

U. S. Department
of Homeland Security

**United States
Coast Guard**



Commanding Officer
U. S. Coast Guard
Research and Development Center

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OSEI Corporation
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Attn: Steven Pedigo, President/Owner

DEEPWATER HORIZON RESPONSE BAA HSCG32-10-R-R00019, TRACKING #2003954

We are pleased to inform you that the initial screening of your White Paper submitted under Broad Agency Announcement (BAA) HSCG32-10-R-R00019 has been completed. It has been determined that your White Paper submission has a potential for benefit to the spill response effort.

Your White Paper has been forwarded to the Deepwater Horizon Response Federal On-Scene Coordinator (FOSC) for further action under its authority. Subject to the constraints and needs of the ongoing oil spill response, you may be contacted by the FOSC or the responsible party.

We appreciate your interest in supporting the Deepwater Horizon Response effort.

Contracting Officer /s/
USCG R&D Center



PRODUCT: Oil Spill Eater II

Apply for: Alternative Oil Spill Response Technologies.

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Since 1989, OSEI Corp has cleaned up of over 14,000 spills as a first and only response tool. OSE

II is distributed in over 35 Nations and focuses on speeding up Mother Nature. **Oil Spill Eater II**

(OSE II) is the world's most environmentally safe and cost effective bioremediation process for

the mitigation of hazardous waste, spills and contamination virtually anywhere of any size. It is

an environmentally safe cleanup method because it uses nature's own bioremediation processes to effectively eliminate hazardous materials. OSE II is listed on the US EPA's National

Contingency Plan for Oil Spills (NCP), OSE II is listed in the U.S. Defense Logistics supply chain

and OSE II is in the Navy DENIX system as BAA Book 18 number 14.

The process: OSE II is applied to a spill, the biosurfactants attack the molecular structure of the

hydrocarbon, by breaking the spill into small particles, then the oil is solubilized which increases

the oil water interface all in approximately 30 minutes. During this process the OSE II enzymes form protein binding sites that will act as catalysts to induce the enhanced bacteria to utilize the broken down hydrocarbon as a food source. Once these reactions have occurred several things become apparent, the oil is broken up, adhesion properties are diminished (which causes oil to release from marsh grass, vessels, BIRDS, marine species, beaches and more) the fire hazard is reduced (which protects responders & ports) the oil is caused to float (which prevents secondary contaminated areas) and most importantly the oil is detoxified so it can be used as a food source at which point the oil is digested to an end point of CO2 and water; and then the enhanced bacteria die off to pre spill background levels. While these reactions are occurring OSE II's nutrient system is rapidly colonizing indigenous bacteria (OSE II does not introduce non indigenous bacteria into any eco system). Once the indigenous bacteria run out of the OSE II nutrients the bacteria then utilize the only food source left, the detoxified oil. There are also constituents in OSE II once mixed and activated by natural water, cause OSE II constituents to molecularly adhere to hydrocarbons, so no matter where the current, or tidal action pushes the oil OSE II will stay with it. OSE II can be used on the surface, below the surface, on the ocean floor, in marshes, estuaries, sand or soil beaches on rocks, in bays, ports and harbors, and we have case studies and pictures at www.osei.us to prove it. RRT 6 has had a success with OSE II on the Osage Indian Reservation. Mr. Nick Nichols of the EPA oil program, and Debra Dietrich of the EPA Headquarters and Mr. Robinson EPA, Region 9 all have first-hand knowledge of OSE II being used in San Diego Bay by the U.S. Navy for over 100 spills, over a 3 1/2 year period with no adverse effects to the whales, dolphins and other ocean ecology. BP has used OSE II in Trinidad and Tobago and a refinery in Greece. Our tech package list the many OSE II toxicity tests on salt and fresh water species which shows OSE II to be virtually non toxic. OSEI Corp and OSE II are trusted and used by all 5 bodies of the U.S.

Military. Please go to our website for additional documentation including our technical package along with videos which include the demonstration of OSE II on Grand Isle where the

oil already had been treated with dispersants and OSE II still cleaned it up. www.osei.us

OSE II has been extensively reviewed by the Navy Environmental Health Center in Norfolk, Virginia. Mr.

Jerry Drewer was our Contact: (757) 363-5540. OSE II has also been extensively tested by the Naval

Research Lab in Key West, Florida: Our contact was Mr. Jan Berge (305) 293-4216. OSE II is so good

OSE II is actually mentioned in other countries Coast Guard Handbooks as the first response method for

cleaning up a spill. OSE II is virtually non-toxic and extremely effective in breaking down oil. Our technical package contains in depth analysis proving it in the following tests:

Salt Water Efficacy Tests:

-U.S. EPA / NETAC 21 Day & 28 Day Bioremediation Test - Biodegraded Alaskan Crude 98% in 21/28 days

-U.S. Respirosity Test – EPA determined OSE II to reduce hydrocarbons by 98% and aromatics by 85%

which was better than any other product tested.

-University of Alaska (Dr. Brown) PAH Test – Demonstrates that OSE II with mineral nutrients and

hydrocarbons is **300%** more effective than without OSE II.

-Mega Borg Ship Spill in Gulf (South African Crude Oil) Test – In 216 hours OSE II lowered TPH from

100,070 ppm to 516 ppm for a 99.5% reduction.

-BETX Bioremediation Test- OSE II can even work well on Benzene, Ethyl Benzene, Toulene and Xylene

ratios demonstrate the potential to biodegrade as much as 98%.

Fresh Water Efficacy Tests:

-Chevron Crude Oil Bioremediation Test- OSEII on Chevron Crude in 24 days reduced 95,200 ppm to 690

ppm or 99.8% effective on biodegrading this oil.

Soil Efficacy Tests:

-U.S. Marine Corps Base 29 Palms California (Cleanup Won Environmental Award)

Salt Water Species Marine Toxicity Tests

-U.S. EPA / NETAC Mysid Toxicity Test (this test was run twice) – LC50 Test, at 96 hours OSE II greater

than 2100 mg/L.

-Both Mummichog and Artemia Salina Toxicity Test – LC50 Test, at 48 hours OSE II is 5285 mg/L.

Fresh Water Species Marine Toxicity Tests

-Rainbow Trout Toxicity Test by Environment Canada-Toxicity tests state 1000 mg/L or less is toxic.

Anything higher is acceptable and considered non-toxic. OSE II, test result 10,000 mg/L = non-toxic.

Beneficial Environment Effects

-Biological Oxygen Demand for OSE II –OSE II has minimal impact on BOD, less than 7%.

-Dispersant Swirling Flask Test - Proves OSE II causes oil to float