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July 27-28, 2005

Hurricane Preparedness

- **NEI Implements a Five-Phase Hurricane Preparedness Plan**

- **Phase One**
 - ▲ **Guidelines for Continual Readiness**
 - June 1 thru November 30
 - Update Severe Weather Notification List
 - Review Hurricane Evacuation Procedures
 - Review Emergency Response Procedures

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Hurricane Preparedness

- **Phase Two**
 - △ **Receive Weather Alert or Storm Notification**
 - Review Operations Forecast
 - Communication with Air and Marine Transportation
 - Review Hurricane Evacuation/Safety Procedures
 - Perform Safety System Checks
- **Phase Three**
 - △ **Evacuation Preparedness**
 - Secure Equipment and Function Test NAV Aids
 - Hold Pre-Evacuation Safety and Procedures Meeting
 - Evacuation Of Non-Essential Personnel

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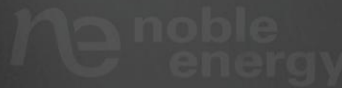
Hurricane Preparedness

- **Phase Four**
 - △ **Shut-Down And Evacuation**
 - Pump Liquid Hydrocarbons into Pipeline
 - Shut-In Wells and Subsurface Safety Valves
 - Close Incoming and Exit Pipelines
 - Shut-Down Operating Systems
 - Evacuate

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Hurricane Preparedness

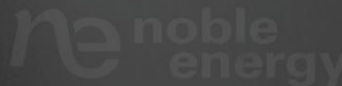
- **Phase Five**
 - ^ **Reboarding**
 - Visual Inspection of Affected Area
 - Pre-Boarding Safety Meeting
 - Damage Assessment
 - Equipment Integrity Verification
 - Safety System Function Test
 - Facility Startup



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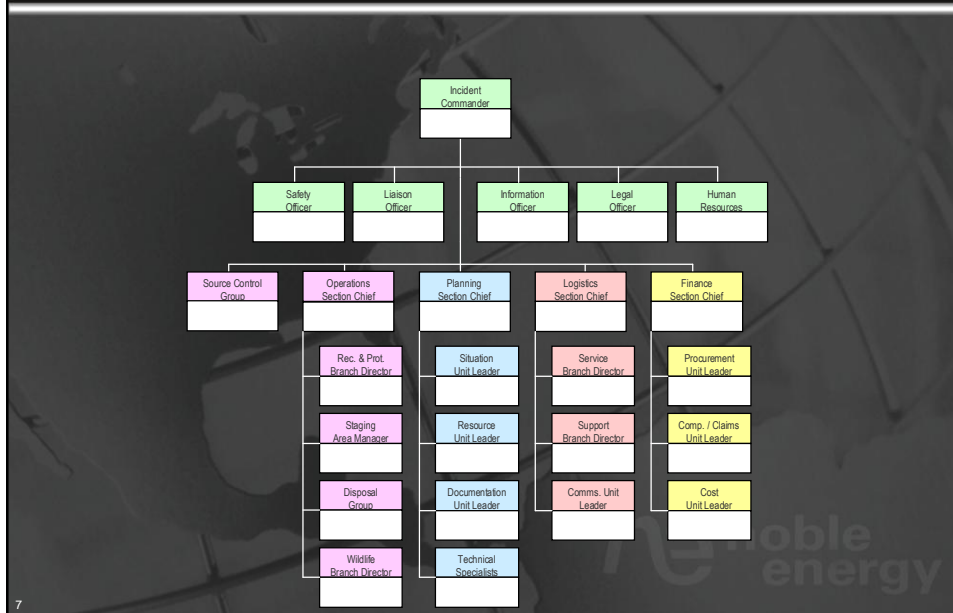
Emergency Management System

- **Goal**
 - ^ **Develop a Proactive Response System Utilizing an Integrated Management System**
- **Objective**
 - ^ **Establish a Command System to Manage Emergency Response and Crisis Operations**
- **Structure**
 - ^ **Noble Energy Utilizes the Incident Command System That Was Adopted by The U.S. Coast Guard for Use in Oil Spills**
 - ICS is now known as the National Incident Management System (NIMS) – its use is now mandated under the new National Response Plan approved in November, 2004



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Incident Management Team Organization Chart



