

3. Environmental Program Information

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LLNL is committed to enhancing its environmental stewardship and to reducing any impacts its operations may have on the environment. This chapter describes the lead organizations that support the LLNL's environmental stewardship and describes LLNL's Environmental Management System (EMS) and Pollution Prevention (P2) program.

3.1 Environmental Protection Program

Three organizations lead the environmental protection program and provide environmental expertise to the Laboratory: Environmental Protection Department (EPD), Radioactive and Hazardous Waste Management (RHWM) Division and Environmental Restoration Department (ERD). Spill response and energy, water and fleet management are also key components of environmental protection and sustainability.

3.1.1 Environmental Protection Department

EPD is responsible for environmental monitoring and environmental regulatory interpretation and implementation guidance in support of LLNL's programs. EPD prepares and maintains environmental plans, reports, and permits; maintains the environmental portions of the *Environment, Safety, and Health (ES&H) Manual*; informs management about pending changes in environmental regulations pertinent to LLNL; represents LLNL in day-to-day interactions with regulatory agencies and the public; develops and provides institutional environmental training; and assesses the effectiveness of pollution control programs. A principal part of EPD's mission is to work with LLNL programs to ensure that operations are conducted in a manner that limits environmental impact and that is in compliance with regulatory requirements. The LLNL EMS is managed within EPD through the EMS Team, which has representatives from each Principal Directorate and the Director's Office.

3.1.2 Radioactive and Hazardous Waste Management Division

RHWM manages all hazardous, radioactive, and mixed wastes generated at LLNL facilities in accordance with local, state, and federal requirements. RHWM processes, stores, packages, treats, and prepares waste for shipment and disposal, recycling, or discharge to the sanitary sewer. As part of its waste management activities, RHWM tracks and documents the movement of hazardous, mixed, and radioactive wastes from waste accumulation areas (WAAs), which are typically located near the waste generator, to final disposition; develops and implements approved standard operating procedures; decontaminates LLNL equipment; ensures that containers for shipment of waste meet the specifications of the U.S. Department of Transportation (DOT) and other regulatory agencies; responds to emergencies; and participates in the cleanup of potential hazardous and radioactive spills at LLNL facilities. RHWM prepares numerous reports

3. Environmental Program Information

in support of its mission including those required by regulation and various guidance and management plans.

RHWM meets regulations for the treatment of LLNL's mixed waste in accordance with the requirements of the FFCA. The schedule for this treatment is negotiated with California and involves utilizing on-site treatment options as well as finding off-site alternatives.

3.1.3 Environmental Restoration Department

ERD evaluates and remediates soil and groundwater contaminated by past hazardous materials handling and disposal practices and from leaks and spills that have occurred at the Livermore site and Site 300 prior to and during LLNL operations. ERD conducts field investigations at both sites to characterize the existence, extent, and impact of contamination. ERD evaluates and develops various remediation technologies, makes recommendations, and implements actions for site restoration. ERD is responsible for managing remedial activities, such as soil removal and groundwater and soil vapor extraction and treatment, and for decontamination, decommissioning, and demolition of closed facilities in a manner that prevents environmental contamination and completes the facility life cycle. As part of its responsibility for CERCLA compliance issues, ERD plans, directs, and conducts assessments to determine both the impact of past releases on the environment and the restoration activities needed to reduce contaminant concentrations to protect human health and the environment.

3.1.4 Response to Spills and Other Environmental Emergencies

LLNL has an active spill response program to investigate and evaluate all spills and leaks (releases) at LLNL that are potentially hazardous to the environment. During working hours, incidents can be reported to the EPD environmental analysts supporting program areas, or the LLNL Fire Dispatch for investigation and response. Off-hour incidents are reported to Fire Dispatch who notifies the Environmental Duty Officer (EDO) and the on-site Fire Department if required. The EDO, who is available 24 hours a day, seven days a week, maximizes efficient and effective emergency environmental response. The EDO and environmental analysts also notify and consult with LLNL management and have seven-day-a-week, 24-hour-a-day access to the Office of Laboratory Counsel for questions concerning regulatory reporting requirements.

3.1.5 Energy, Water and Fleet Management

The Facilities and Infrastructure Directorate implements Laboratory-wide programs for energy and water conservation, fleet management, high performance sustainable building, and renewable energy. These programs are designed to meet the requirements of DOE Order 430.2B, Departmental Energy, Renewable Energy and Transportation Management. The programs contribute to environmental protection through implementation of lab-wide reduction initiatives (see **Table 3-2**).

