

**Mariner's Choice proudly  
presents...**

**MUNOX<sup>®</sup> SR**

by Osprey Biotechnics



**Mariner's Choice<sup>™</sup>**  
Performance • Quality • Ecology

# Mariner's Choice Registered Supplier

- Business focused on nurturing the environment and protecting future for the generations to come
- Partnering with like-minded companies to increase awareness of safe alternatives



# MUNOX<sup>®</sup> SR

- Manufactured by Osprey Biotechnics in Sarasota, Florida – patented processes
- Listed on the EPA National Contingency Plan product list.
- Recently approved by the MEEA and cleared by Food and Drug of Trinidad & Tobago
- Cleared in Jamaica and currently being utilized for remediation projects (as of Aug/2011)

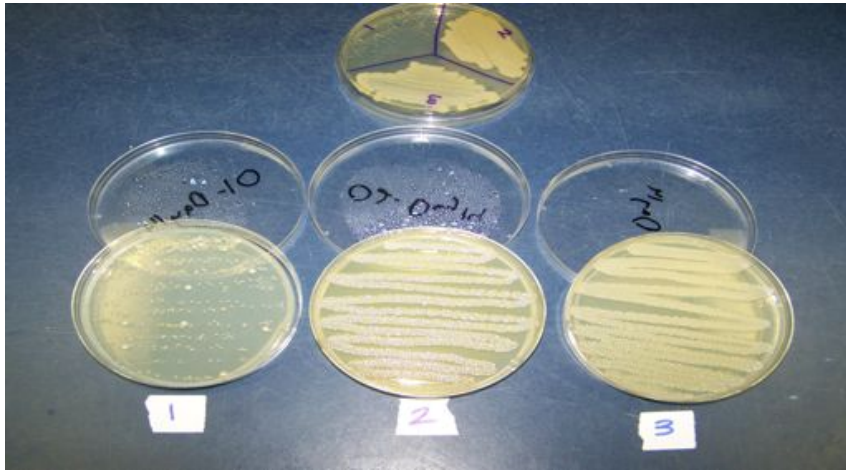


## MUNOX® Specifications

<b>Appearance:</b>	Blue liquid
<b>Bacteria Type:</b>	Stabilized Non Spore Microbes
<b>Bacteria Count:</b>	>1.1 trillion colony forming units (cfu) per litre
<b>Stability:</b>	There is no reduction in viability and activity for 12 months or more, when stored appropriately
<b>pH:</b>	6.5 – 7.5
<b>Temperature range:</b>	40 - 110°F
<b>Growth:</b>	Performs under aerobic and anoxic conditions
<b>Sp. Gravity @ 25°C:</b>	1.0 +/- 0.02 (8.33 lbs/gal)
<b>Salmonella Free:</b>	Non-pathogenic



# Advantage of Bioaugmentation



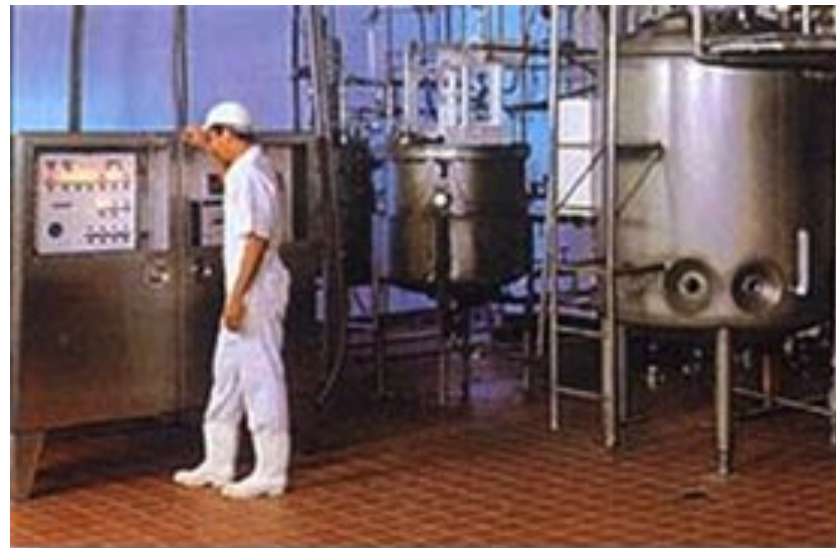
- Agar plates show microbial population
- Plate 1 - water sample from outside the treated area showing some natural microbes present
- Plates 2 & 3 - are samples from inside the treated area have much higher microbial population

**More microbial population = more efficient remediation**  
**More pseudomonas = more effective remediation**



## What Sets MUNOX Apart

- Munox<sup>®</sup> SR is formulated in sterile laboratory conditions under strict QA/QC protocols
- The QA/QC protocols guarantee that Munox<sup>®</sup> SR is pathogen-free and cell count exceed  $10^9$  cfu/ml.



