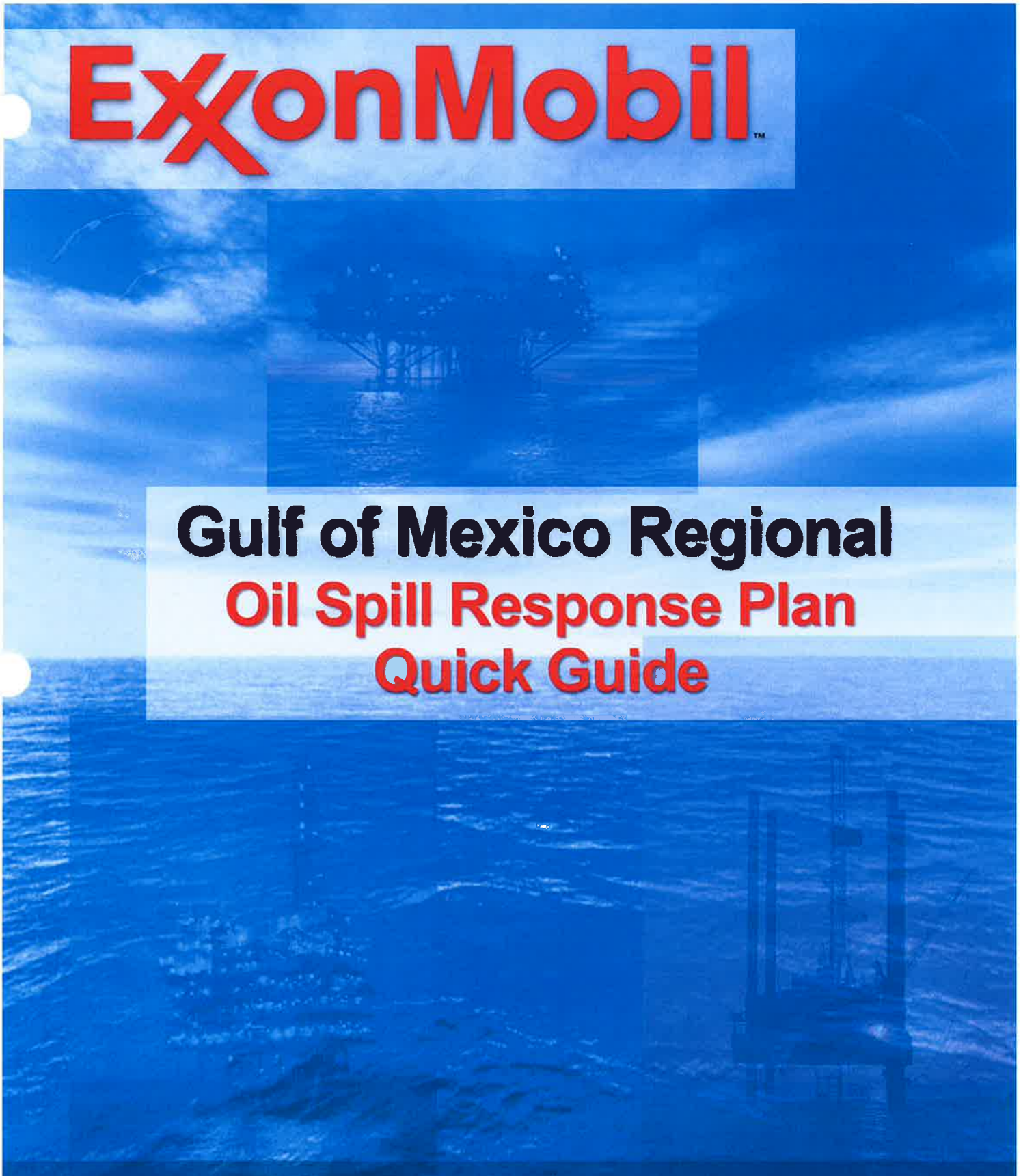
ExxonMobil™

Gulf of Mexico Regional
Oil Spill Response Plan
Quick Guide



Developed by:

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1. EXXONMOBIL OSRP QUICK GUIDE

The ExxonMobil OSRP Quick Guide is a concise set of easy–to–follow instructions and related information regarding actions to be performed by the person in charge, as well as other on duty personnel, in the event of a release of product in the region covered by the plan. Additional information and detail may be found in the corresponding sections and appendices of the Oil Spill Response Plan itself.

