

Fall 2010 Seminar Series



CHALLENGES AND INNOVATION IN CIVIL AND ENVIRONMENTAL ENGINEERING



Lessons Learned About Offshore Production Facilities in Recent Hurricanes

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**Thursday, October 7, 2010
138 DeBartolo Hall, 3:30pm**



Four of the strongest hurricanes on record recently passed through the offshore oil and gas facilities in the Gulf of Mexico: Hurricane Ivan in August, 2004, Hurricane Katrina in August 2005, Hurricane Rita in September 2005 and Hurricane Ike in 2008. The cumulative impact of these storms was significant, with hundreds of platforms destroyed, tens of billions of dollars in property loss, and several hundred million barrels of oil production removed from the U.S. oil supply. Remarkably, however, there were no fatalities or injuries to offshore workers because they were successfully evacuated in advance of each storm. This talk will address what happened and what we have learned from these intense hurricanes. Topics will include hurricane forces, wave-induced mudslides, and the performance of facilities such as temporary drill rigs, permanent production facilities and pipelines.

Dr. Gilbert is the Brunswick-Abernathy Professor in Civil, Architectural and Environmental Engineering at The University of Texas at Austin. He joined the faculty in 1993. Prior to that, he earned B.S. (1987), M.S. (1988) and Ph.D. (1993) degrees in civil engineering from the University of Illinois at Urbana-Champaign. He also practiced with Golder Associates Inc. as a geotechnical engineer from 1988 to 1993. His expertise is the assessment, evaluation and management of risk in civil engineering. Applications include building foundations, slopes, pipelines, dams and levees, landfills, and groundwater and soil remediation systems. He teaches undergraduate, graduate and professional level courses. He conducts research supported by federal and state agencies and private industry. Recent activities include analyzing the performance of offshore platforms and pipelines in hurricanes; managing earthquake and flooding risks for the Sacramento-San Joaquin Delta in California; and performing a forensic analysis of the New Orleans levee failures.

A reception and an opportunity to meet the speaker will take place at 3:00pm in Fitzpatrick 156



Figure 4.4 Destroyed Platform in the South Timbalier Region