



U.S. DEPARTMENT OF
ENERGY

Legacy
Management

2016 ANNUAL HISTORICAL SUMMARY

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



**1 Protect Human
Health and the
Environment**



**2 Preserve, Protect,
and Share Records
and Information**



**3 Safeguard Former
Contractor Workers
Retirement Benefits**



**4 Sustainably Manage
and Optimize the Use
of Land and Assets**



**5 Sustain Management
Excellence**



**6 Engage the Public,
Governments, and
Interested Parties**

Shiprock, New Mexico.

<https://energy.gov/lm>

LM Goals and Objectives



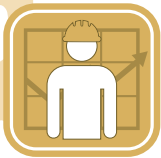
Goal 1

- Comply with environmental laws and regulations related to radioactive and hazardous materials, to prepare for receiving sites into LM.
- Reduce post-closure-related health risks in a cost-effective manner.
- Improve the long-term sustainability of environmental remedies.
- Address the environmental legacy of defense-related uranium mines and milling sites.



Goal 2

- Protect and maintain legacy records.
- Make information more accessible.
- Preserve Yucca Mountain Project science and information.



Goal 3

- Ensure prudent funding of former contractor workers' retirement benefits.
- Shelter former contractor workers' retirement benefits from risks.



Goal 4

- Enhance sustainable environmental performance for facilities and personal property, and account for climate change in LM site management.
- Optimize public use of federal lands and properties.
- Transfer excess real and personal government property.
- Manage the Uranium Leasing Program.



Goal 5

- Develop and maintain high standards for planning, budget, acquisition, and project management.
- Sustain a talented, diverse, inclusive, and performance-driven federal workforce.
- Improve the efficiency and effectiveness of administrative actions.



Goal 6

- Engage the public in our program, project, and site activities.
- Work effectively with local, state, and federal governments and nonprofit organizations.
- Consult, collaborate, and partner with the people and governments of tribal nations.
- Support development of the Manhattan Project National Historical Park.
- Implement Executive Order 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low Income Populations*, within LM.

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Mexican Hat, Utah, Disposal Site.

Overview

The U.S. Department of Energy (DOE or Department) is committed to managing its responsibilities associated with the legacy of World War II and the Cold War. This legacy includes radioactive and chemical waste, environmental contamination, and hazardous materials at over 100 sites across the United States and the territory of Puerto Rico. DOE has taken major steps toward fulfilling its commitments to clean up this environmental legacy by successfully implementing an accelerated environmental remediation program. For the first time, the Department is faced with larger-scale closings of a series of entire facilities.

To meet its responsibilities to the American people and Congress to clean up legacy sites, fulfill commitments to the former contractor workforce, and promote a healthy environment for future generations, DOE established the Office of Legacy Management (LM) on December 15, 2003. LM's responsibilities include ensuring the Department's post-closure responsibilities are met, providing long-term surveillance and maintenance (LTS&M), records management, workforce restructuring and benefits continuity, property management, land-use planning, and community assistance for DOE sites.

This report details major accomplishments achieved by LM in 2016.

LM Mission and Vision

Mission Statement

Fulfill the Department of Energy's post-closure responsibilities and ensure the future protection of human health and the environment.

Vision

- The Department's legacy workforce, communities, and the environment are well-protected and served.
- Consistent and effective long-term surveillance and maintenance protects people and the environment.
- The public has easy access to relevant records and information.
- Because we work together, stakeholders, tribal nations, and state and local governments trust us.
- The Department safeguards former contractor workforce retirement benefits through prudent, timely funding.
- People are treated fairly and have meaningful involvement.





GOAL 1: Protect Human Health and the Environment

Comprehensive Environmental Response, Compensation and Liability Act (CERCLA)

SITE MANAGEMENT AND MONITORING

Fernald Preserve, Ohio, Site

- Managed day-to-day site services during a major site-wide power outage that lasted 11 weeks. Recovery involved planning and safely completing necessary repairs to the on-site electrical substation.
- Established a 108-acre forest wetland habitat, funded by the Fernald Natural Resource Trustees. The Northern Woodlot Enhancement project will protect several salamanders and other species by providing a wetland habitat in an increasingly threatened area of the Midwest.
- Received stakeholder consent for a streamlined environmental monitoring program. This resulted in an approximate \$100,000 annual savings.
- Reduced groundwater and surface water programs. Following years of data and analysis, LM found the sediment and direct radiation monitoring programs no longer necessary. LM refined the On-Site Disposal Facility monitoring in several ways.
- Received stakeholder consent to perform controlled burns of the prairie grass cap at the On-Site Disposal Facility. Burning the grass, rather than mowing and baling, is a more efficient, ecologically viable process resulting in long-term cost savings.
- Planned and initiated a wastewater treatment system optimization project. The project replaced the existing oversized treatment system that had reached the end of its design life. The new system should last 25 to 30 years and meet the site wastewater treatment needs until the end of groundwater remediation, currently predicted to be complete by 2039.
- Removed 409.74 pounds of uranium from the Great Miami Buried Valley Aquifer through environmental remediation work.
- Operated the extraction wellfield at the designed pumping rate, except during a site-wide power outage. In 2016, 1.993 billion gallons of water were pumped.
- Collected approximately 800 environmental monitoring samples and 900 groundwater elevation measurements related to groundwater, surface water, and direct radiation.



Controlled burn at the Fernald Preserve in Ohio.

Pinellas County, Florida, Site

- Issued completion orders by the Florida Department of Environmental Protection for two site remediation areas. Receipt of these orders represents achievement of significant cleanup milestones. LM completed work at two of the site's four active remediation areas where DOE performed corrective actions since 1990. The Department remediated contaminated locations across the site for more than 25 years.



Rocky Flats Site, Colorado

- Honored by the White House as a winner of a GreenGov Presidential Award for “Sustainability Innovations to Improve Groundwater Treatment while Reducing Waste and Pollution.” The award recognizes those in the administration who have gone to great lengths to implement innovative sustainability projects within the government.
- Designed the only known air stripper operating solely on solar/battery power. This saves approximately 3.6 metric tons of carbon dioxide emissions per year while meeting applicable requirements.
- Received the Keeping it Clean Award for developing an innovative groundwater treatment system at the former nuclear weapons production facility. The design enhances safety, improves groundwater treatment reliability, reduces long-term maintenance and costs, and reduces waste.



The White House Council on Environmental Quality, presents the GreenGov Presidential Award certificate to Energy Department personnel attending the ceremony in Washington, DC.

Uranium Mill Tailings Radiation Control Act (UMTRCA)

SITE MANAGEMENT AND MONITORING

- Removed approximately 1,270 gallons of sulfuric acid from the on-site storage tank at the Tuba City, Arizona, Disposal Site and transported it to Energy Fuels in Blanding, Utah.
- Neutralized and disposed of approximately 150 gallons of associated acid sludge from an acid supply tank at the Tuba City site.
- Completed the engineering design and construction to install three new culverts on an access road, to prevent washout at the L-Bar, New Mexico, Disposal Site.
- Conducted a light detection and ranging (LiDAR) aerial topographic survey of the cell for the Bluewater, New Mexico, Disposal Site.
- Completed siphon drainage of the top slope pond on the Bluewater disposal cell.
- Evaluated site ecology including soils, flora, fauna, and land use to establish baseline conditions for the Conquista, Panna Maria, and Ray Point, Texas sites. This information will be used to maintain the sites after they transition to LM.
- Conducted a radon barrier investigation/soil formation study at the Falls City, Texas, Disposal Site.
- Completed radon cover study field work with the U.S. Nuclear Regulatory Commission (NRC) at the Bluewater site.
- Conducted a follow-up assessment of the Mexican Hat, Utah, Disposal Site cover to investigate erosion rills noted on the north end of the cell.
- Completed the *2015 Annual Site Inspection and Monitoring Report for UMTRCA Title I Disposal Sites*.



Selected Publications and Presentations

- Presented *Applications of Ecological Engineering Remedies for Uranium Processing Sites, USA* at the International Atomic Energy Agency (IAEA) International Conference on Advancing the Global Implementation of Decommissioning and Environmental Remediation Programmes in Madrid, Spain.
- Published Glenn, E.P., C.J. Jarchow, and W.J. Waugh, 2016. "Evapotranspiration Dynamics and Effects on Groundwater Recharge and Discharge at an Arid Waste Disposal Site." *Journal of Arid Environments* 133:1–9.
- Collaborators published Glenn, E.P., F. Jordan, and W.J. Waugh, 2016. "Phytoremediation of a Nitrogen-Contaminated Desert Soil by Native Shrubs and Microbial Processes." *Land Degradation and Development*, DOI: 10.1002/ldr.2502.
- Hosted the first LM/DOE Office of Environmental Management technical exchange in Grand Junction, Colorado, and delivered two presentations at the meeting:
 1. *Persistent Secondary Contaminant Sources, Riverton Processing Site, Riverton, WY*
 2. *Degradation of Erosion Control Rock at Lakeview, Oregon, UMTRCA Title I Disposal Site*



Sampling activities at the Amchitka, Alaska, Site.

Nevada Offsites

SITE MANAGEMENT AND MONITORING

- Completed the final *Closure Report Central Nevada Test Area Subsurface Corrective Action Unit 443* and obtained Nevada Division of Environmental Protection approval.
- Completed long-term monitoring at the Amchitka, Alaska, Site—an event that occurs once every five years. LM's objective for the 2016 sampling event was to collect water and tissue data to determine if there is leakage from nuclear testing cavities. LM specifically focused on seawater sampling in the area of potential leakage off Long Shot.

