

NETL's Critical Role in the Deepwater Horizon Oil Spill Response and Investigation

NETL researchers provided essential expertise and research that helped stop the 2010 Deepwater Horizon oil spill and support subsequent federal investigations.



Image from the response to the Deepwater Horizon Oil Spill.

The 2010 Deepwater Horizon oil spill – which released 130 million gallons of oil into the Gulf of Mexico over 87 days – triggered an urgent response from several federal agencies to help stop the spill. NETL's expertise was immediately essential to the response, spotlighted through the Lab's leadership and participation in the Incident Command's Flow Rate Technical Group. The team, led by George Guthrie and consisting of NETL and other federal researchers, provided critical data and estimates that ultimately helped successfully shut in the well and stop the oil spill. Essential to these decisions were insights from NETL's computational fluid dynamics experts that provided highly accurate estimates of the flow rate and spill size, and innovative research into gas hydrate formation from the high-pressure water tunnel facility. This team was awarded the 2010 DOE Secretary of Energy Achievement Award and several researchers received Director's Awards for Exemplary Service to the Nation from the U.S. Geological Survey for their efforts.

Following the spill, NETL researchers continued to provide critical expertise and forensic analytics to support federal investigations into the spill. NETL's Barbara Kutchno provided forensic analyses on the well's cement, earning a certificate of commendation from the U.S. Department of Justice, and Frank Shaffer and his team provided evidence on oil flow composition and volume through the innovative coupling of high-speed imagery and particle-image velocimetry.