

**OCS LIFTING INCIDENTS
2007 - 2008**



October 2009

By:
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Offshore Regulatory Program
Accident Investigation Branch

DISCLAIMER:

All statistical information regarding lifting incidents contained within this document was reported by operators to the Minerals Management Service during the calendar years of 2007 and 2008. This information is subject to changes based on additions or revisions to reports from operators' report currently within our Technical Information Management System (TIMS).

Introduction

The MMS is responsible for the regulation of cranes and other lifting equipment installed on fixed platforms and material handling associated with the derrick on floating facilities according to the current MMS/USCG Memorandum of Agreement. Per the agreement, the USCG is responsible for cranes and other lifting equipment on floating production facilities and MODUs and for Personal Protection Equipment (PPE) which is often associated with operations involving the lifting of personnel. The table below summarizes agency responsibilities related to incidents associated with lifting equipment and operations.

FACILITY TYPE	MATERIAL HANDLING	PPE *	PIPE HANDLING **	CRANES
FIXED	MMS	USCG	MMS	MMS
FLOATER	USCG***	USCG	MMS	USCG
MODU	USCG	USCG	MMS	USCG

* (PPE) PERSONNEL PROTECTION EQUIPMENT = Safety Belts & Lifelines

** PIPE HANDLING = Lifting & Hoisting Equipment Associated With Derrick

*** MMS responsible for equipment related to drilling and completion operations

Following the release of the revised Incident Reporting rule (effective July 2006), the Minerals Management Service (MMS) began to receive more consistent incident reporting and more reliable incident information from Outer Continental Shelf (OCS) operators. MMS and industry analyze this information to determine how to improve the safety of activities related to lifting devices on the OCS.

In accordance with the incident reporting rule and Federal regulations, operators are required to report all lifting incidents to the MMS within 12 hours unless the results of the incident places it in the immediate oral reporting category. All incidents involving crane or personnel/material handling operations are required by the rule to be reported.

During 2007 and 2008, the MMS received 1,474 incident reports for incidents occurring on the OCS. Twenty-four percent of the incidents reported were associated with lifting equipment other than cranes. With lifting accounting for 361 incidents in the defined timeframe, the MMS identifies lifting as the most dangerous operation being conducted under their jurisdiction.

Of the 361 lifting incidents reported over the 24-month period:

- 1 of the 361 incidents resulted in 2 fatalities (MMS accident investigation report at http://www.gomr.mms.gov/homepg/offshore/safety/acc_repo/2008/080220.pdf)
- 98 of the 361 incidents resulted in 103 injured persons with injuries resulting in one or more: days away from work, restricted work or job transfer;
- 297 of the 361 incidents were associated with cranes;
- 64 of the 361 incidents were associated with other lifting devices;
- 109 of the 361 incidents occurred during drilling operations;
- 252 of the 361 incidents occurred during production operations;
- 165 of the 361 incidents occurred between the structure and vessel interface;
- 242 of the 361 incidents occurred in water depths less than 1000-feet and 119 incidents occurred in water depths greater than or equal to 1000-feet; and
- 82 of the 361 incidents were the result of employee failures.

The MMS classified lifting incidents into two major areas for analysis purposes:

1. What type of device was involved in the lift? Incidents associated with lifting devices are classified as either:
 - a. Cranes, as defined in API RP 2D were captured as permanent, or
 - b. All other lifting devices were defined as other lifting devices.
2. What was being lifted? All incidents associated with lifting devices were divided into five categories: personnel, pipe, material, combination, or non-lift.

Herein, the analysis and information presented was prepared to gather a better understanding of what is occurring on the OCS surrounding lifting operations and to share our findings with interested parties to enhance the safety of operations associated with OCS lifting devices.

