BP Gulf Oil Spill Response: Protecting the Responders

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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.

NIEHS Disaster Response to the World Trade Center

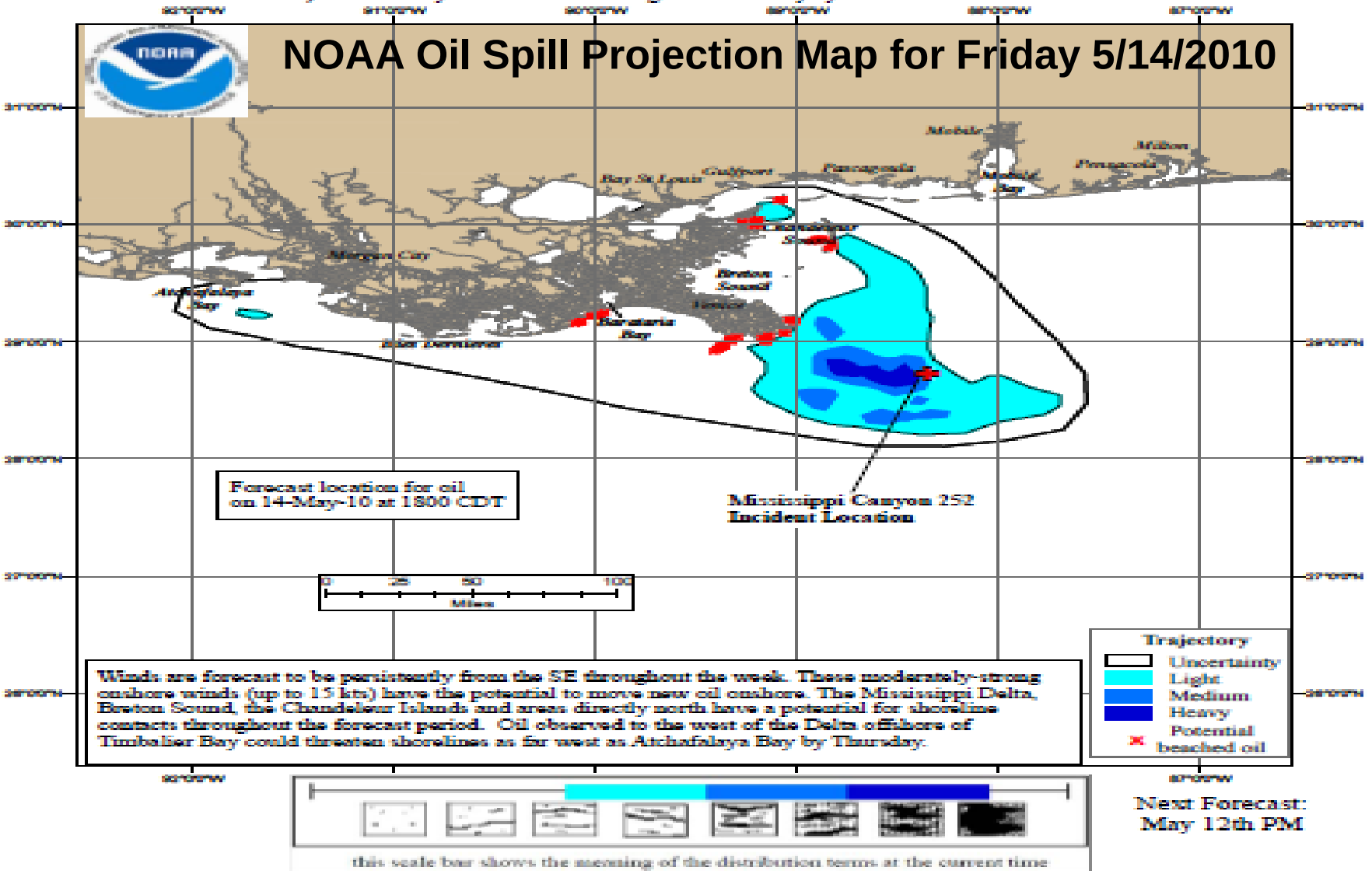
Immediate and sustained supplemental funding to support World Trade Center training response efforts:

- On-site training
- Provision and fit-testing of respirators
- Worker exposure monitoring
- Responder training course
- Consultation on the site safety plan

Trajectory Forecast
Mississippi Canyon 252

NOAA/NOS/OR&R
Estimate for: 1800 CDT, Friday 5/14/10
Date Prepared: 2000 CDT, Tuesday 5/11/10

This forecast is based on the NWS spot forecast from Tuesday, May 11 PM. Currents were obtained from several models (NOAA Gulf of Mexico, West Florida Shelf/USF, Texas A&M/TGLO, NAVO/NRL) and HFR measurements. The model was initialized from Tuesday satellite/aerial imagery analysis (NOAA/NESDIS and Transport Canada) and 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.



