LMS/S07225

Legacy Management FY 2024 Site Sustainability Plan

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U.S. DEPARTMENT OF ENERGY | Legacy Management

This document is designed for online viewing.

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Abbreviations

AFFECT	Assisting Federal Facilities with Energy Conservation Technologies
AML	Abandoned Mine Lands
BMP	best management practice
CFE	carbon pollution-free electricity
CFR	*Code of Federal Regulations*
DEAR	DOE Acquisition Regulation
DOE	U.S. Department of Energy
EAC	energy attribute certificate
ECM	efficiency and conservation measure
EISA	Energy Independence and Security Act
EMS	Environmental Management System
EnMS	Energy Management System
EPA	U.S. Environmental Protection Agency
EPEAT	Electronic Product Environmental Assessment Tool
ESPC	energy savings performance contract
EUI	energy use intensity
EV	electric vehicle
EVCS	electric vehicle charging station
EVSE	EV supply equipment
FEMP	Federal Energy Management Program
FIMS	Facilities Information Management System
ft^2	square feet
FY	fiscal year
GHG	greenhouse gas
GSA	U.S. General Services Administration
ILA	industrial, landscaping, and agricultural
ISO	International Organization for Standardization
LM	Office of Legacy Management
LMS	Legacy Management Support
LTS&M	long-term-surveillance and maintenance
MES	Mentorship for Environmental Scholars
MSI	Minority Serving Institution
OSF	Other Structure and Facility
PAE	*Project or Activity Evaluation*

PHEV	plug-in hybrid electric vehicle
REC	renewable energy certificate
SAM	System for Award Management
SOARS	System Operation and Analysis at Remote Sites
SOW	statement of work
STEM	science, technology, engineering, and mathematics
UMTRA	Uranium Mill Tailings Remedial Action
USDA	U.S. Department of Agriculture
VARP	Vulnerability Assessment and Resilience Plan

Executive Summary

In fiscal year (FY) 2023, the U.S. Department of Energy (DOE) Office of Legacy Management (LM) continued working toward increasing the use of carbon-pollution free energy, increasing site resiliency, reducing water use, and decreasing overall greenhouse gas production. Much of the work conducted in 2023 consisted of applying for Assisting Federal Facilities with Energy Conservation Technologies (AFFECT) grants to repair existing renewable energy systems, identifying and pursuing energy choice contracts that utilize carbon pollution-free electricity, installing electric vehicle charging stations, and determining where evaluations are needed to electrify building components. Due to the unique nature of LM's mission and footprint, LM will continue to experience challenges meeting net-zero building goals, electrifying the fleet, and reaching carbon pollution-free electricity by 2030. LM's unique joint Environmental Management System (EMS) will continue to play a critical role in LM meeting future sustainability goals. In FY 2023, LM implemented the International Organization for Standardization Standard 50001, *Energy Management Systems*, using DOE's 50001 Ready program. Rather than creating a stand-alone system the Energy Management System was incorporated into the existing EMS, utilizing existing manuals, policies, procedures, audits, and management teams.

Introduction

The U.S. Department of Energy (DOE) Office of Legacy Management (LM) is responsible for managing a broad and diverse portfolio of land and assets. LM currently protects human health and the environment at 101 sites in 29 states and the territory of Puerto Rico, providing long-term-surveillance and maintenance (LTS&M) at these legacy sites. As presented in the *Site Management Guide* (LM-Guide-3-20.0-1.0) (March 2023), LM manages several programs including the Defense-Related Uranium Mines Program, the Uranium Leasing Program, and the Applied Studies and Technologies Program that contribute to the achievement of sustainability goals. LM executes its mission and programmatic activities from 10 occupied facilities in nine states. LM is committed to enhancing sustainable environmental performance as identified in the *LM 2020–2025 Strategic Plan* (DOE 2020), LM has the following overarching goals:

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

Underlying these overarching goals are LM's triple-bottom-line activities that focus on:

- Social responsibility: LM focuses on the safety of staff, the public, and the environment with communication playing an important part.
- Economic prosperity: LM promotes business excellence by being fiscally responsible and using best business practices.
- Environmental stewardship: LM consults with regulatory agencies and other stakeholders regarding its compliance with environmental laws, regulations, and agreements; its support of environmental justice; and its general consideration of the environmental impacts of all work being performed.

Note

LM operates its Environmental Management System (EMS) jointly with the Legacy Management Support (LMS) contractor, and both place a priority on sustainability while executing the LM mission and achieving the LM goals. In this document, a reference to "LM" represents both LM and the LMS contractor (LM's strategic partner) unless specifically noted otherwise.

1.0 Energy Management

1.1 Performance Status

LM continued working toward the DOE goals of:

- Reducing energy use intensity (EUI) in goal-subject buildings.

Note

A goal-subject building is any LM-owned building that is not excluded from energy calculations. LM excludes buildings or assets that consume large amounts of energy for mission processes. Full exclusion guidelines can be found in the Guidelines Establishing Criteria for Excluding Buildings *(FEMP 2006).*

EUI is calculated by dividing the goal-subject energy use by the goal-subject building's square footage. LM leases approximately 160,382 square feet (ft^2) of building space and owns only about 90,077 ft^2 of building space. Of the LM-owned building space, 30,378 ft^2 is excluded or non-energy consuming. Leased and other excluded buildings are not included in the EUI calculation.

EUI at goal-subject buildings decreased 4.7% in fiscal year (FY) 2023 from FY 2022. LM's EUI in goal-subject buildings is derived mostly from facility operations, including lighting, heating and cooling systems, and Information Technology operations. The square footage of goal-subject buildings in FY 2023 was 50,521 ft^2. An increase in gross square footage of 1267 ft^2 occurred from the changes in Facilities Information Management System (FIMS). The changes in FIMS came after inventory identified as Other Structures and Facilities (OSFs) was recategorized as buildings. Many of these structures have no utility connections; therefore, LM has historically identified them as an OSF to accurately report on square footage to energy use. The changes were made because these structures meet the definition of a building by having four sides, a roof and a door. In FY 2022, LMS staff moved from a leased, excluded space to the Fernald Preserve, Ohio, Site in temporary onsite workspace.

The Fernald Preserve's extraction wells compose most of LM's excluded energy use. In accordance with the *Guidelines Establishing Criteria for Exclusion Buildings* (FEMP 2006) from Section 543, "Energy Performance Requirements," of the National Energy Conservation Policy Act as Amended by the Energy Policy Act of 2005 (PL 109–58), the energy use from those wells is excluded as "separately-metered energy-intensive loads that are driven by mission and operational requirements, not necessarily buildings, and not influenced by conventional building energy conservation measures." The extraction wells are required by the Comprehensive Environmental Response, Compensation, and Liability Act's Record of Decision for the site.

As a best management practice (BMP), LM continued establishing an Energy Management System (EnMS) using DOE's 50001 Ready program. LM's *Environmental Management System/Energy Management System Description* (LM-Procedure-3-20-12.0, LMS/POL/S04346) and *EMS Sustainability Teams Manual* (LM-Manual-3-20.3-1.0, LMS/POL/S11374) were updated to include the EnMS. LMS staff completed the 50001 Ready Energy Management Assessment created by Lawrence Berkeley National Laboratory to score progress on implementation. It was noted that improvements can be made in the elements of operation, support, planning, and performance evaluation.

