NIEHS
National Institute of
Environmental Health Sciences

BP Gulf Oil Spill Response: Protecting the Responders

PEPH Webinar May 25, 2010

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NIEHS Superfund Worker Training Program

Worker Education and Training Program (WETP) was created in 1986 by the Superfund Amendments and Reauthorization Act of 1986 (SARA), Section 126(g).

Assistance program for training and education of workers engaged in activities related to hazardous waste generation, removal, containment or emergency response and hazardous materials transportation and emergency response.

BP Oil Spill Forecast for Wednesday May 26, 2010

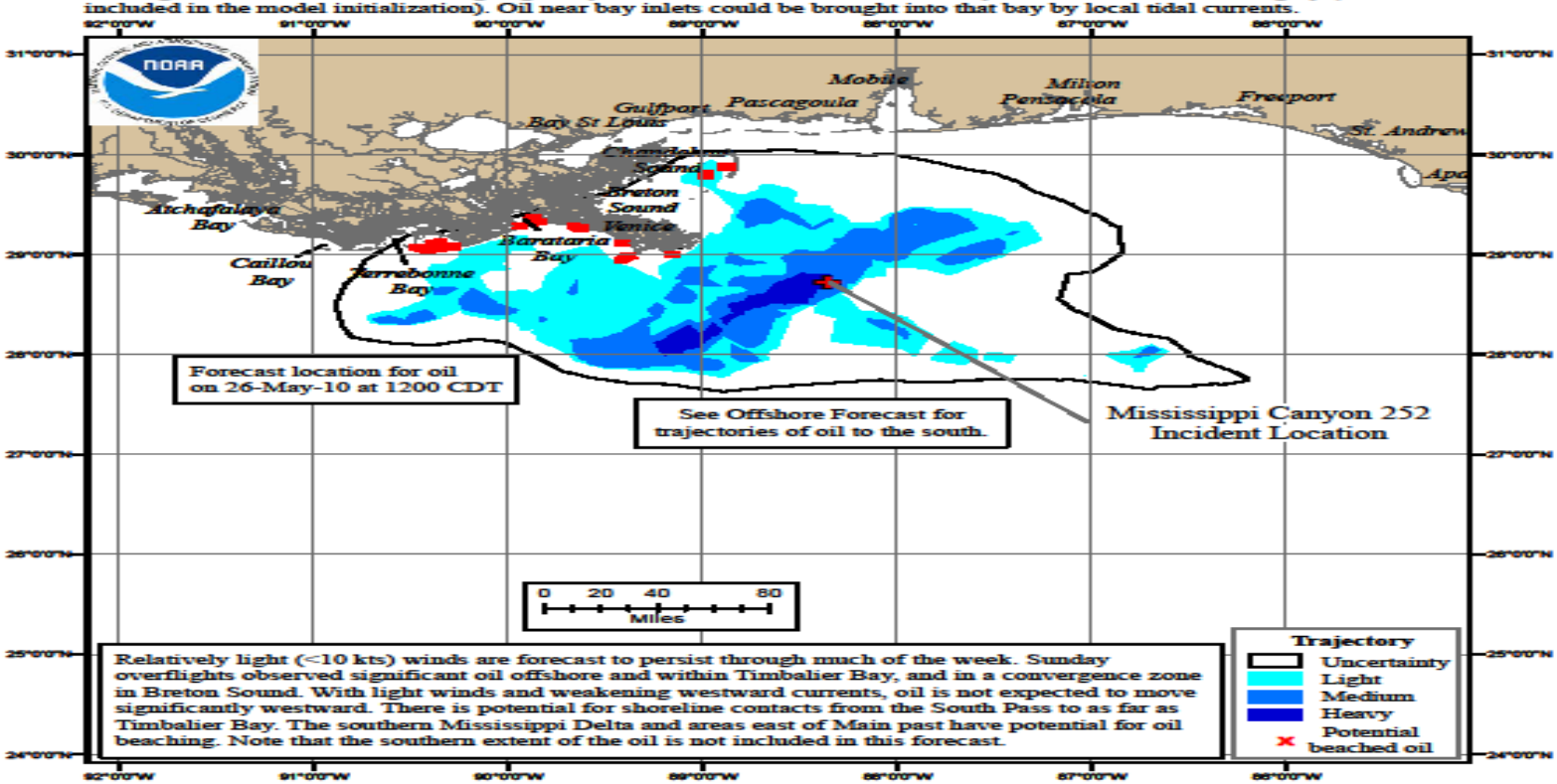
Nearshore Surface Oil Forecast Mississippi Canyon 252