All incident data applied within the analysis for this report is available for download at:

<http://www.mms.gov/incidents/other.htm>

For any additional information on lifting incidents on the OCS, please contact:

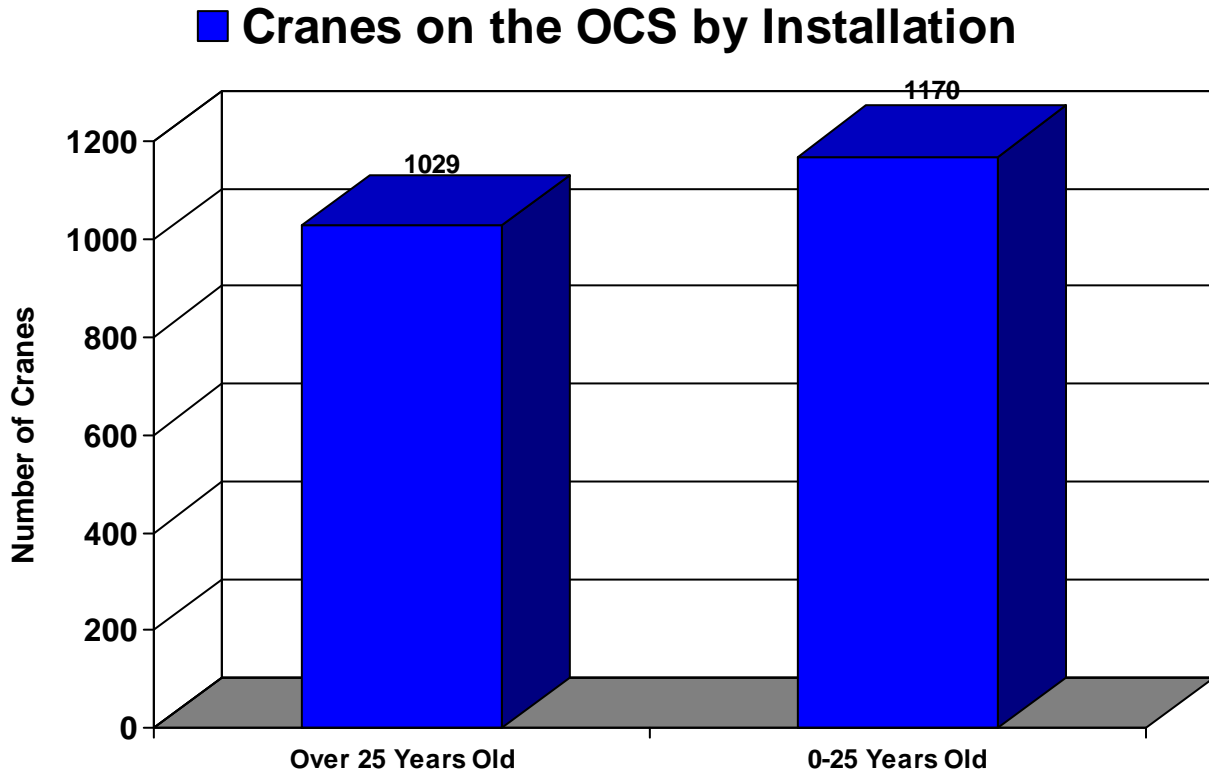
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Outer Continental Shelf Infrastructure

Currently, there are approximately 3,720 platforms on the OCS that have 2,199 cranes associated with them. Of the 2,199 cranes, 46-percent of the cranes are estimated to be older than 25 years old, and 98-percent of them exist on platforms in water depths less than 1000 feet.