Incident Management Structure

- **Incident Command**
 - ▲ Incident Commander and Staff to Manage The Event
- **Operations**
 - ▲ Organize and Manage Tactical Response Operations
- **Source Control**
 - ▲ Control and Stabilize the Source
 - ▲ Shoreline Protection Strategies
 - ▲ Site Specific Waste Management
- **Planning**
 - ▲ Incident Action Plan Development
 - ▲ Safety Security and Environment
 - ▲ Long View Strategy

Incident Management Structure

- **Logistics**
 - ▲ Support Of Personnel and Equipment
 - ▲ Communications
- **Safety**
 - ▲ Site Safety Plans
 - ▲ Site Security Plans
- **Liaison**
 - ▲ Regulatory / Media Communications
- **Finance**
 - ▲ Accounting
 - ▲ Contracting
 - ▲ Insurance
 - ▲ Procurement

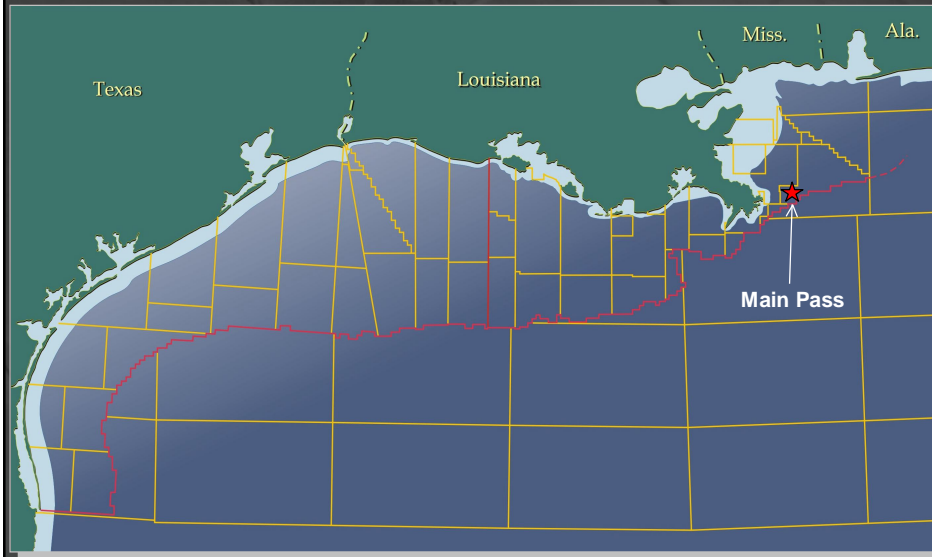
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Response Levels

- **Noble has a Three Tier Level of Response Based On The Size and Scope of The Incident**
- **Tier One**
 - ▲ Short Small Scale Incident With Minor Damage That Can Be Handled With Facility Personnel
 - ▲ Facility Personnel Engaged, IMT Members are Notified But Not Assembled
- **Tier Two**
 - ▲ Medium Scale Incident, Major Injury and or Limited Damage To Facility
 - ▲ Facility Personnel Engaged, IMT Members Assembled
- **Tier Three**
 - ▲ Major Incident, Aviation Emergency, Major Fire, Ivan
 - ▲ All IMT Members Assembled and External Response Organizations Activated

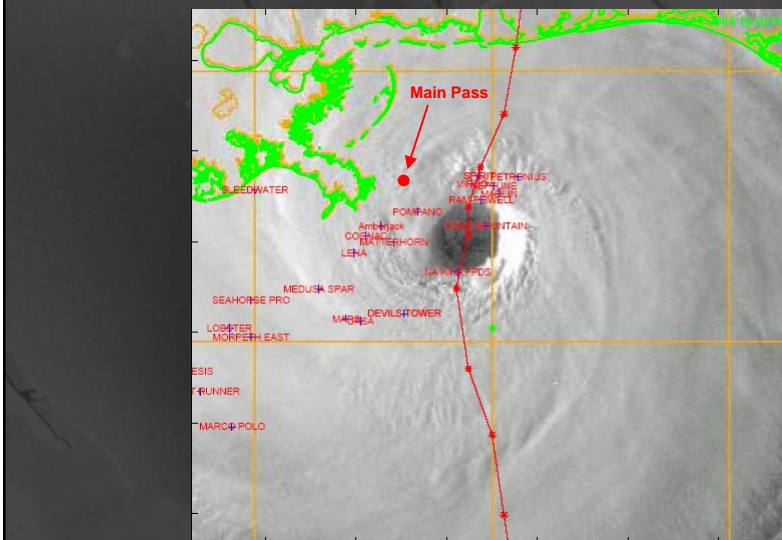
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Gulf of Mexico



