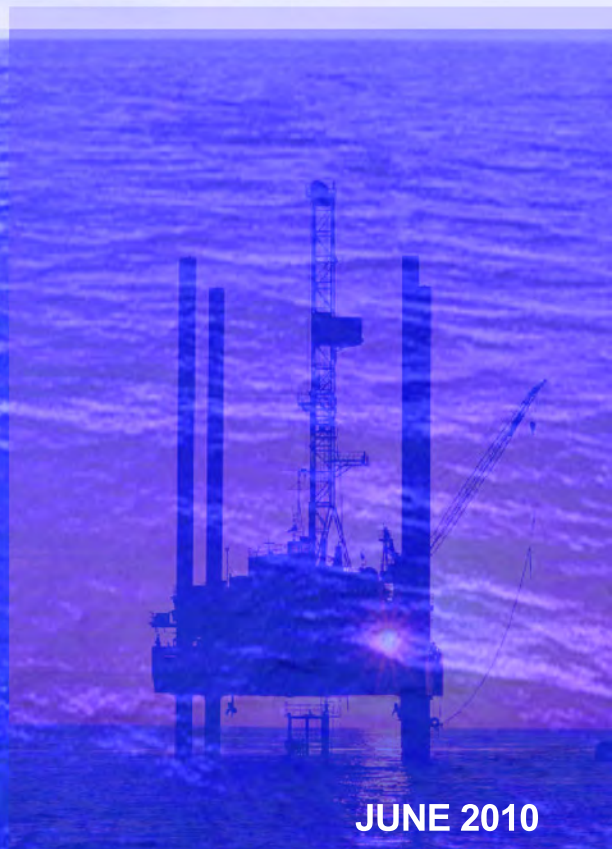
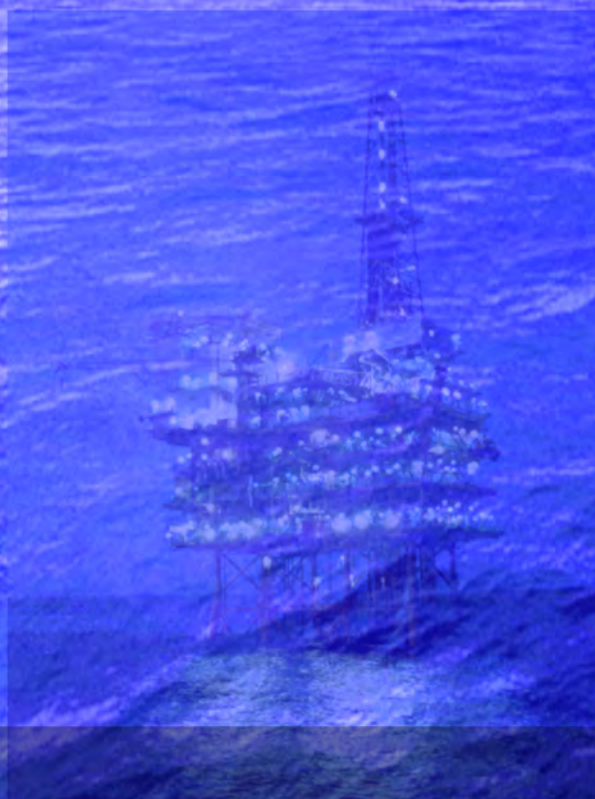




Shell Offshore Inc.




Gulf of Mexico Regional Oil Spill Response Plan



JUNE 2010

Graphics by:

The Response Group
Emergency Response / Pre-Planning & Support

	Shell Offshore, Inc.	Number: HSE0054
		Custodian: SOI RA
	GOM Regional Oil Spill Response Plan	Revision: 6.1 Effective: 03/05/2010

SECTION 1 - OSRP QUICK GUIDE

A. *General*

This Quick Guide is a concise set of easy-to-follow instructions that include actions that should be immediately taken and notifications that must be made in the event Shell Offshore, Inc. experiences an oil spill.

B. *Person In Charge of Facility - Response Actions*

The following internal notifications should be made for each emergency incident to the extent the incident demands (telephone reference is provided in **Figures 1.9, 1.14 and 1.15.**) In no event shall notification be delayed because the immediate supervisor is inaccessible. **Authorization is given to bypass management levels if necessary to provide immediate notification to upper management.** The Regional Spill Response Team will consist of Shell and contract personnel as the situation demands.

Shell/ Shell Pipeline Person in Charge/ Foreman/ OIM

- Notify National Response Center and complete applicable Spill Report Form.
- Immediately notify the Operations Manager/Drilling Supt. (Operations Officers) or Shell Pipeline Emergency Response Coordinator
- Immediately notify the Oil Spill Hotline, or call Qualified Individual/Planning Section Chief directly. Shell Pipeline PIC may delegate this Spill Management Team notification to Shell Pipeline Emergency Response Coordinator/ Env. Rep as per their Department of Transportation Response Plan(s).

Operations Officers

- Ensure that the Spill Response Team has been activated.
- Notify the Senior Executive, as the situation demands.
- Notify the HS&E Manager, as the situation demands.

Qualified Individual

- Ensure activation of all regulatory/ governmental agencies and other external organizations as detailed in **Section 4.** Coordinate with the Incident Commander, as the situation demands.
- Call out Spill Response Team


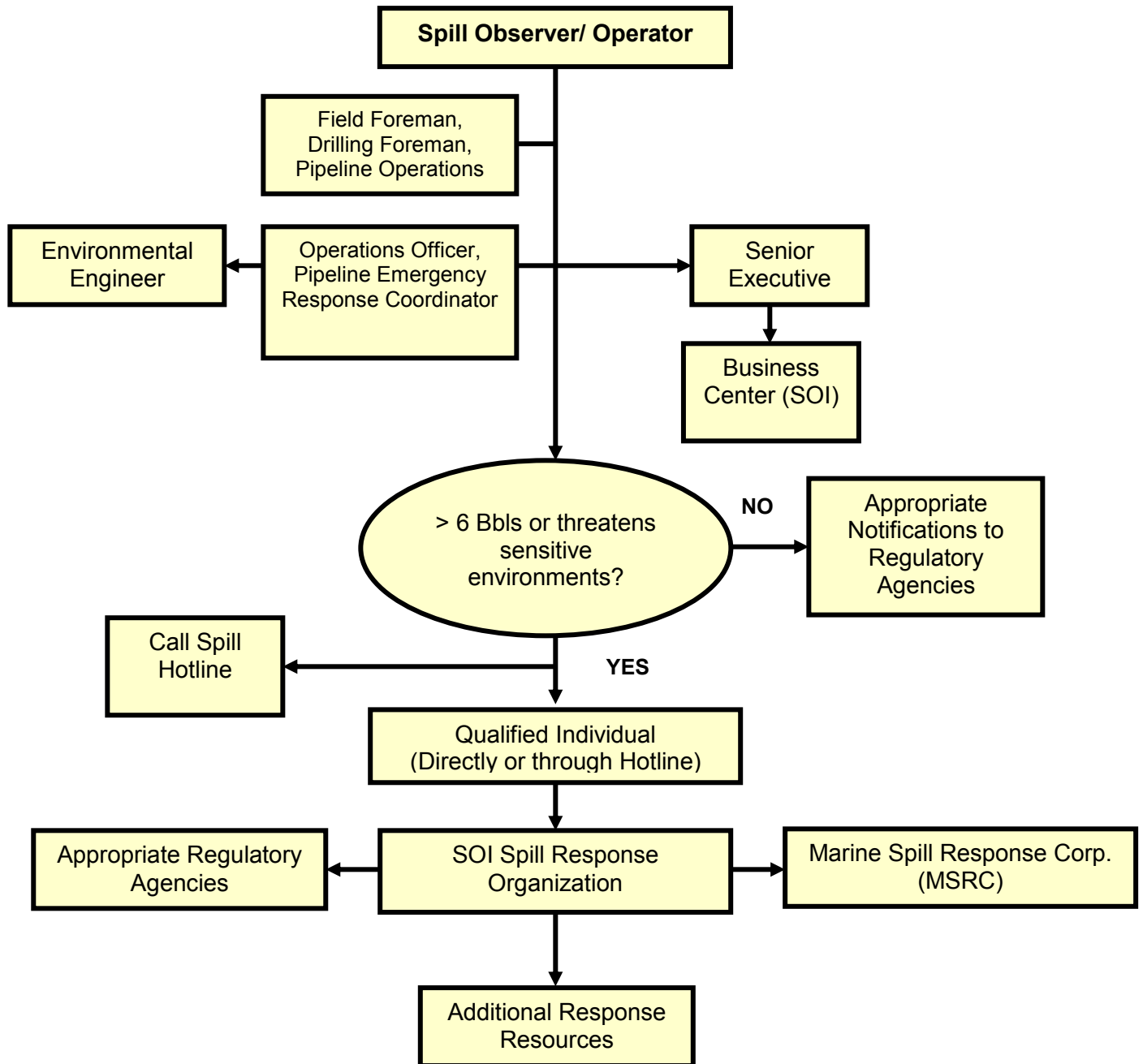
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FIGURE 1.1 - INTERNAL NOTIFICATION SEQUENCE





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FIGURE 1.2 - First Notice Incident Detail Report

(Internal SEPCo HSE use only) Event Number

Report of Offshore Environmental Incident Form (OF-REI)			
DIRECTIONS: This form is to be used to capture information that will be later entered into the IMPACT Safety database. When completing this form, please be as complete and specific as possible. When completing this form using MS Word you will only be able to enter information into the shaded portions of the form or by clicking on the check boxes. You can use the TAB key to move to the right or the DOWN ARROW key to move down on the form. You may also use your mouse to click on the cell that you want to complete.			
Date of Incident	Time of Incident	On SEPCo Premises <input type="checkbox"/> Y <input type="checkbox"/> N	
Incident Headline (Brief description of incident – 50 characters or less on the line below)			
Incident Type and Location Information			
<input type="checkbox"/> Spill <input type="checkbox"/> Exceedance of discharge limits (Noncompliance) <input type="checkbox"/> Produced water sheen <input type="checkbox"/> Material lost overboard <input type="checkbox"/> Complaint <input type="checkbox"/> Fire <input type="checkbox"/> Release <input type="checkbox"/> Other(Describe)			
Field Name	Well No./Rig	Block	Platform
Latitude	Longitude		OCS-G#
Activity at Location			
<input type="checkbox"/> Drilling/W.O./Completion <input type="checkbox"/> Exploration <input type="checkbox"/> Production <input type="checkbox"/> Construction <input type="checkbox"/> Other			
Specific Operation			
<input type="checkbox"/> Workover <input type="checkbox"/> Drilling <input type="checkbox"/> Construction <input type="checkbox"/> Operations <input type="checkbox"/> Other <input type="checkbox"/> Completion <input type="checkbox"/> Crane operations <input type="checkbox"/> Well servicing <input type="checkbox"/> Coil tubing <input type="checkbox"/> Equipment handling <input type="checkbox"/> Air transport <input type="checkbox"/> Maintenance <input type="checkbox"/> Boat/Ship			
Source (Check all that apply)			
<input type="checkbox"/> Drip pan <input type="checkbox"/> Flowline <input type="checkbox"/> Other surface <input type="checkbox"/> Sump <input type="checkbox"/> Tank/Vessel <input type="checkbox"/> Wellhead <input type="checkbox"/> Flare <input type="checkbox"/> Hoses <input type="checkbox"/> Pipeline <input type="checkbox"/> Rotating equipment <input type="checkbox"/> Transfer equipment <input type="checkbox"/> Other			
Environment Affected			
<input type="checkbox"/> Water <input type="checkbox"/> Air			
What was spilled or released?			
Report spilled or released volume expressing liquid in gallons, dry chemicals in pounds and air emissions in Standard Cubic Feet.			
Gallons (gal)	Pounds (lbs)	Standard Cubic Feet (SCF)	
OIL SPILL INFORMATION			
Sheen colors <input type="checkbox"/> Barely Visible (spill factor = 0.000008)		<input type="checkbox"/> Silvery (spill factor = 0.000016)	
<input type="checkbox"/> Slight Color (spill factor = 0.000032)		<input type="checkbox"/> Bright Color (spill factor = 0.000065)	
<input type="checkbox"/> Dull (spill factor = 0.00022)		<input type="checkbox"/> Dark (spill factor = 0.00043)	
Size of the sheen	yards by	yards	Estimated volume of the spill (yards x yards x spill factor) = gallons
Was the sheen <input type="checkbox"/> captured/cleaned up <input type="checkbox"/> allowed to disperse naturally			
How long did the sheen last before natural dispersion or cleaned up? _____ hours			
Weather Information			
Est. current speed	Direction (to)	Estimated wave height	Est. wind speed Direction (from)
Liquid Spill Properties an 6 barrels)			
API Gravity	Pour Point		
Visibility(nautical miles)	Ceiling (feet)	Ambient temp. (°F.)	
Source Control			

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Describe how and when the source of the spill or discharge was stopped

Describe what was/will be done specifically to prevent reoccurrence? (Procedures changed, equipment repaired, etc)

What was the cost of repairs/cleanup (Include equipment, repair time, transportation, etc.)

