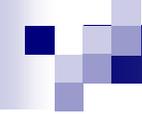


Developing a HASP for Disaster Response

Ideal vs. Reality

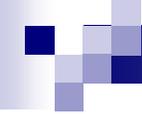
NIEHS Trainers Exchange

March 29, 2007



The HASP

- Required by 1910.120
- Must be Site Specific
- Must contain specific elements
- Requires daily pre-site entry briefings



Elements of a HASP

- Training
- Medical Surveillance
- Hazard and Risk Assessment
- PPE
- Site Control



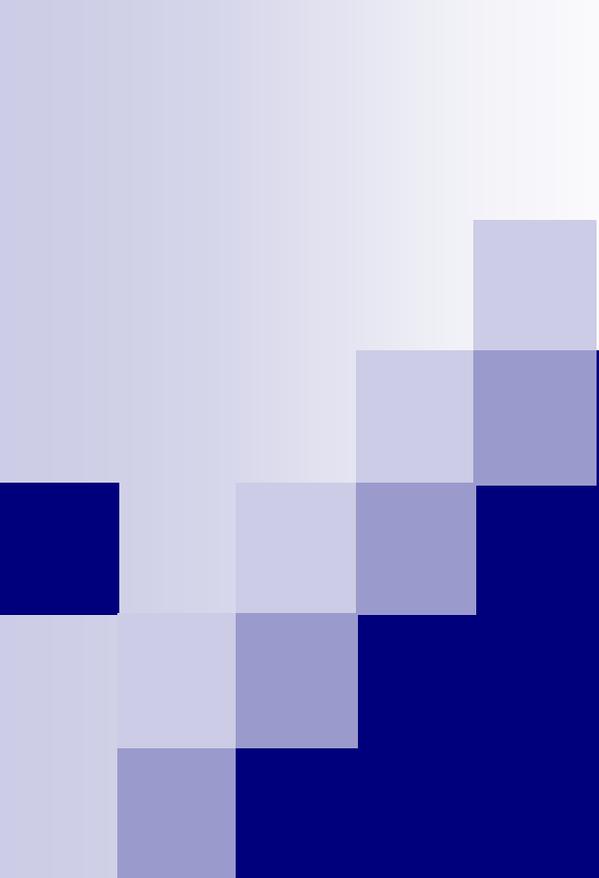
Elements of a HASP

- Air Monitoring Instruments
- Decon
- Emergency Response Issues
- Spill Response Techniques
- Confined Spaces



Enforcing the HASP

- Four State Spill
- 119 miles of contaminated shoreline
- 1600 spill responders
 - From varied backgrounds
- Multiple Agencies
 - Federal, State, Local, Volunteer



Athos I Oil Spill

Delaware River

November 26, 2004

General Spill Response Issues

- Applicability of the HAZWOPER Standard
 - National Contingency Plan requirements
 - 40 CFR 300.150 mandates HAZWOPER compliance
 - Applicable HAZWOPER provisions
 - Emergency response operations – paragraph q
 - Post emergency response clean-up – paragraph q (11)



Training Issues

- Just like haz-waste clean-ups, oil spill responders require 40 hour training
- Marine oil spill responders need additional training to work safely around the large number of additional workplace hazards
- A complete hazard assessment of the spill site for additional workplace hazard is needed

Additional Training Concerns

- Beyond what may be provided in a typical HAZWOPER course, these items are also critical for training workers:
 - Biological hazards
 - Drowning
 - Noise
 - Safe vehicle ops
 - Heat and cold stress
 - Dispersant hazards

The Athos I





The Athos I

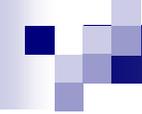
- Single hull tanker
- Registered in the Island of Cyprus
 - Owned by Tsakos Shipping and Trading Co.
- Carrying 325,000 barrels of heavy crude
 - Equals more than 14 million gallons
- Transporting its cargo from Venezuela to New Jersey

The Incident

- As the ship was being brought to Port it struck an underwater object
 - Destination was Citgo Petroleum Refinery in Paulsboro, NJ
- Vessel began to list 8 degrees to port
- Vessel begins to immediately leak its cargo

The Response

- There were several immediate responses to the incident
 - Notifications
 - Cargo transfer
 - Spill containment
 - Spill clean-up
 - Wild life rescue



Notifications

- Notifications were made immediately to:
 - United States Coast Guard
 - Marine Safety Office, Port of Philadelphia
 - State of New Jersey, DEP
 - State of Pennsylvania, DER

- Initial report – 30,000 gallons have spilled

Cargo Transfer

- Cargo transfer was an immediate effort made to stem the flow of oil from the damaged tanker
- Oil was transferred to:
 - Other tanks on board the Athos I
 - Barges brought to the scene





Spill Containment

- Immediate efforts were instituted to confine the spilled oil
- Use of booms and other confinement materials
- Weather played a huge issue