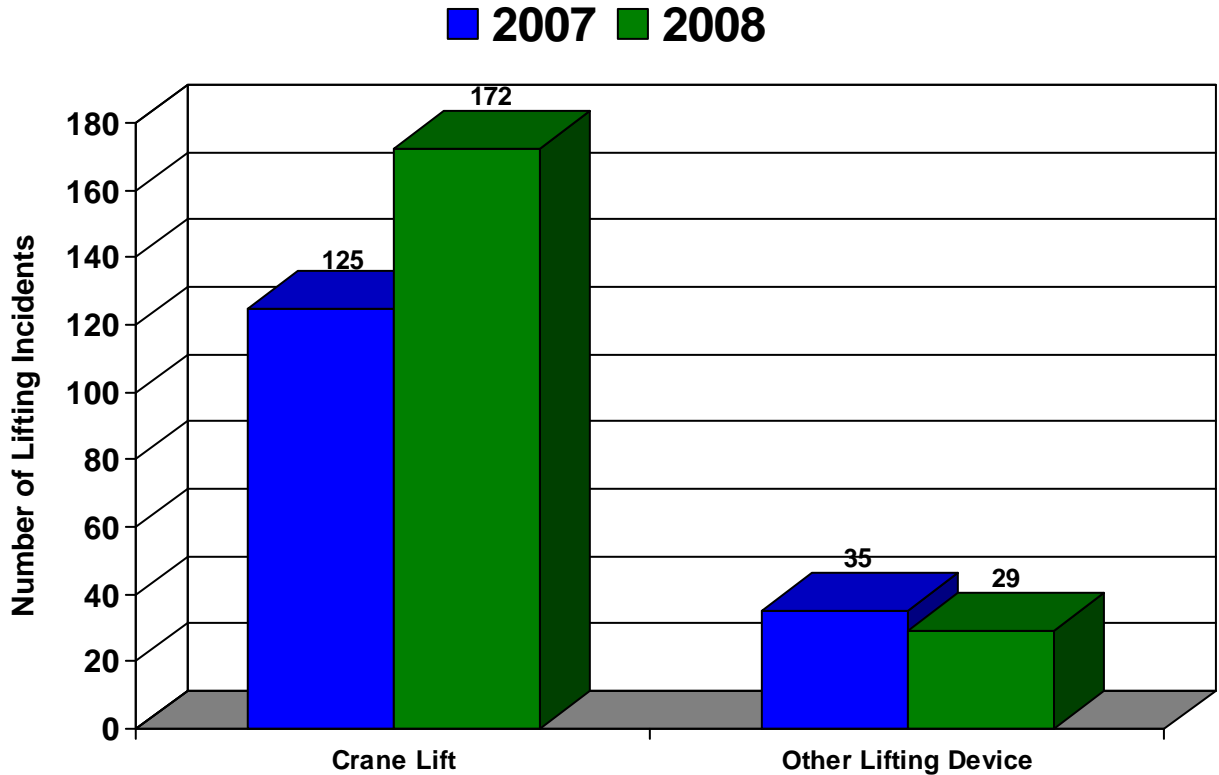
The MMS has no accurate count of the number of other lifting devices being utilized on the OCS or the number of lifts made by cranes or other lifting devices.

With approximately 25-percent of all incidents reported to the MMS in 2007 and 2008 surrounding lifting, the number of incidents per lifting device or lift is probably quite small. Though the incidents per device maybe small, 27 of the 108 fatalities between 1995 and 2008 were the result of lifting incidents; hence, this is an area of ongoing concern and attention by the MMS.

In comparison to production volumes in 2007 and 2008, the operators on the OCS experienced a lifting incident once every 5.46 million barrels of oil equivalent (BOE) produced.

OCS Lifting Analysis

On the OCS, 82-percent of incidents associated with lifting equipment occurred while lifts were made with cranes. The remaining incidents were the result of lifts made by other lifting devices, such as, hoists, air tuggers, winches, come-a-longs, etc. (See chart below)