EXCEEDANCE OF DISCHARGE LIMITS (NONCOMPLIANCE)

Did a sample fail a Permit test? Y N Static sheen Produced H₂O sheen

Oil and Grease mg/l Sanitary chlorine mg/l Toxicity ppm

Full Description (How did the incident occur?)
(Attach additional sheets, if necessary, to complete event description)

INCIDENT IMPACT (Actual)


Actual Impact on Environment	<input type="checkbox"/> Slight Effect – Less than 1 barrel spill	<input type="checkbox"/> Minor Effect – Greater than 1 barrel spill, INC or non-compliance	<input type="checkbox"/> Localized Effect – Greater than 5 barrels spilled or chemical reportable quantity (RQ)	<input type="checkbox"/> Major Effect – Spill response initialization required	<input type="checkbox"/> Massive Effect
Actual Impact on Assets <input type="checkbox"/> None	<input type="checkbox"/> No disruption to operation	<input type="checkbox"/> Brief disruption	<input type="checkbox"/> Partial shutdown, can be restarted	<input type="checkbox"/> Partial operational loss up to 2 weeks	<input type="checkbox"/> Substantial or total loss of operation
Actual Impact on Reputation <input type="checkbox"/> None	<input type="checkbox"/> Slight	<input type="checkbox"/> Limited	<input type="checkbox"/> Considerable	<input type="checkbox"/> Major National	<input type="checkbox"/> Major International

Type of Complaint (Check if none)

Blast/Vibration Lights Odor/Fumes Debris Noise Oil Spray Smoke Flaring
 Other (describe)

NOTIFICATIONS

	Notified	Person's Name	Date / Time	Report number
External Notifications				
National Response Center 1-800-424-8802 (If delegated to by Incident Commander)	<input type="checkbox"/>		/	
	<input type="checkbox"/>		/	
Internal Notifications (all incidents)				

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Incident Commander	<input type="checkbox"/>		/
Area Leader/Drilling Superintendent	<input type="checkbox"/>		/
	<input type="checkbox"/>		/

Witness(es) to the Incident		
Name (Typed or Printed)	Employer	Phone

I certify that all the above information is true, accurate and complete. Under Federal law, penalties can be assessed for recording false information including fines and imprisonment.

Report submitted by			
Name (Typed or Printed)	Title	Phone	Date

Approvals and/or reviewers			
Name (Typed or Printed)	Title	Phone	Date


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FIGURE 1.3 - VOLUME ESTIMATE

A. Locating a Spill

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


Data Acquisition

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

B. Determining the Size and Volume of a Spill

Reports of oil spills, both oral and written, will conform to the following guidelines:

1. Basic Definitions (These definitions correspond to the Spill Volume Estimation Form attached.)
 - Sheen (Barely Visible, Silver Sheen, Slight Rainbow, Bright Rainbow): The oil is visible on the water as a silvery sheen or as rainbow colors. This is the smallest thickness of oil.
 - Dark Colors (Dull Colors, Yellowish Brown, Light Brown): The oil is visible with dark colors; it will still have traces of the rainbow color but is not black or dark brown.
 - Black/ Dark Brown: Fresh oil after the initial spreading will have a black or very dark brown color. This is the greatest thickness of non-emulsified oil.

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**FIGURE 1.3 (continued)
VOLUME ESTIMATE**

2. Spill Factors


- The factors given in the table below shall be used to estimate the volume of oil contained in the spill unless a more accurate amount is known by other means.
- These should be compared whenever possible to volumes estimated from the source of the spill, for example, piping volume, sump volume, or tank capacity.
- Exact calculations of the volume of a spill are not possible by visual observation of the oil on the surface of the water. For this reason, the spill volumes should be rounded off to avoid the appearance of a very accurate determination.

Appearance of Oil on Water (This gives the thickness of oil)	Spill Factor ¹	
	Gallons/ Yd ²	Film Thickness
Barely Visible	0.000008	0.0000015
Silvery	0.000016	0.000003
Slight Color	0.000032	0.000006
Bright Color	0.000065	0.000012
Dull	0.00022	0.00004
Dark	0.00043	0.00008

¹ The factors represent volumes of oil and are based on "Field Operations Guide" United States Coast Guard, 2000 Edition. $Volume\ Oil = Area\ of\ Slick\ (yd^2) \times Spill\ Factor\ (gallons/ yd^2)$

3. Estimating Procedures

See the following Spill Volume Estimation Form to be used in determining an estimate of the amount of oil spilled.

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**FIGURE 1.3 (continued)
VOLUME ESTIMATE**

Use the following steps when estimating the size of a spill:

Step	Action										
1	<ul style="list-style-type: none"> Estimate the coverage dimensions of each part of the spill in yd² for each of the six appearances that may be observed in the spill. Use helicopter coordinates to determine dimensions and sketch the oil spill with heavy areas outlined. 										
2	<ul style="list-style-type: none"> Multiply the dimensions in yd² by the appropriate factor from the table. Add the individual parts together. 										
3	<ul style="list-style-type: none"> The answer is the estimated volume of the spill in gallons or in barrels of oil. <table border="1" data-bbox="391 1010 1382 1318"> <thead> <tr> <th>If. . . .</th> <th>Then. . . .</th> </tr> </thead> <tbody> <tr> <td>Less than one (1) gallon</td> <td>Report as "Less than 1 gallon"</td> </tr> <tr> <td>Less than one (1) barrel</td> <td>Report in gallons</td> </tr> <tr> <td>Between one (1) and seven (7) barrels</td> <td>Round off to the nearest 0.1 barrels</td> </tr> <tr> <td>Seven (7) or more barrels</td> <td>Report in barrels as a whole number</td> </tr> </tbody> </table>	If. . . .	Then. . . .	Less than one (1) gallon	Report as "Less than 1 gallon"	Less than one (1) barrel	Report in gallons	Between one (1) and seven (7) barrels	Round off to the nearest 0.1 barrels	Seven (7) or more barrels	Report in barrels as a whole number
If. . . .	Then. . . .										
Less than one (1) gallon	Report as "Less than 1 gallon"										
Less than one (1) barrel	Report in gallons										
Between one (1) and seven (7) barrels	Round off to the nearest 0.1 barrels										
Seven (7) or more barrels	Report in barrels as a whole number										


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FIGURE 1.4 - SEPCO INCIDENT COMMAND SYSTEM CONTACT INFO, REGIONAL SPILL RESPONSE ORGANIZATION

SEPCO OIL SPILL HOTLINE (FOR ALL EMERGENCIES)	(504) 889-4445
OSS COMMAND CENTER SATELLITE PHONE	(877) 525-3190 Fax (504) 728-0519
OSS COMMAND CENTER INFORMATION	(504) 728-4732/ 3154

COMMAND STAFF

INCIDENT COMMANDER/QUALIFIED INDIVIDUAL @ (Ext. 4500)

NAME & EMAIL	OFFICE	PAGER	HOME	CELL	Blackberry PIN #
Smith, Phil B. Phil.b.smith@shell.com	██████████	██████████	██████████	██████████	██████████
Hutto, W.T. (Alt) Tommy.hutto@shell.com	██████████	██████████	██████████	██████████	██████████
Langford, Tim B. (Alt) Tim.b.langford@shell.com	██████████		██████████	██████████	██████████

LIAISON OFFICER @ (Ext. 4983)


NAME & EMAIL	OFFICE	PAGER	HOME	CELL	Blackberry PIN #
Riche, Rian S. Rian.riche@shell.com	██████████		██████████	██████████	██████████
Dollar, Jason J (SPLC) Jason.dollar@shell.com	██████████	██████████	██████████	██████████	

LEGAL OFFICER @ (Ext. 1630)

NAME & EMAIL	OFFICE	PAGER	HOME	CELL	Blackberry PIN #
Morris, Patrick Patrick.morris@shell.com	██████████		██████████	██████████	██████████
Crais, Arthur A. Arthur.crais@shell.com	██████████		██████████	██████████	██████████

PUBLIC AFFAIRS OFFICER @ (Ext. 4843)

NAME & EMAIL	OFFICE	PAGER	HOME	CELL	Blackberry PIN #
Stewart, Hasting Hasting.stewart@shell.com	██████████			██████████	██████████
Palmer, Fred Fred.palmer@shell.com	██████████	██████████	██████████	██████████	██████████

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SAFETY OFFICER @ (Ext. 3157)

NAME & EMAIL	OFFICE	PAGER	HOME	CELL	Blackberry PIN #
Brown, Gary Gary.brown@shell.com	[REDACTED]		[REDACTED]	[REDACTED]	
Wagner, Tom F. Thomas.wagner@shell.com	[REDACTED]		[REDACTED]	[REDACTED]	


GENERAL STAFF

PLANNING SECTION @ (Ext. 3156)

NAME & EMAIL	OFFICE	PAGER	HOME	CELL	Blackberry PIN #
Hutto, W.T. (S.C.) Tommy.hutto@shell.com	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Staley, Sue (Dep S.C.) Sue.staley@shell.com	[REDACTED]		[REDACTED]	[REDACTED]	[REDACTED]
Kuehn, Robert B. (ENV) Robert.kuehn@shell.com	[REDACTED]		[REDACTED]	[REDACTED]	
Meyer, Rick B. (Resources) Rick.b.meyer@shell.com	[REDACTED]		[REDACTED]	[REDACTED]	
Bellone, Sylvia A. (SUL) Sylvia.bellone@shell.com	[REDACTED]		[REDACTED]	[REDACTED]	
Chady, Jane M. (SUL) jane.chady@shell.com	[REDACTED]		[REDACTED]	[REDACTED]	
Moity, Warren J. (Decon/Waste) Warren.Moity@shell.com	[REDACTED]			[REDACTED]	
Lowe, Stacie A. (Doc) Stacie.Lowe@shell.com	[REDACTED]		[REDACTED]		
Stovall, Gary D. (THSP/SPLC) Gary.stovall@shell.com	[REDACTED]			[REDACTED]	[REDACTED]

LOGISTICS SECTION @ (Ext. 0361)

NAME & EMAIL	OFFICE	PAGER	HOME	CELL	Blackberry PIN #
Perrott, Byron (S.C.) B.perrott@shell.com	[REDACTED]			[REDACTED]	
Summers, Steve (Alt. S.C.) Steve.summers@shell.com	[REDACTED]			[REDACTED]	
Burgett, Christopher S. (I/T) Christopher.burgett@shell.com	[REDACTED]			[REDACTED]	[REDACTED]
Guillott, Patrick P. (Air) Patrick.guillot@shell.com	[REDACTED]			[REDACTED]	
Prather, Greer G. (Marine) Greer.prather@shell.com	[REDACTED]			[REDACTED]	
Pecot, Joe (Comms) j.pecot@shell.com	[REDACTED]			[REDACTED]	

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FINANCE SECTION @ (Ext. 6619)

NAME & EMAIL	OFFICE	PAGER	HOME	CELL	Blackberry PIN #
Tixier, Kathy (S.C.) kathy.tixier@shell.com	[REDACTED]		[REDACTED]	[REDACTED]	
Coulter, Michael (Alt S.C.) Michael.coulter@shell.com	[REDACTED]			[REDACTED]	

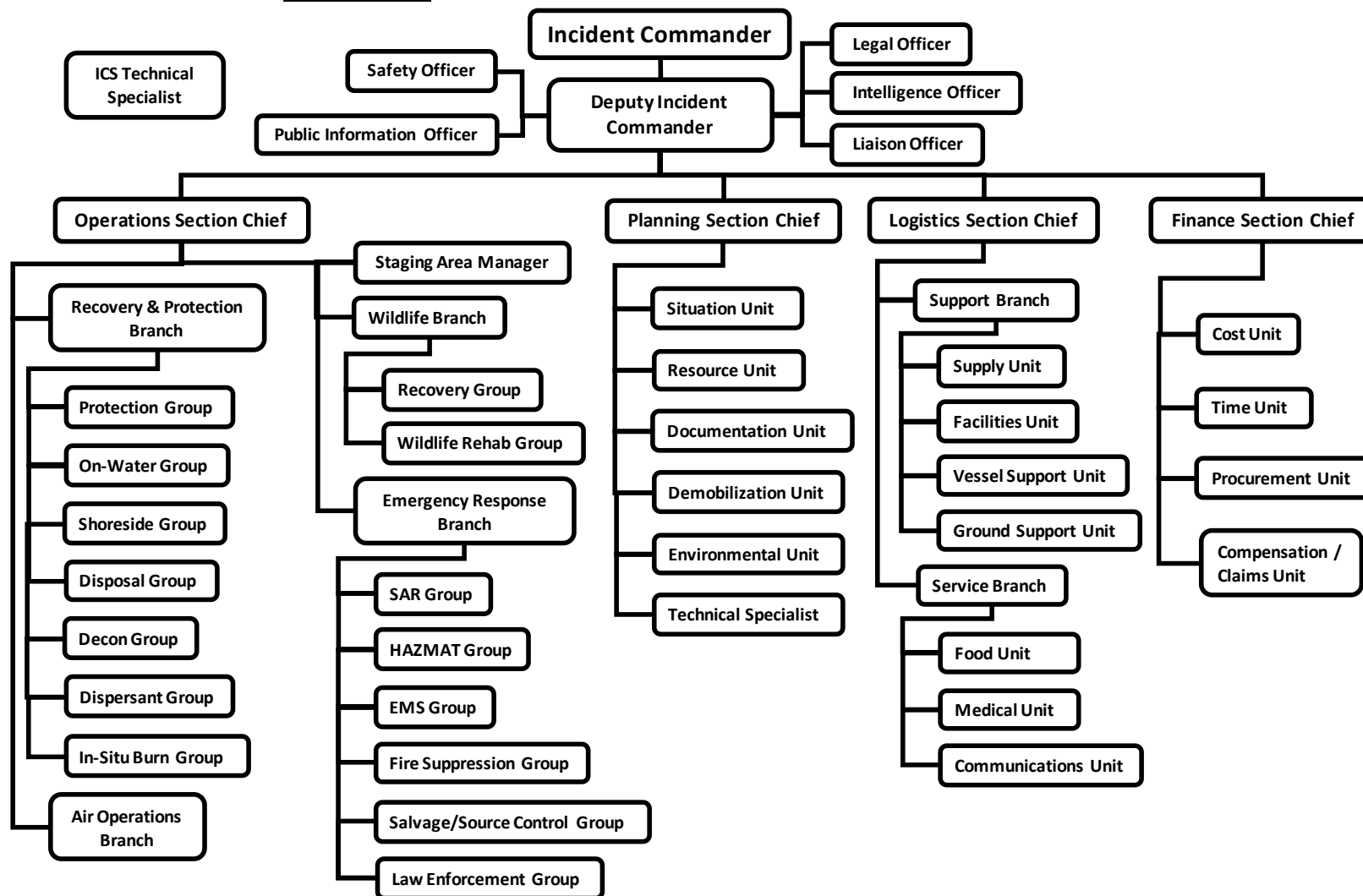
OPERATIONS SECTION @ (Ext. 4750)