Spill Clean-up

- Clean-up included a variety of actions
 - Shore protection
 - Oil/water mixture recovery
 - Oily solid removal
 - Boom and absorbent placement
 - Vessel decontamination

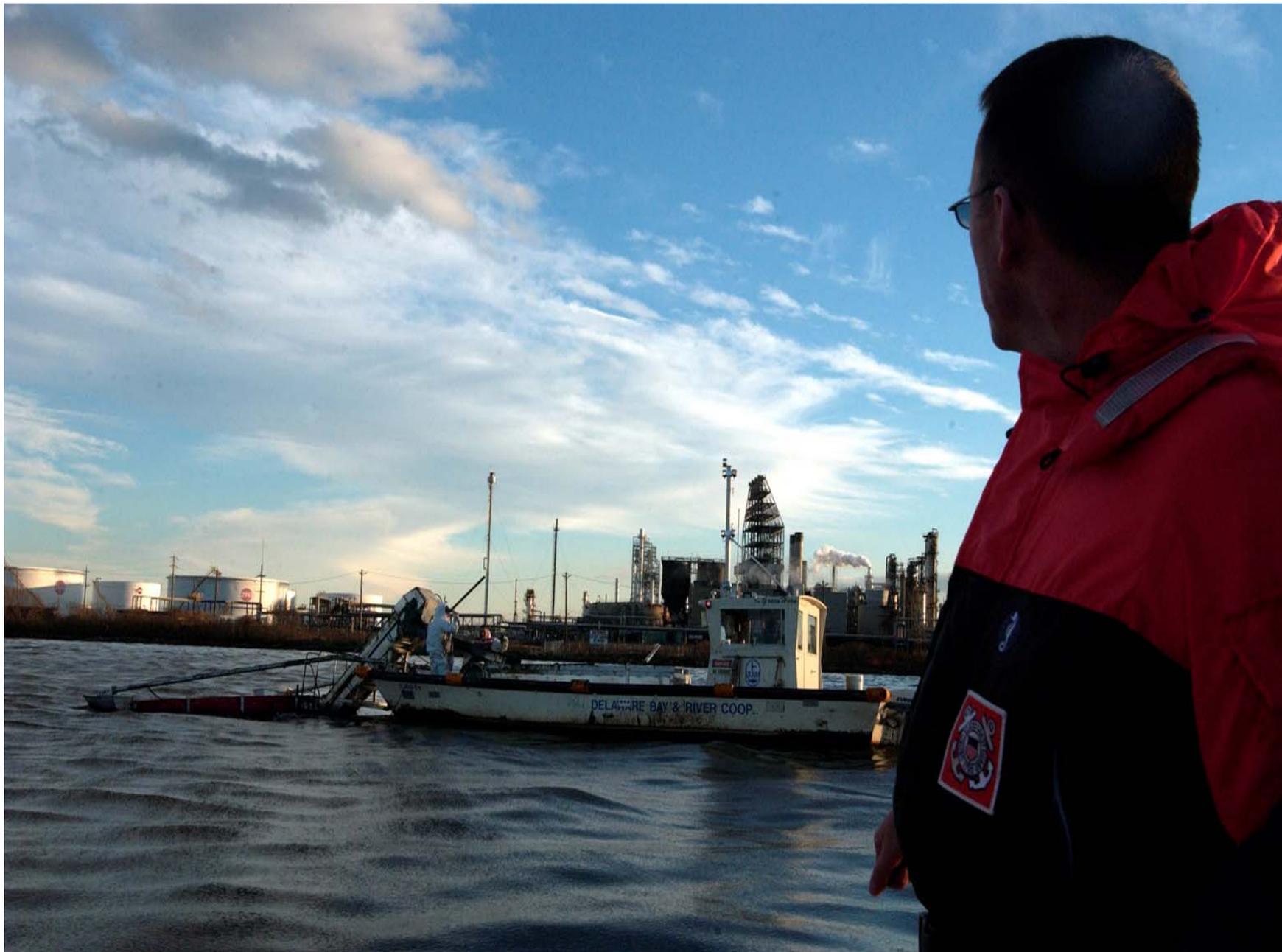
















Wildlife Rescue

- There was a significant amount of oil covered endangered waterfowl, including:
 - American Bald Eagles
 - Canadian Geese
 - Cormorants
 - Other species







DEC 10 2004



DEC 10 2004

The Cause

- The ***official*** cause of the incident has been determined
- There were several ideas
 - Submerged pipe
 - Lost anchor
 - Other debris













The Impact of the Spill

- Environmental Impact
- Monetary Impact
 - Clean-up costs
 - Shut down of harbor
- Effect on NJ nuclear power plant
- Fishing Industry
- Recreational Boating