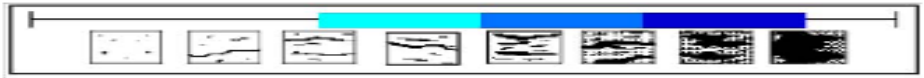
NOAA/NOS/OR&R

Nearshore

Estimate for: 1200 CDT, Wednesday, 5/26/10
Date Prepared: 2100 CDT, Sunday, 5/23/10

This forecast is based on the NWS spot forecast from Sunday, May 22 PM and the NWS/NCEP gridded NAM winds. Currents were obtained from several models (NOAA Gulf of Mexico, West Florida Shelf/USF, TAMU/TGLO, NAVO/NRL) and HFR measurements. The model was initialized from Saturday satellite imagery analysis (NOAA/NESDIS) and Sunday overflight observations. The leading edge may contain tarballs that are not readily observable from the imagery (hence not included in the model initialization). Oil near bay inlets could be brought into that bay by local tidal currents.

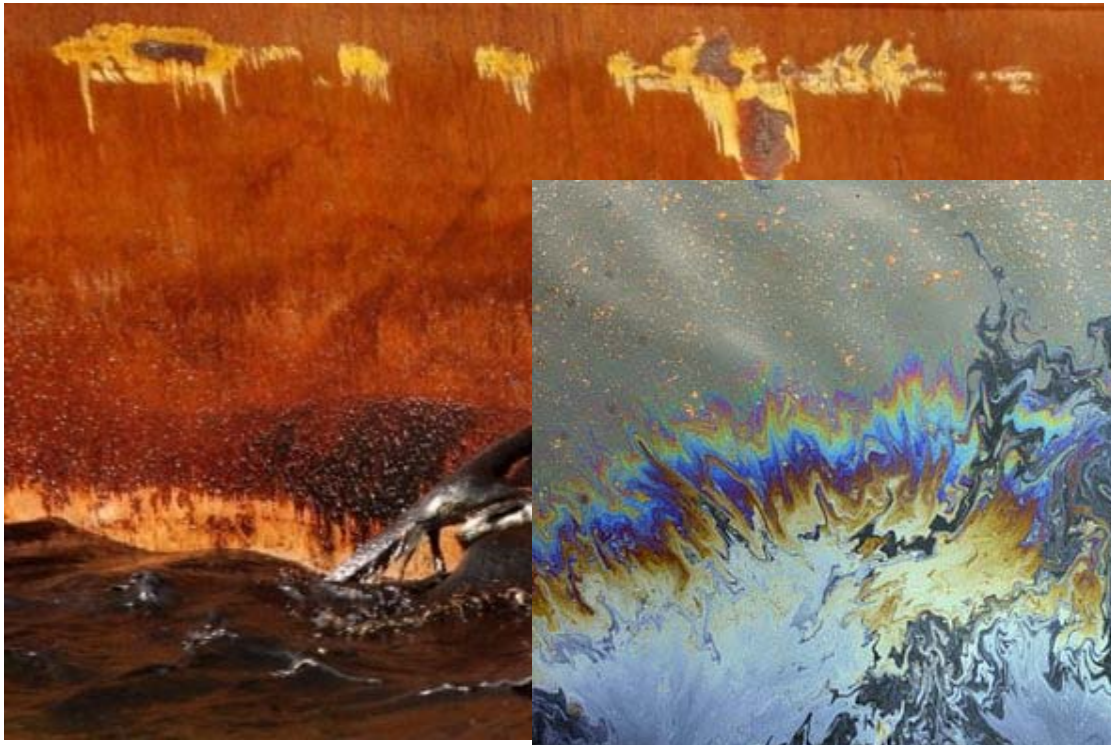


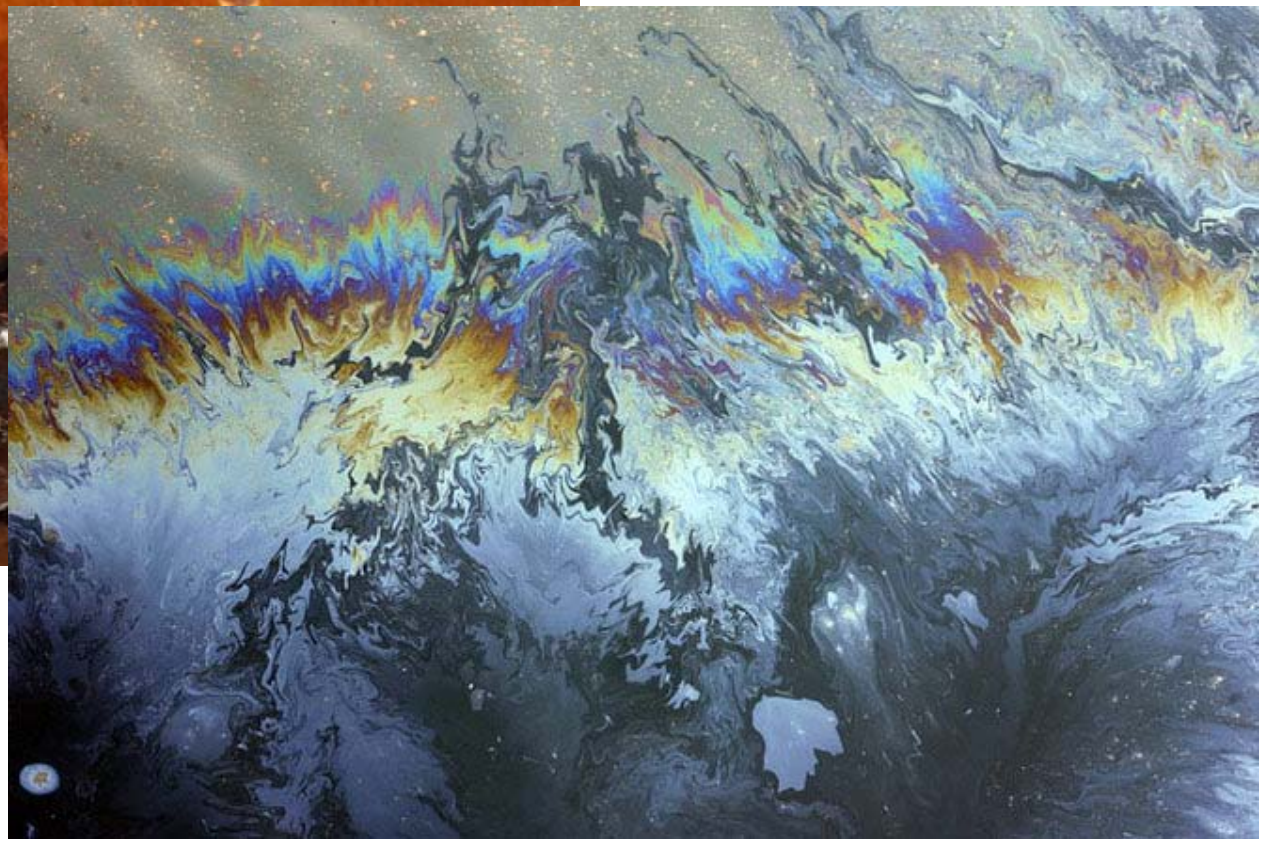


this scale bar shows the meaning of the distribution terms at the current time

Next Forecast: May 24th PM

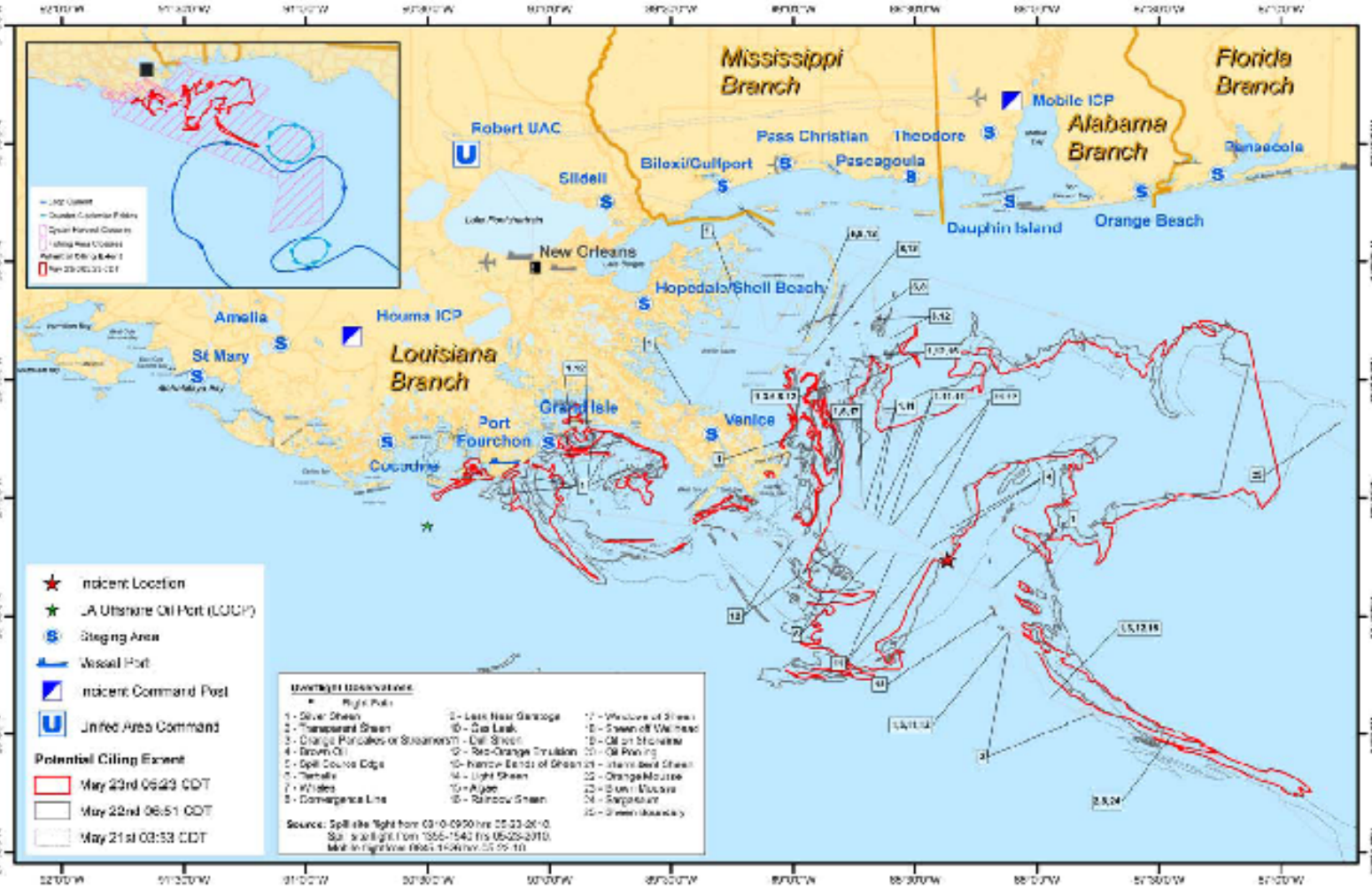
Oil Soaked Heron off the Louisiana Coast