NAME & EMAIL	OFFICE	PAGER	HOME	CELL	Blackberry PIN #
Benson, Ben (S.C.) ben.benson@obriensrm.com	[REDACTED]			[REDACTED]	
Langford, Tim B. (Alt S.C.) tim.b.langford@shell.com	[REDACTED]		[REDACTED]		
Turner, Ed (Alt S.C.) Ed.turner@obriensrm.com	[REDACTED]			[REDACTED]	
Feliciano, Daniel C. (AOBD) Daniel.Feliciano@shell.com	[REDACTED]		[REDACTED]		
Theriot, Cory C. (STAM Disp.) cory.theriot@shell.com	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	

@ Extensions at OSS Command Center, if applicable



FIGURE 1.5 - SOI REGIONAL SPILL RESPONSE ORGANIZATION




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FIGURE 1.6 - SRT CHECKLIST		
POSITION	RESPONSIBILITIES	COMMENTS
INCIDENT COMMANDER	<input type="checkbox"/> Fill in Spill Report Form <input type="checkbox"/> Assist field personnel (Med-Evac) <input type="checkbox"/> Assemble Spill Response Team <ul style="list-style-type: none"> <input type="checkbox"/> Brief team <input type="checkbox"/> Assign duties (org. chart) <input type="checkbox"/> Remind team to keep logs <input type="checkbox"/> Establish objectives (chart) <input type="checkbox"/> Name Incident <input type="checkbox"/> Determine response strategies <input type="checkbox"/> Conduct air surveillance <input type="checkbox"/> Establish meeting times (chart) <input type="checkbox"/> Notify agencies (chart)	
QUALIFIED INDIVIDUAL	<input type="checkbox"/> Status of incident, facility and personnel <input type="checkbox"/> Evaluate level of response required and activate SMT support as required <input type="checkbox"/> Conduct internal/ external notifications as required <input type="checkbox"/> Authorize the use of response resources <input type="checkbox"/> Participate in Incident Command briefings	
LIAISON OFFICER	<input type="checkbox"/> National Response Center <input type="checkbox"/> Notify appropriate State agencies <input type="checkbox"/> MMS District/ Pipeline Section <input type="checkbox"/> Request safety zones air/ water (USCG) <input type="checkbox"/> Request Notice to Mariners (USCG) <input type="checkbox"/> Submit dispersant request to USCG <input type="checkbox"/> Obtain approval to decant (USCG) <input type="checkbox"/> Prepare written reports to agencies	
HUMAN RESOURCES	<input type="checkbox"/> Notify family of injured (if company employee) <input type="checkbox"/> Follow up on injured <input type="checkbox"/> Coordinate volunteer activities	



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FIGURE 1.6 - SRT CHECKLIST

POSITION	RESPONSIBILITIES	COMMENTS
PUBLIC AFFAIRS OFFICER	<input type="checkbox"/> Notify corporate executives <input type="checkbox"/> Notify partners <input type="checkbox"/> Notify company personnel <input type="checkbox"/> Prepare for media interest <input type="checkbox"/> Keep the public informed <input type="checkbox"/> Coordinate media efforts through the Joint Information Center <input type="checkbox"/> Coordinate efforts with USCG <input type="checkbox"/> Identify community concerns	
SAFETY OFFICER	<input type="checkbox"/> Evaluate/ monitor hazards <input type="checkbox"/> Notify offset operators <input type="checkbox"/> Obtain MSDS/ Prepare Site Safety Plan <input type="checkbox"/> Establish first aid posts <input type="checkbox"/> Coordinate search and rescue operations <input type="checkbox"/> Coordinate post incident debriefing <input type="checkbox"/> Conduct air monitoring as may be needed <input type="checkbox"/> Establish initial site safety plan <input type="checkbox"/> Ensure HAZWOPER compliance <input type="checkbox"/> Investigate safety related accidents and report to Incident Commander <input type="checkbox"/> Conduct safety inspections	
SOURCE CONTROL	<input type="checkbox"/> Commence source control operations <input type="checkbox"/> Verify amount spilled <input type="checkbox"/> Calculate total potential <input type="checkbox"/> Mobilize source control specialist <input type="checkbox"/> Develop/ obtain approval for repair plan	
OPERATIONS	<input type="checkbox"/> Direct surveillance operations <input type="checkbox"/> Mobilize Marine Spill Response Corporation and/ or other available equipment that is deemed necessary to response efforts by the Unified Command. (See Appendix F for potential equipment and services not under contract.) <ul style="list-style-type: none"> <input type="checkbox"/> Equipment/ operators/ supervisors <input type="checkbox"/> Take air monitoring equipment <input type="checkbox"/> Obtain samples of spilled material 	



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FIGURE 1.6 - SRT CHECKLIST

POSITION	RESPONSIBILITIES	COMMENTS
	<ul style="list-style-type: none"> <input type="checkbox"/> Prepare shoreline for impact (pre-clean) <input type="checkbox"/> Contact Marine Spill Response Corp (MSRC) <ul style="list-style-type: none"> <input type="checkbox"/> Spray/ spotter aircraft and personnel <input type="checkbox"/> Vessel for USCG SMART Team <input type="checkbox"/> For assistance contact O'Brien's Response Mgt. See appendix F for equipment (potential services not under contract). <input type="checkbox"/> Send company representative to site/ staging <input type="checkbox"/> Consider night time spill tracking <input type="checkbox"/> Consider pre-cleaning the shoreline prior to impact <input type="checkbox"/> Assist in SCAT process to determine shoreline response <input type="checkbox"/> Contact wildlife specialist/ refuge mgrs. for info. <ul style="list-style-type: none"> <input type="checkbox"/> Consider scare cannons (MSRC) <input type="checkbox"/> Consider wildlife trailer (MSRC) <input type="checkbox"/> Call Wildlife Rehab <input type="checkbox"/> Prepare Air Operations Plan <input type="checkbox"/> Develop waste disposal plans <input type="checkbox"/> Set up decontamination stations 	
LOGISTICS	<ul style="list-style-type: none"> <input type="checkbox"/> Locate utility/ crew boats, helos <input type="checkbox"/> Identify/ set up staging areas <input type="checkbox"/> Ensure temporary storage-recovered oil capacity <input type="checkbox"/> Request mechanics/ parts trailers <input type="checkbox"/> Prepare medical plan, source EMTs (ICS 206) <input type="checkbox"/> Prepare communications plan (ICS 205) <input type="checkbox"/> Obtain security @ ICP/ staging areas <input type="checkbox"/> Establish services <input type="checkbox"/> Housing <input type="checkbox"/> Catering <input type="checkbox"/> Parts trailers/ mechanics <input type="checkbox"/> Fueling facilities 	

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<i>FIGURE 1.6 - SRT CHECKLIST</i>		
POSITION	RESPONSIBILITIES	COMMENTS
PLANNING	<input type="checkbox"/> Call and activate The Response Group (TRG) <input type="checkbox"/> Request trajectories <input type="checkbox"/> Show dispersant timeline <input type="checkbox"/> Shoreline impact? Request sensitive areas <input type="checkbox"/> Update w/ weather forecasts/ surveillance <input type="checkbox"/> Prepare dispersants/ insitu burning request form <input type="checkbox"/> Post/ update charts in Incident Command Post <input type="checkbox"/> Commence NRDA operations (sampling) <input type="checkbox"/> Determine Sensitive Areas as Identified in the ACP <input type="checkbox"/> Call out technical specialists as needed <input type="checkbox"/> Prepare ICS 201 and IAP <input type="checkbox"/> Set up secured filing system	
FINANCE	<input type="checkbox"/> Issue WBS Element <input type="checkbox"/> Prepare for claims <input type="checkbox"/> Review contracts with Logistics/ vendors	


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FIGURE 1.7 - RESPONSE OBJECTIVES

Objectives for Operational Period:

MAXIMIZE HEALTH AND SAFETY OF RESPONSE PERSONNEL

- Safety is first priority
- Perform site characterizations
- Restrict access to “Hot” & “Warm” zones to properly trained & equipped personnel

MINIMIZE HEALTH & SAFETY IMPACTS TO GENERAL PUBLIC

- Establish secure safety zones
- Issue Notice to Mariners
- Restrict air space over incident scene
- Conduct air & water quality monitoring, as necessary

CONTROL AND STABILIZE SOURCE

- Be prepared for fire
- Conduct damage assessment
- Commence source control operations

MAXIMIZE PROTECTION OF SENSITIVE AREAS

- Use *The Response Group* & ACP to identify sensitive areas
- Develop and implement protection strategies
- Prioritize areas, as necessary

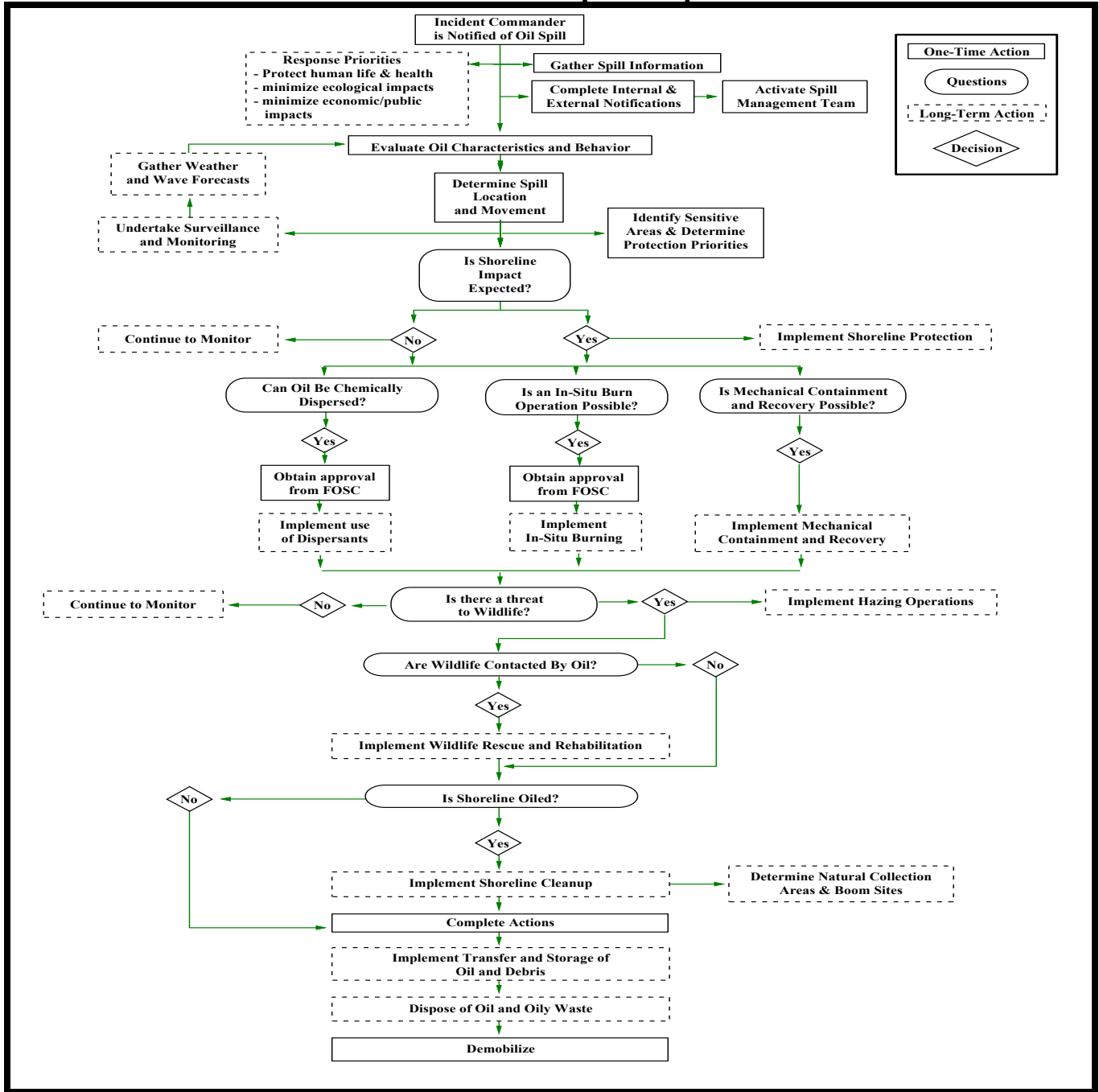
DEVELOP A COMPREHENSIVE, INTEGRATED PLAN

- Obtain approval to use dispersants
- Obtain approval to commence in-situ burning
- Use high capacity recovery devices in the thickest concentrations
- Support on-water operations with surveillance and spotter aircraft
- Prepare shorelines for the arrival of oil
- Initiate wildlife protection operations
- Initiate NRDA operations
- Establish staging areas
- Develop disposal plans
- Integrate agency response personnel into SRT
- Keep public informed
- Be prepared to respond to claims



FIGURE 1.8 – FLOWCHART FOR OIL SPILL RESPONSE

Flowchart for Oil Spill Response




	Shell Offshore, Inc.	Number: HSE0054
		Custodian: SOI RA
	GOM Regional Oil Spill Response Plan	Revision: 6.1 Effective: 3/05/2010

