and employees and property of Contractor for the purpose of determining Contractor's indemnity obligations and Contractor's other obligations under this Contract.

6. **PAYMENT FOR SERVICES:** Contractor shall pay promptly any and all amounts owing for Work performed, services rendered, or materials furnished in connection with the Work so that no lien shall ever be permitted to attach to property of Company, whether real or personal, as the result of such Work and Contractor hereby agrees to defend and indemnify Company for any and all such claims and liens which in any way arise out of or are related to any operations by Contractor hereunder. Without limitation of the foregoing, in the event any such lien or claim is asserted against Company or its property, Company shall be entitled to, but shall not be obligated to, satisfy such claim or lien and set off any amounts paid in connection therewith against any amounts due and owing to Contractor. Upon completion of the Work, Contractor shall furnish to Company satisfactory written evidence that no unpaid claims for labor or materials furnished with respect to the Work exist which would constitute a basis for any such lien or encumbrance. During the forty-eight (48) month period following the performance of any such Work or services or furnishing of materials, Company shall have the right to audit the books, accounts, payrolls, and records maintained by Contractor containing information pertinent to such Work.

7. **TERM:** This Contract will continue in full force and effect until terminated by either party so that Contractor may perform, from time to time, such Work and/or render such services as the parties mutually may agree by execution of a written work order which shall in all respects be governed by and subject to these terms and conditions; it being understood and agreed that either party hereto may cancel this Contract by giving the other party thirty (30) days written notice of such cancellation; provided that termination of this Contract shall not relieve either party of its respective obligations and liabilities hereunder incurred through the effective date of such termination and further provided that Contractor's obligations pursuant to paragraph hereof shall survive termination.

8. **CONFLICT:** The terms, conditions, and requirements of this Contract shall prevail in the event of a conflict with the terms, conditions, or requirements of any work orders, purchase orders, or agreements, oral or written, entered into between the parties through their duly authorized representatives.

9. **APPLICABLE LAW:** This Contract shall be governed by and construed in accordance with the laws of the state of Mississippi without reference to its conflicts of law principles.

10. **SAVINGS CLAUSE:** If any provision herein is held to be partially or completely contrary to law and/or unenforceable, the Contract shall be deemed to be amended to modify partially or completely (including, if necessary, deletion of such provision) such provision or portion thereof to the extent necessary to make it enforceable.

11. **SAFETY:** Contractor shall take all safety precautions necessary to protect its employees, invitees, agents, and subcontractors and the employees and agents thereof, from risks of harm inherent in the nature of the Work hereunder and shall comply in the performance of the Work with all applicable laws, ordinances, and orders of governmental bodies and agencies relating to the safety of employees or to safety in the performance of the Work, including without limitations, all applicable State and Federal Safety Orders and Regulations. Contractor agrees that Company shall have the right (but not the obligation) to inspect Contractor's formal safety program; and, in the event Company deems Contractor's formal safety program to be inadequate for the protection of Contractor's employees, invitees, agents, and subcontractors and the employees and agents thereof, it is expressly understood and agreed that Contractor will implement and enforce Company's formal safety program governing the facility at which Work is being performed by Contractor.

12. **EQUAL EMPLOYMENT OPPORTUNITY:** Contractor agrees to comply with the nondiscrimination clause in Executive Order 11246, as amended, relating to equal employment opportunities and the affirmative action clause regarding the employment of the handicapped, as set forth in 60 CFR741.4, the employment of disabled veterans and veterans of the Vietnam era as set forth in Executive Order 11625, and implementing rules and regulations of the Secretary of Labor, all of which are incorporated herein by reference.

13. **ENFORCEMENT:** If at any time Company shall find it necessary to retain counsel in an effort to enforce Contractor's obligations under this Contract, Company shall be entitled to recover its reasonable attorney fees and litigation expenses incurred in connection with any such efforts.

14. **ARBITRATION.** All disputes, controversies or claims, of whatever kind or character, arising out of or in connection with this agreement shall be settled and determined by binding arbitration in accordance with the Commercial Arbitration Rules of the American Arbitration Association (the "Rules"). Said arbitration shall be conducted by three (3) arbitrators unless Company and Contractor mutually agree that the nature of the dispute requires only one (1) arbitrator and are able to agree on the identity of same. Company and Contractor shall each be entitled to nominate one arbitrator in accordance with the Rules. The two (2) arbitrators so nominated shall nominate the third arbitrator within ten (10) days of confirmation of the first two (2) arbitrators. The arbitration shall be governed by Mississippi law and shall be carried out in the City of Jackson, Mississippi, U.S.A. or such other location as the parties may agree. Company and Contractor shall share equally all administrative fees and expenses related to the Arbitration, including any arbitrator's fees. The award of the arbitrator(s) shall be enforceable in a court of competent jurisdiction.

15. **NOTICES:** Any notice, request, instruction or other document to be given or furnished under this Contract by any party to the other party shall be in writing and shall be delivered personally or shall be sent by facsimile transmission or registered or certified mail, postage prepaid, or by prepaid overnight delivery service to the following addresses or telecopier numbers:

IF TO COMPANY:	IF TO CONTRACTOR:
<p>MS. JANIS ERIKSON P O BOX 1639 2829 LAKE LAND DR, SUITE 2000 JACKSON MS 39232-7611 FAX: (601) 933-3367 Attn: Risk Management Dept.</p>	<p>MR. DAVIAN PLOGER ES&H CONSULTING SERVICES, INC. 1730 COTEAU RD. HOUMA, LA 70364 FAX (985) 853-1978</p>

COMPANY: LION OIL COMPANY

CONTRACTOR: ES&H CONSULTING SERVICES, INC.

By: JOHN M. RYAN, P.G.

By: Davian M. Ploger

Title: ENVIRONMENTAL PROJECT SCIENTIST

Title: Sales/Marketing Manager

LION OIL COMPANY

ES&H CONSULTING SERVICES, INC.

ADDENDUM #1
MSA (LOC-ESH-001)

Lion Oil Company desires to clarify the above-referenced Master Service Agreement as contained herein. The first paragraph of the above-referenced MSA provides that the agreement is between Environmental, Safety, and Health, Consulting Services Inc. and Lion Oil Company (the Parties). The Parties agree that Environmental, Safety, and Health, Consulting Services Inc. will provide those services set forth in the Master Service Agreement for Lion Oil Company. The purpose of this letter is to evidence our mutual agreement that the referenced services agreement be amended to provide that in addition to Lion Oil Company, Environmental, Safety, and Health, Consulting Services Inc. agrees to provide the services contemplated by the agreement to Lion Oil Company's subsidiary companies listed below, whether same be at Lion Oil Company's request in its capacity as administrative services provider to those subsidiary companies, or pursuant to a direct request for services by such companies. In terms of executing the contract, each of these companies is authorized to procure emergency response and general industrial service contracting in addition to and on behalf of Lion Oil Company. The companies include:

Lion Oil Trading and Transportation, Inc.
Paline Pipeline Company
Magnolia Pipeline Company
El Dorado Pipeline Company
J. Christy Construction Company

In witness whereof, the parties listed below have caused this agreement to be executed as of the 3rd day of June, 2002.

WITNESS:

Erin B. Keppelch
Michael K. Bala

ES&H CONSULTING SERVICES, INC.

By:

Davian M. Ploger

Davian M. Ploger

Title:

Sales/Marketing Manager

WITNESS:

John M. Ryan

LION OIL COMPANY

By:

Kirk Latson

Kirk Latson

V.P. Product Distribution and Supply

ORIGINAL



Response Equipment by Location

H – HOUMA **F** – FOURCHON **MC** – MORGAN CITY
BC – BELLE CHASSE **NI** – NEW IBERIA **BR** – BATON ROUGE
V – VENICE **R** – RESERVE **S** – SHREVEPORT

ITEM	RESPONSE EQUIPMENT	H	F	MC	BC	R	S	NI	V	BR
1	OIL SPILL UNIT	2	1	1	1	1	1	1		1
2	HAZ-MAT UNIT	1			1		1	1		1
3	AIR MONITORING UNIT	4	1	1	1			1	1	1
4	NORM MONITORING METER	1			1					1
5	SMALL 10" BOOM TRAILER	1	1							
6	SMALL 18" BOOM TRAILER	2	2	1	1	1	1	1	1	1
7	LARGE 18" BOOM TRAILER	1			1					
8	SMALL 24" BOOM TRAILER		1							
9	ADDITIONAL 6" BOOM	2,000 FT		500 FT	500 FT			200 FT		
10	ADDITIONAL 10" BOOM	2,000 FT	1,000 FT	1,000 FT	100 FT	500 FT		1,000 FT	1,000 FT	1,000 FT
11	ADDITIONAL 18" BOOM	12,000 FT					500 FT	2,000 FT		
12	ADDITIONAL 24" BOOM									
13	ADDITIONAL 36" BOOM	1,000 FT								
14	MARCO SKIMMER	1			1					
15	LARGE DRUM SKIMMER	1			1					
16	MEDIUM DRUM SKIMMER	3	1	1			1	1	1	1
17	SMALL DRUM SKIMMER			1						
18	ROPE MOP SKIMMER	2								1
19	MANTA RAY SKIMMER	4	1	1	1			1	1	1
20	SLURP SKIMMER									
21	SKIM PAK SKIMMER	1	1							
22	32' BARGE BOAT	1								
23	28' RESPONSE BOAT	1								
24	25' RESPONSE BOAT	2	1		1				2	1
25	22' BARGE BOAT	1								
26	20' RESPONSE BOAT	2		2	1			1		1
27	VACUUM TRUCKS	5	1		1					
28	ROLL-OFF TRUCKS	3			1					
29	16' JOHN BOAT	5	1	2	1		2		1	
30	14' JOHN BOAT	2	3							
31	14' PIROGUE	1	1	2	1			1		
32	50 BBL OIL STORAGE BARGE	2								

ITEM	RESPONSE EQUIPMENT	H	F	MC	BC	R	S	NI	V	BR
33	ROLL-OFF CONTAINERS	25						7		8
34	DECON POOL (10 X 10)	1			1					1
35	DECON POOL (25 X 50)	2								
36	DECON POOL (50 X 100)	1								
37	PRESSURE WASHER	1	1	1	1			1	1	1
38	STEAM CLEANER	2						1		
39	3" DIESEL DIAPHRAGM PUMP	2			1			1	1	
40	2" GAS DIAPHRAGM PUMP	4	1	2						
41	WASH PUMP UNIT	10	3	2	3		1	3	3	2
42	3" AIR DIAPHRAGM	6								3
43	1" AIR DIAPHRAGM	2								
44	SORBENT PADS	300	50	100	75		72	50	50	50
45	5" SORBENT BOOM	300	50	50	50		30	50	50	50
46	8" SORBENT BOOM	100	50	50	50		85	50	50	50
47	SORBENT ROLL	40	60	20	20			20	20	20
48	SORBENT SWEEP	30	10	10	10			10	10	10
49	POM-POM SNARE ON ROPE	10	10		50					
50	INDUSTRIAL RUG	10	10	10	10			10	10	10
51	PITCHFORK	20	10	10	10			10	10	10
52	POLLUTION NETS	20	10	10	10			10	10	10
53	POLLUTION CANS	30	10	20	10			10	10	10
54	POLLUTION BAGS (ROLL)	150	30	30	30			30	30	20
55	VISQUEEN (ROLL)	20	10	10	10			10	10	10
56	55 GALLON STEEL DRUM	10	10	10	10			10	10	10
57	55 GALLON PLASTIC DRUM	200	20	20	140			20	20	20
58	85 GALLON OVERPACK	5	5	5	5			5	5	5
59	95 GALLON OVERPACK	20	5	5	10			5	5	5
60	FULL-FACE RESPIRATOR	20	10	10	10			10	10	10
61	SCBA	1					4	4		4
62	PVC GLOVES (DOZEN)	50	20	20	20			20	20	20
63	NITRILE GLOVES (BOX)	40	1	1	1			1	1	1
64	TYVEK SUITS (CASE)	60	10	10	10			10	10	10
65	SARANEX SUITS (CASE)	40	5	5	5			5	5	5
66	LEVEL "B" SUITS (EACH)	24								
67	LEVEL "A" SUITS (EACH)	6								
68	AIR COMPRESSOR	1					1			