LM continued working toward reducing nonfleet fuel use. LM continued to complete several large construction, demolition, investigation, and remediation projects at LM-owned sites that have not historically been part of LM's mission. In FY 2023, nonfleet fuel use was 87% less than in FY 2022. This category will be highly variable depending on scope of work for the fiscal year.

LM conducted two major projects in FY 2023 that contributed 81% of LM's nonfleet fuel use. The first was the Amchitka, Alaska, Site project during which diesel fuel was used for the liveaboard vessel support that transported equipment and staff to and from the Amchitka site and for all onboard activities to conduct environmental sampling and postclosure monitoring. Gasoline was used to transport staff on and around the Amchitka site using skiffs and utility task vehicles.

The second project was the demolition of the reactor and administrative buildings at the Piqua, Ohio, Decommissioned Reactor Site. Temporary generators and heavy equipment were needed to complete the work.

1.2 Plans and Projected Performance

Implementation of the 50001 Ready program will continue with focus on the elements that were not at 100% in the 50001 Ready Energy Management Assessment, this will include the areas of operation, support, planning, and performance evaluation. The EnMS program will be audited along with the EMS program during the triennial external EMS audit.

The risk is medium of nonattainment of decreasing EUI. Energy use and EUI will likely increase slightly with the installation of electric vehicle charging stations (EVCSs), and the expansion of the Fernald Preserve Visitors Center building. LM will continue to explore ways to reduce energy usage and EUI and will purchase bundled green electricity when available and practical.

LM will perform the following planned activities to identify improvements in overall energy usage and EUI in goal-subject and excluded facilities in FY 2024 and beyond:

- Assess goal-excluded assets, including extraction wells at the Fernald Preserve and the Shiprock, New Mexico, Disposal Site, for feasible energy-efficiency improvements. The Fernald Preserve extraction wells consume about 60% of the total electricity used by LM-owned assets.
- Prepare the annual LM site energy comparison report, which provides historical energy information for LM buildings and facilities to help LMS site leads make informed decisions on energy-related projects.
- Continue development of an energy and water usage dashboard to better share energy and water data throughout the LM organization.
- Determine whether combining energy and water evaluations with annual site inspections and condition assessment surveys is practical.

- Two energy conservation measures have been identified but are not currently planned or budgeted.
  - Replacing and upgrading the aging heating, ventilation, and air conditioning system at the Fernald Preserve and the Visitors Center as part of the Visitors Center expansion.
  - Replacing the Fernald Preserve electrical transformer.
- Support installation of EVCSs.
- Perform annual energy evaluations to comply with Energy Independence and Security Act (EISA) Section 432 and identify opportunities to reduce energy usage at the following sites:
  - Fernald Preserve
  - Weldon Spring, Missouri, Site
- Examine the cost of installing additional metering on buildings and other processes that would be advantageous for the EnMS.
- Work with appropriate parties to install separate electric metering in the LM data centers at the LM Business Center at Morgantown, West Virginia, and at the LM Field Support Center at Grand Junction, Colorado.
- Work with appropriate parties to install a System Operation and Analysis at Remote Sites (SOARS) connected electric meter in the Weldon Spring Site Interpretive Center.

LM will continue evaluating reductions in nonfleet vehicles and equipment fuel usage at its sites. This category is dependent on the amount of fieldwork scheduled during the year and is highly variable.

LM will perform the following planned activities in FY 2024:

- Monitor the nonfleet vehicle and equipment fuel usage
- Encourage use of energy-efficient generators and equipment
- Continue separate tracking of diesel, gasoline, and propane used for nonfleet vehicles and equipment
- Evaluate and inventory fossil-fueled nonfleet vehicles and equipment to determine feasibility of replacing with electric or other green options

2.0 Energy Management: Net-Zero and Carbon Free Energy

2.1 Performance Status

In FY 2023, LM reviewed all available guidance and Executive Orders to better understand forthcoming requirements for net-zero buildings. LM staff attended Net-Zero Building Design training sponsored by Federal Energy Management Program (FEMP) to better understand requirements, technologies, and funding mechanisms.

2.2 Plans and Projected Performance

LM currently has no plans to complete deep energy retrofits or complete energy conversions to move DOE-owned buildings to a net-zero status. LM EMS Energy Team staff identified buildings that have some fossil fuel component in place, either natural gas or propane. In FY 2024, LM staff will review the cost and feasibility to convert these components to electric or solar power. No deep energy retrofits were identified and there are no new buildings.

3.0 Water Management

3.1 Performance Status

In FY 2023, LM worked to meet the DOE goals of:

- Reducing potable water use intensity compared to the previous year.
- Reducing nonpotable water used for industrial, landscaping, and agricultural (ILA) activities compared to the previous year.

LM did not meet the goal to reduce potable water use intensity in FY 2023 compared to FY 2022. LM water use tends to be highly variable based on project work at both occupied and unoccupied sites. This was again the case in FY 2023.

LM increased its potable water consumption in FY 2023 (822,674 gallons) compared to FY 2022 (331,553 gallons). The changes in potable water consumption in FY 2023 are attributed to the following:

- Potable water consumption at fully leased LM facilities was not previously tracked because the data were not available. However, beginning in FY 2023, LM was able to track potable water consumption at three leased facilities.
- At the LM Operations Center at Westminster, Colorado; LM Business Center at Morgantown, West Virginia; and Pinellas County, Florida, Site; a total of 116,133 gallons of potable water was consumed in FY 2023. Because the data were not available in FY 2022, this inaccurately reflects an increase over FY 2022.
- At the Weldon Spring Site, water use increased significantly (308,600 gallons in FY 2023 compared to 35,800 gallons in FY 2022). This increase is attributed to project water use associated with demolition of the old Interpretive Center building, increased post-pandemic visitation at the new Interpretive Center building by the public, and a potential leak in the irrigation system associated with the new Interpretive Center building.
- At the Fernald Preserve, potable water use increased (169,347 gallons used in FY 2023 compared to 98,634 gallons in FY 2022) due to project water usage associated with the onsite workspace construction project and increased post-pandemic public visitation at the Fernald Preserve Visitors Center.
- At the Grand Junction, Colorado, Disposal Site, water use increased significantly (36,396 gallons in FY 2023 compared to 3192 gallons in FY 2022) due to a project in October 2022 that required a large amount of water for application of soil tack (for dust suppression) and soil testing.

LM often conducts project work at unoccupied sites, and these projects often require large amounts of water to be used for things such as dust suppression, road maintenance or vegetation planting. LM collects and reports on this water use as purchased potable water. On rare occasions nonpotable water is available and is used as a BMP. (In those instances the use is reported as nonpotable ILA). Some of the projects conducted in FY 2023 that utilized purchased potable water include:

- Project work at the Piqua site used approximately 174,000 gallons of purchased potable water for building misting and dust control during demolition, asbestos abatement, and concrete work.
- Hydro vacuuming was completed at the Fernald Preserve Onsite Workspace Project requiring 10,400 gallons of water that was purchased offsite by a subcontractor.

