

Office of Emerging Technology Program Briefing Paper:

Subject: Project Final Brief Summary

Contract Number: E13PA00010

Project Title: Decommissioning Methodology and Cost Evaluation

Contractor: ICF

Project Start Date: 07/31/2014

Project Completion Date: 07/31/2015

"THE RESEARCH PROJECT OUTCOME DID NOT CONCLUDE AS A HIGHLY INFLUENTIAL OR INFLUENTIAL CATEGORY. THEREFORE, BSEE WOULD NOT CONDUCT A PEER REVIEW FOR THIS RESEARCH"

Purpose:

The purpose of this project is to assist BSEE personnel to gain a better understanding of the topics of Decommissioning Cost, Methodology, Technology, Safety incidents, and Regulations, to utilize the provided information to gain understanding of the decommissioning industry and to see if there are any improvements needed in regulations, permits and plan submittals, and internal procedures for plans and permits.

Scope of work:

- Review the planning and engineering costs and methodologies analyzed in the 2009 TAP “Engineering Cost Assessment for Decommissioning POCS Facilities” and “Decommissioning: Fixed and Floating Platform Removal and Disposition” report (See Section 2.2 OBJECTIVES).
- Conduct research and compare estimated decommissioning costs to actual decommissioning costs which are available both domestically and globally and develop a ratio of Actual/Estimated Cost (AEC) for different types of facilities (conventional, deepwater, floating, etc.) which can be used by the agency for future decommissioning projects. AEC information and assumptions will be included in an easy to use catalogue.
- Research and catalogue facility removal techniques and methodologies implemented domestically and globally. Include, at a minimum, how member countries of the IRF and other State agencies implement decommissioning and facility removal activities under their jurisdiction.
- Provide a listing and an evaluation of any safety or environmental accidents, incidents or events which happened during actual facility removal operations. Use this accident, incident or event information to develop a relative risk ranking for the various facility removal techniques employed.
- Develop a catalogue of offshore decommissioning and facility removal methodologies and techniques employed globally and domestically assessing when an individual technique or methodology is best applied based on:
 - Type of facility (e.g. fixed, floating, caisson, and subsea) being removed, and
 - Characteristics associated with removal:
 - Water depth range,
 - Distance from shore of the facility, and
 - Age of the facility

- Develop an Appendix to the catalogue of cost ranges, taking into account contingencies covering uncertainties such as:
 - Project management
 - Project planning
 - Weather
 - AEC ratio developed in TASK 2
 - General contingencies that take into account the structure type, e.g. fixed platforms, caissons, floating platforms and subsea facilities.
- Develop an Appendix to the catalogue that provides an analysis of decommissioning procedures, techniques, equipment, costs, etc.
- Analyze the different IRF member country and other State agency decommissioning and facility removal regulations and compare and contrast these with BSEE requirements. Identify similarities and differences between BSEE requirements and the requirements of other agencies. The assessment of BSEE regulations should include any current Notices to Lessees and Operators (NTO) in effect for the OCS and incorporated industry standards at 30 CFR 250.198 as well as Subpart Q requirements. For each identified “gap” include suggestion on improving Subpart Q requirements.

Goals and Objectives:

BSEE wanted to gain understanding on five (5) study areas of decommissioning - Cost, Methodology, Technology, Safety incidents, and Regulations. The following gives details on what BSEE targeted following objectives to meet the goals.

- Catalogue of conventional decommissioning and facility removal techniques used domestically and globally for use by BSEE in reviewing facility removal applications
- Catalogue estimating the cost range for techniques and methodologies used domestically and globally in the decommissioning of offshore oil and gas facilities for use by the agency in estimating decommissioning costs and supplemental bonding amounts for both the Pacific OCS Region and the Gulf of Mexico OCS Region taking into account facility water depth, distance from shore, and age.
- Catalogue which takes into account contingencies covering uncertainties such as weather, vessel availability, work downtime and other unforeseen circumstances which may impact facility decommissioning operations.
- Evaluation of existing decommissioning and facility removal regulations in use on a global basis and recommendations on modifying BSEE Subpart Q requirements.
- Evaluation of the various decommissioning and facility removal techniques and methodologies currently employed both on the domestic OCS and globally. This includes when an individual technique and methodology is best applied, the type of facility it is best suited for (e.g. fixed, floating, caisson, and subsea), and the applicability of the techniques and methodologies to facilities based on water depth range, distance from shore, and age.

- Evaluation of the estimated cost ranges associated with each methodology, taking into account contingencies associated with project management and planning, weather, vessel availability, work downtime, and other unforeseen circumstances.
- Evaluations of member countries of the International Regulator Forum (IRF) implement decommissioning and facility removal activities under their jurisdiction.
- Evaluations of State agencies of countries that are not part of the IRF that have oversight and regulatory authority over offshore facility decommissioning operations.

Project's Findings and Recommendations:

The following are major findings-

- The planning and engineering costs and methodologies
- Research and comparison of estimated decommissioning costs to actual decommissioning costs
- Research and catalogue facility removal techniques and methodologies
- Listing and an evaluation of any safety or environmental accidents, incidents or events
- A catalogue of offshore decommissioning and facility removal methodologies and techniques
- An Appendix to the catalogue of cost ranges covering uncertainties
- An Appendix that provides an analysis of decommissioning procedures, techniques, equipment, and costs
- Analysis of the different IRF member country and other State agency decommissioning and facility removal regulations.