



Peer Review Plan

Date: 11/28/2016

BSEE Funding Source or Author's Division: Oil Spill Response Research Branch
Oil Spill Preparedness Division
45600 Woodland Road
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Sterling, VA 20166

Title: Comparative Testing of Corexit EC9500A, Finasol OSR 52, Accell Clean DWD, Marine D-Blue Clean, and ZI 400 at Ohmsett

Subject and Purpose: The Bureau of Safety and Environmental Enforcement (BSEE) recently conducted independent dispersant effectiveness testing. Several products were tested at large scale conditions at Ohmsett, BSEE's oil spill response research facility. Ohmsett provides a test scale for dispersants that cannot be matched by lab scales tests or smaller facilities. The test program was conducted to do a comparative study on the products and to better understand their effectiveness under set test conditions.

Five dispersants were selected from the Environmental Protection Agency's (EPA) National Contingency Plan (NCP) Product Schedule and were tested on a Gulf of Mexico crude oil. They include Corexit® EC9500A, Finasol® OSR 52, Accell® Clean DWD, Marine D-Blue Clean™, and ZI 400. Replicate tests were conducted for each treatment to capture statistically sound data. Data collected included dispersant effectiveness based on the volume of the surface slick that remains after the test as compared to the volume dispersed into the water column and particle size distribution of the oil droplets dispersed at 1.5 meters below the water surface. Particle size distribution was captured using two LISST-100x instruments from Sequoia Scientific. The instruments allowed researchers to quantify the performance of each dispersant. Oil concentration, paired with particle size distribution, will show how much oil was dispersed into the water column and the size of the water droplets that were created. For this test program, droplets sizes of 70 microns or smaller are considered to be fully dispersed because they are assumed to stay suspended in the water column whereas the larger droplets may resurface and coalesce into a new slick.

In addition to providing up-to-date performance data of the products in pseudo-field conditions, operational performance was captured as a general discussion about the ease of use, limitations, and concerns about the products in the environment simulated by the test conditions. BSEE intends to use the results of these tests to provide the response community and regulators with up-to-date information for their decision-making processes.

Impact of Dissemination: This information product is considered by the BSEE to be Influential Scientific Information.

Timing of Review: April 2017 – September 2018

Manner of Review, Selection of Reviewers, and Nomination Process: Review will be facilitated by an independent third party. The review will be conducted by individual e-mail/letters/memoranda/documents. Reviewers will be selected pursuant to the requirements in BSEE's Peer Review Process Handbook.

Expected Number of Reviewers: A structured process to select three (3) peer reviewers who are independent (i.e., not involved with the report reviewed), objective, unbiased, and have significant expertise in the subject matter will be employed.

Requisite Expertise: The panel of reviewers shall have expertise in oil spill response, demonstrated understanding of the methods utilized to understand the efficacy/effectiveness of chemical dispersant use, and sufficient understanding of statistical analysis methods. The panel of peer reviewers shall achieve an optimum level of expertise across the spectrum of issues, balance and independence, while minimizing any potential conflicts of interest.

Opportunity for Public Comment: The opportunity for public comment is not incorporated into the BSEE plan for the peer review of this document.

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