LM met the DOE goal of reducing nonpotable water consumption for ILA activities for FY 2023 which was 37,500 gallons compared to 605,500 gallons used in FY 2022.

LM continued several large construction, demolition, investigation, and remediation or reclamation projects at LM-owned sites that were not historically part of LM's mission. These projects often include major water-consuming end uses at LM sites, such as decontamination and dust-suppression activities.

Project-related activities in FY 2023 involved nonpotable water usage including the Shiprock site, which used 37,500 gallons of nonpotable water obtained from a nearby surface water for fugitive dust control associated with the Many Devils Wash decommissioning project.

LM continually looks for BMPs and considers ways it can reduce, reuse, and recycle both potable and nonpotable water with project-planning tools, such as *Project or Activity Evaluation (PAE)* forms (LMS 1005) and statements of work (SOWs). LM also maintained and followed a water management plan in the *EMS Sustainability Teams Manual*. Potable water meters are installed at goal-subject buildings where they have been proven to be a cost-effective way of ensuring accurate water use reporting and leak detection. Meter readings are recorded monthly by site personnel and tracked in a spreadsheet accessible to all responsible team members. LM also applied stormwater BMPs and required project-specific stormwater controls at projects that occurred in FY 2023 at the following sites:

- Rifle, Colorado, Site
- Shiprock site
- Piqua site
- Fernald Preserve
- Weldon Spring Site

Examples of BMPs to conserve water that were implemented in FY 2023 included:

- Purchase and install leak detectors (YoLink) adjacent to water-consuming equipment at all LM sites with occupied buildings, including the Weldon Spring Site, LM Field Support Center, and the LM Operations Center.
- Avoid project construction work on high wind days to minimize the amount of water needed for fugitive dust control.

LM implemented stormwater control measures to comply with stormwater permitting EISA Section 438 requirements, or both, to improve stormwater quality during the following projects in FY 2023:

- Piqua Reactor Site Demolition Project: Building demolition and site redevelopment began in May 2022 and continued throughout FY 2023. The project resulted in a 10% increase in onsite infiltration in compliance with EISA Section 438. Temporary stormwater controls, including sediment wattles, storm inlet protection, and vehicle tracking controls, were installed to minimize stormwater contamination during demolition activities.
- Fernald Preserve Onsite Workspace Project: Construction of a modular office trailer and a garage and laboratory building began in May 2022 and continued throughout FY 2023. Temporary stormwater controls were installed and maintained in accordance with a Construction Stormwater Pollution Prevention Plan.
- Many Devils Wash Decommissioning Project: Removal of equipment and infrastructure that are no longer needed in the Many Devils Wash area at the Shiprock site reduced DOE's footprint and restored Many Devils Wash to its natural state. The project involved the removal of preexisting waste and debris, regrading rock and soil, and revegetation.

Note

A copy of the water management plan is available on the DOE Sustainability Dashboard.

3.2 Plans and Projected Performance

The overall risk of nonattainment of this water management goal is low considering LM's current policies and procedures that are in place to reduce potable water use intensity associated with buildings at occupied sites. However, with the major initiatives and changes to missions and facilities scheduled at LM sites in upcoming years, the risk of nonattainment of the goal to reduce nonpotable water use consumption and potable water consumption associated with projects (construction, redevelopment, etc.) will be high.

LM has several planned or ongoing activities in FY 2024 involving new construction, renovation, remediation or reclamation, demolition, or decontamination and decommissioning. These activities will require potable or nonpotable water usage at multiple LM sites. LM will use water conservation efforts such as utilizing cost-effective dust suppression and soil moisture conditioning and blending options. The impact to water use intensity and consumption is expected to be minimal, because these projects are planned to be completed in accordance with all applicable water conservation and stormwater management requirements.

Challenges and obstacles to measuring and obtaining water conservation goals and milestones include the following:

- Some large LM projects, with the most opportunity for water conservation implementation, are performed using interagency agreements. The LM EMS Water Sustainability Team has little input to those agreements.
- Some of the buildings designated as "covered facilities" have no water usage, which skews water intensity values.

- Most LM staff and including LMS contractors work in leased buildings where LM has limited input or control of the infrastructure or landscaping practices. In these facilities, LM emphasizes and trains staff on water conservation measures to decrease potable water consumption.
- Water saving measures identified in water evaluations are referred to site management for implementation. Implementation depends on funding, which may or may not be available.
- Many times, water savings measures are completed on items that are not separately metered, so savings are difficult to verify. When the items are separately metered, savings are verified as needed.
- Water use is often project-dependent and can be inconsistent from year to year. Often, there is no way to offset high water usage required to complete a project, resulting in unavoidably variable data.

LM will complete the following activities in FY 2024 to reduce water usage, implement stormwater controls as necessary, and support water conservation measures:

- Continue to track and monitor potable water use intensity and nonpotable ILA water consumption for FY 2024 and beyond to identify opportunities to reuse, recycle, and reduce.
- Continue to utilize and evaluate measures to reduce potable water use intensity.
- Continue to utilize and evaluate measures to reduce nonpotable ILA consumption.
- Ensure early involvement in project planning, using tools such as PAE forms and SOWs.
- Continue to evaluate newly acquired LM sites for water conservation opportunities and improvements to stormwater management controls, if applicable.
- Continue to evaluate requirements for site metering of water usage in accordance with the Energy Act of 2020 Section 1002.
- Evaluate and compare year-to-year potable water usage at the Weldon Spring Site between the old Interpretive Center and the new Interpretive Center as part of the comprehensive water evaluation being completed in FY 2024.
- Continue to evaluate cost-effective dust suppression and soil moisture conditioning and blending options to support ongoing water conservation efforts with site project activities.
- Ensure that daily visual inspections are conducted during water pipeline replacement projects to proactively address leaks in a timely manner.
- Continue implementing International Organization for Standardization (ISO) Standard 50001:2018, *Energy Management Systems*, which should result in the identification of additional water saving measures.
- Continue to evaluate use of alternative water sources (e.g., gray water, harvested rainwater, reclaimed water, process discharge water) to offset the use of fresh surface and groundwater sources.
- Perform annual water evaluations to comply with EISA Section 432 and identify opportunities to reduce water usage at the following sites:
  - Fernald Preserve
  - Monticello, Utah, Disposal and Processing Sites

- Complete and submit LM site-specific comprehensive water evaluations which include a water balance analysis by March 2024 as required by the *Fiscal Year 2023 Site Sustainability Plan Guidance* (DOE 2022). These evaluations will be completed at the following DOE-owned sites with one or more full time employee onsite:
  - Fernald Preserve and Visitors Center
  - Weldon Spring Site Interpretive Center
  - Monticello site
  - Grand Junction site
- Continue to participate in water conservation public outreach opportunities, such as the Ute Water Conservancy Districts Western Colorado Children's Water Festival held annually in May.

