

# Northeast Sustainable Communities Workshop

## “Sustainability and Remediation”

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**Thomas E. Stilley, PE  
DuPont Corporate Remediation Group  
Project Director**



*The miracles of science™*

# Corporate Sustainability Principles

**“Sustainable Growth” part of our core mission statement**

**Market-driven Science Company – make products that serve Sustainable concepts**

- Photovoltaic cells – 10 different products serve industry
- Bio-based Fuel Development
- Sorona® - renewably-sourced polymer used as fabric

**Reduce our “footprint”**

- Renewable Energy targets
- Lower energy consumption while increasing production output
- Greenhouse Gas reductions

# Remediation Sustainability Principles

**Minimize or eliminate energy consumption**

**Minimize or eliminate ancillary environmental impacts from cleanups (e.g., carbon dioxide emissions to the air)**

**Preserve natural resources**

**Maximize the reuse of land and the recycling of other material**

**Encourage the use of remediation technologies that permanently destroy contamination**

# Remediation Sustainability Efforts

## **SURF – collaborative forum**

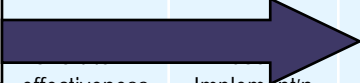
- Public and private involvement
- Share learning's and experiences

## **Remedy Selection Tool**

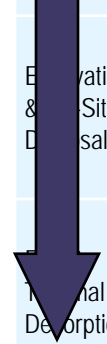
- Includes sustainability as an evaluation factor
- NOT used to “lessen” protectiveness as a factor
- Including sustainability as a goal can change thinking

# Remedy Selection Table - Example

## Remedy Evaluation Factors



## Potential Remedies



## Sustainability

**Sustainability**  
Measure each remedy for greenhouse gas generation, water consumption, and efficiency

Potential Remedies	Remedy Evaluation Factors						effectiveness	Implement'n	Cost	Community acceptance	State acceptance	Sustainability		
	Prin & C	Sources	Objective	Reliability	T, W, V							CO <sub>2</sub>	Eff	Water
Evaporation & Disposal	Yes, when combined with MNA	Yes, by treatment	Yes	High	High due to treatment	32 days 3,300 hours	Moderate	\$\$	Acceptable - pending public	Acceptable - pending review	CO <sub>2</sub> 170 ton Eff 0.003 Water 130,000 gal			
Groundwater Remediation	Yes, when combined with MNA	Yes, by removal	Yes	High	None	2 years 4,400 hours 11,000 miles			Acceptable - pending review	Acceptable - pending review	CO <sub>2</sub> 250 ton Eff 0.000 Water 0 gal			
Soil Vapor Extraction	Yes, when combined with MNA	Yes, by treatment	Yes	High	High due to treatment	2 years 6,700 hours 17,000 miles	Moderate	\$\$	Acceptable - pending public notice	Acceptable - pending review	CO <sub>2</sub> 160 ton Eff 0.003 Water 0 gal			
Capping	Yes, when combined with MNA	Yes, by cover	Yes	Moderate	Moderate, eliminate mobility	13 days 820 hours 1,600 miles	Simple	\$	Acceptable - pending public notice	Acceptable - pending review	CO <sub>2</sub> 24 ton Eff 0.000 Water 0 gal			

# Sustainable Redevelopment

**Brownfields are inherently sustainable**

**Market-based approach – today's end users prefer sustainable developments**

**Sustainable Energy programs (solar, wind, etc.) typically match well with long-term site goals when traditional real estate demand is not robust**