

June 27, 2007 Greener Cleanups Meeting Breakout Group Summary

On Wednesday, June 27 in Chicago, U.S. EPA Region 5 and Illinois EPA convened a small group of practitioners engaged in site cleanups and sustainable reuse. The purpose of the meeting was to explore a new initiative called Greener Cleanups.

Greener cleanups refers to a method of site remediation that makes 1) the actual cleanup more efficient and less polluting, and 2) results in a site where the development is designed to reduce the environmental impacts of future use.

As a portion of the meeting, four breakout groups explored issues related to improving the environmental performance of remediation projects: Regulatory Barriers, Market Barriers, Remedy Selection, and a Greener Clean-up Model. Participants in each group were selected at random.

The meeting conveners provided each group with an initial set of Guiding Questions designed to spur dialog. The conveners set a time limit for the breakout sessions and required that each group identify a spokesperson. Beyond these two requirements and the Guiding Questions, however, the conveners allowed the groups to explore the issues as they saw fit.

Each group approached the issues in a slightly different manner. A summary of the results from each group, along with the participants and the Guiding Questions, are summarized below.

Group 1: Regulatory Barriers

Group 1 was tasked with exploring the regulatory barriers to improving the environmental performance of remediation projects. Group 1 approached the breakout by identifying barriers and making recommendations to address each barrier.

Guiding Questions

1. What are the foreseeable institutional and legal barriers to greener cleanups?
2. Which barriers pose the greatest challenges? Why?
3. Which barriers should we focus on first?

Members

Kevin Laberge, Chicago Department of Environment; Damon Lee, V3 Companies (spokesperson); Jon Peterson, USEPA, Region 5; Sara Rasmussen, USEPA, HQ; Verneta Simon, USEPA, Region 5; Marc Thomas, USEPA, HQ; and Gary Victorine, USEPA, Region 5.

Results

1. Barrier: Variations in agency cleanup levels and processes
Recommendation: Allow site specific variances
2. Barrier: Permitting, for example concrete crushing
Recommendation: Prioritize permits for green remediation activities
Recommendation: Fast track permits
3. Barrier: Process, more review time, learning curve on innovative approaches
Recommendation: Enhance knowledge base of regulators (ex. training, pilots)

4. Barrier: Soil/HW removal, for example RCRA regulations require Soil/HW removal in situations where another approach might work better and/or cause less of an impact
Recommendation: Revise RCRA regulations – waste removal, waste listings
5. Barrier: Difficult permitting process for on-site treatment
Recommendation: Streamline permitting process
Recommendation: Superfund waivers
6. Barrier: Community concerns, NIMBY
7. Barrier: Nonflexible cleanup standards, for example groundwater cleanup levels where aquifer is not used for drinking water
8. Barrier: Demolition waste and recycling contaminated materials
Recommendation: Improve regulations related to demolition wastes
9. Barrier: Engineered barrier requirements and state regulation incentives for impermeable barriers
Recommendation: Expand acceptance of site specific variance
10. Barrier: Lack of “green” approach in regulations
11. Barrier: Perception of the “role” of the regulations and mandate of statute, green “not my job”
Recommendation: Expand knowledge base of regulatory staff
Recommendation: Create incentives for greener cleanups
Recommendation: Include “green” in regulatory evaluation process
12. Barrier: HUD Policies: Restrictions on funding sources, no funding/grants for contaminated sites, and different site remediation rules/policies

Group 2: Market Barriers

Group 2 was tasked with exploring the market barriers to improving the environmental performance of remediation projects. Group 2 approached the breakout by identifying important market considerations and providing examples and recommendations.

Guiding Questions

1. What are the foreseeable implementation barriers to greener cleanups?
2. How can we incentivize or facilitate greener cleanups?
3. What resources do private and public cleanup managers need to implement greener cleanups?

Members

Amber Bixler, Tetra Tech; Kyle Hendrix, Indiana DEM; Gary King, Illinois EPA; Jim Mayka, USEPA, Region 5; Erin Miller, Illinois EPA; Keith Oswald, V3 Companies; and Jim Van der Kloot (spokesperson), USEPA, Region 5.

Results

1. Consideration: Focus on time, cost, and certainty
Example: Residential vs. condo vs. industrial/commercial – residential is most stringent
2. Consideration: Voluntary vs. regulatory programs
Example: RCRA could require greener cleanups – on the federal level
3. Consideration: Reuse of materials on-site
Example: Asphalt – encourage crushed concrete
Recommendation: Remove regulatory barriers
Recommendation: Facilitate market, know where materials are being produced

4. Consideration: Enhance communication
 Example: Express value of greener cleanups
 Recommendation: Incentive or certification
 Recommendation: Pilot Award Program
 Recommendation: Set-up criteria, e.g. No Further Remediation letter with a Gold Award
 Recommendation: Expedited reviews
5. Consideration: Contracting Structure
 Example: No favoring of soil removal or dig and haul
 Recommendation: Clean up on site – minimize cost
6. Consideration: Government reimbursements
 Example: Looking for the greatest cleanup possible (ex. LUST program in Illinois) – may be an ungreen incentive
7. Consideration: Local approval level
 Example: Environmental work can get tied into plat approval
 Example: Local government may not agree – may require most conservative level of cleanup
 Recommendation: Education and outreach is needed
 Recommendation: Outreach to schools, engineering programs, professional organizations
 Recommendation: Illinois EPA could make a clear statement of values
8. Consideration: Uncertainty in the end can be a deterrent for green cleanup technologies
 Example: Need to quantify value and have a competitive advantage.
 Recommendation: Vital to conduct pilot projects and produce historical evidence that shows the benefits, especially for the private sector.

