

Site Sustainability Plan Office of Legacy Management

December 2012



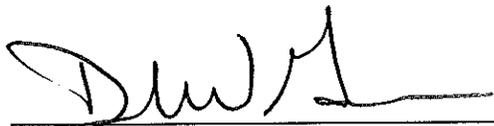
U.S. DEPARTMENT OF
ENERGY

Legacy
Management

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**Site Sustainability Plan
Office of Legacy Management**

December 2012

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David W. Geiser, Director, Office of Legacy Management

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Abbreviations

AFV	alternative fuel vehicle
Btu	British thermal unit
CEDR	Consolidated Energy Data Report
CO ₂	carbon dioxide
DOE	U.S. Department of Energy
E85	ethanol fuel blend
EISA	Energy Independence and Security Act of 2007
EMS	Environmental Management System
EO	Executive Order
EPA	U.S. Environmental Protection Agency
EPAct	Energy Policy Act
EPCRA	Emergency Planning and Community Right-to-Know Act of 1986
EPEAT	Electronic Product Environmental Assessment Tool
ESPC	Energy Savings Performance Contract
FAST	Federal Acquisition Statistical Tool
FDCCI	Federal Data Center Consolidation Initiative
FEMP	Federal Energy Management Program
FIMS	Facility Information Management System
FY	fiscal year
GHG	greenhouse gas
GSA	General Services Administration
GSF	gross square feet
HPSB	high-performance and sustainable building
HVAC	heating, ventilation, and air-conditioning
ILA	industrial, landscaping, and agricultural
kBtu/GSF	thousand British thermal units per gross square foot
LEED	Leadership in Energy and Environmental Design
LM	Office of Legacy Management
LMS	Legacy Management Support
NC	New Construction
NEPA	National Environmental Policy Act
P.L.	Public Law

PPOA	pollution prevention opportunity assessment
PPTRS	Pollution Prevention Tracking and Reporting System
PUE	power utilization effectiveness
PV	photovoltaic
REC	Renewable Energy Credit
SF ₆	sulfur hexafluoride
SOARS	System Operation and Analysis at Remote Sites
SPO	Sustainability Performance Office
SSP	site sustainability plan
SSPP	Strategic Sustainability Performance Plan
T&D	transmission and distribution
UMTRCA	Uranium Mill Tailings Radiation Control Act
U.S.C.	<i>United States Code</i>
USGBC	U.S. Green Building Council
WUI	water use intensity

I. Executive Summary

a. Site management vision

The U.S. Department of Energy (DOE) Office of Legacy Management (LM) is committed to excellence in environmental stewardship. LM's mission is to manage post-closure responsibilities and ensure the future protection of human health and the environment. Currently, LM is responsible for monitoring, testing, inspecting, and maintaining approximately 65,018 acres of land at 89 sites located in 28 states and Puerto Rico, including sites where records and stakeholder support are provided. LM's Environmental Management System (EMS) is a comprehensive method for incorporating life-cycle environmental considerations into all aspects of the LM mission.

Between now and FY 2020, LM will receive approximately 40 more sites for long-term care. As LM takes on these additional sites, all of the following will be expected to increase to handle the additional activities: employees, office space, vehicles, fuel use, purchases, and wastes. Additionally, these future sites may have buildings that would change energy, water, and building calculations. The final condition of these sites when LM accepts them may vary greatly, and the overall impact to sustainability goals is neither determinable nor predictable at this time. As transfer of these sites progresses, LM will attempt to evaluate the impacts to sustainability goals and related funding; LM may need to seek relief from and/or additional funding in achieving the sustainability goals.

LM's EMS is a joint program between LM and its prime contractor for the Legacy Management Support (LMS) contract. The EMS helps LM use its finite resources wisely, minimize wastes and adverse environmental impacts, and comply with the laws, regulations, DOE requirements, and other applicable requirements that protect the environment, public health, and resources. The EMS enables LM to implement sustainable environmental stewardship practices that enhance the protection of air, water, land, and other natural and cultural resources affected by DOE operations. Implementing the EMS is integral to LM's mission and to achieving excellence in environmental stewardship.

b. Major planning assumptions and issues, including funding strategies

The purpose of this Site Sustainability Plan (SSP) is to outline the strategies for managing, funding, and implementing various energy-related activities at LM. Unless stated otherwise, all data are reported in fiscal years. This plan reflects progress made toward, and strategies in place for, accomplishing the goals and requirements established by:

- Executive Order (EO) 13514, *Federal Leadership in Environmental, Energy, and Economic Performance*, October 5, 2009.
- EO 13423, *Strengthening Federal Environmental, Energy, and Transportation Management*, January 24, 2007.
- DOE Order 430.1B Chg. 2, *Real Property and Asset Management*, April 25, 2011.
- DOE Order 436.1, *Departmental Sustainability*, May 2, 2011.
- Energy Independence and Security Act of 2007 (EISA), Section 432 (Title 42 *United States Code* [U.S.C.] Section 8253[f]).

- Energy Policy Act of 2005 (EPAct 2005), Public Law (P.L.) 109-58.
- Energy Policy Act of 1992 (EPAct 1992), P.L. 102-486.
- National Energy Conservation Policy Act of 1978, P.L. 95-619.
- DOE Strategic Sustainability Performance Plan (SSPP), multiple years.
- Secretary of Energy Dr. Steven Chu, “Installation of Cool Roofs on Department of Energy Buildings,” Memorandum for Heads of Departmental Elements, June 1, 2010.
- Secretary of Energy Dr. Steven Chu, “Management of Fleet Inventory,” Memorandum for Under Secretaries, Office of Management (Headquarters Fleet), PMAs, and Headquarters Fleet Managers, Sustainability Performance Office, January 27, 2011.
- DOE Policy 450.4A, *Integrated Safety Management Policy*, April 25, 2011.
- LM Policy 450.9, *Environment, Safety, and Health Policy*, November 29, 2011.

LM, with its comprehensive approach to fulfilling EO 13514, will advance the DOE sustainability mission with a diverse approach and a concentrated effort toward the goals of 2013 and beyond.

LM’s multipronged method of achieving these goals will include training and education to foster behavioral change in the office environment, implement infrastructure improvements, and operate an onsite renewable-power-generating project. Areas that have a priority focus for reduction are electricity purchased from a utility, fugitive emissions, and fleet vehicles.

LM integrates funding for long-term sustainability projects in the normal budget process. Costs are submitted in the Integrated Facilities and Infrastructure Crosscut budget and other related budget calls.

To complete the deliverables for these priority areas, LM will work with its EMS core team, EMS program teams, and the LM operations and maintenance staff. In addition, LM will enlist the technical expertise of its scientists and engineers to enable LM to operate sustainably. This fostering of sustainable operations will include continued emphasis on behavior change.

c. Successes and challenges, including traditional Triple Bottom Line activities

In fiscal year (FY) 2012, LM received a DOE Sustainability Award. LM was 1 of 20 winners selected out of 137 nominations. The title of LM’s submission was *Not Just Your Average EMS*. This is a credit to everyone in the organization, past and present, in all aspects of both environmental compliance and sustainability. It is very important that a legacy organization demonstrate leadership in sustainability.

Behavioral change is a challenge, but it is essential for sustainability programs. As opposed to physical facility or technological upgrades, behavioral changes are low- or no-cost, voluntary actions. Often, the most difficult step in the change process is the realization that change is needed. Employees must realize that even though they don’t personally receive any savings or aren’t penalized for nonparticipation, their actions are instrumental in achieving sustainability goals. LM will continue to train, communicate with, and engage employees so that behavioral changes continue.

The EMS team is jointly led by two EMS sustainability coordinators, one from LM and one from the LMS contractor. They are the points-of-contact for the EMS. Responsibilities of the EMS sustainability coordinators include overseeing the development and implementation of the joint EMS, actively participating in the EMS core team, reporting progress to management, conducting management reviews, facilitating management involvement in the EMS, and generating end-of-year reporting.

The EMS core team includes representatives from applicable programs and projects from LM and LMS contractor management. Their responsibilities include (1) overseeing the development and implementation of the EMS sustainable program teams related to EO 13514, EO 13423, DOE Order 436.1, DOE Order 430.1B Chg. 2, and the DOE SSPP; (2) approving EMS goals; and (3) functioning as the steering committee for management-level decisions.

In FY 2012, the LM EMS team continued implementing EO 13514 and the DOE SSPP requirements as well as EO 13423 and DOE Order 436.1. Progress on activities related to environmental, energy, and transportation management is evaluated and reported quarterly. The EMS team is divided into the following nine sustainability program teams and two ancillary teams:

- Electronics Stewardship
- Energy Efficiency and Greenhouse Gas (GHG) Reduction
- Land Stewardship
- Media (ancillary team)
- Renewable Energy
- Sustainable Acquisition
- Sustainable Buildings (including cool roofs and regional planning)
- Training (ancillary team)
- Vehicle and Fuel Management
- Waste Minimization and Pollution Prevention
- Water Conservation

LM is establishing another sustainability team to address climate change. The team currently has only two people but will be expanding as interest and guidance in this area grow. Each EMS program team consists of a team lead, an LM advocate, an LMS contractor senior management advocate, and several other knowledgeable employees. Each program team is responsible for managing and implementing its individual program.

The EMS team's performance assurance report encompasses the nine program teams and compares the status of their activities against the goals that have been established in accordance with the DOE SSPP, LM environmental aspects, and site-specific objectives and targets. In 2012, an internal goal was to combine some team meetings to increase efficiency and reduce crossover through combined expertise. This would also reduce the number of meetings and provide a larger forum to resolve complex issues.

The EMS team meets regularly and provides a program review to senior management every 3 months. The management review helps establish direction, develop strategies to implement the sustainability programs, provide status updates, and facilitate the successful execution of the sustainability programs across LM. LM will use this SSP to ensure that it meets sustainability goals.

d. Summary table of goal targets

See Table 1 for a summary of FY 2012 performance and long-term projected performance to attain DOE goals through FY 2020. See Attachment A for a copy of LM’s Environment, Safety, and Health policy.

Table 1. DOE Goal Summary Table¹

SSPP Goal #	DOE Goal	Performance Status through FY 2012	Planned Actions & Contribution	Risk of Non-attainment
GOAL 1: Greenhouse Gas Reduction and Comprehensive Greenhouse Gas Inventory				
1.1	28% Scope 1 & 2 GHG reduction by FY 2020 from FY 2008 baseline.	LM produced about 77.1% less Scope 1 and 20.6% less Scope 2 GHG emissions in FY 2012 than in FY 2008. On the basis of metric tons of GHG emissions, combined Scope 1 and 2 emissions were 21.2% less in FY 2012 than in FY 2008.	Continue to implement energy-efficiency improvements.	Low
1.2	13% Scope 3 GHG reduction by FY 2020 from a FY 2008 baseline.	In FY 2012, the available data resulted in an estimated reduction of 3.8% in Scope 3 emissions compared to the FY 2008 baseline. This reduction exceeds the expected target of 3% presented in Appendix J of the SSP Guidance.	LM will continue to encourage employees to carpool to work and to participate in alternative work-location agreements. LM will also continue to reduce business air travel by use of video and teleconferencing.	Low
GOAL 2: Buildings, Energy Savings Performance Contract (ESPC) Initiative Schedule, and Regional and Local Planning				
2.1	30% energy intensity (British thermal unit per gross square foot) reduction by FY 2015 from FY 2003 baseline.	LM’s current energy intensity, based on its FY 2012 data entered in Tab 1.2 of CEDR is 288.4 thousand British thermal units per gross square foot (kBtu/GSF). This figure is an 11.9% increase compared to the 2003 baseline of 257 kBtu/GSF. The main issue is that most of the energy is used in facilities not related to buildings, such as the 23 large extraction wells at the Fernald, Ohio, Site.	Continue to implement energy-efficiency improvements.	High
2.2	EISA Section 432 energy and water evaluations.	LM performed two energy audits in FY 2012 at Fernald Preserve and at the Weldon Spring, Missouri, Site. LM conducted water audits in FY 2012 at the Monticello, Utah, Site and the Fernald Preserve.	Selection of audited sites is rotated to ensure that 100% of the sites are audited every 4 years to meet the requirements of EISA Section 432.	Low

Table 1 (continued). DOE Goal Summary Table¹

SSPP Goal #	DOE Goal	Performance Status through FY 2012	Planned Actions & Contribution	Risk of Non-attainment
2.3	Individual buildings metering for 90% of electricity (by October 1, 2012); for 90% of steam, natural gas, and chilled water (by October 1, 2015). ²	100% of appropriate buildings, according to EPAAct 2005, are metered for electricity. 100% of buildings with natural gas use are metered. LM has no steam or chilled-water systems, so steam and chilled-water metering is not applicable for LM. 100% of appropriate buildings, according to EPAAct 2005, are metered for potable water.	Install new meters as required.	Low
2.4	Cool roofs, unless uneconomical, for roof replacements unless project already has CD-2 approval. New roofs must have thermal resistance of at least R-30. ³	In FY 2012, two cool-roof evaluations were done, one at Weldon Spring and one at Fernald.	All future new buildings will have cool roofs, if economically feasible. If an existing roof needs significant repairs, the possibility of installing a cool roof or applying a cool-roof coating will be evaluated. Cool-roof evaluations will continue to be combined with facility condition assessment surveys.	Low
2.5	15% of existing buildings greater than 5,000 gross square feet (GSF) are compliant with the Guiding Principles (GPs) of high-performance and sustainable building (HPSB) by FY 2015.	12.5% of existing buildings comply with the GPs. All existing LM-owned and LM-leased buildings have been assessed.	Four LM-leased buildings are undergoing building upgrades, and LM is pursuing meeting 100% of the owned and leased buildings to comply with the HPSB GPs by FY 2015.	Low
2.6	All new construction, major renovations, and alterations of buildings greater than 5,000 GSF must comply with the GPs. ⁴	None of the listed activities occurred on buildings greater than of 5,000 GSF.	All new buildings and major renovations will meet or exceed these requirements.	Low
2.7	7.5% of annual electricity consumption from renewable sources by FY 2013 and thereafter.	LM's total renewable power percentage for FY 2012 was 11.8%.	Install photovoltaic solar arrays at the Tuba City, Arizona, Disposal Site to generate 285 kilowatts of electricity in FY 2013, which will provide an additional 8% of the electricity LM uses.	Low
GOAL 3: Fleet Management				
3.1	10% annual increase in fleet alternative fuel consumption by FY 2015 relative to FY 2005 baseline.	This goal was met.	LM will increase the ratio of alternative fuel use to conventional fuel use by 25% compared to FY 2009 values.	Low

Table 1 (continued). DOE Goal Summary Table¹

SSPP Goal #	DOE Goal	Performance Status through FY 2012	Planned Actions & Contribution	Risk of Non-attainment
3.2	2% annual reduction in fleet petroleum consumption by FY 2020 relative to FY 2005 baseline.	<p>This goal was not met.</p> <p>Through LM's mission, the number of sites has increased since the baseline year and will continue to increase. As the number of sites increases, additional travel and a corresponding increase in fuel use is expected.</p> <p>If the petroleum consumption is normalized by dividing by the number of sites, LM is reducing the average consumption per site.</p>	LM will increase the ratio of alternative fuel use to conventional fuel use by 25% compared to FY 2009 values.	High
3.3	100% of light-duty vehicle purchases must consist of alternative fuel vehicles (AFVs) by FY 2015 and thereafter (75% FY 2000–2015). ⁵	<p>This goal was met.</p> <p>In FY 2012, all light-duty vehicle acquisitions were AFVs. These acquisitions make 100% of LM's light-duty fleet AFVs.</p>	LM will continue to replace light-duty conventional fuel vehicles with AFVs. LM's current light-duty fleet comprises 29 vehicles.	Low
3.4	Reduce fleet inventory of non-mission-critical vehicles by 35% by FY 2013 relative to FY 2005 baseline.	<p>LM is not scheduled to meet this goal.</p> <p>Through LM's mission, the number of sites has increased since the baseline year and will continue to increase. As the number of sites increases, additional travel and a subsequent increase in vehicles is expected.</p> <p>If the vehicle inventory is normalized by dividing by the number of sites, LM is reducing the average vehicle count per site.</p>	LM had 28 vehicles in FY 2005 and currently has 40. For FY 2012, LM reduced its fleet from 43 vehicles to 40. This reduction represents a 7% decrease for FY 2012.	High
GOAL 4: Water Use Efficiency and Management				
4.1	26% potable water intensity (gallons per gross square foot) reduction by FY 2020 from FY 2007 baseline.	<p>LM reduced potable water use intensity by 95.8% in FY 2012, exceeding the interim target minimum water intensity reduction of 10% by the end of FY 2012.</p> <p>LM conducted water audits in FY 2012 at the Monticello site and the Fernald Preserve.</p> <p>LM implemented two efficiency improvements at the Weldon Spring site in FY 2012.</p>	<p>LM will continue to track use and performance, and will plan projects to reduce water use intensity through improved use practices and water-efficient products.</p> <p>LM will continue water audits, assess water use, and identify additional water reduction and reuse opportunities.</p>	Low

Table 1 (continued). DOE Goal Summary Table¹

SSPP Goal #	DOE Goal	Performance Status through FY 2012	Planned Actions & Contribution	Risk of Non-attainment
4.2	20% water consumption (gallons) reduction of industrial, landscaping, and agricultural (ILA) water by FY 2020 from FY 2010 baseline.	LM achieved an 8.7% reduction in FY 2012, which exceeds the interim target minimum ILA reduction of 4% by the end of FY 2012.	LM will continue to track use and performance, and will reduce ILA use through improved use practices and water-efficient products. LM will continue to audit water use, will continue to assess water use, and will identify additional water reduction and reuse opportunities.	Low
GOAL 5: Pollution Prevention and Waste Reduction				
5.1	Divert at least 50% of nonhazardous solid waste, excluding construction and demolition debris, by FY 2015.	In FY 2012, LM recycled 310,804 pounds of material, for a total waste diversion of over 48%. In FY 2012, the DOE Office of Health, Safety and Security modified the definition of debris to include bulk material from road, bridge, and building construction and demolition. This new definition changed the classification of some waste from solid waste to construction debris waste.	In FY 2013 and beyond, LM will continue to increase the composting of food and vegetation wastes; to promote reduce, reuse, recycle, and rebuy principles; and to encourage federal and contractor employees to boost work-related recycling efforts to the extent possible. LM will continue to use standardized language in bid proposals, requisitions, and statements of work to require recycling reports from self-performed and subcontracted work.	Medium
5.2	Divert at least 50% of construction and demolition materials and debris by FY 2015.	In FY 2012, LM achieved over a 99% diversion rate for construction and demolition materials.	Because of the FY 2012 expanded definition of construction debris, meeting the 50% goal in upcoming years should not be a problem. LM will continue to use standardized language in bid proposals, requisitions, and statements of work to require recycling reports from self-performed and subcontracted work.	Low

Table 1 (continued). DOE Goal Summary Table¹

SSPP Goal #	DOE Goal	Performance Status through FY 2012	Planned Actions & Contribution	Risk of Non-attainment
GOAL 6: Sustainable Acquisition				
6.1	Procurements meet requirements by including necessary provisions and clauses (Sustainable Procurements/Biobased Procurements).	In 2012, 100% of new contract actions, including task and delivery orders under new contracts and existing contracts, required the supply or use of products and services that were non-ozone-depleting, contained recycled content, were nontoxic or less toxic alternatives, were energy-efficient (as designated by Energy Star or the Federal Energy Management Program), were water-efficient or biobased, or were environmentally preferable (including products registered under the Electronic Product Environmental Assessment Tool). In FY 2012, 99% of purchase orders were for sustainable products and services when sustainable options were available.	All new purchases of products and services will meet sustainability requirements if those products and services are listed on the U.S. Environmental Protection Agency and U.S. Department of Agriculture sustainable acquisitions lists. All new solicitations and subcontracts or purchase orders will contain the sustainable acquisition clause.	Low
GOAL 7: Electronic Stewardship and Data Centers				
7.1	All data centers are metered to measure a monthly Power Utilization Effectiveness (PUE) of 100% by FY 2015.	LM completed installation and configuration of a separate power meter at the primary data center, the LM Business Center in Morgantown, West Virginia. Current completion is 1 out of 6, or 17%.	In FY 2013, LM will extend separate metering to the Grand Junction, Colorado, data center to measure and improve PUE there.	Low
7.2	Maximum annual weighted average PUE of 1.4 by FY 2015.	Electrical use at LM Business Center data center is monitored continuously. The maximum annual weighted average PUE of FY 2012 was 1.0.	LM will continue to monitor data centers and adjust power use as needed to achieve the desired PUE average.	Low
7.3	Electronic Stewardship - 100% of eligible PCs, laptops, and monitors with power management actively implemented and in use by FY 2012.	All desktop and laptop systems in LM are imaged with power management settings configured according to the government standard. The controls for power management on all LM systems are locked down, which prohibits users from changing them. LM migrated 80% of computer systems to Windows 7 by the end of FY 2012. The rollout will continue until 100% of the systems have been upgraded.	LM will continue migrating the remaining computer systems to Windows 7.	Low

Table 1 (continued). DOE Goal Summary Table¹

SSPP Goal #	DOE Goal	Performance Status through FY 2012	Planned Actions & Contribution	Risk of Non-attainment
GOAL 8: Innovation & Government-Wide Support				
8.0	Innovation & Government-Wide support	<p>Site-specific objectives:</p> <p>Through LM's mission, LM will continue to provide educational opportunities at the Fernald Preserve and Weldon Spring sites. These facilities provide learning opportunities on sustainability through their beneficial reuse as visitor centers and ecological areas, and actual sustainability-related displays.</p> <p>LM is also assisting other countries with establishing legacy programs for their uranium industries in a proactive and sustainable manner, through the International Atomic Energy Agency (IAEA).</p>		

¹ The performance status reported in the SSP narrative crosswalks to the data provided in the Consolidated Energy Data Report (CEDR).

² Per National Energy Policy Conservation Act (42 U.S.C Section 8253) the term "buildings" includes industrial, process, or laboratory facilities.

³ Secretary of Energy Dr. Steven Chu, "Installation of Cool Roofs on Department of Energy Buildings," Memorandum for Heads of Departmental Elements, June 1, 2010.

⁴ DOE considers buildings meeting the following criteria as complying with GPs: Any building that achieves Leadership in Energy and Environmental Design- Existing Building (LEED-EB) Silver or higher or LEED-New Construction (NC) Gold or higher; Any building that achieves a Green Globes-NC rating of four or a Green Globes Continual Improvement for existing building (CIEB) rating of three; Any building that has been occupied for more than one year that achieves Living Status designation by the Living Building Challenge (although included as policy in the DOE SSPP, these equivalencies are contingent upon Office of Management and Budget and Council of Environmental Quality approval).

⁵ EPA 1992 goal updated per Presidential Memorandum on Federal Fleet Performance on May 24, 2011.

<http://www.whitehouse.gov/the-press-office/2011/05/24/presidential-memorandum-federal-fleet-performance>.

II. Performance Review and Plan Narrative

1 GHG Reduction and Comprehensive GHG Inventory

1.1 Scope 1 and 2 GHG Emission Reduction

The DOE SSPP committed DOE to reducing its GHG Scope 1 and 2 emissions by 28 percent by FY 2020 compared to the FY 2008 baseline.

On the basis of utility invoices, LM produced about 77.1 percent less Scope 1 and 20.6 percent less Scope 2 GHG emissions in FY 2012 than in FY 2008. On the basis of metric tons of GHG emissions, combined Scope 1 and 2 emissions were 21.2 percent less in 2012 than in 2008. Since LM reports all sites collectively, one zip code has been used for the reporting. The Scope 1 and 2 performance is reported in Tab 3.2 of the Consolidated Energy Data Report (CEDR). LM is ahead of schedule to meet the 28 percent reduction by FY 2020.

To achieve this goal, LM will aggressively proceed with projects, operational improvements, and additional actions to meet the GHG requirements. Doing so will involve determining and obtaining funding sources, changing workplace culture, and having LM management emphasize the importance of GHG reduction.

1.1.1 Performance Status

- a. Referencing pertinent databases and/or workbooks associated with the goal for quantitative information

Purchased energy use decreased approximately 20.6 percent from FY 2008 to FY 2012 on the basis of FY 2012 data shown in Tab 3.1 of CEDR (energy use is nearly proportional to GHG production). Fugitive emissions are now considered a Scope 1 GHG. These data are included in Tab 6.2 of CEDR. Fleet data from FAST is included on Tab 10 of CEDR.

- b. Describing major initiatives or changes to missions or facilities that contribute in significant ways to goal performance

The Weldon Spring, Missouri, Site demolished the onsite Administration Building in September 2012. This will decrease LM's overall electricity use and associated GHG emissions.

Efforts to replace the use of CO₂ with compressed air for sampling activities were successful at many sites during FY 2012. As a result, the amount of CO₂ used was reduced from 440 pounds in FY 2011 to 58.4 pounds FY 2012.

- c. Sharing success stories, accomplishments, lessons learned, and best management practices

Performance related to these goals is reported in the LMS contractor's *Quarterly Performance Assurance Report*.

By increasing the number of flex-fuel vehicles and operating them on cleaner-burning fuels, such as ethanol fuel blend (E85), LM increased the use of alternative fuel from 0 gallons in the

baseline year of FY 2005 to 4,328 gallons in FY 2012, thus reducing GHG emissions from vehicles.

LM's System Operation and Analysis at Remote Sites (SOARS) collects data from 16 sites in nine states and transmits the information to servers in Grand Junction, Colorado. SOARS use has enhanced the operation of active remediation systems and reduced the frequency of travel to LM's remote sites, thus conserving energy, protecting natural resources, and reducing GHG emissions.

- d. Noting baseline changes, impacts, and justifications in the SSP. Identifying, updating and justifying any changes to previously reported data, including the baseline year in the appropriate CEDR tab. Major changes are subject to approval by program and SPO [Sustainability Performance Office]

Fugitive emissions were added to Scope 1 GHG in FY 2012, including those caused by sulfur hexafluoride (SF₆). In FY 2009, a survey was conducted to determine if SF₆ was used at LM sites; no SF₆ was used or existed in inventories at that time. In FY 2012, a recheck for SF₆ was conducted through verbal communications with Procurement personnel and with the LMS operations manager in early October. Procurement confirmed that no major electrical subcontracts had been procured during FY 2012. The LMS operations manager confirmed that SF₆ was not used at any LM sites and that SF₆ would not likely be used in the future. Based on these conversations, it was determined that a formal survey was not necessary.

1.1.2 Plans and Projected Performance

Discuss plans and expectations for FY 2013 and beyond:

- a. Identify planned activities (e.g., mission changes, conservation measures, renewable energy systems, new construction or deactivation and decommissioning (D&D), policy and procedures updates, training) and expected impact of planned activities

Through LM's mission, the number of sites has increased since the baseline year and will continue to increase. As the number of sites increases, additional travel and a corresponding increase in fuel use and GHG emissions are expected.

LM will continue to replace inefficient process equipment and install electricity-saving control systems, as warranted.

LM will continue to pursue renewable energy projects if they are cost-efficient.