11/27/2004



11/27/2004



11/27/2004



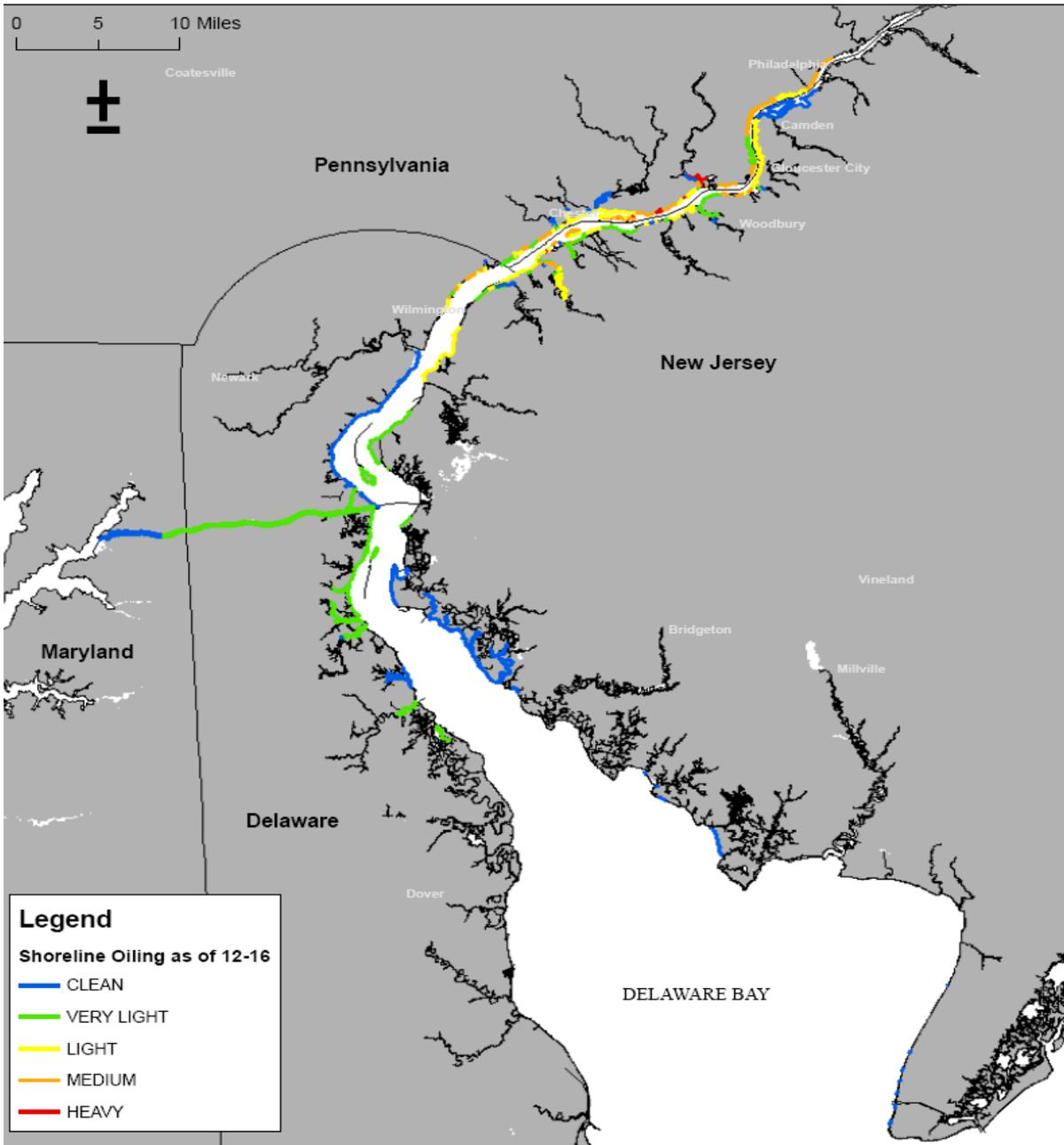
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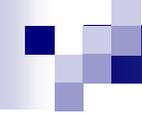
Immediate Impact and Response

- More than 1,600 responders are working at the Command Center and along the River
- 156 vessels are employed in the response effort
- 190 birds have been captured for cleaning
- 126 birds are deceased
- 124,000 feet of boom has been deployed
- 119 miles of shoreline contaminated



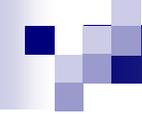
Status as of March 9, 2005

- 490 Responders are still at work
- 129,436 gallons of oil have been recovered
- 13,292 tons of oil contaminated solids have been collected
- 385 birds have been captured, cleaned and released



Status as of March 9, 2005

- 183 birds are deceased
- 38 facilities have been grossly decontaminated, with 7 underway
- 21 Marinas were contaminated and 11 have been fully decontaminated
- 80 recreational boats have been deconned



Status as of March 9, 2005

- Oil recovery operations continue, weather permitting throughout the winter
- Unified Command anticipates clean-up operations to extend through the end of the summer

Closure

- As of May 26, 2006, the spill has been declared officially cleaned up
- Total cost of the spill clean-up:
 - \$160 Million