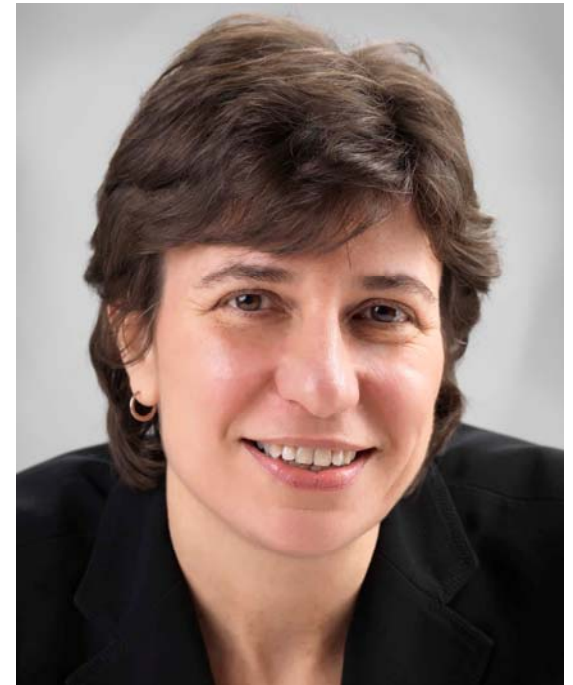


US EPA ARCHIVE DOCUMENT

# Green Cleanup Standards Initiative

Region 5 - Greener Cleanup Workshop  
February 9, 2010

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U.S. Environmental  
Protection Agency

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# Greener Cleanup Principles

## Greenhouse Gases & Energy

- Minimize Air Pollutants and Greenhouse Gas Emissions
- Minimize Total Energy Use and Maximize Use of Renewable Energy

## Resource Conservation

- Reduce Reuse and Recycle Material and Waste
- Minimize Water Use and Impacts to Water Resources
- Protect Land and Ecosystems

# Challenge #1

## Balancing Factors

- Long-term reliability
- Reduction of toxicity, mobility or volume
- Short-term effectiveness
- Ease of implementation
- Cost
- Community acceptance
- State acceptance

## Greener Cleanup Goals

- Minimize air pollutants and greenhouse gas emissions
- Minimize total energy use and maximize use of renewable energy
- Reduce reuse and recycle material and waste
- Minimize water use and impacts to water resources
- Protect land and ecosystems



# Challenge #2

## Regulatory Frameworks

- Superfund
- RCRA
- Federal Facilities
- Tanks
- Brownfields

## Greener Cleanup Goals

- Minimize air pollutants and greenhouse gas emissions
- Minimize total energy use and maximize use of renewable energy
- Reduce, reuse and recycle material and waste
- Minimize water use and impacts to water resources
- Protect land and ecosystems



# Solution:

## Green Cleanup Standard

- Growing interest in social responsibility
- Companies have internal goals to become greener
- Could use new tools being developed
- Build upon state and local government incentives
- USGBC expressed need
- Leverage resources in the private sector
- Could be applied across regulatory structures
- Could be updated as field evolves
- Might address greenwashing
- May provide measurable results



# Green Cleanup Standards Workgroup

- OSRTI (Superfund)
- ORCR (RCRA)
- OBLR (Brownfields)
- FFRRO (Federal Facilities)
- OUST (Tanks)
- CPA (Cross program)
- OSRE (Enforcement)
- Regions 3 (lead), 2, 5, 6, 7, 8, 9
- Groundwater, Engineering and Federal Facilities Forums
- ASTSWMO (Illinois lead), MA, CA, WI
- NIST (National Institute of Standards & Technology)
- EPA's Standards Executive





# Standards Development

National Technology Transfer and Advancement Act (NTTAA)

- Enacted February 1996
- Requires federal agencies to develop standards through a consensus process