Additionally, results from the leakage assessment will provide information on food safety. Prior assessment results from 2004 and 2011, have demonstrated that radionuclides associated with underground nuclear tests have not adversely affected subsistence foods available in and around Amchitka. If sufficient monitoring is conducted and does not identify radionuclide seepage from the test sites, then it can be concluded that the subsistence foods remain safe with respect to test-related radionuclides. Lawrence Livermore National Laboratory is conducting the laboratory analyses. Results from the 2016 sampling will be available in 2017.

- Inspected mud pit cap sites on Amchitka Island in 2016 following a 7.9-magnitude earthquake that occurred 11 miles north of Amchitka Island in 2014. Several aftershocks followed the earthquake with magnitudes ranging from 6.0 to 6.9 within a 100-mile radius.
 - LM will conduct a detailed geotechnical investigation and data collection in the next year to evaluate the damage. From the investigation, LM will prepare engineering designs and make field repairs.



Programs and Projects

APPLIED STUDIES AND TECHNOLOGY (AS&T)

The AS&T program includes a portfolio of long-term technical studies where it delivers new knowledge, enhanced technical capability, advancement of current LM/LM Support (LMS) operations, and new or improved technology applications. In 2016, AS&T managed 14 studies, two have been completed.

Monument Valley Subpile Soil Phytoremediation

- Collaborated on this study with students and faculty from the University of Arizona and Diné College. This is a follow-up study of a multiyear evaluation of soil phytoremediation and bioremediation, as alternatives for remediating contaminated soil that was a source of groundwater contamination at the Monument Valley, Arizona, Processing Site. This study produced evidence that a combination of native transplants and microorganisms had isolated, through evapotranspiration (ET), and removed, through denitrification, most of the soil contamination. The pilot study was the remedy. Collaborators published Glenn, E.P., F. Jordan, and W.J. Waugh, 2016. "Phytoremediation of a Nitrogen-Contaminated Desert Soil by Native Shrubs and Microbial Processes." *Land Degradation and Development*, DOI: 10.1002/ldr.2502.
- Presented on LM's AS&T program, modeling capabilities and projects to Brazilian National Nuclear Energy Commission scientists as part of the IAEA scientific tour.

Tuba City Evapotranspiration

- Conducted a study that involved refining a remote-sensing method for landscape-scale ET estimates. ET can greatly influence both groundwater recharge and discharge in desert environments. Collaborators published a paper on effects of rangeland ET on groundwater flow at the Tuba City site. (Glenn, E.P., C.J. Jarchow, and W.J. Waugh, 2016. "Evapotranspiration Dynamics and Effects on Groundwater Recharge and Discharge at an Arid Waste Disposal Site." *Journal of Arid Environments* 133:1–9.)

MULTIMEDIA ENVIRONMENTAL MODELING

- Participated in the annual Interagency Steering Committee on Multimedia Environmental Modeling (ISCMEM) meeting, hosted by the National Science Foundation. The ISCMEM is a consortium of federal agencies designed to cooperate and coordinate on research and development of integrated, multimedia environmental models, software, databases, applications, and techniques. Current agencies include:
 - DOE
 - EPA
 - NRC
 - National Resources Conservation Service
 - National Science Foundation
 - U.S. Army Corps of Engineers (USACE)
 - U.S. Geological Survey

The National Oceanic and Atmospheric Administration and the National Aeronautics and Space Administration are in process to be part of the consortium.



Long-term cover performance studies were conducted in collaboration with other agencies, the University of Arizona, and Diné College.



EDUCATIONAL COLLABORATIONS

LM created the AS&T Educational Collaboration focus area to support the former Secretary of Energy's commitment to tribal education partnerships with an emphasis on science, technology, engineering, and mathematics education. This focus builds on LM's longstanding commitment to environmental science education by strengthening existing partnerships with Native American undergraduate and graduate students, and by exploring opportunities for new partnerships.

Diné College Partnership

- Maintained a multiyear partnership that supports classroom instruction and creates hands-on field experiences for environmental science students.
- Presented a seminar on ecological remedies for uranium mill tailings.
- Taught classes and conducted laboratory studies covering phytoremediation, environmental sampling designs and statistics, and effects of climate change on the performance of environmental remedies. Students also participated in a field trip and soil sampling activity.

University of Arizona Partnership

- Continued a partnership formed in 2013 with a University of Arizona faculty member, who serves as an environmental science extension specialist to Native American communities and recruits Native American graduate students. An AS&T scientist serves as an adjunct faculty advisor for students who have secured non-DOE grants to collaborate on LM studies.
- Continued students' work on two studies: long-term success of revegetation practices at the Tuba City site, and uptake of contaminants by deep-rooted plants growing on uranium mill tailings disposal cells near Native American communities.
- Collaborated with Native American graduate students to project the long-term performance and adaptability of LM disposal cell covers to climate change and related changes in cover ecology and soil morphology.

COLLABORATION WITH INTERNATIONAL NUCLEAR AGENCIES

- Hosted regulators from the Brazilian National Nuclear Energy Commission, on a scientific visit sponsored by IAEA. Attendees were able to participate in the following events:
 - Meetings with NRC staff
 - Visits to LM sites, including ones in Missouri, Colorado, and Utah

The Brazilian National Nuclear Energy Commission focused on LM's facility closure, decommissioning, waste disposal and management, long-term care, groundwater remediation, public interaction, and abandoned uranium mines processes.



DEFENSE-RELATED URANIUM MINES (DRUM) PROJECT

- Served as lead on an interagency effort to address the environmental impacts—and potential health impacts—of more than 4,000 uranium mines that provided ore to the U.S. Atomic Energy Commission.
- Signed memorandums of understanding with the following agencies to begin verification and validation of DRUM sites on their respective lands:
 - U.S. Bureau of Land Management in Colorado, Utah, and New Mexico
 - U.S. Forest Service Rocky Mountain Region
- Other achievements include:
 - Researching and reconciling location and ownership data of 300 DRUM sites in uranium-related programs
 - Initiating field verification and validation activities on 46 pilot DRUM sites in Colorado and Utah
 - Completing validation and verification at 13 sites



Group observing sampling demonstration at Blue Goose mine in Utah (DRUM site).



View west of Dolores River Canyon on Martin Mesa from just west of Mining Lease 13 in Colorado (DRUM site).



SITE TRANSITIONS

- Worked closely with the U.S. Environmental Protection Agency (EPA) and the Colorado Department of Public Health and Environment to complete the final transfer phases of the Uravan, Colorado, Superfund site for LTS&M. Regulatory issues and challenges with the transfer process have delayed transfer of the site from EPA to LM.
- Addressed uranium mine waste issues at a disposal cell in Church Rock, New Mexico. Work involved cooperating with an interagency working group to clean up uranium mine waste on and near the Navajo Nation. The Church Rock site is the current responsibility of EPA but will transfer to LM for long-term care and custodianship in the future.
- Conducted financial reviews of UMTRCA Title II licensees in the Grants Mineral District (Homestake, New Mexico) for potential reimbursement under Public Law 102-486, the Energy Policy Act of 1992, *Title X—Remedial Action and Uranium Revitalization*.

LM expects these uranium mills, currently under private ownership, to transfer to LM when remediation is complete and NRC terminates their current licenses. Title X provides for partial reimbursement for cleanup costs incurred for mills that provided uranium to the U.S. government for defense-related use.

CONTINUING CHALLENGES

- Developing a Tuba City path forward on groundwater management.
- Investigating cell integrity issues at several sites, which has initiated LiDAR studies.
- Determining a path forward on a Shiprock, New Mexico, remediation system that pumps water to an 11-acre evaporation pond.
- Developing a path forward for the Riverton, Wyoming, Processing Site on its alternate water supply.
- Completing pond decommissioning at the Durango, Colorado, site.
- Completing deployment of the Environmental Quality Information System (EQIS).



Surveyors install a ground control station for the Bluewater, New Mexico, Disposal Site LiDAR survey.



Environment, Safety, Health, and Quality Assurance

The Environment, Safety, Health, and Quality Assurance department spearheaded major updates to the following manuals to reflect LM priorities. These included:

- Safety and health procedures in support of DOE Order 458.1, *Radiation Protection of the Public and the Environment*
- Contractor Assurance System Program Description
- Emergency Management Program Description
- *Environmental Programs Management*
- *Environmental Radiation Protection Program Plan*
- *Incident Reporting and Fact Finding Procedure*

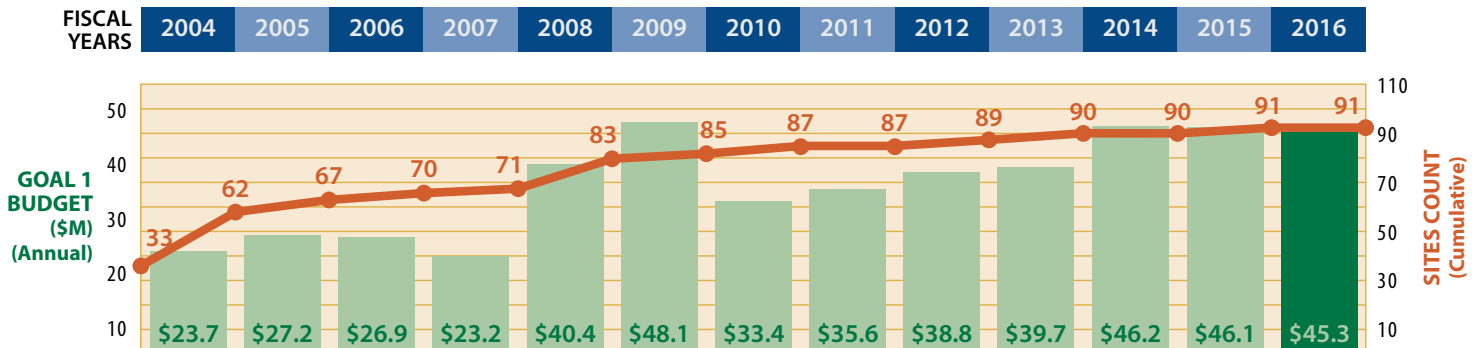
Major updates were also made to the following manuals to ensure work at LM's legacy sites is performed safely. The manuals included:

- *Integrated Safety Management System Procedure*
- *Quality Assurance Desktop Instructions*
- *Quality Assurance Manual*
- Quality Assurance Program Description
- Site Sustainability Plan
- *Training Program Manual*
- *Worker Safety and Health Program*

Goal 1 by the Numbers

- LM's Environmental Sciences Laboratory provided approximately 20,000 soil and groundwater sample results in 2016.
- Engineering and construction groups performed 50 design engineering projects, 50 construction projects, and 60 cost estimates.
- LM's environmental monitoring operations team completed 62 sampling events, 30 maintenance jobs, five Geoprobe soil sampling/well installation events, and two DOE-Consolidated Audit Program laboratory audits.

