

## **Broad Agency Announcement (BAA) Number E12PS00012 for Proposed Research on Oil Spill Response Operations in the US Outer Continental Shelf**

### **DESCRIPTION:**

The U.S. Department of the Interior, Bureau of Safety and Environmental Enforcement (BSEE), solicits White Papers of not more than five (5) pages in length, for specific areas of interest to the BSEE Oil Spill Response Research (OSRR) Program which includes oil spill planning, preparedness, containment, monitoring, recovery, treatment, and response in the U.S. Outer Continental Shelf (OCS). When appropriate, the research shall be conducted consistent with prior research. For a summary of research recently performed, visit [http://www.bsee.gov/Research-and-Training/Oil-Spill-Response-Research-\(OSRR\).aspx](http://www.bsee.gov/Research-and-Training/Oil-Spill-Response-Research-(OSRR).aspx). Interested parties are encouraged to view the information presented on the site when considering submitting White Papers.

### **BACKGROUND:**

The BSEE OSRR Program is requesting White Papers to be submitted in accordance with the terms of this announcement. Authors of selected White Papers will be requested to submit full proposals. Proposals selected for funding by BSEE may receive funding from Fiscal Year (FY) 2012. The BSEE anticipates that \$5,000,000 may be available for the initiation of new research addressing topics identified through this announcement. The BSEE does not anticipate any one award exceeding \$1,000,000. NOTICE: The BSEE may share the White Papers with other organizations for review. Potential contractors shall notify the BSEE if they do not want their White Papers/proposals shared outside of BSEE. The BSEE anticipates awards resultant to this announcement will be made on a Firm Fixed-Price (FFP) basis.

**OBJECTIVES:** The topics for the FY 2012 oil spill response research funding should be limited to the following topics:

**1. Feasibility of Conducting Subsea Dispersant Research at Ohmsett** – Ohmsett, the National Oil Spill Response Test Facility, located in Leonardo, New Jersey, is a government owned facility. It is the largest outdoor saltwater wave/tow tank facility in North America where full-scale oil spill response equipment testing, research, and training can be conducted with crude oil. Oil spill response researchers need to have an appropriate venue to develop and test technologies pertaining to the use of subsea dispersants at various water depths, dosage rates, oil discharges rates, and pressures. BSEE would like to explore the feasibility of upgrading the Ohmsett facility to accommodate those needs. This project would include determining the necessary capabilities to conduct subsea dispersant research; the feasibility of upgrading Ohmsett to house those capabilities; and an estimation of costs associated with implementation of those upgrades.

**2. Ice Month at Ohmsett** – Recovery of oil in ice presents unique challenges. In order to stimulate development of new mechanical and/or chemical technologies, BSEE plans

to conduct an Ice Month at Ohmsett during the winter of 2012/2013. BSEE will pay for the costs associated with tank preparation, which would include filling the test area with broken ice, and usage. Those wishing to take advantage of this opportunity are advised that they must pay for travel expenses of their personnel and transport of their device to the Ohmsett facility. It is anticipated that each device/technology test that was selected to participate in this activity would involve not more than five days of tank time. Device/technology developers who would like to test their devices at Ohmsett must submit a White Paper with information about their device/technology, including any tests previously conducted, and a clear statement about how their device/technology will advance the state of the art of Arctic spill response.

**3. Dispersant Use Impact on Worker Safety** – Reports from the Deepwater Horizon oil spill response effort indicate that the use of dispersants, in both surface and subsurface applications, had an impact on the surface Volatile organic compounds (VOC) levels. Further research is needed in this area to clearly quantify these potential impacts and to develop recommendations to optimize dispersant use for VOC control and worker safety.

**4. Subsea Chemical Dispersant Research** – The Deepwater Horizon incident introduced the operational use of dispersants for subsurface injection in deepwater and ultra deepwater. BSEE is interested in additional research in this topic in the areas of:

- Testing and evaluation of methods, dispersant application ratios, and injection nozzle designs to optimize subsea dispersant application directly into a blowout plume, wellhead, blowout preventer, flowline, or pipeline regardless of water depth.
- The effects of ambient high pressure, high oil temperature, cold water, and the presence of methane and sediment on dispersant effectiveness.
- Arctic implications of subsea dispersant use.

**5. Methods to Increase Encounter Rate for Skimming and *In Situ* Burn Operations**  
BSEE is seeking White Papers that address methods to increase the amount/thickness of oil on the surface of the water in the immediate area of skimming and/or burning operations. These methods could involve the use of chemicals, new/enhanced mechanical systems, or new/enhanced operational procedures.

**6. Mechanical Technologies to Facilitate and Improve Oil Spill Containment and Recovery Under Arctic Conditions** – BSEE is seeking White Papers on the testing and evaluation of new or innovative mechanical technologies that will facilitate and improve the containment, recovery, and processing of spilled oil in cold water and/or broken ice conditions. This includes full scale prototype, commercial, and non-commercially available technologies, and/or adaptations of existing technologies to contain, recover, and process oil in a range of conditions that include cold water and/or broken ice conditions. White Papers should focus on the environmental and oceanographic conditions typically found in the Alaskan Beaufort and Chukchi Seas, where oil exploration and development activities are planned or are currently taking place. Incorporation/consideration of traditional knowledge into any research project that involves oil spill response under Arctic conditions is encouraged.