FIGURE 1.9 - SITE SAFETY ASSESSMENT

ICS 208 – Site Safety Plan	
Incident:	Prepared by: _____ at: _____
Period:	Version Name: _____
Revision: _____	
Applies To Site: _____	
Products: _____	(Attach MSDS)
SITE CHARACTERIZATION	
Water: _____	
Wave Height: _____	Wave Direction: _____
Current Speed: _____	Current Direction: _____
Land: _____	Use: _____
Weather: _____	Temp: _____
Wind Speed: _____	Wind Direction: _____
Pathways for Dispersion:	
Site Hazards	
<input type="checkbox"/> Boat Safety	<input type="checkbox"/> Fire, explosion, in-situ burning
<input type="checkbox"/> Chemical hazards	<input type="checkbox"/> Heat stress
<input type="checkbox"/> Cold Stress	<input type="checkbox"/> Helicopter operations
<input type="checkbox"/> Confined Spaces	<input type="checkbox"/> Lifting
<input type="checkbox"/> Drum handling	<input type="checkbox"/> Motor vehicles
<input type="checkbox"/> Equipment operations	<input type="checkbox"/> Noise
<input type="checkbox"/> Electrical operations	<input type="checkbox"/> Overhead/buried utilities
<input type="checkbox"/> Fatigue	<input type="checkbox"/> Plants/wildlife
<input type="checkbox"/> Other _____	<input type="checkbox"/> Other _____
<input type="checkbox"/> Pump hose	<input type="checkbox"/> Slips, trips, and falls
<input type="checkbox"/> Steam and hot water	<input type="checkbox"/> Trenching/Excavation
<input type="checkbox"/> UV Radiation	<input type="checkbox"/> Visibility
<input type="checkbox"/> Weather	<input type="checkbox"/> Work near water
<input type="checkbox"/> Other _____	<input type="checkbox"/> Other _____
Air Monitoring	
%O ₂ : _____	%LEL: _____ ppm Benzene: _____
ppm H ₂ S: _____	<input type="checkbox"/> Other (Specify): _____
CONTROL MEASURES	
Engineering Controls	
<input type="checkbox"/> Source of release secured	<input type="checkbox"/> Valve(s) closed
<input type="checkbox"/> Site secured	<input type="checkbox"/> Facility shut down
<input type="checkbox"/> Energy source locked/tagged out	<input type="checkbox"/> Other _____
Personal Protective Equipment	
<input type="checkbox"/> Impervious suit	<input type="checkbox"/> Respirators
<input type="checkbox"/> Inner gloves	<input type="checkbox"/> Eye protection
<input type="checkbox"/> Outer gloves	<input type="checkbox"/> Personal floatation
<input type="checkbox"/> Flame resistance clothing	<input type="checkbox"/> Boots
<input type="checkbox"/> Hard hats	<input type="checkbox"/> Other _____
Additional Control Measures	
<input type="checkbox"/> Decontamination	<input type="checkbox"/> Stations established
<input type="checkbox"/> Sanitation	<input type="checkbox"/> Facilities provided – OSHA 29 CFR 1910.120n
<input type="checkbox"/> Illumination	<input type="checkbox"/> Facilities provided – OSHA 29 CFR 1910.120m
<input type="checkbox"/> Medical Surveillance	<input type="checkbox"/> Provided – OSHA 29 CFR 1910.120fq
ICS 208 Site Safety Plan	© 1997-2011 TRG/dbSoft, Inc.


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FIGURE 1.9 - SITE SAFETY ASSESSMENT (continued)

ICS 208 – Site Safety Plan		
Incident:	Prepared By:	at:
Period:	Version Name:	
WORK PLAN		
<input type="checkbox"/> Booming	<input type="checkbox"/> Skimming	<input type="checkbox"/> Vac trucks
<input type="checkbox"/> Heavy equipment	<input type="checkbox"/> Sorbent pads	<input type="checkbox"/> Patching
<input type="checkbox"/> Other	<input type="checkbox"/> Pumping	<input type="checkbox"/> Hot work
	<input type="checkbox"/> Excavation	<input type="checkbox"/> Appropriate permits used
TRAINING		
<input type="checkbox"/> Verified site workers trained per OSHA 29 CFR 1920.120		
ORGANIZATION		
<u>Title</u>	<u>Name</u>	<u>Telephone/Radio</u>
Incident Commander:	_____	_____
Deputy Incident Commander:	_____	_____
Safety Officer:	_____	_____
Public Affaire Officer:	_____	_____
Other:	_____	_____
EMERGENCY PLAN		
<input type="checkbox"/> Alarm system:	_____	
<input type="checkbox"/> Evacuation plan:	_____	
<input type="checkbox"/> First aid location	_____	
Notified		
<input type="checkbox"/> Hospital	_____	Phone: _____
<input type="checkbox"/> Ambulance	_____	Phone: _____
<input type="checkbox"/> Air ambulance	_____	Phone: _____
<input type="checkbox"/> Fire	_____	Phone: _____
<input type="checkbox"/> Law enforcement	_____	Phone: _____
<input type="checkbox"/> Emergency response/rescue	_____	Phone: _____
PRE-ENTRY BRIEFING		
<input type="checkbox"/> Initial briefing prepared for each site		
INCLUDING ATTACHMENTS/APPENDICES		
<u>Attachments</u>		<u>Appendices</u>
<input type="checkbox"/> Site Map	<input type="checkbox"/> Hazardous Substance Information Sheets	<input type="checkbox"/> Site Safety Program Evaluation Checklist
<input type="checkbox"/> Site Hazards	<input type="checkbox"/> Monitoring Program	<input type="checkbox"/> Confined Space Entry Checklist
<input type="checkbox"/> Training Program	<input type="checkbox"/> Confined Space Entry Procedure	<input type="checkbox"/> Heat Stress Consideration
<input type="checkbox"/> Safe Work Practices for Boats	<input type="checkbox"/> Safe Work Practices for Boats	<input type="checkbox"/> Cold Stress and Hypothermia Consideration
<input type="checkbox"/> PPE Description	<input type="checkbox"/> Decontamination	<input type="checkbox"/> First Aid for Bites, Stings, and Poisonous Plant Contact
<input type="checkbox"/> Communication and Organization	<input type="checkbox"/> Site Emergency Response Plan	<input type="checkbox"/> Safe Work Practice for Oily Bird Rehabilitation
		<input type="checkbox"/> SIPI Site Pre-Entry Briefing
		<input type="checkbox"/> Personnel Tracking System
ICS 208 – Site Safety Plan		© 1997-2011 TRG/dbSoft, Inc.


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FIGURE 1.10 – MSRC 24-HOUR EMERGENCY NUMBERS

<p>TELEPHONE: (800) OIL-SPIL (800) 259-6772 (732) 417-0175 (COMMERCIAL)</p> <p>FACSIMILE: (800) 635-6772 (732) 417-0097 (COMMERCIAL)</p>	 
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FIGURE 1.11 - MSRC MAJOR RESPONSE EQUIPMENT (SOUTHERN REGION)

MARCH 2010

Location	Skimmers	EDRC Bbl/Day	Boom	Barges/Storage
Ingleside, TX	Southern Responder MSRC Quick Strike MSRC 403 1 – LORI Brush 1 – Foilex 250 1 – WP 1 1 – Vikoma 3 Weir 1 – GT-185 1* – Transrec 350 1 – Stress I Skimmer	5,000 3,977 3,017 5,657 1,371 10,567 15,840 Total – 45,429	6,600 ft Sea Sentry II 900 ft Slickbar 500 ft Texas Boom 1216 ft Vikoma 3 Weir 1350 ft 44" Amer B&B 430 ft Oil Stop 2050 ft Flexy-Pimac 50 ft OK Corral	1 – 4,000 barrel OSRV Storage 1 – 40,300 bbl Offshore Barge * Transrec permanently mounted on OSRB 403. 1 – 400 bbl Shallow Water Barge (self-propelled) 1 – 50 barrel FRV Storage
Galveston, Tx	<u>Texas Responder</u> <u>MSRC 570</u> 1 – Foilex 250 1 – Walosep 4 2 – GT-185 1 – Transrec 350 1 – Stress I Skimmer 1 – Queensboro	3,977 3,017 2,742 10,567 15,840 905 Total – 37,048	7,590 ft Sea Sentry II 1,000 ft Slickbar 500 ft Texas Boom 500 ft Fire (+400 ft Guide) 100 ft Quali-tech 50 ft OK Corral	1 – 56,900 bbl Offshore Barge 1 – 4,000 bbl OSRV Storage 3 – 400 bbl Shallow Water Barges (non-propelled) 3 – Shallow Water Pushboats
Port Arthur, TX	1 – GT-185	1,371	50 ft OK Corral	1 – 400 bbl Shallow Water Barge (non-propelled) 1 – Shallow Water Pushboat
Lake Charles, LA	<u>Gulf Coast Responder</u> 1 – Foilex 250 1 – Desmi Ocean 1 – Transrec 350 1 – Stress I Skimmer 4 - Queensboro	3,977 3,017 10,567 15,840 3,620 Total – 37,021	9,460 ft Sea Sentry II 1,000 ft Slickbar 400 ft Texas Boom 9,400 ft 18" Amer B&B 100 ft Quali-tech 100 ft OK Corral	16 – 500 bbl Storage Bladders (towable) 1 – 3,000 bbl Storage Bladder (towable) 3 – 400 bbl Shallow Water Barge (non-propelled) 1 – 400 bbl Shallow Water Barge (self-propelled) 6 – Shallow Water Pushboat 1 – 4,000 bbl OSRV Storage



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FIGURE 1.11 - MSRC MAJOR RESPONSE EQUIPMENT (SOUTHERN REGION)

MARCH 2010

Location	Skimmers	EDRC Bbl/Day	Boom	Barges/Storage
Houma, LA	1 – Queensboro	905	50 ft OK Corral	1 – 400 bbl Shallow Water Barge (non-propelled) 2 – Shallow Water Pushboat
Baton Rouge, LA	1 – GT-185	1,371	50 ft OK Corral	1 – 400 bbl Shallow Water Barge (non-propelled) 1 – Shallow Water Pushboat
Fort Jackson, LA	<u>Louisiana Responder</u> <u>MSRC 452</u> 1 – Walosep 4 1 – Desmi Ocean 1 – Foilex 200 1 – GT-185 1 – Stress I Skimmer 1 – Transrec 350 1 – Foilex 250 Total – 39,778	3,017 3,017 1,989 1,371 15,840 10,567 3,977 Total – 39,778	5,280 ft Sea Sentry II 1,000 ft Slickbar 50 ft OK Corral	1 – 4,000 bbl OSRV Storage 1 – 45,000 bbl Offshore Barge 1 – 3,000 bbl Storage Bladder (towable) 1 – 400 bbl Shallow Water Barge (non-propelled) 2 – Shallow Water Pushboat
Pascagoula, MS	<u>Mississippi Responder</u> <u>MSRC 402</u> 1 – AardVac 1 – WP 1 1 – GT-185 1 – Stress I Skimmer 1 – Stress II Skimmer 1 – Transrec 350 1 – Queensboro Total – 38,557	3,840 3,017 1,371 15,840 3,017 10,567 905 Total – 38,557	6,490 ft Sea Sentry II 4,000 ft Quali-Tech 500 ft Fire (+400 ft Guide) 1,450 ft Texa Boom 50 ft OK Corral 2,000 ft Flexy-Pimac 900 ft Amer B&B 5,700 ft Amer Marine	1 – 4,000 bbl OSRV Storage 1 – 40,300 bbl Offshore Barge 1 – 400 bbl Shallow Water Barge (non-propelled) 1 – 400 bbl Shallow Water Barge (self-propelled) 1 – Shallow Water Pushboat



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FIGURE 1.11 - MSRC MAJOR RESPONSE EQUIPMENT (SOUTHERN REGION)

MARCH 2010

Location	Skimmers	EDRC Bbl/Day	Boom	Barges/Storage
Miami, FL	<u>Florida Responder</u> 1 – GT-185 1 – Walosep W4 1 – WP 1 1 – Desmi Ocean 1 – Transrec 350 1 – Stress I Skimmer 2 – Aardvac 800	1,371 3,017 3,017 3,017 10,567 15,840 7,680 <u>Total – 44,509</u>	9,680 ft Sea Sentry II 2,900 ft Slickbar 500 ft Fire (+400 ft Guide) 2,000 ft Quali-Tech 50 ft OK Corral	8 – 500 bbl Storage Bladders (towable) 1 – 400 bbl Shallow Water Barge (self-propelled) 1 – 4,000 bbl OSRV Storage
Tampa, FL	1 – WP 1 1 – GT-185 1 – Stress I Skimmer <u>FRV MSRC Lightning</u> 1 – LORI Brush	3,017 1,371 15,840 5,000 <u>Total – 25,228</u>	1,540 ft Sea Sentry II 2,200 ft Slickbar Boom 2,000 ft Texa Boom 50 ft OK Corral	1 – 36,000 bbl Offshore Barge 2 – 500 bbl Storage Bladders (towable) 1 – 400 bbl Shallow Water Barge (non-propelled) 1 – Shallow Water Pushboat 1 – 50 bbl. FRV storage
Jacksonville, FL	1 – GT-185	1,371	50 ft OK Corral	1 – 400 bbl Shallow Water Barge (non-propelled) 1 – Shallow Water Pushboat
San Juan, Puerto Rico	<u>MSRC Brisa Rapida</u> 1 – Stress II Skimmer 1 – Lori Brush Pack 1 – Queensboro	3,017 5,000 905	4,100 ft Slickbar Boom 50 ft Quali-tech	1 – 50 bbl. FRV 1 – 400 bbl Shallow Water Barges (non-propelled) 1 – Shallow Water Pushboats



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FIGURE 1.11 - MSRC MAJOR RESPONSE EQUIPMENT (SOUTHERN REGION)

MARCH 2010

Location	Skimmers	EDRC Bbl/Day	Boom	Barges/Storage
Ponce, Puerto Rico	1 – Desmi Ocean 2 - Queensboro	3,017 1,810	2,100 ft Slickbar Boom 100 ft Quali-tech	1 – 400 bbl Shallow Water Barge (non-propelled) 1 – 400 bbl Shallow Water Barge (self-propelled) 1 – Shallow Water Pushboat
Yabacoa, Puerto Rico	1 – Foilex 200 1 - Queensboro	1,989 905	7,365 ft Slickbar Boom 50 ft Quali-tech	1 – 400 bbl Shallow Water Barges (non-propelled) 1 – Shallow Water Pushboats
St. Croix, VI (1)	1 – GT-185 1 – AardVac 1 – Stress I Skimmer 1 – Stress II Skimmer 1 - Queensboro	1,371 3,840 15,840 3,017 905 Total – 24,973	12,320 ft Sea Sentry II 5,940 ft Slickbar 500 ft Fire (+400 ft Guide) 100 ft Quali-tech	1 – 38,000 bbl Offshore Barge 2 – 400 bbl Shallow Water Barges (self-propelled) 4 – 500 bbl Storage Bladders (towable)


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FIGURE 1.13 - NOTIFICATION STATUS REPORT

Notification Status Report									
Incident:					Prepared By:				at:
Period: / / : to / / :					Version Name:				
Organization Notified	Phone	Date /Time Notified	Person Contacted	Person Contacted Email	Case No.	Follow Up	ETA On Site	Notified By	
Notes:									
Notes:									
Notes:									
Notes:									
Notes:									
Notes:									
Notes:									
Notification Status Report			© 1997-2011 TRG/dbSoft, Inc.						


