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Residuals and Biosolids Management Conference



**Trace Constituents:
Red Herring Hysteria**

No public health risk exists, but hype still does



Stop Chasing Rainbows

- Trace constituents are just that... ***“Trace”***
- Decades of study show
 - No risk to public health
 - No environmental risk
- All biosolid management techniques are safe:
 - Land-applied
 - Surface-disposed
 - Landfilled
 - Incinerated



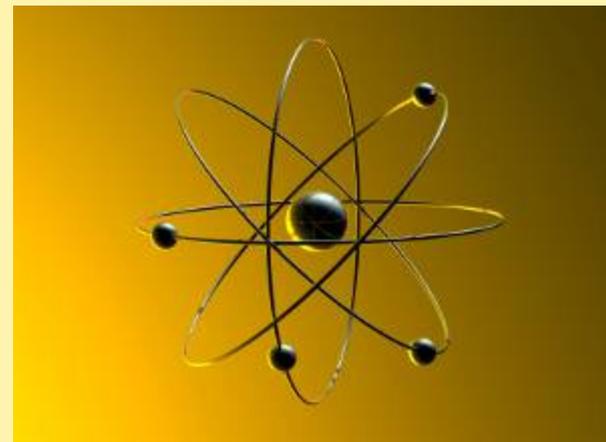
Biosolids – Nature’s Wastewater Purifier

- Today’s wastewater treatment facilities are “clean water plants”
- Biosolids attract and sequester various substances including:
 - Metals
 - Organic Compounds
 - Pathogens
- The result? Cleaner wastewater!
- Biosolids don’t release pollutants into the soil



How Low Can You Go?

- EPA has analyzed dozens of organic compounds
- Technology permits analysis at a level far below public health risk or environmental risk
- EPA has proposed to make removal credits available for 17 additional trace constituents found in biosolids
- By 2009, up to 23 additional trace constituents found in biosolids will most likely be added to this removal credit list



Take two contaminants and call me in the morning

- **The “new and emerging” compounds being promoted by some as potentially dangerous are neither “new” nor “emerging”**
- **Pharmaceuticals**
- **Personal Care Products**
 - **Rigorous testing for direct ingestion and application**



- **Much greater quantities of these “contaminants” are released into our water**
- **Regulatory responsibility lies with the regulators on the “front end”**
- **Life-cycle analysis of these compounds must include study of impacts when they reach wastewater, biosolids**

EPA uses Modeling for “Worst Case Scenario”

- EPA assumes maximum exposure in its risk assessment models
- Even under these extremely unlikely high-exposure scenarios, the public health and environmental risks are extremely low
- Realistic exposure levels put risks at virtually zero



40 CFR 503 Standards 1984-1993

- EPA Baseline – Approximately 350 pollutants in wastewater potentially captured in biosolids
- Numerical standards established for ten metals
- Determined that 22 organic pollutants in biosolids (including PCBs) were of negligible risk to public health and the environment
- State-of-the-art risk assessment
- High-quality field data



40 CFR 503 Standards 1999-2003

- EPA Baseline – Approximately 200 pollutants in wastewater potentially captured in biosolids
- Proposed numerical standard for dioxins established
- After review of public comment and revision of risk assessment, EPA concluded no need to establish numerical standard for dioxins.
- State-of-the-art risk assessment
- High-quality field data



40 CFR 503 Standards 2002 - Present

- EPA Baseline – Approximately 803 pollutants in wastewater potentially captured in biosolids
- Only 40 pollutants identified for comprehensive risk assessment
- Results of the comprehensive risk assessment identified 15 pollutants for further evaluation
- State-of-the-art risk assessment
- High-quality field data
- Third national biosolids survey to analyze concentration data for 15 pollutants



Conclusions

- Industrial pretreatment reduces pollutants to insignificant levels
- Pollutants are tightly bonded to the biosolids soil matrix
- Therefore, the presence of trace pollutants in biosolids present virtually zero exposure or risk to the public and the environment
- EPA analysis and regulation of trace pollutants in biosolids will likely be terminated within five years.



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