OSHA/NIEHS/NIOSH
Oil Spill Responder Hazard Assessment Team

Admiral Mary Landry, USCG Incident Commander meets with OSHA Assistant Secretary David Michaels and the hazard assessment team at 6 AM on Monday, May 3, 2010 in Roberts, LA.

WORKER EDUCATION AND TRAINING PROGRAM

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	Recovery	Clean-up
Chaotic	Planning	Normal cleanup
Risk-taking	No risking lives	Risks assessed and understood
Short	Longer than rescue	
Frenetic	Paced	

What is a Chemical Incident?

A chemical incident is an intentional or unintentional uncontrolled release of a toxic substance into the environment which results in (potential) harm to public health and the environment.

- Unintentional Release
  - Location Based
  - Fixed facility incident
  - Transportation Incident
  - Poor operations and Maintenance (O&M)
- Intentional Release
  - Sabotage, Terrorism
  - Secondary Devices
  - Preventative Measures/ Permitted Releases

All releases have the potential to harm you, your co-workers and others that may have been or become exposed!

National
Incident
Management
System

NIEHS training activation

through the Worker Safety & Health Annex

of the National Response Plan

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

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.

Module 2

NIEHS Oil Spill Cleanup Training Tool

OSHA

How Can You Protect Yourself from Hazardous Chemicals?

When dealing with health and safety hazards try to control them by using the hierarchy of controls

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WORKER EDUCATION & TRAINING PROGRAM

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

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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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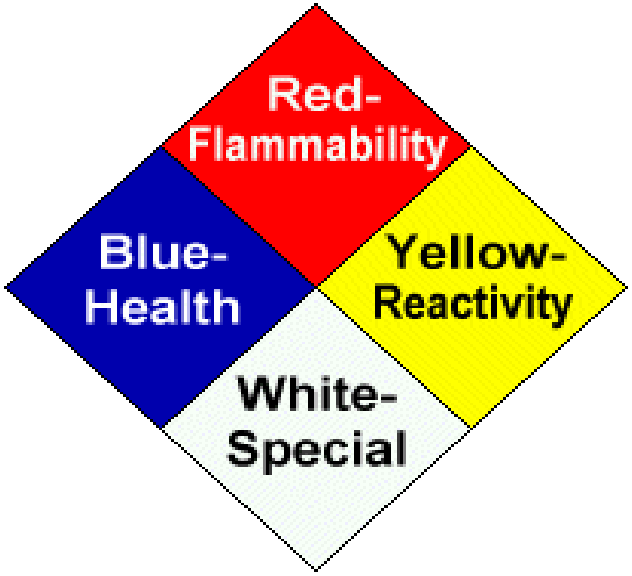
Hazardous Materials and Hazard Communication

- If an explosive device was used to deliver the agent, or if a sever crash or explosion was involved, it may have dislodged or damaged tanks, drums, pipes, and equipment which may contain hazardous materials not present in the initial portion of the incident.
- Do not handle unidentified or damaged containers-report these to your supervisor.
- Understand Material Safety Data Sheets (MSDS). Follow as appropriate.
- NFPA 704M warning labels may also be useful in the field.



- Specific Hazard Communication training is required for any potential chemicals that you may come in contact with.

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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OSHA NIEHS Oil Spill Cleanup Training Tool

Module 2

Health Risks of Weathered Crude Oil

- Potential dermatitis hazard from skin contact.
- Inhaling oil droplets/ oily particles put into the air during cleanup operations can be irritating to eyes, nose, throat and lungs.
- Evaporation that occurs during the first 24 to 48 hours after the spill greatly reduces inhalation hazards from the toxic volatile components, such as benzene.

NOTE: Even if air sampling shows no detectable levels or very low levels of volatile organic compounds (VOCs), there still may be health effects present.

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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.