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APPENDIX H - WORST CASE DISCHARGE SCENARIOS

A. Facility Information

1. WCD < 10 Miles Seaward of the Coastline (if applicable)

Type of Operation	Facility Name/ID No. or Pipeline Segment/ ID No.	Area/ Block No. Where the Spill Originates	Distance in Miles from the Shore
Pipeline	West Delta 143 to Fourchon Terminal at shoreline, Segment 10553	Onshore/Shoreline (State Waters)	-10 to 1 Mile
Factors Considered: Volume and proximity to shore			

2. WCD > 10 Miles Seaward of the Coastline (if applicable)

Type of Operation	Facility Name/ID No. or Pipeline Segment/ ID No.	Area/ Block No. Where the Spill Originates	Distance in Miles from the Shore
Production	Mississippi Canyon 809	MC 809	52
Factors Considered: Volume, gravity and proximity to shore.			

3. WCD involving an Exploratory Well from a Mobile Offshore Drilling Unit (if applicable)


Type of Operation	Facility Name/ID No. or Pipeline Segment/ ID No.	Area/ Block No. Where the Spill Originates	Distance in Miles from the Shore
Exploratory	Mississippi Canyon 762	MC 762	51.3

B. Volume

The volumes of the worst-case discharge scenarios for Production Operations (<10 miles = 10,104 bbls, >10 miles = 163,223 bbls) and Exploration (205,000 bopd) were determined using criteria in CFR 30, Section 254.47. Calculations are shown in **FIGURE H.1**.

C. Land Segment Identification

Trajectories of a spill and the probability of it impacting a land segment have been projected utilizing information in the MMS Oil Spill Risk Analysis Model (OSRAM) for the Central and Western Gulf of Mexico available on the MMS website using 30 day impact. The results are shown in **FIGURE H.2**.


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D. Resource Identification

**Environmental Sensitivities
TERREBONNE PARISH, LOUISIANA**

This includes the eastern portion of Atchafalaya Bay Wildlife Management Area across to Timbalier Bay; along the Gulf Coast including Caillou Bay, Isles Dernieres and Terrebonne Bay. The entire parish is classified as an EPA National Estuary. This area is primarily marshland, broken up by numerous small bays and freshwater lakes. The list of contacts in this section will be updated every 2 years.

Sensitive Areas/ Descriptions	Access	Wildlife	Contact
1) BARATARIA TERREBONNE NATIONAL ESTUARY PROGRAM			
Protects the approximately 735 species of birds, finfish, shellfish, reptiles, amphibians and mammals that frequent the Terrebonne Bay area. Includes the Terrebonne Barrier Island Refuge.	N/A	RTE: Brown pelican, pallid sturgeon, Kemp's Ridley sea turtle, West Indian manatee Others: Waterfowl (winter), shore birds, wading birds, finfish, shellfish, small mammals, reptiles, amphibians	Director 300 Audubon Dr. North Babington Hall, Rm 105 Nicholls State University Thibodaux, LA 70301 (800) 259-0869
2) TERREBONNE BAY AREA			
Covers the western side of Terrebonne Bay to the east side of Timbalier Bay, extending south to the Barrier Islands (including Lake Barre, Tambour, Felicity, Raccourci, and Lake Pelto). Tidal range is 1-3 feet and max currents are 0.5 knots. Winter winds are from the NE at 11.4 knots, spring winds are from the SE at 9.5 knots and summer winds are from the S at 6.8 knots. Black mangroves can be found in the coastal regions.	By boat only.	RTE: Bald eagle, piping plover, brown pelican, pallid sturgeon, Kemp's Ridley sea turtle, West Indian manatee, Louisiana black bear Others: Waterfowl (winter), shorebirds, seabirds diving birds, eastern oyster, redfish, speckled trout, spotted sea trout, tarpon, red drum, marine mammals	N/A

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Sensitive Areas/ Descriptions	Access	Wildlife	Contact
3) CAILLOU BAY AREA			
Includes Lake Pelto, Caillou Bay, Caillou Lake, Lake Mercahant, Lost Lake and Four League Bay. Tidal range is 1-3 feet and the max currents are 0.5 knots. Winter winds are from the NE at 11.4 knots, spring winds are from the SE at 9.5 knots and summer winds are from the S at 6.8 knots. Black mangroves can be found in the coastal regions.	By boat only.	RTE: Bald eagle, least tern (spring), brown pelican, piping plover, pallid sturgeon, Kemp's Ridley sea turtle, West Indian manatee, Louisiana black bear Others: Shorebirds and seabirds, shrimp and blue crab (fall-spring), redfish, speckled trout, Gulf menhaden and southern flounder (fall-spring), drum (spring, fall), marine mammals	Louisiana SWR New Iberia, LA (337) 369-3807
4) ATCHAFALAYA DELTA WILDLIFE MANAGEMENT AREA			
137,000 acres of marshland. Bound by Atchafalaya Bay to the north, the GOM on the South, Wax Lake Outlet on the east and East Cote Blanche Bay on the west.	By boat only.	RTE: Brown pelican, pallid sturgeon, bald eagle, American alligator, Kemp's Ridley sea turtle, West Indian manatee Others: Peregrine falcon, roseate spoonbill, hooded mergansers, wood ducks and other waterfowl (winter), songbirds (spring), wading and shorebirds, finfish and shellfish (nursery), furbearers, white-tailed deer	Atchafalaya Delta WMA P.O. Box 127 Krotz Springs, LA 70091 Manager: Michael Carlos (337) 373-0174 (337) 373-0181 (fax)

Areas of Socio-Economic Concern in Terrebonne Parish:

- Southwest Pass is a high use waterway
- Vermillion Bay has a high number of oil facilities
- Private oyster beds throughout the shoreline marsh areas
- Private oyster beds in Terrebonne Bay

Protection Priorities for Terrebonne Parish:


- Caillou Bay area
- Atchafalaya Delta Wildlife Management Area
- Terrebonne Bay area
- Other shoreline marshes

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Environmental Sensitivities LAFOURCHE PARISH, LOUISIANA

Lafourche Parish includes Timbalier Bay and Bayou Lafourche east to Bay Tambour and Caminada Bay. The Timbalier Bay area contains rookeries, mangroves, oyster beds and finfish and shellfish nursery grounds. Seven rookeries are located northwest of Grand Isle in Bay Tambour and Caminada Bay. Open beaches are located along the Gulf Coast. This area is a part of the Barataria Basin, a unique fishery habitat that has shallow estuarine waters, sandbars, small barrier and coastal islands and coastal wetlands. This area is also a nesting ground for the brown pelican, an endangered species.

Sensitive Areas/ Descriptions	Access	Wildlife	Contact
1) WISNER STATE WILDLIFE MANAGEMENT AREA			
21,621 acres of marshland. Consists mostly of a low sub-delta saline marsh with a number of lake and oil canals present. Major marsh vegetation is oyster grass and salt grass. Numerous finfish and crustaceans are present in the waterways.	By boat only. Public launches available along LA Hwy 1 and commercial ramps are located at Leeville, Caminada Bay and Grand Isle.	RTE: Brown pelican Others: Waterfowl (winter), peregrine falcon, speckled trout, red fish, flounder, black drum, sheepshead, croaker, blue crab, shrimp, nutria, muskrat, mink, raccoon, other small mammals	Wisner WMA LA Dept of Wildlife and Fisheries P.O. Box 98000 Baton Rouge, LA 70898-9000 (225) 765-2360
2) TIMBALIER BAY AREA			
Bay Courant south to the Barrier Islands, including Timbalier Bay, Devils Bay, Pierle Bay and Little Lake. Tidal range is 1-3 feet and max currents are 0.5 knots. Winter wind direction and velocity is from NE at 11.4 knots, spring is from the SE at 9.5 knots and summer is from the S at 6.8 knots.	By boat only.	RTE: Reddish egret, least tern Others: Great egret, royal tern, black-crowned night heron, eastern oyster, red drum, spotted sea trout, tarpon	N/A
3) POINTE AU CHIEN WILDLIFE MANAGEMENT AREA			
28,244 acres of protected marshland. Provides a refuge for migratory birds and other wildlife.	By boat only.	RTE: American alligator, bald eagle Others: Waterfowl (winter), wading birds, snipe, finfish small mammals	Pointe Au Chien WMA 1197 Hwy 665 Montigut, LA 70377 Manager: Mark Castille (936) 594-5494

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Areas of Socio-Economic Concern in Lafourche Parish:

- Fourchon Beach
- Private oyster beds are throughout the shoreline marsh areas

Protection Priorities for Lafourche Parish:

- Wisner State Wildlife Management Area
- Timbalier Bay Area
- Pointe Au Chein Wildlife Management Area
- Other shoreline marshes and private oyster beds

E. Response

Shell Offshore, Inc. will make every effort to respond to the Worst Case Discharge as effectively as possible. A description of the response equipment available to contain and recover the Worst Case Discharge in adverse weather conditions is shown in **FIGURE H.3**. The Incident Commander or designee may contact other service companies if the Unified Command deems such services necessary to the response efforts.

In selecting the worst-case discharge scenarios, Shell Offshore, Inc. considered potential spill volumes, types of product and proximity to the shoreline. Area Contingency Plans were also reviewed for shoreline sensitivities.

Within ten miles of the coastline, Shell Offshore, Inc.'s (Shell Pipeline's) pipeline segment 10553 from West Delta 143 to their Fourchon Terminal at Lafourche Parish, Louisiana, was selected due to the WCD volume (based on criteria in 30 CFR 254.47) of 10,104 barrels of crude oil with an API gravity of 28.9°. Utilizing the MMS OSRAM, the trajectory indicates a 100% probability of impact to the shoreline in Lafourche Parish, Louisiana. The Timbalier Bay area contains rookeries, mangroves, oyster beds and finfish and shellfish nursery grounds. Seven rookeries are located northwest of Grand Isle in Bay Tambour and Caminada Bay. Open beaches are located along the Gulf Coast. This area is a part of the Barataria Basin, a unique fishery habitat that has shallow estuarine waters, sandbars, small barrier and coastal islands and coastal wetlands. This area is also a nesting ground for the brown pelican, an endangered species.

An Adios model was run on a similar product. The results indicate 17% of the product would be evaporated/ naturally dispersed within 12 hours, leaving approximately 8,386 barrels on the water. This first 12-hour rate would apply to any additional product released as a result of a continuous discharge.


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FIGURE H.3 outlines equipment, personnel, materials and support vessels as well as temporary storage equipment to be considered in order to cope with an initial spill of 10,104 bbls. The list estimates individual times needed for procurement, load out, travel time to the site and deployment. **FIGURE H.3** also indicates how operations will be supported

Offshore response strategies may also include attempting to skim utilizing the *Louisiana Responder* and *Mississippi Responder* oil spill response vessel's (OSRV's), two Ampol Response Vessels, and 5 shallow water skimming packages with a total derated skimming capacity of 37,177 barrels. Temporary storage associated with the identified skimming and temporary storage equipment equals 56,400 barrels and the ability to add an additional 15, 840 barrels (Stress1 skimmer) of derated recovery on the barge if necessary.

SAFETY IS FIRST PRIORITY. AIR MONITORING WILL BE ACCOMPLISHED AND OPERATIONS DEEMED SAFE PRIOR TO ANY CONTAINMENT/ SKIMMING ATTEMPTS.

Depending on proximity to shore and water depth, dispersants may be a viable response option. If appropriate, 4 to 5 sorties (325 gallons per sortie) from the BE90 King Air and 4 to 5 sorties (3,250 gallons per sortie) from the Hercules C-130A within the first 12 hour operating day of the response. Using a 1:20 application rate, 90% effectiveness, and assuming 4-5 sorties per day the systems could disperse approximately 6,128 to 7,660 barrels of oil per day based on the NOAA Dispersant Planner. For continuing dispersant operations the CCA's Aerial Dispersant Delivery System (ADDS) could be mobilized. The ADDS has a dispersant spray capability of 5,000 gallons per sortie.

If the spill went unabated, shoreline impact in Lafourche or Plaquemine Parish, Louisiana would depend upon existing environmental conditions. Nearshore response may include the deployment of shoreline boom on beach areas, or protection and sorbent boom on vegetated areas. Strategies would be based upon surveillance and real time trajectories provided by The Response Group that depict areas of potential impact given actual sea and weather conditions. Strategies from the Morgan City, Louisiana Area Contingency Plan, The Response Group and Unified Command would be consulted to ensure that environmental and special economic resources would be correctly identified and prioritized to ensure optimal protection. The Response Group shoreline response guides depict the protection response modes applicable for oil spill clean-up operations. Each response mode is schematically represented to show optimum deployment and operation of the equipment in areas of environmental concern. Supervisory personnel have the option to modify the deployment and

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operation of equipment allowing a more effective response to site-specific circumstances.

Beyond ten miles of the coastline, Shell Offshore, Inc.'s Production platform at Mississippi Canyon Block 809 was selected due to the WCD volume (based on criteria in 30 CFR 254.47) of 163,223 barrels of crude oil with an API gravity of 27.5°. Utilizing the MMS OSRAM, the trajectory indicates a 3% probability of impact to the shoreline in Terrebonne Parish, Louisiana. The Terrebonne Barrier Island Refuge surrounds the Isle Dernieres chain. Brown Pelican breeding grounds are located all along these islands. Mangroves are found along the northern side of the interior islands. Private Oyster beds are throughout the shoreline marsh areas from Lake Pelto to Bay Chalant (adjacent to Cocodrie), at northern end of Lake Barre (Lake Tamour & Bay la Peur), Lake Chien and Grand Cut, Bay Coumant, and Little Lake south to Devils Bay. The area is a prime shrimping area.