3.2 Environmental Management System

LLNL established its EMS to meet the requirements of International Organization for Standardization (ISO) 14001:1996 in June 2004. In 2006, LLNL upgraded its EMS to meet the requirements of ISO 14001:2004, and developed a number of Environmental Management Plans (EMPs) that address lab-wide significant aspects. During FY 2007, the EMS expanded to incorporate EMPs at the programmatic level. During FY 2008, more focus was placed on raising lab-wide awareness of the EMS, and on continued development of EMPs at both the institutional and programmatic levels. In October 2009, LLNL became ISO 14001:2004 certified.

3.2.1 Environmental Management Plans

EMS representatives from each program area continue to develop EMPs and associated objectives and targets, based on program-specific aspects. Directorates select aspects to pursue considering which ones they could reasonably affect, based on budget and mission. During 2009, the directorate EMPs listed in **Table 3-1** were active. In addition, a number of EMPs and initiatives address Lab-wide environmental aspects (see **Table 3-2**).

Table 3-1. LLNL Directorate Environmental Management Plans active in 2009

Principal Directorate	Aspect(s) addressed	Environmental Management Plan(s) and Program(s)
Operations & Business	• Water use	• Water Conservation
	• Municipal waste generation	• Municipal Waste Generation
	• Municipal waste generation	• Recycling of Beverage Containers (closed in 2009)
	• Municipal waste generation • Nonhazardous materials use	• Office Paper Use Reduction and Recycling
	• Nonhazardous materials use	• Nonhazardous Materials Use
	• Electrical energy use • Fossil fuel consumption	• IMF (Institutionally Managed Facilities) Energy Conservation
	Weapons & Complex Integration	• Cultural resource disturbance
• Ecological resource disturbance		• Ecological Resources
• Electrical energy use		• Electrical Energy Use
• Fossil fuel consumption		• Fossil Fuel Consumption
• Hazardous materials use		• Hazardous Materials Use
• Municipal waste generation		• Municipal Waste Generation
• Nonhazardous materials use		• Nonhazardous Materials Use
• Radioactive materials use		• Radioactive Materials Use
• Renewable energy use		• Renewable Energy Use
Science & Technology	• Municipal waste generation • Nonhazardous materials use	• Computer Packaging Material Recycling Plan
	• Nonhazardous materials use	• Minimizing Outdoor Equipment Storage
	• Hazardous materials use • Waste reduction	• Preventing the Formation of Lead Oxide by Sealing Lead Shielding

3. Environmental Program Information

Table 3-1 (cont.). LLNL Directorate Environmental Management Plans active in 2009