ES&H of Shreveport
Resource List

(1) 24' Hazmat Trailer	(1) 24' Oil Spill Trailer
(4) SCBA's	(1) Air Compressor
Regular Personal Protective Equipment (PPE)	(1) Medium Drum Skimmer
(1) 4-Wheel Dolly	(1) 2" Diesel Wash Pump
(1) MSA Passport	(1) 2" Transfer Pump
(1) Draeger Pump	(1) 2" Wash Pump
	200' of 2" Suction Hose
	1 ½' Wash Hose - 80"

(2) Trucks
15' Ladder
(1) Laptop
(1) Digital Camera
2600' of Sorbent Boom: 1400' of 8" sorbent boom, 1200' of 5" sorbent boom
Leaf Blower
(1) 16' Boom Trailer: (2) 16' Flat boats with 25 HP Yamahas
500' of 18" Containment Boom
72 Bales of Sorbent Pads
20 Bales of Chemical Sorbent Pads
6 Bags of Oil Gator
6 Bags of Floor Dry
2 Bags of Sodium Bicarbonate
2 Bags of Soda Ash



**RESPONSE RESOURCE
SHEET**

**24-HOUR EMERGENCY HOTLINE
1-877-4ESANDH**

August 2001

***HOUMA*FOURCHON*MORGAN CITY*NEW IBERIA*
*BELLE CHASSE*BATON ROUGE*VENICE***

ES&H

Response Resources by Location

**H – HOUMA F – FOURCHON MC – MORGAN CITY
 BC – BELLE CHASSE NI – NEW IBERIA BR – BATON ROUGE
 V – VENICE**

ITEM	RESPONSE EQUIPMENT	H	F	MC	BC	NI	V	BR
1	OIL SPILL UNIT	2	1	1	1	1		1
2	HAZMAT UNIT	1			1	1		1
3	AIR MONITORING UNIT	4	1	1	1	1	1	1
4	NORM MONITORING METER	1			1			1
5	SMALL 10" BOOM TRAILER	1	1					
6	SMALL 18" BOOM TRAILER	2	2	1	1	1	1	1
7	LARGE 18" BOOM TRAILER	1			1			
8	SMALL 24" BOOM TRAILER		1					
9	ADDITIONAL 6" BOOM	2000FT		500FT	500FT	200FT		
10	ADDITIONAL 10" BOOM	2000FT	1000FT	1000FT	100FT	1000FT	1000FT	1000FT
11	ADDITIONAL 18" BOOM	12000FT				2000FT		
12	ADDITIONAL 24" BOOM							
13	ADDITIONAL 36" BOOM	1000FT						
14	MARCO SKIMMER	1			1			
15	LARGE DRUM SKIMMER	1			1			
16	MEDIUM DRUM SKIMMER	3	1	1		1	1	1
17	SMALL DRUM SKIMMER			1				
18	ROPE MOP SKIMMER	2						1
19	MANTA RAY SKIMMER	4	1	1	1	1	1	1
20	SLURP SKIMMER							
21	SKIM PAK SKIMMER	1	1					
22	32' BARGE BOAT	1						
23	28' RESPONSE BOAT	1						
24	25' RESPONSE BOAT	2	1		1		2	1
25	22' BARGE BOAT	1						
26	20' RESPONSE BOAT	2		2	1	1		1
27	VACUUM TRUCKS	4	1		1	1		
28	ROLL-OFF TRUCKS	3				1		
29	16' JOHN BOAT	5	1	2	1		1	
30	14' JOHN BOAT	2	3					
31	14' PIROGUE	1	1	2	1	1		
32	50 BBL OIL STORAGE BARGE	2						
33	ROLL-OFF CONTAINERS	24				7		8

ES&H**Response Resources by Location**

H – HOUMA F – FOURCHON MC – MORGAN CITY
BC – BELLE CHASSE NI – NEW IBERIA BR – BATON ROUGE
V – VENICE

ITEM	RESPONSE EQUIPMENT	H	F	MC	BC	NI	V	BR
34	DECON POOL 10 X 10	1			1			1
35	DECON POOL 25 X 50	2						
36	DECON POOL 50 X 100	1						
37	PRESSURE WASHER	1	1	1	1	1	1	1
38	STEAM CLEANER	2				1		
39	3" DIESEL DIAPHRAGM PUMP	2			1	1	1	
40	2" GAS DIAPHRAGM PUMP	4	1	2				
41	WASH PUMP UNIT	10	3	2	3	3*	3	2
42	3" AIR DIAPHRAGM	6						3
43	1" AIR DIAPHRAGM	2						
44	SORBENT PADS	300	50	100	75	50	50	50
45	5" SOBENT BOOM	300	50	50	50	50	50	50
46	8" SORBENT BOOM	100	50	50	50	50	50	50
47	SORBENT ROLL	40	60	20	20	20	20	20
48	SORBENT SWEEP	30	10	10	10	10	10	10
49	POMPOM SNARE ON ROPE	10	10		50			
50	INDUSTRIAL RUG	10	10	10	10	10	10	10
51	PITCHFORK	20	10	10	10	10	10	10
52	POLLUTION NETS	20	10	10	10	10	10	10
53	POLLUTION CANS	30	10	20	10	10	10	10
54	POLLTION BAGS (ROLL)	150	30	30	30	30	30	20
55	VISQUEEN (ROLL)	20	10	10	10	10	10	10
56	55 GAL DRUM STEEL	10	10	10	10	10	10	10
57	55 GAL DRUM PLASTIC	200	20	20	140	20	20	20
58	85 GAL OVERPACK	5	5	5	5	5	5	5
59	95 GAL OVERPACK	20	5	5	10	5	5	5
60	FULL FACE RESPIRATOR	20	10	10	10	10	10	10
61	SCBA	1				4		4
62	PVC GLOVES (DOZEN)	50	20	20	20	20	20	20
63	NITRILE GLOVES (BOX)	40	1	1	1	1	1	1
64	TYVEK SUITS (CASE)	60	10	10	10	10	10	10
65	SARANEX SUITS (CASE)	40	5	5	5	5	5	5
66	LEVEL "B" SUITS (EACH)	24						
67	LEVEL "A" SUITS (EACH)	6						
68	AIR COMPRESSOR (185)	1						

- ITEM 1** – OIL SPILL UNIT, 1000FT OF CONTAINMENT BOOM (ANCHORS, ROPE, BOUYS, AND LIGHTS), SKIMMER (INCLUDING STORAGE OF 300 GALS OF PRODUCT), WASH PUMPS (SUCTION HOSE, DISCHARGE HOSE, NOZZLE, AND EXTRA FUEL), SORBENTS (PADS, BOOM, ROLLS), PPE (SUPPORT FOR 6 PEOPLE FOR 3 DAYS) 3 PICK-UP TRUCKS, 6-PERSONNEL, 2 RESPONSE BOATS
- ITEM 2** – HAZMAT UNIT, SCBA'S, PPE (LEVEL "A", LEVEL "B", LEVEL "C" DRESS, GLOVES BOOTIES), SORBENTS (UNIVERSAL PADS, BOOM, AND FLOOR DRY), NUETRALIZERS (SODIUM BICARBINATE, SODA ASH, LIME), CHEMICAL TRANSFER PUMP (SUCTION AND DISCHARGE HOSES), STORAGE CONTAINERS (SALVAGE DRUMS, OVERPACKS), MONITORING EQUIPMENT (LEL,O2,S02,H2S BENZENE, PH), CASCADE SYTEM (5 BOTTLE RACK AND COMPRESSOR), ENOUGH SUPPORT FOR A FOUR MAN ENTRY TEAM
- ITEM 3** – AIR MONITORING UNIT, MSA PASSPORT (LEL, O2, H2S, CO) MSA QUICK DRAW PUMP (VARIOUS TUBES AS REQUIRED)
- ITEM 4** – NORM MONITORING METER, LUDLUM MODEL
- ITEM 5** – SMALL 10" BOOM TRAILER, 1000FT OF BOOM (ANCHORS, ROPE, BOUYS, AND LIGHTS)
- ITEM 6**– SMALL 18" BOOM TRAILER, 1000FT OF BOOM (ANCHORS, ROPE, BOUYS, AND LIGHTS)
- ITEM 7** –LARGE 18" BOOM TRAILER, 4000FT OF BOOM (ANCHORS, ROPE, BOUYS, AND LIGHTS)
- ITEM 8** – SMALL 24" BOOM TRAILER, 500FT OF BOOM (ANCHORS, ROPE, BOUYS, AND LIGHTS)
- ITEMS 9 – 13** - ADDITIONAL BOOM, STORED IN A WHAREHOUSE AT EACH LOCATION READY FOR LOAD OUT.
- ITEM 14** – MARCO SKIMMER, SELF CONTAINED SHALLOW WATER SKIMMER POWERED BY TWIN 115HP MERCURIES, SELF STORAGE 1200 GAL., CAPABLE OF SPEED UP TO 25 KTS, RECOVERY RATE 350 GPM
- ITEM 15** –LARGE DRUM SKIMMER, TDS 136, RECOVERTE RATE 70 GPM
- ITEM 16** – MEDIUM DRUM SKIMMER, TDS 118, RECOVERY RATE 35 GPM
- ITEM 17** – SMALL DRUM SKIMMER, MAXIUM 15, RECOVERY RATE 20 GPM
- ITEM 18** – ROPE MOP SKIMMER, MODEL II-A,
- ITEM 19** – MANTA RAY SKIMMER, MADE BY SLICKBAR, RECOVERY RATE 5 TO 95 GPM
- ITEM 20** – SLURP SKIMMER, MADE BY SLICKBAR, RECOVERY RATE 2 TO 40 GPM
- ITEM 21** – SKIM PAK SKIMMER, RECOVERY RATE 35 GPM
- ITEM 22** – 32' BARGE BOAT, LARGE OPEN DECK FOR EQUIPMENT TRANSPORT OR WORK PLATFORM, TWIN 150 HP MOTORS
- ITEM 23** – 28' RESPONSE BOAT, ALUMINUM FLAT BOAT WITH TWIN 70 HP MOTORS

ITEM 24 – 25' RESPONSE BOAT, TWIN 60 OR TWIN 115 HP MOTORS

ITEM 25 – 22' BARGE BOAT, LARGE OPEN DECK FOR EQUIPMENT TRANSPORT OR
WORK PLATFORM

ITEM 26- 20' RESPONSE BOAT

ITEM 27 – VACUUM TRUCKS

ITEM 28 – ROLL-OFF BOX DELIVER TRUCKS W/ (SINGLE & DOUBLE RAIL TRAILERS)

ITEM 29 – 16' JOHN BOAT, ALUMINUM FLAT BOAT WITH 25 HP MOTOR

ITEM 30 – 14' JOHN BOAT, ALUMINUM FLAT BOAT WITH 15 HP MOTOR

ITEM 31 – SELF EXPLANATORY

ITEM 32 – 50 BBL OIL STORAGE BARGE, 16 FT ALUMINUM, TRAILABLE

ITEM 33 – 20 7 25 CU. YRD CONTAINER, (ROLL-OFF BOXES), TRAILABLE

ITEMS 34 – 36 – SELF EXPLANATORY

ITEM 37 – PRESSURE WASHER, COLD WATER 3,000 PSI

ITEM 38 – STEAM CLEANER, HOT WATER MACHINE 3, 000 PSI

ITEMS 49 – 40 – SELF EXPLANATORY

ITEM 41– WASH PUMP UNIT, 2" PUMP, SUCTION HOSE, DISCHARGE HOSE, STRAINER,
NOZZLE

ITEMS 42 – 67 – SELF EXPLANATORY

ITEM 68- 185 SFPM AIR COMPRESSOR



**OIL SPILL/HAZMAT
EMERGENCY RESPONSE**

RATE SCHEDULE

**24 HOUR EMERGENCY HOTLINE
1-877-4ESANDH**

JUNE 2001

***HOUMA*FOURCHON*MORGAN CITY*NEW IBERIA*
*BELLE CHASSE*BATON ROUGE*VENICE***

PERSONNEL

Experienced emergency response personnel are available for complete spill clean-up operations, 24 hours a day, 7 days a week. Normal hours of operation are from 0800 through 1700 daily, Monday through Friday. All labor charges will be in accordance with ES&H Daily Tickets. Overtime for personnel will be charged at time and a half between 1700 through 0800 Monday through Friday, weekends from 1700 Friday through 0800 Monday, after eight hours in a day, and all National Holidays. Double time rates will be charged for Christmas Day. Per Diem of \$90.00 per day, per employee will be charged for all work-performed 50 miles outside of employee's home base. There will be a 4-hour minimum service charge on all labor call outs. All call outs will be charged portal-to-portal.

