

Murphy Oil USA Refinery Spill Chalmette & Meraux, LA



U.S. EPA Region 6
Response and Prevention Branch
Oil Team

May 2006



Murphy Oil Spill Time Line

- August 29 - Hurricane Katrina hits south Louisiana
- Waters from surge flood St. Bernard Parish and Meraux, LA from North
 - Mississippi River Gulf Outlet (MRGO)
 - Lake Borne
- Murphy Refinery, entire tank farm under water
- Overflights observe no oil spill

Murphy Oil Spill

- EPA and Murphy overflights on **August 30** find no spill
- Flood waters over dikes
- Levees on north side of Chalmette and Meraux opened, drain Parish.
- Waters begin to recede



Murphy Oil Spill

- September 3 - Murphy Refinery worker and local resident discovers oil spill in neighborhood
 - Finds failed berm at Tank 250-2
 - Sandbags berm
- Murphy notifies NRC
- 25,110 bbls spilled
- Initial estimate 1800+ homes oiled



Murphy Oil Spill

- Tank 250-2 is 250,000 bbl
- Tank reported to have only 85,000 bbl
- Tank floated, moved 33' to east, 4' to north
- 25,000 bbl oil spilled
 - Mixed Arabian Crude
 - 38° API Gravity
- City canals and over 1 sq mile of neighborhoods oiled



Murphy Oil Spill

- EPA FOSC first federal official on site, on Sept. 3 - orders response/cleanup by Murphy
- Spill in USCG Area of Responsibility - USCG assumes lead for oversight
- EPA/USCG Memorandum of Understanding (10/08/05)
 - To maintain span of control and optimize critical resources in southern Louisiana
 - USCG responsibility for oversight of clean up of waterways
 - EPA responsibility for oversight of long-term remediation, clean up on land, residential areas, non-commercial waterways

Murphy Oil Spill

- Murphy responds immediately
- Begins pumping out containment, canals
- ~72% of oil recovered (~18,000 bbls)