Group 3: Remedy Selection

Group 3 was tasked with exploring how remedy selection could influence the environmental performance of remediation projects. Group 3 approached the breakout by first identifying a series of questions about encouraging greener clean-up remedy selection. Group 3 then brainstormed recommendations for specific subject areas, such as “air” or “demolition waste.” Finally, Group 3 categorized their recommendations, specifically noting those that are immediate opportunities, will have the greatest impact, and can be requested of clean-up consultants.

Guiding Questions

1. What opportunities exist for greener cleanups in the following categories? Please identify the short and long term benefits.
 - a. Air pollution
 - b. Greenhouse gas reductions
 - c. Water quality and conservation
 - d. Demolition and waste
 - e. Ecosystem/green space
 - f. Social and economic conditions
 - g. Energy usage
 - h. Public health
2. Which actions have the greatest impact? Are most cost-effective? Easiest to do?
3. How might the sequencing of site activities be improved for greater efficiency or environmental benefit?

4. What questions should site owners and remediation applicants who want greener cleanups ask of their consultants and contractors?

Members

Bruce Clegg, CRA; Greg McGovern, Earth Tech; Joyce Munie (spokesperson), Illinois EPA; Heather Nifong, Illinois EPA; Carlos Pachon, USEPA, HQ; Greg Roth, Illinois EPA; and Annette Weissbach, Wisconsin DNR.

Results

Question: How do we encourage greener cleanup remedy selection?

1. Implement policies and regulations
2. Make it a requirement in order to receive grant funding
3. Demonstrate how greener cleanup remedy selection is cost effective
4. Demonstrate how greener cleanup remedy selection is good PR

Key to Recommendations: * = Immediate Opportunity, # = Greatest Impact, ? = Request of consultants

Recommendations: Air Quality

- o Clean Diesel
- o Biodiesel *
- o Landfill gas for power source (ex. Methane)
- o Dust suppression
- o Minimize vehicular transportation
- o Alternative energy – solar or wind (i.e. for pump and treat) *
- o Choosing remedies to destroy or immobilize contaminants to limit pollution transfer *
- o Use climate exchanges or allow off-set for greenhouse gas reduction and elimination
- o Phytoremediation and wetlands enhancements #
- o Evaluating alternate sampling technologies *
- o Maintenance of fleet * ?

Recommendations: Water

- o Stormwater neutral
- o Improve stormwater quality
- o Water intensity in pump and treat
- o Non-energy intrusive treatment of groundwater *
- o Using stormwater for dust suppression
- o Use of evaporation for purge or lower contaminated water

Recommendations: Demolition Waste

- o Certified recyclers ?
- o Reuse of all demolition waste *
- o Planning remediation sequence to allow for reuse and minimize metal movement
- o Plan sequence and eliminate mixing of contaminated and uncontaminated
- o Design around reuse of existing building footprint to eliminate demolition * ?
- o Reuse of debris on-site *
- o Waste exchanges and policy #

Recommendations: Ecosystems and Greenspace

- o Use of biosolids to enhance soil
- o Native landscaping
- o Wetlands enhancement as tertiary treatment

- Converting brownfields to green space

Recommendations: Social and Economic

- Job training
- Requiring small business and minority owned
- Using not-for-profits
- Creating a website
- Design site to minimize vehicular traffic
- Air monitoring of remediation

Recommendations: Remedial System Design Optimization # ?

- Air Force Base example – Earth Tech project in Michigan; for more information contact Greg McGovern.

Group 4: Greener Cleanup Model

Group 4 was tasked with defining a model for greener cleanups. Group 4 approached the breakout by first identifying potential core values and objectives for a greener cleanup model. Group 4 then brainstormed differences between greener cleanups being performed under a regulatory program and greener cleanups being performed under a voluntary program.

Guiding Questions

1. What are the core values of greener cleanups?
2. Can you give examples of site remediations that have used a greener cleanup approach? How have they been successful or unsuccessful?
3. How might greener cleanups differ among regulatory programs and by site owner or developer or remediation applicant (voluntary vs. non-voluntary, public vs. private)?

Members

Chris Choi, USEPA, Region 5; Deb Goldblum, USEPA, Region 3; Mia McCorkel, USEPA, HQ; Mike Ohm (spokesperson), Bell, Boyd & Lloyd; David Reynolds, Earth Tech; Chris Slattery, Delta Institute; and Ann Wentz, USEPA, Region 5.

Results

Core Values (Always assuming environmental protectiveness.)

- Use resources wisely
- Integrate cleanup with end use
- Consider the environmental “big picture”

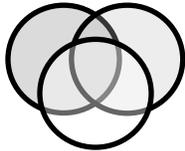
Objective: Greener clean-ups will be low impact

- Less energy consumption
- More renewable energy use
- Less off-site disposal (fuel, landfill capacity)
- Less resource consumption
- Reuse materials and existing infrastructure
- Minimize additional environmental impacts
- Maximize efficiency and effectiveness

Differences between voluntary and regulatory programs, considering “Pilots, Policy, Programs, and Promotions.”

Voluntary Programs

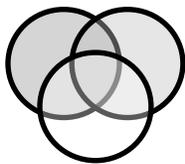
- Pilots: Cost, time, track record; market driven (center of circles)



- Policy: Local government discretion, more flexible
- Programs: Simple metrics (qualitative)
- Promotion: Review times, access to funds, cost savings, branding

Regulatory Programs

- Pilots: Environmental protection is main issue (center of circles)



- Policy: Regulatory framework constraints; less flexible
- Programs: Metrics (qualitative/quantitative), based on pilots
- Promotion: Review times, kudos, cost savings, branding