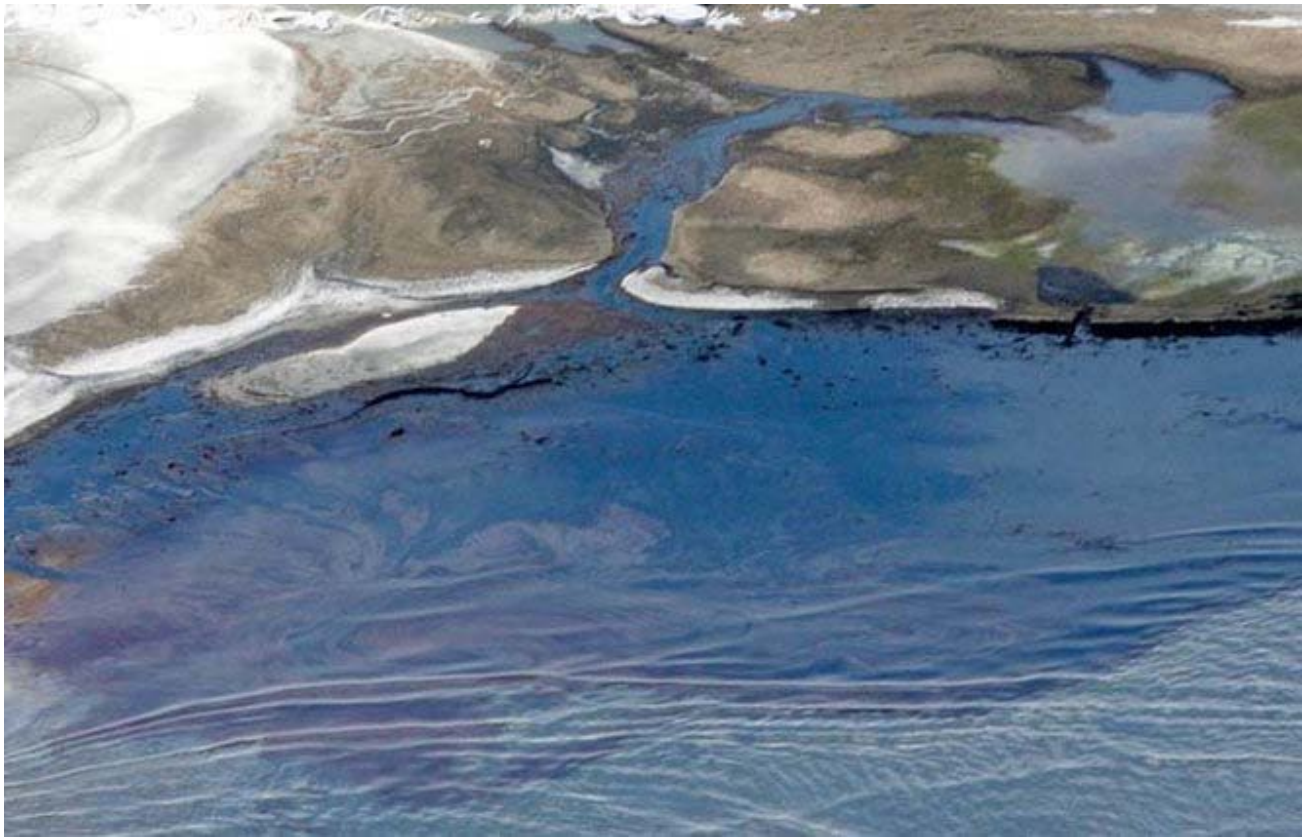


Deepwater Horizon MC252 - Situation Status Map

5/24/2010 0600 Hrs



Pooling of Crude Oil in the Coastal Tidewaters off the Louisiana Coast



NIEHS Gulf Oil Spill Response in partnership with OSHA and NIOSH

- NIEHS developed oil spill response training tool on April 29, 2010 as the spill expands in the Gulf of Mexico.
- NIEHS Staff work with OSHA and NIOSH as part of the Unified Command assessing worker safety issues and concerns.
- NIEHS deployed staff, subject manner experts and awardees for instructor training and worker protection outreach.

BP, USCG, OSHA, NIEHS, and NIOSH meet to assess worker protection issues in the BP Incident Command Center in Houma, LA on Tuesday, May 3, 2010.

Extending rescue extends risk for response workers

Rescue

Chaotic

Risk-taking

Short

Frenetic

Recovery

Planning

No risking lives

Longer than rescue

Paced

Clean-up

Normal cleanup

Risks assessed and understood

Incident Command System (ICS)

- **Used to manage emergency situations (like chemical releases)**

ICS uses:

- Unity of command (one person in charge)
- Span of control to manage personnel (3 - 7 people under one supervisor)
- Life safety code
- A modular system to manage resources (a system that can expand and contract with the emergency event)
- Common terms to promote seamless communication

Oil Spill Responders deploy from Venice, LA

Shoreline Cleanup Workers off of the Louisiana Coast

Beach cleanup worker in Louisiana

