

2010 National Nuclear Security Administration's Pollution Prevention Awards

Best-in-Class

Sustainable Projects for a Sustainable Future

Several coordinated activities introduced during the 2010 Earth Week laid the foundation for sustainable practices that have maintained momentum. The Third Annual Energy Town Hall highlighted innovative projects surrounding energy issues and facilitated discussions relating to energy at the Laboratory. The Environmental Protection, Institutional Facilities and Central Services, and Utilities and Infrastructure Divisions launched an organic vegetable garden to demonstrate the importance of locally-grown and sustainable food and the concept of "slow food." The overall goal of using the produce from the garden for dishes served at the Otowi Cafeteria was also a success. The events of Earth Week encouraged a greater awareness of recycling, public transportation, waste minimization, and energy use.



Sigma Electroplating Discharge Reduction

Replacement of a vacuum pump used in a rinse water recycle system and elimination of the steam heating of the electroplating baths resulted in significant energy, water, and waste savings for the Sigma Electroplating Laboratory.



Environmental Stewardship



Video Teleconferencing

An unclassified video teleconference center was established in the Chemistry and Metallurgy Research Replacement Project Office. This teleconference center allows for live, interactive, and efficient communications without involving travel. It is estimated that one meeting alone saved approximately \$10,000 in travel costs while simultaneously reducing greenhouse gas emissions.



Integrating Sustainability & EMS Goals

The flow-down of new sustainability goals late in the fiscal year tested the ability of the environmental management system to respond with meaningful objectives and targets for the upcoming fiscal year. The Laboratory's mature Environmental Management System provided a reasonable, cogent response that covered the scope of the Site Sustainability Plan requirements within the time-frame required. This resulted in the Laboratory being recognized as the only site in the Department of Energy's complex to successfully integrate the Environmental Management System and the Site Sustainability Plan.



Algal Biofuels Consortium Development

The Algal Biofuels Consortium Development Team continues to provide leadership in renewable energy research focused on innovative technologies that will help bring biofuels to a commercial reality. The Team formed the National Alliance for Advanced Biofuels and Bioproducts consortium. The Consortium secured funding from Department of Energy to develop innovative technologies for cost-effective production of algal biomass and lipids, economically viable fuels and co-products, and a framework for a sustainable biofuels industry.



New Plutonium Removal Technique

Introducing a variation on an analytical technique that separates plutonium from trace impurities reduced most of the transuranic liquid waste and eliminated all of the transuranic solid and low-level waste generated by the original technique. The new process reduced the risk to workers and is amenable to other applications where chromatographic separation of actinides is required for sample preparation.