



Cleaning oil by converting it to CO<sub>2</sub> & water

One step Cleaning Process

# About Oil Spill Eater International

US company.

Since 1989, OSEI is responsible for the clean up of over 27,000 spills. OSEI product focuses on speeding up mother nature and is environmentally friendly.

Cleanup of spills including brackish water, ocean water, fresh water and even inter-tidal areas just to name a few.

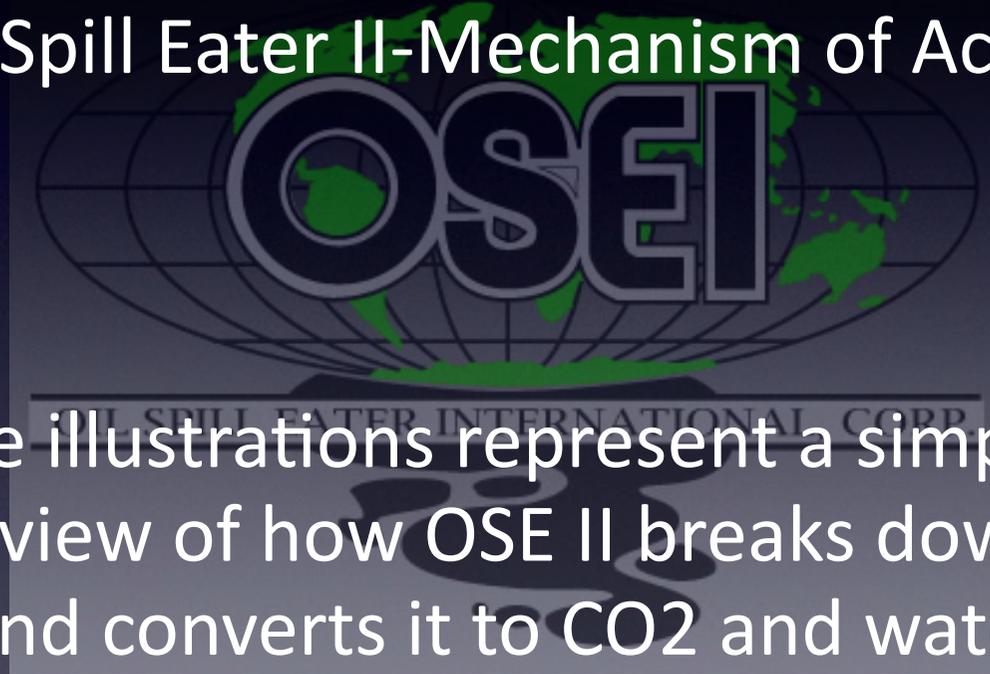
# US EPA



OIL SPILL EATER INTERNATIONAL, CORP.

- US Department Of Defense
- US Navy
- US Coast Guard
- OSE II is used in more than 195 US bases (both US based & globally)

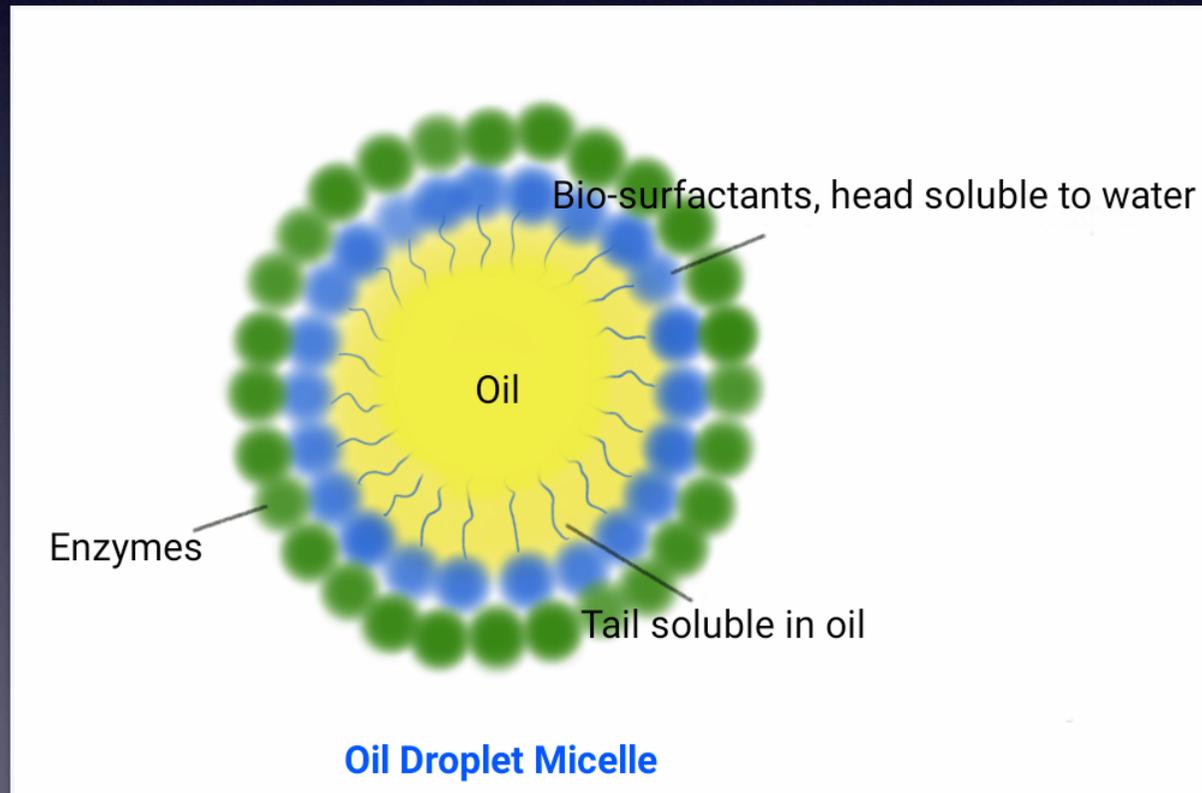
## Oil Spill Eater II-Mechanism of Action