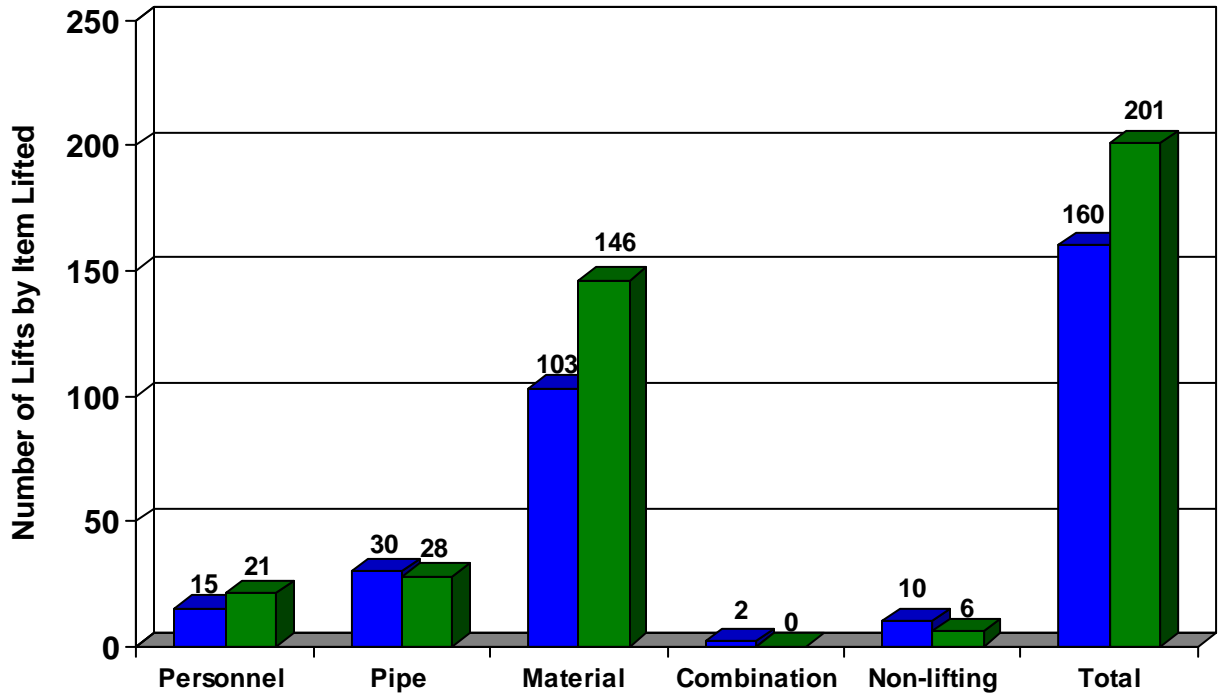


The two fatalities during the reporting period occurred in one, crane incident. Crane incidents also accounted for 76 injuries resulting in 1 or more days of lost time or restricted work while other lifting devices accounted for 27. The more serious injuries, lost times accidents greater than 3 days, occurred 16 times while using cranes and 11 times while using other lifting devices. The data indicates that incidents involving other lifting devices are nearly two-time as likely to result in an injury of greater than one day.

During 2007 and 2008, 69-percent of incidents associated with lifting equipment involved material lifts. Material lifts are those lifts that involved lifting cargo baskets, platform tools, equipment, etc. (See 2 charts below)