National Institute of Environmental Health Sciences
Oil Spill Cleanup Initiative

Safety and Health Awareness for Oil Spill Cleanup Workers

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
National Institutes of Health

NIEHS National Institute of Environmental Health Sciences

OSHA Occupational Safety and Health Administration

NIEHS Oil Spill Responder Training Tool: Key Health and Safety Messages

- Proper training is a key component of a safe response and cleanup.
- The oil and hazardous materials associated with the cleanup can be hazardous to human health.
- The hazards and issues covered in this training tool are dynamic and require vigilance and flexibility.
- The key to a safe response is attention to the safety issues of your work environment.

NIEHS Oil Spill Responder Training Tool

OSHA NIEHS Oil Spill Cleanup Training Tool

Module 1

Introduction to Oil Spill Cleanup

Module 1

NIEHS Oil Spill Responder Training Tool

Module 2

NIEHS Oil Spill Cleanup Training Tool

OSHA

Containment Boom

NIEHS Oil Spill Responder Training Tool

Module 2

NIEHS Oil Spill Cleanup Training Tool

OSHA

Module 2

Oil Spill Cleanup and Health Concerns

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Module 2

NIEHS Oil Spill Cleanup Training Tool

OSHA

How Do Chemicals Enter your Body?

- Skin contact/ absorption
- Inhalation
- Ingestion
- Injection

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WORKER EDUCATION & TRAINING PROGRAM