Goal 1 Budget





GOAL 2: Preserve, Protect, and Share Records and Information

Modernized Geospatial Environmental Mapping System (GEMS) and Information Sharing with GeoPlatform.gov

It is LM's responsibility to manage environmental records spanning nearly 40 years. Managing and communicating those records can have a specific set of challenges. In order to respond to the next generation's record requests, LM upgraded its GEMS. This will help LM share information with stakeholders, regulators, and project personnel who want to learn more about its sites.

While modernizing its GEMS, LM submitted data to GeoPlatform.gov. This resource allows users to participate in an online, geospatial services experience that allows resource sharing across the U.S. government and the world. The content is authoritative, trusted, consistent, and documented data. LM is the first DOE office to accomplish this as part of an open and transparent government.

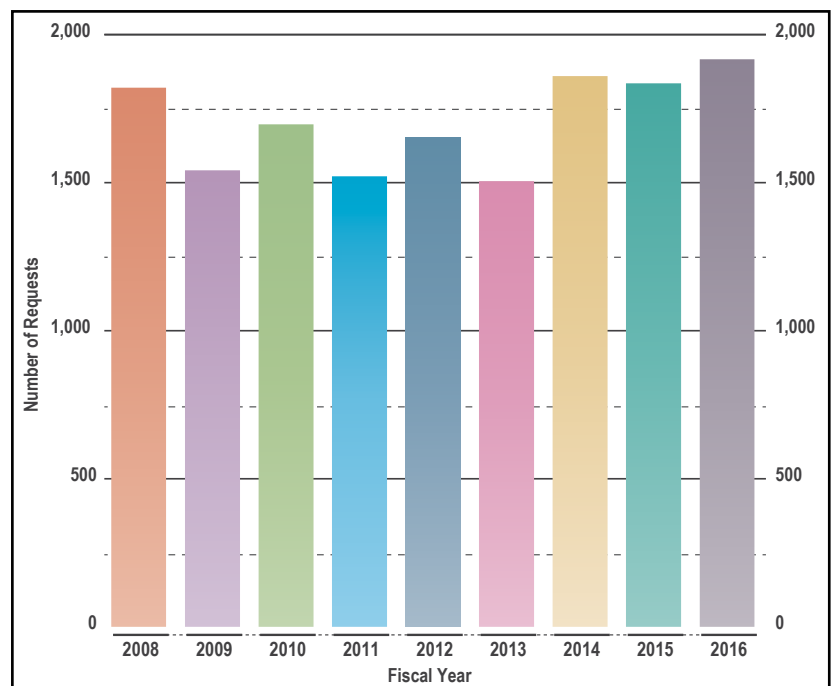
Implemented EQuIS Program to Better Manage Legacy Site Data

LM implemented a new environmental database called EQuIS to help manage site environmental records spanning nearly 40 years. This program replaces LM's previous Site Environmental Evaluation for Projects (SEEPro) system. EQuIS improves the efficiency of data collection, management, and dissemination while also decreasing the burden of those site activities on the Information Technology department. LM expects final data migration and full operational capability in April 2017.

When completed, the EQuIS database will contain approximately 4.7 million analytical results and 232,000 water-level measurements.

Provided Energy Employees Occupational Illness Compensation Program Act (EEOICPA) Request Support

- Conducted an in-depth review of the EEOICPA processing steps for each site, between October 2015 and February 2016.
 - Completed systematic review sessions of the process including a process-flow spreadsheet that lined up with review results
 - Significantly reduced processing time for EEOICPA claims related to the Fernald and Mound, Ohio sites
 - Fulfilled a priority expedited request to digitize pension records for 707 former Mound workers, which resulted in 1,148 files digitized into 21 gigabytes of data



Combined FOIA, Privacy Act, and EEOICPA information requests by year.



Information Technology Projects | Governance | Cyber Security

- Developed and fielded the Formerly Utilized Sites Remedial Action Program (FUSRAP) data information system to provide reference copies to those interested in FUSRAP developments.
- Developed the LM Digital Media Repository.
- Developed a SharePoint-based application with a special user interface that organizes the following media items into a searchable repository:
 - Photographs
 - Audio files
 - Video

This saves time and money because users can place a request and receive targeted information without having to organize the files independently.

- Implemented personal identity verification Homeland Security Presidential Directive 12 multi-factor authentication badges that feature a chip for enhanced security. LM, LMS, LMS subcontractors, and other LM contractors now use the new badge to connect to the LM network in an effort to improve cyber security program-wide.



Records Management specialist at the LM Grand Junction, Colorado, office performs a records search.



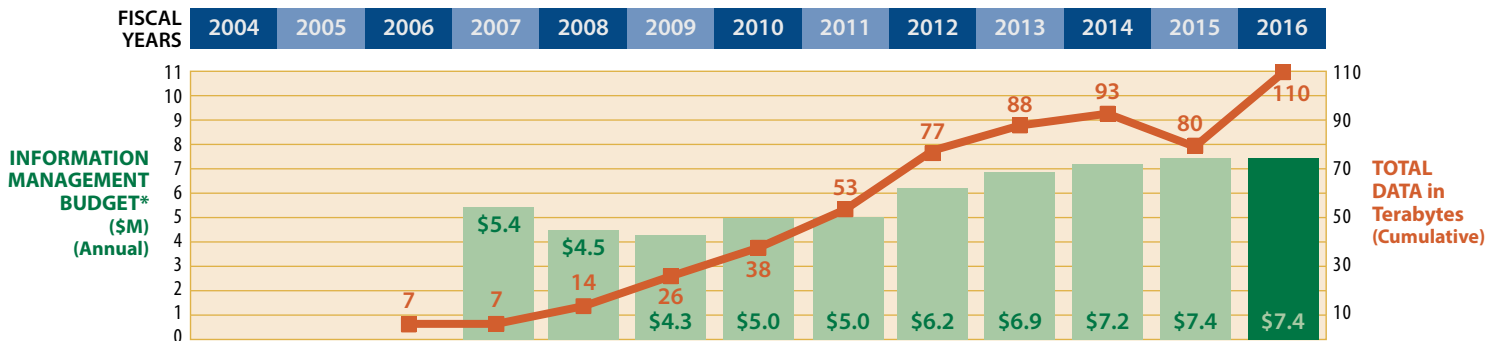
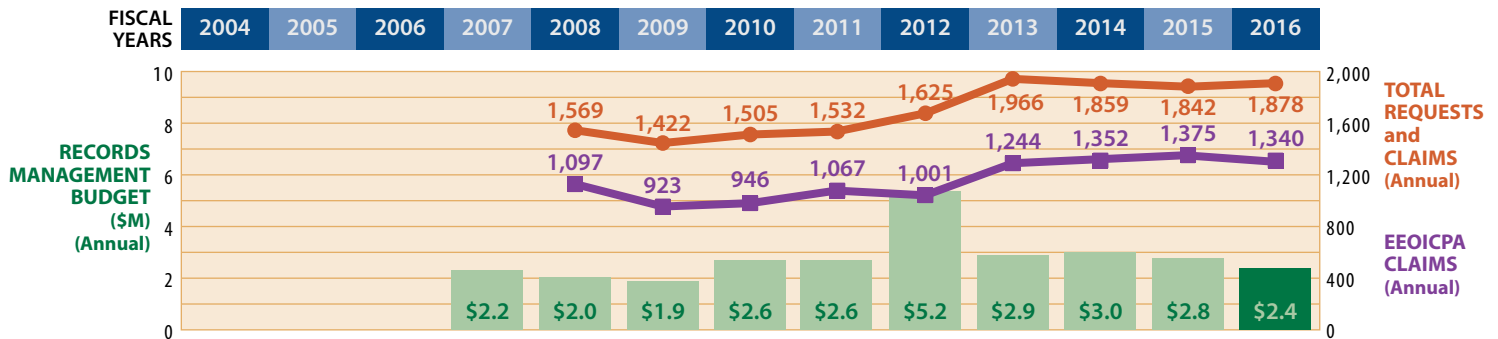
Grand Junction, Colorado, Office.