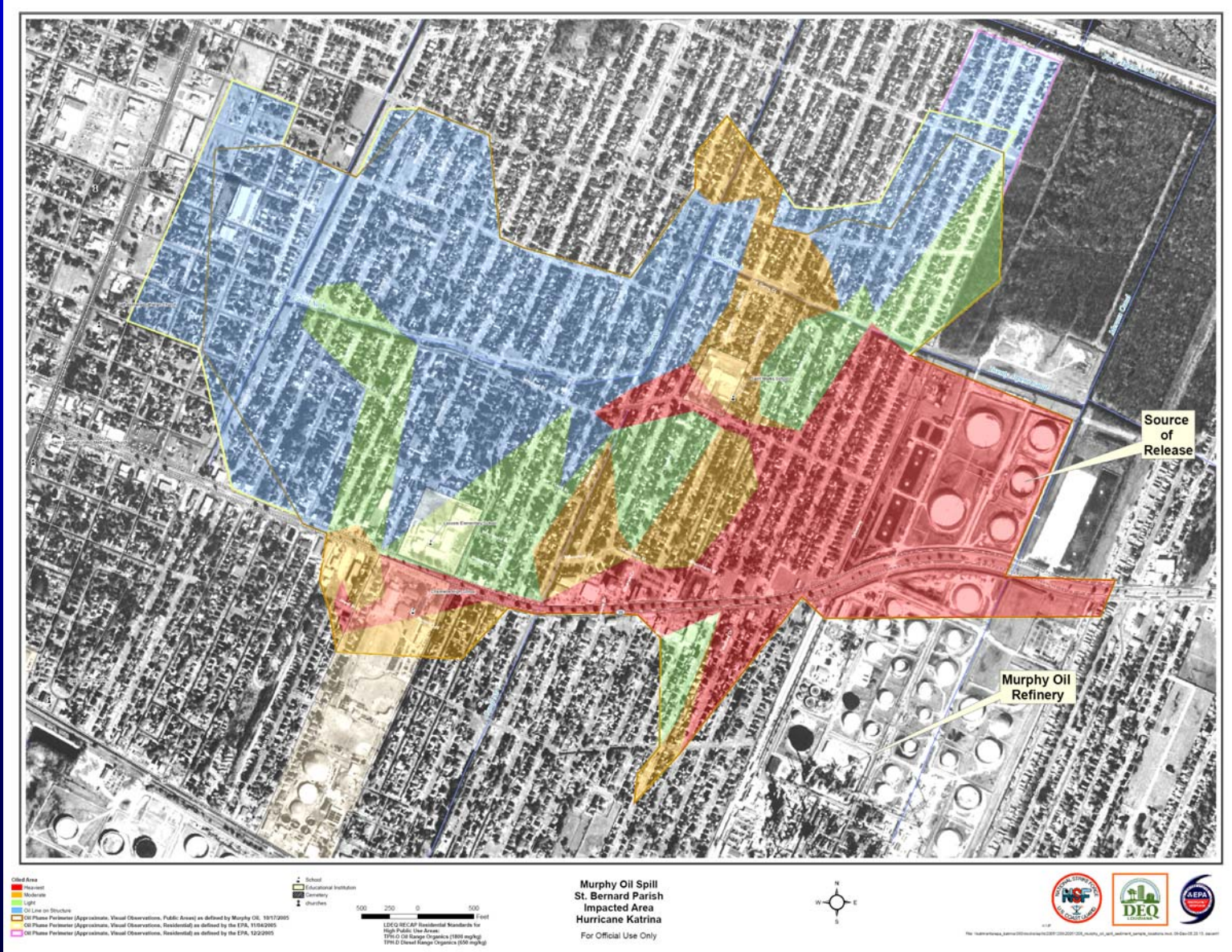


Murphy Oil Spill

- Murphy begins residential cleanup
- Public areas and streets sanded, oil removed
- Boom maintained in canals for residual oil capture
- Oversight lead transitioned to EPA 11/02/05
- Initial visual footprint of spill established



Murphy Oil Spill



Murphy Oil Spill Impacted Area

Murphy Oil Spill

- Federal & State oversight of clean up, in Unified Command:
 - Environmental Protection Agency (EPA)
 - Louisiana Department of Environmental Quality (LDEQ)
- Health Risks assistance from Federal & State Health agencies
 - Agency for Toxic Substances and Disease Registry (ATSDR)
 - Louisiana Dept. of Health and Hospitals (LDHH)

Murphy Oil Spill

- Site very complex on several levels
 - NRP, ESF-10 and EPA/USCG zones of jurisdiction
 - 2 EPA/USCG MOUs (response and enforcement)
 - CWA/OPA vs Stafford Act authorities
 - Clean up standards (State vs Federal)
 - Using State RECAP performance standards (Risk Evaluation/Corrective Action Program)

Murphy Oil Spill

Complexity (continued)

- Class Action lawsuit against Murphy
- Restrictions from Federal Court
 - Restricting Murphy's communication with property owners
- Privacy Act (release of homeowners data to non-federal entities)
- Other EPA work in Parish (HHW, landfill fires)
- Access problems

Murphy Oil Spill

- Coordination and Public Relations:
 - FEMA (need to place trailers in affected area)
 - St. Bernard Parish Council and public meetings
 - Staff FEMA Disaster Recovery Center (community relations)
 - 200,000 fact sheets, flyers
 - Call center, 800 number, 1000's of calls
 - Work in community, neighborhoods, churches, schools

Murphy Oil Spill Access

- Access problem
 - Homes of those suing not accessed
 - Many homeowners cannot be located
 - Murphy cannot communicate with anyone unless they've settled or opted out of lawsuit
 - FEMA Flood maps delay causing uncertainty, homeowner delay in clean up
 - Parish plans for future, expanded roads, etc cause homeowner delay

Murphy Oil Spill

Access (continued)

- Results of access problems
 - Cannot clean up whole contiguous blocks of neighborhoods, or even entire affected area
 - The “island effect” - oiled homes next to cleaned homes
 - Don't know entire universe of contaminated properties
 - Work volume drastically reduced, affects Murphy resources and scheduling
 - Keeping work crews and equipment without demobing/re-mobilization, etc.

Murphy Oil Spill Process For Clean Up

- Phase 1
 - Property Owners call Murphy, request clean up
 - Signed access from property owner
 - Wipe samples for oil signature (other sources in area)
 - Sediment samples obtained on interior and exterior of home to determine levels of TPH (ORO, DRO) relative to State RECAP standard
 - Exterior surfaces of homes washed

