

MMS TAR program announces research projects

THE MINERALS MANAGEMENT Service (MMS) awarded nine new research contracts for studies to improve operational safety and engineering research through its Technology Assessment and Research (TAR) Program. As part of MMS's responsibilities to regulate the offshore oil and gas industry, the TAR program funds research into operational safety, pollution prevention, and oil spill response and cleanup capabilities.

Program research enables MMS managers to make better decisions in evaluating operational proposals and enables regulators to consider the latest technological advancements in enacting new regulations.

TAR PROGRAM

The TAR Program has four primary objectives:

Technical Support. Providing engineering support to MMS decision makers in evaluating industry operational proposals and related technical issues and ensuring that these proposals comply with applicable regulations, rules, and operational guidelines and standards.

Technology Assessment. Investigating and assessing industry applications of technological innovations and ensuring that governing MMS regulations, rules and operational guidelines encompass the use of the best available and safest technologies.

Research Catalyst. Promoting leadership in the fields of operational safety and engineering research and oil spill response and cleanup research activities by acting as a catalyst for industry research initiatives.

International Regulatory. Providing international cooperation for research and development initiatives to enhance the safety of offshore oil and natural gas activities and the development of appropriate regulatory program elements worldwide.

LATEST CONTRACTS

Last August, the MMS issued a broad agency announcement asking for proposed study topics and subject areas for fiscal year 2003 TAR program research

projects. In response, 54 engineering firms, universities and private consultants submitted brief white papers.

MMS professionals in the TAR program evaluated these proposals and selected 14 of them. Nine of the 14 proposals were selected to receive contracts from fiscal year 2003 available funds.

The projects are funded through the TAR Program, established in the 1970's

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to ensure that industry operations on the Outer Continental Shelf incorporate the use of the Best Available and Safest Technologies (BAST), as subsequently required through the 1978 Outer Continental Shelf Lands Act amendments.

The new research efforts will provide needed engineering advice on drilling safety, well testing, cementing operations, coatings, integrity of high pressure high temperature systems, and other topics.

The research contracts have been awarded to: **West Engineering Services, Inc.; Det Norske Veritas; Cementing Solutions, Inc.; MSL Services Corporation; Scandpower Risk Management, Inc.; C-CORE; BOMEL Engineering Consultants, Ltd.; and Colorado School of Mines**, which received two contracts.

SHEAR RAM

West Engineering Services, Inc.: *Shear Ram Capabilities*. This project will review/compare different manufacturers' blind-shear test reporting criteria; review test results for various pipe sizes and pressures; compare and contrast shear rams and blind-shear rams for different operational conditions and modes of well containment; and review configuration options for stack placement.

WELL TESTING SAFETY

Det Norske Veritas: *Evaluation of Safety Concerns During Well Testing From OCS Drilling Rigs - Joint Industry Project*. This project will investigate the current level of safety of well testing and will assess whether future applications introduce significant additional hazards not addressed. The project will also develop recommendations on how to arrive at a consistent and verifiable level of safety with respect to well test operations on the OCS.

DEEPWATER CEMENT SYSTEMS

Cementing Solutions, Inc.: *Long-Term Integrity of Deep-Water Cement Systems Under Stress/Compaction Conditions: Analysis of Expanding Cements*. This study will look at expanding cements to identify correlations between cement properties and annular sealing ability. Results will contribute to the long-term integrity of wells on the OCS.

COATINGS

Colorado School of Mines: *International Workshop on Advanced Research and Development of Coatings for Corrosion Protection of Offshore Oil and Gas Facilities, Marine Pipelines and Ship Structures: Life of Coating, Materials, Repair of Coatings and NDE*. The workshop will undertake a complete assessment of current development of coating practices, coating materials, application, repair, non-destructive evaluation, extended coating life prediction, and future research.

The workshop will define the state-of-the-art, assess current practices and their limitations, discuss field experiences, and chart a course for the future corrosion protection methodologies for offshore structures, pipelines, and ship structures including sensing and monitoring of a coating integrity.

INTEGRITY METHODOLOGIES

MSL Services Corporation: *Development of Integrity Methodologies for the Topsides of Offshore Production Facilities*. The objective of this project is to develop a reliable engineering

methodology to manage the integrity of the topsides of offshore production facilities including structural systems, operating plant, piping, and other appurtenances, e.g., risers and conductors.

The project will encompass the effects of new high temperature high pressure (HTHP) production being introduced to existing facilities in the Gulf of Mexico for new deep gas plays. The methodology will integrate the inspection/survey process (data collection) with existing assessment procedure (engineering evaluation) as part of an integrity management strategy.

SUBSEA PIPELINE REMOVAL

Scandpower Risk Management, Inc.: *An Assessment of Safety, Risks & Costs Associated With Subsea Pipeline Removals*. This project will assess the safety, risks and costs associated with subsea pipeline removals in U.S. waters, and identify where the method of removal interfaces with the environment.

ICE ISLANDS

C-CORE: *Construction & Maintenance of Ice Islands: Current Practice & Future Research*. The objectives of this project are two-fold: first, to identify the current state-of-practice in the design,

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construction, and use of ice islands as a platform for Arctic oil and gas operations; and second, to identify means in which research efforts may be directed to increase the efficiency of construction and maintenance of offshore ice islands.

SAFETY ASSESSMENT

BOMEL Engineering Consultants, Ltd.: *Integration of Human Factors Within Safety Assessment and Management with Specific Reference to Human Limitations in Response to Automated Data Inputs From Control Room Management & Monitoring Systems*. This project will devise an approach for understanding the human limitations to manage, prioritize, and respond to alarms that can occur in the control rooms of offshore facilities.

MAGNETIZATION EFFECTS

Colorado School of Mines: *An Assessment of Magnetization Effects on Hydrogen Cracking for Thick-Walled Pipelines*. This project will first assess what level of magnetization is needed to use Magnetic Flux Leakage inspection technology on thicker walled pipes. It will then determine if that magnetization can damage the pipe through increased hydrogen effects (i.e., cracking, embrittlement). ■