By the Numbers

- Fulfilled 1,916 Freedom of Information Act (FOIA), stakeholder, EEOICPA, and other records requests.
- Added 90,062 records to LM's electronic recordkeeping system.
- Processed 50,000 documents related to the Painesville, Ohio, Site, which transitioned to LM in 2016.
- Digitized 1,148 files into 21 gigabytes of data.
- Identified and mitigated 38,792 cyber security vulnerabilities.
- Received 1,087 request for environmental and spatial data management services.
- Migrated and verified 4.5 million analytical results records from SEEPro to EQUiS.
- Developed 3-D spatial visualization for two sites.

Goal 2 Budgets



*Excludes Yucca Mountain Project data and dollars.

Fiscal year 2015 shows a reduction in total data because a portion of LM's disk space was used to process tests of Yucca Mountain Project/Licensing Support Network data, before re-introducing that Storage Area Network.



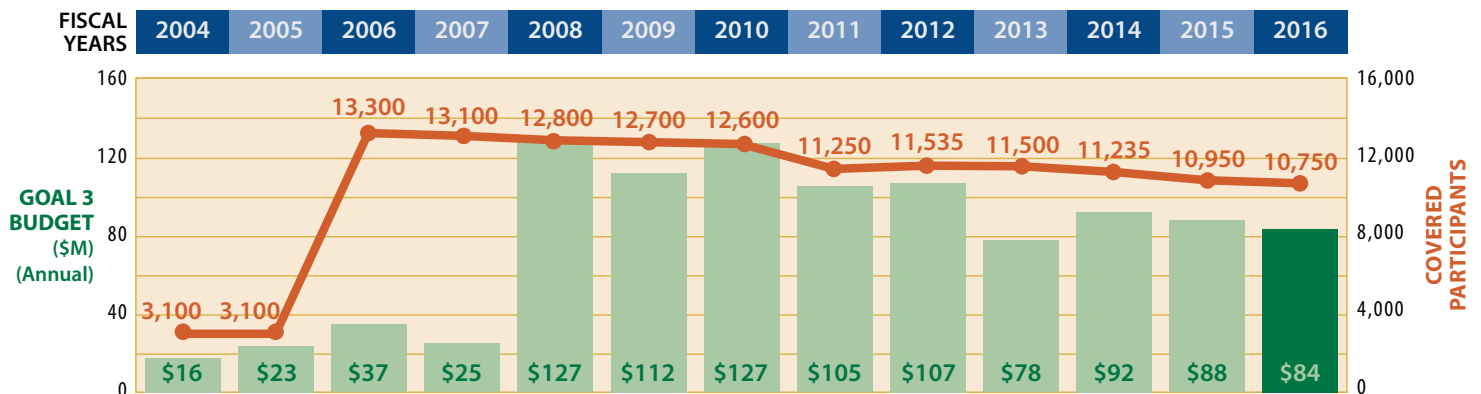
GOAL 3: Safeguard Former Contractor Workers' Retirement Benefits

Adhered to Former Contractor Workers' Retirement Benefits Commitments

LM is responsible for funding pensions, health insurance, and life insurance for over 10,000 former workers and their spouses. Most of the beneficiaries of these programs reside in Colorado, Florida, Kentucky, and Ohio.

In late 2016 LM received the Secretary of Energy's approval for the contractor plan sponsor to terminate the two Rocky Flats pension plans by offering lump distributions, or purchasing annuities on the participants' behalf. When completed in late 2018 this action is estimated to save taxpayers \$50 million over what would have been the lifecycle of the pension plans.

Goal 3 Budget



Many former employees attended the Decade of Difference event at the Fernald Preserve, Ohio, Site.



GOAL 4: Sustainably Manage and Optimize the Use of Land and Assets

Asset Management

Stewardship, protection, and preservation of DOE legacy sites remains an important goal for LM to achieve alongside maximizing responsible uses for office space, materials, and beneficial reuse, when possible. Some of the major accomplishments in LM's asset management program include:

- Provided technical expertise in environmental and real property laws and regulations, including:
 - Reuse at UMTRCA Title II sites
 - Regulatory drivers at LM sites for institutional controls
 - CERCLA/Resource Conservation and Recovery Act (RCRA) expertise
- Revised LM's Institutional Controls program and finalized a new guidance document.
- Provided office space for 30 new LMS staff at the Grand Junction office, overcoming the challenge of accommodating increased need for LM support.
- Received a Green Scorecard for fiscal year 2016 data validation that verified over 3,500 data fields for five types of real property assets.
- Screened 91 sites for conservation reuse.
- Dispositioned 100 percent of all LM excess personal property, 54 percent of which was recycled.
- Organized logistics for the Westminster, Colorado, office relocation.
- Obtained and implemented a new personal property management system for LM's assets.
- Developed a reuse management plan.
- Supported five withdrawals of land associate with UMTRCA Title II sites.



Grazing at the Edgemont, South Dakota, Disposal Site.

Furthered Interagency Agreement with USACE

Project planning officially began for construction of the new Weldon Spring, Missouri, Interpretative Center building, following preliminary work and a signed final interagency agreement between LM and USACE.

Responded to Legal Matters

In August 2016 DOE filed the opening briefing for a motion to dissolve the injunction on the uranium leasing program (ULP). The ULP is composed of 31 lease tracts, encompassing approximately 25,000 acres in southwestern Colorado. A federal judge put the ULP on hold in 2011 pending completion of a Programmatic Environmental Impact Statement (PEIS) and consultation with U.S. Fish and Wildlife Service on endangered species. LM completed the PEIS, issued a Record of Decision, and performed the required consultation in 2014.



Met Beneficial Reuse Goals

LM utilized 42.11 percent of its eligible sites for beneficial reuse in 2016. Examples of reuse at LM sites include grazing and haying agreements, educational activities, a wetlands preserve and visitor center at the Fernald Preserve, and a native prairie restoration and interpretive center at the Weldon Spring Site.



Tania Smith Taylor (right), Office of Site Operations director, accepted the 2016 EPEAT Purchaser Award.

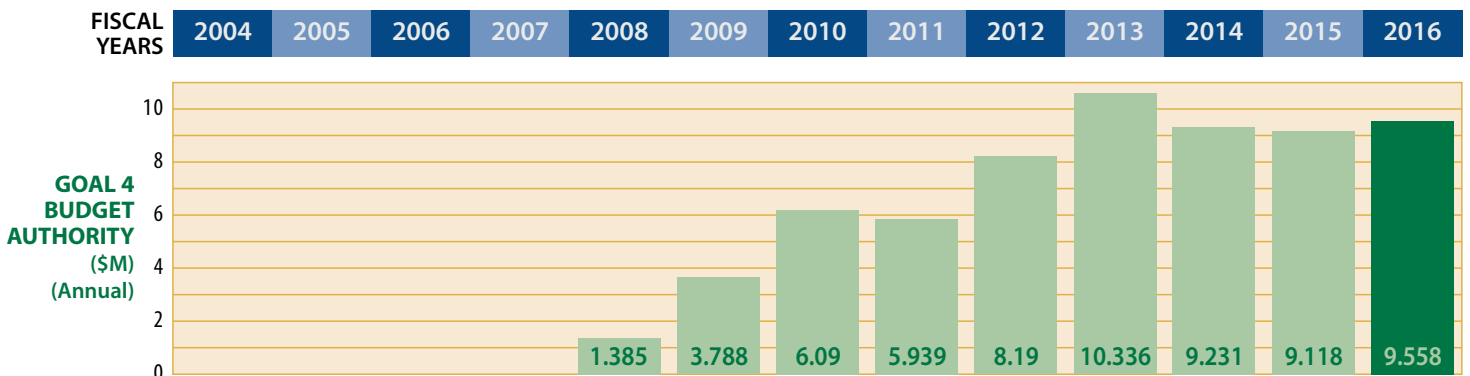
Received Repeat Electronic Product Environmental Assessment Tool (EPEAT) Purchaser Award

The Green Electronics Council awarded LM a two-star EPEAT Purchaser Award for the second consecutive year. The award recognizes excellence in sustainable electronics procurement. EPEAT purchasers earn a star for each product category for which they have a written policy in place requiring the purchase of EPEAT-registered electronics. Award winners represented a wide range of organizations, including national and provincial/state governments, leading academic institutions, and the healthcare sector. Green Electronics Council recognized 38 award winners for their procurement efforts in up to three categories:

1. Personal computers (PC)/displays (desktops, notebooks, integrated desktop computers, workstation desktops, thin clients)
2. Imaging equipment (copiers, digital duplicators, facsimile machines, mailing machines, multifunction devices, printers, scanners)
3. Televisions

To qualify for the award, LM needed to demonstrate implemented policy for procuring environmentally preferable electronic equipment. The policy also included vendor contract specifications requiring that all PCs, laptops, monitors, and imaging equipment (printers) achieve bronze registration or better in the EPEAT system. The combined impact of 38 EPEAT Sustainable Purchasing Award winners in 2016 resulted in more than \$16.8 million in energy savings, greenhouse gas reductions equivalent to removing 29,786 passenger cars from the road for a year, and a reduction of more than 702 metric tons of hazardous waste.

Goal 4 Budget



FY 2004–2007 budget authority does not show Goal 4 as a separate line item.

FY 2008–2011 from congressional justification files.

FY 2012–2016 budget authority total from September final reports, amounts verified with congressional justification files.