LM will continue to promote the reduction of GHG emissions and provide financial support as necessary for inspections of chemicals and cylinders to reduce the potential for spills and leaks.

Since the Administration Building at the Weldon Spring site was demolished in September 2012, any resulting decrease in GHG emissions will start to be reflected in FY 2013 and beyond.

b. Expected site contribution to the DOE goal(s)

LM is a small organization within DOE and quantitatively will make a relatively small contribution to attainment of DOE's overall sustainability goals. However, the LM program is a model for effective federal/contractor joint implementation, is pursuing attainment of the goals, and is expecting to meet this goal.

c. Estimated additional funding needed beyond planned activities and typical operation costs for meeting the goal

None.

d. Site specific measurable goals and milestones (3–5) for the next fiscal year

Reduce fleet emissions by following better vehicle use guidelines and acquiring additional hybrid and flex-fuel vehicles.

Pursue the use of biofuels to fuel alternative fuel vehicles (AFVs) and flex-fuel vehicles whenever biofuels are available.

Complete the Rocky Flats Surface Water Configuration Dam Breach Project at the Rocky Flats, Colorado, Site. Breaching the dams will reduce GHG emissions by eliminating dam maintenance requirements that make vehicle use necessary.

Continue to expand the use of SOARS, where cost effective, to reduce vehicle mileage, reduce GHG emissions, and conserve natural resources.

Collect and distribute building electrical metering data through SOARS to allow building staff and managers to monitor energy use.

e. Request for technical assistance with reference to CEDR project number, if needed

None.

f. Planned or needed training to increase awareness and encourage behavior change

Sustainability awareness training is provided in intervals not to exceed a 2-year period. Additionally, LM's Sustainability teams provide awareness articles, which are published in an internal quarterly newsletter (*ECHOutlook*), at least once every 2 years. Related posters, contests, and activities sometimes accompany the articles. Train existing and new staff members to foster energy-efficiency behavior changes in the office and field environments.

1.2 Scope 3 GHG Emissions Reductions

DOE has committed to reducing its Scope 3 GHG emissions by 13 percent by 2015, compared to the FY 2008 baseline. An analysis of LM's Scope 3 GHG inventory indicates that priority areas for LM should be employee commuter travel, business air travel, and vehicle travel. CEDR provides a current inventory.

1.2.1. Performance Status

Scope 3 emissions are derived from employee commuting travel, business ground and air travel, transmission and distribution (T&D) losses, offsite wastewater treatment, and offsite municipal waste disposal. The status of each of these categories is discussed below.

- a. Referencing pertinent databases and/or workbooks associated with the goal for quantitative information

Performance related to these goals is reported in LM's annual Pollution Prevention Tracking and Reporting System (PPTRS) report and in CEDR (Tabs 7.1a, 7.1b, 8.1–8.3, 9.1a, and 9.1b).

Employee Commuting

Employee commuting mileage details are documented in Tab 8.3 of CEDR.

Business Ground and Air Travel

CO₂ emissions resulting from business air and ground travel are presented in Tabs 8.1 and 8.2 of CEDR, respectively.

T&D Losses

These losses are generally described as a small fraction of energy and electrical systems. These data are obtained from the energy data provided in Tab 3.1 of CEDR.

Contracted Offsite Wastewater Treatment

Offsite wastewater treatment data are located in Tab 7.1b of CEDR.

Offsite Municipal Waste Disposal

Offsite municipal waste disposal data are located in Tab 9.1b of CEDR.

- b. Describing major initiatives or changes to missions or facilities that contribute in significant ways to goal performance

Employee Commuting

The number of LM and contractor employees remained at a little over 400 in FY 2012. By percentages, the distribution of vehicle types and trends remained fairly consistent, with upward trends in bike riding, carpooling, and use of hybrid vehicles. CO₂ emissions related to employee commuting increased from the 2008 baseline of 838.5 pounds in FY 2008 to 1,081 pounds in FY 2012.

Business Ground and Air Travel

LM's mission is to manage post-closure responsibilities and ensure the future protection of human health and the environment. In doing so, travel is an integral part of day-to-day activities. LM has taken a number of steps to reduce business travel to the extent practical by consolidating trips, holding video and teleconferences instead of face-to-face meetings, and encouraging business trip carpools and sharing rental cars.

T&D Losses

T&D losses were lower than the FY 2008 baseline mainly because the Tuba City, Arizona, Disposal Site, one of LM's largest treatment systems, operated about 30 percent of FY 2012. The solar thermal system installed at the Tuba City site in FY 2009 reduces purchased energy use and CO₂ emissions, including T&D losses, by about 10 percent annually. The Fernald, Ohio, Site also implemented significant upgrades to its electrical systems during FY 2012.

Offsite Wastewater Treatment

Sanitary wastewater from LM facilities is treated offsite, with the exception of leach field systems at the Monticello, Utah, Disposal and Processing Site and at the Weldon Spring site. Because these data are based on number of employees, there is no way to improve these numbers other than by decreasing the number of employees. Any water efficiencies realized from these systems are not part of this reporting section.

Offsite Municipal Waste Disposal

Municipal solid waste, construction debris, and recycled materials are tracked on a quarterly basis. LM promotes recycling and reuse during project planning activities. Waste minimization is a mandatory part of contract language to ensure that all personnel working on LM projects reduce the amount of waste generated and recycle to the extent possible.

These actions have resulted in reduced CO₂ emissions in offsite and municipal landfills from LM solid waste and construction debris.

c. Sharing success stories, accomplishments, lessons learned, and best management practices

LM reduced Scope 3 GHG emissions by 3.88 percent in FY 2012 from the FY 2008 baseline year.

Performance related to these goals is reported in the LMS contractor's *Quarterly Performance Assurance Report*.

Employee Commuting

LM continued to promote carpooling, alternative work schedules, and periodic work-from-home opportunities for efficient use of time and resources. LM site-specific activities include walk-to-work or ride-your-bike-to-work days and frequent onsite luncheons sponsored by the Employee

Association, as well as the availability of food deliveries, all of which reduce personal vehicle use during lunch periods.

To reduce employee commuter travel, LM provides options to periodically work from home and promotes carpooling as part of the effort to reduce Scope 3 GHG emissions.

Business Ground and Air Travel

LM made a concerted effort to reduce business air travel by utilizing webinars sponsored by the Federal Energy Management Program (FEMP) to enhance job skills, as well as other seminars and training sessions provided by federal and state agencies and educational institutions. In FY 2012, LM conducted its annual EMS Management Review via videoconferencing, which significantly reduced travel.

T&D Losses

Upgrading antiquated systems and increasing efficiencies at LM sites were primary objectives during FY 2012. This also resulted in a significant decrease in T&D losses. T&D losses were lower than the FY 2008 baseline by over 16 percent, mainly because the Tuba City disposal site, one of the largest treatment systems, operated only about 30 percent of FY 2012. The solar thermal system installed at the Tuba City site in FY 2009 reduced purchased energy use and CO₂ emissions, including T&D losses, by about 10 percent.

Offsite Wastewater Treatment

For FY 2012, CO₂ emissions from offsite wastewater treatment were higher than in FY 2008. This is a result of the increased number of employees. Anthropogenic CO₂ increased from 1.25 to 2.59 metric tons.

Offsite Municipal Waste Disposal

This past year, LM achieved a total of 48 percent solid waste diversion and a 99 percent diversion of construction debris from landfills. LM promotes recycling and reuse during project planning activities.

A pollution prevention opportunity assessment (PPOA) was conducted on a large construction activity at the Rocky Flats site to determine the effectiveness of waste minimization practices for construction debris. The PPOA found that based on the standard language in the Statement of Work and requirements implemented by the project manager, 92.7 percent of the construction debris was recycled, resulting in 55 tons of concrete and 5.1 tons of steel being diverted from landfills.

- d. Noting baseline changes, impacts, and justifications in the SSP. Identifying, updating, and justifying any changes to previously reported data, including the baseline year in the appropriate CEDR tab. Major changes are subject to approval by program and SPO

Employee Commuting

An FY 2012 survey was conducted to update federal and contractor employee commuting choices to and from the workplace. However, the new survey did not obtain all pertinent information, and the FY 2009 survey and the new survey were integrated so that commuter vehicle types could be derived.

Business Ground and Air Travel

The *Guidance for 2012 DOE Site Sustainability Plans* indicated that only contractor data were to be provided for ground and air travel. These data were corrected for FY 2008 baseline and FY 2010 data, and LM and contractor mileages were placed on separate lines for both years. These changes are reflected on Tabs 8.1 and 8.2 of the CEDR.

Emissions from Fully Serviced Leases (New, Voluntary for FY 2012):

LM does not track emissions resulting from fully serviced leases.

1.2.2 Plans and Projected Performance

Discuss plans and expectations for FY 2013 and beyond:

- a. Identify planned activities (e.g., mission changes, conservation measures, renewable energy systems, new construction or deactivation and decommissioning (D&D), policy and procedures updates, training) and expected impact of planned activities

Employee Commuting

It is likely that the workforce size will remain about the same or increase slightly during FY 2013 and beyond. LM will continue to encourage employees to carpool and use public transportation to the extent possible.

LM will also work to increase telecommuting options through mutual agreements.

Business Ground and Air Travel

LM and the LMS contractor will continue to use teleconferencing services and virtual-presence software to conduct meetings and will continue to reduce business travel to the extent practical.

The LMS contractor will develop an incentive program to encourage sharing business rental cars while attending out-of-town meetings and events.

T&D Losses

Future efficiencies gained through routine upgrades of electrical systems and heating, venting, and air-conditioning (HVAC) systems at several LM sites will continue to reduce T&D losses and, subsequently, CO₂ emissions.

Contracted (Offsite) Wastewater Treatment

If the number of employees at sites continues to increase, these emission totals will also continue to increase. It is likely that the workforce size will remain about the same or increase slightly during FY 2013 and in years to come.

Contracted (Offsite) Municipal Waste Disposal

- Office supply reuse centers will continue to exist to facilitate sharing office materials instead of purchasing new supplies.
- Excess materials will be donated or recycled. These actions and other ongoing recycling efforts should continue to support the reduction of CO₂ emissions from landfills.
- Annotated draft guidance for solid waste diversion strategies is currently under internal review by the Waste Minimization team and is expected to be submitted for review to the EMS team leads during the second quarter of FY 2013. It is expected that once implemented, this guidance will result in further municipal, industrial, and hazardous waste reductions in the future.
- A PPOA was initiated in late 2012 to evaluate the potential for a paperless purchasing system. This assessment is still under development and is expected to be completed before the end of the third quarter of FY 2013. If a paperless purchasing system is cost-effective to implement, no paper will be generated for LMS purchases in the future. This will significantly reduce paper use and hard-copy record volumes.

b. Expected site contribution to the DOE goal(s)

LM is a small organization within DOE and quantitatively will make a relatively small contribution to attainment of DOE's overall sustainability goals. However, the LM program is a model for effective federal/contractor joint implementation, is pursuing attainment of the goals, and is expecting to meet this goal.

c. Estimated additional funding needed beyond planned activities and typical operation costs for meeting the goal

None.

d. Site specific measurable goals and milestones (3–5) for the next fiscal year

Employee Commuting

LM will encourage employees to carpool and use public transportation to the extent possible.

LM will also work to increase telecommuting options through mutual agreements.

Business Ground and Air Travel

LM and the LMS contractor will continue to use teleconferencing services and virtual-presence software to conduct meetings and will continue to reduce business travel to the extent practical.

T&D Losses

Efficiencies gained through routine upgrades of electrical and HVAC systems at several LM sites will continue to reduce T&D losses and, subsequently, CO₂ emissions.

Contracted (Offsite) Wastewater Treatment

None.

Contracted (Offsite) Municipal Waste Disposal

Office supply reuse centers will continue to exist to facilitate sharing office materials instead of purchasing new supplies.

Excess materials will be donated or recycled. These actions and other ongoing recycling efforts should continue to support the reduction of CO₂ emissions from landfills.

Annotated draft guidance for solid waste diversion strategies is currently under internal review by the Waste Minimization team and is expected to be submitted for review to the EMS team leads during the second quarter of FY 2013. It is expected that once implemented, this guidance will result in further municipal, industrial, and hazardous waste reductions.

A PPOA was initiated in late 2012 to evaluate the potential for a paperless purchasing system. This assessment is still under development and is expected to be completed before the end of the third quarter of FY 2013.

Emissions from Fully Serviced Leases (New, Voluntary for FY 2012):

LM will look into developing a program to account for CO₂ emissions from fully serviced leases.

e. Request for technical assistance with reference to CEDR project number, if needed

None.

f. Planned or needed training to increase awareness and encourage behavior change

Sustainability awareness training is provided in intervals not to exceed a 2-year period. Additionally, LM's Sustainability teams provide awareness articles, which are published in an internal quarterly newsletter (*ECHOutlook*) at least once every 2 years. Related posters, contests, and activities sometimes accompany the articles.

2 Buildings, ESPC Initiative Schedule, and Regional and Local Planning

2.1 Energy Intensity Reduction

The National Energy Conservation Policy Act, as amended by EISA in 2007, requires DOE to reduce its energy intensity by 30 percent by 2015 from a 2003 baseline.

2.1.1 Performance Status

- a. Referencing pertinent databases and/or workbooks associated with the goal for quantitative information

Performance related to these goals is reported in Tab 2.1 of CEDR. Also, see Tab 2.1 of CEDR for FY 2012 training information.

LM's current energy intensity, based on its FY 2012 data calculated in Tab 1.2 of CEDR, is 288.4 thousand British thermal units per gross square foot (kBtu/GSF). This figure is an 11.9 percent increase compared to the FY 2003 baseline of 257 kBtu/GSF, as shown below in Table 2.

Table 2. LM Energy Consumption

	DOE Goal 2015 (Btu/GSF)	2003 ^a (Btu/GSF)	2008 (Btu/GSF)	2009 (Btu/GSF)	2010 (Btu/GSF)	2011 (Btu/GSF)	2012 ^b (Btu/GSF)	Energy Reduction (Percent)
Energy with RECs	178,208	257,137	636,748	236,202	204,311	266,135	288,371	11.9 percent increase
Gross Square Feet		3,215,306 ^c	26,374	72,206	114,797	71,629	71,015	

Notes:

All values above denote the site-delivered energy, not the source energy.

^a LM became a DOE office in December 2003. As such, the validity of the FY 2003 baseline data within DOE (historical ownership and energy data) needs to be reviewed. Since the baseline data might not reflect true energy intensity at that time, the percent change might not reflect the actual trend.

^b The gross square footage used to determine energy intensity values differs from the gross square footage provided in the Facility Information Management System snapshot, because energy use does not occur at all sites or buildings. Therefore, the energy intensity values estimated in CEDR and the intensity calculated by LM for the SSP differ.

^c This baseline number has fluctuated over the past few years due to Facility Information Management System reclassifications, appropriate inclusion of buildings in baseline, and corrections for true building gross square footage.

Abbreviations:

RECs = Renewable Energy Credits

- b. Describing major initiatives or changes to missions or facilities that contribute in significant ways to goal performance

LM excludes several buildings from the energy intensity goal. These buildings are fully serviced leased spaces, meaning that the lessor pays the utilities.

Attachment B includes the final Facility Information Management System (FIMS) excluded building list and certification letter.

The main issue is that most of the energy is used in facilities not related to buildings, such as the 23 large extraction wells at the Fernald site.

The Weldon Spring site demolished the onsite Administration Building in September 2012. Due to the demolition of the building, the square footage represented by this building will no longer be included in FY 2013 (the square footage is included in FY 2012). This will decrease LM's overall electricity use and associated GHG emissions but will effectively result in an increase in energy intensity use in FY 2013.

The restart of the Tuba City water treatment plant following a year-long maintenance shutdown restored electricity use to previous levels. The Tuba City plant is one of LM's largest treatment systems and operated about 30 percent of FY 2012. The solar thermal system installed at the Tuba City site in FY 2009 reduced purchased energy use and CO₂ emissions, including T&D losses, by about 10 percent.

c. Sharing success stories, accomplishments, lessons learned, and best management practices

In FY 2012, the following activities contributed to the effort to reduce energy intensity:

- Best Management Practices
 - Performance related to these goals is reported in the LMS contractor's *Quarterly Performance Assurance Report*.
 - LM continues to use best management practices for energy reduction at several locations, such as setback HVAC controls.
 - LM developed policies to revise the methods for computer backups and instituted operating-system updates to help reduce electrical energy use.
 - The LMS contractor has implemented employee incentive programs to reward exceptional individual and team performance in increasing energy efficiency and water conservation, deploying renewable energy, minimizing waste, reducing utility costs, and reducing GHG emissions.
 - LM strengthened the Energy Efficiency and GHG Reduction Program by highlighting it during the first quarter and increasing employee awareness. An article was included in the fall edition of *ECHO* Outlook addressing energy conservation, and a poster was distributed to help highlight the program.
 - Earth Day outreach programs were implemented to motivate employees to become more efficient in their use of energy and water, to use green products and services whenever possible, and to minimize waste.
 - Selected managers have results-based energy management as a component of their performance evaluations.
 - Upgrading antiquated systems and increasing efficiencies at LM sites were primary objectives during FY 2012. Reductions in overall electrical consumption at LM sites totaled 20 percent compared to the FY 2008 baseline.

- Benchmarking
 - Several personnel attended Energy Star Portfolio Manager training in preparation for benchmarking LM utilities in Energy Star Portfolio Manager.
 - The LMS contractor entered data for LM facilities into Energy Star Portfolio Manager in preparation for benchmarking facilities in Energy Star Portfolio Manager.
 - Space Management
 - There was further server reduction via consolidation to virtual machines, continuing the effort that started in FY 2009. Virtualization allows for one server to perform the function of up to 100 individual servers, which results in a reduction in direct power use and in particular a reduction in cooling needs, which typically consume a significant amount of energy.
 - Office personnel were relocated from the Weldon Spring Administration Building (36,030 GSF) into a new modular trailer unit (2,880 square feet), which uses significantly less electricity. The trailer is better insulated, and the HVAC units are more efficient than the old ones.
 - Certified Energy Managers/Training
 - One staff member became a certified energy manager.
 - A Sustainable Building Program team member took an energy management self-study course to enhance knowledge in this area.
 - Training on energy conservation and recycling are already embedded in the periodic EMS sustainability training provided to LM and contractor employees. The LMS contractor has included this information in employees' orientation programs.
 - Selected personnel at each site were given training specific to energy and water management programs and will dedicate all, or a substantial portion, of their time to the effective implementation of energy and water management plans.
 - Deferred Maintenance
 - No deferred maintenance was identified.
- d. Noting baseline changes, impacts, and justifications in the SSP. Identifying, updating, and justifying any changes to previously reported data, including the baseline year in the appropriate CEDR tab. Major changes are subject to approval by program and SPO

The energy intensity goal of 30 percent reduction by FY 2015 will be difficult to meet because of the following conditions:

- LM uses the majority of energy on mission-related systems that are not buildings, such as the 23 large extraction wells for remediation at the Fernald site.
- LM has pursued reclassification of buildings as an Other Structure or Facility (OSF), demolition of buildings, and reduction of lease space. Such activities, although warranted, reduce the current GSF, which negatively impacts the energy use intensity compared to the baseline. Traditionally, FEMP and the SPO have not permitted correlating changes to the baseline GSF.

2.1.2 Plans and Projected Performance

Discuss plans and expectations for FY 2013 and beyond:

- a. Identify planned activities (e.g., mission changes, conservation measures, renewable energy systems, new construction or deactivation and decommissioning (D&D), policy and procedures updates, training) and expected impact of planned activities

Tab 3.3 of CEDR lists projects that, if implemented, have the potential to reduce energy use by more than 30 percent by the end of 2015. Energy conservation efforts are focused on the two largest energy consumers: the Fernald site and the Tuba City site. These groundwater remediation sites offer the most opportunity for energy conservation. A variable frequency drive for one of two 200-horsepower blowers for the pump-and-treat system at Tuba City recently malfunctioned and requires replacement. Because the variable frequency drives for both units are of the same vintage, both drives are planned to be replaced in FY 2013.

FEMP's Energy Savings Performance Contract (ESPC) ENABLE initiative will be investigated as a source of funding for energy-efficient improvements at the Interpretive Center at the Weldon Spring site.

- b. Expected site contribution to the DOE goal(s)

LM is a small organization within DOE and quantitatively will make a relatively small contribution to attainment of DOE's overall sustainability goals. However, the LM program is a model for effective federal/contractor joint implementation, is pursuing attainment of the goals, but is not expecting to meet this goal.

The Administration Building at the Weldon Spring site has been demolished and removed from LM's building inventory, but it remains in this year's energy intensity calculation since it was operational for most of the year. The LM-owned building was in excess of LM's mission needs. The removal of the Administration Building from the gross square footage used in the energy intensity use equation will significantly impact LM's ability to achieve the 30 percent intensity reduction goal by FY 2015.

- c. Estimated additional funding needed beyond planned activities and typical operation costs for meeting the goal

No additional funding is needed beyond current planned activities and typical operation costs to meet this goal.

- d. Site specific measurable goals and milestones (3–5) for the next fiscal year

LM plans to do the following:

- Best Management Practices
 - Replace oversized, inefficient groundwater extraction pumps at the Fernald site, as warranted by normal attrition.
 - Evaluate different/innovative ways to operate the pumps in order to make them more energy efficient.

- Reduce energy use by updating the water treatment technology at the Tuba City site to reduce the amount of energy used to treat groundwater, if funding is obtained.
 - Design any new facilities and major renovations that cost more than \$5 million to meet U.S. Green Building Council (USGBC) Leadership in Energy and Environmental Design (LEED) Gold certification.
 - Design any new facilities and major renovations greater than 5,000 GSF that cost \$5 million or less to meet the High-Performance and Sustainable Buildings (HPSB) Guiding Principles (GPs).
 - Continue to write results-based energy management requirements into selected managers' performance evaluations.
 - Continue to initiate and expand outreach and incentive programs to motivate employees to minimize waste, use energy and water more efficiently, and use green products and services.
 - Continue to assess energy reduction as a factor in the decision process for maintenance and repairs.
 - Benchmarking
 - Continue to benchmark LM facilities in Energy Star Portfolio Manager.
 - Certified Energy Managers/Training
 - Have the selected personnel pursue training as certified energy managers.
 - Continue to require new employees to take the EMS awareness training, which includes information on energy conservation and recycling, as part of their orientation upon starting work for the LMS contractor. LM and contractor employees will continue taking EMS training once every 2 years.
 - Continue to train additional staff members. Staff members will continue to attend GovEnergy and other workshops or symposiums to enhance their current knowledge base.
 - One energy team member is trained and certified as a certified energy manager and as a green building engineer. This team member also participated in the commissioning of the Fernald Preserve Delta Building to pursue certification in commissioning. Experience in two building commissioning projects is required prior to being able to commission a building. Another team member completed a self-study course titled *Basics of Energy Management* sponsored by the Association of Energy Engineers.
 - Deferred Maintenance
 - None.
- e. Request for technical assistance with reference to CEDR project number, if needed

Assistance from SPO and FEMP may be needed to help determine if baseline data have been identified correctly. The historical data used for the baseline may be incomplete and need to be reevaluated. Since the baseline data might not reflect true energy intensity at that time, the percent change might not reflect the actual trend.

- f. Planned or needed training to increase awareness and encourage behavior change

Sustainability awareness training is provided in intervals not to exceed a 2-year period. Additionally, LM's Sustainability teams provide awareness articles to an internal quarterly newsletter (*ECHOutlook*) at least once every 2 years. The articles are sometimes accompanied by related posters, contests, and activities.

2.2 EISA Section 432 Energy and Water Evaluations

2.2.1 Performance Status

- a. Referencing pertinent databases and/or workbooks associated with the goal for quantitative information

LM conducted two energy audits (one at the Fernald site and one at the Weldon Spring site in FY 2012. LM conducted two water audits (one at the Fernald site and one at the Monticello site in FY 2012. Performance related to these goals is reported in the Compliance Tracking System (CTS) for reporting in June, and in Tab 2.1 of CEDR.

- b. Describing major initiatives or changes to missions or facilities that contribute in significant ways to goal performance

None.

- c. Sharing success stories, accomplishments, lessons learned, and best management practices

Performance related to these goals is reported in the LMS contractor *Quarterly Performance Assurance Report*.

LM conducted two energy audits, one at the Fernald site and one at the Weldon Spring site, in FY 2012 and conducted two water audits, one at the Fernald site and one at the Monticello site, in FY 2012.

The selection of audited sites is rotated to ensure that 100 percent of the sites are audited every 4 years to meet the requirements of EISA Section 432.

- d. Noting baseline changes, impacts, and justifications in the SSP. Identifying, updating, and justifying any changes to previously reported data, including the baseline year in the appropriate CEDR tab. Major changes are subject to approval by program and SPO

None.

2.2.2 Plans and Projected Performance

Discuss plans and expectations for FY 2013 and beyond:

- a. Identify planned activities (e.g., mission changes, conservation measures, renewable energy systems, new construction or deactivation and decommissioning (D&D), policy and procedures updates, training) and expected impact of planned activities

LM will conduct two water audits in FY 2013. The proposed locations are (1) the Grand Junction Colorado, Disposal Site, and (2) the Old Rifle, Colorado, Processing Site.

Perform two energy audits in FY 2013. The proposed locations are (1) the Shiprock, New Mexico, Disposal Site and (2) the Tuba City, Arizona, site.

The Energy team lead will participate in Energy Auditing Fundamental Online training course sponsored by the Association of Energy Engineers in FY 2013.

- b. Expected site contribution to the DOE goal(s)

LM is a small organization within DOE and quantitatively will make a relatively small contribution to attainment of DOE's overall sustainability goals. However, the LM program is a model for effective federal/contractor joint implementation, is pursuing attainment of the goals, and is currently expecting to meet this goal.

- c. Estimated additional funding needed beyond planned activities and typical operation costs for meeting the goal

No additional funding is needed beyond current planned activities to meet this goal.

- d. Site specific measurable goals and milestones (3–5) for the next fiscal year

LM will conduct two water audits in FY 2013. The proposed locations are (1) the Grand Junction disposal site and (2) the Old Rifle processing site.

LM will conduct two energy audits in FY 2013. The proposed locations are (1) the Shiprock disposal site and (2) the Tuba City site.

The Energy team lead will participate in Energy Auditing Fundamental Online training course sponsored by the Association of Energy Engineers in FY 2013.

- e. Request for technical assistance with reference to CEDR project number, if needed

None.

- f. Planned or needed training to increase awareness and encourage behavior change

Sustainability awareness training is provided in intervals not to exceed a 2-year period. Additionally, LM's Sustainability teams provide awareness articles to the *ECHO* Outlook

newsletter at least once every 2 years. The articles are sometimes accompanied by related posters, contests, and activities.

The Energy team lead will participate in Energy Auditing Fundamental Online training course sponsored by the Association of Energy Engineers in FY 2013 and in the next building commissioning process.