Principal Directorate	Aspect(s) addressed	Environmental Management Plan(s) and Program(s)
Science & Technology (cont.)	<ul style="list-style-type: none"> • All environmental aspects 	<ul style="list-style-type: none"> • EMS Integration into Work Control Process
	<ul style="list-style-type: none"> • Electrical energy use 	<ul style="list-style-type: none"> • Server Energy Efficiency Opportunities (closed in 2009)
	<ul style="list-style-type: none"> • Radioactive materials use 	<ul style="list-style-type: none"> • Minimizing Radioactive Sealed Sources and Reducing Exposure Hazards
	<ul style="list-style-type: none"> • Municipal waste generation 	<ul style="list-style-type: none"> • Office Paper Use Reduction and Recycling (closed in 2009)
	<ul style="list-style-type: none"> • Municipal waste generation 	<ul style="list-style-type: none"> • Computer Packaging Material Recycling for B453
	<ul style="list-style-type: none"> • Municipal waste generation 	<ul style="list-style-type: none"> • Evaluation of Beverage Container Recycling Opportunities in the S&T PAD (closed in 2009)
	<ul style="list-style-type: none"> • Nonhazardous materials 	<ul style="list-style-type: none"> • Minimizing Outdoor Equipment Storage
	<ul style="list-style-type: none"> • Electrical energy use 	<ul style="list-style-type: none"> • B453 Electrical Energy Conservation
	<ul style="list-style-type: none"> • Hazardous waste generation • Industrial waste generation 	<ul style="list-style-type: none"> • Engineering Shop Consolidation
Global Security	<ul style="list-style-type: none"> • Water use 	<ul style="list-style-type: none"> • Optimizing Autoclave Water & Energy Use within Global Security (closed in 2009)
	<ul style="list-style-type: none"> • Electrical energy use 	
	<ul style="list-style-type: none"> • Hazardous waste generation • Industrial waste generation 	<ul style="list-style-type: none"> • Waste & Chemical Usage Evaluation (closed in 2009)
Director's Office	<ul style="list-style-type: none"> • Municipal waste generation 	<ul style="list-style-type: none"> • Office Paper Use Reduction and Recycling
	<ul style="list-style-type: none"> • Nonhazardous materials use 	
	<ul style="list-style-type: none"> • Hazardous waste generation 	<ul style="list-style-type: none"> • Hazardous and Industrial Waste Evaluation
	<ul style="list-style-type: none"> • Waste reduction 	<ul style="list-style-type: none"> • Hazardous/Toxic Chemicals/Materials Evaluation
	<ul style="list-style-type: none"> • Hazardous materials use 	
	<ul style="list-style-type: none"> • Hazardous materials use • Hazardous waste generation 	<ul style="list-style-type: none"> • Environmental Stewardship at Small Arms Training Facility
	<ul style="list-style-type: none"> • Fossil fuel conservation 	
	<ul style="list-style-type: none"> • Municipal waste generation 	
	<ul style="list-style-type: none"> • Hazardous materials use 	<ul style="list-style-type: none"> • Hazardous Materials Use Reduction
NIF & Photon Science	<ul style="list-style-type: none"> • Hazardous waste generation 	<ul style="list-style-type: none"> • Legacy Waste Management
	<ul style="list-style-type: none"> • Municipal waste generation 	
	<ul style="list-style-type: none"> • Hazardous waste management 	<ul style="list-style-type: none"> • Online Service Request Button
	<ul style="list-style-type: none"> • Hazardous waste generation • Hazardous materials use 	<ul style="list-style-type: none"> • Waste and Chemical Usage Evaluation
	<ul style="list-style-type: none"> • Municipal waste generation 	<ul style="list-style-type: none"> • NIF Dedication & Family Days Environmental Stewardship: Recycling (closed in 2009)

3. Environmental Program Information

Table 3-2. LLNL Environmental Management Plans and Initiatives for Lab-wide aspects active in 2009

Environmental aspect	Objective summary	Status
Ecological resource disturbance	<ul style="list-style-type: none"> • Establish an LLNL policy prohibiting the introduction of exotic species • Educate LLNL employees about the consequences of exotic species introduction • Control exotic species, e.g., feral pig, largemouth bass 	Ongoing
Cultural resource disturbance	<ul style="list-style-type: none"> • Support DOE/NNSA in working with the California State Historic Preservation Officer to sign and then implement a new Programmatic Agreement 	Ongoing
Electrical energy use ^(a)	<ul style="list-style-type: none"> • Meet the energy use intensity goals outlined in DOE Order 430.2B, Departmental Energy, Renewable Energy and Transportation Management 	Energy use intensity was reduced by 12.7% over the FY 2003 baseline, exceeding the 12% cumulative four-year goal.
Fossil fuel consumption/renewable energy use ^(a)	<ul style="list-style-type: none"> • Meet the Vehicle Fleet Management objectives outlined in DOE Order 430.2B, Departmental Energy, Renewable Energy and Transportation Management 	The E85 fuel station continued operation in 2009. LLNL has 317 E85 compatible alternative fuel vehicles (AFV) on-site and 65 electric vehicles (GEMS). Fleet Management continues to replace conventional fuel vehicles with AFVs per the General Services Administration (GSA) replacement schedule.
Hazardous materials use	<ul style="list-style-type: none"> • Evaluate biobased alternatives for use by Fleet Management • Increase awareness of green chemistry resources. 	Fleet adopted use of selected biobased lubricating oils. EMS and P2 internal web pages include information on chemical alternatives and links to green chemistry resources.
Water use ^(a)	<ul style="list-style-type: none"> • Meet the water conservation goals outlined in DOE Order 430.2B, Departmental Energy, Renewable Energy and Transportation Management 	Achieved a water use reduction of 5.2% from FY 2007 levels, exceeding the cumulative two-year goal of 4.0%.
Construction and building maintenance ^(a)	<ul style="list-style-type: none"> • Achieve Leadership in Energy & Environmental Design for Existing Buildings (LEED-EB) certification for 15% of site's existing building square footage by FY 2015 	Submitted two buildings for U.S. Green Building Council (USGBC) LEED-EB operations and maintenance certification review.
Renewable energy use ^(a)	<ul style="list-style-type: none"> • Meet the renewable energy goals outlined in DOE Order 430.2B, Departmental Energy, Renewable Energy and Transportation Management 	Achieved compliance with Renewable Energy requirements through purchase of Renewable Energy Credits (RECs).