## What Sets MUNOX Apart...

- Process is patented by Osprey Biotechnics
- Healthy pseudomonas strains - takes out the guess work
- In large numbers - > 1.1 trillion CFUs (colony forming units) per 1L
- Non-sporogenic - goes to work on contact (no germination period required)



## Facts About MUNOX<sup>®</sup> SR

- Takes out the guesswork of having enough beneficial microbes
- High microbial population
- Minimizes the risk of project failure
- Safe for human health and the environment
- Easy to apply
- Cost-effective
- Eliminates the need for invasive procedures, such as excavation and removal
- Product use is supported by the manufacturer and team of scientific, technical and field experts

- ✓ **Sustainable approach**
- ✓ **No negative impact on the environment**
- ✓ **Adds to the bottom line restoring property value**



## Munox Pilot Test - April 14, 2011

- Contaminated site selected
- Contracted with third-party lab for testing - Bio Research Lab
- Samples taken before application, at 6 days and 12 days



# Site



# Application of MUNOX<sup>®</sup>



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# Application...



# Application - day 6 (before / after)



# Application - day 8 (before / after)



# Application - day 12 (before / after)



# EFFECTS OF MUNOX

NAME: NRG SWS, Inc.

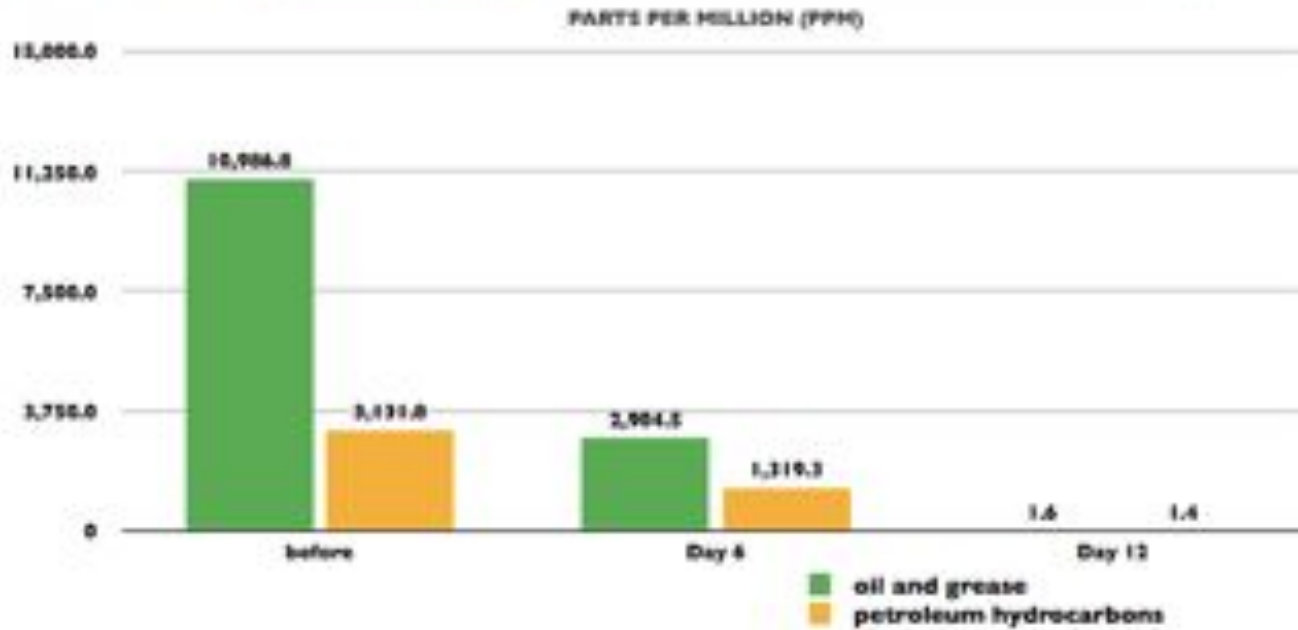
DATE: April 14, 2011

PERIOD: 12 days

LAB: Bio Research Lab



DATE	PARTS PER MILLION (PPM)		
	BEFORE	DAY 6	DAY 12
OIL AND GREASE	10,986.8	2,904.5	1.6
PETROLEUM HYDROCARBONS	3,131.8	1,319.3	1.4



**NOTE:** The final numbers are <1.6 and <1.4



# The Effects of Using MUNOX®

**Efficient** - SAVES time & money

**Effective** - Long-term sustainability

**Increase Land Value** - Asset, not liability

**Raise Profile** - Improve consumer perception

**BOTTOM LINE:** No more excuses - oil  
contaminated properties need  
not be a liability!



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