Petroblok

# Product Usage Presentation
# United States Coast Guard

July, 2010

# The Worst Environmental Disaster in U.S. History

***Things we already know:***

- Crude oil continues to spill into Gulf of Mexico at an alarming rate.
- British Petroleum (BP) Methods are Ineffective.
- Coastal areas are being covered in oil.
- Wildlife, plants, fish, and coral reefs are dying.
- Capping of the oil well is months away.
- Ocean currents are capable of carrying oil and the dispersants to the east coast of the Unites States and beyond, magnifying the pollution damage.

## ***What do we need <u>NOW</u>?***

- To find additional government approved solutions as the current response solutions are not completely effective.
- Solutions that will demonstrate inter-agencies cooperation and leadership, proactivity and timely response.
- Solutions that will reduce manpower, increase cost-effectiveness, be readily disposable, and offer complete mitigation.

***<u>We have one of the solutions to the current and world wide oil pollution problem.</u>***

## *Solution:*

**Elemental Solutions** presents a product that will dramatically reduce the environmental impacts of oil pollution on our beaches and lead a global effort to stem the impact of the oil wherever it will make landfall along the costal tide line.

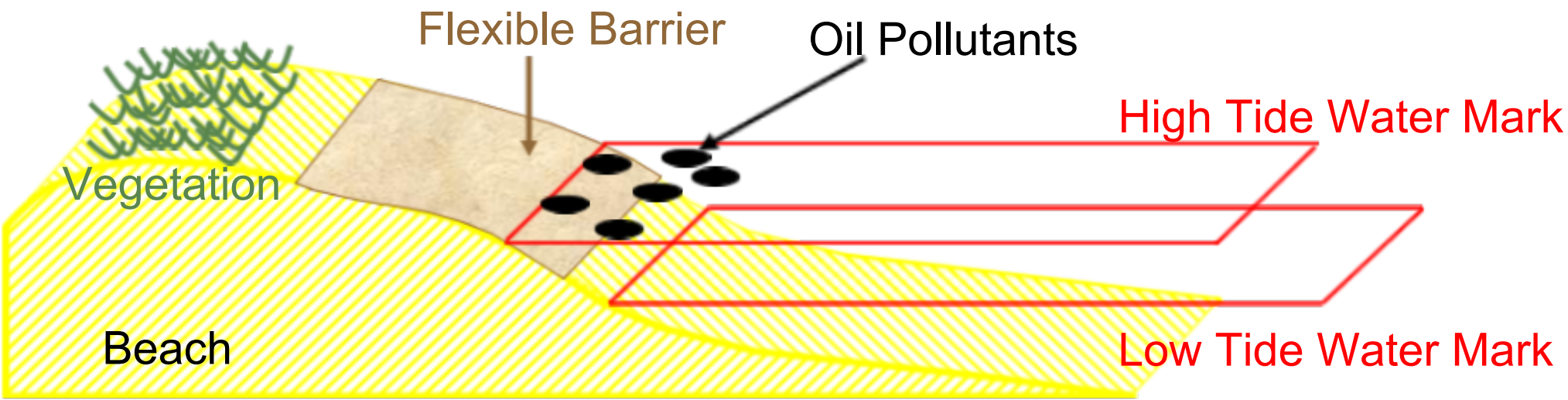
**Petroblok** 

- Technologically advanced co-polymer.
- Effective and economical.
- Environmentally neutral and non-restrictive.
- Biologically degradable, no biotoxicity.
- Eco-safe for humans, marine life, animals and plant life.
- Endorsed on National and International Levels.

## *How does it work?*

When mixed with water (salt or fresh):

- The liquid bonding matrix forms a firm, flexible, three-dimensional (3D) barrier.
- The barrier prevents oil penetration of the beach.
- A barrier thickness of minimum 13 millimeters (mm) or approximately half an inch is recommended.
- Thicker barriers are achievable allowing circulation for cleanup personnel, vehicles and heavy equipment.



## *Oil Recuperation:*

The polluted oil deposited on the barrier can be recuperated by:


- Wiping the oil up with sorbent pads.
- Vacuuming it up into trucks.
- Using high temperature, high pressure water guns to a collection basin.
- Shoveling the oil soaked granular sorbent into containers or trucks.
- Other current conventional means.

# *How is the product applied?*

After dilution, some examples of product application are by:

- Agricultural spray equipment.
- Portable spray containers.
- Tanker trucks.
- “Water drop” helicopters.
- Alternate means of application depending upon the required barrier thickness and the substrate nature.



## *How can the barrier be removed?*

Once the oil has been removed from the barrier surface:

- The barrier can be removed by cutting the matrix into sections and picking it up.
- Depending upon barrier thickness, it can be rolled up and removed.

Once reduced in size, the barrier can be transported by motor vehicle to an approved disposal site.

## *Applicability Testing:*

# 1. Laboratory Testing (Chandler, Arizona):

- Function testing for oil penetration prevention.
- Different dilution ratios were tested to obtain optimal barrier thickness.
- Cured samples were submerged in oil for 142 hours.
- The oil was removed, and a crossed section of the sample was inspected.


# 2. Field testing
(Turks and Caicos Islands , British West Indies)

- The matrix was tested on the beaches.
- The tidal change, salt water and water temperature had no effect on the barrier.
- The barrier was applied to the tidal zone starting above the high tide boundary.
- The barrier border ended in the intertidal zone above the low tide boundary.
- This lower boundary was anchored ar trench to prevent movement and / o

## *Product Environmental Signature:*

- 50% to 60% Vinyl Copolymer and 50% to 40% water.
- Bio-degradable, non-toxic, non-flammable.
- None of the components are subject to the EPA Toxic Substance Control Act.
- Not classed as a hazardous substance under OSHA.
- There are no known health hazards.
- Has Material Safety Data Sheet (MSDS).
- CAS number: Proprietary.

## *Our Mission*

**To provide:**

- A solution to protect our beaches.
- A cost effective product .
- Cost reduction of manpower, response equipment, remediation and mitigation.
- An environmentally safe, non-toxic and US government approved product.
- Solution for large and small areas in the coastal and inland zones.
- Consultation and calibration as necessary or required.
- Training for federal, state and local agencies for response, remediation, mitigation and disposal.