GOAL 5: Sustain Management Excellence

Committed to Preserve Knowledge of LM Sites and Programs

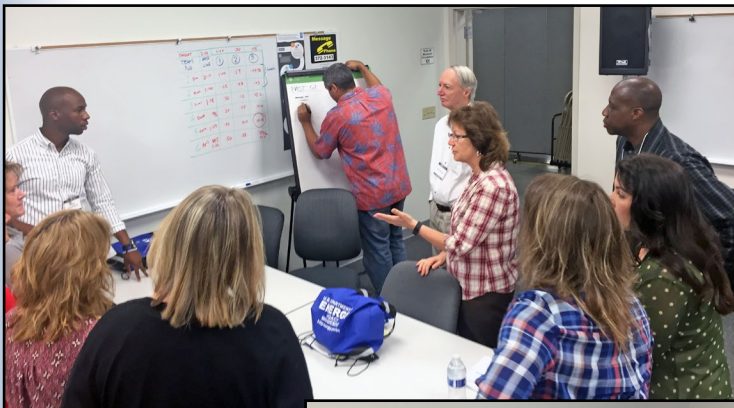
In the midst of LM's accomplishments, the program is addressing a prominent, program-wide challenge—its aging workforce. The average age of LM's federal staff was 49 in 2016, which affects all aspects of the program. More than one-third of LM's staff is eligible for retirement. These leaders have a wealth of experience and knowledge, so capturing that information is critical to LM's continued success.

To prevent the loss of knowledge and expertise that employees have gained over the years, LM assigned a team to lead LM's Knowledge Management Initiative. Knowledge management (KM) comprises a range of strategies and practices an organization uses to identify, create, represent, distribute, and adopt insights and experiences.

In its first year, the team has:

- Completed three-day KM 101 strategic planning training to get current on the state of the field.
- Conducted interviews with retiring managers.
- Sought input and assessed the current state of LM's KM.
- Facilitated breakout group discussions to capture and evaluate current practices.
- Created a prioritized list of issues that the organization can address in the next year.

The team will submit an assessment and recommendations report to the management team.



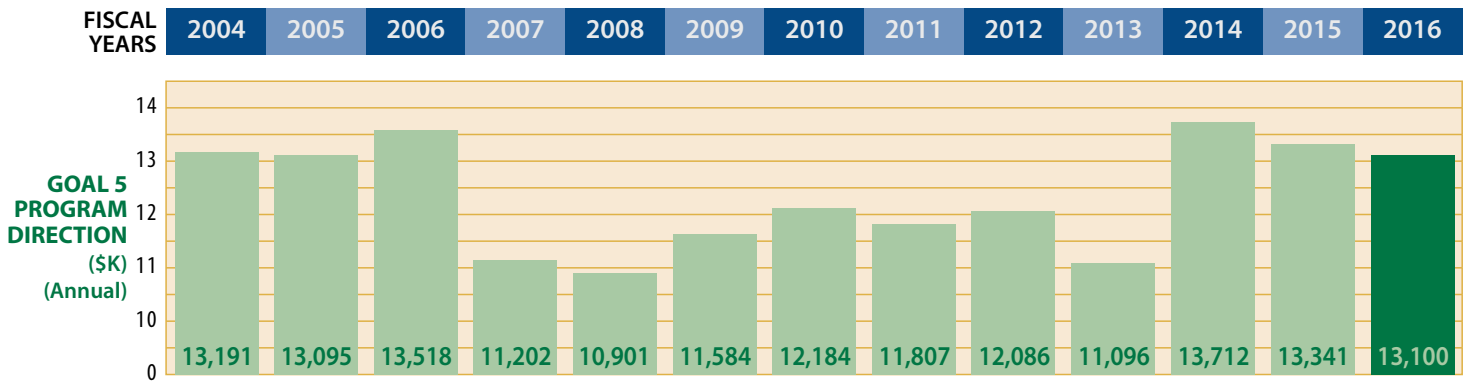
LM employees participate in a knowledge management assessment.



By the Numbers

- Submitted 119 baseline change proposals (BCPs) to reflect work happening at LM sites. BCPs are a formal process used to submit changes to an approved DOE budget. Most of the BCPs in 2016 involved increasing budget to reflect additional scope of work DOE was performing at their sites. DOE also uses BCPs to adjust the due dates for certain projects if work processes change.
- Processed 380 procurements and fulfilled year-end spending of \$2.5 million dollars.
- Processed 1,325 expense reports, 4,050 credit card purchases, and 5,935 invoices.

Goal 5 Budget



Monument Valley, Arizona.

LM Staff

New Employees

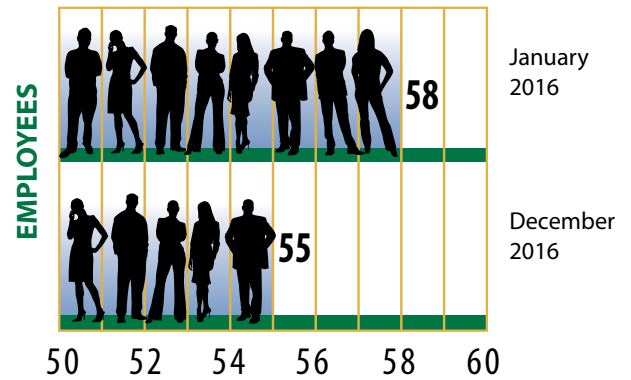
Tracy Atkins joined LM as the DOE principal representative for the Manhattan Project National Historical Park. The responsibility to implement this mission was recently transferred to LM from the DOE Office of the Under Secretary for Management and Performance. In her previous position, she served as a project manager/community planner for the National Park Service Denver Service Center in Colorado. She holds two master's degrees, one from the University of Texas at Austin for community and regional planning, and one from Stanford University for civil engineering, construction engineering, and management. Her undergraduate degree in architectural engineering and project management is also from the University of Texas.

Joyce Chavez joined the LM Asset Management Team as the reuse asset manager. Prior to joining LM, Chavez managed environmental programs for the U.S. Department of Defense. She served as the water program manager at Joint Base Lewis-McChord in Washington (formerly Fort Lewis Army Installation), to develop and implement policy and guidance for water quality while partnering with the regulatory community. Chavez holds a bachelor degree in biochemistry from the University of Colorado at Boulder.

Karen Edson joined LM as a public participation specialist for the Public and Intergovernmental Engagement Team. Previously, Edson worked for EPA in Denver, Colorado, as a senior public affairs specialist for the Community Involvement Program. She holds a bachelor's degree in environmental studies from the University of California, Santa Barbara, and is fluent in Spanish.

William (Bill) J. Frazier joined LM as a site manager on the LM-20.1 Environment Team in Grand Junction. He brings prior experience as a contractor working on DOE Office of Environmental Management (EM) remediation projects for the Grand Junction DOE field office, as well as LM projects. Frazier is a registered professional engineer for the State of Colorado. He has worked as an environmental scientist for the U.S. Bureau of Indian Affairs, a private consultant, a project engineer for the City of Grand Junction, and a facility engineer at the Grand Junction Veterans Affairs Medical Center. Frazier is a Navy veteran (Persian Gulf War) and holds a bachelor's degree in civil engineering from the University of Colorado.

Michael Garrett joined the LM Archives and Information Management (AIM) Team as a records management program analyst. Prior to coming on board, he served as the director of records and e-Discovery at NorthWestern Energy, a publicly traded gas and electric utility in Butte, Montana. Garrett is originally from Helen, Georgia, and served with the U.S. Army in Korea and with the 82nd Airborne Division at Fort Bragg, North Carolina. He attended college at Hampden-Sydney College in Virginia.



58 Full-Time Equivalent Employees
1/20/2016

LM-1
D. Geiser, Director
M. Downing, EJ Prog. Mgr.

HR Team
P. Poole-Shirriell, Team Leader
N. Moore, Admin. Support Spec.

PIE Team
T. Carter, Team Leader
B. Waters, Public Part. Spec.
P. Benson, Prog. Analyst

Office of Business Operations – LM-10.0
T. Pauling, Director
J. Montgomery, Business Mgmt. Spec.

Benefits Continuity Team LM-10.1 P. Ring, Team Leader M. Olsen, Prog. Analyst	Financial, Audits, and Contracts Services Team LM-10.3 J. Powell, Team Leader I. Colbert, Financial Mgmt. Spec. N. Pino, Mgmt. Analyst C. Clayton, Prog. Analyst L. Biagas, Financial Analyst J. Chinkhota, Financial Analyst C. Pennal, Prog. Analyst J. Austin, Prog. Analyst T. Bronnenberg, Prog. Analyst
Archives and Information Management Team LM-10.2 E. Parks, Acting Team Leader T. Garlow, IT Spec. R. Walker, IT Spec. J. Gueretta, Prog. Analyst	Coordination, Operations, and Guidance Team LM-10.4 T. Collins, Team Leader C. Johnson-Freeman, Prog. Analyst R. King, Correspondence Spec. E. Jackson, Staff Assistant K. Lively, Staff Assistant P. Walters, Staff Assistant E. Valencia, Staff Assistant

Office of Site Operations – LM-20.0
T. Smith Taylor, Director
S. Gutierrez, Gen. Engineer

UMTRCA/NVOs Team LM-20.1 A. Gil, Team Leader R. Bush, Gen. Engineer A. Kleinrath, Gen. Engineer D. Barr, Phy. Scientist M. Kautsky, Hydrologist J. Dayvault, Hydrologist W. Dam, Hydrologist J. Nguyen, Phy. Scientist J. Linard, Phy. Scientist A. Denny, Phy. Scientist	RCRA/CERCLA/FUSRAP Team LM-20.2 K. Reed, Team Leader S. Surovchak, Phy. Scientist C. Carpenter, Gen. Engineer G. Hooten, Gen. Engineer K. Starr, Gen. Engineer D. Castillo, Gen. Engineer
Asset Management Team LM-20.3 D. Shafer, Team Leader T. Vanek, Realty Spec. T. Ribeiro, Gen. Engineer E. Holland, Property Mgmt. Spec. P. Stromme, Facilities Spec. B. Sokolovich, Realty Officer C. Haggard, Prog. Analyst	Uranium Mine Team LM-20.4 R. Edge, Team Leader D. Steckley, Phy. Scientist

55 Full-Time Equivalent Employees
12/29/2016

LM-1
C. Melendez, Director
T. Pauling, Deputy Director
M. Downing, EJ Prog. Mgr.