An Adios model was run on a similar product. The results indicate 12% of the product would be evaporated/ naturally dispersed within 12 hours, leaving approximately 71,818 barrels on the water. This first 12-hour rate would apply to any additional product released as a result of a continuous discharge.

FIGURE H.3 outlines equipment, personnel, materials and support vessels as well as temporary storage equipment to be considered in order to cope with an initial spill of 163,223 bbls. The list estimates individual times needed for procurement, load out, travel time to the site and deployment. **FIGURE H.3** also indicates how operations will be supported.

Primary offshore response strategies would also include six (6) Oil Spill Response Vessels (*Responder* class), four (4) Oil Spill Response Barges, three (3) Vessel-of-Opportunity Skimming Systems, and two (2) Ampol Response Vessel. The total derated skimming capacity of these resources is 171,743 barrels per day; the associated temporary storage volume is 208,100 barrels. The attached **FIGURE H.3** shows the equipment that would be mobilized for a response, with derated recovery capacity and response times. These resources would be utilized wherever adequate slick thickness' are located, and weather permitting. Under adverse weather conditions, the primary MSRC equipment (major response vessels and Transrec skimmers) is still effective and safe in sea states of 6-8 ft. If sea conditions prohibit safe mechanical recovery efforts, then natural dispersion and airborne chemical dispersant application (visibility & wind conditions permitting) may be the only viable recovery option. Primary storage equipment for each day's recovered oil is listed in the attachment as MSRC's major Oil Spill Response Vessels and offshore storage barges situated in their respective recovery zones, totaling approximately 208,100 bbls. The strategy for


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transferring, storing and disposing of oil collected in these recovery zones would be to utilize two 150,000-160,000 ton (dead weight) tankers mobilized by Equiva Trading Company (or any other tanker immediately available). The recovered oil would be transferred to Motiva’s Norco, La. Storage and refining facility, or would be stored at Delta Commodities, Inc. Harvey, LA facility. **SAFETY IS FIRST PRIORITY. AIR MONITORING WILL BE ACCOMPLISHED AND OPERATIONS DEEMED SAFE PRIOR TO ANY CONTAINMENT/SKIMMING ATTEMPTS.**

Depending on proximity to shore and water depth, dispersants may be a viable response option. If appropriate, 4 to 5 sorties (325 gallons per sortie) from the BE90 King Air and 4 to 5 sorties (3,250 gallons per sortie) from the Hercules C-130A within the first 12 hour operating day of the response. Using a 1:20 application rate, 90% effectiveness, and assuming 4-5 sorties per day the systems could disperse approximately 6,128 to 7,660 barrels of oil per day based on the NOAA Dispersant Planner. For continuing dispersant operations the CCA’s Aerial Dispersant Delivery System (ADDS) would be mobilized. The ADDS has a dispersant spray capability of 5,000 gallons per sortie.

If the spill went unabated, shoreline impact in Terrebonne or Plaquemine Parish, LA would depend upon existing environmental conditions. Nearshore response may include the deployment of shoreline boom on beach areas, or protection and sorbent boom on vegetated areas. Strategies would be based upon surveillance and real time trajectories provided by The Response Group that depict areas of potential impact given actual sea and weather conditions. Strategies from the Morgan City, Louisiana Area Contingency Plan, The Response Group and Unified Command would be consulted to ensure that environmental and special economic resources would be correctly identified and prioritized to ensure optimal protection. The Response Group shoreline response guides depict the protection response modes applicable for oil spill clean-up operations. Each response mode is schematically represented to show optimum deployment and operation of the equipment in areas of environmental concern. Supervisory personnel have the option to modify the deployment and operation of equipment allowing a more effective response to site-specific circumstances.

Exploratory, Shell Offshore, Inc.’s drilling operations at Mississippi Canyon Block 762 was selected due to the WCD volume of an estimated 205,000 BOPD of crude oil with an API gravity of 29°. Utilizing the MMS OSRAM 30 day probabilities, the trajectory indicates a 3% probability of impact to the shoreline in Terrebonne Parish, Louisiana and an 8% probability of impact to the shoreline in Plaquemine Parish, Louisiana. The Pass A Loutre WMA, Delta NWR, and Breton Island NWR are located along the coast of Plaquemine Parish. Brown Pelican breeding grounds are located all along these islands. Private Oyster

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beds are throughout the shoreline marsh areas from Grand Isle to the tip of Southwest Pass. The area is a prime sport fishing & shrimping area.

An Adios model was run on a similar product. The results indicate 13% of the product would be evaporated/ naturally dispersed within 12 hours, leaving approximately 89,495 barrels on the water. This first 12-hour rate would apply to any additional product released as a result of a continuous discharge.

FIGURE H.3 outlines equipment, personnel, materials and support vessels as well as temporary storage equipment to be considered in order to cope with an initial spill of 205,000 bbls/day or 8,542 bbls/hr. The list estimates individual times needed for procurement, load out, travel time to the site and deployment. **FIGURE H.3** also indicates how operations will be supported.

Primary offshore response strategies would also include six (6) Oil Spill Response Vessels (*Responder* class), five (5) Oil Spill Response Barges, twelve (12) Vessel-of-Opportunity Skimming Systems, and two (2) Ampol Response Vessels. The total derated skimming capacity of these resources is 214,460 barrels per day; the associated temporary storage volume is 250,800 barrels. The attached **FIGURE H.3** shows the equipment that would be mobilized for a response, with derated recovery capacity and response times. These resources would be utilized wherever adequate slick thickness' are located, and weather permitting. Under adverse weather conditions, the primary MSRC equipment (major response vessels and Transrec skimmers) is still effective and safe in sea states of 6-8 ft. If sea conditions prohibit safe mechanical recovery efforts, then natural dispersion and airborne chemical dispersant application (visibility & wind conditions permitting) may be the only viable recovery option. Primary storage equipment for each day's recovered oil is listed in the attachment as MSRC's major Oil Spill Response Vessels and offshore storage barges situated in their respective recovery zones, totaling approximately 250,800 bbls. The strategy for transferring, storing and disposing of oil collected in these recovery zones would be to utilize two 150,000-160,000 ton (dead weight) tankers mobilized by Equiva Trading Company (or any other tanker immediately available). The recovered oil would be transferred to Motiva's Norco, La. Storage and refining facility, or would be stored at Delta Commodities, Inc. Harvey, LA facility. **SAFETY IS FIRST PRIORITY. AIR MONITORING WILL BE ACCOMPLISHED AND OPERATIONS DEEMED SAFE PRIOR TO ANY CONTAINMENT/ SKIMMING ATTEMPTS.**

Depending on proximity to shore and water depth, dispersants may be a viable response option. If appropriate, 4 to 5 sorties (325 gallons per sortie) from the BE90 King Air and 4 to 5 sorties (3,250 gallons per sortie) from the Hercules C-130A within the first 12 hour operating day of the response. Using a 1:20

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application rate, 90% effectiveness, and assuming 4-5 sorties per day the systems could disperse approximately 6,128 to 7,660 barrels of oil per day based on the NOAA Dispersant Planner. For continuing dispersant operations the CCA's Aerial Dispersant Delivery System (ADDS) would be mobilized. The ADDS has a dispersant spray capability of 5,000 gallons per sortie.

If the spill went unabated, shoreline impact in Terrebonne or Plaquemine Parish, LA would depend upon existing environmental conditions. Nearshore response may include the deployment of shoreline boom on beach areas, or protection and sorbent boom on vegetated areas. Strategies would be based upon surveillance and real time trajectories provided by The Response Group that depict areas of potential impact given actual sea and weather conditions. Strategies from the New Orleans, Louisiana Area Contingency Plan, The Response Group and Unified Command would be consulted to ensure that environmental and special economic resources would be correctly identified and prioritized to ensure optimal protection. The Response Group shoreline response guides depict the protection response modes applicable for oil spill clean-up operations. Each response mode is schematically represented to show optimum deployment and operation of the equipment in areas of environmental concern. Supervisory personnel have the option to modify the deployment and operation of equipment allowing a more effective response to site-specific circumstances.


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FIGURE H.1 - WORST CASE DISCHARGE SCENARIO

1B. Calculations for Production Facility (> 10 miles from shore) with Departing Lease Pipelines (or DOCD):		BLOCK MC 809
i.	<u>Storage Tanks</u> Enter the maximum estimated quantity (bbls) of all storage tanks on the facility.	16,569
ii.	<u>Facility Piping</u> Enter the total static capacity (bbls) of all flowlines (piping) on the facility.	100
iii.	<u>Break in Departing Lease Pipeline</u> Add the volume of oil calculated to leak from a break in lease pipelines departing the facility, considering: <ul style="list-style-type: none"> • Time to shutdown multiplied by highest measured oil flow rate over the preceding 12-month period. • Total volume of oil that would leak from the pipeline after it is shut-in (consider effects of hydrostatic pressure, gravity, frictional wall forces, length of pipeline segment, tie-ins with other pipelines, etc.) • Methodology used and assumptions made: _____ Calculations include volumes of oil discharged before all well shut-in plus volume of oil in flow line 	4,554
iv.	<u>Uncontrolled Blowout</u> Enter the highest daily volume possible from an uncontrolled blowout of the highest capacity well associated with the facility, considering reservoir characteristics, casing/production tubing sizes, historical production and reservoir pressure data. <ul style="list-style-type: none"> • Methodology used and assumptions made: _____ Calculations assume event occurs during completion with sand control in place 	142,000
v.	WCD Total for Production Operations (> 10 miles from shore) =	163,223 bbls


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FIGURE H.1 - WORST CASE DISCHARGE SCENARIO (cont'd)

2. Calculations for ROW pipelines:

2a. < 10 Miles from the Shoreline

Segment 10553, from WD 143 to Onshore		Calculations (BBLs)
i.	Add the pipeline system detection time to the shutdown response time assuming automatic shutdown (enter hours in decimals).	
ii.	Multiply by the highest measured oil flow rate over the preceding 12-month period (for new pipelines use predicted oil flow rate).	
iii.	Add the total volume of oil that would leak from the pipeline after it is shut in (consider effects of hydrostatic pressure, gravity, frictional wall forces, length of pipeline segment, tie-ins with other pipelines, etc.)	
TOTAL		10,104 bbls

3. Calculations for Exploratory Well:

3a. Exploratory Well

MC 762 Drilling Operations		Calculations (BBLs)
i.	Estimated blowout rate from the exploratory well calculated with the Prosper computer model.	~ 205,000 bbls/ day


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FIGURE H.2 - TRAJECTORY BY LAND SEGMENT

<p>Trajectory of a spill and the probability of it impacting a land segment have been projected utilizing Shell Offshore, Inc.'s WCD and information in the MMS Oil Spill Risk Analysis Model (OSRAM) for the Central and Western Gulf of Mexico available on the MMS website using 30 day impact. The results are tabulated below.</p>				
Area/Block	OCS-G	Launch Area	Land Segment Contact	%
< 10 Miles from Shoreline Shoreline (WD 143 to Fourchon Terminal)	10553	37	100% land impact in LAFOURCHE PARISH, LA	100
> 10 Miles from Shoreline MC 809 & Exploratory Well MC 762		58	GALVESTON, TX CHAMBERS, TX JEFFERSON CAMERON, LA VERMILION, LA IBERIA, LA ST MARY, LA TERREBONNE, LA LA FOURCHE JEFFERSON, LA PLAQUEMINES, LA ST. BERNARD, LA OKALOOSA, FL	1 1 1 3 2 1 1 3 3 1 8 1 1




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FIGURE H.3 – EQUIPMENT RESPONSE TIMES

 FIGURE H.3 - WCD Scenario < 10 Miles from the Shoreline WD 143 Pipeline To Fourchon - Sample Offshore On-Water Recovery Activation List													
Skimming System	Supplier & Phone	Warehouse	Skimming Package	Quantity	Recovery Rate (Barrels/Day)	Storage (Barrels)	Staging Area	Distance to Site from Staging (Miles)	Response Times (Hours)				
									Staging ETA	Loadout Time	ETA to Site	Deployment Time	Total ETA
M/V Recovery	AMPOL 800-482-6765	Fourchon, LA	GT-185 Skimmer	1	1,371	200	Fourchon, LA	12	2	1	1	1	5
			36" Expandi Boom	720'									
			Personnel	8									
			110' Utility Boat	1									
			Crew Boat - >65'	1									
Louisiana Responder Transrec-350	MSRC 800-OIL-SPIL	Fort Jackson, LA	Transrec Skimmer	1	10,567 15,840	4,000	Fort Jackson, LA	85	2	1	6	1	10
			*Stress Skimmer (Backup)	1									
			67" Boom	2640'									
			210' Vessel	1									
			Personnel	12									
32' Support Boat	1												
MSRC-452 Offshore Barge	MSRC 800-OIL-SPIL	Fort Jackson, LA	3000 BBL Bladders	1	3,000	45,000	Fort Jackson, LA	85	2	1	9.5	12.5	
			Offshore Barge	1									
			Personnel	4									
			Offshore Tug	1									
Mississippi Responder Transrec-350	MSRC 800-OIL-SPIL	Pascagoula, MS	Transrec Skimmer	1	10,567 15,840	4,000	Pascagoula, MS	177	2	1	12.5	1	16.5
			*Stress Skimmer (Backup)	1									
			67" Boom	2640'									
			210' Vessel	1									
			Personnel	12									
32' Support Boat	1												
M/V Responder	AMPOL 800-482-6765	Cameron, LA	Vikoma SS-50 Skimmer	1	1,987	200	Cameron, LA	212	2	1	15	1	19
			36" Expandi Boom	720'									
			Personnel	8									
			110' Utility Boat	1									
			Crew Boat - >65'	1									
OFFSHORE DERATED RECOVERY RATE (BBLs/DAY)												24,492	
OFFSHORE STORAGE CAPACITY (BARRELS)												56,400	

Note: * Stress Skimmers are listed above with MSRC Responders as backup skimmer to the Transrec. Stress Skimmer could be offloaded only Offshore Barge (452) with 660" of Sea Sentry Boom and an additional Crew Boat for boom handling as requested to provide additional skimming operations.