AUTOMOTIVE EQUIPMENT

A mileage charge of \$0.50 per mile will be charged for all automotive equipment. Fuel for all automotive equipment is included in the \$0.50 per mile charge.

STAND-BY-RATES

Stand-by rates will be ½ the daily rate for equipment. These rates may be negotiated based upon the circumstances causing the need for a stand-by situation. Full rates will apply for personnel and per diem.

TAXES

All federal, state, and municipal taxes, except income taxes and advalorem taxes, now and hereinafter imposed with respect to services rendered; to rental equipment; to the processing, manufacture, repair, delivery, transportation of equipment and supplies shall be added to and become part of the total price payable by the client. Unless the proper exemption certificates are furnished.

TERMS

All equipment not listed in this rate schedule, whether requested by the contracting company or needed to complete work in progress, will be negotiated for price with a client company representative. A 20% handling charge will be added to the cost of any equipment rented or subcontracted, which is or is not listed in this rate schedule.

REPLACEMENT OF DAMAGED EQUIPMENT

All equipment and supplies are subject to a replacement charge at ES&H cost + 20% if damaged, or if decontamination is impossible.

DECONTAMINATION OF EQUIPMENT

A mutually agreed price for cleaning contaminated containment boom shall be decided upon and can vary depending on the degree of contamination. The charges for cleaning all other equipment is $\frac{1}{2}$ the daily rental rate. Time and materials will also be included. Any waste water disposal will be at cost + 20%.

INVOICES

Invoices will be rendered either on a daily basis or at the completion of the job, depending on the duration of the job. Invoices will contain all applicable Federal, State and, Local taxes. All charges are payable NET CASH within thirty (30) days from the date of invoice. Finance charges will be applied to invoices with an unpaid balance beginning thirty-one (31) days from the date of invoice. Finance charges are computed at the periodic rate of 1.5% per month (18% per annum.)

PERSONNEL

	HOURLY RATE	
	<u>Regular</u>	<u>Overtime</u>
Project Manager	\$50.00	\$75.00
Supervisor	\$45.00	\$67.50
Project Acct.	\$45.00	\$67.50
Safety Officer	\$40.00	\$60.00
Disposal Coordinator	\$40.00	\$60.00
Foreman	\$36.00	\$54.00
Mechanic	\$32.00	\$48.00
Operator	\$30.00	\$45.00
Field Acct.	\$30.00	\$45.00
Technician	\$28.00	\$42.00
Logistics Coordinator	\$40.00	\$60.00

PERSONNEL (HAZMAT)

Project Manager	\$65.00	\$97.50
Supervisor	\$50.00	\$75.00
Project Acct.	\$50.00	\$75.00
Safety Officer	\$50.00	\$75.00
Foreman	\$45.00	\$67.50
Mechanic	\$45.00	\$67.50
Operator	\$45.00	\$67.50
Field Acct.	\$35.00	\$52.50
Technician	\$35.00	\$52.50

RESPONSE VEHICLES

Pick Up Truck	\$95.00 / day
1.5 Ton Truck	\$150.00 / day
Personnel Van	\$125.00 / day
4 x 4 Pick Up	\$200.00 / day
4 x 4 ATV	\$200.00 / day
Command Post	\$400.00 / day
Tractor	\$65.00 / hour
70bbl Vacuum Truck	\$65.00 / hour
Flatbed Freightliner	\$65.00 / hour
Roll Off Delivery (single)	\$95.00 / hour
Roll Off Delivery (double)	\$160.00 / hour
King Vac	\$125.00 / hour

RESPONSE TRAILERS

48' Response Trailer	-----	\$175.00 / day
32' Response Trailer	-----	\$150.00 / day
28' Response Trailer	-----	\$135.00 / day
24' Response Trailer	-----	\$130.00 / day
20' Response Trailer	-----	\$120.00 / day
16' Response Trailer	-----	\$ 75.00 / day
8' Response Trailer	-----	\$ 35.00 / day
6' Response Trailer	-----	\$ 25.00 / day

MARINE EQUIPMENT

32' Response Boat w/ motor	-----	\$700.00 / day
28' Response Boat w/ motor	-----	\$550.00 / day
28' Response Boat w/ (2) 225 HP Motors	-----	\$750.00 / day
25' Response Boat w/ motor & radar	-----	\$550.00 / day
25' Response Boat w/ motor	-----	\$500.00 / day
25' Barge Boat w/ motor	-----	\$600.00 / day
22' Barge Boat w/ motor	-----	\$400.00 / day
18' - 20' Response Boat w/ motor	-----	\$350.00 / day
16' Response Boat w/ motor	-----	\$200.00 / day
12'-14' Response Boat w/ motor	-----	\$150.00 / day
12'-14' Response Boat w/o motor	-----	\$100.00 / day
Air Boat	-----	\$500.00 / day
Pirogue	-----	\$ 35.00 / day
Oil Barge over 250bbl to 5000bbl	-----	Available upon request
Oil Barge 30bbl to 50bbl	-----	\$175.00 / day
Spud Barge	-----	Available upon request
Deck Barge 120' x 30'	-----	Available upon request

SPILL CONTROL EQUIPMENT

6" Containment Boom	-----	\$0.75 / ft / day
10" Containment Boom	-----	\$1.00 / ft / day
18" Containment Boom	-----	\$1.40 / ft / day
24" Containment Boom	-----	\$2.50 / ft / day
36" Containment Boom	-----	\$4.00 / ft / day
42" Containment Boom	-----	\$5.00 / ft / day
48" Containment Boom	-----	\$6.00 / ft / day

SPILL CONTROL EQUIPMENT cont.

10 LB Anchor	-----	\$20.00 / day
15 LB Anchor	-----	\$25.00 / day
22 LB Anchor	-----	\$40.00 / day
40 LB Anchor	-----	\$60.00 / day
60 LB Anchor	-----	\$80.00 / day
Boom Lights (small)	-----	\$10.00 / day
Boom Lights (large)	-----	\$20.00 / day
Chemical Boom Lights	-----	\$12.00 / each
Buoys	-----	\$25.00 / job
Boom Stakes	-----	\$10.00 / each

SKIMMERS

Marco Skimmer	-----	\$3500.00 / day
Marco Backing Belt (replacement)	-----	Cost + 20%
Marco Light Oil Belt (replacement)	-----	Cost + 20%
Marco Filterbelt Pad (replacement)	-----	Cost + 20%
Marco Diesel Pad (replacement)	-----	Cost + 20%
Drum Skimmer (small)	-----	\$ 400.00 / day
Drum Skimmer (medium)	-----	\$ 500.00 / day
Drum Skimmer (large)	-----	\$ 550.00 / day
Manta Ray	-----	\$ 150.00 / day
Skimpack	-----	\$ 125.00 / day
Aluminum (small)	-----	\$ 150.00 / day
Aluminum (large)	-----	\$ 200.00 / day
Slurp Skimmer	-----	\$ 150.00 / day
Rope Mop I-4	-----	\$ 350.00 / day
Rope Mop II-4	-----	\$ 400.00 / day
Rope Mop II-6	-----	\$ 450.00 / day
Rope Mop II-9	-----	\$ 500.00 / day
12" Tail Pulley	-----	\$ 10.00/day
16" Tail Pulley	-----	\$ 20.00/day
4" Rope Mop (rental)	-----	\$ 1.00/ ft / day
6" Rope Mop (rental)	-----	\$ 1.25/ ft / day
9" Rope Mop (rental)	-----	\$ 1.50/ ft / day
4" Rope Mop (replacement)	-----	\$ 23.75/ ft
6" Rope Mop (replacement)	-----	\$ 26.00/ ft
9" Rope Mop (replacement)	-----	\$ 40.00/ ft
Pelican Skimmer	-----	\$ 100.00 / day
Duck Bill Skimmer	-----	\$ 25.00 / day

MISCELLANEOUS MATERIALS

Sorbent Pad (100 / bale)	-----	\$ 45.00 / bale
Sorbent Pad (50 / bale)	-----	\$ 70.00 / bale
5" Sorbent Boom (40' / bale)	-----	\$ 90.00 / bale
8" Sorbent Boom (40' / bale)	-----	\$130.00 / bale
Sorbent Roll (144' x 38')	-----	\$125.00 / roll
Sorbent Sweep (100' / bale)	-----	\$ 85.00 / bale
Pompom Snare (30 / box)	-----	\$ 50.00 / box
Pompom Snare(100' on rope)	-----	\$200.00 / box
Sorbent Part. (27 lb. / bale)	-----	\$ 93.00 / bale
FiberPearl	-----	\$ 25.00 / bag
Industrial Rug	-----	\$250.00 / roll
Spag Sorb. (4cu ft / bag)	-----	\$ 80.00 / bag
Spag Sorb. Boom (32' / box)	-----	\$200.00 / bag
Stay Dry (40 lb)	-----	\$ 15.00 / bag
Sodium Bicarbonate (50lb)	-----	\$ 25.00 / bag
Soda Ash (50lb)	-----	\$ 20.00 / bag
Lime (50lb)	-----	\$ 20.00 / bag
Peat Moss (3.8 cu. ft.)	-----	\$ 25.00 / bag
Oil Gator (50lb)	-----	\$ 25.00 / bag
Pitchfork	-----	\$ 15.00 / each
Rake	-----	\$ 15.00 / each
Shovel (Flat, Spade, Scoop)	-----	\$ 15.00 / each
Flat Shovel (Non-Sparking)	-----	\$ 25.00/each
Squeegee	-----	\$ 15.00 / each
Scrub Brush	-----	\$ 15.00 / each
Rope, 1/4 (roll)	-----	\$ 45.00 / roll
Rope, 3/8 (roll)	-----	\$ 65.00 / roll
Rope, 1/2 (roll)	-----	\$ 75.00 / roll
Pool Net	-----	\$ 20.00 / each
Pollution Net	-----	\$ 20.00 / each
Pollution Bags (50 / roll)	-----	\$ 75.00 / roll
Visqueen	-----	\$ 90.00 / roll

MISCELLANEOUS MATERIALS cont.

30 gal. Plastic Drum	-----	\$70.00 / each
55 gal. Plastic Drum	-----	\$60.00 /each
95 gal. Plastic Drum	-----	\$180.00 / each
55 gal. Steel Drum	-----	\$ 55.00 / each
85 gal. Steel Salvage Drum	-----	\$170.00 /each
Duct tape	-----	\$ 5.00 / roll
Pollution Cans	-----	\$ 15.00 / each
Decon Sprayer	-----	\$ 40.00 / each
Barrier tape	-----	\$ 35.00 / each
Hand cleaner	-----	\$ 4.00 / each
Rags / Wipes (box)	-----	\$ 10.00 / box
Roll off Box Liner	-----	\$ 45.00 / each
Disposable Hand Wipes	-----	\$ 30.00 / each
Outboard Oil	-----	\$ 15.00 / gallon
Hose Condom	-----	\$ 30.00/ roll
Soap (5 gal.)	-----	\$ 35.00 / each
Multec 1500 (5 gallon bucket)	-----	\$ 125.00/each
Sample Containers	-----	\$ 5.00/ each
2 Bottle Breathing Air Cascade System (high pressure)-----		\$200.00/day
4 Bottle Breathing Air Cascade System (high pressure)-----		\$275.00/day
6 Bottle Breathing Air Cascade System (high pressure)-----		\$350.00/day
8 Bottle Breathing Air Cascade System (high pressure)-----		\$400.00/day
Low Pressure Breathing Air Refills	-----	\$ 35.00/each
High Pressure Breathing Air Refills	-----	\$ 50.00/each
Breathing Air Compressor	-----	\$200.00/day

PERSONAL PROTECTIVE EQUIPMENT

CPF-1 Suit	-----	\$20.00 / each
CPF-2 Suit	-----	\$70.00 / each
CPF-3 Suit	-----	\$90.00 / each
CPF-4 Suit	-----	\$Cost plus 20%
Tyvek Suit (25 / case)	-----	\$150.00 / case
Saranex Suit	-----	\$30.00 / each
Disposable Slicker Suit	-----	\$10.00 /each
Heavy Duty Slicker Suit	-----	\$ 35.00 / each
Plypro Coveralls	-----	\$12.50 / each
Plycoated Tyvek Coveralls	-----	\$225.00 / case
Nomex Coveralls	-----	\$100.00 / each
Bunker Gear	-----	\$175.00 / each

PERSONAL PROTECTIVE EQUIPMENT cont.