HR Team
P. Poole-Shirriell, Team Leader

PIE Team
T. Carter, Team Leader
K. Edson, Public Part. Spec.
P. Benson, Prog. Analyst

Office of Business Operations – LM-10.0
D. Shafer, Director

Benefits Continuity Team LM-10.1 D. Barr, Acting Team Leader M. Olsen, Prog. Analyst	Financial, Audits, and Contracts Services Team LM-10.3 D. Barr, Team Leader I. Colbert, Financial Mgmt. Spec. L. Biagas, Financial Analyst J. Chinkhota, Financial Analyst J. Austin, Financial Analyst C. Clayton, Prog. Analyst C. Pennal, Prog. Analyst T. Bronnenberg, Financial Analyst N. Pino, Financial Analyst
Archives and Information Management Team LM-10.2 E. Parks, Team Leader T. Garlow, IT Spec. R. Walker, IT Spec. J. Gueretta, Prog. Analyst M. Garrett, Prog. Analyst	Coordination, Operations, and Guidance Team LM-10.4 T. Collins, Team Leader C. Johnson-Freeman, Prog. Analyst R. King, Correspondence Spec. E. Jackson, Assistant K. Lively, Staff Assistant P. Walters, Staff Assistant E. Valencia, Staff Assistant

Office of Site Operations – LM-20.0
T. Smith Taylor, Director
S. Gutierrez, Gen. Engineer

UMTRCA/NVOs Team LM-20.1 A. Gil, Team Leader R. Bush, Gen. Engineer A. Kleinrath, Gen. Engineer M. Kautsky, Hydrologist J. Dayvault, Hydrologist W. Dam, Hydrologist J. Nguyen, Phy. Scientist J. Linard, Phy. Scientist A. Denny, Phy. Scientist	RCRA/CERCLA/FUSRAP Team LM-20.2 G. Hooten, Team Leader S. Surovchak, Phy. Scientist C. Carpenter, Gen. Engineer K. Starr, Gen. Engineer D. Castillo, Gen. Engineer S. Smiley, Phy. Scientist J. Murl, Phy. Scientist
Asset Management Team LM-20.3 B. Sokolovich, Team Leader T. Ribeiro, Gen. Engineer E. Holland, Property Mgmt. Spec. C. Haggard, Prog. Analyst J. Chavez, Phy. Scientist	Uranium Mine Team LM-20.4 R. Edge, Team Leader D. Steckley, Phy. Scientist

Jeffrey Murl joined LM as an Environment Team 2 site manager through the prestigious Presidential Management Fellowship program. Prior to joining LM, Murl worked for Arcadis, in Honolulu, Hawaii, as an environmental specialist (engineer/geologist). His educational background includes a bachelor of science degree in nuclear engineering from Thomas Edison State College in Trenton, New Jersey, and a bachelor of science degree in geology and geophysics and a master of geoscience degree from University of Hawaii at Manoa in Honolulu.

Sue Smiley joined LM in May 2016 and is based at the Fernald Preserve as a site manager. She is part of the RCRA/CERCLA/FUSRAP team. Smiley began her DOE career more than 25 years ago at the Mound, Ohio, laboratory with the Office of Defense Programs. She worked as the environmental compliance manager, responsible for oversight of the Clean Air Act, Clean Water Act, Safe Drinking Water Act, National Environmental Policy Act, RCRA, and other environmental programs at the site. Smiley has a master of environmental science degree from the Institute of Environmental Science at Miami University, with an area of concentration in applied ecology. She also holds a bachelor of science degree in zoology from Miami University.

Tania Smith Taylor is LM Director of Site Operations. Prior to LM, she worked for EM where she led several initiatives pertinent to managing facilities and infrastructure, eliminating excess contaminated facilities, reusing assets for economic development, using project management lessons learned, creating contractor out-placement programs, and training in science, technology, engineering, and mathematics education. Smith Taylor holds a civil engineering technology degree from South Carolina State University, a master's degree in mechanical engineering from Manhattan College, and a master's degree in business administration from Nova Southeastern University.

Promotions

Gwen Hooten was promoted to Environment Team 2 lead, which oversees LM RCRA/CERCLA/FUSRAP sites. Prior to this new position, she served as a site manager, responsible for a number of LM sites, including Fernald Preserve, Mound, and Piqua, Ohio, sites; the Site A/Plot M, Illinois, Decommissioned Reactor Site; and a number of FUSRAP sites. Hooten holds a bachelor's degree in agricultural engineering from Texas A&M University.

Dr. Edwin (Doc) Parks was promoted to LM AIM Team lead. Prior to this position, he served as the acting lead and was also a records program analyst for the AIM Team. Parks has an extensive educational background that includes a master's degree from the National War College, National Defense University; a doctorate in public administration from the University of La Verne in California; a master's degree in administration and human resource management from Central Michigan University; and a bachelor's degree in elementary education from Trenton State College of New Jersey.

Budimir Sokolovich was promoted to Asset Management Team lead. He previously served as the senior realty officer for LM, since joining the organization in January 2015. He has more than 20 years of real estate experience in both private and federal sectors. Prior to joining LM, Sokolovich was a real estate contracting officer and team lead with the EM Consolidated Business Center in Cincinnati, Ohio. He is a graduate of the University of Pittsburgh where he holds undergraduate degrees in economics and urban studies, and a law degree. He is also a licensed realtor in Pennsylvania. Sokolovich is a DOE real estate contracting officer and has received the real property administrator designation from the Building Owners and Managers Association.



Retirements and Separations

During 2016, 10 employees left LM, representing a significant percentage of the organization. David Geiser retired from his position as director of LM. Upon retirement, he received the Secretary of Energy's Exceptional Service Award, one of the highest awards given to DOE employees. Three members of the LM management team also retired, as did two staff members. Four staff members accepted positions with other federal agencies. LM appreciates the contributions and years of dedication by all those who have served the organization.



Carmelo Melendez, LM Director.

Appointments

Carmelo Melendez was selected as the director for LM in December 2016. As director, he will provide the leadership to continue to fulfill the Energy Department's post-closure responsibilities and ensure the future protection of human health and the environment. Most recently, Director Melendez served as the director of the Office of Asset Management within the DOE Office of Management and as the DOE senior real property officer. He holds a bachelor of science degree in mechanical engineering from the University of Puerto Rico; a master of business administration in financial management from Southern New Hampshire University; a master of engineering in civil and environmental engineering from the University of Florida; and a doctoral engineer degree in engineering management from George Washington University.

Thomas Pauling became the new acting director for LM in May 2016 after his earlier appointment as LM deputy director. In addition to his appointment as acting director of the LM Office of Business Operations in June 2015, Pauling has also served LM as director of the LM Office of Site Operations, Environment Team lead, and staff-level site manager. Pauling holds a bachelor of science degree in chemical engineering from Washington University in St. Louis, Missouri. He returned to his prior position as deputy director in December and is assisting Director Melendez in leading the LM team.



Thomas Pauling, LM Deputy Director.



GOAL 6: Engage the Public, Governments, and Interested Parties

Communicating the work that LM manages is vital to working in communities. LM conducts outreach regularly. Some LM sites have visitors centers where thousands of community members visit each year. LM designs informational programs geared toward engaging participants with the historical significance and importance of legacy sites.

Navajo Nation

LM's work on the Navajo Nation includes LTS&M and participation in technical meetings, open houses, and other outreach events. The purpose of these face-to-face gatherings is to meet with Navajo stakeholders to discuss and address concerns related to groundwater remediation activities, technical studies conducted on behalf of tribal agencies, and communities impacted by LM operations. LM established an outreach office in Window Rock, Arizona, where a liaison is available to answer stakeholders' questions.

In 2016 LM participated in 16 meetings and outreach events focused on the Navajo Nation.

NAVAJO NATION FIVE-YEAR PLAN

Outreach is part of LM's coordinated effort that began in 2014 with five federal agencies in consultation with Navajo Nation agencies to implement a second Navajo Nation Five-Year Plan. This coordinated effort has resulted in stakeholders getting consistent information while each agency can communicate, using its strengths and responsibilities. The involved agencies are DOE, EPA, NRC, Indian Health Service, Bureau of Indian Affairs, and U.S. Centers for Disease Control and Prevention.

Five-Year Plan objectives included forming a Community Outreach Network with each of the agencies represented and a Navajo Nation outreach liaison hired to support the group. LM led the initiative. The DOE-sponsored liaison's primary roles involve connecting community members with the involved agencies and facilitating communication and connection between the agencies in their missions to address uranium issues.



Participants learn about LM's Tuba City, Arizona, site during an October 2016 site tour.



Posters and a groundwater flow model were displayed for stakeholders attending the uranium issues open house near the Monument Valley, Arizona, site.



