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"ENVIRONMENTAL AND ECONOMIC ASSESSMENT OF DISCHARGES FROM GULF OF MEXICO REGION OIL AND GAS OPERATIONS"

Contract Number: DE-AC22-92MT92001

Continental Shelf Associates, Inc.
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Quarterly Technical Progress Report (July - September 1995)

US/DOE Patent Clearance is not required prior to publication of this document.

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EXECUTIVE SUMMARY

Task 3 (Environmental Field Sampling and Analysis of NORM, Heavy Metals, and Organics) work included data analysis and report writing. Task 4 (Monitoring of the Recovery of Impacted Wetland and Open Bay Produced Water Discharge Sites in Coastal Louisiana and Texas) activities involved continued analyses of samples, data analysis, and report writing. Task 5 (Assessment of Economic Impacts of Offshore and Coastal Discharge Requirements on Present and Future Operations in the Gulf of Mexico Region) and 6 (Synthesis of Gulf of Mexico Seafood Consumption and Use Patterns) activities included the preparation of final reports. Task 7 (Technology Transfer Plan) activities involved presentations at the International Seminar on Produced Water. Task 8 (Project Management and Deliverables) activities involved the submission of the necessary reports and routine management.

INTRODUCTION

This report represents the thirteenth quarterly technical summary for the study "Environmental and Economic Assessment of Discharges from Gulf of Mexico Region Oil and Gas Operations." Activities associated with Tasks 3 through 8 are discussed in this report.

PROJECT DESCRIPTION

Continental Shelf Associates, Inc. (CSA) was contracted to conduct a three-year study of the environmental and health related impacts of produced water and sand discharges from oil and gas operations. Data on naturally occurring radioactive materials (NORM), heavy metals, and hydrocarbons in water, sediment, and biota will be collected and evaluated. Health related impacts will be studied through field collections and analyses of commercially- and recreationally-important fish and shellfish tissues. Additionally, information on seafood catch, consumption, and use patterns for the Gulf of Mexico will be gathered and analyzed. The facilities to be studied will include both offshore and coastal facilities in the Gulf of Mexico. Coastal sites will be additionally studied to determine ecological recovery of impacted wetland and open bay areas. The economic impact of existing and proposed effluent federal and state regulations will also be evaluated.

The primary objectives of the project are to increase the base of scientific knowledge concerning (1) the fate and environmental effects of organics, trace metals, and NORM in water, sediment, and biota near several offshore oil and gas facilities; (2) the characteristics of produced water and produced sand discharges as they pertain to organics, trace metals, and NORM variably found in association with the discharges; (3) the recovery of three terminated produced water discharge sites located in wetland and high-energy open bay sites of coastal Louisiana; (4) the economic and energy supply impacts of existing and anticipated federal and state offshore and coastal discharge regulations; and (5) the catch, consumption and human use patterns of seafood species collected from coastal and offshore waters. The products of the effort will be a series of technical reports detailing the study procedures, results, and conclusions which contribute to the transfer of technology to the scientific community, petroleum industry, and state and federal agencies.

PROJECT STATUS

Task 3 activities included data analysis and report writing.

Task 4 activities involved the analysis of 93 additional benthic infauna replicates from the Bay de Chene and Delacroix Island sites. Data analysis and report writing were also conducted.

Task 5 activities involved the preparation of a final report that incorporates responses to comments from the Scientific Review Committee (SRC).

Task 6 activities involved the preparation of a final report that incorporates responses to comments from the Scientific Review Committee (SRC).

Task 7 activities included preparing manuscripts for the proceedings publication of the 1995 International Seminar on Produced Water in the session entitled US DOE Study - Environmental and Economic Assessment of Discharges from Gulf of Mexico Region Oil and Gas Operations. Additional activities included making the following presentations:

- Naturally occurring radioactive material associated with offshore produced water discharges in the Gulf of Mexico.
- Bioaccumulation of heavy metals from produced water discharges to the Gulf of Mexico.
- An ecological risk assessment for polycyclic aromatic hydrocarbons in produced water discharges to the western Gulf of Mexico, USA.
- Delineation of benthic impact and recovery at two produced water discharge sites in inshore Louisiana.
- Distribution of finfish caught near oilfield structures along coastal Louisiana and Texas.

Task 8 activities involved the submission of the required reports, project management and cost plans, and routine management.

PLANNED ACTIVITIES

Task 3 activities will include continued data analysis and report writing.

Task 4 activities will include continued data analysis and report writing.

Task 5 activities will involve the completion of the final report.

Task 6 activities will involve the completion of the final report.

Task 7 activities will include a presentation at the Minerals Management Service Information Transfer Meeting in New Orleans.

Task 8 activities will include the submission of all required reports.

SUMMARY

Task 3 work included data analysis and report writing. Task 4 activities involved continued analyses of samples, data analysis, and report writing. Task 5 and 6 activities included the preparation of final reports. Task 7 activities involved presentations at the International Seminar on Produced Water. Task 8 activities involved the submission of the necessary reports and routine management.

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