**7. Remote Sensing Techniques**- BSEE is seeking White Papers that address the use of various remote sensing techniques to improve and facilitate the efficiency of various response countermeasures (mechanical containment and recovery, in situ burning, and the use of dispersants) during an oil spill. These techniques could encompass a variety of methods and be hosted on a variety of platforms. White Papers should include information on equipment capabilities and limitations, data download and dissemination capabilities, real-time data communication capabilities with response assets, and integration of data into the overall response control systems. Technologies/techniques that have previously undergone some degree of development should clearly indicate how funding by BSEE will advance the state of the art.

**8. Mechanical Technologies to Facilitate and Improve Surface Oil Spill**

**Containment** - BSEE is seeking White Papers on the testing and evaluation of new, or innovative mechanical technologies that will capture and contain oil on the water's surface. This includes full-scale prototype, commercial, and non-commercially available, and/or adaptations of existing technologies. White Papers should focus on surface containment systems that can be rapidly deployed at a spill source, can contain oil in a variety of sea states and wind conditions, use new or improved anchoring methods, minimize oil loss due to entrainment, can withstand heavy loading from large volumes of oil, and/or designs that optimize on-water oil capture.

**9. Mechanical Technologies to Facilitate and Improve Subsea Oil Spill**

**Containment and Removal** - BSEE is seeking White Papers on subsea oil spill containment and removal option. These include:

- The testing and evaluation of new or innovative mechanical technologies that will contain oil released from pipelines, manifolds, valves, or other production equipment located on the seafloor in water depths of up to 10,000 feet. This includes full-scale prototype, commercial, and non-commercially available, and/or adaptations of existing technologies. White Papers should focus on systems that are rapidly deployable to the spill locations in offshore waters.
- The development of design/operating standards and to reassess surface containment/recovery performance standards.

**10. In situ Burning** – The Deepwater Horizon oil spill response effort included large scale *in situ* burning of the oil on the water's surface. BSEE is interested in additional research in this topic in the areas of:

- New technology for recovery of sunken *in situ* burn residue.
- Enhanced designs for the containment and burning of the oil.
- Decision-making guidance pertaining to the stockpiling of fire-proof materials.
- Development of onsite protocols for safety issues.

**HOW TO RESPOND:**

White Papers of not more than five (5) pages in length, an ORIGINAL PLUS three (3) copies and one (1) electronic copy in PDF format, on a CD, shall be submitted to the U.S. Department of Interior, Bureau of Safety and Environmental Enforcement, 381 Elden St.,

Herndon, VA 20170-4817, ATTN: Rebecca L. Kruse, Contracting Officer, not later than **4:00 PM, EASTERN TIME on 1 March 2012**. WHITE PAPERS SENT THROUGH EMAIL AND FAXES WILL NOT BE ACCEPTED. White Papers shall define the proposed research scope and include the level of effort. NOTE THAT COST ESTIMATES ARE NOT TO BE INCLUDED IN THE WHITE PAPER. The White Papers shall be evaluated only on technical merits. IF YOUR WHITE PAPER IS SELECTED FOR FURTHER EVALUATION, A TECHNICAL AND COST/BUSINESS PROPOSAL WILL BE REQUESTED FROM YOUR COMPANY BY THE CONTRACTING OFFICER. Projects shall be selected from all or part of the technical issues listed depending on the interest and scope of White Papers received. The BSEE shall evaluate the responses, and those deemed to have merit shall be furnished information to assist in the preparation of the complete proposal. This announcement constitutes a Request for White Papers, but does not obligate the Government to consummate award. Respondents WILL NOT be notified of the results of the evaluation on the information submitted.

WHITE PAPERS SHALL BE EVALUATED USING THE FOLLOWING CRITERIA: (1) feasibility of the approach or solution; (2) the Offerors understanding of the technical issues; (3) the Offerors ability to implement the proposed approach; (4) innovative or creative approaches or solutions including the participation and/or funding by the oil spill response industry or other groups in the research industry, where appropriate; and (5) past performance. IF ANY OF THE REQUIREMENTS OF THIS ANNOUNCEMENT ARE NOT MET, THE WHITE PAPER WILL NOT BE EVALUATED. QUESTIONS shall be E-mailed to [rebecca.kruse@bsee.gov](mailto:rebecca.kruse@bsee.gov) not later than 4:00 p.m., EASTERN TIME on 1 March 2012. The Solicitation number E12PS00012 **MUST** be in the subject line of the E-mail. All questions shall include the Solicitation number E12PS00012, your full name and title, your organization, complete address, and telephone and fax numbers. Telephone inquiries WILL NOT be accepted. A separate White Paper shall be submitted for each study on which the offeror wishes to propose. The White Paper shall identify clearly the Offeror's company/organization, point of contact, address, telephone and facsimile numbers. RESPONSES will be accepted ONLY until 4:00 pm, EASTERN TIME on 1 March 2012. If Offerors desire to hand deliver their White Papers, they are advised that the BSEE facility is a secure office complex and Offerors **MUST NOT** enter the building beyond the lobby. There is a courtesy telephone at the guard station to which you must call extension 7-1523 or 7-1070 for a procurement official to meet you and receive your submittal.

#### **POINT OF CONTACT:**

**You MUST contact Rebecca L. Kruse at 703-787-1523 and set up an appointment 24 hours in advance of dropping off your White Paper.** Point of Contact: Rebecca L. Kruse, Contracting Officer @ 703-787-1523, [rebecca.kruse@bsee.gov](mailto:rebecca.kruse@bsee.gov); you may submit, via email, your question to the Point of Contact above.