 FIGURE H.3 - WCD Scenario < 10 Miles from the Shoreline WD 143 Pipeline To Fourchon - Sample Nearshore On-Water Recovery Activation List													
SBS w/ GT-185	MSRC 800-OIL-SPIL	Houma, LA	GT-185 Skimmer	1	1,371	400	Cocodrie, LA	20	1	1	1.5	1	4.5
			18" Boom	100'									
			Personnel	4									
			SW Barge	1									
			Push Boat	1									
SBS w/ FOILEX 250	MSRC 800-OIL-SPIL	Belle Chasse, LA	Foilex Skimmer	1	3,977	400	Cocodrie, LA	20	2.5	1	1.5	1	6
			18" Boom	100									
			Personnel	4									
			SW Barge	1									
			Push Boat	1									
SBS w/ GT-185	MSRC 800-OIL-SPIL	Baton Rouge, LA	GT-185 Skimmer	1	1,371	400	Cocodrie, LA	20	4	1	1.5	1	7.5
			18" Boom	100'									
			Personnel	4									
			SW Barge	1									
			Push Boat	1									
SBS w/ FOILEX 200	MSRC 800-OIL-SPIL	Pascagoula, MS & Belle Chasse, LA	Foilex Skimmer	1	1,989	400	Cocodrie, LA	20	5.5	1	1.5	1	9
			18" Boom	100									
			Personnel	4									
			SW Barge	1									
SBS w/ FOILEX 250	MSRC 800-OIL-SPIL	Lake Charles, LA	Foilex Skimmer	1	3,977	400	Cocodrie, LA	20	6	1	1.5	1	9.5
			18" Boom	100'									
			Personnel	4									
			SW Barge	1									
NEARSHORE DERATED RECOVERY RATE (BBLs/DAY)												12,685	
NEARSHORE SKIMMING VESSEL STORAGE CAPACITY (BARRELS)												2,000	

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 WCD Scenario < 10 Miles from the Shoreline - WD 143 Pipeline To Fourchon Sample Offshore Aerial Dispersant Activation List												
Aerial Dispersant System	Supplier & Phone	Warehouse	Aerial Dispersant Package	Quantity	Staging Area	Distance to Site from Staging (Miles)	Response Times (Hours)					Total ETA
							Staging ETA	Loadout Time	ETA to Site	Deployment Time		
BE-90 King Air Aircraft Air Speed - 213 MPH	MSRC 800-OIL-SPIL	Stennis, MS	BE-90 Dispersant Aircraft	1	Stennis INTL., MS 1st Flight	105	4.00	0.20	0.49	0.20	4.90	
			Dispersant - Gallons	230-425								
			Spotter Aircraft	1	Stennis INTL., MS 2nd Flight	105	0.49	0.20	0.49	0.20	1.40	
			Spotter Personnel	2								
			Crew - Pilots	2								
C130-A Aircraft Air Speed - 342 MPH	MSRC 800-OIL-SPIL	Coolidge, AZ	C130-A Dispersant Aircraft	1	Ellington Field, TX 1st Flight	305	8	0.3	0.89	0.5	9.75	
			Dispersant - Gallons	3250								
			Spotter Aircraft	1	Stennis INTL., MS 2nd Flight	105	0.31	0.3	0.31	0.5	1.45	
			Spotter Personnel	2								
			Crew - Pilots	2								
ADDS PACK Air Speed - 330 MPH	Clean Carribean 985-851-6391	Pt. Everglades, FL	C-130 Aircraft	1	Clearwater, FL	461	24-48	1	1.40	0.5	26.9 to 51.05	
			ADDS PACK	1								
			Dispersant - Gallons	5000								
			Spotter Aircraft	1								
			Spotter Personnel	2								
			Crew - Pilots	2								


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FIGURE H.3 - WCD Scenario < 10 Miles from the Shoreline
WD 143 Pipeline To Fourchon - Sample Shoreline Protection & Wildlife Support Listing

Supplier & Phone (MSRC Star Contractor)	Warehouse	Equipment Listing	Quantity	Staging Area	Distance to Site from Staging (Miles)	Response Times (Hours)				
						Staging ETA	Loadout Time	ETA to Site	Deployment Time	Total ETA
ES&H Environmental 877-437-2634	Fourchon	Containment Boom - 18" to 24"	1000'	Fourchon, LA (0 Miles)	15	2	1	1	1	5
		Containment Boom - 6" to 10"	200'							
		Response Boats - 14' to 20'	3							
		Portable Skimmers	3							
ES&H Environmental 877-437-2634	Houma, LA	Response Personnel	2	Fourchon, LA (60 Miles)	15	2	1	1	1	5
		Containment Boom - 18" to 24"	27,000'							
		Containment Boom - 6" to 10"	15,000'							
		Response Boats - 14' to 20'	38							
		Response Boats - 21' to 36'	12							
		Portable Skimmers	25							
		Shallow Water Skimmers	1							
		Bird Scare Cannons	200							
Response Personnel	11									
AMPOL 800-482-6765	Harvey, LA	Containment Boom - 18" to 24"	14750'	Cocodrie, LA (80 Miles)	15	3	1	1	1	6
		Response Boats - 14' to 20'	1							
		Response Personnel	10							
Oilmap 800-645-6671	Belle Chasse, LA	Containment Boom - 18" to 24"	21,000'	Cocodrie, LA (96 Miles)	15	3	1	1	1	6
		Containment Boom - 6" to 10"	500'							
		Response Boats - 14' to 20'	15							
		Response Boats - 21' to 36'	9							
		Portable Skimmers	24							
		Shallow Water Skimmers	1							
Response Personnel	18									
AMPOL 800-482-6765	New Iberia, LA	Containment Boom - 18" to 24"	19000'	Cocodrie, LA (114 Miles)	15	4	1	1	1	7
		Response Boats - 14' to 20'	2							
		Response Boats - 21' to 36'	5							
		Portable Skimmers	6							
		Shallow Water Skimmers	1							
		Bird Scare Cannons	8							
Response Personnel	25									
USES Environmental 888-279-9930	Meraux, LA	Containment Boom - 18" to 24"	9000'	Fourchon, LA (110 Miles)	15	4	1	1	1	7
		Containment Boom - 6" to 10"	1000'							
		Response Boats - 14' to 20'	13							
		Response Boats - 21' to 36'	5							
		Portable Skimmers	8							
Response Personnel	15 to 30									
Oilmap 800-645-6671	New Iberia, LA	Containment Boom - 18" to 24"	3,500'	Cocodrie, LA (114 Miles)	15	4	1	1	1	7
		Containment Boom - 6" to 10"	500'							
		Response Boats - 14' to 20'	6							
		Response Boats - 21' to 36'	1							
		Portable Skimmers	6							
		Shallow Water Skimmers	1							
		Bird Scare Cannons	20							
		Response Personnel	8							
USES Environmental 888-279-9930	Geismar, LA	Containment Boom - 18" to 24"	1000'	Fourchon, LA (131 Miles)	15	4.5	1	1	1	7.5
		Response Boats - 14' to 20'	3							
		Portable Skimmers	2							
		Response Personnel	9 to 18							
MSRC 800-OIL-SPIL	Lake Charles, LA	Wildlife Trailer	1	Houma, LA (177 Miles)	0	6.5	1	0	2	9.5
		Contract Truck (Third Party)	1							
		Personnel (Responder/Mechanic)	1							
WR&E 281-731-8826	Baton Rouge, LA	Wildlife Specialist - Personnel	6 to 20	Houma, LA	0	3	1	0	0	4
WR&E 281-731-8826	Houston, TX	Wildlife Specialist - Personnel	6 to 20	Houma, LA	0	6.5	1	0	0	7.5
TRI-STATE 302-737-9543	Newark, DE	Wildlife Specialist - Personnel	6 to 12	Houma, LA	0	12	1	0	0	13



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FIGURE H.3 - WCD Scenario > 10 Miles from the Shoreline - MC 809
Sample Offshore On-Water Recovery Activation List

Skimming System	Supplier & Phone	Warehouse	Skimming Package	Quantity	Recovery Rate (Barrels/Day)	Storage (Barrels)	Staging Area	Distance to Site from Staging (Miles)	Response Times (Hours)				
									Staging ETA	Loadout Time	ETA to Site	Deployment Time	Total ETA
M/V Recovery	AMPOL 800-482-6765	Fourchon, LA	GT-185 Skimmer	1	1,371	200	Fourchon, LA	90	2	1	6.5	1	10.5
			36" Expandi Boom	720									
			Personnel	8									
			110' Utility Boat	1									
			Crew Boat - >65'	1									
Louisiana Responder Transrec-350	MSRC 800-OIL-SPIL	Fort Jackson, LA	Transrec Skimmer	1	10,567	4,000	Fort Jackson, LA	97	2	1	7	1	11
			67" Boom	2640'									
			210' Vessel	1									
			Personnel	12									
			32' Support Boat	1									
FOILEX 250	MSRC 800-OIL-SPIL	Belle Chasse, LA	Offshore Skimmer	1	3,977	500	Fourchon, LA	90	3	1	6.5	1	11.5
			43" Offshore Boom	100'									
			Personnel	4									
			Utility Boat	1									
			Towable Bladder	1									
FOILEX 200	MSRC 800-OIL-SPIL	Belle Chasse, LA	Offshore Skimmer	1	1,989	500	Fourchon, LA	90	3	1	6.5	1	11.5
			43" Offshore Boom	100'									
			Personnel	4									
			Utility Boat	1									
			Towable Bladder	1									
MSRC-452 Offshore Barge	MSRC 800-OIL-SPIL	Fort Jackson, LA	3000 BBL Bladders	1	15,840	45,000	Fort Jackson, LA	97	2	1	11		14
			Offshore Barge	1									
			Stress 1 Skimmer	1									
			Personnel	4									
			Offshore Tug	1									
Mississippi Responder Transrec-350	MSRC 800-OIL-SPIL	Pascagoula, MS	Transrec Skimmer	1	10,567	4,000	Pascagoula, MS	156	2	1	11	1	15
			67" Boom	2640'									
			210' Vessel	1									
			Personnel	12									
			32' Support Boat	1									
FOILEX 250	MSRC 800-OIL-SPIL	Lake Charles, LA	Offshore Skimmer	1	3,977	500	Fourchon, LA	90	6.5	1	6.5	1	15
			43" Offshore Boom	100'									
			Personnel	4									
			Utility Boat	1									
			Towable Bladder	1									
MSRC-402 Offshore Barge	MSRC 800-OIL-SPIL	Pascagoula, MS	Offshore Barge	1	15,840	40,300	Pascagoula, MS	156	2	1	17.5		20.5
			Stress 1 Skimmer	1									
			Personnel	4									
			Offshore Tug	1									
M/V Responder	AMPOL 800-482-6765	Cameron, LA	Vikoma SS-50 Skimmer	1	1,987	200	Cameron, LA	274	2	1	19.5	1	23.5
			36" Expandi Boom	720'									
			Personnel	8									
			110' Utility Boat	1									
			Crew Boat - >65'	1									
Gulf Coast Responder Transrec-350	MSRC 800-OIL-SPIL	Lake Charles, LA	Transrec Skimmer	1	10,567	4,000	Lake Charles, LA	291	2	1	21	1	25
			67" Boom	2640'									
			210' Vessel	1									
			Personnel	12									
			32' Support Boat	1									
Texas Responder Transrec-350	MSRC 800-OIL-SPIL	Galveston, TX	Transrec Skimmer	1	10,567	4,000	Galveston, TX	345	2	1	24.5	1	28.5
			67" Boom	2640'									
			210' Vessel	1									
			Personnel	12									
			32' Support Boat	1									
Southern Responder Transrec-350	MSRC 800-OIL-SPIL	Ingleside, TX	Transrec Skimmer	1	10,567	4,000	Ingleside, TX	488	2	1	35	1	39
			67" Boom	1980'									
			210' Vessel	1									
			Personnel	12									
			Tow Bladder	1									

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 FIGURE H.3 - WCD Scenario > 10 Miles from the Shoreline - MC 809 Sample Offshore On-Water Recovery Activation List													
System	Supplier & Phone	Warehouse	Skimming Package	Quantity	Recovery Rate (Barrels/Day)	Storage (Barrels)	Staging Area	Distance to Site from Staging (Miles)	Response Times (Hours)				
									Staging ETA	Loadout Time	ETA to Site	Deployment Time	Total ETA
MSRC-570 Offshore Barge	MSRC 800-OIL-SPIL	Galveston, TX	Offshore Barge	1	15,840	56,900	Galveston, TX	345	2	1	38.5		41.5
			Stress 1 Skimmer	1									
			Personnel	4									
			Offshore Tug	1									
MSRC Offshore Tank Barge	MSRC 800-OIL-SPIL	Tampa, FL	500 BBL Bladders	2	15,840	1,000	Tampa, FL	425	2	1	47		50
			Offshore Barge	1		36,000							
			Stress 1 Skimmer	1									
			Personnel	4									
			Tug - 3000 HP	1									
Florida Responder Transrec-350	MSRC 800-OIL-SPIL	Miami, FL	Transrec Skimmer	1	10,567	4,000	Miami, FL	640	2	1	45.5	1	49.5
			67" Boom	1320	15,840								
			210' Vessel	1									
			Stress 1 Skimmer	1									
			Personnel	12									
32' Support Boat	1												
OFFSHORE DERATED RECOVERY RATE (BBLS/DAY)												171,743	
OFFSHORE SKIMMING VESSEL & BARGE STORAGE CAPACITY (BARRELS)												208,100	