4.0 Fleet Management

4.1 Performance Status

LM worked toward the DOE goal of transitioning to a 100% zero emission vehicle fleet by 2035, fleet optimization, and reducing petroleum consumption. LM also worked toward meeting the requirements of Executive Order 14008, *Tackling the Climate Crisis at Home and Abroad*, including Section 205, "Federal Clean Electricity and Vehicle Procurement Strategy," and the government's sustainability efforts.

Currently, 4.8% of LM's fleet of light-duty vehicles are electrically powered. As U.S. General Services Administration (GSA) vehicles come up for replacement, LM evaluates how to adjust its fleet to accommodate additional electric vehicles (EVs) at its sites. This action may require LM to shift vehicles from site to site to allow for EV use at more appropriate and applicable sites. LM work often requires overnight and long-distance travel. LM determined that EVs should not be used for overnight or remote travel, or when the round trip exceeds the EV's mileage range. This determination was made due to limited availability of charging stations across the country, where some states are more limited than others. Additionally, publicly available EV charging stations can be less reliable and often do not function as intended. The ideal scenario for LM's full EVs is for site support vehicles that can be charged at an onsite LM charging network.

LM utilized the replacement cycle opportunity to evaluate the option for plug-in hybrid electric vehicles (PHEVs), which can be used as an EV and a gas-powered vehicle. The ability for these vehicles to operate on gasoline makes these vehicles primary candidates to electrify the LM light-duty fleet because of the lack of charging infrastructure in locations that LM supports. Acquisition of PHEVs would help LM meet the mandate to electrify the LM light-duty fleet by 2027. Replacement is limited to whether GSA is offering PHEVs for the current year.

Telematics were used in LM's fleet of vehicles and equipment to track operational data for the fleet including its EVs. LM continued to follow the *LM/LMS Fleet Management Manual* (LM-Manual-3-13-1.0, LMS/POL/S24625) to ensure optimization of the fleet size to accomplish

the mission using the smallest, most appropriate vehicles possible. For the purpose of right-sizing the fleet, LM evaluates and monitors utilization reports and metrics, including how often vehicles are rented. LM uses Agile Fleet Commander to track its operational and maintenance data for the LM fleet of vehicles and equipment. The ChargePoint account application will be used for reporting and tracking of electrical usage by LM's EV supply equipment (EVSE).

In FY 2023, LM purchased and installed six EVSE level 2 chargers with a total of 12 ports at its five main office sites. These EVSE chargers are a combination of standalone solar charging stations and more traditional charging stations. The following EVSE stations were installed in FY 2023:

- Two ChargePoint stations and four ports at the LM Field Support Center: GSA lot and Atomic Legacy Cabin
- One Beam Global Solar Station and two ports at the LM Operations Center: Rocky Mountain Metropolitan Airport
- One ChargePoint station and two ports at the Fernald Preserve GSA lot
- One Beam Global with ChargePoint interface and two ports at the Fernald Preserve Visitors Center
- One ChargePoint station with two ports at the Weldon Spring Site GSA lot

4.2 Plans and Projected Performance

LM will continue to acquire alternative fuel vehicles and EVs conducive to the mission. The overall risk of nonattainment of this goal is high due to LM's mission and technical constraints. The electrification of the LM fleet will be impacted by both vehicle availability and capability. The demands of LM mission critical work currently exceed the capability of available EVs. LM work often requires long-distance trips on unpaved roads in remote locations. Additionally, hauling requirements of many project support teams and mission critical project teams are extensive and technology has not allowed for an equivalent vehicle to meet the current mission using EVs or PHEVs. LM may consider increasing class sizes of the light-duty vehicles to medium-duty vehicles to accommodate the mission with better flexibility and to right-size the project fleet.

The following activities are planned for FY 2024:

- Continue to gather telematics data from Geotab and analyze data on GSA and Agile Fleet Commander Fleet Management System platforms. The telematics provides an efficient automated method for the LM EMS Vehicle and Fuel Use Team to capture miles driven on each vehicle for DOE reporting.
- Continue to right-size the fleet by reducing the number of oversized or underutilized vehicles and replacing them with EVs as needed.
- Continue installing EVSEs on LM-owned sites as needed.
- Work with landlords to install EVSEs at leased facilities.
- Continue working with the ChargePoint account application to finalize setup of the EVSE rate system.

5.0 Clean and Renewable Energy

5.1 Performance Status

In FY 2023, LM continued to work toward the DOE goal of increasing the use of clean and renewable energy. LM evaluated the new renewable energy requirements and how those requirements would impact LM sites. LM identified which sites were consuming the largest amount of energy and in which balancing areas those sites were located. It was determined that only two sites were located within a retail choice electric area: the Fernald Preserve and the Mound, Ohio, Site. LMS staff began working with utility retailers to find a provider that utilizes carbon-free energy. LMS staff worked with the FEMP, GSA, and Defense Logistics Agency to negotiate new energy contracts with the preferred providers.

Note

Balancing areas as defined by the DOE National Renewable Energy Laboratory: the collection of generation, transmission, and loads within the metered boundaries of the balancing authority. The balancing authority maintains load-resource balance within this area (DOE 2015).

LM's utility contracts are unique, which became a challenge to complete entering into retail choice energy contracts. All of LM's utility contracts and billing are managed by the LMS contractor. Therefore, GSA was not able to set up new contracts on behalf of the contractor; the contracts must go through LM directly.

LM repaired its largest renewable energy installation at the Tuba City, Arizona, Disposal Site in September 2023, and brought it back online. The solar array was damaged in FY 2022 and offline for 19 months. The 285-kilowatt photovoltaic (solar) system provides 77% of LM's onsite renewable energy. The array produced 533,431 kilowatt-hours of electricity in FY 2021, the last full year it was operational. In 2022, the Tuba City site became an unmanned site, and most of the energy produced from this system was returned to the grid, which provides power for the Navajo Nation.

LM purchased renewable energy attribute certificates (EACs) in FY 2023 in accordance with the new requirements. The new requirements greatly impacted LM's ability to purchase EACs for three reasons.

1. There are not as many EACs available to purchase because the renewable energy generation system had to be installed after October 1, 2021, to qualify.
2. The cost of EACs are significantly higher than the cost of renewable energy certificates (RECs). LM purchased 3275 fewer credits in FY 2023 because of the cost of the credits.
3. Credits could only be purchased in the balancing area in which LM sites are located. No EACs were available to purchase for the Weldon Spring Site. LM purchased EACs in Indiana and Colorado.

Overall, LM had a year-over-year decrease in renewable energy use in FY 2023 because of the inoperable solar array at the Tuba City site and the fewer purchased EACs.

LM evaluated its current grid-supplied carbon pollution-free electricity (CFE), onsite and purchased CFE and Legacy CFE to contribute to the DOE baseline data. LM also forecast the expected CFE until 2030. Grid-supplied data was obtained from the retail electric choice supplier at Fernald Preserve and from the U.S. Environmental Protection Agency (EPA) **Power Profiler** webpage for vertically integrated LM sites. All current onsite renewable energy installations are too dated to count as CFE but are included in the legacy CFE 7.5% cap. Projections of needed future CFE-qualifying renewable energy installations are shown in Table 1. Current year purchased CFE in the form of EACs is shown and is escalated as needed in outyears.