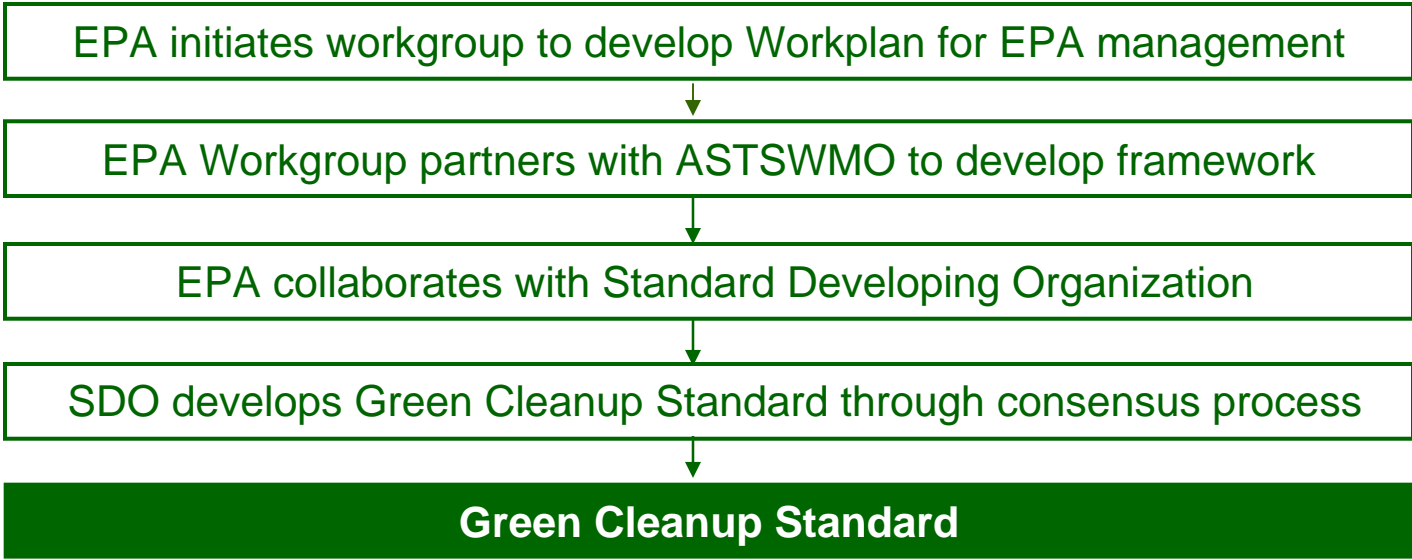
# Key Workgroup Accomplishments

- Identified green cleanup core elements - incorporated into OSWER's Greener Cleanup Principles
- Agreed to collaborate with ASTM International to develop a standard
- Facilitate dialogue among EPA and State regulators contributing to the standard's development

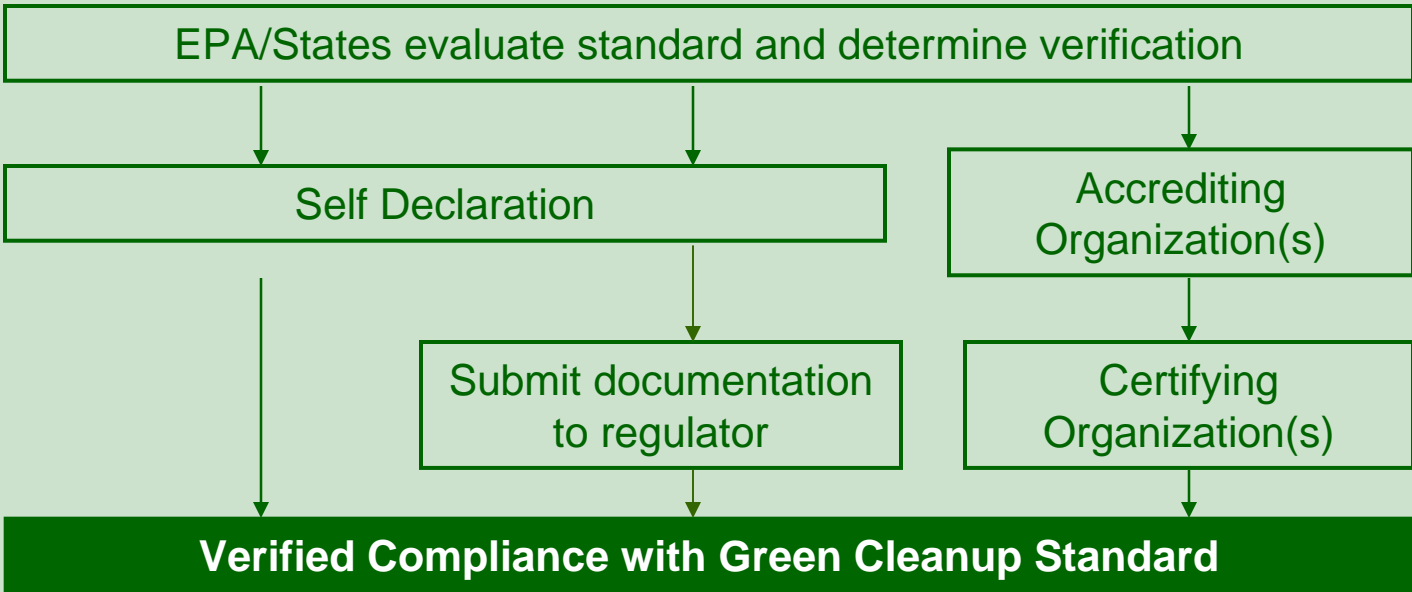


# Conceptual Development for Green Cleanups Standard

STANDARD DEVELOPMENT



VERIFICATION



# Key Attributes

- **Voluntary** - Not mandating new cleanup evaluation
- **Transparent** - Consensus based development
- **Universal** - Easier for stakeholders to implement
- **Flexible** - Program or State-specific verification options
- **Market Driven** - Promote innovative approaches
- **Verifiable** - Documentation to support decisions



# Key Challenges

- Accommodating various regulatory structures and technical issues
- Keeping it pragmatic (*given site specific nature of cleanups*)
- Defining boundaries (*cleanup vs. reuse; LCA*)
- Preventing greenwashing



# ASTM Timeline

- October: Kick-off meeting in Atlanta
- Nov-March: Developing draft
- April: Meeting in St. Louis



# Additional Information

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[http://www.clu-in.org/greenremediation/subtab\\_b5.cfm](http://www.clu-in.org/greenremediation/subtab_b5.cfm)

<http://www.astm.org/>