2.3 Metering

The National Energy Policy Conservation Act, as amended by the Energy Policy Act of 2005 (EPAc 2005), requires installation of electrical meters by 2012 on all individual buildings with the use of advanced electrical meters to the maximum extent practicable. EISA 2007 added a requirement that all appropriate buildings must also be metered for steam and natural gas by 2016.

The DOE SSPP requires installation of electrical meters on individual buildings or processes so that these individually metered buildings and processes account for at least 90 percent of a site's total electricity use by October 1, 2012. Ninety percent of appropriate buildings must be metered for steam, natural gas, and chilled water by October 1, 2015.

To the maximum extent practical, LM will install metering devices (either advanced or standard) in each building, in other facilities, and on site grounds to measure electricity and natural gas use. LM does not use steam or chilled water, so plans to meter these utilities are not required. While metering of potable water is not required, LM will continue to meter potable water as a best management practice, where cost effective.

2.3.1 Performance Status

- a. Referencing pertinent databases and/or workbooks associated with the goal for quantitative information

Of the appropriate EPAc 2005 buildings, 100 percent are metered for electricity, and 100 percent of buildings with natural gas usage are metered. LM has no steam or chilled-water systems. All (100 percent) of appropriate EPAc 2005 buildings are metered for potable water. Performance related to these goals is reported in the FIMS database and in Tab 2.1 of CEDR.

- b. Describing major initiatives or changes to missions or facilities that contribute in significant ways to goal performance

Electrical

Advanced electrical metering has been installed at three sites:

- The Fernald Preserve Visitors Center meter was connected to SOARS for data storage and trending.
- Advanced meters were installed on two Tuba City site buildings.
- Advanced meters were installed on the Weldon Spring Interpretive Center and Leachate building (FIMS Other Structure and Facility).

Water

Standard water metering has been installed at all goal sites except the Old Rifle processing site, where LM determined that installing a meter would not be cost-effective and would not appreciably improve the collection of monitoring data. Only very small quantities of water are used at the Old Rifle site. Water is brought to the site by a tank truck of known volume.

Gas

A standard gas meter is installed at the Fernald site's Converted Advanced Wastewater Treatment facility, where the one process that uses natural gas takes place. Natural gas is not used for any buildings.

Steam and Chilled Water

LM has no steam or chilled-water systems, so metering is not applicable for LM.

- c. Sharing success stories, accomplishments, lessons learned, and best management practices

Performance related to these goals is reported in the LMS contractor *Quarterly Performance Assurance Report*.

LM prepared and issued a metering plan to achieve sustainability goals. In addition, LM identified budgeting needs for FY 2012 as well as FY 2013 through FY 2018. LM uses metering information for benchmarking, reporting, system diagnostics and maintenance, and measurement and verification of savings.

- d. Noting baseline changes, impacts, and justifications in the SSP. Identifying, updating and justifying any changes to previously reported data, including the baseline year in the appropriate CEDR tab. Major changes are subject to approval by program and SPO

None.

2.3.2 Plans and Projected Performance

Discuss plans and expectations for FY 2013 and beyond:

- a. Identify planned activities (e.g., mission changes, conservation measures, renewable energy systems, new construction or deactivation and decommissioning (D&D), policy and procedures updates, training) and expected impact of planned activities

LM will continue to track and monitor potable water use for FY 2013 and beyond to identify areas for water efficiency improvements.

- b. Expected site contribution to the DOE goal(s)

LM is a small organization within DOE and quantitatively will make a relatively small contribution to attainment of DOE's overall sustainability goals. However, the LM program is a

model for effective federal/contractor joint implementation, is pursuing attainment of the goals, and is expecting to meet this goal.

- c. Estimated additional funding needed beyond planned activities and typical operation costs for meeting the goal

No additional funding is needed beyond current planned activities and typical operation costs to meet this goal.

- d. Site specific measurable goals and milestones (3–5) for the next fiscal year

Electrical

Two meters remain to be installed in buildings. Installation is scheduled for FY 2013, which will meet the advanced electrical metering requirement.

In FY 2013, two advanced electrical meters are scheduled to be installed at the Weldon Spring site on the office trailer and on the new wastewater treatment system.

Water

LM does not plan to install additional standard water meters at current LM sites. LM will install additional standard meters if they would add value to LM's water conservation program.

Gas

No additional actions are planned.

Steam and Chilled Water

LM has no steam or chilled-water systems, so metering is not applicable.

- e. Request for technical assistance with reference to CEDR project number, if needed

None.

- f. Planned or needed training to increase awareness and encourage behavior change

LM conducts sustainability awareness training at least every 2 years. Additionally, LM's Sustainability teams provide awareness articles to the *ECHOutlook* newsletter at least once every 2 years. The articles are accompanied by related posters, contests, and activities.

2.4 Cool Roofs

LM will enhance the overall building thermal performance for all new construction and roof replacements, as warranted, by using cool roofs. The cool roofs shall have a thermal resistance of at least R-30, consistent with Secretary of Energy Chu's memorandum of June 1, 2010.

2.4.1 Performance Status

- a. Referencing pertinent databases and/or workbooks associated with the goal for quantitative information

LM is using the FIMS database to track cool-roof types and total cool-roof GSF.

- b. Describing major initiatives or changes to missions or facilities that contribute in significant ways to goal performance

None.

- c. Sharing success stories, accomplishments, lessons learned, and best management practices

Performance related to these goals is reported in the LMS contractor *Quarterly Performance Assurance Report*.

Beginning in FY 2012, in an effort to capture data that were more specific and accurate, cool-roof assessments were performed on all existing buildings at the Fernald and Weldon Spring sites. To reduce travel expenses, labor costs, and GHG emissions, assessments were coordinated with the scheduling of Condition Assessment Surveys. The data collected included the slope and gross square footage of the existing roof, the type of roof structure, roofing material and insulation specifications, and the age of the building and dates of any replacements or repairs. Information regarding deficiencies, deferred maintenance, or any other pertinent history relating to life-cycle cost analysis was recorded during these assessments.

In FY 2012, a cool roof was installed on the Delta Building at the Fernald site.

- d. Noting baseline changes, impacts, and justifications in the SSP. Identifying, updating and justifying any changes to previously reported data, including the baseline year in the appropriate CEDR tab. Major changes are subject to approval by program and SPO

None.

2.4.2 Plans and Projected Performance

Discuss plans and expectations for FY 2013 and beyond:

- a. Identify planned activities (e.g., mission changes, conservation measures, renewable energy systems, new construction or deactivation and decommissioning (D&D), policy and procedures updates, training) and expected impact of planned activities

LM will continue to perform cool-roof assessments as necessary and strive to make all new roofs and replacement decisions in compliance with Secretary Chu's goal and the economic feasibility. These assessments will be coordinated with the scheduling of Facility Condition Assessments.

b. Expected site contribution to the DOE goal(s)

LM is a small organization within DOE and quantitatively will make a relatively small contribution to attainment of DOE's overall sustainability goals. However, the LM program is a model for effective federal/contractor joint implementation, is pursuing attainment of the goals, and is expecting to meet this goal.

c. Estimated additional funding needed beyond planned activities and typical operation costs for meeting the goal

No additional funding is needed beyond current planned activities and typical operation costs to meet this goal.

d. Site specific measurable goals and milestones (3–5) for the next fiscal year

In the future, LM will strive to make all new roofs and replacement decisions in compliance with Secretary Chu's goal and the economic feasibility.

Cool-roof assessments will be coordinated with the scheduling of Facility Condition Assessments. The data collected will include the slope and gross square footage of the existing roof, the type of roof structure, roofing material and insulation specifications, and the age of the building and dates of any replacements or repairs. Information regarding deficiencies, deferred maintenance, or any other pertinent history relating to life-cycle cost analysis will also be recorded during these assessments.

e. Request for technical assistance with reference to CEDR project number, if needed

None.

f. Planned or needed training to increase awareness and encourage behavior change

LM conducts sustainability awareness training at least every 2 years. Additionally, LM's Sustainability teams provide awareness articles to the *ECHOutlook* newsletter at least once every 2 years. The articles are accompanied by related posters, contests, and activities. In addition, a primer on cool roofs is planned for FY 2013.

2.5 Existing HPSB Buildings

Section 4.a of DOE Order 436.1 states, "Comply with the sustainability requirements contained in EO 13423, and EO 13514." EO 13514 and the DOE SSPP clarify the goal to be 15 percent of the number of existing buildings and building leases—not square footage—and that only buildings greater than 5,000 GSF are subject to the goal. The 15 percent requirement in EO 13514 and the DOE SSPP must be met by 2015. EO 13514 and the DOE SSPP stipulate that progress must continue toward 100 percent compliance for the entire building inventory that is greater than 5,000 GSF.

2.5.1. Performance Status

- a. Referencing pertinent databases and/or workbooks associated with the goal for quantitative information

Performance related to these goals is reported in CEDR Tab 3.4 and in Energy Star Portfolio Manager.

- b. Describing major initiatives or changes to missions or facilities that contribute in significant ways to goal performance

Existing Buildings

The Administration Building at the Weldon Spring site has been demolished and removed from LM's building inventory. The LM-owned building was 36,030 GSF and was excess to LM's mission needs. Demolition of the Administration Building reduced the number of LM buildings subject to HPSB (either LEED or GPs) upgrade requirements. The lab that was attached to this building will remain standing and in use. It is now referred to as the Programmatic Storage Building and has 2,415 GSF.

With the Fernald Preserve Visitors Center being awarded USGBC LEED Platinum certification in FY 2008, 14.2 percent of LM's applicable buildings meet the GPs. Recent improvements to four buildings included in LM's inventory (Delta Building at Fernald and Buildings 810, 938, and 12 at the Grand Junction office site) are nearing completion, and these buildings are on track to meet 100 percent of the HPSB GPs by the end of FY 2013. At that time, LM's expected compliance with the GPs should be 62.5 percent.

Leased Buildings

In FY 2012, LM completed assessments of all leased facilities greater than 5,000 GSF. The Delta Building at the Fernald Preserve and Buildings 810 and 938 at the Grand Junction office site have been undergoing energy efficiency improvements as LM works toward meeting the GPs in 15 percent of building inventory by 2015.

HPSB assessment checklists for all buildings greater than 5,000 GSF are updated annually, and any changes affecting a building's compliance score are noted. These checklists and supporting documentation are maintained and updated regularly in Energy Star's Portfolio Manager. Utilities are updated and tracked in Portfolio Manager on a monthly basis.

- c. Sharing success stories, accomplishments, lessons learned, and best management practices

Performance related to these goals is reported in the LMS contractor *Quarterly Performance Assurance Report*.

In FY 2012, LM worked closely with building owners of LM-leased facilities who were interested in improving their buildings to bring them into compliance with the HPSB GPs. Some of the energy conservation measures are highlighted below.

Improvements in the Delta Building at the Fernald Preserve include replacing four original mechanical systems with four gas furnaces, four heat pumps, four energy recovery ventilators, and four programmable thermostats; upgrading lighting ballasts from T12 lighting to T8 lighting and adding motion sensors, replacing an oversized water heater, replacing two metal garage doors with insulated garage doors, and adding a cool roof and siding. An energy audit and a commissioning report were completed for this building.

Improvements in Building 810 at the Grand Junction office site include installing a 20.24 kilowatt photovoltaic (PV) solar panel system, installing two new highly efficient boilers and new efficient evaporative coolers, installing a new high-efficiency heating/cooling system for the upper floor, adding vent upducts to increase evaporative cooler efficiency, replacing old steam registers in offices with new hydronic registers, upgrading lighting ballasts from T12 lighting to T8 lighting and adding motion sensors, replacing old refrigerators and freezers with Energy Star models, replacing old single-pane windows with new double-pane windows in offices, and installing individual gas and electric meters. An energy audit and a commissioning report were completed for this building.

Improvements in Building 938 at the Grand Junction office site include installing two new highly efficient boilers and new efficient evaporative coolers, adding vent upducts to increase evaporative cooler efficiency, replacing old heat recirculating pumps with new ones, upgrading lighting ballasts from T12 lighting to T8 lighting and adding motion sensors, replacing old refrigerators and freezers with Energy Star models, and installing individual gas and electric meters. An energy audit and a commissioning report were completed for this building.

Because of the need for additional office space at the Grand Junction office site, Building 12 has also been undergoing sustainable improvements. These include two new evaporative coolers and two evaporative coolers reused from Building 810, two remodeled restrooms equipped with low-flow fixtures and recycled content partitions, and Green Label Certified carpet and other construction materials using recycled or biobased content. This building, occupied on October 1, 2012, will be added to LM's FY 2013 inventory of buildings greater than 5,000 GSF.

Improvements at the Westminster Office Building at the Rocky Flats site include the installation of additional recycled tire flooring.

A Sustainable Building Program team member received a Green Associate LEED credential to support green design, construction, and operations.

HPSB assessment checklists for all owned and leased buildings greater than 5,000 GSF are updated annually, and any changes affecting a building's compliance score are noted. These checklists and accompanying documentation are maintained and updated regularly in Energy Star's Portfolio Manager. Utilities are updated on a monthly basis.

- d. Noting baseline changes, impacts, and justifications in the SSP. Identifying, updating, and justifying any changes to previously reported data, including the baseline year in the appropriate CEDR tab. Major changes are subject to approval by program and SPO

None.

2.5.2 Plans and Projected Performance

Discuss plans and expectations for FY 2013 and beyond:

- a. Identify planned activities (e.g., mission changes, conservation measures, renewable energy systems, new construction, or deactivation and decommissioning (D&D), policy and procedures updates, training) and expected impact of planned activities

LM continues to monitor its building inventory and identifies and evaluates owned or leased buildings that measure greater than 5,000 GSF and are transitioning to or from LM by 2015. LM will continue to pursue meeting 100 percent of the GPs in the remaining buildings greater than 5,000 GSF. HPSB assessment checklists are updated annually, and any changes affecting a building's compliance are noted. These checklists, utilities, and supporting documentation are maintained and updated regularly in Energy Star's Portfolio Manager. In 2013, LM will encourage and train building occupants to take an active role in learning sustainable principles and building operations that will contribute to conserving resources and creating better work environments. A Building Occupant Training outline is being developed to assist individual facility managers in creating a manual they could customize for their buildings' specific needs. (FY 2013 SB target)

While the Weldon Spring site's Interpretive Center is still being considered as having potential to meet the GPs by 2015, until funding is secured (see Planned), committed, and obligated, the status for sustainability of this building has been reprioritized.

The data center presently in Building 12A (6,757 GSF) at the Grand Junction office site will be relocated to a smaller space (Building 46, less than 5,000 GSF) in FY 2013. The lease for Building 12A will end when this occurs. This will reduce the number of buildings in LM's inventory of buildings greater than 5,000 GSF.

FEMP's ESPC ENABLE initiative will be investigated as a source of funding for energy-efficiency improvements at the Interpretive Center at the Weldon Spring site.

In FY 2013, old metal siding will be replaced with cool metal siding, parking lot lighting will be upgraded, and cellular insulated window blinds will be installed at the Delta Building at the Fernald Preserve.

The Sustainable Building Program will continue to be proactive in supporting buildings that are undergoing energy-efficiency improvements as a measure of good practice but that do not fall under the requirement to pursue the HPSB GPs or LEED (third-party certification) based on square footage and/or construction costs. Utilities that are tracked in Portfolio Manager are compared to baseline figures to show improvements in energy and water usage or, if necessary, to address areas in need of improvement.

- b. Expected site contribution to the DOE goal(s)

LM is a small organization within DOE and quantitatively will make a relatively small contribution to attainment of DOE's overall sustainability goals. However, the LM program is a

model for effective federal/contractor joint implementation, is pursuing attainment of the goals, and is currently expecting to exceed this goal.

Currently, with one LEED Platinum-certified building, the Fernald Preserve Visitors Center, LM is 14.2 percent compliant with the DOE goal. Recent improvements to four buildings included in LM's inventory (Delta, 810, 938, and 12) are nearing completion, and these buildings are on track to meet 100 percent of the HPSB GPs by the end of FY 2013. At that time, LM's expected compliance to the GPs should be 62.5 percent.

- c. Estimated additional funding needed beyond planned activities and typical operation costs for meeting the goal

No additional funding is needed beyond current planned activities and typical operation costs to meet this goal.

- d. Site specific measurable goals and milestones (3–5) for the next fiscal year

In FY 2013, old metal siding will be replaced with cool metal siding, parking lot lighting will be upgraded, and cellular insulated window blinds will be installed at the Delta Building at the Fernald Preserve.

The Sustainable Building Program will continue to be proactive in supporting buildings that are undergoing energy-efficiency improvements as a measure of good practice but that do not fall under the requirement to pursue the HPSB GPs or LEED (third-party certification) based on square footage and/or construction costs. Utilities that are tracked in Portfolio Manager are compared to baseline figures to show improvements in energy and water usage or, if necessary, address areas in need improvement.

The data center presently in Building 12A (6,757 GSF) at the Grand Junction office site will be relocated to a smaller space (Building 46, less than 5,000 GSF) in FY 2013, thereby reducing the data center's leased footprint. The lease for Building 12A will be terminated when relocation to Building 46 occurs. This will reduce the number of buildings and total square footage in the HPSB inventory.

LM will continue to pursue meeting 100 percent of the GPs in the remaining buildings greater than 5,000 GSF.

- e. Request for technical assistance with reference to CEDR project number, if needed

None.

- f. Planned or needed training to increase awareness and encourage behavior change

For buildings that have been undergoing energy improvement projects that are near completion, a Building Occupant Training outline is being developed to assist individual facility managers in creating a manual they can customize for their buildings' specific needs. This will be used to instruct building occupants on the day-to-day use of any new additional equipment, systems, and

the building itself (e.g., windows, shades) and whom to contact with concerns or problems with equipment or the building.

2.6 High-Performance Sustainable Design

To address the requirements in the DOE SSPP, LM has made a commitment to pursue USGBC LEED Gold certifications and incorporate the GPs into the construction of future buildings, as addressed in the following sections.

HPSB New Construction

EO 13514 (g) (ii) states “that all new construction, major renovation, or repair and alteration of Federal buildings complies with the *Guiding Principles for Federal Leadership in High Performing and Sustainable Buildings ...*” The DOE SSPP elaborates: “All new construction, major renovations, and alterations of buildings greater than 5,000 GSF must comply with the GP [Guiding Principle] and where the work exceeds \$5 million, each are LEED-New Construction (LEED-NC) Gold certification.” All buildings below the \$5 million threshold but greater than 5,000 GSF are required to comply with all of the GPs. DOE considers any new building that achieves LEED-NC Gold or better to comply with the requirements of the GPs.

To address these requirements, LM has made a commitment to pursue USGBC LEED, including LEED Gold certifications, and incorporate the GPs into the construction of future buildings, as addressed in the following sections.

2.6.1 Performance Status

- a. Referencing pertinent databases and/or workbooks associated with the goal for quantitative information

New construction is located on Tab 3.4 of CEDR. No new construction was conducted in FY 2012.

- b. Describing major initiatives or changes to missions or facilities that contribute in significant ways to goal performance

None.

- c. Sharing success stories, accomplishments, lessons learned, and best management practices

Performance related to these goals is reported in the LMS contractor *Quarterly Performance Assurance Report*.

- d. Noting baseline changes, impacts, and justifications in the SSP. Identifying, updating and justifying any changes to previously reported data, including the baseline year in the appropriate CEDR tab. Major changes are subject to approval by program and SPO

None.

2.6.2 Plans and Projected Performance

Discuss plans and expectations for FY 2013 and beyond:

- a. Identify planned activities (e.g., mission changes, conservation measures, renewable energy systems, new construction or deactivation and decommissioning (D&D), policy and procedures updates, training) and expected impact of planned activities

No other new-construction buildings or major renovations that fit the criteria of the requirements are planned. However, if this changes, all new construction or major renovations that cost more than \$5 million will be designed to meet USGBC LEED Gold certification, and any buildings that cost \$5 million or less will be required to meet the GPs.

- b. Expected site contribution to the DOE goal(s)

LM is a small organization within DOE and quantitatively will make a relatively small contribution to attainment of DOE's overall sustainability goals. However, the LM program is a model for effective federal/contractor joint implementation. LM currently has no new buildings scheduled for construction. If this changes, LM will pursue attainment of this goal.

- c. Estimated additional funding needed beyond planned activities and typical operation costs for meeting the goal

Currently, no additional funding is needed beyond current planned activities and typical operation costs to meet this goal.

- d. Site specific measurable goals and milestones (3–5) for the next fiscal year

No other new-construction buildings or major renovations that fit the criteria of the requirements are planned. However, if this changes, all new construction or major renovations that cost more than \$5 million will be designed to meet USGBC LEED Gold certification, and any buildings that cost \$5 million or less will be required to meet the GPs.

- e. Request for technical assistance with reference to CEDR project number, if needed

None.

- f. Planned or needed training to increase awareness and encourage behavior change

LM conducts sustainability awareness training at least every 2 years. Additionally, LM's Sustainability teams provide awareness articles to the quarterly newsletter *ECHOutlook* at least once every 2 years. The articles are accompanied by related posters, contests, and activities.

2.7 Renewable Energy

The DOE SSPP required DOE to have 7.5 percent of its electricity consumption from renewable energy sources by FY 2013, in accordance with EPLA 2005.

2.7.1 Performance Status

- a. Referencing pertinent databases and/or workbooks associated with the goal for quantitative information

The existing renewable energy projects are shown in Tab 3.2a of CEDR. Performance related to this goal is reported in CEDR in Tabs 3.2a, 3.2b, and 3.3.

- b. Describing major initiatives or changes to missions or facilities that contribute in significant ways to goal performance

Install PV solar arrays at the Tuba City site to generate 285 kilowatts of electricity in 2013, which will provide an additional 8 percent of the electricity LM uses.

- c. Sharing success stories, accomplishments, lessons learned, and best management practices

Performance related to these goals is reported in the LMS contractor *Quarterly Performance Assurance Report*.

Current renewable energy (electricity) production onsite in FY 2012 was 122 megawatt hours, which is 2.1 percent of LM's electricity purchases of megawatt hours. The regulations allow LM to earn double credit for onsite renewable energy generated on either federal or tribal land. Additionally, LM purchased Renewable Energy Credits (RECs) to account for another 7.6 percent of electricity use. Therefore, LM's total renewable power percentage for FY 2012 was 11.8 percent, (2×2.1 percent from onsite renewables plus 7.6 percent from purchased RECs).

Significant activities include the following:

- LM strengthened the Renewable Energy Program by highlighting it during the first quarter. An article addressing renewable energy was included in the summer edition of the *ECHOutlook* newsletter, and a poster was distributed to help highlight the program.
- A 51-kilowatt PV solar array is currently operating at the Tuba City site.
- A ground-source heat pump is currently operating at the Fernald Preserve.
- Onsite solar energy is supplied by 20- to 100-watt solar panels that power SOARS, a system that uses telemetry to collect data from remote sites. SOARS is in use at 16 LM sites.

The Rocky Flats site is completely off grid.

- Solar power now operates automated sampling systems, treatment processes, chemical dosing pumps, continuous-duty water pumps, access gates, garage door, and supervisory control and data acquisition systems.
- The telemetry system consists of 20 radio-linked monitoring locations running entirely on solar power. The system collects and transmits more than 24,000 instrument readings in a typical day. All data are forwarded, upon request, through two remote terminal units with cellular modems. These locations run continuously on a single 30-watt panel and an approximately 50-ampere-hour gel battery.

- PV solar power is also used to continuously monitor pool levels, piezometers levels, and inflow/outflow rates at three earthen dams. These data are used for dam safety emergency response, water management decisions, and long-term dam safety evaluations. Each dam generally has several 10/18 watt panels, each with its own approximately 50 ampere-hour battery.

A wind turbine at the Weldon Spring site powers renewable energy displays in the Interpretive Center and demonstrates wind power to visitors.

At the Fernald Preserve, PV solar-powered lighting, a PV solar-powered pump, a PV solar-powered aerator system, and a renewable-energy display are currently operating.

LM conducted a competitive bidding process of selecting a solar development company in June 2012 to develop, own, and operate a solar PV system at the Durango, Colorado, Disposal Site. Five companies submitted proposals in response to the Request for Proposal. After careful evaluations of all of the proposals, LM awarded the bid to American Capital Energy.

- d. Noting baseline changes, impacts, and justifications in the SSP. Identifying, updating, and justifying any changes to previously reported data, including the baseline year in the appropriate CEDR tab. Major changes are subject to approval by program and SPO

None.

2.7.2 Plans and Projected Performance

Discuss plans and expectations for FY 2013 and beyond:

- a. Identify planned activities (e.g., mission changes, conservation measures, renewable energy systems, new construction or deactivation and decommissioning (D&D), policy and procedures updates, training) and expected impact of planned activities

None.

- b. Expected site contribution to the DOE goal(s)

LM is a small organization within DOE and quantitatively will make a relatively small contribution to attainment of DOE's overall sustainability goals. However, the LM program is a model for effective federal/contractor joint implementation, is pursuing attainment of the goals, and is currently expecting to meet this goal.

- c. Estimated additional funding needed beyond planned activities and typical operation costs for meeting the goal

No additional funding is needed beyond current planned activities and typical operation costs to meet this goal.

- d. Site specific measurable goals and milestones (3–5) for the next fiscal year

Purchase RECs if needed to meet the 7.5 percent goal.

Install solar PV arrays at the Tuba City site to generate 285 kilowatts of electricity in 2013, which will provide an additional 8 percent of the electricity LM uses.

Install solar-powered gates at the Fernald Preserve.

Install solar PV to power the pump for the new air-stripper treatment enhancement to be added to the East Trenches Treatment System at the Rocky Flats site.

Expand the current solar PV system at the Rocky Flats Mound Site Plume Treatment System air-stripper treatment enhancement to run continuously (currently a daylight only system).

e. Request for technical assistance with reference to CEDR project number, if needed

None.

f. Planned or needed training to increase awareness and encourage behavior change

LM conducts sustainability awareness training at least every 2 years. Additionally, LM's Sustainability teams provide awareness articles to the internal quarterly newsletter *ECHOutlook* at least once every 2 years. The articles are accompanied by related posters, contests, and activities.

2.8 Regional and Local Planning

According to the DOE SSPP, DOE is to pursue the following actions:

- Participate in regional transportation planning, recognition of existing community transportation infrastructure, and incorporation of such efforts into site policy and guidance documents.
- Ensure that planning efforts for new federal facilities or new leases will include consideration of sites that are pedestrian friendly, are near existing employment centers, are accessible to public transit, and emphasize existing central cities and, in rural communities, existing or planned town centers.
- Identify and analyze impacts from energy use and alternative energy sources in all Environmental Impact Statements and Environmental Assessments for proposals for new or expanded federal facilities under the National Environmental Policy Act (NEPA) of 1969, as amended (Title 42, *United States Code*, Section 4321 et seq. [42 U.S.C. 431 et seq.]).
- Coordinate efforts with regional programs for federal, state, tribal, and local ecosystem, watershed, and environmental management.
- Identify regional transportation planning, ecosystem, watershed, and environmental management initiatives affecting sites, and opportunities to work with local authorities to align energy policies and locate renewable energy infrastructure.
- Continue efforts to assess the state of interaction between sites and their respective local or regional organizations and steps to increase interaction.