Table 1. LM's Forecasted CFE

Metric	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030
1. Total annual CFE (a +b + c + d)	1707	1981	2891	3108	3360	3657	4007	4452
a. Grid-supplied CFE	1216	1401	1606	1644	1684	1724	1766	1808
b. Onsite CFE	0	0	600	690	794	913	1049	1,207
c. Purchased CFE	225	281	352	439	549	687	858	1103
d. Legacy CFE from EPAct 7.5% cap	265	298	334	334	334	334	334	334
2. Total annual electricity usage	3537	3978	4452	4452	4452	4452	4452	4452

Note:
CFE usage is shown in megawatt-hours (MWh).

5.2 Plans and Projected Performance

LM will continue investigating ways to increase renewable energy consumption, mainly by installing photovoltaic systems on LM sites and contracting with energy providers that are producing clean and renewable energy. The expected impact is to increase LM's consumption of clean and renewable energy at LM's facilities.

LM is determining the best way to implement retail electric choice contracts for the Ohio sites; this should be determined before the current Fernald Preserve retail electric choice contract expires in January 2024.

The risk of nonattainment of this goal is high. Meeting this goal will be impacted by:

- Changes in how clean onsite generated and RECs are applied and used.
- Mission changes (e.g., installation of an active water treatment system at the Shiprock disposal site) where additional power will be needed to operate the system.
- Feasibility of replacing existing energy systems with renewable energy systems.

LM plans to complete the following activities in FY 2024 to increase clean and renewable energy consumption:

- Review sites entering the LM inventory for possible renewable energy projects.


Note

All LM sites are reviewed for possible renewable energy projects every 4 years. The next review is scheduled for FY 2025.

- Purchase EACs.
- Investigate the feasibility of replacing items using natural gas equipment in LM-owned facilities with CFE equipment.
- Consider CFE options for natural gas use in future leases.
- Work with FEMP to implement contracts with energy suppliers that will supply additional CFE.
- Continue evaluating ways to increase CFE usage at its sites.
- Contact electric providers for the remaining sites to check on the availability of green tariffs and other methods to increase CFE delivery.
- Revisit existing renewable energy feasibility studies and investigate installing additional renewable energy sources at LM sites and on LM-owned buildings.
- Install additional solar panels at the Rifle site to power the pore water removal enhancement projects.

6.0 Acquisition and Procurement

6.1 Performance Status

The LM EMS Sustainable Acquisition Team focuses on (1) using sustainable acquisition strategies for service and construction contracts and (2) procuring environmentally sustainable products in accordance with DOE Acquisition Regulation (DEAR) requirements (Title 48 *Code of Federal Regulations* Section 9 [48 CFR 9]) and with other applicable DOE and federal procurement policies. In FY 2023, there were no major initiatives or changes to missions or facilities that impacted goal performance.

In FY 2023, LM met the DOE goal of ensuring that 95% of new contract actions for products and services meet sustainable acquisition requirements. LM included in all new contract actions, under new and existing contracts, requirements that the products and services:

- Be energy efficient (i.e., be ENERGY STAR certified or comply with FEMP guidelines, as appropriate).
- Be water efficient (i.e., be certified as water efficient under the EPA WaterSense Program, as appropriate).
- Be biopreferred and biobased (as defined by the U.S. Department of Agriculture [USDA] BioPreferred Program), environmentally preferable (including Electronic Product Environmental Assessment Tool [EPEAT]-registered products), non-ozone-depleting, and nontoxic or less toxic.
- Contain recycled content, including paper containing 30% postconsumer fiber.

LM does not do any contracting, so there are no contracts that need to include DEAR or *Federal Acquisition Regulation* clauses. As a BMP, the LMS contractor, RSI EnTech, LLC, flows these requirements down to the subcontractors.

LM's purchase card data are tracked manually in Microsoft Excel workbooks by the EMS Sustainable Acquisition Team lead. LM does not utilize the Federal Procurement Data System or the System for Award Management (SAM), accessed through SAM.gov, to track biobased product purchases or sustainable acquisition contracts. However, the LMS contractor does use SAM.gov. As a BMP, it was used to enter biobased product purchases completed in FY 2023.

6.2 Plans and Projected Performance

LM's FY 2024 acquisition and procurement practices will remain mostly unchanged from FY 2023. LM will continue to promote sustainable acquisition and procurement to the maximum extent possible. Risk of nonattainment of this goal is low because LM has sufficient management systems and policies in place.

LM will perform the following planned activities to ensure that the goal is met or exceeded in FY 2024:

- Promote sustainable acquisitions and procurement to the maximum extent possible and ensure that 95% of new contract actions, under both new and existing contracts, contain language requiring the supply or use of environmentally preferable or sustainable products and services.
- Use the bimonthly team meetings of the acquisition group to emphasize the federal requirements to acquire designated products (ENERGY STAR, FEMP, WaterSense, BioPreferred Program, EPEAT, etc.) in all procurement actions as applicable.
- Attend the DOE bimonthly sustainable acquisition teleconferences or webinars to stay abreast of what other DOE programs and DOE contractors are doing to purchase sustainable products and services.
- Include the required language to ensure that products and services will be green or sustainable in the LMS contractor's procurement terms and conditions for all commodities and services.
- Ensure that 95% of EPA- and USDA-listed products and services purchased, excluding all purchases made with credit cards, are environmentally preferable or sustainable as subject to certain qualifications.
- Track compliance with the goal of purchasing 95% sustainable products and services and continue using the Sustainable Acquisition Contracts and Biobased Product Purchase Workbooks for reporting.
- Require that purchases of noncompliant energy-efficient products have written preapproval from a subject matter expert.

7.0 Investments: Improvement Measures, Workforce, and Community

7.1 Performance Status

LM continued working toward the DOE goal of implementing life-cycle cost-effective efficiency and conservation measures (ECMs) with appropriated funds or performance contracts. During FY 2023, LM projects did not identify any ECMs that met the monetary requirements for a performance contract. Because no projects were previously done under an energy savings performance contract (ESPC), no measurement and verification of ESPCs was required.

No life-cycle cost-effective ECMs in FY 2023 met the criteria for reinvestment. LM provided all approved fiscal year appropriations, direct obligations, and indirect obligations funding for ECMs, including facility surveys and evaluations in the DOE Sustainability Dashboard. Appropriations and direct obligations are summarized in Table 2.