A. Safety

I. Introduction

Site Safety Planning is an essential element of emergency preparedness and response. ExxonMobil is dedicated to ensuring the safety of company personnel and the public. In the event of an oil spill, or other emergency, ExxonMobil will manage a coordinated response to minimize impacts to the environment while keeping safety issues in the forefront. The Site Safety Plan found in the back of the Quick Guide is a general plan intended to address initial safety criteria during the early stages of the response effort.

II. Roles and Responsibilities

A list of responsibilities of certain response personnel in the Safety Section, and other ICS positions, may be found in this Quick Guide. A complete list of roles & responsibilities may be found in **Section 4** of the OSRP.

B. Spill Assessment

Upon receiving indication of an oil spill, or other chemical release that may threaten the Waters of the United States, the following actions are critical to initiating and sustaining an effective response:

•	Locate the spill
•	Determine size and volume of the spill
•	Predict spill movement
•	Monitor and track spill movement

Specific directions and strategies for performing the above actions are detailed in **Section 10** of the OSRP. Additionally, **Figure 1-1a – 1-1c and Figure 1-3** provide information related to spill estimation and trajectory requests respectively, while **Figure 1-2** is the ExxonMobil Spill Reporting Form. **Figures 1-28 through 1-31** are a list of facilities covered by this Quick Guide and the associated Oil Spill Response Plan.

C. Locating a Spill

In the event of a significant release of oil, an accurate estimation of the spill's total volume along with the spill location and movement is essential in providing preliminary data to plan and initiate cleanup operations. Generating the estimation as soon as possible will aid in determining:

•	Equipment and personnel required;
•	Potential threat to shorelines and/or sensitive areas as well as ecological impact; and
•	Requirements for storage and disposal of recovered materials.

As part of the initial response, ExxonMobil will initiate a systematic search with aircraft, primarily helicopters, to locate a spill and determine the coordinates of the release. If weather prohibits the use of aircraft (both fixed wing and rotor), field boats may be used to conduct search operations.

Aircraft will also be utilized to photograph the spill as often as necessary for operational purposes. The over flight information will assist with estimating the spill size and movement based upon existing reference points (i.e., oil rigs, islands, familiar shoreline features, etc.)

D. Determining the Size and Volume of a Spill

When a spill has been verified and located, the priority issue will be to estimate and report the volume and measurements of the spill as soon as possible. Spill measurements will primarily be estimated by using coordinates, pictures, drawings, and other information received from helicopter or fixed wing over flights.

Oil spill volume estimations may be determined by direct measurements or by calculations based upon visual assessment of the color of the slick and information related to length and width that can be calculated on existing charts (See **below and Figure 1-1c**). The appearance of oil on water varies with the oil's type and thickness as well as ambient light conditions. Oil slick thicknesses greater than approximately 0.25 mm cannot be determined by appearance alone.

Direct measurements are the preferred method for determining the volume of a spill. Measurements can be obtained by:

•	Gauging the tank or container to determine volume lost
•	Measuring pressure lost over time
•	Determining the pump or spill rate (GPM) and elapsed time

D. Determining the Size and Volume of a Spill (Cont'd)

Visual assessment for determining the volume of oil based on slick information begins with understanding the terminology listed below:

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

D. Determining the Size and Volume of a Spill (Cont'd)

Several natural weathering processes occur that can diminish the severity of the spill depending upon the composition of the oil. Natural weathering processes include the following:

•	**Dispersion** - The act of breaking up large particles into smaller ones and distributing them throughout a liquid or gaseous medium.
•	**Dissolution** - The process of going into solution.
•	**Emulsification** - Process consisting of the suspension of small globules of one liquid in a second liquid with which the first will not mix.
•	**Evaporation** - To convert or change into a vapor or to draw off in the form of vapor.

Factors listed in **Figure 1-1a** will be used to estimate the volume of oil in a spill unless an accurate amount is known by other means. Estimated spill volumes should be rounded off to avoid the misconception of a precise determination.

E. Predicting Spill Movement

Real time oil spill trajectory models predict the movement of spilled oil on water as well as identifying potential shoreline impact zones and other environmentally and ecologically sensitive areas.

