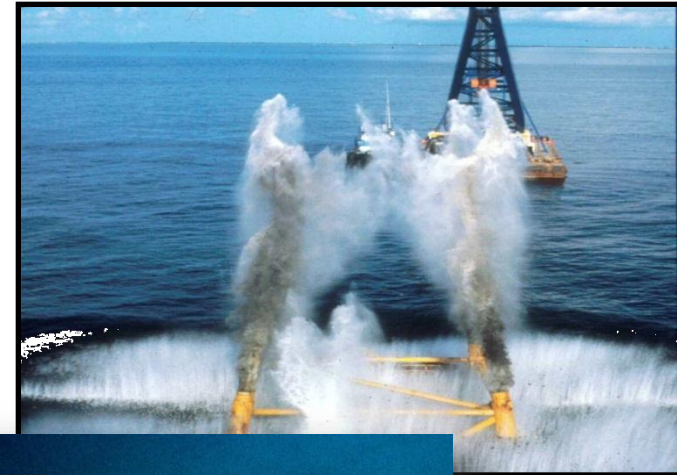
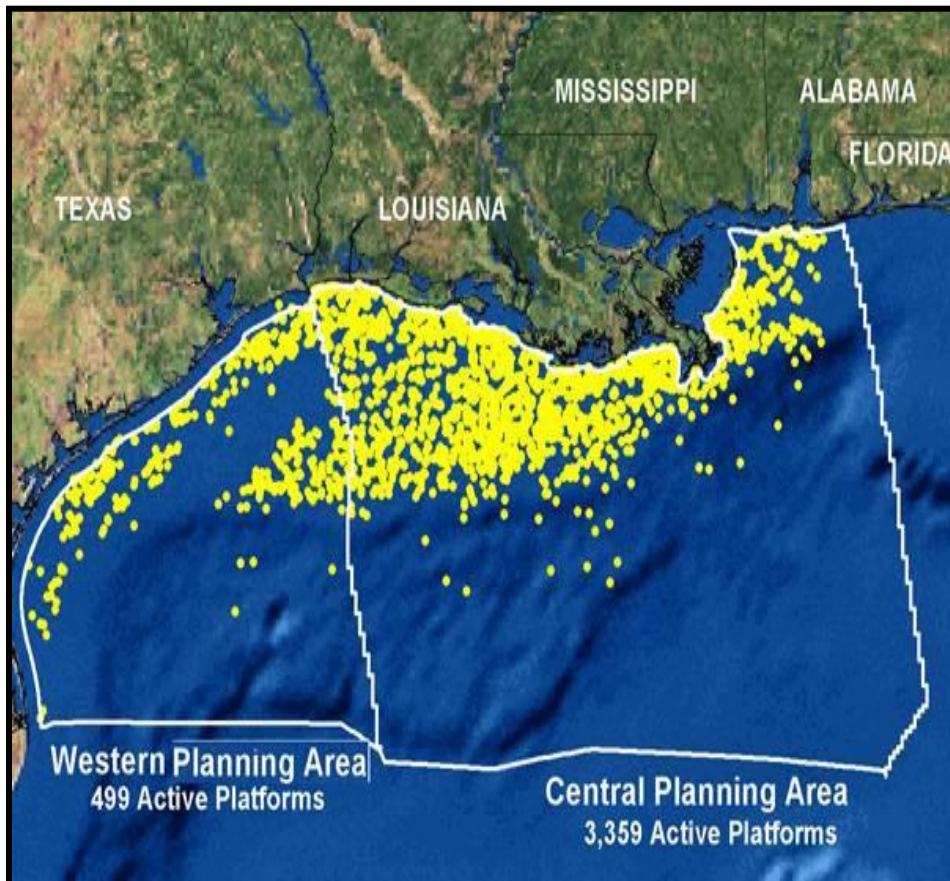


Pressure Wave and Acoustic Properties Generated by the Explosive Removal of Offshore Structures: Potential Effects on Protected Species



BSEE Information Need:

- 1) Current Marine Mammal Protection Act authorization expires July 2013.
- 2) Additional data will enable BSEE to update the acoustic model to more accurately predict acoustic energy/pressure from explosive removal of structures.



Date Information is Required:
ASAP

Tentative Ranking: 2



Two Critical Components of OCS Explosive Use Need to be Better Quantified to Help Develop Operational Capabilities and Enhance Environmental Oversight:

- 1) **The Level of Acoustic Energy/Pressure at which Marine Protected Species can be Harmed** (*Primarily Related to Consultation and Rulemaking Responsibilities under ESA/MMPA*).
- 2) **The Actual Levels of Acoustic Energy/Pressure Released During Explosive-Severance Activities.**

Data collected:

2 Open-Water Detonations at 5 lbs. each, and
20 Severance Detonations (*Varying from 15-30ft BML*), including an “Internal” Target (i.e., a Well Severed within a Standing Caisson) and a “Subsea-Terminated” Target (i.e., a Caisson Standing 4-ft AML with a Severance Charge Set/Detonated 20 ft. BML)



Study Objectives:

- 1) quantitatively measure the underwater pressure waves and acoustic properties generated by the detonation of explosives used for offshore structure removals;
- 2) investigate the reputed dampening effects of the structure and surrounding sediments; and
- 3) provide BSEE with scientifically valid data to update modeling so that the “take” harassment impact zones of protected species may be more accurately calculated.



Study's Methods:

- 1) Open water detonations at offshore structures
- 2) In-situ measurement of pressure waves and acoustic energy associated with these explosions
- 3) Incorporation of new data into modeling efforts