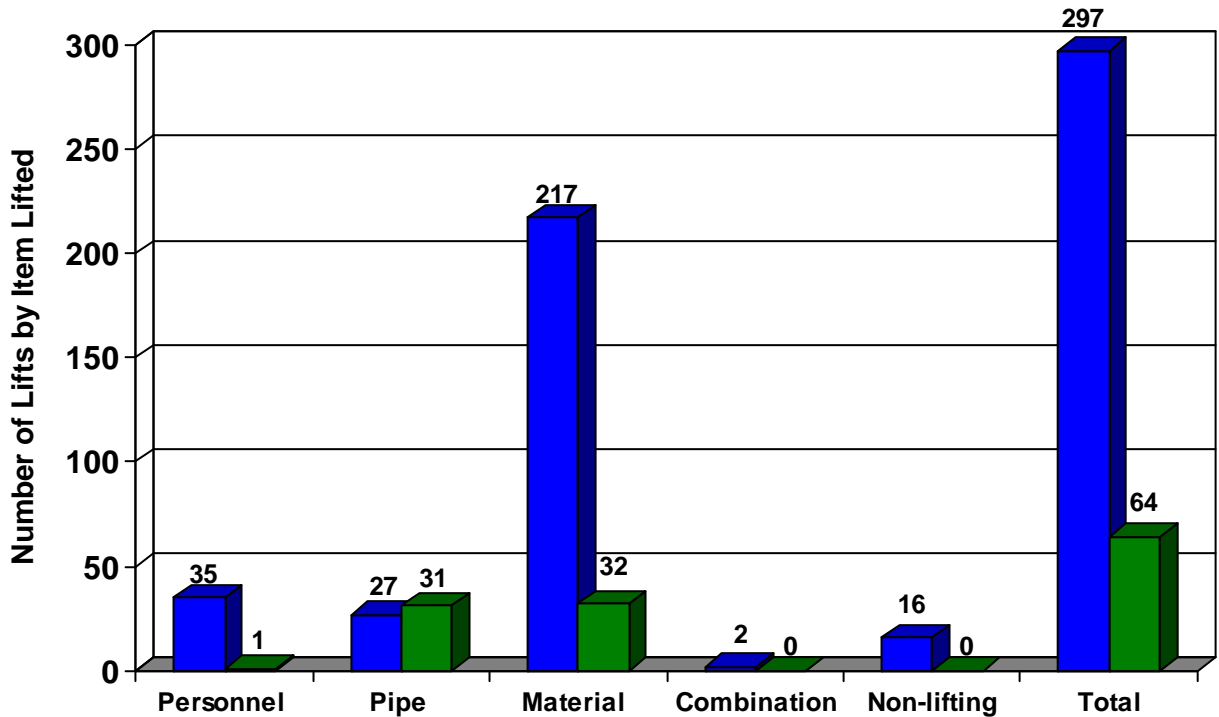
There were also: 36 personnel lifts (9.97%)- lifts of personnel from point to point on OCS infrastructure; 58 pipe lifts (16.07%) - vertical and horizontal lift of pipe, casing, or any tubulars; 2 combination lifts (0.55%) - two or more type of lifts at once; normally personnel and material; and 16 non-lift incidents (4.43%) - a reported incident associated with lifting equipment, but not associated with an actual lifting activity (such as maintenance, electrical, oil and hydraulic fluid spills associated with a crane, etc. related)