The Response Group, Inc. (TRG) in Houston, TX, is the primary resource providing ExxonMobil with predictions of both the movement of oil on water and potential impact areas. The Response Group can initiate the trajectory mapping process by either verbal request or submitting a trajectory request form, **Figure 1-3**, on a 24 hour/day basis at 281-880-5000. TRG relies on a number of sources that provide real time data in conjunction with condition variables in order to track and predict spill movement throughout the duration of an incident. Trajectory model results will be transferred to ExxonMobil personnel via fax or email. Weather forecasts buoy data, and National Weather Bureau satellite imagery may be collected from internet services or by contacting the National Weather Service as listed below:

•	Gulf of Mexico website: http://www.nws.noaa.gov/om/marine/zone/gulf/gulfmz.htm Slidell, LA (504) 589-2808
•	Houston/Galveston, TX Area (281) 337-5074
•	Brownsville, TX (956) 504-1432 Austin/San Antonio, TX (830) 606-3617
•	Miami, FL (305) 229-4550

Trajectory models can be run with real-time and predicted weather information used as input over a several hour period.

F. Monitoring and Tracking the Spill Movement

Surveillance of the spill movement throughout the incident is essential to bringing response operations to a successful conclusion. ExxonMobil will utilize over flights and trajectory modeling to monitor and predict the movement of oil until the spill response operation is completed.

Surveillance operations can be continued both day and night, and during inclement weather, through the use of infrared sensing cameras capable of detecting oil on water. Information from the infrared cameras can be downloaded to a computer and printed out on a chart and/or recorded on videotape. This surveillance technology, if applicable, would be used in conjunction with scheduled over flight operations.

Oil Coverage Estimation Chart — **Figure 1-1a**

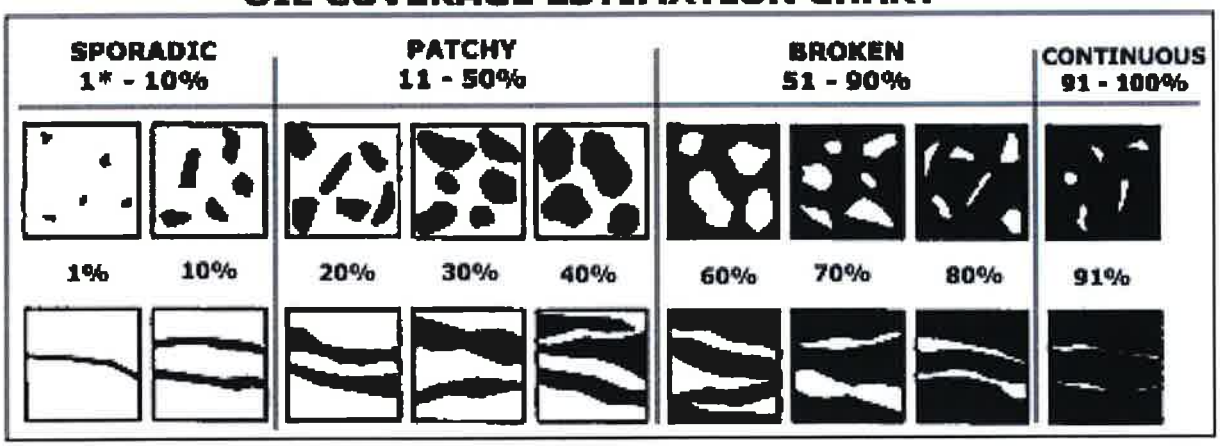
Oil Thickness Estimations				
Standard Term	Approx. Film Thickness		Approx. Quantity of Oil in Film	
	Inches	Mm		
Barely Visible	0.0000015	0.00004	25 gals/mile²	44 liters/km²
Silvery	0.000003	0.00008	50 gals/mile²	88 liters/km²
Slight Color	0.000006	0.00015	100 gals/mile²	176 liters/km²
Bright Color	0.000012	0.0003	200 gals/mile²	351 liters/km²
Dull	0.00004	0.001	666 gals/mile²	1,168 liters/km²
Dark	0.00008	0.002	1,332 gals/mile²	2,237 liters/km²
Thickness of light oils: 0.0010 inches to 0.00010 inches. Thickness of heavy oils: 0.10 inches to 0.010 inches.				

