OSPR/Chevron Technology Workshop

Solutions for energy, petrochemical, and military.
Capion Technologies

- Proactive Protection
- Fire Prevention
- Spill Containment
- Secondary Containment
- Spill Remediation
- Site Cleaning
- Sheen Removal
- Energy from Waste Disposal
Life Safety Attributes

- Reduce the health risks related to chemical exposure.
- Respond quickly allowing responders faster access to victims.
- Do not generate smoke and help reduce smoke inhalation tragedies.
- Provide improved visibility within an incident scene.
- Extinguish fires in seconds and help eliminate responder fatigue.
- Reduce healthcare costs related to exposure, smoke inhalation, fatigue, and other medical effects.
• Approved medium by the EPA, USDA & FDA, and are non-toxic, non-hazardous and inhibit mold & bacteria growth.
• Do not release harmful gases into the atmosphere.
• Do not use any chemicals or natural resources.
• Do not generate secondary waste.
• Do not need to be cleaned up after deployment. Once particles impact a surface they dissipate into the atmosphere.
• Are inert and non-polluting.
• Reduce or eliminate exposure to (and corporate liability from) the use of dangerous chemical agents.
TechnoCLEAN™

• Clean large surfaces of thin, hard contaminants, without damaging the substrate
• non-abrasive, nonflammable and nonconductive cleaning method
• environmentally-friendly and contains no secondary contaminants such as solvents or grit media
• No damage to active electrical or mechanical parts or creating fire hazards
• Remove production residues, release agents, contaminants, paints, oils and biofilms
Oil Remediation

28 Years providing:
- Water Treatment
- Storm Water
- Open Water spills
- Rivers and Streams
- Heavy Crude and Light Oils
- **Sheen** Removal
- Spill Kits
- Primary & Secondary Containment
# The RUBBERIZER® Advantage

## How product works
A physical reaction turns the oil into a rubber-like mass
Like a sponge, absorbents take in the oil as well as water

## After retrieval
Will not leach under pressure
Will drip, drop and leach out oil

## Effectiveness with light oils
Very effective, proven field tests
Can recover but will leak out of absorbent material

## Effectiveness on sheen
Removes sheen
Cannot clean up sheen

## Effectiveness with heavy, viscous oils
Effective with all types of oil, based on formula variations
Dependent on type of oil

## High temperature effect
No effect
Little effect

## Flash point
Lowers flammability of treated oil
May lower flammability

## Volatile fumes
Solidifies and reduces volatile fumes
No effect on fumes

## Labor Efficiency
Rubberizer works more effectively with an easy to handle, single waste stream
Produces two waste streams with significantly more labor hours required for remediation and processing

## Application on solid surfaces
Effective on solid surfaces, where solidified oil can easily remediated
Not as effective, works like paper towels.

## Waste volume
Very little volume increase with only a dry, single waste stream
Large volumes of both dry and wet waste.

## Waste weight
Equal to the weight of solidifier
Equal to the weight of the absorbent plus additional water

## Waste disposal-landfill
Solidifiers can be disposed of in most landfills since they pass leach tests
Only disposed of as hazardous waste; No landfill disposal of the liquid waste

## Waste disposal-incineration
High BTU value generates electricity
Low BTU, energy

## Recycling of used product
Can be recycled into other industrial processes including asphalt, rubber additives, or burned as fuel
Not applicable for most traditional absorbents

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True Cost of Remediation™

**CLEARTEC RUBBERIZER®**
- $ product cost
- $ deployment labor
- $ one-time waste to energy fee

**Absorbents, Poly, and others**
- $$ Same costs as Rubberizer® plus:
  - $$ additional deployment labor
  - $$ dry/wet waste separation
  - $$ dry waste hazmat disposal fees
  - $$ wet waste hazmat disposal fees
  - $$ oil/water separation labor
  - $$ oil/water separation equipment costs
  - $$ safe water testing fees

'UP TO 60% LESS EXPENSIVE!'
Energy-from-Waste

- All used Rubberizer® material is accepted as recoverable
- End-to-end waste management
- Largest network of Energy-from-Waste facilities in North America
- Realizing zero-landfill disposal
- Cradle-to-Grave product handling reduces costs of deployment
- Eliminates long term waste liability

Waste management hierarchy
Keeping materials out of landfills

The European Union and the U.S. Environmental Protection Agency (EPA) have both concluded that following the waste management hierarchy generally maximizes energy savings and minimizes green-house gas emissions.
Why Energy-from-Waste

RUBBERIZER®

- Has 2.3 times more energy than coal
- Leaves only a .01% residual ash
- All gases are collected, filtered and cleaned
- Avoided carbon dioxide (CO2) emissions from fossil fuel combustion
- This is not incineration
- The result is clean, renewable energy

According to the U.S. Environmental Protection Agency (EPA), nearly one ton of greenhouse gas emissions are avoided for every ton of solid waste processed at an EfW facility.
Thank You!