LM has ongoing activities at more than 89 post-closure sites located in 28 states and Puerto Rico. Due to the relatively small number but wide geographic separation of employees, LM expends less effort on transportation and facility or infrastructure planning. Rather, more of LM's local and regional planning efforts are focused on ecosystem, watershed, and environmental management. LM recognizes that such legacy activities are local and that stakeholder involvement is integral to LM operations. LM also makes considerable effort to educate future generations on the historical aspects of the Cold War activities, the enduring environmental impacts of those activities, and how site cleanup can be performed sustainably.

2.8.1 Overall Efforts

Transportation/Facility/Renewable Energy Planning

Many of the LM sites are unstaffed or have only a few people working onsite. In addition, several of the staffed sites are in remote locations where public transportation is not available. For these reasons, LM does not participate in regional transportation planning.

Watershed and Ecosystem Management

LM participates in a program to protect the local watershed and buried aquifer as part of the Fernald site natural resource damage settlement. LM, along with the U.S. Department of the Interior and the Ohio Environmental Protection Agency, is a Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Natural Resource Trustee for the Fernald Preserve. The Natural Resource Trustees initiated the Paddys Run Conservation Project as a means to secure conservation easements within the Paddys Run watershed, which includes most of the Fernald site. The Natural Resource Trustees have partnered with a local nonprofit conservation trust to administer the program. Since 2011, the Natural Resource Trustees have received applications totaling over 3,100 acres. Within this acreage, more than 2,000 acres are under consideration for protection.

Over 900 acres of the Fernald site have been ecologically restored, with approximately 400 acres of forest, 360 acres of prairies, and 140 acres of wetlands and open water. Most restoration took place from 1999 to 2006 during site remediation. However, several additional restoration projects were completed in 2012. A vernal pool wetland community with adjacent forest restoration was constructed on the western side of the site. A wetland swale was constructed in the footprint of the former Silos Area, and several acres of prairie grasses and wildflowers were seeded. Numerous site improvements, including the construction of 7 miles of trails, provide access to the site's ecologically restored habitats and contribute to making the site a regional attraction for nature observation. The restored areas have resulted in 217 species of birds observed at the Fernald site. The onsite restoration projects that were implemented in 2012 were designed to maintain and restore predevelopment hydrology. Through an expanding outreach effort, LM is working with local schools to encourage the next generation of scientists and engineers. Fernald site staff members develop and conduct educational programs that have provided hands-on learning experiences for thousands of area students, from elementary grades through college. Regularly scheduled, nature-based educational programs for the general public complement the site's school-based outreach activities.

The Fernald site has been proposed as a potential reintroduction location for the federally endangered American burying beetle. LM teamed with researchers at the Cincinnati Zoo to conduct a baseline survey for on-property burying beetles. The baseline surveys were conducted in summer 2011 to determine habitat and recovery potential. A second confirmation study was conducted in 2012. Three species of burying beetles were observed, indicating good potential for successful release and propagation of the American burying beetle. The U.S. Fish and Wildlife Service is partnering with DOE to develop a cooperative agreement for reintroduction at the site.

LM continues to work with local counties and the U.S. Bureau of Land Management offices to control noxious weeds along access roads and on selected LM sites.

Environmental Management/Stakeholder Involvement and Collaboration

LM maintains an extensive distribution list of local stakeholders and elected officials for each site. As part of an effort to acquire feedback from stakeholders on LM's performance at both a local and national level, LM commissioned an independent survey, which was conducted from May to October 2012. The purpose of the survey was to gauge the effectiveness of LM's communication and outreach strategies. Stakeholders are updated or contacted as site activities warrant. All stakeholders are able to access public websites for copies of annual or other reports. The Rocky Flats and Fernald sites continue to participate with stakeholder groups in quarterly meetings.

LM organized and facilitated a technical meeting for the Navajo Nation Environmental Protection Agency, U.S. Geological Survey, and Navajo Abandoned Mine Lands/Uranium Mill Tailings Remedial Action Department. DOE shared environmental data and reports and facilitated discussion to support Navajo Nation and U.S. Geological Survey efforts in conducting independent groundwater studies at the Shiprock site.

LM continues to coordinate and attend quarterly meetings with representatives of the Navajo Nation and Hopi Tribe. The Shiprock disposal site; the Monument Valley, Arizona, Processing Site; the Mexican Hat, Utah, Disposal Site; and the Tuba City disposal site are on or near Navajo or Hopi Reservations. The quarterly meetings are used to provide the status of site activities and discuss technical issues.

LM continues to work closely with the Navajo Nation to coordinate water use for irrigation at the Monument Valley site and the Shiprock site. Water is used to irrigate experimental research plots that use plants to uptake selected contaminants. Navajo Nation staff and a local resident irrigate the plots at the Shiprock site. A local Navajo resident adjacent to the Monument Valley site irrigates the plot on that site. Navajo students from Diné College also assist with plant tissue sampling for contaminant uptake studies.

LM's activities create and promote opportunities, discourse, and achievements in environmental science education. An LM scientist participated on a thesis committee for a graduate student at the University of Nevada, Reno. The student completed his thesis on nitrogen isotopic signatures in groundwater at the Shiprock site. Another LM scientist is serving on the graduate committee for a Native American student in environmental science at the University of Arizona. The student's research is comparing the uptake of mill tailings constituents by deep-rooted plants growing on LM disposal cell covers with the same plant species growing in nearby reference

areas. A Vanderbilt University Ph.D. graduate published a journal article based on her research on dominant ecological processes for long-term performance evaluations of landfill covers. An LM scientist served on her graduate committee and co-authored the publication.

LM maintains an educational exchange partnership with the Diné Environmental Institute at Diné College, the oldest tribal college in the United States. LM and LMS contractor scientists teach seminars, involve students in field research activities, and mentor student interns. Through an educational philosophy grounded in the Navajo traditional living system that places human life in harmony with the natural world, college faculty and students help guide LM scientists to seek more sustainable remedies for soil and groundwater contamination at former uranium mill sites on Navajo Nation land.

2.8.2 Site-Specific Measurable Goals and Milestones (3–5) for the Next Fiscal Year

At LM sites, ensure that site policies and guidance documents reflect LM's ongoing participation and coordination with local and regional transportation and planning groups.

Ensure that planning for new federal facilities or new leases includes consideration of sites that are pedestrian friendly, are near existing employment centers, are accessible to public transit, and emphasize existing central cities and, in rural communities, existing or planned town centers.

Continue to hold quarterly meetings with the Navajo Nation and Hopi Tribe.

Continue to encourage public participation and offer educational programs at LM sites with visitor centers and continue educational outreach programs.

Continue to pursue the larger-scale control of noxious weeds through coordination with local and regional agencies.

2.8.3 Success Stories and Examples, Accomplishments, Lessons Learned, and Best Management Practices

In February 2011, LM began working with an interagency design work group to review a design for disposal of waste from the Northeast Church Rock (NECR) mine, the largest uranium mine located on the Navajo Nation. The proposed plan is to dispose of approximately 1 million cubic yards of mine-related waste at the Church Rock Uranium Mill Tailings Radiation Control Act (UMTRCA) Title II site in New Mexico. LM was invited to the work group because the proposed plan for the NECR mine waste is to place it on top of the Church Rock UNC (United Nuclear Corporation) UMTRCA Disposal Cell. After UNC meets its reclamation obligations under its U.S. Nuclear Regulatory Commission (NRC) license, the site will be eventually transferred to LM. The design work group is composed of LM, the U.S. Environmental Protection Agency (EPA) Regions 6 and 9, NRC, the State of New Mexico, UNC and its parent company General Electric, and the Navajo Nation. LM is currently reviewing a design data gap report that identifies what new data are necessary to clean up the NECR mine site and to design the new disposal cell that is proposed on top of the existing Church Rock disposal cell. LM has also participated in review of the groundwater cleanup strategy for the mill site.

The site is unique in that the NECR mine is located on the Navajo Nation, the Church Rock disposal cell is located on UNC private property and is regulated by the NRC, and EPA is involved because the NECR mine cleanup falls under CERCLA (Region 9), and the groundwater at the mill site is under CERCLA (Region 6).

3 Fleet Management

3.1 Increase Alternative Fuel Use by 10 Percent Year-Over-Year

Under the DOE SSPP, DOE is committed to a 10 percent annual increase in fleet alternative fuel use by 2015 relative to a 2005 baseline.

3.1.1 Performance Status

- a. Referencing pertinent databases and/or workbooks associated with the goal for quantitative information

Status is tracked in the Federal Acquisition Statistical Tool (FAST) database (Scope 1 GHG Mobile Emissions data, in terms of CO₂, located in Attachment F). E85 fuel stations are tracked using the alternate fuel data center at DOE's Energy Efficiency and Renewable Energy website (EERE).

- b. Describing major initiatives or changes to missions or facilities that contribute in significant ways to goal performance

None.

- c. Sharing success stories, accomplishments, lessons learned, and best management practices

Performance related to these goals is reported in the LMS contractor *Quarterly Performance Assurance Report*.

LM has consistently exceeded the 10 percent increase in alternative fuel consumption. In 2005, the baseline year, LM consumed zero gallons of alternative fuels. LM's FY 2012 alternative fuel consumption was a total of 4,328 gallons. This represents a very large increase of alternative fuels relative to the FY 2005 baseline. Based on the EISA 2007 goal to increase E85 fuel use by 10 percent each year from FY 2005, LM would need to only use 259 gallons between now and FY 2015.

The FY 2012 E85 fuel use totals show an increase of 41 percent compared to the FY 2011 totals.

LM's Vehicle and Fuel Use Programs stretch goal to increase the ratio of alternative fuel use to conventional fuel use by 25 percent shows an increase of 123 percent compared to the FY 2009 ratio.

- d. Noting baseline changes, impacts, and justifications in the SSP. Identifying, updating and justifying any changes to previously reported data, including the baseline year in the appropriate CEDR tab. Major changes are subject to approval by program and SPO

In 2005 the guidelines for FAST were as follows: Estimate the total amount of fuel used in your AFV Fleet for the listed year. Include gasoline and diesel and any alternative fuels in the estimate. All fuel consumed in E85-capable vehicles was reported in FAST as E85 fuel, although no E85 fuel was available in 2005 and 2006. Therefore, the numbers reflected in FAST for 2005 and 2006 are petroleum-based fuel, not E85. In 2007 the FAST guidelines changed to require precise reporting of E85 consumption, and the amounts used became more accurate.

3.1.2 Plans and Projected Performance

Discuss plans and expectations for FY 2013 and beyond:

- a. Identify planned activities (e.g., mission changes, conservation measures, renewable energy systems, new construction or deactivation and decommissioning (D&D), policy and procedures updates, training) and expected impact of planned activities

LM is currently tracking and will continue to track the locations of E85 stations relative to the work being performed as part of LM's mission. At the Grand Junction office site, maps and station listings showing E85 fuel stations were placed in all E85 fuel vehicle logbooks.

- b. Expected site contribution to the DOE goal(s)

LM is a small organization within DOE and quantitatively will make a relatively small contribution to attainment of DOE's overall sustainability goals. However, the LM program is a model for effective federal/contractor joint implementation, is pursuing attainment of the goals, and has met this goal.

- c. Estimated additional funding needed beyond planned activities and typical operation costs for meeting the goal

None.

- d. Site specific measurable goals and milestones (3–5) for the next fiscal year

Pursue continuation of the reward program to give LMS contractor personnel an incentive to use E85 fuel.

Assess the need for AFV waivers in FY 2013 where E85 fueling stations are unavailable, and apply for waivers as needed.

Continue tracking E85 fuel use by each vehicle in FY 2013.

Continue to monitor DOE's Energy Efficiency and Renewable Energy website to determine E85 fuel and biodiesel (B20) fuel availability.

- e. Request for technical assistance with reference to CEDR project number, if needed

None.

- f. Planned or needed training to increase awareness and encourage behavior change

LM conducts sustainability awareness training at least every 2 years. Additionally, LM's Sustainability teams provide awareness articles to the internal quarterly newsletter *ECHOutlook* at least once every 2 years. The articles are accompanied by related posters, contests, and activities.

3.2 Reduce Departmental Fleet Petroleum Use by 2 Percent Annually

The DOE SSPP goal is a 2 percent annual reduction in fleet petroleum consumption by FY 2020 relative to an FY 2005 baseline.

3.2.1 Performance Status

- a. Referencing pertinent databases and/or workbooks associated with the goal for quantitative information

Performance related to these goals is reported in the FAST database.

- b. Describing major initiatives or changes to missions or facilities that contribute in significant ways to goal performance

LM's mission is to manage post-closure responsibilities and ensure the future protection of human health and the environment. As more sites move into post-closure and legacy management, LM's number of sites and associated use of vehicles will continue to increase, making it difficult for LM to meet the reduction goal. LM's fleet in the baseline year of FY 2005 was 28 vehicles. The current fleet of 43 vehicles, of which 42 are leased and 1 is owned, is located at 10 sites in eight states and the District of Columbia. This fleet is expected to grow in relation to LM's overall mission, since using the fleet vehicles is necessary to the success of the LM mission.

- c. Sharing success stories, accomplishments, lessons learned, and best management practices

Performance related to these goals is reported in the LMS contractor *Quarterly Performance Assurance Report*.

LM is currently reducing conventional petroleum fuel usage on a normalized basis to help ensure improvement. For this normalized evaluation, the fuel consumption is divided by the number of LM sites in any given year. Conventional petroleum fuel consumption has dropped by 31 percent per year, from an average of 452 gallons of fuel per site in 2005 to 310 gallons per year per site in FY 2012. Methods of reducing conventional fuel use include acquiring more E85-capable vehicles, tracking and updating E85 station locations for vehicle users, and promoting ride sharing and trip consolidation.

LM has established videoconferencing capabilities at its nine major sites around the country. In addition, virtual-presence meeting software is being used more frequently to reduce travel.

LM strengthened the Vehicle and Fuel Use Program by highlighting it during the third quarter. An article was included in the spring edition of the *ECHOutlook* newsletter to address vehicles and fuel use, and a poster was distributed to help highlight the program.

- d. Noting baseline changes, impacts, and justifications in the SSP. Identifying, updating and justifying any changes to previously reported data, including the baseline year in the appropriate CEDR tab. Major changes are subject to approval by program and SPO

None.

3.2.2 Plans and Projected Performance

Discuss plans and expectations for FY 2013 and beyond:

- a. Identify planned activities (e.g., mission changes, conservation measures, renewable energy systems, new construction or deactivation and decommissioning (D&D), policy and procedures updates, training) and expected impact of planned activities

None.

- b. Expected site contribution to the DOE goal(s)

LM is a small organization within DOE and quantitatively will make a relatively small contribution to attainment of DOE's overall sustainability goals. However, the LM program is a model for effective federal/contractor joint implementation, is pursuing attainment of the goals, but is not expecting to meet this goal because of continued growth in the number of LM sites.

If the program grows as expected, the number of LM sites will grow to approximately 126 by FY 2020. It will be a major challenge for LM to decrease fleet petroleum consumption by 2 percent annually through FY 2020 compared to the 2005 baseline. In 2005, LM had significantly fewer sites and vehicles than at the end of FY 2012.

- c. Estimated additional funding needed beyond planned activities and typical operation costs for meeting the goal

No additional funding is needed beyond current planned activities and typical operation costs to meet this goal.

- d. Site specific measurable goals and milestones (3–5) for the next fiscal year

Continue to develop the Vehicle and Fuel Use Program. The Vehicle and Fuel Use team will continue to maintain a list of vehicles, monitor the monthly fuel consumption with detailed spreadsheets, monitor vehicle and fuel type, and take appropriate action to meet program goals for vehicle and fuel use.

Increase the overall fuel economy of the fleet by continually working with the General Services Administration (GSA) to acquire smaller vehicles, plug-in hybrid vehicles, or other advanced-technology vehicles.

Identify the most fuel-efficient vehicle for a given task by taking into account miles driven, fuel used, vehicle use, and road type such as off-road conditions.

Continue using videoconferencing and virtual-presence meeting software capabilities at LM's eight major sites around the country to reduce travel and reduce miles through methods such as trip consolidation.

Evaluate expanding the shuttle service between the Fernald site and the Delta Building. The Delta Building houses the majority of the employees who work at the Fernald Preserve. The distance between the two locations is 1.5 miles.

e. Request for technical assistance with reference to CEDR project number, if needed

None.

f. Planned or needed training to increase awareness and encourage behavior change

Sustainability awareness training is provided in intervals not to exceed a 2-year period. Additionally, LM's Sustainability teams provide awareness articles to the internal quarterly newsletter *ECHOutlook* at least once every 2 years. The articles are sometimes accompanied by related posters, contests, and activities.

3.3 AFV Purchases

The DOE SSPP goal is to replace all new light-duty vehicle acquisitions with a minimum of 75 percent AFVs and 100 percent of light-duty vehicles consisting of AFVs by 2015.

3.3.1 Performance Status

a. Referencing pertinent databases and/or workbooks associated with the goal for quantitative information

Performance related to these goals is reported in the FAST database.

b. Describing major initiatives or changes to missions or facilities that contribute in significant ways to goal performance

None.

c. Sharing success stories, accomplishments, lessons learned, and best management practices

Performance related to these goals is reported in the LMS contractor *Quarterly Performance Assurance Report*.

LM's goal is to acquire AFVs to replace retired light-duty vehicles at least 75 percent of the time, which is consistent with the DOE SSPP goal that 75 percent of light-duty vehicle purchases

must consist of AFVs by FY 2015. LM's current strategy, which consists of acquiring an AFV when a fleet vehicle needs to be replaced, exceeds the EAct 1992 requirement that 75 percent of retired vehicles be replaced with AFVs. Currently LM's light-duty fleet is 100 percent AFVs, which exceeds the EAct 1992 requirement for AFVs and meets the 2015 goal.

- d. Noting baseline changes, impacts, and justifications in the SSP. Identifying, updating and justifying any changes to previously reported data, including the baseline year in the appropriate CEDR tab. Major changes are subject to approval by program and SPO

None.

3.3.2 Plans and Projected Performance

Discuss plans and expectations for FY 2013 and beyond:

- a. Identify planned activities (e.g., mission changes, conservation measures, renewable energy systems, new construction or deactivation and decommissioning (D&D), policy and procedures updates, training) and expected impact of planned activities

LM's current strategy is to replace all light-duty vehicles with AFVs at the time of replacement.

- b. Expected site contribution to the DOE goal(s)

LM is a small organization within DOE and quantitatively will make a relatively small contribution to attainment of DOE's overall sustainability goals. However, the LM program is a model for effective federal/contractor joint implementation, is pursuing attainment of the goals, and has already met this goal.

- c. Estimated additional funding needed beyond planned activities and typical operation costs for meeting the goal

None.

- d. Site specific measurable goals and milestones (3–5) for the next fiscal year

The Vehicle and Fuel Use team will continue to record and track vehicle-related data and produce monthly summary reports that include information regarding AFVs.

In addition, data in the FAST report will continue to project a 3-year vehicle acquisition forecast that will include AFVs for all light-duty vehicles.

LM will continue to acquire AFVs for all light-duty replacements.

- e. Request for technical assistance with reference to CEDR project number, if needed

None.

- f. Planned or needed training to increase awareness and encourage behavior change

Sustainability awareness training is provided in intervals not to exceed a 2-year period. Additionally, LM's Sustainability teams provide awareness articles to the internal quarterly newsletter *ECHOutlook* at least once every 2 years. The articles are sometimes accompanied by related posters, contests, and activities.

3.4 Reduction in Fleet Inventory

The DOE SSPP committed DOE to reduce fleet inventory by 35 percent within the next 3 years relative to a 2005 baseline. LM reduced the fleet by three vehicles in 2012.

3.4.1 Performance Status

- a. Referencing pertinent databases and/or workbooks associated with the goal for quantitative information

Performance related to these goals is reported in the FAST database.

- b. Describing major initiatives or changes to missions or facilities that contribute in significant ways to goal performance

On January 27, 2011, Secretary Chu challenged his agency to reduce vehicle fleets by 35 percent over 3 years (2012, 2013, and 2014) based on 2005 numbers “without sacrificing either critical mission elements or our commitment to operating in a safe, secure and environmentally sound manner.”

In FY 2012, LM's vehicle fleet consisted of 42 leased vehicles and 1 owned vehicle. In an attempt to meet Secretary Chu's challenge, LM reduced its fleet size by three vehicles at the end of FY 2012. The current FY 2012 inventory is 39 leased vehicles and 1 owned.

LM had significantly fewer sites and vehicles in FY 2005 than those projected for the end of 2014. LM currently has 89 sites and is projected to have 100 by the end of FY 2014. In accordance with LM's mission, the number of sites will continue to increase, with the expected programmatic growth, to approximately 126 sites by FY 2020.

- c. Sharing success stories, accomplishments, lessons learned, and best management practices

Performance related to these goals is reported in the LMS contractor *Quarterly Performance Assurance Report*.

LM reduced its vehicle fleet by three vehicles in FY 2012. This brings LM's fleet to 39 GSA leased vehicles and 1 owned vehicle.

- d. Noting baseline changes, impacts, and justifications in the SSP. Identifying, updating and justifying any changes to previously reported data, including the baseline year in the appropriate CEDR tab. Major changes are subject to approval by program and SPO

None.

3.4.2 Plans and Projected Performance

Discuss plans and expectations for FY 2013 and beyond:

- a. Identify planned activities (e.g., mission changes, conservation measures, renewable energy systems, new construction or deactivation and decommissioning (D&D), policy and procedures updates, training) and expected impact of planned activities

If LM's mission continues to expand through FY 2020 as expected, it will be difficult to meet this goal. LM has projected a 41 percent increase in the number of sites by FY 2020, and it would be problematic to hold steady on the current number of fleet vehicles or possibly reduce the number further over the next 2 years to meet the reduction goals. Although most of those transitioned sites are unstaffed, they are supported by the vehicles from the closest staffed site, and any further reductions could jeopardize LM's ability to meet mission goals.

- b. Expected site contribution to the DOE goal(s)

LM is a small organization within DOE and quantitatively will make a relatively small contribution to attainment of DOE's overall sustainability goals. However, the LM program is a model for effective federal/contractor joint implementation, is pursuing attainment of the goals, but is not expecting to meet this goal because of projected growth in the program.

If the program grows as expected, the number of LM sites will grow to approximately 126 sites by FY 2020. If LM's mission continues to expand through 2020 as expected, it will be difficult to meet this goal. LM has projected a 41 percent increase in the number of sites by 2020, and it would be problematic to hold steady on the current number of fleet vehicles or possibly reduce the number further over the next 2 years to meet the reduction goals. Although most of those transitioned sites are unmanned staffed, they are supported by the vehicles from the closest staffed site, and any further reductions could jeopardize LM's ability to meet mission goals.

- c. Estimated additional funding needed beyond planned activities and typical operation costs for meeting the goal

None.

- d. Site specific measurable goals and milestones (3–5) for the next fiscal year

LM will continue to assess the use of vehicles at all staffed sites.

LM will continue to explore the use of all-terrain vehicles and electric vehicles at locations conducting work onsite.

LM will continue to project future need for vehicle as it relates to LM's mission.

- e. Request for technical assistance with reference to CEDR project number, if needed

None.

- f. Planned or needed training to increase awareness and encourage behavior change

Sustainability awareness training is provided in intervals not to exceed a 2-year period. Additionally, LM's Sustainability teams provide awareness articles to the internal quarterly newsletter *ECHOutlook* at least once every 2 years. The articles are sometimes accompanied by related posters, contests, and activities.

4 Water Use Efficiency and Management

According to the DOE SSPP, LM will reduce water consumption at goal subject sites for the following areas:

- Potable water intensity by no less than 26 percent by FY 2020 relative to the established FY 2007 baseline.
- Non-potable fresh water used for industrial, landscaping, and agricultural (ILA) purposes by no less than 20 percent by FY 2020 relative to the established FY 2010 baseline.

4.1 Potable Water Intensity Reduction Goal

LM is required to reduce potable water intensity use by 26 percent by 2020 compared to a 2007 baseline.

4.1.1 Performance Status

- a. Referencing pertinent databases and/or workbooks associated with the goal for quantitative information

Performance related to this goal is reported in Tab 3.1 of CEDR, which contains updated quarterly FY 2012 data, and in Table 3, below. The data include updated usage amounts and costs associated with each quarter of FY 2012 for both potable and ILA non-potable fresh water.

Table 3. LM Combined-Sites Water Use Since FY 2007

Fiscal Year (FY)	GSF ^a	Water Use (Gallons)		Potable Water Use Intensity (WUI) Percent Reduction	Non-Potable Freshwater ILA Use (Gallons) Percent Reduction
		Potable	Non-potable Freshwater ILA		
2007	10,992	1,497,098	NA	NA – Baseline year	NA
2008	11,712	1,070,768	NA	32.9 percent reduction	NA
2009	22,512	549,462	NA ^b	82.1 percent reduction	NA
2010	22,464	80,358	503,336 ^c	97.3 percent reduction	NA – Baseline year
2011	69,157	1,112,688	456,093	88.2 percent reduction	9.4 percent reduction
2012	69,157	392,791	459,729	95.8 percent reduction	8.7 percent reduction
2012: Combined-Sites Potable WUI = (392,791 ÷ 69,157) = 5.68					
Combined-Sites Percent Potable WUI Reduction = [(2007 WUI – 2012 WUI) ÷ 2007 WUI] × 100 percent = [(136.2 – 5.68) ÷ 136.2] × 100 = 95.8 percent reduction					
2012: Combined-Sites Percent Non-potable Freshwater ILA Reduction = [(2010 – 2012) ÷ 2010] × 100 percent = [(503,336 – 459,729) ÷ 503,336] × 100 percent = 8.7 percent reduction					

^a See Attachment C for a listing of LM's gross square footage. The gross square footage used to determine Potable Water Intensity values is different from the gross square footage provided in the FIMS snapshot, because water use does not occur in all the included FIMS square footage. Therefore, the Potable Water Intensity values in the CEDR and SSP conflict. The values reported above are the correct values for LM's Potable Water Intensity and reduction. In addition, the Weldon Spring site demolished the onsite Administration Building in September 2012. Due to the demolition of the building, the square footage represented by this building will no longer be calculated in FY 2013 (the square footage is included in FY 2012).

^b The definition of fresh water was expanded to include non-potable freshwater in mid-2009, so non-potable use was included in the overall water use category. In FY 2010, direction was given that non-potable water should not be included in the EO 13514 potable water reduction goal but that past years' non-potable use did not have to be eliminated from reported potable use data.

^c Non-potable fresh water used for ILA was defined with its own goal, for which 2010 is the baseline year.

- b. Describing major initiatives or changes to missions or facilities that contribute in significant ways to goal performance

The Weldon Spring site demolished the onsite Administration Building in mid-September 2012, and the square footage represented by this building will no longer be calculated in FY 2013 (the square footage is included in FY 2012). This will decrease LM's overall water-use square footage in FY 2013.