Table 2. LM's Projected Appropriations and Direct Obligations

LM Appropriations and Direct Obligations for FY 2022–FY 2024					
Fiscal year	Obligations for facility energy and water efficiency improvements, including surveys and audits (dollars)	Estimated annual energy savings anticipated from obligations		Estimated annual water savings anticipated from obligations	
		Energy cost savings (dollars)	Energy savings (million Btu)	Water cost savings (dollars)	Water savings (gallons)
Actual FY 2023	$1,233,363	0	0	0	0
Projected FY 2024	$847,082	0	0	0	0
Projected FY 2025	$9,342	0	0	0	0

Abbreviation:
Btu = British thermal units

LM completed the following activities in FY 2023:

- Evaluated expanding the usage of new technologies (such as remote sensing, telemetry, and uncrewed aircraft system-based sensors with instruments) to improve site monitoring efforts while reducing costs, natural resource use, and business travel-related greenhouse gas (GHG) emissions.
- Pursued additional training on estimating costs, scheduling, and preparing return on investments and simple paybacks.
- Determined the cost-effectiveness of projects and consider the implementation of new technologies for demonstration purposes, the facilitation of technology and information transfer, and the accomplishment of deferred maintenance tasks. This includes studying and applying cost-effective new technologies that enhance protectiveness.
- Continued to refine the scope and estimated implementation costs for projects, evaluate funding sources for financial and technical rigor, and seek appropriate funding sources over the next 5 years for those life-cycle cost-effective ECM projects.

- Continued implementation of ISO 50001:2018 using DOE's 50001 Ready program to identify opportunities for ECMs.
- Completed EISA Section 432 energy and water evaluations.

LM completed several BMPs in regard to ECMs:

- LM staff members took performance contracting courses offered by the FEMP and met with FEMP individuals to get a better understanding of performance contracts and the ability to bundle projects.
- LM verified implemented ECMs during EISA evaluations.
- LM applied for two Assisting Federal Facilities with Energy Conservation Technologies (AFFECT) grants.

The following ECMs and related activities were implemented in FY 2023 using direct obligations funding:

- Completed necessary repairs to bring the 285 kilowatt photovoltaic (solar) panel system at the Tuba City site back online after damage apparently caused by a lightning strike and investigated ways to prevent a future occurrence. This included engaging an electrical engineering firm to evaluate the system.
- Initiated implementation of ISO 50001:2018, *Energy Management Systems*, using DOE's 50001 Ready program to identify opportunities for ECMs.
- Continued using technologies (such as remote sensing, telemetry, and uncrewed aircraft system-based sensors with instruments) to improve site monitoring efforts while reducing costs, natural resource use, and business travel-related GHG emissions.

To improve climate literacy across the LM workforce, LM and the LMS contractor made the Sustainability Performance Division's *Introduction to Climate Change* course (CLI-101DE) a mandatory training for all employees. At the end of FY 2023, 42.7% of LM staff have completed the course in the Learning Nucleus.

LM invested in enhancing LM workforce capabilities and community development in FY 2023 by accomplishing the following:

- Staff attended the 2023 Federal Environmental Symposium in Atlanta, Georgia
- Staff completed necessary training to maintain certification for energy manager
- Staff participated in FEMP-sponsored performance contracting training and worked with FEMP personnel to better understand how to bundle projects to qualify for performance contracts
- Subject matter experts attended function-specific training for sustainable buildings, climate resilience and adaptation, energy performance, and waste management

In 2023 LM worked to support environmental justice by completing the following activities:

- Awarded a continuation on the Navajo Cooperative agreement for 6 years under UMTRCA.
- Awarded a continuation on the Hopi Cooperative agreement for 5 years.

- Awarded environmental justice grants to five Minority Serving Institutions (MSIs) located within 250 of LM's sites so that MSIs can execute environmental justice activities that will benefit disadvantaged communities near LM sites.
- Supported tribal stakeholder participation and community relations with the Navajo Nation and the Hopi Tribe.
- Supported public awareness and understanding about the long-term management of the four Navajo Nation Uranium Mill Tailings Remedial Action (UMTRA) Project sites.
- Fostered productive communication with tribal stakeholders.
- Hired a network coordinator to identify, attend, and represent the network at various tribal events where information and resources about the federal agencies' collaborative efforts and services are shared with community members. The coordinator also organizes a monthly conference call among the network to share agency outreach updates.
- Partnered with tribal agencies and schools on Navajo Nation land to promote science, technology, engineering, and mathematics (STEM) education and careers. LM provides informational materials at STEM outreach events.
- Continued to offer internships through the DOE Mentorship for Environmental Scholars (MES) Program. The MES Program recruits, trains, and places interns at DOE laboratories and LM offices across the United States. Annually, the program selects 15 students from traditionally underrepresented organizations, such as Historically Black Colleges and Universities, Hispanic-Serving Institutions, and Tribal Colleges and Universities, to do research and support work for 10 weeks during the summer. The students major in studies integral to the DOE mission.
- Supported the Navajo Nation Ten-Year Plan. LM interacts with other federal and Navajo agencies through Community Outreach Network meetings. These meetings bring agencies together to accomplish the overall goal of informing and educating community members as a group.

7.2 Plans and Projected Performance

LM will continue working toward the DOE goal of implementing life-cycle cost-effective ECMs with appropriated funds or performance contracts. LM will evaluate projects for identification of ECMs and potential performance contracts early in the planning activities. LM does not have any life cycle cost-effective projects planned in FY 2024 that would be eligible for ESPCs, utility energy service contracts, or power purchase agreements. Funds are not identified in current or forecasted years for life cycle cost-effective ECMs that could be completed within the 2-year time constraint (from project identification to completion) for using performance contracts. Additionally, LM ECMs are usually small in dollar amount and do not meet the funding requirements for performance contracts. Typically, LM ECMs are implemented using direct obligations. The overall risk of nonattainment of this goal is high due to finance and technical constraints and the nature of LM sites and activities.

LM will perform the following planned activities:

- Evaluate expanding the usage of new technologies (such as remote sensing, telemetry, and uncrewed aircraft system-based sensors with instruments) to improve site monitoring efforts while reducing costs, natural resource use, and business travel-related GHG emissions.

- Pursue additional training on estimating costs, scheduling, and preparing return on investments and simple paybacks.
- Continue to examine reinvestment potential to use realized cost savings from ECMs.
- Expand awareness of ECMs to assist LM site managers in identifying potential ECMs.
- Evaluate deferred maintenance activities for opportunities to enter utility contracts.
- Determine the cost-effectiveness of projects and consider the implementation of new technologies for demonstration purposes, the facilitation of technology and information transfer, and the accomplishment of deferred maintenance tasks. This includes studying and applying cost-effective new technologies that enhance protectiveness.
- Continue to refine the scope and estimated implementation costs for projects, evaluate funding sources for financial and technical rigor, and seek appropriate funding sources over the next 5 years for those life-cycle cost-effective ECM projects.
- Continue to reinvest cost savings realized from ECMs, where applicable.
- Continue implementation of ISO 50001 using DOE's 50001 Ready program to identify opportunities for ECMs.
- Complete EISA Section 432 energy and water evaluations.

LM will continue investing in the workforce by encouraging staff to take sustainability, climate adaptation and resiliency, and core competency training.

