ASCE Meeting 9/23/2010 Dan Sirkis, P.G.

LIPARI LANDFILL SUPERFUND SITE REMEDIATION

Site History Aerial Morph1959-1995







Total COC Removal From Lipari 1992-2006

- 329,000,000 gallons of water extracted and treated (including 2007)
- Aqueous Phase Removal 144, 200 pounds
- Vapor Phase Removal- 281,700 pounds
- Total Contaminant Removal 426,000 pounds





Current On-Site Remediation Efforts at Lipari

SVE/Bioremediation

- Lower Landfill Water Level
 - Promote biological activity in Landfill to remediate BCEE
 - SVE will become more effective in remediating VOCs

Exterior Wall Benefits

- Encapsulate Trash/Contamination Outside of Existing Slurry Wall
- Reduce Flow of Contaminated Water into North French Drain Sump
- Reduce Concentration of Contaminated Water Entering North French Drain Sump
- Possible Reduce Contamination in Kirkwood Aquifer
 - Reduce Leakage of Contamination into Kirkwood



New Cut-Off Wall and Work





DANGER-KEEP OUT CHEMICALS PRESENT HAZARDOUS TO YOUR HEALTH

Commander's Briefing July 25,2008





Site History Aerial Morph1959-1995



SOIL VAPOR EXTRACTION AT LIPARI

Total COC Removal From Lipari

- **1992e** Se Removal 69579 kg 153,395 pounds (1993-2007)
- Vapor Phase Removal- 135720 kg 299,211 pounds (1999-2007)
- Total Contaminant Removal 452,606 pounds

Why Continue SVE?

- SVE is very successful at removing Volatile Organic Compounds (VOCs) from Lipari
- Over 299,211 pounds of VOCs removed in 8 years
- Floating free-phase product is still present
- VOCs thought to be cause of increase in cases of stillborn children, low-birth weight babies (NIH,1997) and Leukemia (NJDOH, 1989) in the adjacent community.
- Side-slope area has high levels of VOCs that have yet to be remediated.

Vapor Phäse Biofilter Pilot

plus carbon polishing could replace

First ever use at a Superfund Landfill
Current removal rate = 70%
Efficient removal of Yearly breakthrough Compounds." Carbonophyllic??



Gas-Fired Lipari Thermal Oxidizer