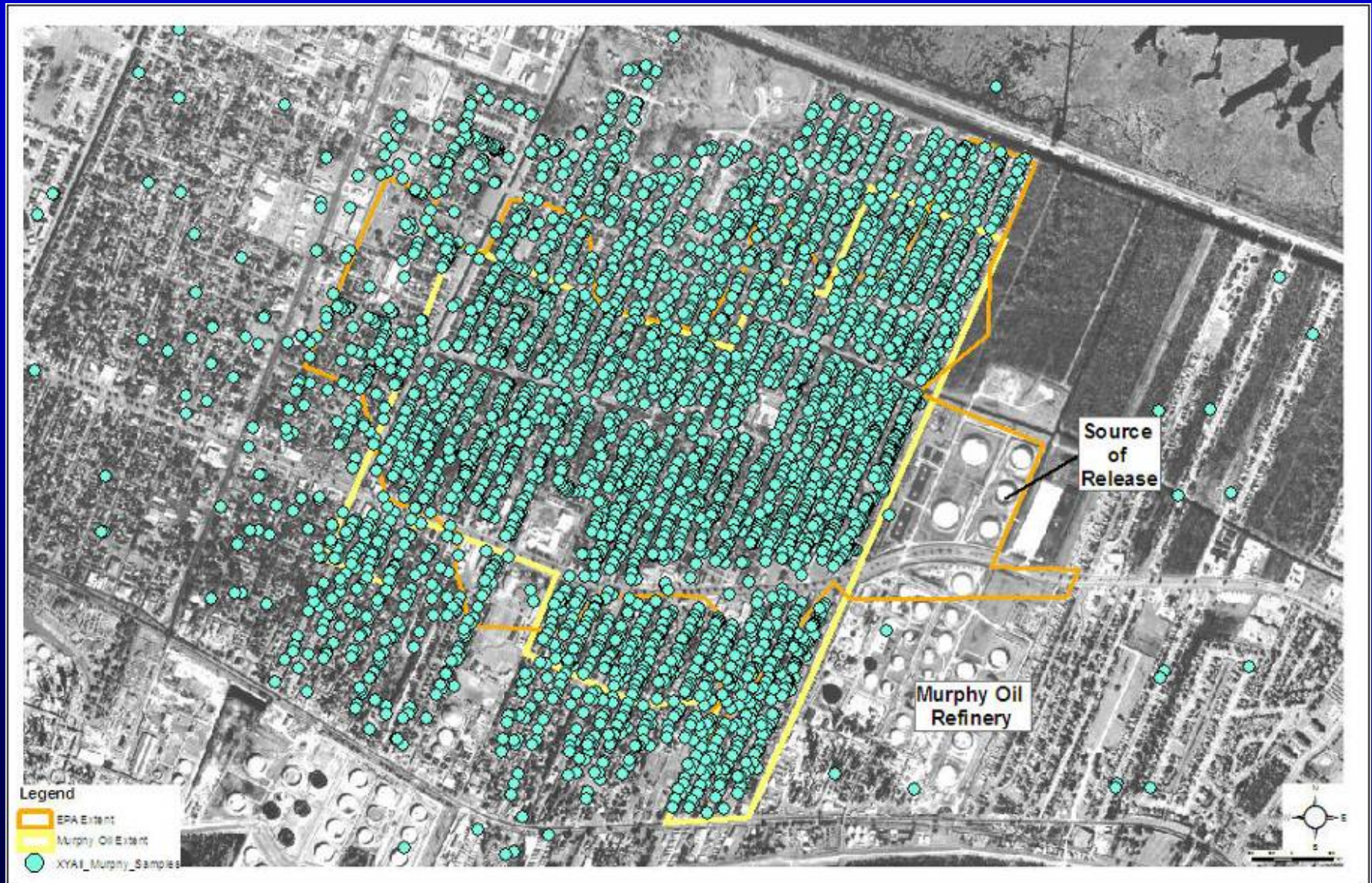
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Murphy Oil Spill Process For Clean Up

- Phase 1
 - EPA conducts oversight of all Murphy actions
 - EPA obtains 10% splits of sediment samples
 - Samples run independently of Murphy
 - Samples run using LDEQ RECAP (TPH) standard
 - Diesel Range Organics
 - Oil range Organics

Murphy Oil Spill



Sample Locations (>4500)

Murphy Oil Spill



Murphy Oil Spill Process For Clean Up

- Phase 2
 - Home owner guts house to studs on own dime
 - Murphy removes oiled debris, transports to industrial landfill
 - Home owner calls Murphy, requests interior cleaning, grants second access
 - Murphy power washes interior,
 - If above RECAP, yard excavated & replaced

Murphy Oil Spill

- **>1335** home exteriors washed
- **333** homes interiors completed
- **>7650** samples taken from **4545** addresses
- **795** EPA split samples taken and sent to lab for separate analysis
- Oil removal in canals complete
- **> 284,700** cu. yds of debris removed