In addition, LM will perform the following planned activities in FY 2024 and beyond:

- Maintain the certified energy manager's certification
- Identify an additional person to take energy manager training
- Communicate information about upcoming training events to personnel
- Prepare sustainability and climate-related communication information for LM staff
- Continue to inform and educate LMS site and facility leads on performance contracting and AFFECT funding opportunities
- Take training offered by FEMP
- Continue community investments by incorporating or expanding environmental justice into operations, planning, decision-making, and procurement activities

In support of environmental justice, LM plans to:

- Continue supporting the Navajo Nation and Hopi Tribes through the cooperative agreements. Navajo Nation has agreements under the Defense-Related Uranium Mines (DRUM) Program and UMTRA Project. Hopi Tribe has an UMTRA agreement.
- Provide input and updates to the EPA's 10-year plan for addressing uranium contamination throughout the Navajo Nation.
- Participate in 10-year plan meetings with federal and Navajo Nation agencies.

- Continue awarding grants, based on funding availability, to MSIs located within 250 miles of LM's sites so that MSIs can execute environmental justice activities that will benefit disadvantaged communities near LM sites.
- Evaluate guidance and orders on incorporating environmental justice into procurement activities.
- Update manuals, procedures, and plans accordingly, as well as supporting other environmental justice outreach events and activities.
- Support tribal stakeholder participation and community relations with the Navajo Nation and the Hope Tribe.
- Collaborate with the Navajo Nation Abandoned Mine Lands (AML) Reclamation/UMTRA Department and the Hopi Tribe UMTRA Program on outreach activities.
- Prepare and participate in STEM activities in nearby communities.
- Continue to support the team that is exploring the need to integrate STEM education into formal and informal learning for indigenous students.
- Continue to search the List of Navajo-Owned Certified Businesses to look for businesses that can perform the work needed on LM sites on Navajo Nation land.
- Support students through STEM programming in high schools, collaborative internships and mentorships for college students, and employment opportunities for recent graduates.
- Inform the public about current and planned activities related to the sites.
- Educate the public and soliciting public input about site activities and operations.
- Present information to correct misperceptions about LM sites.
- Provide public access to site information, reports, and other documents.
- Promote use of the LM public website and social media as sources of information.
- Conduct community-based site meetings, open houses, and tours.
- Continue to support tribal stakeholder participation and community relations with the Navajo Nation and the Hopi Tribe.
- Collaborate with the Navajo Nation AML Reclamation/UMTRA Department and the Hopi Tribe UMTRA Program on outreach activities.
- Participate and encourage STEM activities in nearby communities.

8.0 Fugitives and Refrigerants

8.1 Performance Status

LM continued to work toward the overall DOE goal of reducing Scope 1 GHG emissions by reducing the purchase and use of fugitive gases and refrigerants. There is no specific quantifiable performance goal to report on for fugitive gases and refrigerant emissions, which are only two of many contributors to LM's overall Scope 1 GHG total emissions.

In FY 2023, the use of fugitive gases and refrigerants continued to be a relatively small part of LM's overall operations and represented a small fraction of overall anthropogenic carbon dioxide equivalent emissions for the organization. LM has no High-Energy Mission-Specific Facilities.

No major initiatives or changes to LM's mission occurred in FY 2023 that contributed in significant ways to LM's fugitive or refrigerant use and GHG emissions performance. Changes in the inventory of refrigerants from FY 2022 to FY 2023 resulted from replacing items in accordance with the manufacturer replacement schedule, and the addition of items needed or the removal of items no longer operational.

LM's inventory and use of refrigerants is limited to refrigerators deep freezers, ice machines, air conditioning systems and coolers, and drinking fountain coolers. Whenever possible, refrigerants are replaced with equipment that contain less-toxic alternative chemicals or alternative equipment not containing fugitive refrigerants. Figure 1 shows a total quantity, in pounds, of refrigerants at LM sites. R-410a is the most abundant refrigerant used, primarily in air conditioning systems. As LM acquires new systems or replaces existing systems the R-410a will be phased out as it becomes less available in the market and replaced with a less-toxic alternative. The same will occur with R22 and R-134a.

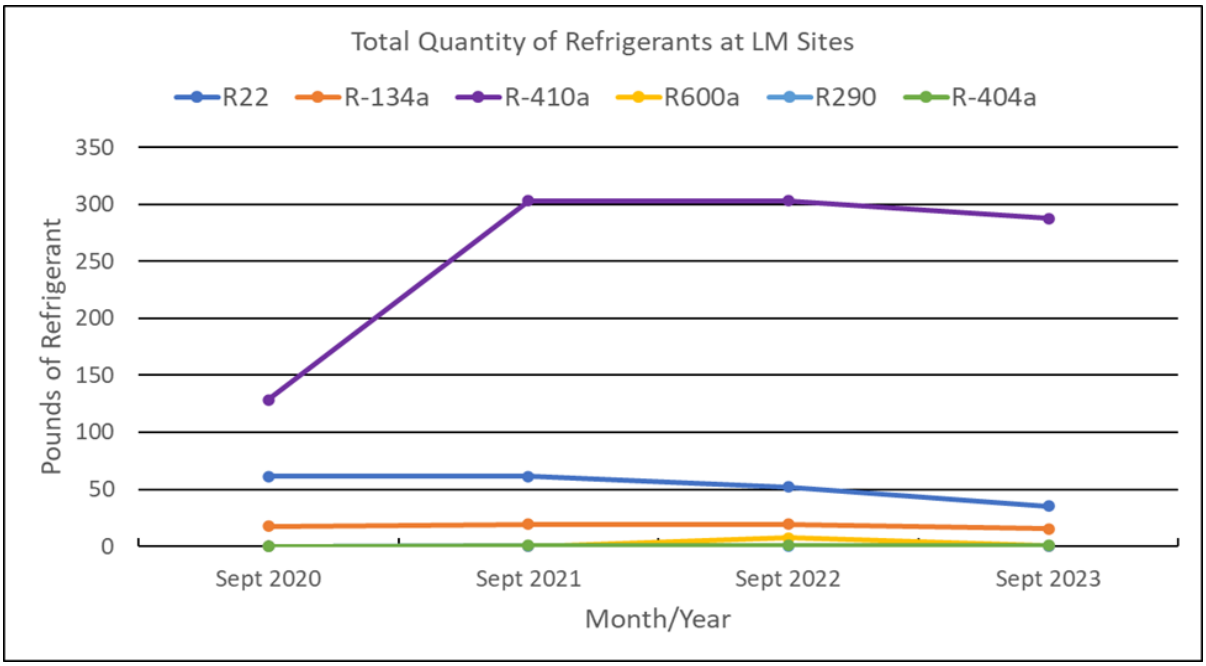
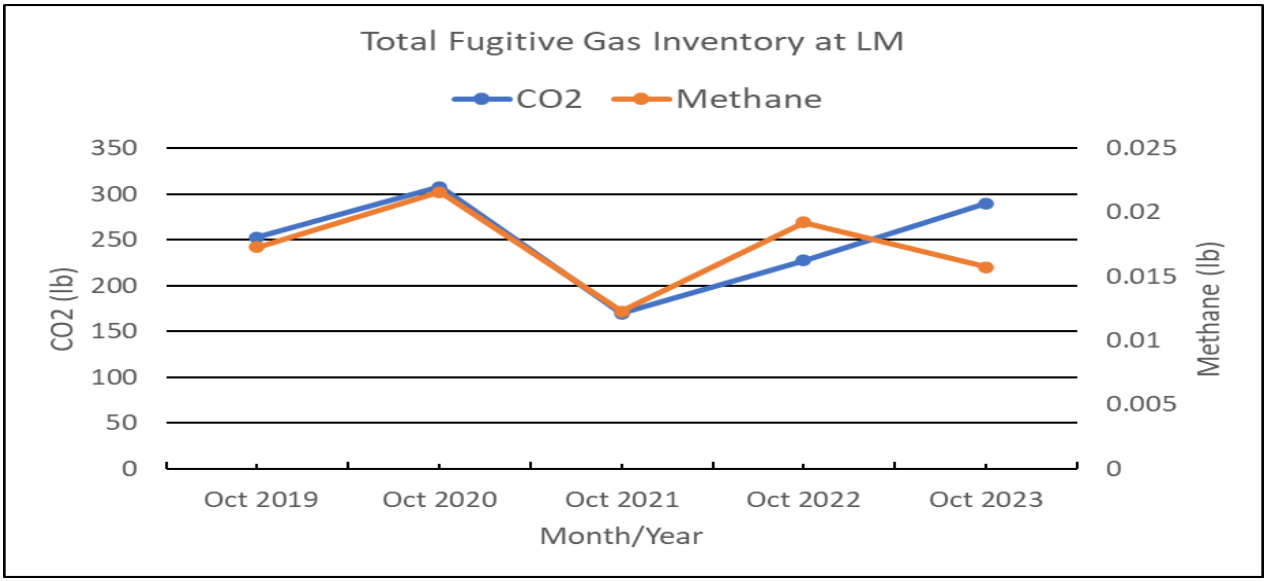