Hazmat Boots	-----	\$100.00 /pair
Tyvek Boot Covers	-----	\$5.00 / pair
Rubber Boot Covers	-----	\$20.00 / pair
Chemical Resistant Boots	-----	\$75.00
Hip Boots	-----	\$Cost plus 20%
Chest Waders	-----	\$Cost plus 20%
Cotton Gloves	-----	\$3.00 / pair
PVC Rubber Gloves	-----	\$5.00 / pair
Nitrile Gloves (25/box)	-----	\$45.00 / box
Safety Glasses	-----	\$10.00 /each
Safety Shields	-----	\$20.00 / each
Dust / Particulate Mask	-----	\$3.00 / each
Half Face Respirator	-----	\$25.00 / day
Full Face Respirator	-----	\$50.00 / day
5 Min Escape Pack	-----	\$100.00 / day
SCBA	-----	\$175.00 / day
H.E.P.A. Apr Cartridges	-----	\$24.00 / pair
Organic Vapor / H.E.P.A. Cartridges	-----	\$22.00 / pair
Chemical Vapor APR Cartridges	-----	\$24.00 / pair
Organic Vapor Respirator Cartridges	-----	\$24.00 / pair
Emergency Signal Horn	-----	\$15.00 / day
Safety Harness	-----	\$50.00 / day
Lifeline with Safety Hook	-----	\$ 10.00/ day
Tripod / Winch Retrieval System	-----	\$160.00 / day

**Minimum Protective equipment such as hard hats, life vests, knee boots and steel toe boots are provided by ES&H Consulting Services at a cost of \$35.00 per person for each day the person is on the work site or cost + 20%.

SAFETY SUPPORT EQUIPMENT

MSA Passport Air Monitor	-----	\$100.00 / day
FID	-----	\$ 295.00 / day
PID	-----	\$ 275.00 / day
Chemical Tube Pump	-----	\$ 50.00/day
LudLum Model #2 Norm Survey Meter	-----	\$ 50.00/ day
LudLum Model #3 Norm Survey Meter	-----	\$ 50.00/ day
pH Meter	-----	\$ 50.00 / day
Chemical Tubes	-----	\$ 10.00 / each
PCB Test Kit	-----	\$ 20.00 / each

MISCELLANEOUS SUPPORT EQUIPMENT

1" Diaphragm Pump (Gas or Air)	-----	\$ 75.00 / day
2" Diaphragm Pump (Gas or Air)	-----	\$ 110.00 / day
3" Diaphragm Pump (Gas or Air)	-----	\$135.00 / day
2" Chemical Transfer Pump	-----	\$250.00 / day
2" Diesel Pump	-----	\$ 90.00 / day
3" Diesel Pump	-----	\$110.00/day
2" Peristaltic Pump (Vac Pump)	-----	\$300.00 / day
2" Gas Pump	-----	\$ 90.00 / day
3" Gas Pump	-----	\$110.00 / day
1/2" Air Diaphragm Pump	-----	\$ 65.00/ day
2.8 kW Generator	-----	\$ 70.00 / day
4 kW Generator	-----	\$ 80.00 / day
8 kW Generator	-----	\$ 90.00 / day
10 kW Generator	-----	\$125.00 / day
12 kW Generator	-----	\$150.00 / day
10 CU ft Air Compressor	-----	\$100.00 / day
100 CU ft Air Compressor	-----	\$150.00 / day
185 CU ft Air Compressor	-----	\$175.00 / day
375 CU ft Air Compressor	-----	\$300.00 / day
Breathing Air Compressor	-----	\$200.00 / day
Scare Cannons	-----	\$ 40.00 / day
3/4 Air Hose	-----	\$.25 / ft / day
1" Suction/Discharge Hose	-----	\$.25 / ft / day
2" Suction/Discharge Hose	-----	\$.40 / ft / day
3" Suction/Discharge Hose	-----	\$.55 / ft / day
4" Suction/Discharge Hose	-----	\$.65 / ft / day
5" Suction/Discharge Hose	-----	\$.75 / ft / day
6" Suction/Discharge Hose	-----	\$.85 / ft / day
2" Coast Guard Approved Hose	-----	\$ 1.20 / ft / day
3" Coast Guard Approved Hose	-----	\$ 1.50 / ft / day
2" Chemical Hose	-----	\$ 1.00 / ft / day
Generated Light Plant	-----	\$175.00 / day
Explosion Proof Lighting	-----	\$ 70.00/day
Light Tower	-----	\$ 25.00 / day
Foam Machine	-----	\$200.00 / day
Acetylene/ Oxygen Torch Set	-----	\$ 50.00/ day
Rope Ladder	-----	\$ 20.00/ day
24' Fiberglass Extension Ladder	-----	\$ 25.00/day
40' Extension Ladder	-----	\$ 40.00/day

1500psi Pressure Washer	-----	\$ 95.00 / day
3000psi Pressure Washer	-----	\$ 180.00 / day
3000psi Steam Cleaner	-----	\$250.00 / day
Pressure washer Hose	-----	\$ 0.35 /ft /day

MISCELLANEOUS SUPPORT EQUIPMENT cont.

12' Extension Pressure Wand	-----	\$ 10.00/ day
Bobcat Escavator	-----	\$250.00 / day
Forklift	-----	\$175.00 / day
Weedeater	-----	\$ 35.00 / day
Air Blower	-----	\$ 35.00 / day
Turbine Air Blower (Ram Fan)	-----	\$ 75.00/day
4" Cone Blower	-----	\$ 55.00/day
5" Cone Blower	-----	\$ 65.00/day
Chain Saw	-----	\$ 35.00 / day
Wheelbarrow	-----	\$ 25.00 / day
Disposable decon pool	-----	\$ 20.00 / day
Decon Pool 10 x 10	-----	\$ 65.00 / day
Decon Pool 25 x 50	-----	\$250.00 / day
Decon Pool 25 x 100	-----	\$350.00 / day
Roll Off Boxes	-----	\$ 25.00 / day

HAZMAT EQUIPMENT

Chemical Pads	-----	\$ 125.00/bale
5" Chemical Boom	-----	\$ 120.00/bale
8" Chemical Boom	-----	\$ 175.00/bale
1 1/2" Fire Hose	-----	\$.75/foot
Industrial Fire Nozzle	-----	\$ 50.00 / day
Non-Sparking Hand Tools	-----	\$ 50.00 / day
Pogo Pump	-----	\$ 25.00 / day
Drum Labels	-----	\$ 2.00/each
Safety Cones	-----	\$ 2.00 / day
Eye Wash Station	-----	\$ 20.00 / day
Pallet Puller	-----	\$ 25.00 / day
Drum Dolly	-----	\$ 25.00 / day
Drum Lift	-----	\$ 25.00 / day
Hazmat Drum Liner	-----	125.00 / roll
Drum Thief	-----	\$ 30.00 / each
Wet / Dry Vac	-----	\$40.00 / day
Plug & Patch Kit	-----	\$500.00 / each

COMMUNICATIONS EQUIPMENT

Digital Camera	-----	\$ 50.00 / day
Cellular Phone	-----	\$ 25.00 / day
Cellular Air Time	-----	\$ Cost + 20% or \$2/min
VHF Radio	-----	\$ 25.00 / day
Motorola Radio	-----	\$ 25.00 / day
Portable Radio Repeater	-----	\$275.00 / day
Fax Machine	-----	\$ 25.00 / day
Laptop Computer	-----	\$ 75.00 / day
Enhanced Laptop Computer	-----	\$175.00 / day
Poster Printer	-----	\$250.00 / day
Printer, Text	-----	\$ 50.00 / day
Copier	-----	\$ 50.00 / day
Handheld GPS	-----	\$ 50.00 / day



**APPENDIX D
CRUDE OIL MATERIAL SAFETY DATA SHEET**

Lion Oil Company

Product: Crude Oil

Revision No. 7



MSDS No. LO0018

Date of Preparation: 6-08-09

Section 1 - Chemical Product and Company Identification

Product/Chemical Name: Crude Oil

Chemical Formula: Mixture

CAS Number: 8002-05-9

Synonyms: Crude, Sweet Crude, Sour Crude

Description: Amber to black viscous liquid with a mild sulfur odor.

Manufacturer or Distributor: Lion Oil Co., 1000 McHenry St., El Dorado, AR 71730; (870) 862-8111

24-hr Emergency Phone Number: "FOR CHEMICAL EMERGENCY" Spill, Leak, Fire, Exposure or Accident

CALL CHEMTREC – Day or Night 800-424-9300

MSDS CONTACT: Beverly McFarland – 870-862-3703

Section 2 - Hazards Identification

☆☆☆☆☆ Emergency Overview ☆☆☆☆☆

DANGER!**Health****Flammability****Physical Hazard**

HMIS	
H	1*
F	4
PH	0
PPE†	
†Sec. 8	

Volatile and Flammable Liquid

Keep away from ignition sources. Crude oil vapors are heavier than air and may travel some distance to an ignition source and flash back.

Contains Benzene - long term, prolonged or repeated skin contact may increase the risk of skin cancer, blood and nervous system damage.

May contain hydrogen sulfide gas (H₂S).

HARMFUL OR FATAL IF SWALLOWED – Can enter lungs and cause damage.

May cause eye and skin irritation.

Spills may create a slip hazard.

☆☆☆☆☆ Potential Health Effects ☆☆☆☆☆

Primary Entry Routes: Inhalation, Skin Absorption, Ingestion, Skin and/or Eye contact.

Target Organs: Eyes, Skin, Respiratory System, Central Nervous System, Liver, and Kidneys

Carcinogenicity: Contains Benzene which has been designated a carcinogen by IARC (group 1), NPT, and OSHA.

Medical Conditions Aggravated By Long-Term Exposure:

Benzene – Individuals with liver disease may be more susceptible to toxic effects.

Hexane – Individuals with neurological disease should avoid exposure.

Petroleum Hydrocarbons – Skin contact may aggravate an existing dermatitis.

Acute Effects

Inhalation: Inhalation causes irritation of mouth, throat, and respiratory tract. Can cause headaches, dizziness, drowsiness, convulsions, coma, cyanosis and generalized depression. Large amounts in lungs could cause chemical pneumonitis, which can be fatal. This material may contain hydrogen sulfide (H₂S) which has rotten – egg odor. Continued exposure to H₂S may deaden a person's sense of smell. If the rotten – egg odor has stopped, this may not mean that H₂S is no longer present. High levels of H₂S can cause shock, convulsions, coma, and death.

Eye: Eye contact causes tearing, redness and severe irritation.

Skin: Skin contact from prolonged or frequent exposure to liquids or vapors can cause irritation and dermatitis.

Ingestion: Do Not Induce Vomiting because of danger of aspirating liquid into lungs. May be harmful or fatal if swallowed. Ingestion can cause blurred vision, vertigo, vomiting and cyanosis. Seek medical attention.

Chronic Effects

Benzene has been classified as a leukemogen and may produce anemia, leukemia from repeated or prolonged exposure to high concentrations.

Section Ref. (10)

6-08-09

MSDS No. LO0018

Crude Oil

Section 3 - Composition / Information on Ingredients

Ingredient Name	CAS Number	% wt
Crude oil, including:	8002-05-9	100
Benzene	71-43-2	0.1-1.5
Toluene	108-88-3	0.1-1.5
Xylenes (mixed isomers)	1330-20-7	0.1-1.5
Cyclohexane	110-82-7	0.01-0.5
Ethylbenzene	100-41-4	0.01-0.5
Hexane	110-54-3	0-3.0
Trimethylbenzene	95-63-6	0-0.2
Naphthalene	91-20-3	0-0.2
Cumene	98-82-8	0-0.2
Hydrogen Sulfide	7783-06-4	<0.001

Section 4 - First Aid Measures

Inhalation: Move to fresh air. If overcome by vapor, remove from exposure and call a physician immediately. If breathing is irregular or has stopped, start resuscitation, administer oxygen, if available. Seek medical attention.

Eye Contact: Flush with water for 15 minutes. Contact doctor for additional advice.