Spill Volume Estimation Procedure	
1.	Estimate dimensions (length x width) of the spill in miles. Multiply length times width to calculate area covered by oil in square miles
2.	Multiply each area calculated in (1) by the appropriate factor from the thickness estimation table (above) and add the parts together

Oil Coverage Estimation Chart

Figure 1-1b

OIL COVERAGE ESTIMATION CHART



*TRACE = <1%

** From Office of Response & Restriction, National Ocean Service, National Ocean & Atmospheric Administration

D. Worst Case Discharge Scenario Mobile Rig Exploration Drilling

1) Worst Case Summary

ExxonMobil Corporation has determined that its worst case scenario for discharge of oil from a mobile rig exploration drilling operation would occur from the Walker Ridge 848 operations. The WR 848 operations involve the exploration of oil and gas. The volume of the worst-case discharge scenario for WR 848 is 166,000 barrels. The oil has an API gravity of 28°. It should be noted that the worst case discharge calculation was based on the daily volume possible from an uncontrolled blowout of the exploratory operation. This facility is located approximately 205 miles from the Louisiana shoreline.

2) Facility Information

- Area and Block: WR 848
- Latitude: 26° 7' 4.81"
- Longitude: 91° 21' 39.96"
- Distance to Shore: 205 miles
- API Gravity: 28°
- Oil Storage Volume: 0 barrels
- Projected Highest Daily Volume: 166,000 barrels

3) Worst Case Discharge Volume

Criteria	*Barrels*
Highest daily volume from uncontrolled blowout from highest capacity proposed well considering characteristics of reservoir and casing / tubing sizes and analog reservoirs from the area, if known. (1 day)	166,000
TOTAL WORST CASE DISCHARGE	**166,000**

4) Land Segment Identification

Land areas that could be potentially impacted by WR 848 spill were determined using the MMS Oil Spill Risk Analysis Model (OSRAM) trajectory results. OCS Launch Block C 49 was used as WR 848's point of origin. Land segments identified by the model are listed below:

Area and Spill Site	Land Segment Contact	Percent Impact Chance		
	County/ Parish & State	3 Days	10 Days	30 Days
WR 848	Calhoun, TX	-	-	1
	Matagorda, TX	-	-	2
	Brazoria, TX	-	-	1
	Galveston, TX	-	-	1
	Jefferson, TX	-	-	1
	Cameron, LA	-	-	2
	Vermilion, LA	-	-	1
	Terrebonne, LA	-	-	1
	Plaquemines, LA	-	-	1