Murphy Oil Spill

Health Risks

- Determined by health agencies, LDHH & ATSDR
- ATSDR Health Consults
 - November 9, 2005 - advised of health risks
 - December 9, 2005 - For properties sampled:
 - no short term risks
 - no long term health risks for most properties
 - Health risks at some properties

Murphy Oil Spill

Health Risks

- Other health risks:
 - Mold
 - Structural problems
 - Snakes, rodents
 - Debris, puncture wounds
 - Contaminating/transporting oil from adjacent non-oiled properties onto yours (or trailer)



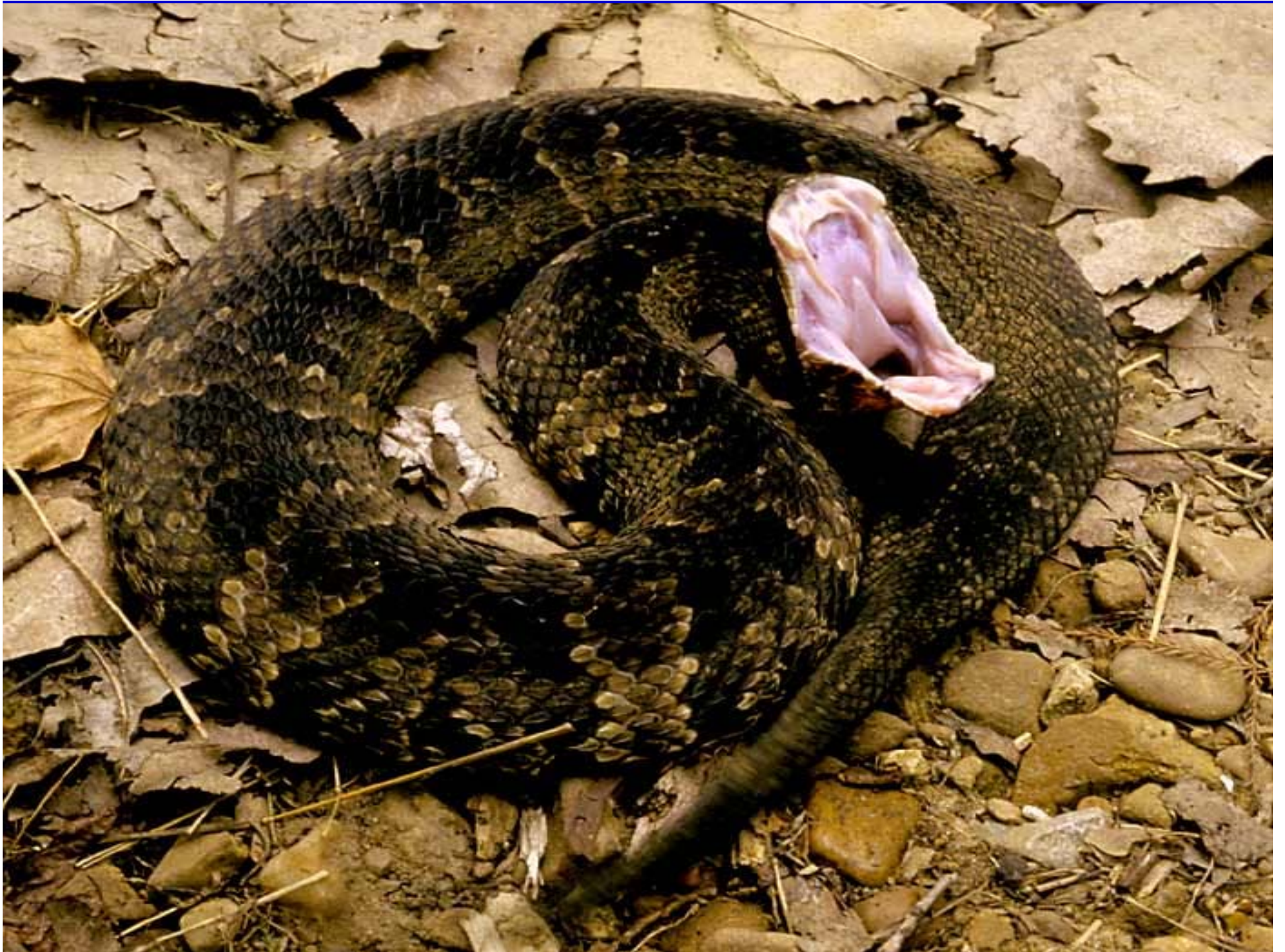
Hurricane Katrina/Rita Response

Health and Safety Orientation





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Murphy Oil Spill

DISCUSSION &
QUESTIONS