Skin Contact: Remove any contaminated clothing and wash skin with soap and water, launder or dry-clean clothing before reuse.

Ingestion: **Do not induce vomiting because of danger of aspirating liquid into lungs.** Large amounts in lungs could cause chemical pneumonitis, which can be fatal. If spontaneous vomiting is about to occur, place victim's head below knees. Seek medical attention.

After first aid, get appropriate in-plant, paramedic, or community medical support.

Section Ref. (10)

Section 5 - Fire-Fighting Measures

Flash Point: <0° F

Flash Point Method: TCC

Autoignition Temperature: 536° F (gasoline)

LEL: 1.4 %

UEL: 7.6 %

Emergency Response Guide: Guide No. 128

Flammability Classification: Flammable Liquid Class 1B

Extinguishing Media: Dry chemical, Halon, CO₂, foam, water. Water may not be effective and water fog can be used to cool containers. Water may splash and spread flaming liquid.

Unusual Fire or Explosion Hazards: Keep away from heat, sources of ignition and strong oxidizers. Can react violently with oxidizing agents.

Hazardous Combustion Products: Fumes, smoke, carbon monoxide, sulfur oxides, and other decomposition products, in the case of incomplete combustion

Special Fire-Fighting Procedures: Vapors can readily form explosive mixtures with air. Heavier than air vapors can flow along surfaces to ignition sources and flash back. Used self-contained breathing in enclosed areas.

Section Ref. (4, 10)

NFPA rating®	
H	1
F	4
R	0

Section 6 - Accidental Release Measures

"FOR CHEMICAL EMERGENCY" Spill, Leak, Fire, Exposure or Accident

CALL CHEMTREC – Day or Night 800-424-9300

Spill /Leak Procedures: Danger, Flammable, eliminate all ignition sources. Equipment used in spill cleanup must be grounded to prevent sparking.

Small Spills: Take up with an absorbent material and place in containers, seal tightly for proper disposal.

6-08-09

MSDS No. LO0018

Crude Oil

Large Spills: Isolate the hazard area and restrict entry to unnecessary personnel. Shut off source of leak only if it can be done safely or dike and contain the spill. Wear appropriate respirator and protective clothing. Water fog may be useful in suppressing vapor cloud, contain run-off. Remove with vacuum trucks. Soak up residue with sand or other suitable material, place in containers for proper disposal. Flush with water and dispose of flushing solutions as above. Local, state and federal disposal regulations must be followed.

Contact state and local environmental or health authorities. If spilled material could reach any surface waters, then notify The National Response Center (800) 424-8802.

Regulatory Requirements: This material or materials contaminated by crude oil may meet the criteria of a hazardous waste as defined by the EPA under RCRA or other state and local regulations. Analysis of the material may be needed to make a correct determination.

Section Ref. (4)

Section 7 - Handling and Storage

Handling Precautions: Do not get in eyes, on skin or on clothing. Do not breathe vapors, mists or fumes. Wear protective equipment described in section 8 if exposure conditions warrant. Use only with adequate ventilation.

Storage Requirements: Keep away from open flame, high temperatures, sparks, pilot lights, static electricity, open flames and other sources of ignition. Store in well ventilated area. Store in tightly closed containers. Bond and ground containers during transfer of Crude Oil.

Other Precautions: Toxic amounts of Hydrogen Sulfide (H₂S) may be present in storage tanks and bulk transportation vessels that have contained crude or still contain crude. **Do Not Enter these Compartments** until the Hydrogen Sulfide (H₂S) level has been determined, and the proper exposure controls are in place to meet the exposure values listed in Section 8.

Section 8 - Exposure Controls / Personal Protection

Ingredient	OSHA PEL		ACGIH TLV		NIOSH REL		NIOSH IDLH
	TWA	STEL	TWA	STEL	TWA	STEL	
Crude Oil	500 ppm		5mg/m ³ oil mist		350 ppm		1100 ppm
Benzene	1 ppm	5 ppm	0.5 ppm	2.5 ppm	0.1 ppm	1.0 ppm	500 ppm
Toluene	200 ppm	300 ppm	50 ppm		100 ppm	150 ppm	500 ppm
Xylenes (mixed isomers)	100 ppm		100 ppm	150 ppm	100 ppm	150 ppm	900 ppm
Cyclohexane	300 ppm		300 ppm		300 ppm		2000 ppm
Ethylbenzene	100 ppm		100 ppm	125 ppm	100 ppm	125 ppm	800 ppm (10% LEL)
Hexane	500 ppm		50 ppm		50 ppm		1100 ppm (10% LEL)
Trimethylbenzene	N. D.		25 ppm		25 ppm		N. D.
Naphthalene	10 ppm		10 ppm	15 ppm	10 ppm	15 ppm	250 ppm
Cumene	50 ppm		50 ppm		50 ppm		900 ppm (10% LEL)
Hydrogen Sulfide		20 ppm	10 ppm	15 ppm		10 ppm	100 ppm

(LEL) – Lower Explosion Limit

Engineering Controls

Ventilation: Provide explosion proof ventilation to meet TLV requirements in enclosed work areas.

Protective Clothing/Equipment

Gloves: Use chemical resistant gloves to prevent skin contact.

Goggles: Wear chemical goggles if eye contact is likely.

Respiratory: Use organic vapor cartridge respirators for exposures over TLV up to 1000 ppm. Use fresh air or self-contained breathing equipment for unknown or high concentrations.

Contaminated Equipment: Launder or dry-clean contaminated clothing before reuse.

Section Ref. (2, 3)

6-08-09

MSDS No. LO0018

Crude Oil

Section 9 - Physical and Chemical Properties

Physical State: Liquid

Appearance and Odor: Amber to black viscous liquid with a mild sulfur odor.

Odor Threshold: No Data

Vapor Pressure: 1.5 – 9.0 psi @ 100° F

Vapor Density (Air=1): 3 - 4

Formula Weight: No Data

Density: No Data

Specific Gravity (H₂O=1, at 4 °C): 0.78 – 0.93

pH: NA

Water Solubility: Negligible

Other Solubilities: No Data

Boiling Point: 0 – 1500° F

Freezing/Melting Point: NA

Viscosity: 1.0 – 400 cst @ 100° F

Refractive Index: No Data

Surface Tension: No Data

% Volatile: 25 – 95%

Evaporation Rate: No Data

Section 10 - Stability and Reactivity

Stability: This Material is Stable.

Polymerization: Hazardous Polymerization will not occur.

Chemical Incompatibilities: Keep away from Oxidizing agents.

Conditions to Avoid: Keep away from open flame, high temperatures, and other sources of ignition.

Hazardous Decomposition Products: Fumes, smoke, carbon monoxide, sulfur oxides, and other decomposition products, in the case of incomplete combustion

Section 11- Toxicological Information

Carcinogenicity: Contains Benzene, IARC known carcinogen to humans, rating 1

Crude oil, IARC limited evidence in animals and inadequate evidence in humans, rating 3

Chronic Effects: Contains polynuclear aromatics (PAH's) which have been shown to cause skin cancer after prolonged and repeated contact with the skin of test animals.

Crude oil:

Skin-Mouse TDLo: 3744 mg/kg/2Y-I: Carcinogenic effects

Skin-Mouse TD: 12,480 mg/kg/2Y-I: Carcinogenic effects

National Technical Information Service (Springfield, VA 22161) (Formerly U.S. Clearinghouse for Scientific and Technical Information) NTIS** CONF-790334-3

Skin-Mouse TD: 40 g/kg/10W-I: Equivocal tumorigenic agent

British Empire Cancer Campaign Annual Report (Cancer Research Campaign, 2 Carlton House Terrace, London SW1Y 5AR, England) V.1- 1924-BECCAN 39, 420 , 61

Skin-Mouse TD: 21,216 mg/kg/2Y-I: Carcinogenic effects

Skin-Mouse TD: 210 mg/kg/2Y-I: Carcinogenic effects

National Technical Information Service (Springfield, VA 22161) (Formerly U.S. Clearinghouse for Scientific and Technical Information) NTIS** CONF-801143

Skin-Mouse TD: 3744 mg/kg/2Y-I: Neoplastic effects

Journal of Occupational Medicine (American Occupational Medical Association, 150 N. Wacker Dr., Chicago, IL 60606) V.1- 1959-JOCMA7 21,614,79

Microsomal Mutagenicity Assay-Salmonella typhimurium 1 mg/plate

Carcinogenesis (Information Retrieval, 1911 Jefferson Davis Highway, Arlington, VA 22202) V.1- 1980-CRNGDP 3, 21, 78

HYDROGEN SULFIDE (7783-06-4)

Inhalation-Rat LC50: 444 ppm

Personal Communication from Mr. H.B. Lackey, Chemical Products Div., Crown Zellerbach, Camas, WA 98607, to Dr. H.E. Christensen, NIOSH, Rockville, MD 20852, June 9, 1978LacHB# 09JUN78

Inhalation-Mouse LC50: 634 ppm/1H

Aerospace Medical Research Laboratory Report. (Aerospace Technical Div., Air Force Systems Command, Wright-Patterson Air Force Base, OH 45433)AMRL** TR-72-62,72

6-08-09

MSDS No. LO0018

Crude Oil

Inhalation-Rat TCLo: 20 ppm (female 6-22D post) Reproductive effects
Toxicology. (Elsevier Scientific Pub. Ireland, Ltd., POB 85, Limerick, Ireland) V.1- 1973-TXCYAC 6,389,90

Inhalation-Human LCLo: 600 ppm/30M

"Practical Toxicology of Plastics" Lefaux, R., Cleveland, OH, Chemical Rubber Company,
196829ZWAE -,207,68

Inhalation-Man LDLo: 5700 mg/kg: Central nervous system effects, Pulmonary system effects

Archives des Maladies Professionnelles de Medecine du Travail et de Securite Sociale. (Masson et Cie, Editeurs, 120
Blvd. Saint-Germain, P-75280, Paris 06, France) V.7- 1946-AMPMAR 44,483,83

Inhalation-Human LCLo: 800 ppm/5M

Tabulae Biologicae. (The Hague, Netherlands) V.1-22, 1925-63. Discontinued TABIA2 3,231,33

Inhalation-Mammal LCLo: 800 ppm/5M

Naunyn-Schmiedeberg's Archiv fuer Experimentelle Pathologie und Pharmakologie. (Berlin, Germany) V.110-
253, 1925-66. For publisher information, see NSAPCCAEPPEAE 138,65,28

Other human data for H₂S: It has been reported that 170 to 300 ppm is the maximum concentration that can
be endured for 1 hour without serious consequences [Henderson and Haggard 1943] and that olfactory
fatigue occurs at 100 ppm [Poda 1966]. It has also been reported that 50 to 100 ppm causes mild conjunctivitis
and respiratory irritation after 1 hour; 500 to 700 ppm may be dangerous in 0.5 to 1 hour; 700 to 1,000 ppm
results in rapid unconsciousness, cessation of respiration, and death; and 1,000 to 2,000 ppm results in
unconsciousness, cessation of respiration, and death in a few minutes [Yant 1930].

Henderson Y, Haggard HW [1943]. Noxious gases, 2nd ed.; New York, NY; Reinhold Publishing Corp. pg 245

Poda GA [1966]. Hydrogen sulfide can be handled safely. Arch Environ Health 12:795800.

Yant WP [1930]. Hydrogen sulfide in industry: occurrence, effects and treatment. Am J Public Health 20:598608.

Section Ref. (5, 10)

Section 12 - Ecological Information

Aquatic Toxicity: This material is toxic to aquatic organisms and should be kept out of all bodies of water.
If spilled material could reach any surface waters, then notify The National Response Center (800) 424-8802.
May be dangerous if it enters water intakes. Notify local health and pollution control officials.
Notify operators of nearby water intakes.

Section Ref. (10)

Section 13 - Disposal Considerations

Disposal: Local, state and federal disposal regulations must be followed.

Disposal Regulatory Requirements: This material or materials contaminated by crude oil may meet the criteria of a
hazardous waste as defined by the EPA under RCRA or other state and local regulations. Analysis of the material may
be needed to make a correct determination.

Container Cleaning and Disposal: "Empty" Container Warning: "Empty" containers retain product residue (liquid and/or
vapor) and can be dangerous. DO NOT PRESSURIZE, CUT, WELD, BRAZE, SOLDER, DRILL, GRIND, OR EXPOSE SUCH
CONTAINERS TO HEAT, FLAME, SPARKS, STATIC ELECTRICITY, OR OTHER SOURCES OF IGNITION. THEY MAY
EXPLODE AND CAUSE INJURY OR DEATH.