5) Resource Identification

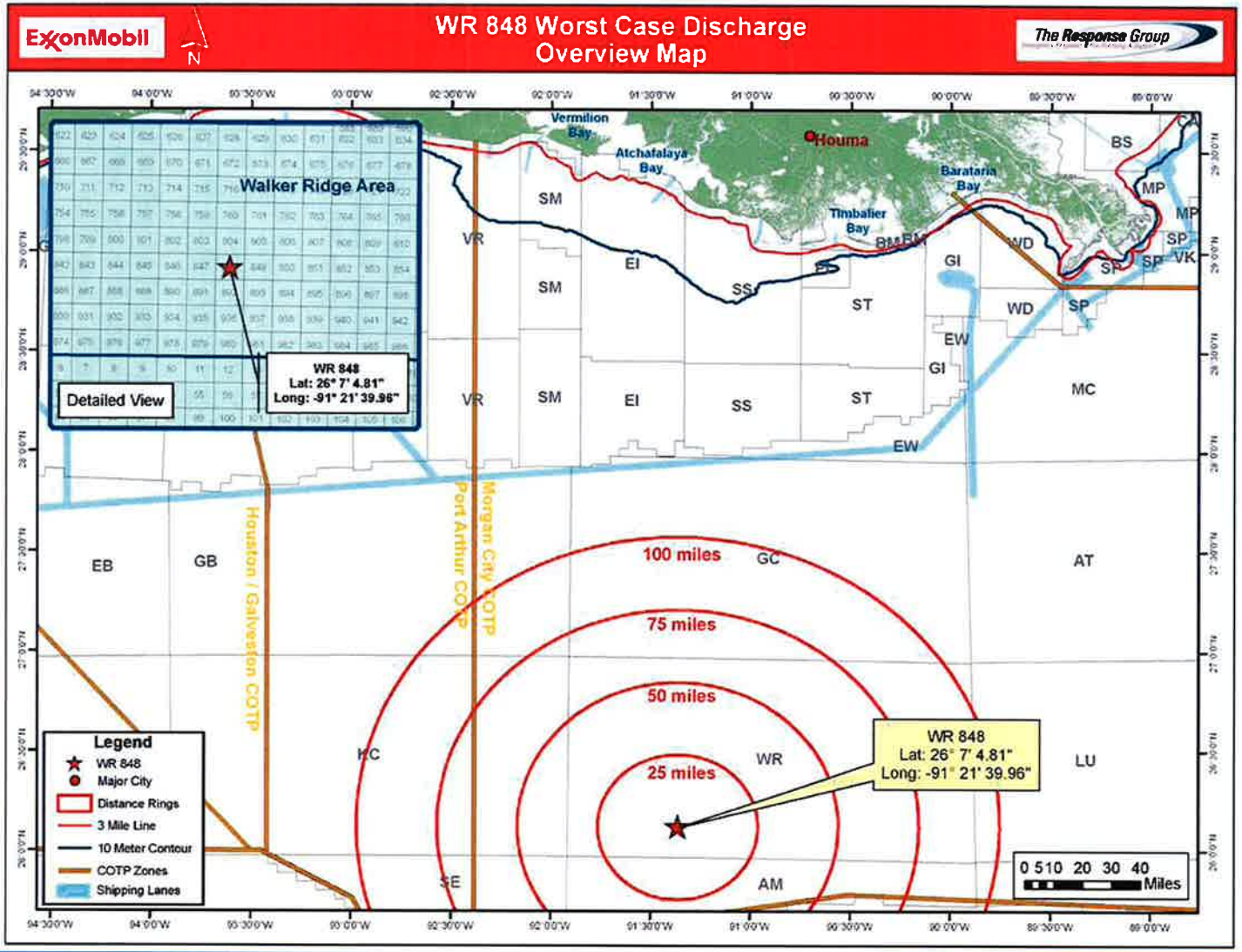
The land segment that has the highest probability of being impacted by WR 848 is Matagorda County, Texas and Cameron Parish, Louisiana, at 2 percent each. Sources listing the resources within the Gulf of Mexico Region are identified in **Section 11**.