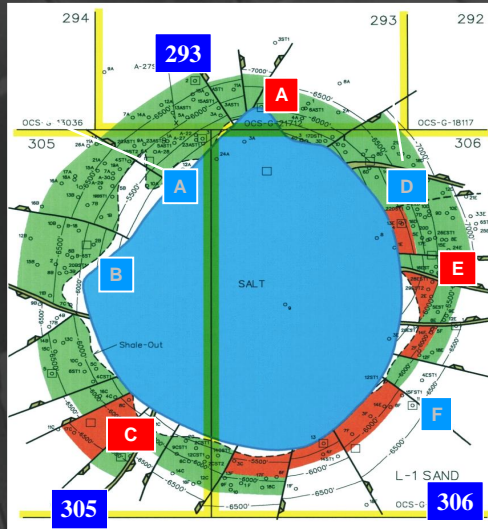
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Hurricane Ivan



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Main Pass 306 Field MP 305, 306 & 293



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Hurricane Ivan

- Fixed Wing Reconnaissance Reported Missing Platforms, No Pollution
- Confirmed Status By Two Helicopter Flights Reported Sheening From Standing Platforms
- Activated Emergency Response Team
- Activated Oil Spill Response Team
- Established Houston Command Post
- Agency Notifications
- Set up Venice Command Post

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Planning Cycle

- **NEI Segmented Planning into Two Functional Groups**
- **Operation Planning Group**
 - ▲ Focus on the Current Incident
 - ▲ Assist on Logistic Setup
 - ▲ Support Incident Command
- **“Long View” Planning Group**
 - ▲ Focus On Long Range Strategy
 - ▲ Establish Goals and Objectives
 - ▲ Define Best Management Practices

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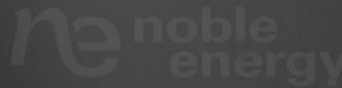
Planning Stages

- **Stage I – Stabilize Pollution and Safety**
- **Stage II – Damage Assessment**
 - ▲ Existing Platforms
 - Structural Integrity
 - ▲ Lost Platforms
 - Site Survey
- **Stage III – Structural Stabilization**
 - ▲ Assessment
 - ▲ Planning
 - ▲ Execution

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Planning Stages

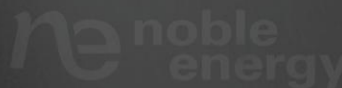
- **Stage IV –Operational Planning**
 - ▲ Salvage/P&A
 - ▲ RTP – (Return to Production)
 - ▲ Reserve Analysis
- **Stage V – Execution**
 - ▲ Salvage/P&A
 - ▲ RTP
 - ▲ Reserve Recovery



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Planning Considerations

- **Safety**
 - ▲ Diver Safety
 - ▲ Personnel
- **Pollution**
 - ▲ Well Bore
 - ▲ Submerged Equipment
 - ▲ Support Vessels & Surface Equipment
- **Weather**
 - ▲ Seasonal Weather
 - ▲ Storms




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Planning Considerations

- **Operational**
 - ▲ **Equipment Availability**
 - ▲ **Operational Efficiency**
 - ▲ **Learning Curve**
 - ▲ **Communication**
- **Financial**
 - ▲ **Insurance**
 - ▲ **Accounting**


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Lessons Learned

- **Early Reconnaissance**
- **Experienced Emergency Team**
 - ▲ **Periodic Emergency Drills**
 - ▲ **Strong Alternate Support**
- **Agency Alliances**
 - ▲ **MMS**
 - ▲ **US Coast Guard**
 - ▲ **State Agencies**
 - ▲ **US Customs**

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Lessons Learned

- **Industry Alliances**
 - ▲ **Shared Resources**
 - Transportation
 - Dive Vessels
 - Pollution Control Equipment
 - Emergency Response Peer Contacts
 - ▲ **Contracting Issues**
 - Operator to Operator
 - Operator to Vendor
- **Planning Phase**
 - ▲ **Transitioning from Emergency Phase**
 - Avoid Reactive Response
 - ▲ **Source Industry, Environmental & Regulatory Experts**
 - ▲ **Target “Fit for Purpose” and “Best in Class”**