Section 14 - Transport Information

DOT Transportation Data (49 CFR 172.101):

The description shown may not apply to all shipping situations. Consult 49CFR, or appropriate Dangerous Goods
Regulations, for additional description information.

DOT Shipping Name: Petroleum Crude Oil

DOT Hazard Class: 3

DOT ID No.: UN1267

DOT Packing Group: I

Hazard Label: Flammable Liquid

6-08-09

MSDS No. LO0018

Crude Oil

Section 15 - Regulatory Information

EPA Regulations:

RCRA Hazardous Waste Classification (40 CFR 261): This material or materials contaminated by crude oil may meet the criteria of a hazardous waste as defined by the EPA under RCRA or other state and local regulations. Analysis of the material may be needed to make a correct determination.

CERCLA Reportable Quantity (RQ) (40 CFR 302.4):

Compound	CAS Number	RQ
Benzene	71-43-2	10
Toluene	108-88-3	1000
Xylenes (mixed isomers)	1330-20-7	100
Cyclohexane	110-82-7	1000
Ethylbenzene	100-41-4	1000
Hexane	110-54-3	5000
Trimethylbenzene	95-63-6	-----
Naphthalene	91-20-3	100
Cumene	98-82-8	5000
Hydrogen Sulfide	7783-06-4	100
Benzo(a)pyrene	50-32-8	1
Benzo(a)anthracene	56-55-3	10
Dibenz(a,h)anthracene	53-70-3	1
3-Methylcholanthrene	56-49-5	10
7,12-Dimethylbenz(a)anthracene	57-97-6	1
Naphthalene	91-20-3	100
Biphenyl	92-52-4	100
Anthracene	120-12-7	5000
Benzo(rst)pentaphene	189-55-9	10
Phenanthrene	85-01-8	5000
Benzo(g,h,I)perylene	191-24-2	5000
Indeno(1,2,3-cd)pyrene	193-39-5	100
Benzo(b)fluoranthene	205-99-2	1
Fluoranthene	206-44-0	100
Benzo(k)fluoranthene	207-08-9	5000
Benzo(a)phenanthrene	218-01-9	100

SARA 311/312 Codes (40 CFR 370 / 29 CFR 1910.1200):

Fire	YES
Pressure	NO
Reactivity	NO
Immediate (acute)	YES
Delayed (chronic)	YES

**SARA Toxic Chemical (40 CFR 372) Section 313:
Chemicals of Special Concern (40 CFR 372.28)***

Compound	CAS Number	Concentration %
Benzene	71-43-2	0.1-1.5
Toluene	108-88-3	0.1-1.5
Xylenes (mixed isomers)	1330-20-7	0.1-1.5
Cyclohexane	110-82-7	0.01-0.5
Ethylbenzene	100-41-4	0.01-0.5
Hexane	110-54-3	0-3.0
Trimethylbenzene	95-63-6	0-0.2
Naphthalene	91-20-3	0-0.2

6-08-09

MSDS No. LO0018

Crude Oil

Cumene	98-82-8	0-0.2
Hydrogen Sulfide	7783-06-4	<10 ppm
Benzo(a)pyrene	50-32-8	<50 ppm
Benzo(a)anthracene	56-55-3	<50 ppm
Dibenz(a,h)anthracene	53-70-3	<100 ppm
3-Methylcholanthrene*	56-49-5	<50 ppm
7,12-Dimethylbenz(a)anthracene	57-97-6	<24 ppm
Naphthalene	91-20-3	190 ppm
Biphenyl	92-52-4	<240 ppm
Anthracene	120-12-7	60 ppm
Benzo(rst)pentaphene	189-55-9	<50 ppm
Dibenzo(a,h)pyrene	189-64-0	<50 ppm
Phenanthrene	85-01-8	60 ppm
Benzo(g,h,I)perylene	191-24-2	<100 ppm
Dibenzo(a,l)pyrene	191-30-0	<50 ppm
Dibenzo(a,e)pyrene	192-65-4	<50 ppm
Indeno(1,2,3-cd)pyrene	193-39-5	<100 ppm
7,H-dibenzo(c,g)carbazole	194-59-2	<24 ppm
Benzo(b)fluoranthene	205-99-2	<50 ppm
Benzo(j)fluoranthene	205-82-3	<50 ppm
Fluoranthene*	206-44-0	<50 ppm
Benzo(k)fluoranthene	207-08-9	<50 ppm
Benzo(a)phenanthrene	218-01-9	<50 ppm
Dibenz(a,j)acridine	224-42-0	<24 ppm
Dibenz(a,h)acridine	226-36-8	<24 ppm
Dibenzo(a,e)fluoranthene	5385-75-1	<50 ppm
1-Nitropyrene	5522-43-0	<50 ppm
5-Methylchrysene	3697-24-3	<50 ppm

Crude Oil may contain trace metals which are listed in section 313.

SARA EHS (Extremely Hazardous Substance) (40 CFR 355):

Compound	CAS Number	RQ
Hydrogen Sulfide	7783-06-4	100

TSCA (40 CFR 710): This product and its components are listed on the Toxic Substance Control Act (TSCA) Chemical Substance Inventory.

State Regulations: The following chemicals are specifically listed by individual states, for details on each states regulatory requirements you should contact the appropriate agency in that state.

Compound	CAS Number	States
Benzene	71-43-2	CA, CA65, MA, NY, NJ, TX, FL, IL, PA
Toluene	108-88-3	CA, CA65, MA, NJ, TX, FL, IL, PA
Xylenes (mixed isomers)	1330-20-7	CA, MA, NY, NJ, TX, FL, IL, PA
Cyclohexane	110-82-7	CA, MA, NJ, TX, FL, IL, PA
Ethylbenzene	100-41-4	CA, MA, NJ, TX, FL, IL, PA
Hexane	110-54-3	CA, MA, TX, FL, IL, PA
Trimethylbenzene	95-63-6	MA, TX, FL, PA
Naphthalene	91-20-3	CA, MA, NJ, TX, FL, IL, PA
Cumene	98-82-8	CA, MA, NJ, TX, FL, IL, PA
Hydrogen Sulfide	7783-06-4	CA, MA, NJ, NY, FL, IL, PA, TX
Crude Oil	8002-05-9	MA, FL, PA, TX

6-08-09

MSDS No. LO0018

Crude Oil

CA – CALIFORNIA STATE SUPERFUND HAZARDOUS SUBSTANCE
 CA65 – CALIFORNIA PROPOSITION 65 CARCINOGENS OR REPRODUCTIVE TOXINS
 MA – MASSACHUSETTS SUBSTANCE LIST
 NY – NEW YORK HAZARDOUS SUBSTANCE BULK STORAGE LIST
 NJ – NEW JERSEY RIGHT TO KNOW HAZARDOUS SUBSTANCE
 TX – TEXAS AIR CONTAMINANTS WITH HEALTH EFFECTS SCREENING LEVEL
 FL – FLORIDA TOXIC SUBSTANCE LIST
 IL – TOXIC SUBSTANCE DISCLOSURE TO EMPLOYEES LIST
 PA – PENNSYLVANIA HAZARDOUS SUBSTANCE LIST

Section Ref. (6)

SECTION 16 - Other Information

Prepared By: Tommy Rowland – 6-8-09

Revision Notes: Moved Hazard Identification to Section 2 and Composition/ Information on Ingredients to Section 3. Updated Sections 5, 11 and 16.

Hazardous Materials Information System (U.S.A.)

HMIS	
H	1*
F	3
PH	0
PPE†	
†Sec. 8	

.....	H – Health	4 – Extreme
.....	F – Fire Hazard	3 – Serious
.....	PH – Physical Hazard	2 – Moderate
.....		1 – Slight
.....		0 – Minimal

* **Chronic Hazard** - Chronic (long-term) health effects may result from repeated over exposure.

National Fire Protection Association

NFPA Label

Chem. name

Health (blue)
 4 – deadly
 3 – extreme danger
 2 – hazardous
 1 – slightly hazardous
 0 – normal material

Fire Hazard (red)
 Flash Point Temp.
 4 – below 73F - v.flam.
 3 – 73 to 100F – flam.
 2 – 101 to 200F- comb.
 1 – over 200F –slightly combustible
 0 – will not burn

Reactivity (yellow)
 4 – may detonate
 3 – shock or heat may detonate
 2 – violent chem. reaction
 1 – unstable if heated
 0 – stable

Specific Hazard
 OXY - oxidizer
 ACID – acid
 ALK – Alkali
 COR – corrosive
 W – use no water
 RAD - radiation haz.

Disclaimer: LION OIL COMPANY PROVIDES THIS INFORMATION FOR THE USER'S CONSIDERATION. LION OIL COMPANY BELIEVES THIS INFORMATION IS ACCURATE, BUT NOT ALL INCLUSIVE IN ALL CIRCUMSTANCES. USER SHOULD ENSURE THAT USER HAS CURRENT DATA RELEVANT FOR ITS PURPOSES. NO WARRANTY, EXPRESSED OR IMPLIED, INCLUDING MERCHANTABILITY, FITNESS OR OTHERWISE IS GIVEN.

Reference and research:

- (1) The International Chemical Safety Card - <http://www.cdc.gov/niosh/ipcs/icstart.html>
- (2) NIOSH Pocket Guide to Chemical Hazards - <http://www.cdc.gov/niosh/npg/>
- (3) 2007 Guide to Occupational Exposure Values – Compiled by ACGIH
- (4) 2008 Emergency Response Guidebook - <http://hazmat.dot.gov/pubs/erg/unidnum.htm>
- (5) Sax's Dangerous Properties of Industrial Materials, 9th Edition; Edited by Richard J. Lewis, Sr.; Version 1.6; Copyright © 1997 by John Wiley & Sons, Inc.
- (6) Touchstone Environmental, Inc.; Chemcheck Handbook (educational resource)
- (7) Hawley's Condensed Chemical Dictionary, 13th Edition; Edited by Richard J. Lewis, Sr.; Version 1.1 Copyright© 1997 by John Wiley & Sons, Inc.
- (8) Environmental Contaminant Reference Databook; VOLUMES I, II and III; by Jan. C. Prager; Version 2.0; Copyright © 1997 by John Wiley & Sons, Inc.
- (9) Fire Protection Guide to Hazardous Materials, Twelfth Edition; National Fire Protection Association (NFPA 325) Guide to Hazardous Chemical Properties of Flammable Liquids, Gases, and Volatile Solids. 1994 edition.
- (10) Hazardous Materials Handbook; Richard P. Pohanish and Stanley A. Greene, Version 1.3 Copyright© 1997 by Richard P. Pohanish and Stanley A. Greene



**APPENDIX E
ICS FORMS**

CHECK-IN LIST Equipment (ICS FORM 211e-OS)

Special Note. This form is used for equipment check-in only.

Purpose. Equipment arriving at the incident can check in at various incident locations. Check-in consists of reporting specific information that is recorded on the form.

Preparation. The Check-In List is initiated at a number of incident locations including staging areas, base, camps, helibases, and ICP. Managers at these locations record the information and give it to the Resources Unit as soon as possible.

Distribution. Check-In Lists are provided to both the Resources Unit and the Finance/Administration Section. The Resources Unit maintains a master list of all equipment and personnel that have reported to the incident. All completed original forms **MUST** be given to the Documentation Unit.

Item #	Item Title	Instructions
1.	Incident Name	Enter the name assigned to the incident.
2.	Operational Period	Enter the time interval for which the form applies. Record the start and end date and time.
3.	Check-in Location	Check the box for the location where the equipment was checked in.
4.	Equipment Description	Enter a description of the equipment (e.g., 36" open water boom, skimmer, vac truck, etc.).
5.	Equipment Identifier	Enter the Identifier for the equipment (e.g., radio call-sign, vessel name, vendor name, license plate, etc.).
6.	Supplier/Owner	Enter the supplier/owner of the equipment.
7.	Assignment	Work assignment, if known. Arriving equipment may not have an assignment at time of check-in.
8.	Contact Information	Enter the contact information for the person operating equipment.
9.	Initial Incident Check-in?	Check if this is the first time the equipment has been checked in.
10.	Time In/Out	Enter the time the equipment is checked in and/or out (24-hour clock).
11.	Prepared By Date/Time	Enter name and title of the person preparing the form. Enter date (month, day, year) and time prepared (24-hour clock).
12.	Date/Time Sent to Resources Unit	Enter date (month, day, year) and time (24-hour clock) the form is sent to the Resources Unit.

