



Emergency Disconnects in the Gulf of Mexico

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May 8, 2015

“To promote safety, protect the environment and conserve resources offshore through vigorous regulatory oversight and enforcement.”

Emergency Disconnect Sequence

API Standard 53

- Available on all subsea BOP stacks that are DP vessels
- Not required on moored vessels
- Functions to leave stack and controls in a desired state and disconnect LMRP from lower stack
- Two minimum locations from which it can be activated
- Must function in 90 seconds or less

Emergency Disconnect Sequence

API Standard 16D

- Requirement to rapidly disconnect riser in event of inability to maintain station keeping (within watch circle)
- List of functions at a minimum shall include release of LMRP connector and closure of at least one blind/shear ram
- Shear ram closure may be initiated upon disconnect of LMRP
- Other functions may include retraction of pod stingers, choke and kill stabs/valves, riser-fill valves, acoustic stabs and ram BOP/annular BOP (block)

Dynamic Position Vessels

- Computer controlled system which automatically maintains a vessel's position and heading using its own propellers and thrusters
- Examples are drillships, semi-submersibles, mobile offshore drilling units (MODU), and floating production, storage and offloading (FPSO)

Types of Vessels Operating in the GOM

- Drillships
- Semi-Submersibles
- MODUs
- FPSO

Causes of Disconnect

- Weather
 - Hurricanes, Tropical Storms
- Loop Currents
 - Present in the GOM 95% of the time
 - Current is 125-190 miles wide and 2600 feet deep
 - Worse during the summer and fall months
- Human Error
- Loss of Rig Power
- Equipment Failure

Gulf of Mexico Areas of Disconnect

Area Block	Number
Walker Ridge (WR)	2
Mississippi Canyon (MC)	3
Eugene Island	1
East Breaks	1
Green Canyon	10

Gulf of Mexico Disconnects by Year

Year	Disconnect
2005	2
2006	3
2007	1
2008	0
2009	1
2010	0

Year	Disconnect
2011	2
2012	2
2013	2
2014	3
2015	1
Total	17

GOM Areas of Disconnects

- Stat only relates to those performing permitted work in GOM
- Incidents reported to MMS/BSEE
- Methods of Reporting and Requirements
 - <http://www.bsee.gov/Inspection-and-Enforcement/Accidents-and-Incidents/Reporting/>
 - <https://ewell.mms.doi.net/ewell/>

Weather Disturbance in GOM during disconnects

- 2005
 - Hurricane Cindy, Katrina and Rita
- 2007
 - Hurricane Humberto
- 2008
 - Hurricane Dolly, Gustav, Ike
 - Tropical Storm Edouard
- 2010
 - Tropical Storm Bonnie
- 2011
 - Tropical Storm Lee

Weather Disturbance vs Disconnects

Year	Disturbance #	Year	Disconnect #
2005	3	2005	2
2007	1	2007	1
2008	4	2008	0
2010	1	2010	0
2011	1	2011	2

API Documents Incorporated by Reference

- API Standard 53, Blowout Prevention Equipment Systems for Drilling Wells
- API Spec. 11D1 for packers and bridge plugs
- ANSI/API Spec 16A, Specification for Drill-through Equipment
- API Spec. 16C, Specification for Choke and Kill Systems
- API Spec. 16D, Specification for Control Systems for Drilling Well-control Equipment and Control Systems for Diverter Equipment
- ANSI/API Spec. 17D, Design and Operation of Subsea Production Systems—Subsea Wellhead and Tree Equipment
- API RP 17H for remotely operated vehicle interfaces

BSEE Safety Alerts

- BSEE Safety Alert #315; February 24, 2015
- BSEE Safety Alert #312; May 20, 2014
- BSEE Safety Alert #303; January 29, 2013
- BSEE Safety Alert #300; March 9, 2012
- <http://www.bsee.gov/Regulations-and-Guidance/Safety-Alerts/Safety-Alerts/>

Recommendations

- Addition of regulations into 30 CFR 250 relating to emergency disconnects
- ISO documents incorporated into API relating to emergency disconnects

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