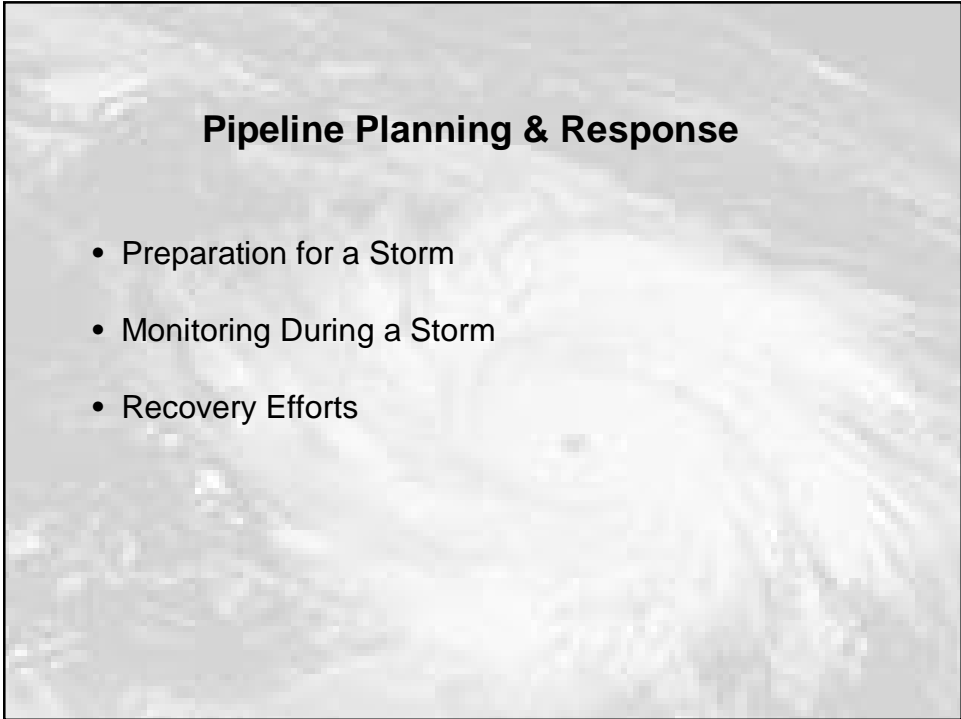


A satellite image of a hurricane, showing a well-defined eye and spiral cloud bands, serving as a background for the text.

Offshore Hurricane Readiness & Recovery Conference

Pipeline Planning & Response

**July 26, 2005
Houston, Texas**

A satellite image of a hurricane, showing a well-defined eye and spiral cloud bands, serving as a background for the text.

Pipeline Planning & Response

- Preparation for a Storm
- Monitoring During a Storm
- Recovery Efforts

Typical Phases of Storm Preparation/Response

Storm/Hurricane Planning Prior to the Season

Monitoring Storm to Determine Evacuation Plan

Securing Facilities & Installations

Evacuation

Monitoring

Assess Damage

Recovery Efforts

Restart

Advance Storm/Hurricane Planning

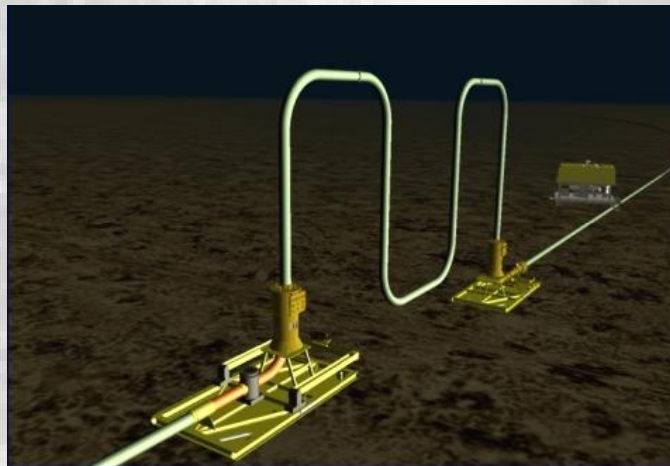
- Identify members of the Incident Command System & establish protocol for daily storm updates & evacuation planning.
- Establish requirements for evacuation and restart with producers.
 - Contact Control Center before evacuation.
 - Closing meter readings
 - Inform Control Center of any damage upon return
 - Obtain clearance prior to restart
- Place response vessels on standby as appropriate.