- c. Sharing success stories, accomplishments, lessons learned, and best management practices. Performance related to these goals is reported in the LMS contractor *Quarterly Performance Assurance Report*

In FY 2012 LM tracked potable water use at all LM goal subject sites. Table 3 shows the water use performance of LM goal subject sites since 2007. As shown in Table 3, in FY 2012 LM reduced potable water use by 95.8 percent compared to the baseline year of FY 2007.

Through efficient water use, improved technology, and improved practices, LM has achieved a 2 percent or greater reduction in annual potable water use intensity.

LM implemented two potable water efficiency improvements at the Weldon Spring site in FY 2012. These efficiencies consisted of replacing a leaking backflow preventer and repairing leaks throughout the Weldon Spring Interpretive Center and lab building.

In FY 2012, LM conducted water audits at the Monticello and Fernald Preserve sites.

LM maintains and follows a water management plan located in the LMS *Environmental Management Systems Programs Manual*, Section 3.0, “Water Conservation” (EMS Program #3).

LM evaluates ways to reuse and recycle water.

LM identified budgeting needs for FY 2013 through FY 2018.

LM consistently addresses ways to reduce water-use by utilizing multiple project planning tools (Project Activity Evaluation, Statement of Work, etc.) that address several aspects of sustainability, including water (potable and/or non-potable) reduction opportunities.

- d. Noting baseline changes, impacts, and justifications in the SSP. Identifying, updating and justifying any changes to previously reported data, including the baseline year in the appropriate CEDR tab. Major changes are subject to approval by program and SPO

The gross square footage used to determine potable water use intensity values is different from the gross square footage provided in the FIMS snapshot, because water use does not occur in all the included FIMS square footage. Therefore, the potable water use intensity values in the CEDR and SSP conflict. The values reported in Table 3 are the correct values for LM’s potable water use intensity and reduction.

4.1.2 Plans and Projected Performance

Discuss plans and expectations for FY 2013 and beyond:

- a. Identify planned activities (e.g., mission changes, conservation measures, renewable energy systems, new construction or deactivation and decommissioning (D&D), policy and procedures updates, training) and expected impact of planned activities

LM will continue to track and monitor potable water use for FY 2013 and beyond to identify areas for water efficiency improvements.

- b. Expected site contribution to the DOE goal(s)

LM is a small organization within DOE and quantitatively will make a relatively small contribution to attainment of DOE's overall sustainability goals. However, the LM program is a model for effective federal/contractor joint implementation, is pursuing attainment of the goals, and is expecting to exceed this goal.

- c. Estimated additional funding needed beyond planned activities and typical operation costs for meeting the goal

None.

- d. Site specific measurable goals and milestones (3–5) for the next fiscal year

LM will continue to reduce water use and to implement water efficiency improvements identified in past audits.

LM has identified budgeting needs for FY 2013 through FY 2018.

LM will continue to investigate ways to reuse and recycle water and will continue to perform water audits of goal subject sites to meet the requirements of EISA Section 432. The selection of audited sites will be rotated to ensure that all of the sites are audited every 4 years.

LM will maintain and follow a water management plan described in the *LMS Environmental Management Systems Programs Manual*, Section 3.0, “Water Conservation” (EMS Program #3).

- e. Request for technical assistance with reference to CEDR project number, if needed

None.

- f. Planned or needed training to increase awareness and encourage behavior change

Sustainability awareness training is provided at least every 2 years. Additionally, LM’s Sustainability teams provide awareness articles to the internal quarterly newsletter *ECHOutlook* at least once every 2 years. The articles are accompanied by related posters, contests, and activities.

LM will participate in the FEMP Managing Water Assessments in Federal Facilities training.

4.2 Non-Potable Fresh Water ILA Use Reduction Goal

LM is required to reduce consumption of non-potable ILA water by 20 percent by 2020 from a 2010 baseline.

4.2.1 Performance Status

- a. Referencing pertinent databases and/or workbooks associated with the goal for quantitative information

Performance related to this goal is reported in Tab 3.1 of CEDR.

LM updated quarterly FY 2012 data in Tab 3.1 of the CEDR. The data include updated usage amounts and costs associated with each quarter of FY 2012 for both potable and ILA non-potable fresh water.

See Table 3, “LM Combined-Sites Water Use Since FY 2007” in Section 4.1.1.

- b. Describing major initiatives or changes to missions or facilities that contribute in significant ways to goal performance

None.

- c. Sharing success stories, accomplishments, lessons learned, and best management practices

Performance related to this goal is reported in the LMS contractor's *Quarterly Performance Assurance Report*.

LM tracked FY 2012 non-potable freshwater use data for ILA purposes at all LM goal subject sites. As shown in Table 3, in 2012 LM reduced ILA water use by 8.7 percent compared to the baseline year of FY 2010, which exceeds the required minimum ILA reduction of 4 percent by the end of FY 2012.

Although LM achieved the required water use reduction goal during FY 2012, use at the Grand Junction disposal site and the Tuba City site was abnormally high this year due to the increased activities at the sites. In addition, use at the Fernald Preserve was atypically high due to drought conditions that resulted in an increase in non-potable water use for landscaping. Although possible, excessive water uses are not expected.

LM maintains and follows a water management plan described in the LMS *Environmental Management Systems Programs Manual*, Section 3.0, "Water Conservation" (EMS Program #3).

LM has identified budgeting needs for 2013 through 2018.

LM saved an estimated \$25,300 (\$0.09 per gallon) by using non-potable water for a road-repair at the Grand Junction disposal site, due to the site subcontractor's choice to switch from using potable water to non-potable fresh water.

LM used approximately 93 percent of non-potable fresh water for industrial purposes. The remaining percent was used for landscaping.

Approximately 23 percent of the non-potable water LM used at the Tuba City site was recycled water. The volume of this water was included in the non-potable water use for FY 2012.

- d. Noting baseline changes, impacts, and justifications in the SSP. Identifying, updating and justifying any changes to previously reported data, including the baseline year in the appropriate CEDR tab. Major changes are subject to approval by program and SPO

Tab 3.3, Row 18 of the CEDR is no longer necessary. The two FY 2012 improvements were potable water efficiency improvements. No non-potable water efficiency improvements were made in FY 2012. The two potable water improvements are noted in Row 17 of Tab 3.3.

Tab 3.1 of the CEDR contains updated quarterly 2011 data. The data include updated usage amounts and costs associated with each quarter of FY 2011 for both potable and ILA non-potable fresh water.

4.2.2 Plans and Projected Performance

Discuss plans and expectations for FY 2013 and beyond:

- a. Identify planned activities (e.g., mission changes, conservation measures, renewable energy systems, new construction or deactivation and decommissioning (D&D), policy and procedures updates, training) and expected impact of planned activities

LM will continue to track and monitor non-potable ILA water use to identify areas for water use efficiency improvements.

- b. Expected site contribution to the DOE goal(s)

LM is a small organization within DOE and quantitatively will make a relatively small contribution to attainment of DOE's overall sustainability goals. However, the LM program is a model for effective federal/contractor joint implementation, is pursuing attainment of the goals, and is expecting to exceed this goal.

- c. Estimated additional funding needed beyond planned activities and typical operation costs for meeting the goal

None.

- d. Site specific measurable goals and milestones (3–5) for the next fiscal year

Continue to implement non-potable freshwater efficiency improvements as opportunities and funding become available.

Continue to use low-water-use landscaping technologies and practices.

Investigate ways to reuse and recycle water.

Continue to perform water audits of goal subject sites to meet the requirements of EISA Section 432. LM will rotate the selection of audited sites to ensure that 100 percent of the sites are audited every 4 years.

- e. Request for technical assistance with reference to CEDR project number, if needed

None.

- f. Planned or needed training to increase awareness and encourage behavior change

LM conducts sustainability awareness training at least every 2 years. Additionally, LM's Sustainability teams provide awareness articles to the internal quarterly newsletter *ECHOutlook* at least once every 2 years. The articles are accompanied by related posters, contests, and activities.

4.3 Storm Water Management

EISA Section 438 stipulates that “The sponsor of any development or redevelopment project involving a Federal facility with a footprint that exceeds 5,000 square feet shall use site planning, design, construction, and maintenance strategies for the property to maintain or restore, to the maximum extent technically feasible, the predevelopment hydrology of the property with regard to the temperature, rate, volume, and duration of flow.”

4.3.1 Performance Status

- a. Referencing pertinent databases and/or workbooks associated with the goal for quantitative information

None.

- b. Describing major initiatives or changes to missions or facilities that contribute in significant ways to goal performance

None.

- c. Sharing success stories, accomplishments, lessons learned, and best management practices

Performance related to these goals is reported in the LMS contractor *Quarterly Performance Assurance Report*.

As identified in Section 2.8.1, several ecological restoration projects were completed in FY 2012 at the Fernald Preserve. A vernal pool wetland community with adjacent forest restoration was constructed on the western side of the site. A wetland swale was constructed in the footprint of the former Silos Area, and several acres of prairie grasses and wildflowers were seeded. The onsite restoration projects that were implemented in FY 2012 were designed to maintain and restore predevelopment hydrology.

- d. Noting baseline changes, impacts, and justifications in the SSP. Identifying, updating and justifying any changes to previously reported data, including the baseline year in the appropriate CEDR tab. Major changes are subject to approval by program and SPO.

None.

4.3.2 Plans and Projected Performance

Discuss plans and expectations for FY 2013 and beyond:

- a. Identify planned activities (e.g., mission changes, conservation measures, renewable energy systems, new construction or deactivation and decommissioning (D&D), policy and procedures updates, training) and expected impact of planned activities

No new activities are currently planned for FY 2013. Any new activities would be planned to ensure that EISA 438 requirements are met.

b. Expected site contribution to the DOE goal(s)

LM is a small organization within DOE and quantitatively will make a relatively small contribution to attainment of DOE's overall sustainability goals. However, the LM program is a model for effective federal/contractor joint implementation, is pursuing attainment of the goals, and is expecting to meet this goal.

c. Estimated additional funding needed beyond planned activities and typical operation costs for meeting the goal

No additional funding is needed beyond current planned activities and typical operation costs to meet this goal.

d. Site specific measurable goals and milestones (3–5) for the next fiscal year

New or upgraded roofs will either be green or use rainwater cisterns.

Concrete paving blocks that are designed to infiltrate runoff will be considered for new parking lots.

Bioswales will be considered for use adjacent to asphalt roadways and other hard surfaces to facilitate infiltration when future upgrades are planned.

The EISA 438 requirement will be put into design procedures for development or redevelopment projects that exceed 5,000 GSF.

e. Request for technical assistance with reference to CEDR project number, if needed

None.

f. Planned or needed training to increase awareness and encourage behavior change

LM conducts sustainability awareness training at least every 2 years. Additionally, LM's Sustainability teams provide awareness articles to the internal quarterly newsletter *ECHO* Outlook at least once every 2 years. The articles are accompanied by related posters, contests, and activities.

5 Pollution Prevention and Waste Minimization

LM has established goals that are consistent with the pollution prevention goals outlined in the DOE SSPP:

- Achieve 50 percent diversion of solid municipal waste through recycling/reuse by 2015.
- Achieve 50 percent diversion of construction and demolition debris through recycling/reuse by 2015.

5.1 Performance Status

- a. Referencing pertinent databases and/or workbooks associated with the goal for quantitative information

Performance related to these source reduction goals is reported in LM's annual PPTRS report. PPTRS printouts are included as Attachment D.

- b. Describing major initiatives or changes to missions or facilities that contribute in significant ways to goal performance

LM's job-planning process takes into account minimizing the generation of waste and pollutants through source reduction. LM's contracts and subcontracts specifically call out waste minimization and the use of less-toxic and more environmentally friendly products and chemicals. Websites to locate these materials and supplies are provided in most requests for proposals and statements of work. Assessments are conducted periodically to ensure that subcontractors are addressing these requirements.

Office supply reuse centers were established to facilitate sharing office materials instead of purchasing new supplies. Performance related to this goal in FY 2012 is reported in the PPTRS.

LM reviewed all chemical procurement requests to ensure that chemicals regulated under the Emergency Planning and Community Right to Know Act of 1986 (EPCRA) are tracked, are reduced, or undergo a sustainable-alternatives review. Acceptable alternative chemicals are approved through the procurement and job-planning processes.

LM reviewed subcontract statements of work to ensure that sustainability language is in place for recycling, reuse, salvage, and green purchasing.

LM submitted reports for Section 312 of EPCRA for five sites. No EPCRA Section 313 reports are required. An LM-wide battery inventory was completed and is being maintained to ensure that sites are meeting EPCRA requirements for reporting sulfuric acid and lead quantities, if applicable. EPCRA reports are tracked through a monthly update to the regulatory compliance schedule. Procurement tracking is used to help compile data for EPCRA reporting. In addition, a chemical inventory program is in place to track all chemicals at each LM site and ensure that significant changes in chemical quantity or toxicity are evaluated for applicable EPCRA reporting requirements.

LM maintains an ecosystem improvement log that includes the results of weed control and management activities. Integrated pest management (IPM) is the preferred control method when it is appropriate to the site conditions. When IPM is not appropriate to the site conditions, less toxic or nontoxic chemical applications are evaluated for effectiveness and cost and used as appropriate.

- c. Sharing success stories, accomplishments, lessons learned, and best management practices

Performance related to these goals is reported in the LMS contractor *Quarterly Performance Assurance Report*. LM was able to achieve a 48 percent solid waste diversion from landfills

through the use of source reduction and recycling strategies. LM was also successful in diverting over 99 percent of construction and demolition debris through reuse and recycling measures.

In addition, LM maintains spreadsheet inventories for recycled materials, chemicals, universal wastes, and solid, hazardous, and radioactive wastes.

A PPOA was conducted on a large construction activity at the Rocky Flats site to determine the effectiveness of waste minimization practices for construction debris. The PPOA found that based on the standard language in the Statement of Work and requirements implemented by the project manager, 92.7 percent of the construction debris was recycled, resulting in 55 tons of concrete and 5.1 tons of steel diverted from landfills.

LM held an Earth Day celebration at several sites to promote composting, reuse, and recycling. In 2012, LM celebrated Earth Day at the Grand Junction office site by promoting recycling and reuse through an educational vermiculture composting presentation at the annual Take Our Children to Work Day. In addition, recycled water bottles and wooden spoons were used to demonstrate to the kids and their parents how to make birdfeeders, and kits (including birdseed) were sent home with each child. A recyclable solar calculator made with recycled materials was also presented to each child to help them understand the enormous variety of uses for recycled materials and green energy. The Earth Day celebration was very successful and fun for all who participated.

LM continued to improve chemical-management activities by maintaining accurate inventory management, identifying and sharing excess chemicals, and planning chemical purchases based on need. Chemical inventories are updated quarterly, and each site maintains an accurate Material Safety Data Sheets logbook. Examples of chemical reduction and minimization efforts in FY 2012 included the following:

- The Grand Junction office site Environmental Sciences Laboratory chemist continually checks and reuses expired standards for noncritical analyses.
- All sites equipped with a laboratory continue to share reagent-grade sample preservatives with the LMS contractor Environmental Monitoring group.
- d. Noting baseline changes, impacts, and justifications in the SSP. Identifying, updating and justifying any changes to previously reported data, including the baseline year in the appropriate CEDR tab. Major changes are subject to approval by program and SPO

None.

5.1.2 Plans and Projected Performance

Discuss plans and expectations for FY 2013 and beyond:

- a. Identify planned activities (e.g., mission changes, conservation measures, renewable energy systems, new construction or deactivation and decommissioning (D&D), policy and procedures updates, training) and expected impact of planned activities

In FY 2013, the south end of Building 12 at the Grand Junction site will be demolished. Plans are in development to recycle as much as possible. This activity will remove the last of the site's radioactive contamination from beneath the building.

Also in 2013, Building 46 will be renovated with many green attributes that will assist in the reduction of hazardous material sources and increase the use of recycled-content material.

LM is developing strategies to assist sites to track and report recycling and waste diversion activities.

- b. Expected site contribution to the DOE goal(s)

LM is a small organization within DOE and quantitatively will make a relatively small contribution to attainment of DOE's overall sustainability goals. However, the LM program is a model for effective federal/contractor joint implementation, is pursuing attainment of the goals, and is expecting to meet this goal.

- c. Estimated additional funding needed beyond planned activities and typical operation costs for meeting the goal

None.

- d. Site specific measurable goals and milestones (3–5) for the next fiscal year

Specific goals include the following:

- Strive to divert 50 percent solid waste from landfills annually.
 - Strive to divert 50 percent of construction debris from landfills annually.
 - Increase composting where feasible.
 - Improve the data collection process for construction-recycling activities through the development of guidelines.
 - Continue current requirements that all new solicitations and contracts contain requirements for recycling 50 percent of construction waste and continue to require submittals.
- e. Request for technical assistance with reference to CEDR project number, if needed

None.

- f. Planned or needed training to increase awareness and encourage behavior change

LM conducts sustainability awareness training at least every 2 years. Additionally, LM's Sustainability teams provide awareness articles to the internal quarterly newsletter *ECHOutlook* at least once every 2 years. The articles are accompanied by related posters, contests, and activities.

6 Sustainable Acquisition

6.1 Procurements Meet Requirements by Including Necessary Provisions and Clauses (Sustainable Procurements/Biobased Procurements)

LM has established the following goals to support sustainable acquisition:

- Ensure that 95 percent of new contract actions, including task orders and delivery orders under new and existing contracts, require the supply or use of products and services that are energy efficient (Energy Star or FEMP designated), water-efficient, biobased, environmentally preferable (including Electronic Product Environmental Assessment Tool [EPEAT]-registered products), or non-ozone-depleting; contain recycled content; or are nontoxic or less-toxic alternatives.
- LM also commits its sites to strive to make 95 percent of new LM contract actions for products and services, including task/release and blanket orders but excluding all credit card purchases, environmentally preferable in accordance with EO 13514 and as subject to certain qualifications.

6.1.1 Performance Status

- a. Referencing pertinent databases and/or workbooks associated with the goal for quantitative information

The Job Cost Accounting Management Information System (JAMIS) generates electronic reports that provide information for products and services used by the LMS contractor. Information for new contract actions is collected manually, and all actions are reviewed.

- b. Describing major initiatives or changes to missions or facilities that contribute in significant ways to goal performance

The sustainable acquisition wording that requires the supply or use of sustainable products and services was placed in the contractors Terms and Conditions so that it would be included in every new contract action.

- c. Sharing success stories, accomplishments, lessons learned, and best management practices

The bulk data for product and services is included in the LMS contractor's *Quarterly Performance Assurance Report*.

One hundred percent of the computer systems purchased during 2012 were rated Silver or Gold by EPEAT, excluding credit card purchases. This percentage exceeds the requirement in EO 13423 of purchasing 95 percent EPEAT Silver or Gold equipment.

Ninety-nine percent of products and services purchased during 2012 were sustainable (where recycled and biobased products are identified as available by the U.S. Department of Agriculture and EPA).

All new solicitations and contracts contain requirements for products and services to be energy efficient (Energy Star or FEMP-designated), water efficient, biobased, environmentally preferable (including EPEAT-registered products), non-ozone-depleting, and nontoxic or less toxic; and to contain recycled content. In FY 2012, 100 percent of new contract actions, including task orders and delivery orders under new and existing contracts, met these requirements.

The current LM affirmative procurement plans, policies, and programs ensure that all federally mandated designated products and services are included in all relevant acquisitions.

The current procurement process allows for review by a subject matter expert to identify applicable sustainable acquisition requirements.

- d. Noting baseline changes, impacts, and justifications in the SSP. Identifying, updating and justifying any changes to previously reported data, including the baseline year in the appropriate CEDR tab. Major changes are subject to approval by program and SPO

None. Sustainable acquisition has no baselines.

6.1.2 Plans and Projected Performance

Discuss plans and expectations for FY 2013 and beyond:

- a. Identify planned activities (e.g., mission changes, conservation measures, renewable energy systems, new construction or deactivation and decommissioning (D&D), policy and procedures updates, training) and expected impact of planned activities

Sustainable Acquisition team personnel plan to continue to attend the DOE bimonthly sustainable acquisition teleconference/webinar to stay abreast of what other DOE agencies and contractors are doing to purchase sustainable products and services. LM is currently meeting sustainable acquisition goals and plans to continue meeting these goals.

Update the LMS contractor Sustainable Acquisition Cost Element list to add copiers, printers, and televisions to EPEAT purchasing standards.

By September 10, 2013, update the LMS contractor Terms and Conditions for all commodities and services to include the goal of 95 percent sustainable products and 60 percent for biobased product content.

- b. Expected site contribution to the DOE goal(s)

LM is a small organization within DOE and quantitatively will make a relatively small contribution to attainment of DOE's overall sustainability goals. However, the LM program is a model for effective federal/contractor joint implementation, is pursuing attainment of the goals, and is expecting to meet this goal.

- c. Estimated additional funding needed beyond planned activities and typical operation costs for meeting the goal

No additional funding is needed beyond current planned activities and typical operation costs to meet this goal.

- d. Site specific measurable goals and milestones (3–5) for the next fiscal year

Track compliance with the goal of purchasing 95 percent sustainable products and services (includes tracking for the performance assurance summary and LM's annual PPTRS report).

Continue to strengthen the requirement for federally mandated, designated products in all purchasing programs as necessary.

Continue to require that purchases of noncompliant energy-efficient products have written preapproval from a subject matter expert.

- e. Request for technical assistance with reference to CEDR project number, if needed

None.

- f. Planned or needed training to increase awareness and encourage behavior change

Sustainability awareness training is provided in intervals not to exceed a 2-year period. Additionally, LM's Sustainability teams provide awareness articles to the internal quarterly newsletter *ECHO* Outlook at least once every 2 years. The articles are sometimes accompanied by related posters, contests, and activities.

7 Electronics Stewardship and Data Centers

7.1 Data Centers and Electronic Stewardship

The Federal Data Center Consolidation Initiative (FDCCI) in the third quarter of FY 2012 refined its definition of “data center” to include any room that contains a computer server of any kind. As a result, LM will now be responsible for six data centers (Morgantown, Grand Junction, Fernald, Weldon Spring, Westminster, and Tuba City). Each will require separate metering to achieve a required power utilization effective (PUE) rating of 1.4 by FY 2015.

7.1.1 Performance Status

- a. Referencing pertinent databases and/or workbooks associated with the goal for quantitative information

Performance related to these goals is reported in the LMS contractor's *Quarterly Performance Assurance Report*, in LM's annual PPTRS report, in Tab 5.1 of CEDR, and in the DC Pro assessment tool.

- b. Describing major initiatives or changes to missions or facilities that contribute in significant ways to goal performance

In FY 2012 LM installed a separate power-metering device in the data center in Morgantown, West Virginia. This metering system monitors power use in real-time and has been instrumental in reducing power usage at the data center. The DC Pro assessment tool provided guidance for safely raising the temperature in the data center, reducing power consumption related to cooling needs with no damage to data processing equipment.

- c. Sharing success stories, accomplishments, lessons learned, and best management practices

In FY 2012 LM installed Windows 7 in most workstations. Windows 7 has the capability to provide greater control of PC power consumption; this capability was exploited by use of an efficient power configuration on each system. These settings are locked and cannot be changed by users.

During the installation, users with both a desktop and a laptop system were required to consolidate to one system, which resulted in additional equipment, maintenance, and power savings.

LM continues to manage all excess or surplus electronic products in an environmentally responsible manner by:

- Redeploying equipment to other staff members if it meets LM requirements.
- Donating equipment to nonprofit organizations, such as schools and community groups, if it does not meet LM requirements.
- Recycling computers and other devices with no redeemable value.

All computer systems LM purchases are EPEAT Gold.

LM continues to provide information to the FDCCI and follows up on suggested operational changes when feasible.

- d. Noting baseline changes, impacts, and justifications in the SSP. Identifying, updating and justifying any changes to previously reported data, including the baseline year in the appropriate CEDR tab. Major changes are subject to approval by program and SPO

The FDCCI in the third quarter of FY 2012 refined its definition of "data center" to include any room that contains a computer server of any kind. As a result, LM will now be responsible for

six data centers (Morgantown, Grand Junction, Fernald, Weldon Spring, Westminster, and Tuba City). Each will require separate metering to achieve a required PUE rating of 1.4 by FY 2015.

7.1.2 Plans and Projected Performance

Discuss plans and expectations for FY 2013 and beyond:

- a. Identify planned activities (e.g., mission changes, conservation measures, renewable energy systems, new construction or deactivation and decommissioning (D&D), policy and procedures updates, training) and expected impact of planned activities

LM is investigating application for the Federal Electronics Challenge Silver Award in 2013.

In concert with the FDCCI, LM has established the following goals to perform sound electronics stewardship and data center management:

- Continually work to intelligently reduce the energy that computing resources consume.
- Increase or maintain the quantity of electronic assets disposed of through sound disposition practices.
- Ensure that 95 percent of newly purchased computer systems are EPEAT Silver or Gold.
- Reduce the number of duplicate desktop and laptop systems in circulation to a single system per user.

- b. Expected site contribution to the DOE goal(s)

LM is a small organization within DOE and quantitatively will make a relatively small contribution to attainment of DOE's overall sustainability goals. However, the LM program is a model for effective federal/contractor joint implementation, is pursuing attainment of the goals, and is expecting to meet this goal. Given the recent change in the definition of a data center, which has tripled the number of data centers from two to six, site contribution at the smaller sites has yet to be determined.

- c. Estimated additional funding needed beyond planned activities and typical operation costs for meeting the goal

Due to an unplanned change in scope, additional funding will be needed to achieve the targeted PUE. Funding will be used to cover the cost of acquisition, installation, and configuration of separate power metering for the server room at each of LM's satellite locations. The Grand Junction data center is already planned and budgeted as part of new construction at the site. The estimated funding at the remaining four sites (Fernald, Weldon Spring, Westminster, and Tuba City) is approximately \$20,000.00. Estimated cost based on the installation performed at the Morgantown site is approximately \$5,000.00 per location.

- d. Site specific measurable goals and milestones (3–5) for the next fiscal year

Optimize the configurations of data centers and monitor power consumption in data centers.

Minimize the number of systems that exist in general office space.

Educate users on how they can be conscientious consumers.

Continue to manage surplus or excess electronic products in an environmentally responsible manner.

Continue to purchase EPEAT Silver or Gold computer systems.

e. Request for technical assistance with reference to CEDR project number, if needed

None.

f. Planned or needed training to increase awareness and encourage behavior change

Sustainability awareness training is provided in intervals not to exceed a 2-year period. Additionally, LM's Sustainability teams provide awareness articles to the internal quarterly newsletter *ECHOutlook* at least once every 2 years. The articles are sometimes accompanied by related posters, contests, and activities. Users periodically receive notification via the Intranet or e-mail that LM policy is to power systems down at the end of the business day.

7.2 Power Utilization Effectiveness

7.2.1 Performance Status

a. Referencing pertinent databases and/or workbooks associated with the goal for quantitative information

Performance related to these goals is reported in LM's annual PPTRS report, in Tab 5.1 of CEDR, and in the DC Pro assessment tool.

b. Describing major initiatives or changes to missions or facilities that contribute in significant ways to goal performance

The recently changed FDCCI definition of data center and the cost of implementing separate metering represent a significant change to the LM mission.

c. Sharing success stories, accomplishments, lessons learned, and best management practices

Performance related to these goals is reported in the LMS contractor's *Quarterly Performance Assurance Report*.