(a) Aspect is addressed as part of the DOE Order 430.2B Executable Plan.

3. Environmental Program Information

3.2.2 EMS Audits and Reviews

3.2.2.1 External Audits:

An external EMS audit conducted by the DOE Livermore Site Office on April 20–24 identified two major nonconformances and six minor nonconformances. A path forward to enable the Laboratory to self certify in accordance with DOE Order 450.1A in June was implemented with the preparation of a Corrective Action Plan. The Laboratory self certified with acceptance by DOE on May 27, 2009.

The Laboratory successfully completed an external independent audit of its ISO 14001 EMS program (September 21–24), the fourth and final phase in a series of audits required to achieve formal registration of the LLNL ISO 14001 Environmental Management System. Registration was formally conferred on October 31, 2009. The registration recognizes that Laboratory organizations and employees meet all the goals in environmental compliance programs, processes, and practices.

This independent audit was conducted by NSF International Strategic Registration, an internationally recognized ISO auditor, and validated the Laboratory's strong commitment to environmental stewardship.

3.2.2.2 Internal Assessments and Reviews:

In May a Senior Management Review was conducted and senior management reaffirmed its commitment to environmental stewardship through the implementation of EMS.

In November 2009 an internal EMS audit was performed to address corrective actions resulting from the April DOE independent assessment and to comply with the ISO 14001:2004 internal audit requirements. Five minor nonconformances were identified and are in the process of being addressed both at the institutional and programmatic level.

3.3 Pollution Prevention Program

LLNL's P2 Program operates within the framework of the Integrated Safety Management System (ISMS) and EMS and in accordance with applicable laws, regulations, and DOE orders as required by contract. It encompasses stewardship and maintenance, waste stream analysis, reporting of waste generation and P2 accomplishments, and fostering of P2 awareness through presentations, articles, and events. The P2 Program supports institutional and directorate P2 activities via environmental teams, including implementation and facilitation of source reduction and/or reclamation, recycling, and reuse programs for hazardous and nonhazardous waste; facilitation of environmentally preferable procurement; and preparation of P2 opportunity assessments.

The P2 Program at LLNL strives to systematically reduce all types of waste generated, and to eliminate or minimize pollutant releases to all environmental media from all aspects of the operations at the Livermore site and Site 300. These efforts help protect public health and the

3. Environmental Program Information

environment by reducing or eliminating waste, improving resource usage, and reducing inventories and releases of hazardous chemicals. These efforts also benefit LLNL by reducing compliance costs and minimizing the potential for civil and criminal liabilities under environmental laws. In accordance with EPA guidelines and DOE policy, the P2 Program uses a hierarchical approach to waste reduction (i.e., source elimination or reduction, material substitution, reuse and recycling, and treatment and disposal), which is applied, where feasible, to all types of waste. Waste generation is tracked using RHWM's HazTrack database. By reviewing the information in this database, program managers and P2 Program staff can monitor and analyze waste streams to determine cost-effective improvements to LLNL operations.

LLNL continues its efforts to phase-out Class I ozone depleting substances (ODSs). These efforts include recovery and recycling activities, refrigerant and coolant substitutions, preventative maintenance, leak detection programs, and equipment replacement. LLNL uses minimal quantities of ODSs for mission-critical laboratory research, under the "laboratory exemption" provided for in 40 CFR Part 82, Subpart A, Appendix G.

3.3.1 Routine Hazardous, Transuranic, and Radioactive Waste

Routine waste listed in **Table 3-3** includes waste from ongoing operations produced by any type of production, analysis, and research and development taking place at LLNL.

Beginning in FY 2009, a new volumetric calculation and reporting method is in place for transuranic and radioactive wastes. Because of this change, a comparison between FY 2009 and past years' data will not accurately reflect actual changes in generated volume. Therefore, the table for transuranic and radioactive wastes (**Table 3-4**) is limited to 2009. The multi-year table format will resume with the addition of FY 2010 data next year.

Table 3-3. Routine hazardous waste at LLNL, FY 2006–2009.