CHECK-IN LIST Personnel (ICS FORM 211p-OS)

Special Note. This form is used for personnel check-in only.

Purpose. Personnel arriving at the incident can be checked in at various incident locations. Check-in consists of reporting specific information that is recorded on the form.

Preparation. The Check-In List is initiated at a number of incident locations including staging areas, base, camps, helibases, and ICP. Managers at these locations record the information and give it to the Resources Unit as soon as possible.

Distribution. Check-In Lists are provided to both the Resources Unit and the Finance/Administration Section. The Resources Unit maintains a master list of all equipment and personnel that have reported to the incident. All completed original forms **MUST** be given to the Documentation Unit.

Item #	Item Title	Instructions
1.	Incident Name	Enter the name assigned to the incident.
2.	Operational Period	Enter the time interval for which the form applies. Record the start and end date and time.
3.	Check-in Location	Check the box for the check-in location.
4.	Name	Enter the name of the person.
5.	Company/Agency	Enter the company or agency with which the individual is associated.
6.	ICS Section / Assignment / Quals.	Enter ICS Section and assignment, if known, and note any other ICS qualifications, if needed.
7.	Contact Information	Enter the contact information for the person.
8.	Initial Incident Check-in?	Check if this is the first time a person has checked in for this incident.
9.	Time In/Out	Enter the time the person checks in and/or out (24-hour clock).
10.	Prepared By Date/Time Prepared	Enter name and title of the person preparing the form. Enter date (month, day, year) and time prepared (24-hour clock).
11.	Date/Time Sent to Resources Unit	Enter date (month, day, year) and time (24-hour clock) the form is sent to the Resources Unit.

1. Incident Name	2. Date and Time of Message	GENERAL MESSAGE ICS 213-OS
3. TO: ICS Position		
4. FROM: ICS Position		
5. Subject:		
6. Message		
7. Reply		
8. Signature / Position (person replying)		Date / Time of reply
GENERAL MESSAGE	June 2000	ICS 213-OS

General Message (ICS FORM 213-OS)

Purpose. The General Message is used by:

Incident personnel to record incoming messages which cannot be orally transmitted to the intended recipients;
Command Post and other incident personnel to transmit messages to the Incident Communications Center for transmission via radio or telephone to the addressee;

Incident personnel to send any message or notification to incident personnel which requires a hard-copy delivery;
Incident personnel to place resource orders.

Preparation. This form is prepared by any incident personnel needing to transmit a hard-copy message. The recipient should send a timely reply to the originator, as necessary.

Distribution. Upon completion, the General Message may be hand-carried to the addressee or to the incident Communications Center for transmission. Originator retains a copy of the form. All completed original forms MUST be given to the Documentation Unit.

Item #	Item Title	Instructions
1.	Incident Name	Enter the name assigned to the incident.
2.	Date and Time of Message	Enter the date and time of message origination.
3.	To	Enter name and ICS position of message recipient.
4.	From	Enter name and ICS position of message sender.
5.	Subject	Indicate the message subject.
6.	Message	Enter message.
7.	Reply	This section to be used by the unit/person who receives the message to reply to your message.
8.	Signature/Position Date/Time of reply	Enter name and position of person replying to this message. Enter date (month, day, year) and time of reply (24-hour clock).

UNIT LOG (ICS FORM 214-OS)

Special Note. ICS Form 214-OS is used to log activities for an entire unit, whereas the ICS form 214a-OS is designed for individual use.

Purpose. The Unit Log records details of unit activity, including strike team activity. These logs provide the basic reference from which to extract information for inclusion in any after-action report.

Preparation. A Unit Log is initiated and maintained by Command Staff members, Division/Group Supervisors, Air Operations Groups, Strike Team/Task Force Leaders, and Unit Leaders. Completed logs are submitted to supervisors who forward them to the Documentation Unit.

Distribution. The Documentation Unit maintains a file of all Unit Logs. All completed original forms MUST be given to the Documentation Unit.

Item #	Item Title	Instructions
1.	Incident Name	Enter the name assigned to the incident.
2.	Operational Period	Enter the time interval for which the form applies. Record the start and end date and time.
3.	Unit Name/Designators	Enter the title of the organizational unit or resource designator (e.g., Facilities Unit, Safety Officer, Strike Team).
4.	Unit Leader	Enter the name and ICS Position of the individual in charge of the Unit.
5.	Personnel Assigned	List the name, position, and home base of each member assigned to the unit during the operational period.
6.	Activity Log	Enter the time and briefly describe each significant occurrence or event (e.g., task assignments, task completions, injuries, difficulties encountered, etc.)
7.	Prepared By	Enter name and title of the person completing the log. Provide log to immediate supervisor, at the end of each operational period.
	Date/Time	Enter date (month, day, year) and time prepared (24-hour clock).

INDIVIDUAL LOG (ICS FORM 214a-OS)

Special Note. This optional ICS form 214a-OS is a log for individual use, and ICS form 214-OS is designed to log activities for an entire unit.

Purpose. The Individual Log, while not required, records details of each individual's activities. These logs provide a basic reference from which to extract information for inclusion in any after-action report.

Preparation. An Individual Log can be initiated and maintained by each member of the ICS. Completed logs are forwarded to supervisors who provide copies to the Documentation Unit.

Distribution. The Documentation Unit maintains a file of all Individual Logs. The original of each log **MUST** be submitted to the Documentation Unit.

Item #	Item Title	Instructions
1.	Incident Name	Enter the name assigned to the incident.
2.	Operational Period	Enter the time interval for which the form applies. Record the start and end date and time.
3.	Individual Name	Enter the name of the individual.
4.	ICS Section	Enter the ICS Section to which the individual is assigned.
5.	Assignment/Location	Enter the assignment or location for the individual.
6.	Activity Log	Enter the time and briefly describe each significant occurrence or event (e.g., task assignments, task completions, injuries, difficulties encountered, etc.)
7.	Prepared By	Enter name and title of the person completing the log. Provide log to immediate supervisor, at the end of each operational period.
	Date/Time	Enter date (month, day, year) and time prepared (24-hour clock).

1. Incident Name			2. Operational Period (Date / Time) From: _____ To: _____										OPERATIONAL PLANNING WORKSHEET ICS 215-OS			
3. Division / Group or Location	4. Work Assignments	5. Resource / Equipment										9. "X" here if 204a Needed				
		Resource											6. Notes / Remarks	7. Reporting Location	8. Requested Arrival Time	
		Req.														<input type="checkbox"/>
		Have														<input type="checkbox"/>
		Need														<input type="checkbox"/>
		Req.														<input type="checkbox"/>
		Have														<input type="checkbox"/>
		Need														<input type="checkbox"/>
		Req.														<input type="checkbox"/>
		Have														<input type="checkbox"/>
		Need														<input type="checkbox"/>
		Req.														<input type="checkbox"/>
		Have														<input type="checkbox"/>
		Need														<input type="checkbox"/>
10. Total Resources Required														13. Prepared by: Date _____ Time _____		
11. Total Resources On Hand																
12. Total Resources Needed																

OPERATIONAL PLANNING WORKSHEET (ICS FORM 215-OS)

Purpose. This form communicates to the Resources Unit the resources needed as a result of decisions made during the Tactics and Planning meetings. The Worksheet is used by the Resources Unit to complete the Assignment List (ICS form 204-OS) and by the Logistics Section Chief for ordering resources. The worksheet may also be used by the Resources Unit Leader to complete the Assignment List Attachment(s) (ICS form 204a-OS), if the Operations and Planning Section Chiefs deem it necessary.

Preparation. This form is initiated at the Tactics Meeting and modified and finalized at the Planning Meeting. For ease of use, the form should be enlarged to poster size. This form is principally crafted by the Operations and Planning Section Chiefs. When decisions are reached, the appropriate resource information should be recorded on the form. Use additional sheets, as needed.

Distribution. When the work assignments and accompanying resource allocations are agreed to, the form is distributed to the Resources Unit to help prepare Assignment Lists (ICS form 204-OS) and any needed Assignment List Attachment(s) (ICS form 204a-OS). The Planning Section will use a copy of this worksheet for preparing resource requests for the next operational period. All completed original forms MUST be given to the Documentation Unit.

Item #	Item Title	Instructions
1.	Incident Name	Enter the name assigned to the incident.
2.	Operational Period	Enter the time interval for which the form applies. Record the start and end date and time.
3.	Division/Group or Location	Enter the Division/Group or other Location Identifier (e.g., Division A - Segment 1, On-water Group 1, Air Group 1, etc.).
4.	Work Assignments	Enter the specific work assignments given to each Division/Group (e.g., on-water skimming, Shoreline Cleanup Assessment Team, shoreline cleanup crews, conduct overflights, etc.).
5.	Resource/Equipment	Complete resource description. Enter the number of resources required "Req." and the number of resources available "Have" to perform the work assignment. The number of resources needed "Need" is the difference between "Req." and "Have."
6.	Notes/Remarks	Provide any additional information needed for this work assignment.
7.	Reporting Location	Enter the specific location the "needed" resources are to report for the work assignments (staging area, etc.)
8.	Requested Arrival Time	Enter time resources are requested to arrive at reporting location (24-hour clock).
9.	Assignment List Attachment 204a Needed	"X" this box if the Planning and Operations Section Chiefs determine that special instructions are needed for a specific Strike Team, Task Force, or single resource (e.g., work assignment, equipment, environmental considerations, or site-specific safety considerations).

Item #	Item Title	Instructions
10.	Total Resources Required	Enter the total number of resources required. Add all of the "Req." fields above.
11.	Total Resources On Hand	Enter the total number of resources on hand. Add all of the "Have" fields above.
12.	Total Resources Needed	The Total Resources Needed is the difference between the Total Resources Required and the Total Resources On Hand.
13.	Prepared By Date/Time	Enter name and title of the person preparing the form. Enter date (month, day, year) and time prepared (24-hour clock).

RADIO REQUIREMENTS WORKSHEET			1. INCIDENT NAME			2. DATE		3. TIME			
4. BRANCH		5. AGENCY			6. OPERATIONAL PERIOD		7. TACTICAL FREQUENCY				
8. DIVISION/GROUP			DIVISION/ GROUP _____			DIVISION/ GROUP _____			DIVISION/ GROUP _____		
AGENCY _____			AGENCY _____			AGENCY _____			AGENCY _____		
9. AGENCY	ID NO.	RADIO RQMTS	AGENCY	ID NO.	RADIO RQMTS	AGENCY	ID NO.	RADIO RQMTS	AGENCY	ID NO.	RADIO RQMTS
216 ICS 3-82		PAGE				10. PREPARED BY (COMMUNICATIONS UNIT)					

RADIO REQUIREMENTS WORKSHEET (ICS FORM 216)

Purpose. The Radio Requirements Worksheet is used to develop the total number of personal portable radios required for each Division/Group and Branch. It provides a listing of all units assigned to each Division, and thus depicts the total incident radio needs.

Initiation of Form. The worksheet is prepared by the Communications Unit for each operational period and can only be completed after specific resource assignments are made and designated on Assignment Lists. This worksheet need not be used if the Communications Unit Leader can easily obtain the information directly from Assignment Lists.

Distribution. The worksheet is for internal use by the Communications Unit and therefore there is no distribution of the form.

Item #	Item Title	Instructions
1.	Incident Name	Enter the name assigned to the incident.
2.	Date	Enter date prepared (e.g., 09/17/1996).
3.	Time Prepared	Enter time prepared (e.g., 1530).
4.	Branch	Enter the Branch number (I, II, etc.) for which radio requirements are being prepared.
5.	Agency	Enter the three-letter designator of the agency staffing the Branch Director position (e.g., VNC, CDF, ANF, LFD, etc.).
6.	Operational Period	Enter the time interval for which the assignment applies (e.g., 9/17/96-0600 to 9/18/96-0600).
7.	Tactical Frequency	Enter the radio frequency to be used by the Branch Director to communicate with each Division/Group Supervisor in the Branch.
8.	Division/Group	Enter for each Division/Group in the Branch the Division/Group identifier (A, B, etc.) and the agency assigned (e.g., LAC, VNC, etc.).
9.	Agency/ID No./Radio Requirements	List all units assigned to each Division/Group. Record the agency designator, unit or resource identification, and total number of radios needed for each unit or resource.
10.	Prepared By	Enter the name and position of the person completing the worksheet.