Fernald Preserve

The Fernald Preserve, Ohio, Site hosted 400 visitors at its Weapons to Wetlands—A Decade of Difference event, recognizing the site's historical work. The site began as the Fernald Feed Materials Production Center. Later, it became the Fernald Closure Project. Today it is the Fernald Preserve. The event celebrated the decade of work since the mission changed from environmental remediation to ongoing groundwater remediation, maintenance of an On-Site Disposal Facility, ecological restoration, environmental monitoring, and public access. Since fulfilling its cleanup and restoration mission, the site has been established with extensive natural habitats including wetland, prairies, and forest.

Weldon Spring Site

Approximately 180 Weldon Spring, Missouri, Site visitors engaged in capturing and tagging monarch butterflies as part of Monarch Watch's international tagging efforts. An exceptionally high number of monarch butterflies stopover at the Weldon Spring Site each September during the insect's annual migration. The site's prairie is diverse with nectar-producing native plants. Butterflies need such nectar for food during their several-thousand-mile migration to Mexico. The tagging program supports the Federal Strategy to Promote the Health of Honey Bees and Other Pollinators established by the Pollinator Task Force, by direction of former President Obama in 2015. This event was possible through a partnership with the Missouri Department of Conservation.

Interpretive staff hosted 150 visitors at a View the Supermoon event atop the disposal cell. This was an incredible experience for visitors to be on the cell at night under the full moon. The event was possible through partnerships with the Astronomical Society of Eastern Missouri and the St. Louis Sci-Fi and Fantasy Club.

The site mailing list continues to grow with 258 contacts receiving monthly communications on public activities at the site.

Measuring the Success of Public Affairs Efforts

Outreach metrics are a large component of the Public Affairs strategy. LM has advanced their data collection methods to capture the amount of people that visit its legacy sites on an annual basis.

At the Fernald Preserve the greater community shows its support of LM public involvement opportunities through participation. Nearly 78,000 people have enjoyed the Visitors Center, nature and history programs, the meeting room, and other services provided since the site's public opening in August 2008. Many guests also use the 7 miles of walking trails and enjoy the wildlife supported on the preserve's 1,050 acres. Bird watchers and photographers comprise the largest group of independent site visitors. The site mailing list continues to grow with over 1,950 contacts receiving monthly communications on public activities at the preserve.



Visitors view the Fernald Preserve from the production area overlook, during the Decade of Difference event.



Weldon Spring Site Interpretive Center visitors viewed the supermoon with astronomers.



Weldon Spring Site Interpretative Center staff completed the first full year of data collection for visitors that use the site's outdoor resources. LM installed three outdoor visitor counters in June 2015 that captured approximately 58,000 visitors and vehicles at the site vehicle entrance, Hamburg Trail, and the Disposal Cell Trail.

Vehicle and trail counters compliment traditional attendance data to present the site's service to the community in all aspects of visitation. Many users take advantage of the site's outdoor resources to hike to the top of the disposal cell, view the native garden, and watch for wildlife in the prairie.

Weldon Spring Site Interpretative Center staff completed the first full year of conducting interpretive programming satisfaction surveys. Teachers and group leaders were given a one-page survey to report on the quality of the programs presented, quality of staff, and to provide any additional feedback. Staff has used these surveys and feedback to understand the impact of updating their programs. The vast majority of all surveys collected score at the top end of satisfaction in programs provided to the community.

123LogAnalyzer and Google Analytics Statistical Software

LM uses 123LogAnalyzer and Google Analytics statistical software packages to track information about visitors to the external LM website. Statistical information regarding the number of hits, visits, unique Internet Protocol addresses, page views, and downloads is available in the 123LogAnalyzer report. Information is broken down by day and time increments, the number of pages viewed per day, and the length of time a visitor stays at the website. Resources accessed throughout the year fluctuate with issues, concerns, and media attention associated with the various sites and programs.

The following were the most popular webpages accessed over the evaluation period:

- LM Sites
- Weldon Spring Site Interpretive Center Online Tour
- Environmental Justice History
- Weldon Spring Site
- Fernald Closure Project
- LM Mission
- Rocky Flats Site
- Programmatic Framework
- LM Considered Sites
- Fernald Preserve Site



Jon Maraschin, Riverview Technology Corporation Executive Director, and Dr. April Gil, GJO Manager, at the celebration of the GJO listing on the National Register of Historic Places.

Goal 6-Related Awards

NATIONAL REGISTER OF HISTORIC PLACES

The National Register of Historic Places listed the Grand Junction, Colorado, Office (GJO) on its register in recognition of GJO's important, historical roles in the Manhattan Project and the Cold War. The listed site is a portion of the original 55.71-acre former gravel mine purchased by the U.S. government in 1943 for the USACE Manhattan Engineer District (MED).

MED selected Grand Junction for its proximity to remote vanadium mines and uranium-rich mill tailings. A Denver and Rio Grande Western Railroad spur already served the site, and an abundant water supply was available from the Gunnison River.

From GJO the MED operated a refinery to concentrate uranium oxide, or "yellowcake." MED oversaw the procurement and initial processing of domestic uranium used to develop the first atomic bombs from both a log cabin used as a refinery office and an office on Main Street.



RECOGNIZING HISTORICAL COMMUNITY ROLES

Thomas Pauling, former acting LM director, presented William Kistler “Bill” Coors with a Secretary of Energy’s Appreciation Award in Golden, Colorado. The award recognizes Coors’ historic role in providing critical insulators to MED during World War II. Coors insulators were an essential component of the Y-12 calutrons, which enriched uranium for the “Little Boy” atomic bomb. When the initial insulators used in the calutrons began failing at an alarming rate and threatened the success of the Y-12 project, Coors, of the Coors Porcelain Company, was asked to provide large quantities of high-quality ceramic insulators capable of handling the tremendous electrical loads. He immediately got to work and the Coors insulators arguably saved the Y-12 project from failure. Coors turned 100 years old in 2016.



Bill Coors (seated) was recognized for his historic role in World War II.

Environmental Justice (EJ)

- Co-hosted the 2016 *National Environmental Justice Conference and Training Program* in Washington, DC, with the Ninth Annual National Conference on Health Disparities.
 - The 2016 conference theme “A National Dialogue for Building Healthy Communities” provided opportunities for EJ communities to have access to federal, state, and local government and private sector leaders. Attendees enjoyed the opportunity to obtain information, resources, and strategies to address ongoing EJ issues, and health disparities solutions for building healthy, sustainable communities.



2016 National Environmental Justice Conference and Training Program in Washington, DC.

- Launched the fifth Environmental Justice and Tribal Consultation Training in Richland, Washington.
 - This EJ training supports the agencies’ responsibilities with respect to the Memorandum on Tribal Consultation, signed by former President Obama, directing executive agencies to develop and implement tribal consultation policies. DOE engages in tribal consultation with American Indian and Alaska Native governments and communities on energy development, sustainability, and cleanup activities related to DOE facilities.
- Assisted in establishing the Environmental Justice Academy at Allen University.
 - Formed a partnership to integrate the EPA Region 4 Environmental Justice Academy as part of the newly established Environmental Justice Institute at Allen University.
- Participated in the 39th Annual American Indian Science and Engineering Society National Conference.
 - Presented DOE’s Mentorship for Environmental Scholars program that recruits qualified undergraduate students from Historically Black Colleges and Universities.
- Participated in a Teaching Radiation, Energy, and Technology workshop at the University of South Carolina in Aiken.



- Participated in the 46th Congressional Black Caucus Annual Legislative Conference, EJ Braintrust.
 - The EJ Braintrust highlighted the unique relationship between environmental protection, EJ, economic development, and human health.



Federal agency representatives, Allen University faculty members, and local community leaders.

When viewing the social determinants that play a role in communities with disproportionate health problems, education is a major factor. The 2016 Braintrust brought together experts to discuss the role education plays and how to improve access to education in all communities. The panel discussed enhancing existing opportunities to build on various university and federal agency partnerships to reach out to communities nationwide.

- Participated in the second Principals' meeting of the federal Interagency Working Group on EJ issues with 17 federal agencies. The White House Council on Environmental Quality organized this group to help address environmental, social, economic, and public health burdens in minority, low-income, indigenous, and tribal communities.
- Supported the Environmental Justice Interagency Principals Meeting in Washington, DC. The Interagency Working Group on EJ organized the meeting with 17 federal agencies with direct focus on transition planning and strengthening the EJ infrastructure in the respective agencies and departments.

By the Numbers

- Fernald hosted a record 13,178 guests at the Visitors Center in 2016, surpassing 2015 attendance by more than 1,000 visitors.
- Weldon Spring Site
 - 12,983 visitors hiked the Disposal Cell Trail
 - 13,489 visitors hiked the Hamburg Trail
 - 31,290 vehicles entered the site
- The LM website received 876,959 visits between May 1, 2015, and April 30, 2016—an increase of more than 115,000 visits over the previous reporting period.



Picnic area at the Weldon Spring, Missouri, Disposal Site.



Fernald Preserve, Ohio, Visitors Center.