Waste category	FY 2006	FY 2007	FY 2008	FY 2009
Routine hazardous waste generated (MT)	153	138	248	159

Table 3-4. Routine transuranic and radioactive waste at LLNL, FY 2009.

Waste category	FY 2009 ^(a)
Routine low-level waste generated (m ³)	203.5
Routine mixed waste generated (m ³)	24.6
Routine TRU / mixed TRU waste generated (m ³)	9.4

(a) In FY 2009, a new volumetric calculation and reporting method was put in place for transuranic and radioactive wastes.

3. Environmental Program Information

3.3.2 Diverted Waste

LLNL maintains an active waste diversion program, encouraging recycling and reuse of both routine and nonroutine waste.

3.3.2.1 Routine Waste

Together, the Livermore site and Site 300 generated 3654 MT of routine nonhazardous solid waste in FY 2009. This volume includes diverted waste (e.g., material diverted through recycling and reuse programs) and landfill waste.

Both sites combined diverted a total 2502 MT of routine nonhazardous waste in FY 2009, which represents a diversion rate of 68%. The diverted routine nonhazardous waste includes waste recycled by RHWM and materials diverted through the surplus sales program. The portion of routine nonhazardous waste sent to landfill was 1152 MT. See **Table 3-5**.

In 2009, LLNL transferred or donated for reuse 50 laptops and monitors and recycled 4055 computers, monitors, and laptops, which were managed as universal waste.

Table 3-5. Routine nonhazardous waste in FY 2009, Livermore site and Site 300 combined.

Destination	Waste description	Amount in FY 2009 (MT)
Diverted	Batteries ^(a)	31
	Baled paper	78
	Beverage containers	5
	Corrugated Cardboard	78
	Cooking grease	21
	Engine oils	8
	Fluorescent lights ^(a)	6
	Magazines, newspapers, phone books	20
	Mixed metals ^(b)	1352
	Office paper	80
	Tires and scrap	5
	Toner cartridges	8
	Wood (chips, compost)	810
	TOTAL diverted	2502
Landfill	Compacted (landfill)	1152
	TOTAL landfill	1152
TOTAL routine nonhazardous waste		3654

(a) Batteries and fluorescent lights are managed as universal waste.

(b) Mixed scrap metals, including 12.76 MT of lead.

3.3.2.2 Nonroutine Waste

Nonroutine nonhazardous solid wastes include excavated soils, wastes and metals from construction, and decontamination and demolition activities. The Livermore site and Site 300 generated a total of 7525 MT of nonroutine nonhazardous solid waste in FY 2009.

In FY 2009, the two sites combined diverted 4912 of nonroutine nonhazardous solid waste through reuse or recycling, which represents a diversion rate of 65%. Diverted nonroutine nonhazardous solid waste includes soil reused either on site for other projects or as cover soil at Class II landfills. See **Table 3-6**.

Table 3-6. Nonroutine nonhazardous waste in FY 2009, Livermore site and Site 300 combined.

Destination	Waste description	Amount in FY 2009 (MT)
Diverted	Class II cover soil (reused at landfill)	186
	Class II concrete (reused at landfill)	4726
	TOTAL diverted	4912
Landfill	Construction demolition (noncompacted landfill)	2613
	TOTAL landfill	2613
TOTAL nonroutine nonhazardous waste		7525

(a) RHWM Waste Data Management System

3.3.3 Environmentally Preferable Purchasing

LLNL has a comprehensive Environmentally Preferable Purchasing (EPP) program that includes preferential purchasing of recycled content and biobased products. In 2009, the EPP program continued to include a preference for Electronic Product Environmental Assessment Tool (EPEAT) registered products. 97 % of all desktop electronics purchases in FY 2009 were EPEAT Silver or EPEAT Gold, indicating that the products meet or exceed the Institute of Electrical and Electronics Engineers (IEEE) 1680-2006 environmental performance standard for electronic products.

3.3.4 Pollution Prevention Activities

3.3.4.1 Environmental Stewardship Accomplishments and Awards

Each year, the P2 Program submits nominations for the NNSA environmental awards program, which recognizes exemplary performance in integrating environmental stewardship practices to reduce risk, protect natural resources, and enhance site operations. In FY 2009, LLNL received

3. Environmental Program Information

two Environmental Stewardship awards: one in the Waste/Pollution Prevention category and the other in the Sustainable Design/Green Building category.