 WCD Scenario > 10 Miles from the Shoreline - MC 809 Sample Offshore Aerial Dispersant Activation List																			
Aerial Dispersant System	Supplier & Phone	Warehouse	Aerial Dispersant Package	Quantity	Staging Area	Distance to Site from Staging (Miles)	Response Times (Hours)												
							Staging ETA	Loadout Time	ETA to Site	Deployment Time	Total ETA								
BE-90 King Air Aircraft Air Speed - 213 MPH	MSRC 800-OIL-SPIL	Stennis, MS	BE-90 Dispersant Aircraft	1	Stennis INTL., MS	152	4.00	0.20	0.71	0.20		5.15							
			Dispersant - Gallons	230-425									1st Flight						
			Spotter Aircraft	1									Stennis INTL., MS	152	0.71	0.20	0.71	0.20	
			Spotter Personnel	2															2nd Flight
C130-A Aircraft Air Speed - 342 MPH	MSRC 800-OIL-SPIL	Coolidge, AZ	C130-A Dispersant Aircraft	1	Stennis INTL., MS	152	8	0.3	0.44	0.5		9.30							
			Dispersant - Gallons	3250									1st Flight						
			Spotter Aircraft	1									Stennis INTL., MS	152	0.44	0.3	0.44	0.5	
			Spotter Personnel	2															2nd Flight
			Crew - Pilots	2															
ADDS PACK Air Speed - 330 MPH	Clean Caribbean 985-851-6391	Pt. Everglades, FL	C-130 Aircraft	1	Clearwater, FL	420	24-48	1	1.27	0.5		26.8							
			ADDS PACK	1															
			Dispersant - Gallons	5000															
			Spotter Aircraft	1															
			Spotter Personnel	2															
			Crew - Pilots	2															
												51.05							



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FIGURE H.3 - WCD Scenario (Exploratory) - MC 762
Sample Offshore On-Water Recovery Activation List

Skimming System	Supplier & Phone	Warehouse	Skimming Package	Quantity	Recovery Rate (Barrels/Day)	Storage (Barrels)	Staging Area	Distance to Site from Staging (Miles)	Response Times (Hours)				
									Staging ETA	Loadout Time	ETA to Site	Deployment Time	Total ETA
M/V Recovery	AMPOL 800-482-6765	Fourchon, LA	GT-185 Skimmer	1	1,371	200	Fourchon, LA	90	2	1	6.5	1	10.5
			36" Expandi Boom	720									
			Personnel	8									
			110' Utility Boat	1									
			Crew Boat - >65'	1									
Louisiana Responder Transrec-350	MSRC 800-OIL-SPIL	Fort Jackson, LA	Transrec Skimmer	1	10,567	4,000	Fort Jackson, LA	97	2	1	7	1	11
			67" Boom	2640									
			210' Vessel	1									
			Personnel	12									
			32' Support Boat	1									
WP-4	MSRC 800-OIL-SPIL	Belle Chase, LA	Offshore Skimmer	1	3,017	400	Fourchon, LA	90	3	1	6.5	1	11.5
			67" Offshore Boom	660									
			Personnel	4									
			Crew Boat	1									
			Towable Bladder	1									
DESMI OCEAN	MSRC 800-OIL-SPIL	Belle Chase, LA	Offshore Skimmer	1	3,017	500	Fourchon, LA	90	3	1	6.5	1	11.5
			67" Offshore Boom	660									
			Personnel	4									
			Crew Boat	1									
			Towable Bladder	1									
GT-185	MSRC 800-OIL-SPIL	Belle Chase, LA	Offshore Skimmer	1	1,371		Fourchon, LA	90	3	1	6.5	1	11.5
			67" Offshore Boom	660									
			Personnel	4									
			Crew Boat	1									
			Towable Bladder	1									
FOILEX 200	MSRC 800-OIL-SPIL	Belle Chasse, LA	Offshore Skimmer	1	1,989	500	Fourchon, LA	90	3	1	6.5	1	11.5
			43" Offshore Boom	100									
			Personnel	4									
			Utility Boat	1									
			Towable Bladder	1									
FOILEX 250	MSRC 800-OIL-SPIL	Belle Chasse, LA	Offshore Skimmer	1	3,977	500	Fourchon, LA	90	3	1	6.5	1	11.5
			43" Offshore Boom	100									
			Personnel	4									
			Utility Boat	1									
			Towable Bladder	1									
MOSS Unit w/ GT-260	AMPOL 800-482-6765	New Iberia, LA	GT-260 Skimmer	1	2,743	50	Fourchon, LA	90	5	1	6.5	1	13.5
			36" Expandi Boom	720									
			Personnel	4									
			110' Utility Boat	1									
			Crew Boat	1									
MOSS Unit w/ WP-4	AMPOL 800-482-6765	New Iberia, LA	Offshore Skimmer	1	3,565	50	Fourchon, LA	90	5	1	6.5	1	13.5
			36" Expandi Boom	720									
			Personnel	4									
			110' Utility Boat	1									
			Crew Boat	1									
WP-4	AMPOL 800-482-6765	New Iberia, LA	Offshore Skimmer	1	3,565	200	Fourchon, LA	90	5	1	6.5	1	13.5
			36" Expandi Boom	720									
			Personnel	4									
			110' Utility Boat	1									
			Crew Boat	1									
WP-4	AMPOL 800-482-6765	New Iberia, LA	Offshore Skimmer	1	3,565	200	Fourchon, LA	90	5	1	6.5	1	13.5
			36" Expandi Boom	720									
			Personnel	4									
			110' Utility Boat	1									
			Crew Boat	1									
			Portable Tank	1									

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 FIGURE H.3 - WCD Scenario (Exploratory) - MC 762 Sample Offshore On-Water Recovery Activation List													
Skimming System	Supplier & Phone	Warehouse	Skimming Package	Quantity	Recovery Rate (Barrels/Day)	Storage (Barrels)	Staging Area	Distance to Site from Staging (Miles)	Response Times (Hours)				
									Staging ETA	Loadout Time	ETA to Site	Deployment Time	Total ETA
WP-1	MSRC 800-OIL-SPIL	Pascagoula, MS	Offshore Skimmer	1	3,017	500	Fourchon, LA	90	5.5	1	6.5	1	14
			67" Offshore Boom	660'									
			Utility Boat	1									
			Personnel	4									
			Towable Bladder	1									
Crew Boat	1												
MSRC-452 Offshore Barge	MSRC 800-OIL-SPIL	Fort Jackson, LA	3000 BBL Bladders	1	15,840	45,000	Fort Jackson, LA	97	2	1	11		14
			Offshore Barge	1									
			Stress 1 Skimmer	1									
			Personnel	4									
			Offshore Tug	1									
DESMI OCEAN	MSRC 800-OIL-SPIL	Lake Charles, LA	Offshore Skimmer	1	3,017	500	Fourchon, LA	90	6.5	1	6.5	1	15
			67" Offshore Boom	660'									
			Utility Boat	1									
			Personnel	4									
			Towable Bladder	1									
Crew Boat	1												
Mississippi Responder Transrec-350	MSRC 800-OIL-SPIL	Pascagoula, MS	Transrec Skimmer	1	10,567	4,000	Pascagoula, MS	156	2	1	11	1	15
			67" Boom	2640'									
			210' Vessel	1									
			Personnel	12									
			32' Support Boat	1									
FOILEX 250	MSRC 800-OIL-SPIL	Lake Charles, LA	Offshore Skimmer	1	3,977	500	Fourchon, LA	90	6.5	1	6.5	1	15
			43" Offshore Boom	100'									
			Personnel	4									
			Utility Boat	1									
			Towable Bladder	1									
MSRC-402 Offshore Barge	MSRC 800-OIL-SPIL	Pascagoula, MS	Offshore Barge	1	15,840	40,300	Pascagoula, MS	156	2	1	17.5		20.5
			Stress 1 Skimmer	1									
			Personnel	4									
			Offshore Tug	1									
M/V Responder	AMPOL 800-482-6765	Cameron, LA	Vikoma SS-50 Skimmer	1	1,987	200	Cameron, LA	274	2	1	19.5	1	23.5
			36" Expandi Boom	720'									
			Personnel	8									
			110' Utility Boat	1									
			Crew Boat - >65'	1									
Gulf Coast Responder Transrec-350	MSRC 800-OIL-SPIL	Lake Charles, LA	Transrec Skimmer	1	10,567	4,000	Lake Charles, LA	291	2	1	21	1	25
			Stress Skimmer	1									
			67" Boom	2640'									
			210' Vessel	1									
			Personnel	12									
32' Support Boat	1												
Texas Responder Transrec-350	MSRC 800-OIL-SPIL	Galveston, TX	Transrec Skimmer	1	10,567	4,000	Galveston, TX	345	2	1	24.5	1	28.5
			67" Boom	2640'									
			210' Vessel	1									
			Personnel	12									
			32' Support Boat	1									
Southern Responder Transrec-350	MSRC 800-OIL-SPIL	Ingleside, TX	Transrec Skimmer	1	10,567	4,000	Ingleside, TX	488	2	1	35	1	39
			67" Boom	1980'									
			210' Vessel	1									
			Personnel	12									
			Tow Bladder	1									
MSRC-570 Offshore Barge	MSRC 800-OIL-SPIL	Galveston, TX	Offshore Barge	1	15,840	56,900	Galveston, TX	345	2	1	38.5		41.5
			Stress 1 Skimmer	1									
			Personnel	4									
			Offshore Tug	1									
Florida Responder Transrec-350	MSRC 800-OIL-SPIL	Miami, FL	Transrec Skimmer	1	10,567	4,000	Miami, FL	620	2	1	44.5	1	48.5
			67" Boom	1320'									
			210' Vessel	1									
			Personnel	12									
			32' Support Boat	1									
			Stress 1 Skimmer	1	15,840								

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 FIGURE H.3 - WCD Scenario (Exploratory) - MC 762 Sample Offshore On-Water Recovery Activation List														
System	Supplier & Phone	Warehouse	Skimming Package	Quantity	Recovery Rate (Barrels/Day)	Storage (Barrels)	Staging Area	Distance to Site from Staging (Miles)	Response Times (Hours)					
									Staging ETA	Loadout Time	ETA to Site	Deployment Time	Total ETA	
MSRC Offshore Tank Barge	MSRC 800-OIL-SPIL	Tampa, FL	500 BBL Bladders	2	15,840	1,000 36,000	Tampa, FL	425	2	1	47			50
			Offshore Barge	1										
			Stress 1 Skimmer	1										
			Personnel	4										
			Tug - 3000 HP	1										
MSRC-403 Offshore Barge	MSRC 800-OIL-SPIL	Ingleside, TX	Offshore Barge	1	15,840	40,300	Ingleside, TX	488	2	1	54			57
			Stress 1 Skimmer	1										
			Personnel	4										
			Offshore Tug	1										
			OFFSHORE DERATED RECOVERY RATE (BBL/DAY)											
OFFSHORE SKIMMING VESSEL & BARGE STORAGE CAPACITY (BARRELS)												250,800		

 WCD Scenario (Exploratory) - MC 762 Sample Offshore Aerial Dispersant Activation List																				
Aerial Dispersant System	Supplier & Phone	Warehouse	Aerial Dispersant Package	Quantity	Staging Area	Distance to Site from Staging (Miles)	Response Times (Hours)													
							Staging ETA	Loadout Time	ETA to Site	Deployment Time	Total ETA									
BE-90 King Air Aircraft Air Speed - 213 MPH	MSRC 800-OIL-SPIL	Stennis, MS	BE-90 Dispersant Aircraft	1	Stennis INTL., MS	150	4.00	0.20	0.70	0.20			5.15							
			Dispersant - Gallons	230-425										1st Flight						
			Spotter Aircraft	1										Stennis INTL., MS	150	0.70	0.20	0.70	0.20	1.85
			Spotter Personnel	2																
C130-A Aircraft Air Speed - 342 MPH	MSRC 800-OIL-SPIL	Coolidge, AZ	C130-A Dispersant Aircraft	1	Stennis INTL., MS	150	8	0.3	0.44	0.5			9.30							
			Dispersant - Gallons	3250										1st Flight						
			Spotter Aircraft	1										Stennis INTL., MS	150	0.44	0.3	0.44	0.5	1.75
			Spotter Personnel	2																
			Crew - Pilots	2																
ADDS PACK Air Speed - 330 MPH	Clean Caribbean 985-851-6391	Pt. Everglades, FL	C-130 Aircraft	1	Clearwater, FL	416	24-48	1	1.26	0.5			26.8							
			ADDS PACK	1																
			Dispersant - Gallons	5000										Stennis INTL., MS	150	0.44	0.3	0.44	0.5	51.05
			Spotter Aircraft	1																
			Spotter Personnel	2																
Crew - Pilots	2																			


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FIGURE H.3 (Continued)

OPERATIONAL LIMITATIONS OF RESPONSE EQUIPMENT	
MSRC OSRV	8 foot seas
VOSS System	4 foot seas
Expandi Boom	6 foot seas, 20 knot winds
Dispersants	Winds more than 25 knots, Visibility less than 3 nautical miles, or Ceiling less than 1,000 feet.

Additional Support for a Blowout lasting 30 days:

- 1) Ocean Barge to transport recovered oil from offshore skimming systems and temporary storage barges to onshore disposal sites (identified in Area Contingency Plans and approved by the State)
- 2) Additional OSRO personnel to relieve equipment operators
- 3) Vessels for supporting offshore operations
- 4) Field safety personnel
- 5) Continued surveillance and monitoring of oil movement
- 6) Helicopter, video cameras
- 7) Infra red (night time spill tracking) capabilities
- 8) Logistics needed to support equipment:
 - Parts trailers and mechanics to maintain skimmers and boom
 - Staging areas
 - Fueling facilities
 - Decontamination stations
 - Dispersant stockpile transported from Houston to Houma
 - Communications equipment and technicians
- 9) Logistics needed to support responder personnel:
 - Food
 - Berthing
 - Additional clothing/safety supplies
 - Decontamination stations
 - Medical aid stations
 - Safety personnel