Repair Equipment Inventory - Shelf

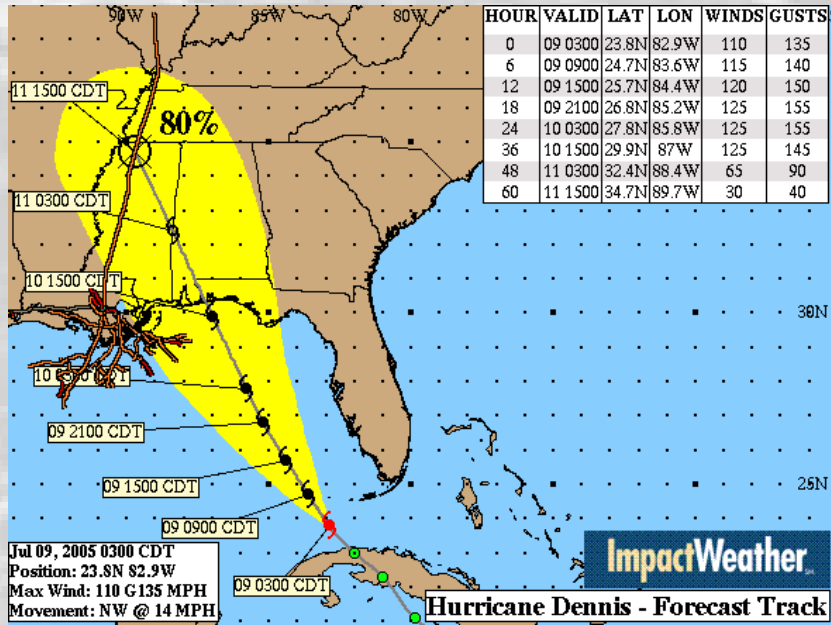


Repair Equipment Inventory - Deepwater

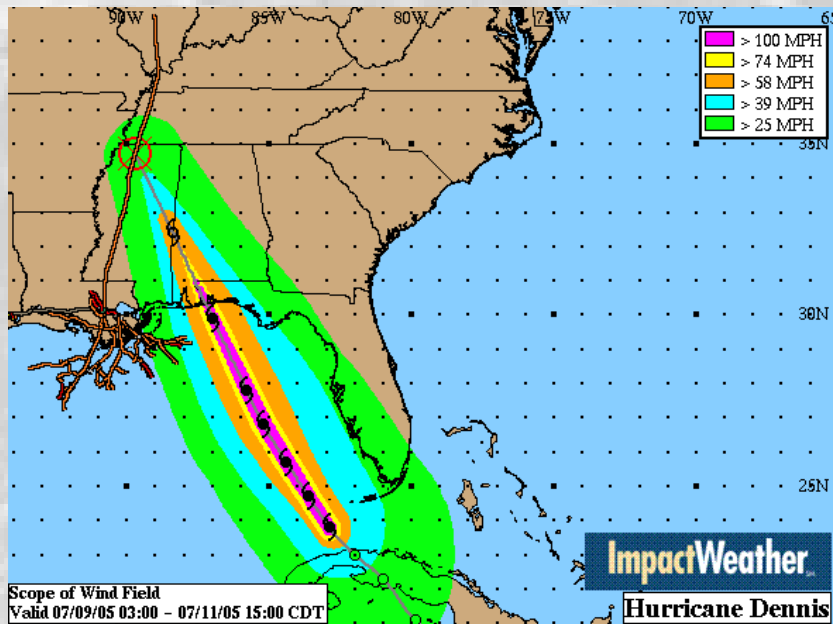
- ROV operated concrete removal tool, diamond wire saw, flooded member detector, lift frames, etc.
- ROV operated end connectors with upward looking hubs & collet connectors 12" through 20"



Monitoring Storm to Determine Evacuation Plans



Monitoring Storm to Determine Evacuation Plans



Securing Pipelines & Related Facilities

- Confirm adequate inventory in tanks to maintain weight.
- Secure any loose items.
- Pump down the platform sump.
- Leave appropriate generator(s) running
- Establish communication procedures with drill rigs near any pipelines.
- Daily teleconferences with SPLC staff.

Monitoring During Storm

- Plot storm track, scope of wind, waves, etc. with respect to pipelines.
- Monitor pipeline pressures during storm via Control Center in Houston.
- Receive status updates on drill rig positions for those near pipelines.
- Communicate with staff to determine personal impacts.

Recovery Efforts

Reconnaissance Flights.

- Recon flights with fixed wing and large helicopters as soon as weather and sea conditions allow.
- Report any findings back to Pipeline Incident Commander.
- If lost communication at some platforms, these will be the first to re-man to read actual pressures on the system and restore remote communications.

Recovery Efforts

Standup Tests.

- Test only during daylight hours with aircraft monitoring line during test.
- Pressurize pipelines slowly. Calculate the number of barrels required to raise to the test pressure in advance.
- Hold test pressure for two hours while flying line to observe for any signs of oil.

Recovery Efforts

Release Investigations & Repair.

- Plot coordinates of any sheens observed with respect to pipelines using in-house software.
- If wind, current, and sheen location indicate that a pipeline is suspected to have a leak, mobilize boat to location to investigate.
- Develop response and repair plan for MMS, DOT, and USCG review/approval.