Configuration of separate metering at the Legacy Management Business Center data center in Morgantown required a significant amount of time. The system has been configured to provide real-time data on demand. Lessons learned from this endeavor will make future metering projects easier and uniform.

- d. Noting baseline changes, impacts, and justifications in the SSP. Identifying, updating and justifying any changes to previously reported data, including the baseline year in the appropriate CEDR tab. Major changes are subject to approval by program and SPO

Using FDCCI's original definition of a data center, which was predominantly based on the size of the room, LM had two data centers. The primary data center was at the LM Business Center in Morgantown, and the secondary data center was in Grand Junction. Under the new guidelines, every LM satellite location that has a server housed in a room of any size now is considered to have a data center. Now, instead of two data centers, LM has six: the LM Business Center in Morgantown, Grand Junction, Fernald, Weldon Spring, Westminster, and Tuba City.

The FDCCI scope modification has caused a change in data center count. The change in definition of a data center has tripled LM's data center count from two to six. Estimated cost to separately meter each site is \$5,000 per site.

7.2.2 Plans and Projected Performance

- a. Identify planned activities (e.g., mission changes, conservation measures, renewable energy systems, new construction or deactivation and decommissioning (D&D), policy and procedures updates, training) and expected impact of planned activities

In 2013, LM will extend separate metering to include the server rooms at all LM locations.

- b. Expected site contribution to the DOE goal(s)

LM is a small organization within DOE and quantitatively will make a relatively small contribution to attainment of DOE's overall sustainability goals. However, the LM program is a model for effective federal/contractor joint implementation, is pursuing attainment of the goals, and is expecting to meet this goal. Given the recent change in the definition of a data center, which has tripled the number of data centers from two to six, site contribution at the smaller sites has yet to be determined.

- c. Estimated additional funding needed beyond planned activities and typical operation costs for meeting the goal

None.

- d. Site specific measurable goals and milestones (3–5) for the next fiscal year

In 2013, LM will extend separate metering to the following office sites:

- Grand Junction, Colorado
- Fernald, Ohio
- Weldon Spring, Missouri
- Westminster, Colorado
- Tuba City, Arizona

- e. Request for technical assistance with reference to CEDR project number, if needed

None.

- f. Planned or needed training to increase awareness and encourage behavior change

Sustainability awareness training is provided in intervals not to exceed a 2-year period. Additionally, LM's Sustainability teams provide awareness articles to the internal quarterly newsletter *ECHOutlook* at least once every 2 years. The articles are sometimes accompanied by related posters, contests, and activities. Users receive periodic notification via the Intranet or e-mail that LM policy is to power systems down at the end of the business day.

7.3 Power Management

7.3.1 Performance Status

- a. Referencing pertinent databases and/or workbooks associated with the goal for quantitative information

This information is captured in Tab 5.1 of CEDR and in the DC Pro assessment tool. Tab 5 columns AO and AP of CEDR show the number of hardware systems (Hosts) and the number of Virtual Operating Systems (OS) running on them.

- b. Describing major initiatives or changes to missions or facilities that contribute in significant ways to goal performance

Electrical use at the Legacy Management Business Center data center is monitored in real-time. The maximum annual weighted average PUE of 2012 was 1.0.

All desktop and laptop systems in LM are imaged with power management settings configured in accordance with the government standard. The controls for power management on all LM systems are locked, which prohibits users from changing these controls.

In FY 2012 the Windows 7 operating system was installed on LM computers and included the appropriate power management controls in place and locked down. IT migrated 80 percent of LM systems to Windows 7 by the end of the fiscal year.

- c. Sharing success stories, accomplishments, lessons learned, and best management practices

Currently, LM has 26 virtualized hardware servers doing the work of 304 individual hardware servers. Server Virtualization allows a single PC server, using specialized software, to mimic the functionality of what once took many PC servers. The result of server virtualization is lower power and cooling requirements and costs.

- d. Noting baseline changes, impacts, and justifications in the SSP. Identifying, updating and justifying any changes to previously reported data, including the baseline year in the appropriate CEDR tab. Major changes are subject to approval by program and SPO

Changes in FDCCI scope will require separate metering of data centers and server rooms at all LM locations that have a server.

7.3.2 Plans and Projected Performance

Discuss plans and expectations for FY 2013 and beyond:

- a. Identify planned activities (e.g., mission changes, conservation measures, renewable energy systems, new construction or deactivation and decommissioning (D&D), policy and procedures updates, training) and expected impact of planned activities

LM plans to continue the virtualization process where applicable. Virtualization allows for one server to perform the function of up to 100 individual servers, which results in a reduction in direct power usage and in particular a reduction in cooling needs, which typically consume a significant amount of energy.

In FY 2013, LM will extend separate metering capability for the data center server rooms at the five remaining LM sites.

- b. Expected site contribution to the DOE goal(s)

LM is a small organization within DOE and quantitatively will make a relatively small contribution to attainment of DOE's overall sustainability goals. However, the LM program is a model for effective federal/contractor joint implementation, is pursuing attainment of the goals, and is expecting to meet this goal.

- c. Estimated additional funding needed beyond planned activities and typical operation costs for meeting the goal

No additional funding is needed beyond current planned activities and typical operation costs to meet this goal.

- d. Site specific measurable goals and milestones (3–5) for the next fiscal year

LM will complete actions that conserve energy in the data centers at the LM Business Center in Morgantown and at Grand Junction office site.

The decision was made to relocate data center at Grand Junction to a different building. The unmetered data center is not scheduled for relocation until FY 2013, at which time separate metering will be installed.

LM will continue installation of Windows 7 in FY 2013 with the appropriate power management controls in place and locked down until 100 percent of the systems have been upgraded.

- e. Request for technical assistance with reference to CEDR project number, if needed

None.

- f. Planned or needed training to increase awareness and encourage behavior change

Sustainability awareness training is provided in intervals not to exceed a 2-year period. Additionally, LM's Sustainability teams provide awareness articles to the internal quarterly newsletter *ECHOutlook* at least once every 2 years. The articles are sometimes accompanied by related posters, contests, and activities.

8 Site Innovation and Government-Wide Support

8.1 Other Sustainability Goals and Initiatives

8.1.1 Environmental Education and Outreach on Remediated Sites

Fernald Preserve, Ohio

At the Fernald Preserve, an existing building was converted to a Visitors Center that meets USGBC LEED Platinum standards. Wastewater from the Visitors Center is transferred to a biowetland using solar-powered pumps. An interactive multimedia exhibit on renewable energy provides visitors with information about how to reduce energy consumption, shows the value of alternative energy sources, and explains LM's demonstrated use of and commitment to alternative energy. A brochure, curriculum, webpage, and interpretive trail signage also provide renewable energy instruction. The Fernald Preserve participates in the annual Green Energy Ohio solar tour (<http://www.greenenergyohio.org/page.cfm?pageId=3>) to further showcase its commitment to renewable energy. Numerous site improvements, including the construction of 7 miles of trails, provide access to the site's ecologically restored habitats. Prescribed burns are an important management tool to ensure the continued vitality of the Fernald site's prairies. The success of the ecological restoration has made the site a regional destination for nature observation. Through an expanding outreach effort, LM is working with local schools to encourage the next generation of scientists and engineers. Personnel from the Fernald site develop and conduct educational programs that have provided hands-on learning experiences for thousands of area students, from elementary grades through college. Regularly scheduled, nature-based educational programs for the general public complement the site's school-based outreach activities.

LM oversees implementation and monitoring of two ecological restoration projects at the Fernald Preserve that are funded through a CERCLA natural resource damage settlement. Planning and implementation of on-property ecological restoration projects is one component of compensation for natural resource injury. The Paddys Run Tributary Project involves creation of vernal pool wetland habitat with adjacent forest restoration. The Triangle Area Project is a mesic tallgrass prairie establishment, similar to other efforts at the site.

In 2012 the Fernald Preserve undertook three tree-planting efforts. In March the site hosted volunteers from the Lions Club and planted approximately 4,800 deciduous bare-root saplings. An

additional 7,080 trees were planted during the riparian forest restoration project along Paddys Run Tributary. Eighty of these were large trees ranging from 3 feet to 15 feet in height, and the other 7,000 were bare-root saplings. The former silos area also underwent restoration this year. During this restoration project, 20 large trees were planted. The riparian area is located immediately adjacent to streams, lakes, or other surface waters. Restoring forests along headway streams allows more storm flow to be captured and retained higher in the watershed. Riparian forest buffers also reduce flood damage as they capture sediments. The sedimentation of streams contributes to flood damage by filling in streambeds and increasing the frequency and depth of flooding and by increasing the volume of flood waters. Ecological restoration has helped turn a DOE liability into a community asset.

In addition to the improvements in the waterway and its surrounding area, the total carbon storage and gross carbon storage of these newly planted, surviving trees was calculated using the U.S. Department of Agriculture Forest Service software suite, i-Tree. The current carbon storage of these trees is 346 kilograms. If all of these trees survive through maturity, the gross carbon storage potential is 304 kilograms per year.

Weldon Spring Site

At the Weldon Spring site, an Interpretive Center open to the general public is operated to provide information about the site's environmental cleanup and the long-term surveillance and maintenance. Stakeholders are sent updates, such as the Annual Site Environmental Report, and notices of site inspections. Customized field trips are provided for students in kindergarten through 12th grade. Additionally, the staff conducts outreach presentations for organizations that do not have funding to travel to the Interpretive Center. Approximately 24,000 visitors per year visit the site, use the meeting room, visit the Interpretive Center, or were involved in an outreach presentation. Numerous volunteers help maintain a native-plant garden at the site and provide expertise for managing prairie on the site.

8.1.2 International Support in Legacy Management

In August 2012, LM and the International Atomic Energy Agency (IAEA) co-hosted the IAEA International Workshop on Legacy Sites: Perspectives from Regulators and Operators. The workshop was part of an IAEA program whose objective is to help member-state countries develop effective programs to remediate and provide post-closure care of contaminated sites around the world associated principally with uranium production during the Cold War. The 4-day workshop in Grand Junction was preceded by a week of visits to past and present uranium milling and tailings disposal sites in Colorado and Utah. More than 30 visitors from 20 countries attended the event.

The IAEA wanted to highlight the mission of LM to help participants better understand what challenges they will have after remediation to ensure that sites continue to protect the public and the environment. LM staff, contractor staff, and representatives from EPA, NRC, and the Colorado Department of Public Health and Environment made presentations at the workshop and provided their perspective on setting standards and regulating the cleanup of uranium mill sites in the United States under UMTRCA. Participants from Canada, Australia, Russia, France, and Germany, among others, made presentations on the regulatory framework and cleanup of uranium legacy sites in their countries. For participants from countries with operating mines and

mills, the program provided insights on avoiding the creation of new legacy sites in the future. A topic of particular interest to many participants is LM's program of beneficial reuse of sites. During visits to Monticello, Rifle, and Grand Junction, workshop participants were able to see examples of former uranium-ore-processing sites now being used for recreation and renewable energy generation, among other uses. More information about the workshop is available on the external LM website at http://www.lm.doe.gov/Office_of_Business_Operations/Stakeholder_Relations/Program_Update_Newsletters.aspx.

8.1.3 Site Specific Measurable Goals and (3–5) Milestones

Through LM's mission, LM will continue to provide educational opportunities at the Fernald Preserve and Weldon Spring sites. These facilities provide learning opportunities on sustainability through their beneficial reuse as visitor centers, ecological areas, and sustainability-related displays.

LM, through coordination with the IAEA, will continue to assist other countries with establishing sustainable legacy programs for their uranium industries.

9 Budget and Funding

9.1 Overall Status

LM integrates funding for long-term sustainability projects in the normal budget process. Costs are submitted in the Integrated Facilities and Infrastructure Crosscut budget and other related budget calls.

LM plans to implement energy efficiency projects through FY 2015 that may significantly reduce energy intensity compared to the FY 2003 baseline. LM selects projects primarily by evaluating life-cycle costs. The projects' initial goals include having a payback time that is less than or equal to 25 years. Based on the return-on-investment criteria and the level of development of scope and implementation cost estimates of the projects listed on Tab 3.3 in the CEDR worksheet, LM will potentially pursue three renewable energy or energy conservation projects. All proposed or planned energy projects will undergo further technical and economic analysis for consideration during the budget evaluation process.

LM identifies cost savings realized from sustainability efforts. However, LM does not have a specified reinvestment program.

9.2 Site-Specific Measurable Goals and (3–5) Milestones

In the future, LM will not only determine the cost-effectiveness of projects but will also consider the implementation of new technologies for demonstration purposes, the facilitation of technology transfer, and the reduction of deferred maintenance.

LM will examine the remaining three identified energy reduction projects that need additional financial or technical rigor before they are ready to be submitted in the budget.

LM will continue to refine the scope and estimated implementation costs, evaluate funding sources for financial and technical rigor, and seek appropriate funding sources over the next 3 years for those projects that are life-cycle cost-effective. LM's next budget request will be updated to include projects that will allow sustainability goals to be met.

Additional training on costs, scheduling, estimating, and preparing return-on-investments and simple paybacks will be pursued in FY 2013.

9.3 Success Stories, Accomplishments, Lessons Learned, and Best Management Practices

Initially LM was identifying projects on a yearly basis and seeking approval during the EMS Management Review, typically near the end of the fiscal year. This placed the project approvals and associated funding request outside the normal budgeting schedule, and funds were not being requested in a timely manner. To improve the timing of funding requests, LM began a multi-year sustainability budgeting plan. With a 5-year look ahead, LM identifies the major sustainability goals and related activities (e.g., water audits or annual reporting events) and the projects that will be necessary to achieve and track the goals. An additional column identifies projects that have not yet been scheduled or that extend beyond the 5-year window. This allows flexibility in moving projects as available funding changes.

III. Climate Change Adaptation

According to EO 13514, Sections 8(i) and 16, and subsequent Council on Environmental Quality Implementing Instructions, DOE developed and submitted a Climate Change Adaptation Plan with its SSPP. The DOE Climate Change Adaptation Plan directs DOE programs to ensure that all facilities address climate change adaptation in their 2013 SSPs, and establishes goals and objectives applicable to DOE sites. These goals/objectives are discussed in the next sections. Objectives 2.1, 3.1, and 3.2 in the Adaptation Plan have been excluded from this discussion, as they are not applicable to individual sites. Objective 1.2 and 4.2 overlap, so they are addressed together.

Goal 1: Improve Understanding of Climate Change Effects and Impacts

Objective 1.1: Work with other agencies to improve our understanding of climate change.

The DOE Grand Junction Projects Office hosted a collaborative workshop in 1994 titled “Climate Change in the Four Corners and Adjacent Regions.” Attendees from over 20 different agencies and organizations shared interagency knowledge of climate change implications for environmental restoration and land-use planning. Ongoing LM projects stemming from that exchange are in place to monitor long-term disposal cell performance.

In FY 2012, the plan for further climate change investigations included an extensive framework for projecting long-term disposal cell cover performance and a survey of current approaches for evaluating climate change effects. An LM scientist attended the Ecological Society of America annual meeting in August 2012 to survey current climate change science essential to LM’s efforts to project long-term cover performance.

In August 2012, LM hosted a workshop with the IAEA to discuss the challenges of management and regulatory oversight of legacy sites all over the world. One of the presentations, “Long-Term Performance Cover Monitoring,” a collaborative effort between LM scientists and the University of Wisconsin-Madison, explored the possibilities of engineering disposal cells to function more effectively in changing environmental conditions. Covers evolve over time as materials equilibrate with the natural setting. Understanding these changes is useful in interpreting changes in hydrologic performance and anticipating potential effects due to climate change.

Additional efforts to improve understanding of climate change included LM personnel participating in the online Climate Vulnerability Assessment Training provided by the U.S. Fish and Wildlife Service National Conservation Training Center; LM personnel attending the GreenGov Climate Change Adaptation workshop presentations provided by United States Global Change Research Program and National Climate Assessment; and continually reviewing information as provided in the resources posted on the DOE Working Group SharePoint site and FedCenter.

Objective 1.2: Work with other Federal agencies and local jurisdictions (as appropriate) to develop regional partnerships for climate change information sharing and collaboration.

Objective 4.2: Identify or establish and participate in regional climate change adaptation partnerships, as appropriate, for all DOE facilities.

In 2011 LM participated in the DOE voluntary review of the cross-cutting energy section of the National Fish, Wildlife, and Plants Climate Adaptation Strategy.

LM plans to invigorate previous relationships in the Four Corners region as well as establish new relationships with agencies in other parts of the country. LM is in the process of making contacts with the Bureau of Land Management, NRC, EPA, U.S. Geological Survey, and local universities to explore regional partnership opportunities.

Members of the Surface Biogeochemical Research program, which is part of the of the Climate and Environmental Sciences division of the DOE Office of Science, are working on a bioremediation research project at the Old Rifle site. LM plans to explore the potential for climate-oriented evaluation with this program as well.

Goal 2: Improve Understanding of Climate Change Vulnerabilities and Risk

Objective 2.2: Conduct detailed risk or vulnerability assessments, as appropriate, for specific DOE programs or facilities.

LM reviewed and contributed to the *April 2012 DOE High Level Analysis of Vulnerability to Climate Change*. LM is in the process of determining which vulnerability/risk assessment approach would be most effective for LM sites and whether any climate change vulnerability/risk assessments have been completed by institutions near LM sites.

Disposal cells are one aspect of several LM sites that are in the process of being evaluated for climate change vulnerabilities. LM is considering a framework that would screen future environmental scenarios and possible future disposal cell cover states. This information, along with climate variables, would be input to an ecohydrology model to project cover performance for that environmental scenario.

Goal 4: Improve the Climate Resiliency of all DOE Sites

Objective 4.1: Update all appropriate LM site plans to address climate change resiliency.

Once LM has established a comprehensive climate change assessment approach, site managers and site leads will be informed and engaged in the assessment strategy. LM will determine which program and site documents would be most appropriate for noting climate change adaptation considerations and will establish a schedule for making those updates.

Attachment A

Environment, Safety, and Health Policy

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Summary of Changes
to
Policy 450.8
Environment, Safety, and Health
Revised Version Issued as Policy 450.9

LM Policy 450.8 Environment, Safety, and Health of 05/29/09, has undergone minor revisions. This Policy has been revised to include a new Executive Order and make revisions for updated DOE Orders that LM abides by. Please replace LM Policy 450.8 with **LM Policy 450.9**.

The most recent and official controlled hard copy version of this document resides with LM's Directives Coordinator. An electronic version of the controlled document has been placed on the LM Intranet for employee use. Printed hard copies of this electronic version are considered uncontrolled documents.

INITIATED BY: [Insert Office]
NO. OF PAGES/ATTACHMENTS: 2 pages, 0 attachment



SUBJECT: ENVIRONMENT, SAFETY, AND HEALTH POLICY

1. OBJECTIVE. This policy reaffirms the Department of Energy (DOE), Office of Legacy Management’s (LM) commitment to safety of our workers, respect for the environment, and protection of public health and safety through our environment, safety and health (ES&H) program.
2. CANCELLATION. This policy cancels LM P 450.8, *Environment, Safety, and Health Policy*, dated 05-29-09.
3. APPLICABILITY. This Policy applies to all LM contractor and federal employees.
4. REQUIREMENTS. Not Applicable
5. RESPONSIBILITIES. It is the responsibility of all LM personnel to support the ES&H policy to the utmost of their abilities. This policy, as set forth and supported by all members of senior management, will be reviewed annually and updated as necessary. Senior management will ensure that these expectations are made clear and available to all LM personnel, including DOE-LM employees and contractors, research associates, LM stakeholders, and the public.
6. POLICY. It is DOE policy that work be conducted safely and efficiently and in a manner that ensures protection of workers, the public, and the environment. LM has a diversity of Goals, which support our mission “To manage the Department’s post-closure responsibilities and ensure the future protection of human health and the environment.” In support of our mission and goals, proper management of the impacts of our operations and facilities on worker and public safety and the environment is essential.

With this policy, LM is pledging to protect the public, workers, and the environment by complying with all applicable requirements, committing to prevention of pollution, and achieving continual improvement. LM continues to make ES&H an integral part of our day-to-day decision-making and long-term planning processes across all goals, activities

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The most recent and official controlled hard copy version of this document resides with LM’s Directives Coordinator. An electronic version of the controlled document has been placed on the LM Intranet for employee use. Printed hard copies of this electronic version are considered uncontrolled documents.

LM Policy 450.9

and functions by following an Integrated Safety Management System (ISMS) and an Environmental Management System (EMS) that are integrated to the fullest extent practicable. LM will strive to improve our ES&H programs and sustain compliance through the concerted process of continuous performance improvements using performance measurements such as objectives and targets.

7. REFERENCES.

- a. DOE Order 436.1, Environmental Sustainability.
- b. DOE P 450.4A, Integrated Safety Management Policy.
- c. Executive Order 13423, Strengthening Federal Environmental, Energy, and Transportation Management.
- d. Executive Order 13514, Federal Leadership in Environmental, Energy, and Economic Performance.

Approved: Original signed by
David W. Geiser **11/29/11**
Director
Office of Legacy Management

Distribution: As required

INITIATED BY: [Insert Office]

NO. OF PAGES/ATTACHMENTS: 2 pages, 0 attachment

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Attachment B

FIMS Excluded Building List and Certification Letter

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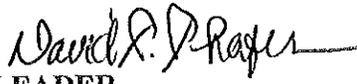


Department of Energy

Washington, DC 20585

December 6, 2012

MEMORANDUM FOR: JENNIFER MacDONALD, DIRECTOR
SUSTAINABILITY PERFORMANCE OFFICE

FROM: DAVID S. SHAFER 
ASSET MANAGEMENT TEAM LEADER
DEPARTMENT OF ENERGY
OFFICE OF LEGACY MANAGEMENT

SUBJECT: Self-Certification Form for The Energy Intensity Goal of
Energy Independence and Security Act of 2007 (EISA 2007)

Each building or group of buildings excluded under the criteria for exclusion under EISA 2007, Part G or Part H is/are metered for energy consumption and their consumption is reported annually.

If any building has been excluded under the criteria for Part H for impracticability then all practicable energy and water conservation measures with a payback of less than 10 years have been installed. A justification statement that explains why process-dedicated energy in the facility may impact the ability to meet the goal has been provided in the FIMS Report 063.

I certify that the buildings listed on the Excluded Building List produced by FIMS as Report 063 dated October 4, 2012 for the Legacy Management Sites on pages 43 through 49 meet the exclusion criteria in *Guidelines Establishing Criteria for Excluding Buildings* published by FEMP on January 27, 2006.

Please contact me at (720) 880-4347 or email david.shafer@lm.doe.gov if you need further information. Please send any correspondence to:

U.S. Department of Energy
Office of Legacy Management
2597 Legacy Way
Grand Junction, CO 81503

Attachment

cc w/ attachment:
T. Ribeiro, DOE-LM (e)
File: ADM 115.02

Ribeiro/11-30-12 EISA 2007 Memo (MacDonald).doc



U.S. Department of Energy
Facilities Information Management System
Energy Consuming Excluded Buildings and Trailers List

Program Office LM

Site 08024 Monticello, UT, Disposal and Processing Sites

Property ID Justification Comments:	Real Property Unique ID	Property Name	Exclusion Part	Property Type	Gross SQFT	Excluded SQFT
MNT-BLDG-STORSHED	208390	STORAGE SHED	D - Essentially only lighting	Building	260	260

Shared meter

This report qualifies DOE Owned, DOE Leased, and Contractor Leased buildings and trailers where the Energy Consuming Metered Process (Excluded) Facilities gsft is greater than zero.

U.S. Department of Energy
Facilities Information Management System
Energy Consuming Excluded Buildings and Trailers List

Program Office LM

Site 08031 Pinellas County, FL, Site

Property ID	Real Property Unique ID	Property Name	Exclusion Part	Property Type	Gross SQFT	Excluded SQFT
PIN-STAR	143457	STAR CTR OFFICE PORTION OF LEASE	C - Fully serviced lease	Building	1,613	1,613
Fully serviced lease						

This report qualifies DOE Owned, DOE Leased, and Contractor Leased buildings and trailers where the Energy Consuming Metered Process (Excluded) Facilities gsft is greater than zero.

U.S. Department of Energy
Facilities Information Management System
Energy Consuming Excluded Buildings and Trailers List

Program Office LM

Site 08034 Rocky Flats, CO, Site

Property ID	Real Property Unique ID	Property Name	Exclusion Part	Property Type	Gross SQFT	Excluded SQFT
RFS-BLDG-OFFICE	204031	WESTMINSTER OFFICE SPACE C - Fully serviced lease LEASE		Building	16,010	16,010
Justification Comments: utilities paid by Lessor						

This report qualifies DOE Owned, DOE Leased, and Contractor Leased buildings and trailers where the Energy Consuming Metered Process (Excluded) Facilities gsft is greater than zero.

U.S. Department of Energy
Facilities Information Management System
Energy Consuming Excluded Buildings and Trailers List

Program Office LM

Site 08035 Rifle, CO, Disposal/Processing Site

Property ID	Real Property Unique ID	Property Name	Exclusion Part	Property Type	Gross SQFT	Excluded SQFT
RFO-TRLR-ERSP	207375	SINGLE WIDE TRAILER - ERSP	B - Privately owned	Trailer	672	672
Rental Agreement						

This report qualifies DOE Owned, DOE Leased, and Contractor Leased buildings and trailers where the Energy Consuming Metered Process (Excluded) Facilities gsft is greater than zero.

U.S. Department of Energy
Facilities Information Management System
Energy Consuming Excluded Buildings and Trailers List

Program Office LM

Site 08052 Fernald, OH, Site

Property ID Justification Comments:	Real Property Unique ID	Property Name	Exclusion Part	Property Type	Gross SQFT	Excluded SQFT
FER01	203707	DELTA BUILDING	C - Fully serviced lease	Building	10,408	10,408

Lessor pays all utilities

This report qualifies DOE Owned, DOE Leased, and Contractor Leased buildings and trailers where the Energy Consuming Metered Process (Excluded) Facilities gsft is greater than zero.

U.S. Department of Energy
Facilities Information Management System
Energy Consuming Excluded Buildings and Trailers List

Program Office LM

Site 08066 Grand Junction, CO, Site

Property ID Justification Comments:	Real Property Unique ID	Property Name	Exclusion Part	Property Type	Gross SQFT	Excluded SQFT
GJO-BLDG-STORSHED Meter exists on leased building	207408	STORAGE SHED	D - Essentially only lighting	Building	336	336
GJO-BLDG-B2 Fully Service Lease	208140	RTC LEASE-BUILDING2	C - Fully serviced lease	Building	1,684	1,684
GJO-BLDG-B12 Fully Services Lease	208138	RTC LEASE-BUILDING12	C - Fully serviced lease	Building	4,443	4,443
GJO-BLDG-B32 Fully Serviced Lease	208137	RTC LEASE-BUILDING32	C - Fully serviced lease	Building	4,616	4,616
GJO-BLDG-B810 rent includes all utilities	204554	RTC LEASE-BUILDING810	C - Fully serviced lease	Building	25,495	25,495
GJO-BLDG-B12A Fully Service Lease	208136	RTC LEASE-BUILDING12A	C - Fully serviced lease	Building	6,757	6,757

This report qualifies DOE Owned, DOE Leased, and Contractor Leased buildings and trailers where the Energy Consuming Metered Process (Excluded) Facilities gsft is greater than zero.

