



Office of Legacy Management

*Managing Today's Change,
Protecting Tomorrow's Future*

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LM was established to provide a long-term, sustainable solution to the Cold War legacy.

The LM mission is to manage the Department's post-closure responsibilities and ensure the future protection of human health and the environment.

LM has four programmatic goals/priorities:

- Protect human health and the environment through effective and efficient long-term surveillance and maintenance.
- Preserve, protect, and make accessible legacy records and information.
- Support an effective and efficient workforce structured to accomplish Departmental missions and ensure former contractor worker pension and medical benefits.
- Manage legacy land and assets, emphasizing protective real and personal property reuse and disposition.



LM protects human health and the environment through effective and efficient long-term surveillance and maintenance at 85 sites.





In the next three years (by the close of FY 2012), LM expects to add 16 new sites for a total of 101.

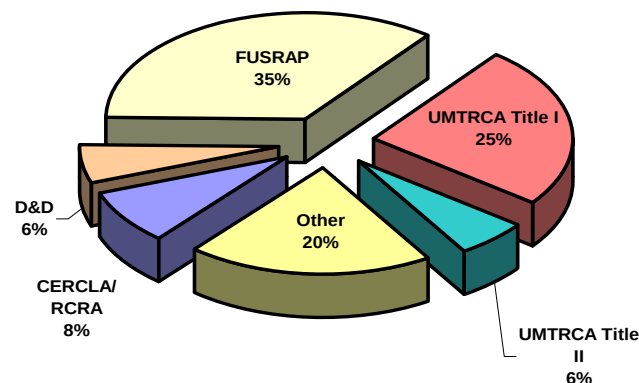




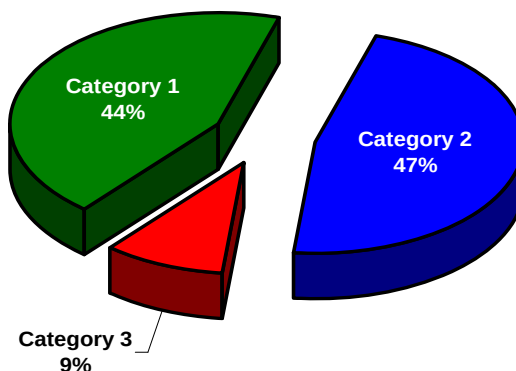
LM manages our site responsibilities under several different regulatory schemes with a large variation in site requirements.

As of June 2009

Type	Actual 2009
CERCLA/RCRA	7
D&D	5
FUSRAP	30
UMTRCA Title I	21
UMTRCA Title II	5
Other	17
TOTAL	85



FY09 Sites by Category	
Category 1	37
Category 2	40
Category 3	8
TOTAL	85



LM acquires sites from DOE Environmental Management, private NRC Licensees (UMTRCA Title II) and the USACE (FUSRAP).

Most of the major EM closure sites have already transferred to LM: Pinellas, Weldon Spring, Monticello, the Grand Junction Site, Fernald, Rocky Flats, and the 9 Nevada Off-Sites.

LM expects to receive the Mound Site on October 1, 2010.



48 LM sites require some form of active LTSM; 8 of those require staff either on-site or nearby.

Category 1 (37): These are also referred to as “records only” sites. They are primarily FUSRAP sites where the USACE performs the cleanup and then transfers the site to LM for long-term management. If additional cleanup is required it is transferred back to the USACE for further remediation.

Category 2 (40): Sites require activities such as inspections of disposal cell caps, acquisition and confirmation of institutional controls, and collection and analysis of groundwater samples. These are primarily UMTRCA sites.

Category 3 (8): Sites require the same type of activities as category 2 sites, plus additional operations, usually a groundwater treatment system or a leachate management system.



The Fernald site includes: a disposal cell, active groundwater treatment, a visitor center and wildlife preserve.





The Rocky Flats site has limited on-site disposal, requires active groundwater treatment and contains a national wildlife refuge.





The Weldon Spring site includes: a disposal cell, groundwater monitoring, an interpretive center, and a native prairie.





The Tuba City and Grand Junction UMTRCA sites supported on-site disposal of mill tailings.



There is active groundwater treatment at the Tuba City, AZ site. DOE continues to support periodic disposal operations at the Grand Junction disposal cell.





LM's science and technology activities are highly leveraged and aimed at reducing the cost of LTS&M activities.