■ 2007 ■ 2008

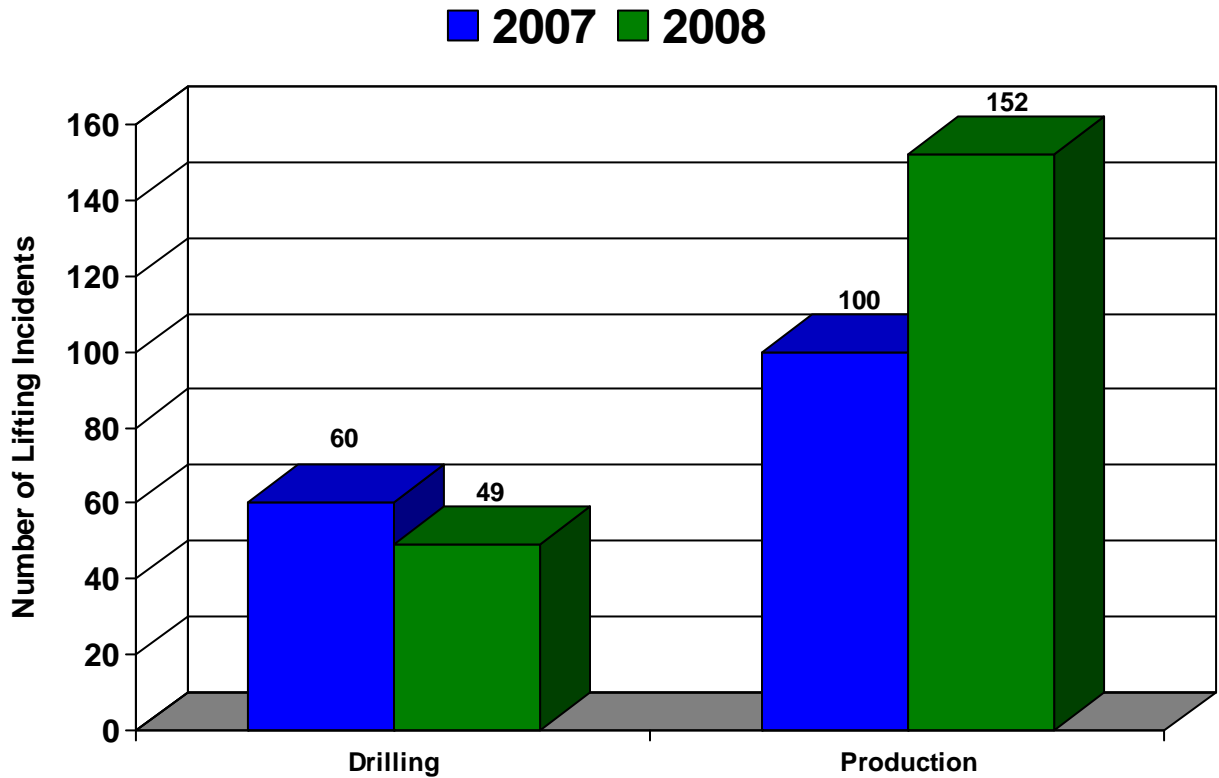


While considering the type of lifting device with what was being lifted, the following can be presented:

■ Crane ■ Other Lifting Device



A majority of the incidents associated with lifting equipment occurred during production operations. In the past two years, production related lifting incidents accounted for 70-percent of the lifting incidents reported to the MMS. (See chart below)



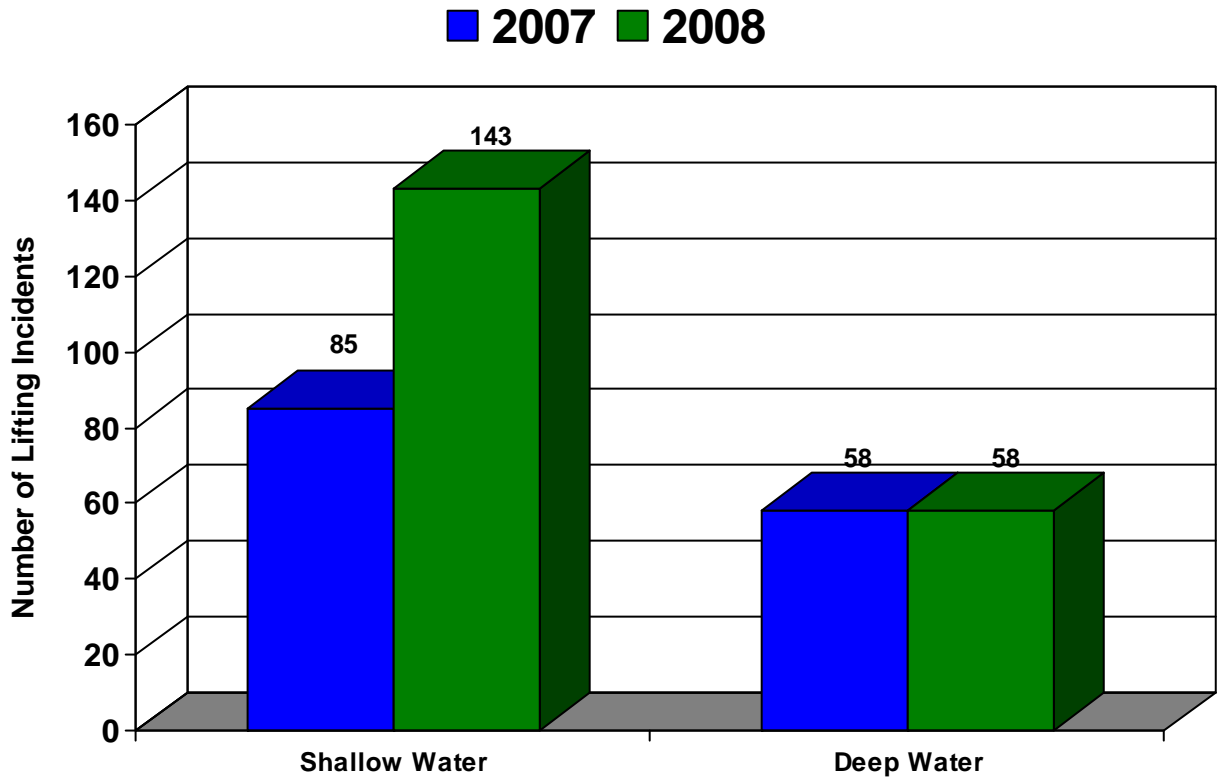
Between 2007 and 2008, drilling activities (wells spud) in the GOM decreased by 8-percent; however, lifting incidents associated with drilling decreased by 18-percent. For every well spud on the OCS during 2007 and 2008, 0.09 lifting incidents occurred and 0.03 lifting related injuries occurred.