The LLNL Ferrite Core and Power Conditioning Equipment Recovery project won in the Waste/Pollution prevention category for the reuse of over 800 ferrite cores and 50,000 pounds equipment from a decommissioned facility. Reusing the cores in another project saved over \$2 million and diverted approximately 39,000 pounds of waste from the municipal waste stream.

The LLNL Water Conservation Test Bed project won an NNSA Environmental Stewardship award in the Sustainable Design/Green Building category for its water conservation efforts. The 3.5-acre Water Conservation Test Bed conserves the use of potable domestic water and includes an automated landscape water management feature to transport rainwater collected from a non-industrial rooftop to underground storage tanks for use in landscape irrigation. The volume of rainwater to be collected is expected to be between 90,000 and 210,000 gallons annually. The system design allows for future expansion to other nearby sources so that ultimately no potable water will be needed for irrigation.

The P2 Program also submitted an accomplishment to the NNSA for the beneficial reuse of wastewater at Site 300. Site 300 is converting from existing well water to a public water supply system. The conversion effort generated wastewater from flushing out the lines as part of the connection process. LLNL received permission from regulatory authorities to use this water to maintain proper treatment parameters for the site's sewage evaporation pond and to provide some of the water to neighboring Carnegie State Vehicular Recreation Area for dry season dust control. This effort allowed the beneficial reuse of over 400,000 gallons of non-potable water, and reduced the demand for well water at both sites.

The P2 Program received the California Integrated Waste Management Board's 2009 WRAP award for recycling accomplishments during the 2008 calendar year. The award recognizes California businesses and organizations that have made outstanding efforts to reduce nonhazardous waste by implementing resource-efficient practices, aggressive waste reduction, reuse and recycling activities, and procurement of recycled-content products. This is the second consecutive year that LLNL has won the WRAP award.

3.3.4.2 High Performance Sustainable Buildings and Energy Conservation

The Facilities and Infrastructure Directorate manages the implementation of DOE Order 430.2B objectives related to sustainable building materials and practices. In FY 2008, a Green Cleaning Policy was developed that meets the U. S. Green Building Council's (USGBC) Leadership in Energy and Environmental Design (LEED) requirements. The purpose and goal of the Policy is to reduce the usage of potentially hazardous cleaning chemicals and their adverse impact on indoor air quality, occupant health, and the environment. In FY 2009, LLNL continued to expand green cleaning lab-wide, with the goal to implement green cleaning at all applicable locations.

Also in FY 2009, two buildings at the Livermore site were submitted for USGBC LEED-EB Operations and Maintenance certification review. Building 142 was submitted to USGBC for

3. Environmental Program Information

LEED-EB Operations and Maintenance Silver certification. LLNL's Terascale Simulation Facility (TSF) won a 2009 DOE/NNSA Federal Energy Management Program award for its two-year effort to conserve energy in TSF computer rooms. The TSF was also submitted to USGBC for LEED-EB Operations and Maintenance Gold certification and is estimated to save \$2.4 million annually in energy costs.

3.3.5 Pollution Prevention Employee Training and Awareness Programs

In 2009, LLNL conducted a number of activities to promote employee awareness of pollution prevention. LLNL participated in a community Earth Day event, held April 18, 2009. The event was sponsored by the City of Livermore and the Livermore Area Recreation and Park District, and included a creek cleanup and a festival. The P2 Program and volunteers from the LLNL Environmental Protection Department staffed a table at the festival, which included a poster display of LLNL waste diversion activities. Information on LLNL and pollution prevention was also distributed to festival attendees.

The P2 Program conducted other awareness activities during the year. Articles on pollution prevention appeared in *Newsline* (the LLNL newspaper) and *NewsOnLine*. The P2 Program continues to conduct training for purchasing staff on Environmentally Preferable Purchasing requirements.

The P2 Program maintains an internal P2 website for LLNL employees, which was redesigned in 2009. The website is a resource for employees who have questions regarding pollution prevention, energy efficiency, reuse and recycling of materials, green building, and other environmental topics. Employees can also use the site to suggest P2 ideas, ask questions about P2 planning and implementation, and find out about P2 current events.

The P2 Program's Earth Hotline was merged into an EPD-wide Green Hotline in 2009. The Green Hotline provides support for employees with questions, suggestions, or ideas regarding LLNL's pollution prevention and waste diversion endeavors, as well as other environmental issues