Figure 1. Total Quantity of Refrigerants at LM Sites

Fugitive gases, carbon dioxide and methane, are used at LM sites for groundwater monitoring and instrument calibration activities conducted by field staff. The amount of carbon dioxide and methane in storage at the end of FY 2023 is similar to the amount in storage at the end of FY 2019, before the COVID-19 pandemic. Regular sampling activities continued in FY 2023, and gases were purchased to restock LM's inventory (Figure 2).



Abbreviations: CO_2 = carbon dioxide, lb = pounds

Figure 2. Total Fugitive Gas Inventory at LM

8.2 Plans and Projected Performance

LM's FY 2024 fugitive gas and refrigerant management practices will remain mostly unchanged from FY 2023. Fugitive gas-consuming activities (e.g., sampling and calibration) and use of refrigerant equipment (e.g., refrigerators, cold water drinking fountains, and air conditioning units) will continue to be minimal in FY 2024. No fluorinated gases will be added to LM's inventory. The overall risk of nonattainment of this goal is low.

LM remains committed to reducing GHG emissions associated with fugitives and refrigerants and plans to conduct the following activities in FY 2024:

- Maintain inventories of fugitive gases and refrigerants and update the inventories at least once per year
- Remove unneeded gases or equipment from inventory and dispose of them in an environmentally compliant manner
- Replace aged equipment containing hydrofluorocarbons in accordance with the manufacturer's replacement schedule or as equipment breaks and needs to be replaced (e.g., refrigerators, air conditioning systems)

9.0 Adaptation and Resilience

9.1 Performance Status

In FY 2023, LM continued to work toward the DOE goal of implementing climate adaptation and resilience measures. LM continued to provide updates on the identified resilience solutions reported in the LM Vulnerability Assessment and Resilience Plan (VARP). In January 2023 the

Climate Change Risk and Resilience Assessment Project for the U.S. Department of Energy Office of Legacy Management Final Report (LBNL et al. 2023) identified several sites that are most vulnerable to temperature increases, extreme precipitation, flooding, and wildfire risk. Recommendations for the Canonsburg, Pennsylvania, Disposal Site are among the solutions to be implemented. In addition, site personnel revised and updated additional cost-effective resilience solutions for 24 sites. The following is a short list of some of more than 50 identified activities:

- Establish erosion control and flood mitigation structures to prevent a disposal cell breach that would allow contaminated water to seep into the groundwater after a precipitation event
- Remove ponded water from disposal cell depressions
- Conduct site inspections periodically and consider wildfire season when scheduling inspections
- Mow vegetation around the SOARS stations as needed to reduce the amount of available fuel around them in case of wildfire
- Plant additional vegetation to support riparian corridor
- Place transducers into onsite groundwater monitoring wells to help understand the impact of extreme precipitation events

The costs of implementing some resilience solutions such as inspections, weather notifications, and vegetation management are included in a site's budget as part of the overall program and are planned for in the life-cycle budget for 75 years. Other project costs are prioritized based on immediacy of need. Large projects are prioritized and added to LM's "shovel ready" list of projects that are evaluated, prioritized, and executed when funding becomes available.

9.2 Plans and Projected Performance

LM continues working toward the DOE goal of implementing climate adaptation and resilience measures to reduce risk to critical assets and infrastructure and to provide adequate energy and water supplies, facility operations, information and communication technology capability, and transportation availability. The risk of nonattainment of this goal is low.

During FY 2024, the following activities are planned to ensure that LM meets the goal of implementing climate adaptation and resilience measures:

- Support sustainability and resilience initiatives, including the Executive Orders, DOE Order 436.1A, *Departmental Sustainability*, DOE Climate Adaptation and Resilience Plan, and DOE Sustainability Performance Plan.
- Update and evaluate resilience solutions identified in the DOE Sustainability Dashboard's Resilience Solution Tracking for future planning and implementation.
- Review and update planning documents, procedures, and policies based on the recommendations and solutions identified in the VARP and the Lawrence Berkeley National Laboratory analysis.
- Continue to perform required site inspections and additional, event-based inspections as needed.

- Install a new standby generator for the LM Field Support Center, Building 46, Data Center.
- Evaluate the capabilities of current SOARS monitoring stations, prioritize sites with stations for upgrades, and prioritize sites without stations for system installation.
- Continue improvements to the Emergency Management program to ensure that the LM program can successfully respond to changing conditions, emergencies, and disruptions in service.
- Prepare or update all hazards surveys, emergency planning hazard assessments, and Site Emergency Management Risk Assessments as applicable.
- Establish and maintain interfaces with local, state, tribal, and federal organizations responsible for emergency response or who may be used to supplement response capabilities based on threats/hazards identified in the all-hazards planning basis to include planning for severe events.
- Maintain the LM/LMS Wildland Fire Emergency Action Plan (Appendix B, *LM/LMS All Hazards Emergency Management Plan* [LM-Procedure-3-20-17.0, LMS/POL/S37643]) and site-specific wildland fire management plans in compliance with DOE Order 420.1C Chg. 2, *Facility Safety*.
- Identify areas where there is wildland urban interface and update or develop the wildland fire management plans to include details on urban interface issues and protective measures.
- Provide Asset Management, Safety and Health, Environmental Compliance, and Quality Control support as needed for LM AFFECT grant awards or other energy savings/renewable energy project development.
- Continue to train staff on sustainability and resilience initiatives.

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