Oil-spill related human health research

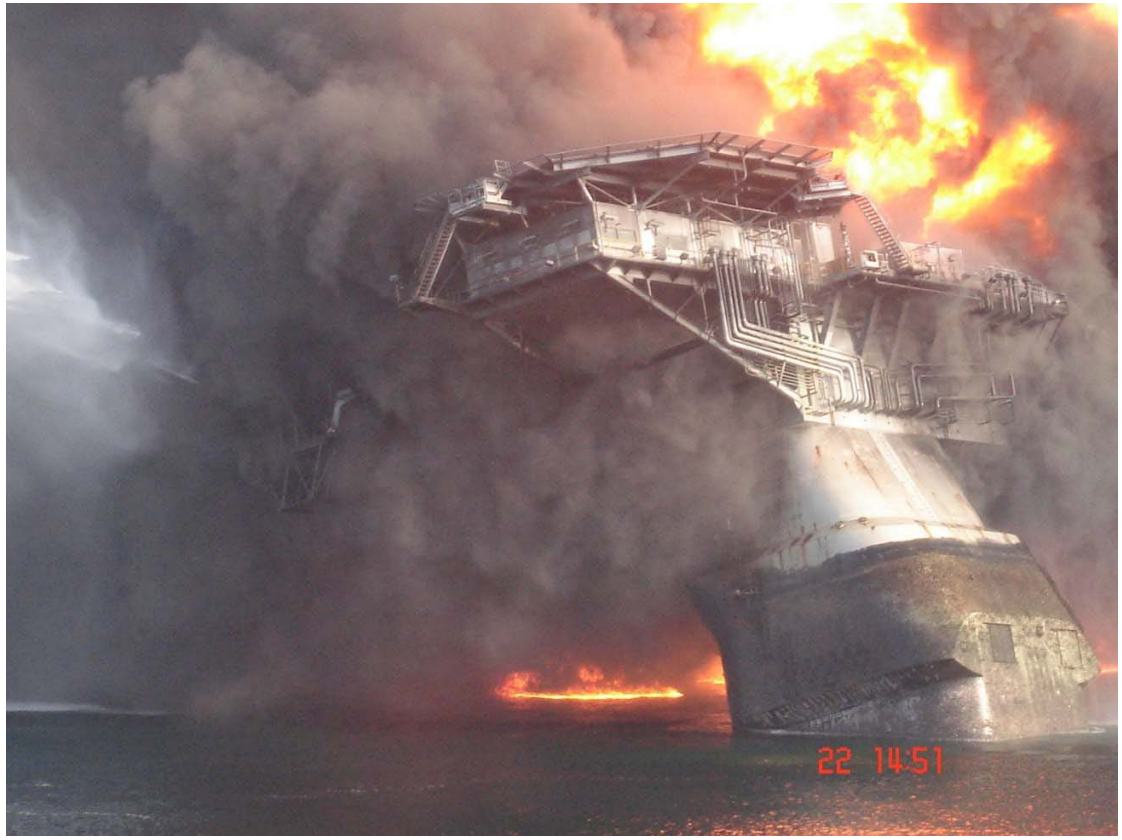
Potential areas of human health research inquiry:

- Initial target populations: off shore vessel crews and shoreline cleanup workers and early responders
- Focus on health effects of target populations with all potential exposures to Gulf Oil related contaminants, including clean-up efforts or other unique exposure scenarios due to early response
- Bio-specimen collection and monitoring from key populations of 'first' responders (i.e. workers, fishermen, volunteers)
- Collect or use environmental monitoring made available by Federal agencies of key environmental media: air, water, sediment, shellfish
- Evaluate the associations between emerging health effects in key populations along the coast who are involved in emergency response to this accident
- Develop risk communication campaign to relate key messages about health and safety issues that are related to environmental contamination and health effects evolving from oil spill

Research Concerns with Exposure to Crude Oil

Medical surveillance studies and human health exposure assessments related to the spill will be difficult due to the size of the spill area, potentially impacted shoreline area, and number of responding workers.

- **Identify health conditions and populations for medical surveillance and health assessment**
- **Dermal**
- **Respiratory**
- **Heat-related issues**
- **Non-exposure-related injuries**
- **Long-term health effects – what would these be (respiratory, neurological, carcinogenic, etc.)?**
- **Multiple substances and chemical mixtures including raw and weathered crude oil, dispersants, and combustion by-products.**

"Long-term studies should be evaluated as to whether they have the ability to detect any chronic health effects in workers based on the materials they are working with and recorded exposure durations."

In remembrance of the eleven Deepwater Horizon drilling rig workers who died at MC252. May they not be forgotten.