RADIO FREQUENCY ASSIGNMENT WORKSHEET (ICS FORM 217)

Purpose. The Radio Frequency Assignment Worksheet is used by the Communications Unit Leader to assist in determining frequency allocations.

Preparation. Cache radio frequencies available to the incident are listed on the form. Major agency frequencies assigned to the incident should be added to the bottom of the worksheet.

Distribution. The worksheet, prepared by the Communications Unit, is for internal use.

Item #	Item Title	Instructions
1.	Incident Name	Enter the name assigned to the incident.
2.	Date	Enter date prepared (e.g., 09/17/1996).
3.	Operational Period	Enter the time interval for which the assignment applies (e.g., 9/17/96-0600 to 9/18/96-0600).
4.	Incident Organization	List frequencies allocated for each channel for each organizational element activated, record the number of radios required to perform the designated function on the specified frequency.
5.	Radio Data	For each radio cache and frequency assigned, record the associated function. Functional assignments are: a. Command b. Support c. Division tactical d. Ground-to-air
6.	Agency	List the frequencies for each major agency assigned to the incident. Also list the function and channel number assigned.
7.	Total Radios Required	Totals for each row and column are calculated automatically. This provides the number of radios required by each organizational unit and the number of radios using each available frequency.
8.	Prepared By	Enter the name and position of the person completing the worksheet.

SUPPORT VEHICLE INVENTORY (ICS FORM 218)

Purpose. The Support Vehicle Inventory form provides an inventory of all transportation and support vehicles assigned to the incident. The information is used by the Ground Support Unit to maintain a record of the types and locations of vehicles on the incident. The Resources Unit uses the information to initiate and maintain status/resources information on these resources.

Preparation. The form is prepared by Ground Support Unit personnel at intervals specified by the Ground Support Unit Leader.

Distribution. Initial inventory information recorded on the form should be given to the Resources Unit. Subsequent changes to the status or location of transportation and support vehicles should be provided to the Resources Unit immediately.

NOTE:

- a. The Ground Support Unit Leader may prefer to use separate sheets for each type of support vehicle (e.g., buses, pickups, and food tenders).
- b. More than one line may be used to record information on each vehicle. If this is done, separate individual vehicle entries with a heavy line.
- c. Several pages may be used. When this occurs, number the pages consecutively (in the number box at bottom of form).

Item #	Item Title	Instructions
1.	Incident Name	Enter the name assigned to the incident.
2.	Date Prepared	Enter date prepared (e.g., 09/17/1996).
3.	Time Prepared	Enter time prepared (e.g., 1530).
4.	Vehicle Information	Record the following vehicle information:
	Type	a. Specific vehicle type (e.g., bus, stakeside, etc.).
	Make	b. Vehicle manufacturer name (e.g., GMC, International).
	Capacity/Size	c. Vehicle capacity / size (e.g., 30-person bus, 3/4 ton truck).
	Owner	d. Owner of vehicle (agency or private owner).
	ID Number	e. Serial or other identification number.
	Location	f. Location of vehicle.
	Release Time	g. Time vehicle is released from incident.
5.	Prepared By	Enter name of the person completing the form.

ICS 219_2 HANDCREWS GREEN COLORED CARD

Purpose. Resource Status Cards are used by the Resources Unit to record status and location information on resources, transportation, and support vehicles and personnel. The Resource Status Cards provide a visual display of the status and location of resources assigned to the incident.

Preparation. Information to be placed on the cards may be obtained from several sources including but not limited to:

1. ICS Briefing (ICS Form 201)
2. Check-In List (ICS Form 211)
3. Status Change Card (ICS Form 210)
4. Agency supplied information

Detailed information on preparing status cards is found in Resources Unit Position Manual (ICS 221-3).

Distribution. The cards are displayed in resource status racks where they can be easily retrieved. Cards will be retained by the Resources Unit until demobilization. At demobilization all cards MUST be turned into the Documentation Unit.

Item Title	Instructions
Order/Request No.	Number assigned by dispatching agency.
Home Base	Location at which Handcrew is normally located.
Departure Point	Location from which Handcrew left to reach this incident.
Crew ID No./Name (for Strike Teams)	List commonly used names or numbers to identify the crews which make up the Strike Team.
No. Personnel	Total no. of personnel (including Leader) in Crew or Strike Team.
Manifest	Was a manifest prepared for the Crew/Strike Team?
Weight	Total weight (including equipment and personal belongings) of the Crew/Strike Team.
Destination Point	Next location to which Crew/Strike Team is being sent from the incident.
Method of Travel	Enter the appropriate method of travel (e.g., own, bus, air).
Transportation Needs	Enter the appropriate transportation needs (e.g., own, bus, air).
Status	Choose the appropriate entry from the pop-up menu. If the item is O/S (out-of-service), enter the ETR (estimated time of return) in the ETR field below the Status field.

BLUE CARD STOCK (HELICOPTER)

AGENCY	TYPE	MANUFACTURER NAME/NO.	LD. NO.
ORDER/REQUEST NO.		DATE/TIME CHECK IN	
HOME BASE			
DEPARTURE POINT			
PILOT NAME			
DESTINATION POINT			ETA
REMARKS			
INCIDENT LOCATION			TIME
STATUS			
ETR			
NOTE			
INCIDENT LOCATION			TIME
STATUS			
ETR			
NOTE			

ICS 219-4 (Rev. 4/82) HELICOPTER NFES 1346

AGENCY	TYPE	MANUFACTURER	LD. NO.
INCIDENT LOCATION			TIME
STATUS			
ETR			
NOTE			
INCIDENT LOCATION			TIME
STATUS			
ETR			
NOTE			
INCIDENT LOCATION			TIME
STATUS			
ETR			
NOTE			
INCIDENT LOCATION			TIME
STATUS			
ETR			
NOTE			

NFES 1346

ICS 219_4 HELICOPTER - BLUE COLORED CARD

Purpose. Resource Status Cards are used by the Resources Unit to record status and location information on resources, transportation, and support vehicles and personnel. The Resource Status Cards provide a visual display of the status and location of resources assigned to the incident.

Preparation. Information to be placed on the cards may be obtained from several sources including but not limited to:

1. ICS Briefing (ICS Form 201)
2. Check-In List (ICS Form 211)
3. Status Change Card (ICS Form 210)
4. Agency supplied information

Detailed information on preparing status cards is found in Resources Unit Position Manual (ICS 221-3).

Distribution. The cards are displayed in resource status racks where they can be easily retrieved. Cards will be retained by the Resources Unit until demobilization. At demobilization all cards MUST be turned into the Documentation Unit.

Item Title	Instructions
Order/Request No.	Number assigned by dispatching agency.
Home Base	Location at which helicopter is normally located.
Departure Point	Location from which helicopter left to reach this incident.
Destination Point	Next location to which helicopter is being sent from the incident.
Incident Location	Assigned location information on helicopters may be the same as other resources (e.g., Division A). However, location could also indicate a "general" working location (e.g., water-dropping in Branch 1; or Crew Transport – Wilson Staging Area).
Status	Choose the appropriate entry from the pop-up menu. If the item is O/S (out-of-service), enter the ETR (estimated time of return) in the ETR field below the Status field.
Manufacturer Name/No.	e.g., Bell 206

ORANGE CARD STOCK (AIRCRAFT)

AGENCY	TYPE	MANUFACTURER NAME/NO.	ID. NO.
ORDER/REQUEST NO.		DATE/TIME CHECK IN	
HOME BASE			
DATE TIME RELEASED			
INCIDENT LOCATION			TIME
STATUS			
ETR			
NOTE			
INCIDENT LOCATION			TIME
STATUS			
ETR			
NOTE			
INCIDENT LOCATION			TIME
STATUS			
ETR			
NOTE			
ICS 219-6 (4/82) AIRCRAFT			

AGENCY	TYPE	MANUFACTURER	ID. NO.
INCIDENT LOCATION			TIME
STATUS			
ETR			
NOTE			
INCIDENT LOCATION			TIME
STATUS			
ETR			
NOTE			
INCIDENT LOCATION			TIME
STATUS			
ETR			
NOTE			
INCIDENT LOCATION			TIME
STATUS			
ETR			
NOTE			
NFES 1348			

ICS 219_6 AIRCRAFT - ORANGE COLORED CARD

Purpose. Resource Status Cards are used by the Resources Unit to record status and location information on resources, transportation, and support vehicles and personnel. The Resource Status Cards provide a visual display of the status and location of resources assigned to the incident.

Preparation. Information to be placed on the cards may be obtained from several sources including but not limited to:

1. ICS Briefing (ICS Form 201)
2. Check-In List (ICS Form 211)
3. Status Change Card (ICS Form 210)
4. Agency supplied information

Detailed information on preparing status cards is found in Resources Unit Position Manual (ICS 221-3).

Distribution. The cards are displayed in resource status racks where they can be easily retrieved. Cards will be retained by the Resources Unit until demobilization. At demobilization all cards **MUST** be turned into the Documentation Unit.

Item Title	Instructions
Order/Request No.	Number assigned by dispatching agency.
Home Base	Location at which aircraft is normally located.
Departure Point	Location from which aircraft left to reach this incident.
Destination Point	Next location to which aircraft is being sent from the incident.
Incident Location	Reflect the area of the incident to which aircraft is primarily assigned (e.g., Branch 1).
Status	Choose the appropriate entry from the pop-up menu. If the item is O/S (out-of-service), enter the ETR (estimated time of return) in the ETR field below the Status field.
Manufacturer Name/No.	e.g., Douglas DC-3



**APPENDIX F
PIPELINE SPILL RESPONSE PLAN REVISION LETTER DATED JUNE 7, 2002**



Lion Oil Trading & Transportation, Inc.

P.O. Box 1639
 Jackson, MS
 39215-1639 USA
 601-933-3000

CERTIFIED MAIL - 7001 0320 0005 2918 4686

June 7, 2002

Mr. James Taylor
 Response Plans Officer
 US DOT Office of Pipeline Safety
 P.O. Box 267
 Alexandria, Virginia 22313-0267

***RE: Pipeline Response Plan Update - RSPA Sequence Number 125
 Paline Crude Oil Response Zone
 Paline Pipeline Company (Lion Oil Trading and Transportation, Inc.)***

Dear Mr. Taylor:

In response to the deficiencies noted in your January 10, 2002 correspondence, please find enclosed two (2) copies of the revised above-referenced response plan for our Paline Pipeline Company crude oil pipeline. Lion Oil Trading and Transportation, Inc. (LOTT) has worked diligently in not only addressing RSPA's deficiencies but significantly upgrading our response resources and capabilities with the tools included herein. One (1) meter resolution color infrared imagery was acquired for use as a base map to overlay all necessary sensitive and vulnerable environmental and cultural data. The imagery will allow for effective visualization of this information and the development of effective response strategies and tactics as well as training and pre-planning in the event of a significant release from our pipeline. LOTT believes this investment in digital mapping will improve the functionality of our pre-planning and emergency response capabilities.

Please note that Lion Oil Company and its pipeline division underwent reorganization recently resulting in the following changes relative to the Paline Pipeline, RSPA Sequence 125:

Pipeline Owner (Paline):	<i>Paline Pipeline Company</i>
Pipeline Operator (Paline):	<i>Paline Pipeline Company</i>
Pipeline Administration:	<i>Lion Oil Trading and Transportation, Inc.</i>

LOTT and Paline Pipeline Company are wholly-owned subsidiaries of Lion Oil Company.

To assist RSPA in cross-referencing the adequacy of our responses to noted deficiencies, LOTT has prepared the following matrix. Each protocol is more thoroughly addressed in the plan.

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

WEB LINKS

1. USEPA Region VI Search
2. NRDA Guidance Under Oil Pollution Act of 1990
3. Federal Agency Roles and Responsibilities for Oil Spill Prevention and Response
4. Texas General Land Office Oil Spill Prevention and Response Program
5. State of Texas Oil and Hazardous Substances Contingency Plan
6. USCG First District Marine Safety Division Spill Planning and Preparedness Information
7. Texas General Land Office Coastal Issues
8. USGS Index to Species Profiles
9. Texas Parks & Wildlife