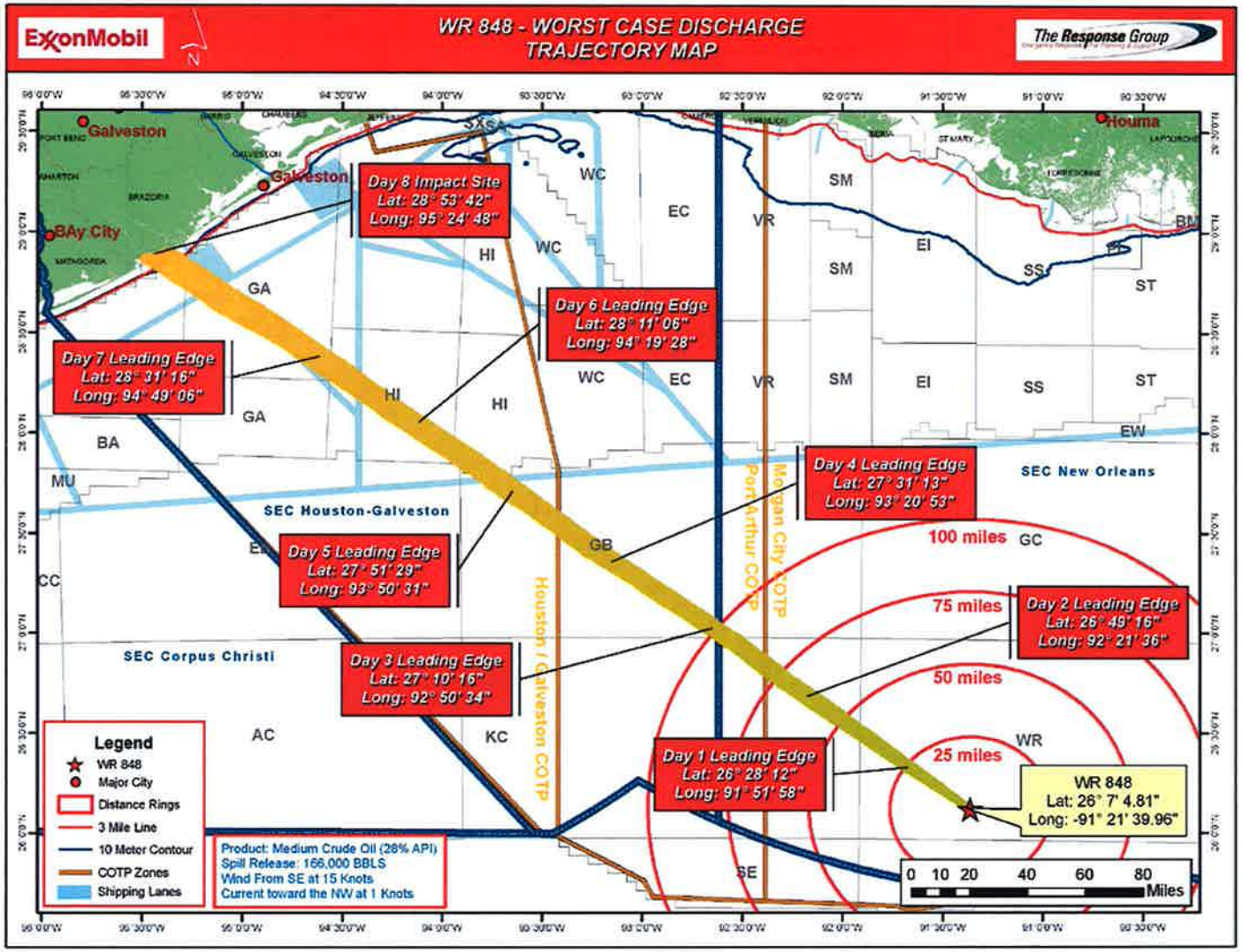
6) Response

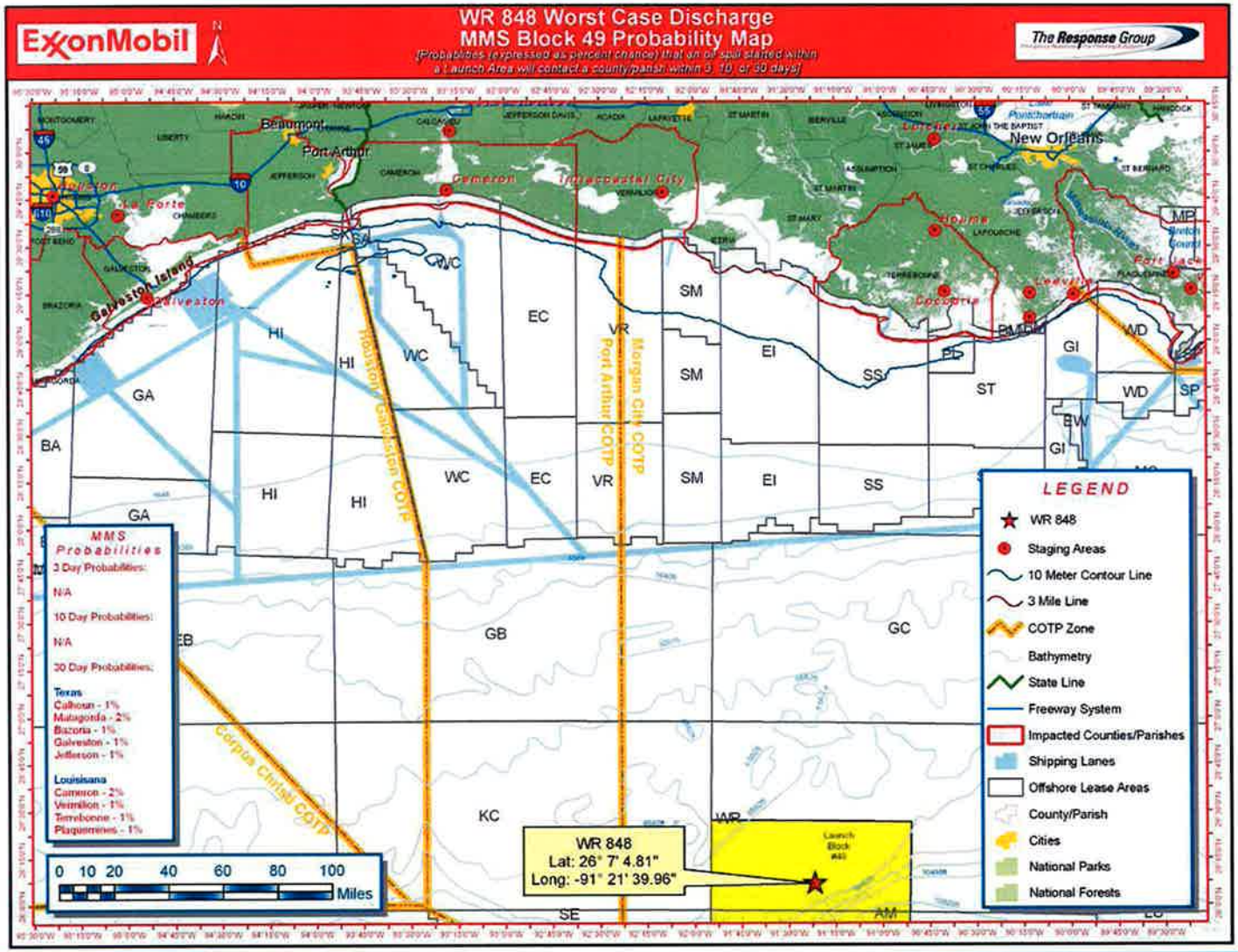
ExxonMobil has contracted with Marine Spill Response Corporation (MSRC) and Clean Gulf Associates (CGA) as primary Oil Spill Removal Organizations. Contact information for both OSROs can be found in **Figure 7-2**. Upon notification of the spill, ExxonMobil would request a full mobilization of the resources identified in the attached **Appendix E**.

