
South-central Louisiana Area Contingency Plan (SCLACP)

Risk Analysis: Area Planning Scenarios

Annex 1a May 2022

Record of Changes

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1000 Introduction

This annex has been developed by the Federal On-Scene Coordinator (FOSC), in consultation with the South-central Louisiana Area Committee, and is based on an assessment of all potential sources of discharges in this area meeting the provisions of 40 CFR Part 300.210(c) of the National Contingency Plan. At a minimum, this will address the following area planning elements:

- Oil spill discharge and hazardous substance release history;
- A risk assessment of potential sources of discharges within the area;
- A realistic assessment of the nature and size of possible threats and resources at risk;
- Planning scenarios that provide for a Worst Case Discharge (WCD), a Maximum Most Probable Discharge (MMPD), and an Average Most Probable Discharge (AMPD) from a vessel, offshore facility (outer continental shelf activity and near shore production fields), or onshore facility (fixed and mobile) in the area, as applicable.

2000 Scenario Development

As required by the Oil Pollution Act of 1990, a most probable discharge, a maximum most probable discharge, and a worst case discharge are presented in this annex of the South-central Louisiana Area Contingency Plan. In addition, The Coast Guard requires an offshore WCD scenario be included in area contingency plans where offshore continental shelf activity is present. The below definitions can be found in 33 CFR Parts 154 and 155, and 40 CFR Part 300.5, as appropriate.

2100 Average Most Probable Discharge

The Coast Guard has determined Average Most Probable Discharge as the lesser of 50 barrels or 1% of a Worst Case Discharge for an offshore or onshore facility/pipeline/marine terminal, or the lesser of 50 barrels or 1% of cargo from a Tank Vessel during cargo transfer operations. This value was adopted for consistency with Federal Vessel and Facility Response Plans.

2200 Maximum Most Probable Discharge

The Coast Guard has defined Maximum Most Probable Discharge as the lesser of 1,200 barrels or 10% of the volume of a Worst Case Discharge for an offshore facility or onshore facility/pipeline/marine terminal; 2,500 barrels of oil for a vessel with an oil cargo capacity equal to or greater than 25,000 barrels; or 10% of the vessel's oil cargo capacity for vessels with a capacity less than 25,000 barrels for Tank Vessels. These values were adopted for consistency with Federal Vessel and Facility Response Plans.

2300 Worst Case Discharge

As defined by section 311(a) (24) of the Clean Water Act, the definition of a Worst Case Discharge in the case of a vessel is a discharge in adverse weather conditions of its entire cargo, and in the case of an offshore facility or onshore facility/pipeline/marine facility, the largest foreseeable discharge in adverse weather conditions. This definition has been adopted for consistency with Federal Vessel and Facility Response Plans.

3000 Discharge and Release History

3100 List of Significant Discharges

Table 1: List of Significant Discharges

| Date | Location | Source* | Product | Amount (bbls) | Responsible Party |
|---------|---|---------|--------------------------|---------------|--|
| 07JUL08 | MM 98, Mississippi River/ DM932 | V | #6 Fuel Oil | >9,000 | Tug MEL OLIVER |
| 29AUG05 | Murphy Oil (Valero), Meraux LA | ONF | Crude | 25,110 | Hurricane Katrina |
| 20APR10 | Gulf of Mexico-Mississippi Canyon 252/ Macondo Well | OSF | Crude | 4.9 Million | British Petroleum |
| 29JUL07 | MP 21- Breton Sound | OSF | Crude | 80 | Unknown Vessel |
| 28JUL10 | Cedyco Mud Lake | OSF | Crude | 100 | Cvitanovic Boat Services |
| 30NOV00 | Tanker Westchester | V | Crude | 13,500 | Ermis Maritime Corp. |
| 08APR06 | Tanker Thomas Wheeler | V | Crude | Unknown | Collision with T/V SILVANUS |
| 27FEB84 | SS American Eagle | V | Unknown | Unknown | Explosion/ non-gas free atmosphere in cargo tank |
| 10SEP88 | LeBeouf Towing Company | V | Crude | 3,000 | Hurricane Florence |
| 10APR93 | Sunshine Bridge/MM 167 Mississippi River | V | #6 Fuel Oil | 5,500 | Tug DAVE BRASSEL |
| 27FEB99 | T/V Hyde Park/MM 92-76 Mississippi River | V | #6 Fuel Oil/Caustic Soda | 50 | T/V HYDE PARK |

***V = Vessel, **OSF = Offshore Facility, ONF = Onshore Facility P = Pipeline**

****Means any structure, group of structures, equipment, or device (other than a vessel) which is used for one or more of the following purposes: Exploring for, drilling for, producing, storing, handling, transferring, processing, or transporting oil. The term excludes deep-water ports and their associated pipelines defined by the Deepwater Port Act of 1974, but include other pipelines used for one or more of these purposes. A mobile offshore drilling unit (MODU) is classified as a facility when engaged in drilling or downhole operation**

4000 Risk Assessment

The possibility exists for a WCD to occur anywhere in the MSU Houma planning area given the high volume of deep-draft vessels (tank and non-tank vessels), the prevalence of oil and gas support vessels, offshore facilities (drilling rigs), oil and petrochemical terminals, and tug/tank barge composites. In addition, the unpredictable and sudden severe weather during transitional seasons, river fog in the winter and afternoon thunderstorms during the summer increase the risk.