LM's sites and long-term surveillance and maintenance activities provide opportunities for DOE, NRC, EPA and other agencies to:

- evaluate the long-term performance of disposal cell covers
- evaluate and optimize subsurface monitoring networks
- improve the prediction of fate and transport of contaminants of concern
- improve technologies for the passive remediation of groundwater
 - permeable reactive barriers
 - monitored natural attenuation
 - phyto-remediation



LM manages legacy land and assets emphasizing beneficial reuse including the use and development of renewable energy

- LM is committed to the beneficial reuse of its property and is currently conducting real property reuse activities (disposition, conservation, community, agricultural, and renewable energy) at all LM sites.
- LM assesses incoming sites for land reuse opportunities and continues to pursue solar and wind power commercial generation and pilot-scale research opportunities. These opportunities may include potential partnerships with federal and private owners of land adjacent to the sites.
- In partnership with NREL, LM screened its DOE-owned sites for wind and solar energy development potential in 2008. The report is available at <http://www.nrel.gov/docs/fy08osti/41673.pdf>





LM is pursuing the use of renewable energy to support LTSM systems and for commercial power applications.

- Currently reviewing the renewable energy R&D of DOE and other federal agencies and commercial generation efforts to see where LM land could be offered for use (wind and solar).
- Currently evaluating land in Wyoming with BLM to determine if joint wind energy projects are viable. Industry has said LM sites are not large enough by themselves for commercial scale, but LM lands adjoin some BLM land for possible joint commercial projects. Wind energy prototype projects could require less land.
- Actively implemented the use of photo-voltaic power for remote operation of field telemetry and data logging at sites.

We use solar power to heat water at our groundwater treatment plant at the Tuba City, AZ site. We are adding a 51 kW photo-voltaic system to further reduce energy use.





LM is consolidating legacy records and information management operations in the newly constructed LM Business Center.

- The LM Business Center in Morgantown, WV, opened December 14, 2009.
- The Business Center includes a warehouse with capacity to house ~140,000 cubic feet of records.
- The centralized facility enables LM to be more efficient and more responsive to both DOE and stakeholders.
- LM has initiated plans to preserve 1,700 cubic feet of x-ray records for former DOE workers.





LM manages electronic data in accordance with guidance provided by ISO 19005.

- LM is migrating e-records from Hummingbird to Documentum, and more than 6 terabytes of electronic data to the new LM Business Center.
- LM is using OmniRIM software to track the migration of ~ 80,000 cubic feet of records from NARA storage facilities around the country.
- PDF/A is a file format for long-term archiving of electronic documents. It is based on the PDF Reference Version 1.4 from Adobe Systems Inc. and is defined by ISO 19005-1:2005 (published on October 1, 2005):
 - Document Management - Electronic document file format for long term preservation - Part 1: Use of PDF 1.4 (PDF/A-1)
- Legacy Management uses this technology in our data center.





The Department has a rigorous process for transitioning site work scope and budget from EM to LM.

- Sites transfer from EM to LM when there is no longer a DOE mission and active remediation is largely complete. LM was created to provide a long-term, sustainable solution.
- EM-installed remedies at sites with long-term cleanup schedules (e.g., Hanford) or on-going missions (e.g., National Labs) are managed by the landlord DOE organization.
- EM and LM developed a site transition protocol to guide our organizations through the transfer process. Site Transition Plans are developed and executed.
- EM is responsible for attaining a steady state condition, including acquiring all regulatory decisions prior to transfer to LM. Normally, LM will begin LTSM operations, or at least have an overlap observation period, in order to smoothly transfer “corporate” knowledge prior to EM completion.
- EM and LM also collaborate in the development of a Critical Decision-4 package (DOE Order 413 project completion) that captures all relevant information and provides for the necessary budget target transfer.



Each year the Department learns how to improve the management of environmental remedies and other legacy activities.

- LM was formed December 10, 2003. We are in our 6th year of operation.
- Most of our Category 3 sites are under regulatory regimes that require a Five Year Review of remedy performance.
- Several LM sites have long-term commitments to treat groundwater.
- 30 of LM's sites have disposal cells which require perpetual monitoring.
- LM will continue to conduct studies related to long term performance of groundwater remedies and disposal cell covers.
- LM deploys new technologies (e.g., remote sensing) based on cost-benefit analyses or changes in regulatory requirements.
- LM will continue to receive and manage sites from DOE/EM, private licensees (UMTRCA Title II), and the U.S. Army Corps of Engineers (FUSRAP sites).