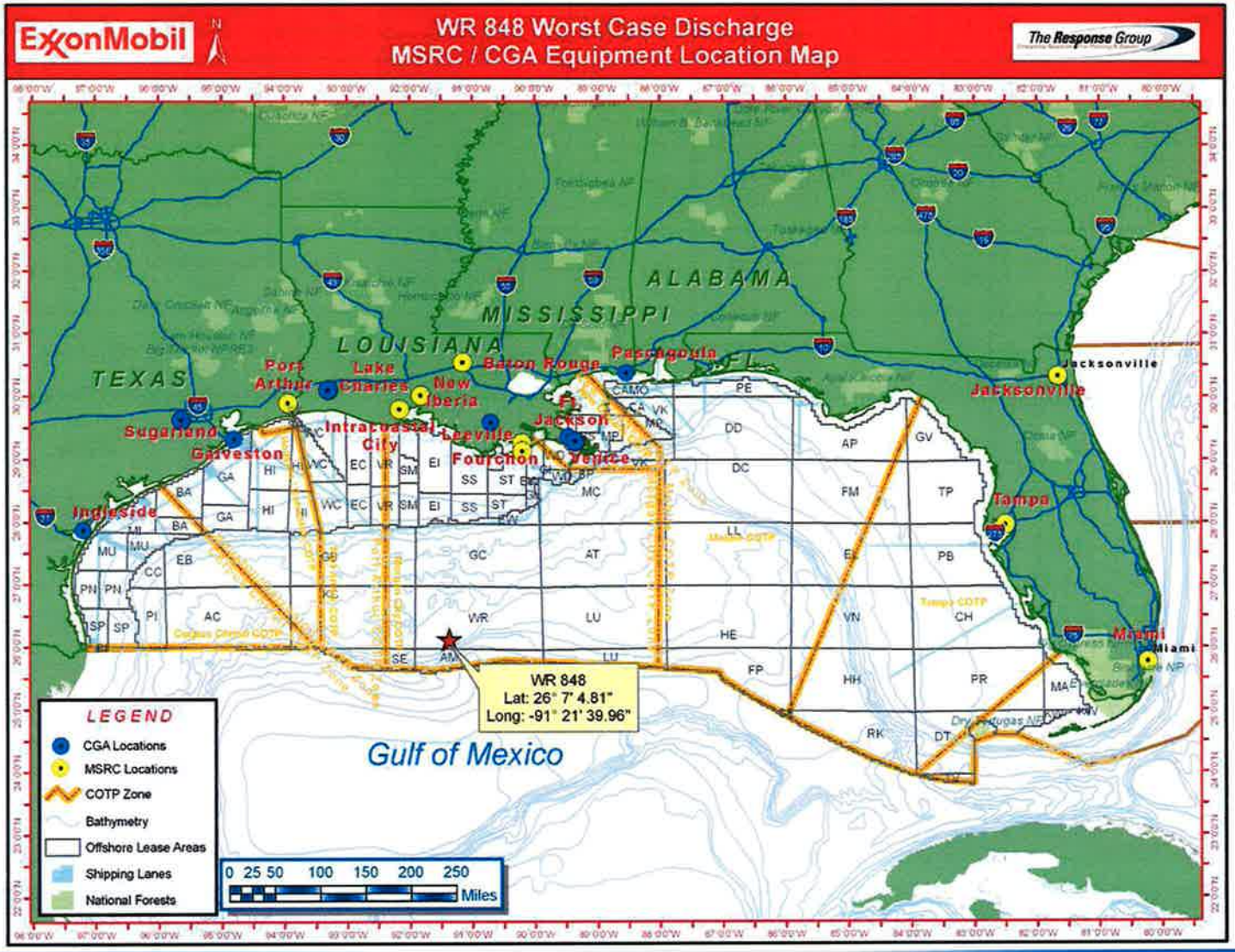
An Adios model was run on a similar product. The results indicate 16% of the product would be evaporated or naturally dispersed within 12 hours, leaving approximately 139,440 barrels on the water.

