GREENER CLEANUPS POLICY - EPA REGION 9

Background

As part of our mission to protect human health and the environment, EPA is committed to using effective and environmentally sustainable strategies to restore contaminated land for beneficial uses. EPA's cleanup programs already promote sustainability by removing health threats from toxins left in the environment by previous unsustainable industrial practices. However, with consideration and planning, additional sustainability benefits often can be achieved when a cleanup action is performed. The Region 9 Greener Cleanups Policy is intended to ensure that sustainability is considered in cleanups by establishing a preference for using strategies, practices and technologies that reduce the environmental footprint of Superfund and RCRA cleanups.

Policy

While first meeting all statutory and regulatory requirements of Superfund and RCRA, **EPA Region 9 will strive to integrate sustainability practices into its cleanup actions**. This policy establishes a **preference for use of a range of practices, strategies and technologies to support the implementation of greener cleanups**.

- Reduce air emissions, including greenhouse gas emissions, by using clean diesel technology and alternative fuels.
- Conserve natural resources and energy through efficient energy use and by using renewable energy technologies.
- Minimize overall virgin material use and waste generation as well as reuse and recycle existing resources.
- Minimize toxics in materials and products.
- Minimize impacts to water quality and water resources by water conservation and efficiency measures.

These sustainability practices will be evaluated in light of the site-specific situation at each cleanup site. Sustainability will be incorporated where determined appropriate into Superfund and RCRA cleanups performed by EPA or under EPA oversight. Not all strategies will be appropriate in every case. Cleanups that do not satisfy threshold requirements for protectiveness, or do not meet other site-specific cleanup objectives, are not considered to be "greener cleanups" under this policy.

Sustainability strategies and technologies should be evaluated at every stage of the cleanup process to achieve the greatest level of benefit. In implementing this policy, project managers are encouraged to consider the application of lifecycle analysis tools. These tools can help account for the manufacture, use, and transport of materials, products, equipment and wastes associated with all phases of a cleanup. Region 9 will continue to pursue emerging sustainability technologies and strategies to expand the scope of opportunities at Superfund and RCRA cleanups.

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Region 9 Greener Cleanups Practices, Strategies, and Technologies

The Region 9 Greener Cleanups Policy establishes a preference for use of a range of practices, strategies and technologies to support the implementation of greener cleanups including those listed below. We anticipate that these specific practices, strategies and technologies will be updated as emerging practices and technologies are identified.

Air Emission Reduction

- Using clean diesel technologies and alternative fuel strategies;
- Using idle- reduction strategies to reduce air particulate emissions from diesel equipment; and
- Reducing the amount of transportation required to and/or from the site and the total emissions due to materials transport to and/or from the site.

Energy Conservation and Utilization

- Reducing energy use and employing energy efficiency approaches and equipment (e.g. EnergyStar, combined heat and power);
- Using renewable energy to power the remedial action (e.g. solar, wind, anaerobic digestion, hydroelectric, geothermal);
- Siting and applying renewable energy technologies as part of site reuse (e.g. for other local purposes or to feed the electric grid); and
- Designing buildings for sustainability including: potential reuse, design for deconstruction, green materials, and water and energy efficiency.

Material Use and Waste Production

- Using concrete in which coal ash, or granulated blast furnace/steel slag has been substituted for carbon-intensive Portland cement;
- Using coal ash, foundry sand, tire rubber chips, recycled asphalt, reclaimed concrete, FGD gypsum, or other industrial byproducts in place of virgin materials as aggregate in concrete or asphalt, or as fill material in embankments, stabilized cover, etc.; and
- Minimizing waste by recycling or direct reuse of site materials including any construction or demolition debris such as wood, shingles, asphalt, concrete, and drywall.

Toxics Reduction in Materials and Products

- Using materials and products that do not contain or are designed to minimize toxic substances.

Water Conservation

- Reducing water use and employing water efficiency approaches and equipment.