These illustrations represent a simplified overview of how OSE II breaks down oil and converts it to CO<sub>2</sub> and water

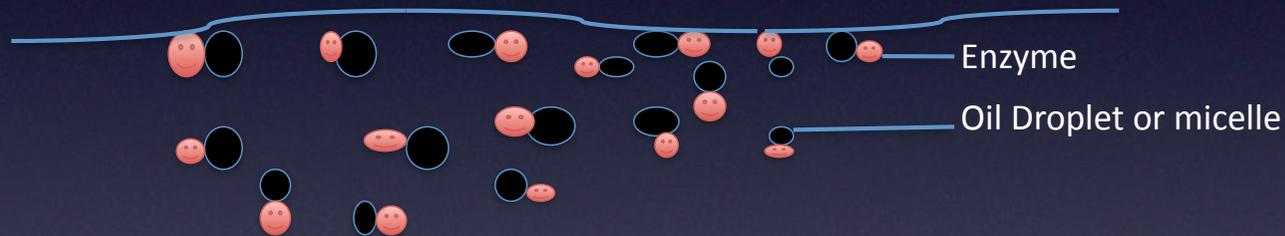
# OSE II Stage 1

When OSE II is applied to an oil spill on open water, the molecular structure begins to breakdown immediately and in a short time, *visually* disappear. This is caused through the action of bio surfactants that connect with the oil molecules and breakdown the covalent and ionic bonds creating small micelles (oil droplets). This process rapidly reduces the toxicity of the oil making it more bioavailable to indigenous bacteria that utilise the oil as a food source.



# OSE II Stage 2

Once OSE II has come into contact with oil molecules, the enzymes form protein binding sites enabling the already present bacteria to utilise the oil as a food source. OSE II enzymes and biosurfactants create a detoxified medium of smaller separated droplets called micelles, where indigenous bacteria can safely attach themselves and digest to CO<sub>2</sub> and water. OSE II also changes the density of the oil making it float and reduces the adhesion properties so the oil will no longer adhere to shorelines, vegetation or man made structures.



Oil Before application of OSE II



Oil starting to break up immediately when OSE II is applied



Oil breaking down to very small droplets or micelles after a short time once OSE II is applied