Between 2007 and 2008 the number of lifting incidents occurring during production operations increased over 52-percent. During the same period, 0.13 production related lifting incidents and 0.03 production related lifting injuries occurred for every 1 million BOE produced.

Even though the likelihood of an incident occurring appears to be much greater during production operations, one would have to consider the amount of production activity and number of production facilities on the OCS compared to drilling activity/facilities. Currently (October 2009) on the OCS, there is a 64 to 1 ratio when comparing the number of production facilities to the number of drilling rigs.

MMS has also examined the occurrence of lifting incidents in shallow vs. deep water. The MMS defines deep water as a water depth greater than or equal to 1000-feet. Less than 2-percent of the OCS infrastructure (platforms and rigs) exists in deepwater, but

approximately one-third of all lifting incidents occur in deepwater. (See chart below)
Regarding injuries, 17-percent of lifting injuries during 2007 and 2008 occurred in deepwater, and 83-percent occurred in shallow water.



Although it cannot be quantified, MMS expects there is more lifting activity per crane in deep water compared to those on the shelf, but the large number of incidents occurring in deepwater with so little of the infrastructure is still an area of concern within the MMS.

Another possibility for noticeable amount of incidents in deep water could be the interaction with vessels with the infrastructure while lifting is occurring. Of all lifting incidents reported to the MMS, 46-percent of the incidents occurred at the vessel-infrastructure interface. 31-percent of the incidents occurred while lifting from deck to deck.

In continuation of analysis and efforts completed to date, the MMS will work with industry to identify the leading causes of lifting incidents to reduce the reoccurrence in the future.

Summary Table

2007-2008 Lifting Incidents					
	#	%		#	%
	Incidents	Incidents		Injuries	Injuries
Lifting Device					
Crane	297	82.2715%		76	73.7864%
Other Lifting Devices	64	17.7285%		27	26.2136%
Items/People Being Lifted					
Personnel	36	9.9723%		17	16.5049%
Pipe	58	16.0665%		27	26.2136%
Material	249	68.9751%		55	53.3981%
Combination	2	0.5540%		1	0.9709%
Non-lifting	16	4.4321%		3	2.9126%
Facility/Operations					
Production Facility/ Operations	252	69.8061%		59	57.2816%
Drilling Rig/Operations	109	30.1939%		44	42.7184%
Location					
Shallow water	242	67.0360%		85	82.5243%
Deep water	119	32.9640%		18	17.4757%
Type of lift					
Deck to deck (on platform)	112	31.0249%		27	26.2136%
Vessel to platform/rig	76	21.0526%		18	17.4757%
Rig/Platform to Vessel	52	14.4044%		9	8.7379%
Vessel to vessel	37	10.2493%		12	11.6505%
Other	84	23.2687%		37	35.9223%