Program Update Articles by Issue

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- Goal 1: Deputy Under Secretary Klaus Visits the Fernald Preserve in Ohio
- Goal 1: LM Organizes Conference Session on Uranium Studies
- Goal 1: Paddys Run Streambank Stabilization at the Fernald Preserve in Ohio
- Goal 1: Uranium Mining and Milling near Rifle, Colorado
- Goal 2: LM—First DOE Office to Make Geospatial Data Available on GeoPlatform.gov
- Goal 2: LM and NETL Records Staff Collaborate on Disaster Preparedness
- Goals 1 and 5: Applied Studies and Technology: Training Course in Groundwater Geochemistry and Reaction Modeling
- Goals 1 and 6: LM Updates Stakeholders on the Recent Closure of Central Nevada Test Area
- Goal 4: Watershed Protection at the Fernald Preserve in Ohio
- Goals 5 and 6: LM Participates in 2016 Waste Management Conference
- Goal 6: African Americans and the Manhattan Project
- Goal 6: Preservationists Tour Historic Log Cabin at the Grand Junction, Colorado, Office
- Goal 6: Updated Radiation Exhibit Unveiled at Math and Science Center in Grand Junction, Colorado
- Goal 6: Environmental Justice Activities
- Goal 6: Interagency Working Group on Environmental Justice – Cabinet-Level Meeting
- Goal 6: Educate, Motivate, Innovate: Student Climate Change Justice for Healthy Sustainable Communities—Washington, DC

U.S. DEPARTMENT OF ENERGY Legacy Management
Program Update
January–March 2016

Welcome to the January–March 2016 issue of the U.S. Department of Energy (DOE) Office of Legacy Management (LM) Program Update. This publication is designed to provide a status of activities within LM. Please direct all comments and inquiries to lm@energy.gov.

Inside this Update:

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- Preservationists Tour Historic Log Cabin at the Grand Junction, Colorado, Office ... 2
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- Goals 1 and 6: Little Wind River Floods at Riverton, Wyoming: Study to Determine Impacts on Soil Contaminants
- Goal 1: LM Completes 2016 Monitoring at Amchitka Island, Alaska
- Goal 1: Annual Assessment Shows Mound, Ohio, Site ICs Are Protective
- Goal 2: New Mound, Ohio, Exhibit at Dayton History Carillon Historical Park
- Goal 2: LM Environmental Database Modernization Is Off and Running
- Goal 2: UK/LM Information Exchange Focus: Importance of Records Management for Interim Safe Storage of Reactors
- Goal 2: Moab UMTRA Project/LM Technical Exchange

U.S. DEPARTMENT OF ENERGY Legacy Management
Program Update
April–June 2016

Welcome to the April–June 2016 issue of the U.S. Department of Energy (DOE) Office of Legacy Management (LM) Program Update. This publication is designed to provide a status of activities within LM. Please direct all comments and inquiries to lm@energy.gov.

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- Little Wind River Floods at Riverton, Wyoming: Study to Determine Impacts on Soil Contaminants ... 2
- Annual Assessment Shows Mound, Ohio, Site ICs Are Protective ... 3
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Program Update Articles by Issue

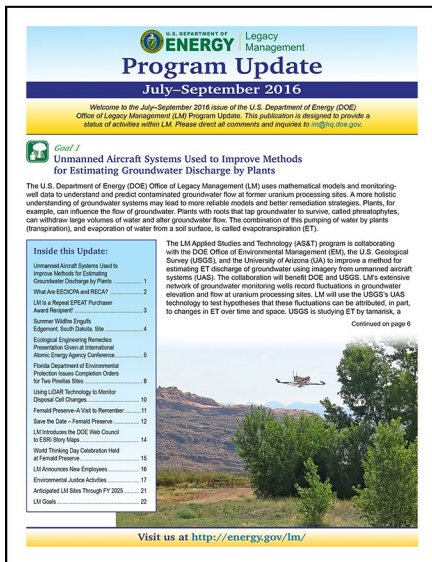


Quarter 2 (continued)

- Goal 2: LM Business Center Hosts Office of Environment, Health, Safety and Security (AU-14) Representatives
- Goal 4: Site Reuse – A Dog’s Delight
- Goal 5: Retiring LM Director Recognized with Exceptional Service Award
- Goal 5: New Acting LM Director Appointed
- Goal 6: LM Earth Day Activities Include USPS BlueEarth Recycling Event
- Goal 6: LM 2016–2025 Strategic Plan Released
- Goal 6: Monument Valley Open House
- Goal 6: Earth Day at DOE Headquarters
- Goal 6: Community Leaders’ Institute in Orangeburg, South Carolina
- Goal 6: Climate Change: A Global Reality
- Goal 6: Working Effectively With Tribal Governments and Communities; DOE Environmental Justice and Tribal Training

Quarter 3

- Goal 1: Unmanned Aircraft Systems Used to Improve Methods for Estimating Groundwater Discharge by Plants
- Goal 1: Using LiDAR Technology to Monitor Disposal Cell Changes
- Goal 1: Summer Wildfire Engulfs Edgemont, South Dakota, Site
- Goals 1 and 6: Ecological Engineering Remedies Presentation Given at International Atomic Energy Agency Conference
- Goal 1: Florida Department of Environmental Protection Issues Completion Orders for Two Pinellas Sites
- Goal 2: LM Introduces the DOE Web Council to Environmental Systems Research Institute Story Maps
- Goal 2: What Are EEOICPA and RECA?
- Goal 6: World Thinking Day Celebration Held at Fernald Preserve



- Goal 6: Fernald Preserve—A Visit to Remember
- Goal 6: Interagency Working Group on Environmental Justice—Passing the Administration’s Leadership Baton
- Goal 6: Teaching Radiation, Energy, and Technology Workshop Held in Aiken, South Carolina
- Goal 6: Community Leaders’ Institute, Climate Change: A Global Reality, Myrtle Beach, South Carolina
- Goal 6: 46th Congressional Black Caucus Annual Legislative Conference, Environmental Justice Braintrust

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- Goal 2: LM Responds to Increase in Records Requests
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- Goal 4: Rocky Flats Site Wins Presidential Award for Sustainability
- Goal 5: Successful Inaugural Year for the LM Knowledge Management Initiative
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- Goal 6: LM Tribal Relations Strengthen Through Outreach
- Goal 6: A Decade of Difference at Fernald
- Goal 6: Manhattan Project National Historical Park Comes to LM
- Goal 6: Endangered American Burying Beetles at Fernald Preserve
- Goal 6: Bill Coors Recognized for Historic Role in Manhattan Project
- Goal 6: LM and Navajo AML/UMTRA Win Best Science Award at Festival
- Goal 6: Environmental Justice Academy Established at Allen University
- Goal 6: American Indian Science and Engineering Society 39th Annual National Conference

Legacy Management
Program Update
October-December 2016

Welcome to the October-December 2016 issue of the U.S. Department of Energy (DOE) Office of Legacy Management (LM) Program Update. This publication is designed to provide a status of activities within LM. Please direct all comments and requests to lm@hq.doe.gov

New LM Director Appointed

In December 2016, Carmelo Melendez was selected as the new Director for the U.S. Department of Energy (DOE) Office of Legacy Management (LM). As Director, he will provide the leadership to continue to fulfill the Energy Department's position responsibility and ensure the future protection of human health and the environment.

Director Melendez comes to LM after serving as the Director of the Office of Asset Management within the DOE Office of Management and as the DOE Senior Real Property Officer. He has also served DOE within the Office of Environmental Management, the Office of Engineering and Construction Management, and the Office of Acquisition and Project Management. He was instrumental in carrying out several DOE Laboratory Operations Board initiatives, transferring several properties for community economic development, and improving the way DOE manages real property, personal property, and fleet property to support DOE's field mission and national laboratories. He has been a career member of the Senior Executive Service, Vice Chairman of the National Academies' Federal Facilities Council, and a member of the U.S. Office of Management and Budget's Real Property Advisory Council.

Director Melendez retired as Commander in the U.S. Navy Civil Engineer Corps and has served in numerous positions in the U.S. Departments of Defense, Energy, and State, specializing in acquisition management, civil affairs, construction management, expeditionary engineering, facilities engineering, and financial management. He received a bachelor of science degree in mechanical engineering from the University of Puerto Rico, a master of business administration in financial management from Southern New Hampshire University, a master of engineering in civil and environmental engineering from the University of Florida, and a doctorate degree in engineering management from George Washington University.

Acting Director for LM, Thomas Pauling, has returned to his prior position as Deputy Director and is assisting Director Melendez in leading the LM team.

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Grand Junction, Colorado, Disposal Site.

LM Sites in 2016



Acronym List

AIM	Archives and Information Management	GJO	Grand Junction, Colorado, Office
AS&T	Applied Studies and Technology	IAEA	International Atomic Energy Agency
BCPs	baseline change proposals	ISCMEM	Interagency Steering Committee on Multimedia Environmental Modeling
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act	KM	knowledge management
DOE, Department	U.S. Department of Energy	LiDAR	light detection and ranging
DRUM	defense-related uranium mine	LM	Office of Legacy Management
EEOICPA	Energy Employees Occupational Illness Compensation Program Act	LMS	Office of Legacy Management support
EJ	environmental justice	LTS&M	long-term surveillance and maintenance
EM	Office of Environmental Management	MED	USACE Manhattan Engineer District
EPA	U.S. Environmental Protection Agency	NVOs	Nevada Offsites
EPEAT	Electronic Product Environmental Assessment Tool	NRC	U.S. Nuclear Regulatory Commission
EQiS	Environmental Quality Information System	PEIS	Programmatic Environmental Impact Statement
ET	evapotranspiration	RCRA	Resource Conservation and Recovery Act
FOIA	Freedom of Information Act	SEEPPro	Site Environmental Evaluation for Projects system
FUSRAP	Formerly Utilized Sites Remedial Action Program	ULP	Uranium Leasing Program
GEMS	Geospatial Environmental Mapping System	UMTRCA	Uranium Mill Tailings Radiation Control Act
		USACE	U.S. Army Corps of Engineers



Grand Junction, Colorado, Office