Tables below outline skimming equipment as well as temporary storage equipment to be considered in order to cope with an initial spill of 166,000 bbls. The list estimates individual times needed for procurement, load out, travel time to the site and deployment.









ExxonMobil — WR 848 (Exploratory) - 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
Queensboro	MSRC 800-OIL-SPIL	Houma, LA	Offshore Skimmer	1	905		Fourchon, LA	220	3	1	15.5	1	20.5
			67" Offshore Boom	660'									
			Personnel	4									
			Utility Boat	1									
GT-185	MSRC 800-OIL-SPIL	Baton Rouge, LA	Offshore Skimmer	1	1,371		Fourchon, LA	220	4.5	1	15.5	1	22
			67" Offshore Boom	660'									
			Personnel	4									
			Utility Boat	1									
Stress 1	MSRC 800-OIL-SPIL	Fort Jackson, LA	Offshore Skimmer	1	15,840		Fort Jackson, LA	270	1	1	19.5	1	22.5
			67" Offshore Boom	1320'									
			Personnel	4									
			Utility Boat	1									
FOILEX 250	MSRC 800-OIL-SPIL	Fort Jackson, LA	Offshore Skimmer	1	3,977		Fort Jackson, LA	270	1	1	19.5	1	22.5
			67" Offshore Boom	1320'									
			Personnel	4									
			Utility Boat	1									
FOILEX 200	MSRC 800-OIL-SPIL	Fort Jackson, LA	Offshore Skimmer	1	1,989		Fort Jackson, LA	270	1	1	19.5	1	22.5
			67" Offshore Boom	660'									
			Personnel	4									
			Utility Boat	1									
DESMI OCEAN	MSRC 800-OIL-SPIL	Fort Jackson, LA	Offshore Skimmer	1	3,017		Fort Jackson, LA	270	1	1	19.5	1	22.5
			67" Offshore Boom	1320'									
			Personnel	4									
			Utility Boat	1									
GT-185	MSRC 800-OIL-SPIL	Fort Jackson, LA	Offshore Skimmer	1	1,371		Fort Jackson, LA	270	1	1	19.5	1	22.5
			67" Offshore Boom	660'									
			Personnel	4									
			Utility Boat	1									
WP-4	MSRC 800-OIL-SPIL	Fort Jackson, LA	Offshore Skimmer	1	3,017		Fort Jackson, LA	270	1	1	19.5	1	22.5
			67" Offshore Boom	660'									
			Personnel	4									
			Utility Boat	1									