U.S. Department of Energy
Facilities Information Management System
Energy Consuming Excluded Buildings and Trailers List

Program Office LM

Site 08066 Grand Junction, CO, Site

Property ID Justification Comments:	Real Property Unique ID	Property Name	Exclusion Part	Property Type	Gross SQFT	Excluded SQFT
GJO-BLDG-B938	208135	RTC LEASE-BUILDING938	C - Fully serviced lease	Building	19,834	19,834
Fully Service Lease						

This report qualifies DOE Owned, DOE Leased, and Contractor Leased buildings and trailers where the Energy Consuming Metered Process (Excluded) Facilities gsft is greater than zero.

U.S. Department of Energy
Facilities Information Management System
Energy Consuming Excluded Buildings and Trailers List

10/04/2012

Program Office LM

Site 08024 Monticello, UT, Disposal and Processing Sites

Property ID Justification Comments:	Real Property Unique ID	Property Name	Exclusion Part	Property Type	Gross SQFT	Excluded SQFT
MNT-BLDG-STORSHED	208390	STORAGE SHED	D - Essentially only lighting	Building	260	260

Shared meter

This report qualifies DOE Owned, DOE Leased, and Contractor Leased buildings and trailers where the Energy Consuming Metered Process (Excluded) Facilities gsft is greater than zero.

U.S. Department of Energy
Facilities Information Management System
Energy Consuming Excluded Buildings and Trailers List

10/04/2012

Program Office LM

Site 08031 Pinellas County, FL, Site

Property ID Justification Comments:	Real Property Unique ID	Property Name	Exclusion Part	Property Type	Gross SQFT	Excluded SQFT
PIN-STAR Fully serviced lease	143457	STAR CTR OFFICE PORTION OF LEASE	C - Fully serviced lease	Building	1,613	1,613

This report qualifies DOE Owned, DOE Leased, and Contractor Leased buildings and trailers where the Energy Consuming Metered Process (Excluded) Facilities gsft is greater than zero.

U.S. Department of Energy
Facilities Information Management System
Energy Consuming Excluded Buildings and Trailers List

10/04/2012

Program Office LM

Site 08034 Rocky Flats, CO, Site

Property ID Justification Comments:	Real Property Unique ID	Property Name	Exclusion Part	Property Type	Gross SQFT	Excluded SQFT
RFS-BLDG-OFFICE utilities paid by Lessor	204031	WESTMINSTER OFFICE SPACE C - Fully serviced lease LEASE		Building	16,010	16,010

This report qualifies DOE Owned, DOE Leased, and Contractor Leased buildings and trailers where the Energy Consuming Metered Process (Excluded) Facilities gsft is greater than zero.

U.S. Department of Energy
Facilities Information Management System
Energy Consuming Excluded Buildings and Trailers List

10/04/2012

Program Office LM

Site 08035 Rifle, CO, Disposal/Processing Site

Property ID Justification Comments:	Real Property Unique ID	Property Name	Exclusion Part	Property Type	Gross SQFT	Excluded SQFT
RFO-TRLR-ERSP	207375	SINGLE WIDE TRAILER - ERSP	B - Privately owned	Trailer	672	672

Rental Agreement

This report qualifies DOE Owned, DOE Leased, and Contractor Leased buildings and trailers where the Energy Consuming Metered Process (Excluded) Facilities gsft is greater than zero.

U.S. Department of Energy
Facilities Information Management System
Energy Consuming Excluded Buildings and Trailers List

10/04/2012

Program Office LM

Site 08052 Fernald, OH, Site

Property ID Justification Comments:	Real Property Unique ID	Property Name	Exclusion Part	Property Type	Gross SQFT	Excluded SQFT
FER01	203707	DELTA BUILDING	C - Fully serviced lease	Building	10,408	10,408

Lessor pays all utilities

This report qualifies DOE Owned, DOE Leased, and Contractor Leased buildings and trailers where the Energy Consuming Metered Process (Excluded) Facilities gsft is greater than zero.

U.S. Department of Energy
Facilities Information Management System
Energy Consuming Excluded Buildings and Trailers List

10/04/2012

Program Office LM

Site 08066 Grand Junction, CO, Site

Property ID Justification Comments:	Real Property Unique ID	Property Name	Exclusion Part	Property Type	Gross SQFT	Excluded SQFT
GJO-BLDG-STORSHED	207408	STORAGE SHED	D - Essentially only lighting	Building	336	336
Meter exists on leased building						
GJO-BLDG-B2	208140	RTC LEASE-BUILDING2	C - Fully serviced lease	Building	1,684	1,684
Fully Service Lease						
GJO-BLDG-B12	208138	RTC LEASE-BUILDING12	C - Fully serviced lease	Building	4,443	4,443
Fully Services Lease						
GJO-BLDG-B32	208137	RTC LEASE-BUILDING32	C - Fully serviced lease	Building	4,616	4,616
Fully Serviced Lease						
GJO-BLDG-B810	204554	RTC LEASE-BUILDING810	C - Fully serviced lease	Building	25,495	25,495
rent includes all utilities						
GJO-BLDG-B12A	208136	RTC LEASE-BUILDING12A	C - Fully serviced lease	Building	6,757	6,757
Fully Service Lease						

This report qualifies DOE Owned, DOE Leased, and Contractor Leased buildings and trailers where the Energy Consuming Metered Process (Excluded) Facilities gsft is greater than zero.

U.S. Department of Energy
Facilities Information Management System
Energy Consuming Excluded Buildings and Trailers List

10/04/2012

Program Office LM

Site 08066 Grand Junction, CO, Site

Property ID Justification Comments:	Real Property Unique ID	Property Name	Exclusion Part	Property Type	Gross SQFT	Excluded SQFT
GJO-BLDG-B938	208135	RTC LEASE-BUILDING938	C - Fully serviced lease	Building	19,834	19,834

Fully Service Lease

This report qualifies DOE Owned, DOE Leased, and Contractor Leased buildings and trailers where the Energy Consuming Metered Process (Excluded) Facilities gsft is greater than zero.

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Attachment C

LM's List of Buildings and Gross Square Footage Used for Reporting

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**Office of Legacy Management
Buildings Included on EMS Reports**

Site	Property Name	Property ID	GSF	Incl. in Water Baseline (FY2007)	Water Baseline (sq. ft.)	Water FY2008 (sq. ft.)	Water FY2009 (sq. ft.)	Water FY2010 (sq. ft.)	Water FY2011 (sq. ft.)	Water FY2012 (sq. ft.)	Water Notes	Incl. in Energy Baseline (FY2003)	FY2003 Energy Baseline (sq. ft.)	FY2008 Energy (sq. ft.)	FY2009 Energy (sq. ft.)	FY2010 Energy (sq. ft.)	FY2011 Energy (sq. ft.)	FY2012 Energy (sq. ft.)	Energy Notes	FY2010 Existing Building	FY2010 Existing Building (sq. ft.)	FY2011 Existing Building (sq. ft.)	FY2012 Existing Building (sq. ft.)	Reason for Building Exclusion	
Column Totals	Totals		2,638,049		10,579	10,579	22,512	22,464	69,157	72,037			50,547	26,374	72,206	114,797	71,629	71,015			190,666	148,683	135,997		
Durango, CO Disposal/Processing Site	Storage Shed	DUD-BLDG-STORSHED	100	no							no potable water use	no							OSF	no				Less than 5,000 GSF	
Fernald, OH Site	Restoration Storage Shed	FER-BLDG-RESTSTORSHED	450	no							no potable water use	no		450	600	600			non energy consuming storage shed	no				Less than 5,000 GSF	
Fernald, OH Site	Warehouse (Old D.O. Bldg.) 18P	FER-BLDG-DO18P	900	no							no potable water use	no		900	900	900				no				Less than 5,000 GSF	
Fernald, OH Site	Warehouse (Old Comm. Bldg) 23B	FER-BLDG-COMM23B	768	no							no potable water use	no		750	750	750			SF corrected	no				Less than 5,000 GSF	
Fernald, OH Site	Visitor Center Building	FER-BLDG-VISITORCNTR	10,800	no			10,800	10,800	10,800	10,800	Not included in FY 07 or FY 08 data. FY 09 water use at the new Visitor Center will be included for Fernald. The FY 09 sq. ft. and water use data (first year) will be added to the baseline to adjust the baseline for future comparisons.	no		10,000	10,800	10,800	10,800	10,800		yes	10,800	10,800	10,800		
Fernald, OH Site	Grndwtrsys	FER-OSFS-GRNDWTRSYS		yes	7,200	7,200	7,200	7,200	7,200	7,200		no		7,200	0	0	0	0	OSF (total gross square footage is 12,757 which includes 7,200 previously known as 51A, but called CAWWT) Part G exclusion.	no				OSF	
Fernald, OH Site	Delta Building Lease	FER01	10,408	no							Fully-Serviced Lease	no							Fully-Serviced Lease	yes	10,108	10,108	10,408	Fully-Serviced Lease. SF corrected	
Fernald, OH Site	Pole Barn	FER-BLDG-POLEBARN	1,440	no								no		6,980	0	0	0	1,440	Buildings were removed as part of remediation. Additional buildings were included as part of an OSF CAWWT (51A, 18Q, 18R, 18S, 18VH, 18V1, and CWWHouse)	no					
Grand Junction, CO Disposal/Processing																									
Grand Junction, CO Disposal/Processing Site	Decontamination Building A	GRJ-BLDG-DECON	1,272	yes	1,272	1,272	1,272	1,272	1,272	1,272	See also information for the GJDS trailer (under separate spreadsheet tab). The sq. ft. for both the trailer (662 sq. ft) and Decon Building A (1,272 sq. ft) used for this site's water data is 1,934 sq. ft. No changes since baseline year.	no		1,272	1,272	1,272	1,272		no					Less than 5,000 sq. feet	
Grand Junction, CO Disposal/Processing Site	Storage Building D	GRJ-BLDG-STORAGE	1,308	no							no potable water use	no		1,308	1,308	1,308	1,308			no				Less than 5,000 sq. feet	
Grand Junction, CO Disposal/Processing Site	Three Sided Storage Shed	GRJ-BLDG-3SIDED STOR	1,280	no							no potable water use	no		1,280	1,280	1,280			non energy consuming 3 sided storage shed	no				Less than 5,000 sq. feet	
Grand Junction, CO Disposal/Processing Site	Storage Shed	GRJ-BLDG-STORSHED	64	no							no potable water use	no		64	64	64			non energy consuming	no				Less than 1,000 GSF	
Grand Junction, CO Disposal/Processing Site	Single Wide Trailer, Building B	GRJ-TRLR-OFFICE	720	yes	662	662	720	720	720	720	Potable water used in this trailer. See information pertaining to Decon Building A (under separate spreadsheet tab). The sq. ft. for both the trailer (720 sq. ft) and Decon Building A (1,272 sq. ft) used for this site's water data is 1,992 sq. ft.	no		720	720	720	720		no					Less than 5,000 GSF	
Grand Junction, CO Site																									
Grand Junction, CO Office Site	Storage Shed	GJO-BLDG-STORSHED	336	no							no potable water use	no				336	336		D - Essentially only lighting, paid through fully serviced leased. Building is DOE-owned; however, power source comes from utility line from other leased facilities and is paid through fully serviced leased contract on other leased buildings. Shared meter.	no				Less than 5,000 GSF	
Grand Junction, CO Office Site	Records Storage Container	GJO-TRLR-RECORDSTOR	0	no							no potable water use	no							Removed from FIMS, identified as personal property	no	320	320		Less than 5,000 GSF. Fully Serviced Leased	
Grand Junction, CO Office Site	RTC Lease-Building12	GJO-BLDG-B12	4,443	no							Fully-Serviced Lease	no							Fully-Serviced Lease	yes	4,443	4,443		Less than 5,000 GSF. Fully Serviced Leased	
Grand Junction, CO Office Site	RTC Lease-Building12A	GJO-BLDG-B12A	6,757	no							Fully-Serviced Lease	no							Fully-Serviced Lease	yes	6,757	6,757	6,757	Fully-Serviced Lease	
Grand Junction, CO Office Site	RTC Lease-Building2	GJO-BLDG-B2	1,684	no							Fully-Serviced Lease	no							Fully-Serviced Lease	no	1,684	1,684		Less than 5,000 GSF. Fully Serviced Leased	
Grand Junction, CO Office Site	RTC Lease-Building32	GJO-BLDG-B32	4,616	no							Fully-Serviced Lease	no							Fully-Serviced Lease	no	4,616	4,616		Less than 5,000 GSF. Fully Serviced Leased	
Grand Junction, CO Office Site	RTC Lease-Building810	GJO-BLDG-B810	25,495	no							Fully-Serviced Lease	no							Fully-Serviced Lease	yes	25,495	25,495	25,495	Fully-Serviced Lease	
Grand Junction, CO Office Site	RTC Lease-Building938	GJO-BLDG-B938	19,834	no							Fully-Serviced Lease	no							Fully-Serviced Lease	yes	19,834	19,834	19,834	Fully-Serviced Lease	
Las Vegas, NV Site																									
Las Vegas, NV Site	NV Office Lease-Canyon Center	LVS-BLDG-CANYONCNTR	0	no							No longer leased	no							No longer leased	no	4,923	4,923		Less than 5,000 GSF. Fully Serviced Leased. Leased ended - removed from FIMS	
Monument Valley, AZ Processing Site																									
Monument Valley, AZ Processing Site	Storage Shed 1	MON-BLDG-STORSHED1	72	no							no potable water use	no							OSF	no				Less than 5,000 GSF	
Monument Valley, AZ Processing Site	Storage Shed 2	MON-BLDG-STORSHED2	48	no							no potable water use	no							OSF	no				Less than 5,000 GSF	
Monticello, UT Disposal and Processing Sites																									
Monticello, UT Disposal and Processing Sites	Triple Wide Trailer	MNT01-TR	1,800	yes	725	725	1,800	1,800	1,800	1,800	The sq. ft. reported in the FY08 Exec. Plan and on previous reports was incorrectly reported as 725. The actual (corrected) building size information currently used is 1,800 sq. ft. No physical changes were made to the size of the building.	no		1,800	1,800	1,800	1,800		no					Less than 5,000 GSF	
Monticello, UT Disposal and Processing Sites	Storage Hopper	MNT-OSFS-STORHOP	725	no							no potable water use	no		725	0	0	0	0	Actually a storage hopper converted to OSF in FY2010	no				Less than 5,000 GSF	
Monticello, UT Disposal and Processing Sites	STORAGE SHED	MNT-BLDG-STORSHED	280	no							no potable water use	no			240	240			D - Essentially only lighting	no				Less than 5,000 GSF	
Mound, OH Site																									
Mound, OH Site				no							Mound buildings were not included in baseline because site belonged to EM. Currently determining whether to include the LM building as a site for potable water use tracking purposes.	no							Mound buildings were not included in baseline because site belonged to EM. Transfer to LM is imminent.	no				Mound buildings were not included in baseline because site belonged to EM. Transfer to LM is imminent.	
Pinellas County, FL Site																									
Pinellas County, FL Site	Storage Shed 1	PIN-BLDG-STORSHED1	120	no							no potable water use	no		120	120	120	120		powered but not individually metered	no				Less than 5,000 GSF	
Pinellas County, FL Site	Storage Shed 2	PIN-BLDG-STORSHED2	120	no							no potable water use	no		120	120	120	120		powered but not individually metered	no				Less than 5,000 GSF	
Pinellas County, FL Site	Star Ctr Office Lease	PIN-STAR	1,613	no							Fully-Serviced Lease	no							Fully-Serviced Lease	no				Less than 5,000 GSF. Fully-Serviced Lease	
Piqua, OH Decommissioned Reactor																									
Piqua, OH Decommissioned Reactor	Storage Vault	PIQ-OSFS-STORAGVAULT	43,168	no							In FY11, LM reclassified the Piqua Buildings (PIQ-BLDG-ADMIN; PIQ-BLDG-REACTORCON) as an OSF. Per the FIMS User Guide the unit of measurement required for this asset type is captured in cubic feet (455,626).	no				43,168	0	0	Exclusion G	yes	43,168			Reclassified by LM as OSF. Previously included as 2 separate buildings totalling 43,168 gsf.	
Rifle, CO Disposal/Processing Site																									
Rifle, CO Disposal/Processing Site	Single Wide Trailer (rented)	RFO-TRLR-ERSP	672	yes	720	720	720	672	672	672	Old Rifle Processing Site trailer new in June 2008. Sq. ft and water use added to baseline information as adjustment for comparison purposes. Square footage adjusted in FY10 per additional source documentation provided.	no							rental agreement	no				Less than 5,000 GSF	
Rocky Flats, CO Site																									
Rocky Flats, CO Site	Other Buildings		2,426,033	no							Previously demolished.	no		0	0	0	0	0	Total area in 2003 was 2,427,101 square feet. All except one building demolished between 2003 and 2008. Only renewable energy used for this building.	no				Previously demolished.	
Rocky Flats, CO Site	Equipment Storage Building	RFS-BLDG-EQUIPSTOR	1,118	no							no potable water use	no		1,068	1,068	1,068			non-energy consuming - solar powered	no				Less than 5,000 sq. feet	
Rocky Flats, CO Site	Rocky Flats Office Space	RFS01	16,010	no							Fully-Serviced Lease	no							Fully-Serviced Lease	yes	13,010	13,010	16,010	Fully-serviced lease. Additional SF added FY2012	
Tuba City, AZ Disposal Site																									
Tuba City, AZ Disposal Site	Control Building	TUB-BLDG-CONTROL	1,018	no							Non-potable water used at Tuba City site. Water would require treatment prior to use.	yes	1,018	1,018	1,018	1,018	1,018	1,018		no				Less than 5,000 sq. feet	
Tuba City, AZ Disposal Site	Greenhouse	TUB01-GH	0	no							Non-potable water used at Tuba City site. Water would require treatment prior to use.	yes	761	761	0	0	0	0	Transferred to Trbe	no					Less than 5,000 sq. feet
Tuba City, AZ Disposal Site	Shop/Laboratory Building	TUB-BLDG-SHOPLAB	1,176	no							Non-potable water used at Tuba City site. Water would require treatment prior to use.	yes	1,176	1,176	1,176	1,176	1,176	1,176		no				Less than 5,000 sq. feet	
Tuba City, AZ Disposal Site	Treatment System	TUB-OSFS-TREATSYS	0	no								no							Exclusion G	no					
Tuba City, AZ Disposal Site	Storage Shed	TUB-BLDG-STORSHED1	282	no							no potable water use	no		282	282	282			non-energy consuming	no				Less than 5,000 sq. feet	
Tuba City, AZ Disposal Site	Storage Shed 2	TUB-BLDG-STORSHED2	282	no							no potable water use	no			282	282			non-energy consuming	no				Less than 5,000 sq. feet	
Weldon Spring, MO Site																									
Weldon Spring, MO Site	Administration Building	WEL-BLDG-ADMIN	33,615	no			0	0	36,030	33,615	See also information for Interp Cntr (under separate spreadsheet row). Weldon Spring buildings were not included in baseline because buildings were outgranted out to Lindenwood University. Became LM buildings in FY2011. Potable water used in this building. The sq. ft. for both the Admin Bldg (36,030 sq. ft) and Interpretive Center (10,663 sq. ft) used for this site's water data is 46,693 sq. ft.	yes	36,030	36,030	36,030	36,030	36,030	33,615	SF separated (Admin and Programmatic Support Building). This will not be counted next year.	yes	36,030	36,030	36,030		
Weldon Spring, MO Site	Interpretive Center	WEL-BLDG-INTERPCNTR	10,663	no			0	0	10,663	10,663	See also information for Admin Bldg (under separate spreadsheet row). Weldon Spring buildings were not included in baseline because buildings were outgranted out to Lindenwood University. Became LM buildings in FY2011. Potable water used in this building. The sq. ft. for both the Admin Bldg (36,030 sq. ft) and Interpretive Center (10,663 sq. ft) used for this site's water data is 46,693 sq. ft.	yes	9,478	9,478	10,663	10,663	10,663		yes	9,478	10,663	10,663			
Weldon Spring, MO																									

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Attachment D

PPTRS Printouts

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Pollution Prevention Tracking and Reporting System 2012

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REVIEW

Site Name: Office of Legacy Management
FY Year: 2012

System Name	Status	Last Modified By	Last Modified Date
Site/Project Profile	Complete	DePinho, Darlene	10/29/2012
Waste & Toxics	Approved	Ribeiro, Tracy Anne	11/23/2012
Electronics Data:	Approved	Ribeiro, Tracy Anne	11/23/2012
Acquisition	Approved	Ribeiro, Tracy Anne	11/23/2012
Operations	Approved	Ribeiro, Tracy Anne	11/23/2012
End-of-Life			
Contract Tracking	Approved	Ribeiro, Tracy Anne	11/23/2012
Priority Products	5 Item(s) Completed	DePinho, Darlene	DePinho, Darlene
Special Waste Types	1. Lead PSO: LM - Approved	1. Ribeiro, Tracy Anne	1. 11/23/2012
Sustainability Awards	1. Not Started	1. N/A	1. N/A
Migratory Birds	1. Uranium Fo: - Finalized	1. Ribeiro, Tracy Anne	1. 11/21/2012

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Site/Project Profile

Site Name: Office of Legacy Management
FY Year: 2012

Site Name:

Lead PSO:

Other PSOs with reportable
activities at this site:

--Select--
EE
EM
FE
NE
NA
PM
RW
SC
MA

*Note: Please keep
holding the CTRL key
to make a multiple
selection.*

DOE Point of Contact Information:

DOE Point of Contact:

DOE Phone #: (nnn) nnn-nnnn or nnn-xxx-nnnn

DOE Email Address:

DOE Fax #:

DOE Employee Address:

Contractor Point of Contact Information:

Company Name:

Contractor Point of Contact:

Contractor Phone #: (nnn) nnn-nnnn or nnn-xxx-nnnn

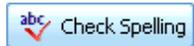
Contractor Email Address:

Contractor Fax #:

Contractor Address:

Additional Question

Indicate local, state, regional, and/or national awards (not including DOE/NNSA recognition) received during the reporting period for environmental sustainability and environmental compliance efforts:



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Waste and Toxics

Guidance

Site Name: Office of Legacy Management
FY Year: 2012

This record has been approved by tribeiro at 11/23/2012 and cannot be edited. If this data is incorrect, please contact P2 Support at 800-473-4375 or email to p2support@eh.doe.gov

Please report your site/facility's waste generation by waste type and disposal method in the table below.

Construction and Demolition (C & D)	Disposal Method	Amount (metric tons)
Construction and Demolition (C & D) debris consist of bulky, heavy materials, such as concrete, wood, metals, glass, and salvaged building components, generated during the construction, renovation, and demolition of buildings, roads, and bridges.	Landfilled	77.8
	Diverted	7867.87
Municipal Solid Waste (MSW)		
Municipal Solid Waste (MSW) (does not include C&D) consists of unwanted materials, such as trash and organics that are generated by normal housekeeping activities and are not considered hazardous, radioactive, or covered under the Toxic Substance Control Act (TSCA). Note: In order to load your MSW data for on-site and off-site landfills: 1. Click on the links to the right to download the Excel files to enter the data. The program may prompt you to enter your ID and Password again. 2. Fill in the data on the spread sheet (fill in only the column(s) with the green heading(s)), provide a document name, and save the spread sheet on your computer. 3. To upload the file from your computer to PPTRS, select the "Browse" button in the Waste and Toxics table to locate the file you just saved. 4. Once you've identified the file, double click on the file and the file location will appear in the "Upload File" box. 5. Click on the "Save & Upload File" button. The spread	Landfilled off-site: (Click here to download Excel file) <div style="text-align: center;"> UpLoad File <input style="width: 100%;" type="text"/> <input type="button" value="Browse..."/> <input type="button" value="Save & Upload File"/> </div> <div style="text-align: center;"> UpLoaded File Off Site MSW.xlsx </div> <hr/> Landfilled on-site: (Click here to download Excel file) <div style="text-align: center;"> UpLoad File <input style="width: 100%;" type="text"/> <input type="button" value="Browse..."/> <input type="button" value="Save & Upload File"/> </div> <div style="text-align: center;"> UpLoaded File </div>	
	Waste-to-energy (not a subset of diverted)	0

<p>sheet will appear in the "Upload" MSW box.</p> <p>Repeat with the "On-site Landfills and Municipal solid Waste facilities (Domestic Only)."</p> <p>To replace a file, just upload the revised spread sheet again.</p>	Total diverted (excluding composting)	41.15
	Composted off-site (subset of diverted)	0
	Composted on-site (subset of diverted)	0.26
Material and Debris		
Material and debris generated from posted radiological areas including wastes identified by regulatory agreement as potentially contaminated with hazardous or radioactive constituents.	Landfilled only	14.52
OPTIONAL REPORTING CATEGORY		
Special waste types (for example, listed wastes, characteristic wastes, universal wastes and mixed wastes are regulated by various statutes such as RCRA. Examples for this optional reporting category include batteries and florescent lights).	Landfilled	14.52
	Diverted	14.52

If your site's waste is handled by another site, it is important that both sites indicate this relationship in the PPTRS reporting. Please ensure that the reporting does not double-count (or disregard) the waste quantities.

Describe any planned activities (for example, new composting program, major construction initiative) that will impact site performance in this area in the appropriate section of your Site's Sustainability Plan (SSP).

Comments:

Another LM site is expected to begin composting in 2013. Although there is not a cafeteria onsite, opportunities exist to recycle coffee grounds and miscellaneous lunch materials.

Additional Questions

1. Please describe any actions your site has taken to verify whether materials reported as "diverted from the waste stream" are actually being handled appropriately. For example, list any site visits, audits, or follow-up activities conducted on recycling contractors.

LM recieved certificates of equipment recycling from Life Span Technology Recycling and has verified that it is in full compliance with all federal and state regulations and guidelines for electronics equipment transporting and recycling. LM has made

2. Please describe your site's progress in achieving its toxic chemical reduction goals. Include description of the chemicals being targeted, the reduction goals, efforts completed to date, and next steps, if any.