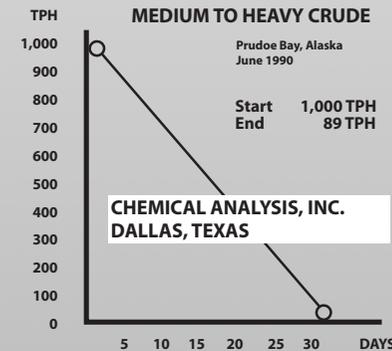
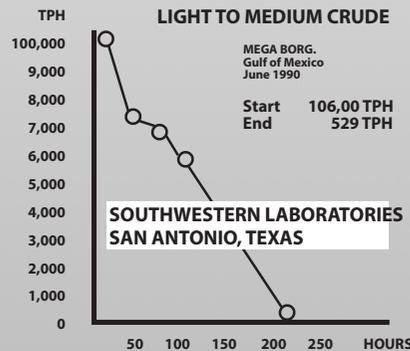
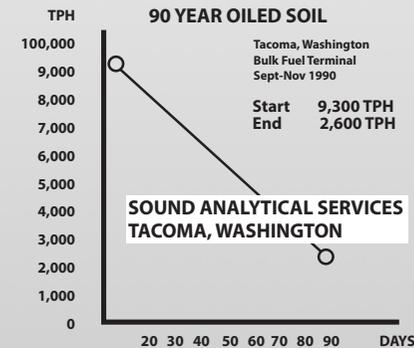
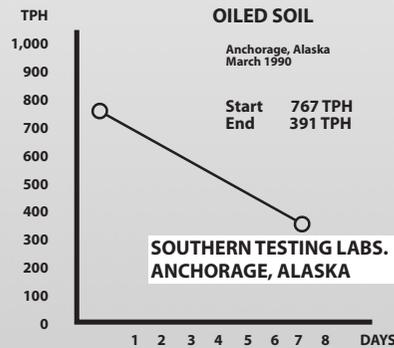
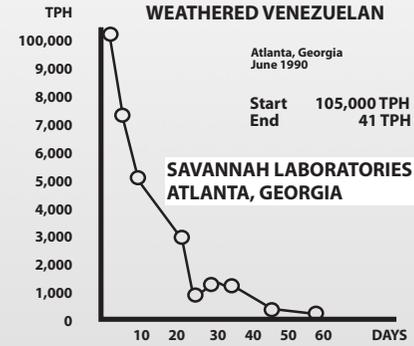
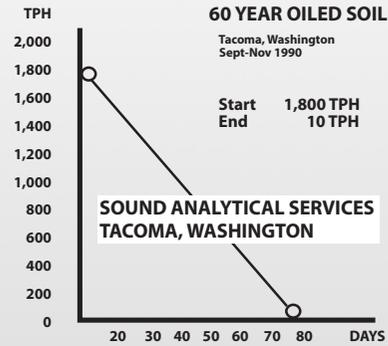


Oil droplets are virtually invisible in a short time after applying OSE II enzyme

# NATURAL BACTERIA LIVING IN THE SPILL ENVIRONMENT DIGEST THE OIL TO 100% NON DETECT

OSE II contains nutrients that attract indigenous bacteria that rapidly colonize/grow in numbers greatly speeding up spill remediation. OSE II does not contain any foreign bacteria or non indigenous organisms. The bacteria, natural to the spill environment, rapidly consume detoxified oil with the help of OSE II nutrients and enzymes until all is converted to CO<sub>2</sub> and water, permanently removing the oil from the environment.

# TPH BIODEGRADATION TESTS OF OSE II PERFORMED BY INDEPENDENT LABORATORIES



*This page represents a sampling of laboratory test reports available upon request.*



[https://www.youtube.com/watch?v=o8XbOKicZ\\_M](https://www.youtube.com/watch?v=o8XbOKicZ_M)

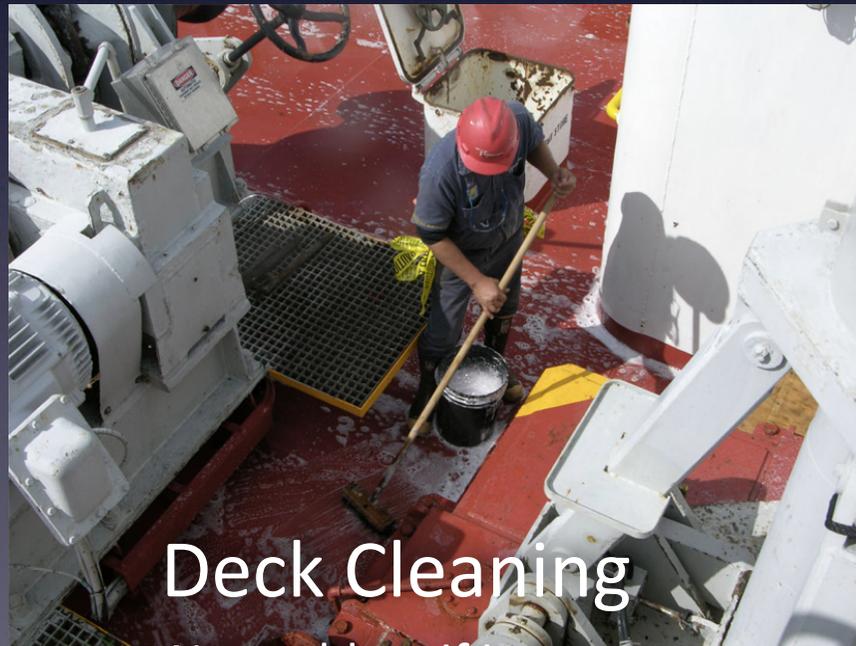
<https://youtu.be/dJcq3ONnESM>



Anti-Pollution



Tank Cleaning



Deck Cleaning

No problem if it goes overboard, EPA approved



Engine room cleaning





Engine room cleaning

Hard to reach areas cleaning



Anti-pollution prevention during bunkering





Terrain Cleaning



Industrial Application Cleaning



Underground Spill Treatment



Tank water oil contamination treatment



## Fire Retardancy Properties





Thank You