4100 Possible Sources of WCD

The Lower Mississippi River port complex is one of the biggest and busiest ports in the world. The region accounts for much of the country's oil refining and petrochemical production capacity, and is the world's third largest port in dry cargo volume, moving approximately 400 million tons a year. In the MSU Houma planning area, there are numerous scenarios that may cause a WCD: groundings, collisions, equipment failure, natural disaster, offshore facility incident, pipeline rupture or wellhead failure, and oil terminal incidents.

4101 Offshore Facilities/Pipelines

See Table 4 of Section 3301 of the South-central Area Contingency Plan (SCLACP) for OCS facilities and pipeline WCD volumes. Also see Section 3303: Gulf of Mexico Offshore Technical Information for Area Contingency Planning in the ACP base plan for OCS WCD scenarios and modeling.

4102 Onshore Facilities/Pipelines/Marine Terminals

The MSU Houma planning area is home to over 60 fixed facilities, including 6 major refineries, and 13 Mobile Onshore Facilities transferring oil and/or hazardous materials in bulk. Onshore fixed oil storage facilities present the greatest potential volume oil spill. A possible WCD scenario is multiple tank failures at an onshore facility during hurricane conditions. A similar incident occurred at Murphy Oil during Hurricane Katrina, discharging over 25,000 barrels of crude oil. Common products handled at the largest of these facilities include unleaded gasoline, diesel fuel, crude oil, #2 fuel oil and #6 oil.

4103 Vessel Traffic

The MSU Houma planning area is home to the Intracoastal Waterway. The Intracoastal Waterway is one of the busiest waterways in the world, connecting the interior of the United States to markets throughout the world. Additionally, the MSU Houma zone is also the midway point for the Gulf Intracoastal Waterway. A significant number of towing vessels transit the area annually. All vessel movements are carefully monitored and coordinated through the MSU Houma Vessel Traffic Service, but risk of collision and subsequent discharge is still present.

A WCD for a vessel is defined as loss of a vessel's entire cargo in adverse weather conditions. There is a significant volume of oil that is transported, stored, or consumed as fuel within in the MSU Houma area. The largest foreseeable vessel discharge could result from a collision between two vessels.

4200 Spill Activity Statistics

The USCG MISLE database and MSU Houma unit records were analyzed for the MSU Houma

planning area. Years of spill incident data suggests that the majority of spills come from facilities, either onshore or offshore. The data further suggests that the most frequent product reported spilled in the navigable waters is oil, petroleum-based.

4300 Vulnerability Analysis

The following infrastructure and natural resources could be vulnerable from the effects of a major oil spill in the area:

- Water intakes (drinking, cooling, or other)
- Businesses
- Residential areas
- Wetlands and other sensitive environments
- Fish and Wildlife
- Endangered flora and fauna
- Recreational areas
- Marine transportation system
- Utilities
- Unique habitats or historical sites
- The Geographic Response Strategies detail tactics used to protect, recover, and mitigate the effects of a WCD.

4400 Planning Assumptions

The probability of a WCD occurring in the area is low. However, offshore facility operations, large crude carrier vessel transits, navigational hazards, and the operational activities associated transfer, handling, and storage of oil, along with the activities associated with offshore oil and gas exploration and production within the area provide high consequence situations for a WCD. Factor in natural disasters such as tropical storms and other severe weather events, the likelihood of a major spill occurring in the area increases significantly.

4500 Planning Scenarios

Given the applicable conditions described above, the WCD volumes from all potential sources is listed in the table below. The MMPD and the AMPD scenario volume is calculated based on a fixed number established for an offshore facility, an onshore facility/pipeline/marine terminal, or a percentage of the WCD rate from each potential source. For tank and non-tank vessels, the MMPD and the AMPD scenario volume is calculated based on a fixed number, a percentage of the cargo capacity, or the cargo transfer rate.

5000 Offshore Facility WCD Scenario

See Table 4 of Section 3301 of the South-central Area Contingency Plan (SCLACP) for OCS facilities and pipeline WCD volumes. Also see Section 3303: Gulf of Mexico Offshore Technical Information for Area Contingency Planning in the ACP base plan for OCS WCD scenarios and modeling.

5100 Offshore Response Resources

For a list of the most up to date offshore response resources please see the Marine Well Containment Company ([MWCC](#)) or the [HWCG](#) websites; additional links to offshore resource may be found in Section 7000 of the ACP base plan.

Table 1: List of Blowout and Firefighting Specialists

| Firefighting Boats | |
|--|---|
| <i>Edison Chouest Offshore, Inc. - Galliano, LA</i> | (985) 601-4444 |
| Jackup Boats | |
| <i>Cudd Energy Service</i> Houston, TX Houston, TX Toll Free Robstown, TX Robstown, TX Toll Free | (832)295-5555 (800) 899-1118 (361) 387-8521 (800) 762-6557 |
| <i>Danos & Curole - Larose, LA</i> | (985) 693-3313 |
| <i>Global Industries</i> Carlyss, LA Toll Free | (337) 583-5000 (800) 256-7587 |
| <i>Tetra Applied Technologies – Belle Chasse, LA</i> | (504) 394-3506 |
| Firefighting Experts | |
| <i>Boots & Coots - Houston, TX – Toll Free</i> | (800) 256-9688 / (281) 931-8884 |
| <i>Cudd Energy Service / Houston, TX</i> Toll Free | (713) 849-2769 / (832) 295-5555 (800) 899-1118 |
| <i>Wild Well Control - Houston, TX</i> | (281) 784-4700 |
| <i>Williams Fire & Hazard Control</i> Vidor, TX Alternate Number | (281) 999-0276 (409) 727-2347 |