LM's progress in achieving its toxic chemical reduction goals involved reducing the use of CO2 for field sampling from 440 pounds in 2011 to 58 pounds and reducing methane from 20 pounds to less than 0.5 pounds in 2012. Reviews are conducted of all chemical

3. Does your site have an integrated pest management program that covers buildings and grounds?

Yes

If not, please explain:

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	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	
1	Contracted/Off-site Landfills and Municipal Solid Waste Facilities (Domestic Only)																										
2																											
3	Instructions: Enter information to be uploaded into PPTRS for FY 2012. Cells with a green highlight are required, yellow highlight are optional if known, and no action is required for red cells. Finally, sites may elect to provide a short description of the methodology used for gathering this information.																										
4																											
5	Methodology																										
6																											
7																											
8																											
9																											
10	Mass of Solid Waste Disposed Off-site (Metric Tons)	Degradable Organic Carbon (Megagram C/ Megagram Waste)		DOC Anaerobic Digestibility (%)		Methane Correction Factor	Methane % of Landfill Gas (%)		Methane Molecular Weight Conversion	Carbon Dioxide Molecular Weight Conversion	Carbon dioxide (biogenic) (MT Megagram)	Methane (MT Megagram)	Percentage Uncontrolled Release (CO2 Biogenic)		Percentage Uncontrolled Release (CH4)		Landfill Gas Collection System Efficiency (CH4)		Venting Loss (CH4)		Methotrophic Bacteria Oxidation Factor (CH4)		Combustion Oxidation Factor (CO2 Biogenic)		Biogenic MtCO ₂ e	Anthropogenic MtCO ₂ e	
11		Site	Default	Site	Default		Site	Default					Site	Default	Site	Default	Site	Default	Site	Default	Site	Default	Site	Default			Site
12	140.980	0.203		50.0%		1.0	50.0%		1.333	3.667	26.234	9.540	100.0%		50.0%		75.0%		1.0%		10.0%		99.0%		35.876	113.479	
13		0.203		50.0%		1.0	50.0%		1.333	3.667	-	-	100.0%		50.0%		75.0%		1.0%		10.0%		99.0%		-	-	
14		0.203		50.0%		1.0	50.0%		1.333	3.667	-	-	100.0%		50.0%		75.0%		1.0%		10.0%		99.0%		-	-	
15		0.203		50.0%		1.0	50.0%		1.333	3.667	-	-	100.0%		50.0%		75.0%		1.0%		10.0%		99.0%		-	-	
16		0.203		50.0%		1.0	50.0%		1.333	3.667	-	-	100.0%		50.0%		75.0%		1.0%		10.0%		99.0%		-	-	
17		0.203		50.0%		1.0	50.0%		1.333	3.667	-	-	100.0%		50.0%		75.0%		1.0%		10.0%		99.0%		-	-	
18		0.203		50.0%		1.0	50.0%		1.333	3.667	-	-	100.0%		50.0%		75.0%		1.0%		10.0%		99.0%		-	-	
19		0.203		50.0%		1.0	50.0%		1.333	3.667	-	-	100.0%		50.0%		75.0%		1.0%		10.0%		99.0%		-	-	
20		0.203		50.0%		1.0	50.0%		1.333	3.667	-	-	100.0%		50.0%		75.0%		1.0%		10.0%		99.0%		-	-	


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Electronics

1. EPEAT Acquisition

Guidance

Site Name: Office of Legacy Management

FY Year: 2012

This record has been approved by tribeiro at 11/23/2012 and cannot be edited. If this data is incorrect, please contact P2 Support at 800-473-4375 or email to p2support@eh.doe.gov

Please enter the number of all acquired electronics in the following table.

	Desktop Computers # of Units	LCD Monitors # of Units	Laptop Computers # of Units	Thin Clients # of Units
EPEAT - Registered (Bronze)	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
EPEAT - Registered (Silver)	<input type="text" value="0"/>	<input type="text" value="16"/>	<input type="text" value="10"/>	<input type="text" value="0"/>
EPEAT - Registered (Gold)	<input type="text" value="106"/>	<input type="text" value="31"/>	<input type="text" value="70"/>	<input type="text" value="0"/>
Energy Star Qualified Not EPEAT - Registered	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
Not - Energy Star Qualified Not EPEAT - Registered	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>

What percent of desktop computers meet the FEMP Low Standby [requirement](#)?

%

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Electronics 2. Operations Guidance

Site Name: Office of Legacy Management
FY Year: 2012

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1a. Provide the total number of computers and monitors in use at your organization.

Desktop computers; CRT Monitors; LCD Monitors; Laptop/notebook computers;

1b. How many computers and monitors are under Power Management? (See Guidance)

Desktop computers; CRT Monitors; LCD Monitors; Laptop/notebook computers;

1c. How many computers and monitors are exempt from power management?

Desktop computers; CRT Monitors; LCD Monitors; Laptop/notebook computers;

2. Provide the total number of printers, copiers, and multifunction devices in use at your organization:

3. What number of printers, copiers, and multifunction devices at your organization are set to default to double-sided printing?

4. Number of printers, copiers and multifunction devices incapable of duplex printing:

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Electronics 3. End-of-Life Guidance

Site Name: Office of Legacy Management
FY Year: 2012

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Electronics Recycling:	
<p>Conversion factors: Use the average measures below to convert gross weights into number of units for TRS reporting. These values are used by the Federal Electronics Challenge and authorized by the EPA.</p> <p style="margin-left: 20px;">CPU - 27 lbs CRT Monitor - 14" - 15 lbs, 15" - 17 lbs, 17" - 25 lbs, 20" - 70 lbs LCD Monitor - 25 lbs Laptop - 7 lbs</p>	
Did your site dispose of any mixed electronics (not segregated by type)?	No

How did your site manage computer equipment taken out of service in fiscal year 2012? Enter numbers only in the following two tables.				
	Desktop Computers # of units	CRT Monitors # of units	LCD Monitors # of units	Laptop Computers # of units
Transferred or Donated for Reuse:	62	0	27	60
Recycled by certified recycler:	0	0	0	1
Recycled by non-certified recycler:	0	0	0	0
Sent for Disposal (e.g., Landfill Facilities):	0	0	0	0

	Printers	Multifunction devices (MFDs)		Televisions	Servers	Cellular/mobile telephones	Personal digital assistants
--	-----------------	-------------------------------------	--	--------------------	----------------	-----------------------------------	------------------------------------

	# of units	(PDAs) # of units				
Transferred or Donated for Reuse:	17	6	0	19	0	1
Recycled by certified recycler:	9	0	0	0	41	1
Recycled by non-certified recycler:	0	0	0	0	0	0
Sent for Disposal (e.g., Landfill Facilities):	0	0	0	0	0	0

If your site did not segregate electronics by product type prior to disposition, please indicate the gross weight sent to each of the following:

Transferred or Donated for Reuse:	0.22498	mt
Sent for Recycling:	1.094518	mt
Sent for Disposal:	0	mt

Note: DO NOT include items segregated by product type. These should be reported in the previous section.

If your organization sent electronic equipment to be recycled, which of the following did you use? (Check all that apply.)

- Responsible Recycling (R2) or e-Stewards Certified Recycler
- UNICOR
- Manufacturer Take-Back Program (for EPEAT registered products)
- Manufacturer Take-Back Program (for non-EPEAT registered products)
- Defense Reutilization and Marketing Service (DRMS)
- Non-certified recycler

If you checked “Manufacturer Take-Back Program (for non-EPEAT registered products),” “DRMS,” or “Non-certified recycler”, what, if any, due diligence measures did your organization take to ensure that the equipment was recycled in an environmentally sound manner? (Check all that apply.)

- Conducted onsite review of the recycler
- Relied on onsite review conducted by another federal facility or agency
- Other, please specify:

General Comments:

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Contract Tracking

[Guidance](#)

Site Name: Office of Legacy Management

FY Year: 2012

This record has been approved by Ribeiro, Tracy Anne at 11/23/2012 and cannot be edited. If this data is incorrect, please contact P2 Support at 800-473-4375 or email to p2support@eh.doe.gov

Type of Contract	Number of New Contract Actions* (Enter 0 if there were no new contract actions)	Number Reviewed	Number without Sustainable Acquisition opportunity	Number meeting Sustainable Acquisition requirements	Description of Review Methodology and Findings
Construction	<input type="text" value="7"/>	<input type="text" value="7"/>	<input type="text" value="0"/>	<input type="text" value="7"/>	Reviewed all 7 Contract Actions to ensure Sustainable Acquisition requirements were in place
Custodial	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	
OPTIONAL: Other contract types with sustainability acquisition opportunities. (please describe)	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	No other contracts with sustainability acquisition opportunities

**Note: The total number of contract actions (2nd column) should be both those compliant with and those not compliant with EO 13514 .*

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Priority Products Purchasing for the GreenBuy Program (Optional Reporting)

[Guidance](#)

Site Name: Office of Legacy Management
FY Year: 2012

This form has been completed

Data Entry - OFFICE - Cartridges-Toner

Leadership Goal: 75% of purchases (by # of units or dollar amount, denoting method used) meet one or more of the following:

- D-remanufactured [More Info](#)
- STMC [More Info](#)
- EcoLogo 039 [More Info](#)

Met in This Year	% Achieved	Criterion Met	Data Gathering Process Description, including quantities reviewed and compliant
<input checked="" type="radio"/> Yes <input type="radio"/> No	89 %	D-remanufactured	Reviewed Sustainability Acquisition Report by dollars. All purchases reviewed.

Approved and Lock

Submit

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Pollution Prevention Tracking and Reporting System 2012

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Priority Products Purchasing for the GreenBuy Program (Optional Reporting)

[Guidance](#)

Site Name: Office of Legacy Management
FY Year: 2012

This form has been completed

Data Entry - OFFICE - Copy Paper

Leadership Goal: 100% of purchases:

- D-30% PC recycled content [More Info](#)
- Consider specifying PC content AND EcoLogo 077 or Green Seal 07 [More Info](#) Or [More Info](#)

Met in This Year	% Achieved	Criterion Met	Data Gathering Process Description, including quantities reviewed and compliant
<input checked="" type="radio"/> Yes <input type="radio"/> No	100 %	D-30% PC recycled content	Reviewed Sustainability Acquisition Report by dollars. All purchases reviewed.

Approved and Lock

Submit

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Priority Products Purchasing for the GreenBuy Program (Optional Reporting)

[Guidance](#)

Site Name: Office of Legacy Management
FY Year: 2012

This form has been completed

Data Entry - OFFICE - Electronic Equipment – Computers

Leadership Goal: 95% of purchases meet one or more of the following:

Desktop/Notebooks

- D+- EPEAT Gold [More Info](#)

Thin Client

- ENERGY STAR or EPEAT [More Info](#) Or [More Info](#)

Met in This Year	% Achieved	Criterion Met	Data Gathering Process Description, including quantities reviewed and compliant
<input checked="" type="radio"/> Yes <input type="radio"/> No	95 %	95% of computers purchased were EPEAT Gold. Of these, 100% of desktops were EPEAT Gold and 87.5% of	Reviewed requisitions and purchase orders. 186 computers were purchased (106 desktops and 80

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Priority Products Purchasing for the GreenBuy Program (Optional Reporting)

[Guidance](#)

Site Name: Office of Legacy Management
FY Year: 2012

This form has been completed

Data Entry - OFFICE - Electronic Equipment –Computer Monitors

Leadership Goal: 95% of purchases meet the following:

- D+-EPEAT Gold [More Info](#)

Met in This Year	% Achieved	Criterion Met	Data Gathering Process Description, including quantities reviewed and compliant
<input type="radio"/> Yes <input checked="" type="radio"/> No	66 %	100 percent of monitors purchased were LCDs. 66% were EPEAT Gold, the remaining 34% were EPEAT	Reviewed requisitions and purchase orders. 47 LCD monitors were purchased, of which 31 were EPEAT

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Priority Products Purchasing for the GreenBuy Program (Optional Reporting)

[Guidance](#)

Site Name: Office of Legacy Management
FY Year: 2012

This form has been completed

Data Entry - OFFICE - Furniture

Leadership Goal: 75% of purchases meet one or more of the following:

- BIFMA Level 1 (32 points) or higher [More Info](#)
- EcoLogo 033 [More Info](#)
- GREENGUARD [More Info](#)
- D-recycled content [More Info](#)

Met in This Year	% Achieved	Criterion Met	Data Gathering Process Description, including quantities reviewed and compliant
<input checked="" type="radio"/> Yes <input type="radio"/> No	84 %	D-recycled content	Reviewed all Sustainability Acquisition Reports. All quantities reviewed based on dollars.

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Special Waste Types (Optional Reporting)

[Guidance](#)

PSO: LM

Site Name: Office of Legacy Management

FY Year: 2012

This record has been approved by Ribeiro, Tracy Anne at 11/23/2012 and cannot be edited. If this data is incorrect, please contact P2 Support at 800-473-4375 or email to p2support@eh.doe.gov

Waste Type	Routine Waste		Nonroutine Waste	
High Level Waste (Liquid)	<input type="text" value="0"/>	m3	<input type="text" value="0"/>	m3
High Level Waste (Solid)	<input type="text" value="0"/>	m3	<input type="text" value="0"/>	m3
Transuranic Waste (Liquid)	<input type="text" value="0"/>	m3	<input type="text" value="0"/>	m3
Transuranic Waste (Solid)	<input type="text" value="0"/>	m3	<input type="text" value="0"/>	m3
Mixed Transuranic Waste (Liquid)	<input type="text" value="0"/>	m3	<input type="text" value="0"/>	m3
Mixed Transuranic Waste (Solid)	<input type="text" value="0"/>	m3	<input type="text" value="0"/>	m3
Low Level Waste (Liquid)	<input type="text" value="0"/>	m3	<input type="text" value="0"/>	m3
Low Level Waste (Solid)	<input type="text" value="2.769"/>	m3	<input type="text" value="7.8"/>	m3
Mixed Low Level Waste (Liquid)	<input type="text" value="0"/>	m3	<input type="text" value="0"/>	m3
Mixed Low Level Waste (Solid)	<input type="text" value="0"/>	m3	<input type="text" value="0"/>	m3
RCRA Regulated	<input type="text" value="0.0636"/>	mt	<input type="text" value="0"/>	mt
State Regulated	<input type="text" value="0"/>	mt	<input type="text" value="0"/>	mt
TSCA Regulated	<input type="text" value="0"/>	mt	<input type="text" value="0"/>	mt
Mixed TSCA	<input type="text" value="0"/>	mt	<input type="text" value="0"/>	mt

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Nomination Application - USFWS

[Guidance](#)

[Nomination Information and Instructions Guide](#)

[Appendix A](#); [Appendix B](#)

Site Name: Office of Legacy Management
FY: 2012

This Award was finalized by Tracy Anne Ribeiro on 11/21/2012

1. Applicant (must be a Federal Agency; if more than one federal agency, list the lead agency):

U.S. Department of Energy (DOE) Office of Legacy Management

2. Co-applicant(s) (any agency, organization, or private individual that should receive recognition for the project):

N/A

3. Action (In two pages or less, describe the Agency's action. Consider how the Agency demonstrates leadership in the conservation of migratory birds):

DOE has converted a former uranium-processing industrial facility into a publicly accessible nature preserve. The Fernald Preserve is situated on 1,050 acres, in a rural portion of southwest Ohio. The site is a former uranium processing plant that produced high purity uranium metal for the nation's

4. When was the action initiated? (Reminder: initiation date must be January 10, 2001 or later):

Ecological restoration design plans were incorporated into site remediation, setting the stage for migratory bird conservation efforts. The DOE Office of Legacy Management took over responsibility for the Fernald site on October 29, 2006 when the site management was transitioned from the DOE Office of

5. Describe the scale of your project. Does the action take place locally, statewide, regionally, across several regions or more within the United States, or internationally?

The specific activities relating to migratory bird conservation at the Fernald Preserve include management of restored grasslands, wetlands, and open water habitats. This involves approximately 365 acres of prairie communities and 140 acres of wetlands and open water. In addition, the 80-acre Granite Disposal

6. Does the action meet or exceed agency mandates? Please explain.

Under the CERCLA Records of Decision for the Fernald site, DOE is minimally required to maintain the site as an undeveloped park. DOE exceeds this mandate in several ways. First, the Fernald Preserve is managed in order to promote migratory bird habitat. Second, DOE affords public access to the site via

7. Explain how the action promotes or results in effective migratory bird conservation. Please include examples of demonstrable results and actions to support your answer. If the action is innovative (inventive, clever, and original), describe that here too.

Management of ecologically restored areas at the Fernald Preserve has resulted in documented expansion of migratory bird populations, including breeding habitat for grassland birds and migratory waterfowl. Specific actions include prescribed burns and mowing to maintain prairie communities and manipulation

8. Describe the roles and responsibilities of partners and co-applicants (if any). **Partners are associated with the action through monetary or in-kind support.**

N/A

9. Have others expressed an interest in this work? **If so, please explain who is interested and why.**

The Fernald Preserve has been discussed as a candidate for designation as an Important Bird Area by the National Audubon Society. Informal discussions with Audubon representatives have taken place, and a formal application is under consideration. The Fernald Preserve also participated in the Ohio Breeding

10. How did the action impact DOE's current migratory bird conservation practices (i.e., were new initiatives drafted or was new guidance written)?

Since restoration activities are specific to the regional ecosystem at the Fernald Preserve, conservation practices are necessarily site-specific. However, best management practices relating to ecosystem management are shared across the DOE Office of Legacy Management program.

11. Which migratory bird species of concern benefited from your action? **See Appendix B for the list of migratory bird species of concern, provided by the US FWS. In addition, please describe completed project actions and how these contributed to migratory bird conservation. If specific migratory bird species have not yet benefited, how does your agency hope to contribute to the conservation of a migratory bird species as the project continues?**

218 bird species have been observed at the Fernald Preserve since 2006. The site species list includes 39 species that are recognized as U.S. Fish and Wildlife Service (USFWS) species of concern.

The list below provides a summary of USFWS species of concern that have been

Project Title: Uranium Foundry to Migratory

Nomination Point of Contact

Name: Jane Powell

Organization: DOE - Office of Legacy Manag

Address: 10995 Hamilton-Cleves Hwy

City: Harrison

State: OH

Zip Code: 45030

Phone: 513-648-3148 (nnn) nnn-nnnn or nnn-nnn-nnnn

Fax: 513-648-3252

Email: jane.powell@lm.doe.go

Federal Point of Contact

Name: Tracy Ribeiro

Organization: DOE - Office of Legacy Manag

Address:	<input type="text" value="11025 Dover Street, Suite"/>
City:	<input type="text" value="Westminster"/>
State:	<input type="text" value="CO"/>
Zip Code:	<input type="text" value="80021"/>
Phone:	<input type="text" value="303-410-4817"/> (nnn) nnn- nnnn or nnn- nnn -nnnn
Fax:	<input type="text" value="720-377-3829"/>
Email	<input type="text" value="tracy.ribeiro@lm.doe.gc"/>

Description:

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PRESIDENTIAL MIGRATORY BIRD FEDERAL STEWARDSHIP AWARD

NOMINATION APPLICATION

1. Applicant (must be federal agency; if more than one, list lead agency):

U.S. Department of Energy (DOE) Office of Legacy Management

2. Co-applicants(s) (any agency, organization, or private individual that should receive recognition for the project)

NA

3. Action (in two pages or less, describe the Agency's action. Consider how the Agency demonstrates leadership in the conservation of migratory birds)

DOE has converted a former uranium-processing industrial facility into a publicly accessible nature preserve. The Fernald Preserve is situated on 1,050 acres, in a rural portion of southwest Ohio. The site is a former uranium processing plant that produced high-purity uranium metal for the nation's defense. Production took place from 1951 to 1989. The Fernald site transitioned to a mission of remediation under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA). Cleanup remedies included product and waste shipment, building demolition, soil remediation and groundwater treatment. With stakeholder support, an onsite disposal facility (OSDF) was constructed on-property, and the site was remediated to cleanup levels associated with an undeveloped park.

Ecological restoration of the Fernald Preserve was incorporated into remediation activities. Restored areas encompass over 900 acres of the site. Restoration was designed to be integrated into regional ecosystems, using vegetation native to southwestern Ohio. Portions of the Fernald Preserve are actively managed to promote migratory bird habitat. DOE maintains mesic and wet prairie communities through prescribed burning, mowing, and selected control of noxious weeds. In addition, considerations for migratory birds have been integrated into site remedies. An on-property landfill has been capped with mesic prairie grasses and wildflowers, thereby adding approximately 80 acres of additional grassland bird habitat to the site. Wetland and open water communities are managed via addition and drawdown of water levels. By actively maintaining water levels, DOE creates habitat for migratory waterfowl and provides passive infiltration for support of the groundwater remedy.

DOE facilitates and encourages public enjoyment of the Fernald Preserve. Over 7 miles of trails have been established to provide access to ecologically restored areas. Four overlooks have been constructed as well. This series of trails and overlooks provides a variety of viewing opportunities for migratory birds. Since its opening in 2008, the Fernald Preserve has become a hot spot for the local birding community. Thousands of birders, outdoor enthusiasts, neighbors and former workers visit the Fernald Preserve each year.

Community outreach activities also provide opportunities for stewardship and conservation of migratory birds. A number of programs are conducted throughout the year, with the intent to educate community members about bird conservation and involve them in the conservation process. For example, programs have included a bird-banding demonstration for saw-whet owls and participation in the National Audubon Society's annual Christmas bird count. Hundreds of people come to bird-banding demonstrations each year and approximately 15 people participate in the annual Christmas bird count.

Restored area management and community outreach are critical to the Legacy Management mission at the Fernald Preserve, and these activities will continue. The *Fernald Preserve Legacy Management and Institutional Controls Plan* includes provisions for continued management of ecologically restored areas and community involvement.

4. When was the action initiated (Reminder: initiation date must be January 10, 2001 or later)

Ecological restoration design plans were incorporated into site remediation, setting the stage for migratory bird conservation efforts. The DOE Office of Legacy Management took over responsibility for the Fernald site on October 29, 2006, when the site management was transitioned from the DOE Office of Environmental Management. Active management of ecologically restored areas was put in place at this time. The site was renamed the Fernald Preserve and unveiled to the public in August 2008.

5. Describe the scale of your project. Does the action take place locally, statewide, regionally, across several regions or more within the United States or internationally?

The specific activities relating to migratory bird conservation at the Fernald Preserve include management of restored grasslands, wetlands, and open water habitats. This involves approximately 365 acres of prairie communities and 140 acres of wetlands and open water. In addition, the 80-acre Onsite Disposal Facility cap is managed as a tallgrass prairie. The 7-mile trail system provides ways to view and access most of these restored areas. The scale of the action should be considered local, as management and access is limited to portions of the Fernald Preserve.

6. Does the action meet or exceed agency mandates? Please explain.

Under the CERCLA Records of Decision for the Fernald site, DOE is minimally required to maintain the site as an undeveloped park. DOE exceeds this mandate in several ways. First, the Fernald Preserve is managed in order to promote migratory bird habitat. Second, DOE affords public access to the site via construction and maintenance of trails and overlooks. Lastly, DOE actively involves the community through a variety of outreach activities. Over 41 outreach activities that promote bird conservation have been conducted at the Fernald Preserve since the site opened to the public in August 2008.

7. Explain how the action promotes or results in effective migratory bird conservation. Please include examples of demonstrable results and actions to support your answer. If the action is innovative (inventive, clever, and original), describe that here too.

Management of ecologically restored areas at the Fernald Preserve has resulted in documented expansion of migratory bird populations, including breeding habitat for grassland birds and migratory waterfowl. Specific actions include prescribed burns and mowing to maintain prairie communities, and manipulation of water levels to maximize waterfowl habitat.

Specific management activities within approximately 585 acres of the Fernald Preserve have resulted in a site bird list of 218, and counting. This site bird list includes 17 of the top 20 “species in decline,” as documented by Audubon Ohio.

8. Describe the roles and responsibilities of partners and co-applicants (if any). Partners are associated with the action through monetary or in-kind support.

NA

9. Have others expressed an interest in this work? If so, please explain who is interested and why.

The Fernald Preserve has been discussed as a candidate for designation as an Important Bird Area by the National Audubon Society. Informal discussions with Audubon representatives have taken place, and a formal application is under consideration. The Fernald Preserve also participated in the Ohio Breeding Bird Atlas from 2008 through 2011. In addition to the involvement with regional conservation organizations, there has been great interest in site outreach efforts. Activities that educate the community about migratory birds are very popular. The Fernald Preserve has hosted a Bioblitz in 2009 and 2011, with birders helping to catalog site species. Other programs include bird banding demonstrations, owl call hikes, woodcock mating displays, turkey demonstrations, bird-related scavenger hunts, and the annual Christmas Bird Count.

10. How did the action impact your agency’s current migratory bird conservation practices (i.e., were new initiatives drafted or was new guidance written)?

Since restoration activities are specific to the regional ecosystem at the Fernald Preserve, conservation practices are necessarily site-specific. However, best management practices relating to ecosystem management are shared across the DOE Office of Legacy Management program.

11. Which migratory bird species of concern benefitted from your action? See Appendix B for the list of migratory bird species of concern, provided by the USFWS. In addition, please describe completed project actions and how these contributed to migratory bird conservation. If specific migratory bird species have not yet benefitted, how does your agency hope to contribute to the conservation of a migratory bird species as the project continues?

218 bird species have been observed at the Fernald Preserve since 2006. The site species list includes 39 species that are recognized as U.S. Fish and Wildlife Service (USFWS) species of concern.

The list below provides a summary of USFWS species of concern that have been observed at the Fernald Preserve.

Bittern, American	Finch, Purple	Thrush, Wood
Bittern, Least	Flicker, Northern	Warbler, Bay-breasted
Blackbird, Rusty	Flycatcher, Acadian	Warbler, Black-throated green
Bobolink	Flycatcher, Olive-sided	Warbler, Blue-winged
Bobwhite, Northern	Flycatcher, Willow	Warbler, Cerulean
Cuckoo, Black-billed	Grebe, Horned	Warbler, Golden-winged
Cuckoo, Yellow-billed	Heron, Black-crowned night	Warbler, Kentucky
Dickcissel	Owl, Northern Saw Whet	Warbler, Prothonotary
Dowitcher, Short-billed	Owl, Short-eared	Warbler, Yellow
Eagle, Bald	Sapsucker, Yellow-bellied	Waterthrush, Louisiana
Eagle, Golden	Sparrow, Grasshopper	Woodpecker, Red-headed
Egret, Snowy	Sparrow, Henslow's	Wren, Marsh
Falcon, Peregrine	Tanager, Summer	Wren, Sedge

Through participation in the Ohio Breeding Bird Atlas, 92 species were confirmed nesting at the site, including a number of grassland birds, such as bobolink, dickcissel, eastern meadowlark, grasshopper sparrow, and blue grosbeak. In addition, several rare birds have been documented at the Fernald Preserve, including a garganey, Eurasian wigeon, Wilson's phalarope, and black-legged stilt.

Completed project actions have led directly to the expansion of bird habitat at the Fernald Preserve, particularly with respect to breeding grassland birds. Over 68 acres of prairie habitat have been managed via prescribed burn. Much of the remaining prairie acreage is maintained via mowing. In addition, a fall mowing regimen on the OSDF provides an additional 80-acre prairie. Prescribed burning and mowing activities are timed in order to avoid nesting seasons. They are also staggered, so that no more than one third of a given area is cleared within a given season. These activities ensure that habitat impacts are minimized.