

THE DEPARTMENT OF ENERGY'S SCIENTIFIC RESPONSE TO THE OIL SPILL

Secretary Chu and the Department of Energy's National Laboratories are providing round-the-clock scientific support to help inform strategies to stop the BP oil spill. Secretary Chu and his team of scientists are brainstorming ideas about the most effective scientific and engineering approaches to the problem, providing expert advice and technical support validation, testing assumptions and making engineering calculations to help BP think through their approach. The Department of Energy is also offering its resources and technical assistance to the Flow Rate Technical Team led by MMS, NOAA and USCG.

- At the request of President Obama, Secretary Chu has assembled a team of scientific experts from inside and outside of government to work on the problem, and is engaging with these experts and BP officials on a daily basis.
- The Department's laboratories are providing on-the-ground technical, engineering and scientific support at BP's Houston Headquarters. At any given time, those labs have at least 6-8 experts on the ground supporting the response. To date, more than 150 personnel from the National Laboratories have directly supported these response efforts.
- Experts from the National Laboratories provided diagnostics of the damaged blowout prevention equipment on the ocean floor through radiography (analysis, design and fabrication efforts) and with innovative, nonintrusive approaches for measuring pressure at various points in the system. The Department has provided BP with high-quality 2D radiography that BP personnel are saying breaks all records for deep water radiography--breaking the previous record by more than 4,000 feet.
- The Laboratories have also provided BP with structural analysis of the failed riser. This allows various drill pipe, casing and riser scenarios to be evaluated. They also predicted the structural integrity of the riser kink under different flow scenarios and used sophisticated analysis of computer-estimated fluid flow inside the nonfunctioning apparatus.
- The Department of Energy is supporting the National Infrastructure Simulation and Analysis Center (NISAC), which has been modeling the economic costs and societal impact of the oil spill on energy and other industries in the Gulf and along the coast to support the response efforts of the National Incident Commander and the Unified Area Command. NISAC is a modeling, simulation, and analysis center within the Department of Homeland Security (DHS) that leverages national expertise to address infrastructure protection.
- Using the Interagency Modeling and Atmospheric Assessment Center (IMAAC), the Department's scientists provided smoke plume predictions for the original fire on the platform and surface-oil test burns.