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Defense-Related Uranium Mines Program Management Plan
2017–2021

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U.S. DEPARTMENT OF ENERGY | Legacy Management

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for the U.S. Department of Energy Office of Legacy Management

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Abbreviations

AEC	Atomic Energy Commission
AML	Abandoned Mine Lands
AUM	Abandoned Uranium Mine
AUMWG	Abandoned Uranium Mine Multi-Agency Working Group
BLM	U.S. Bureau of Land Management
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CWBS	Contract Work Breakdown Structure
DOE	U.S. Department of Energy
DRUM	Defense-Related Uranium Mines
FOIA	Freedom of Information Act
GIS	Geographic Information System
IWCP	Integrated Work Control Process
LCB	Life-Cycle Baseline
LM	Office of Legacy Management
LMS	Legacy Management Support
MOU	Memorandum of Understanding
NEPA	National Environmental Policy Act
PgMP	Program Management Plan
TAM	Task Assignment manager
USC	*United States Code*
USFS	U.S. Forest Service
V&V	verification and validation
WBS	Work Breakdown Structure

Executive Summary

The Defense-Related Uranium Mines (DRUM) Program Management Plan (PgMP) provides the structure and basis for U.S. Department of Energy Office of Legacy Management (LM) and its Legacy Management Support (LMS) contractor to manage the verification and validation (V&V) of defense-related uranium mines (mines) that provided ore to the Atomic Energy Commission. V&V activities are conducted to fully understand the scope of the problem posed by these mines by determining their location, reclamation or remediation status, and potential impacts to public safety, human health, and the environment. This PgMP describes how LM, the LMS contractor, and partner agencies will work as a cohesive team to execute the DRUM Program. Additionally, the PgMP is a living document and will be revised as necessary.

The DRUM PgMP aligns with Goal 1 of the Legacy Management *2016–2025 Strategic Plan*. Goal 1's charge is "to protect human health and the environment." Objective 4 falls under Goal 1 and addresses the environmental legacy of defense-related uranium mines. The following are activities that will be employed by the DRUM Program to meet Objective 4:

- Improve data quality and content in the U.S. Department of Energy national inventory of abandoned uranium mines
- Conduct site-specific reconnaissance at mines for data validation and verification
- Exchange mine information with other federal agencies and state governments to help address mines presenting the greatest risks

DOE entered into memoranda of understandings (MOUs) in 2016 with the U.S. Bureau of Land Management (BLM) and U.S. Forest Service (USFS) to facilitate a better understanding of the scope of the problem posed by the mines. Currently, LM has signed MOUs with BLM Colorado, New Mexico, and Utah offices and the USFS Rocky Mountain Region, which includes Colorado, Wyoming, and South Dakota. This collaborative effort with partner agencies has led LM to develop a V&V Work Plan that describes the numerous activities and types of data to be collected. The V&V activities will be used to verify location, collect features, collect radiological data and soil samples, screen mines and features using a risk-based screening approach, and summarize the information for partner agencies to assess priorities and determine if any further action is warranted. Additionally, the site visits will identify potential physical safety hazards.

The DRUM Program has four main projects:

- Mine data reconciliation
- Field inventory
- Environmental sampling
- Data management

Together, these projects comprise LM's efforts to V&V mines.

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1.0 Purpose

This 2017–2021 Defense-Related Uranium Mines (DRUM) Program Management Plan (PgMP) presents the U.S. Department of Energy (DOE) Office of Legacy Management (LM) and Legacy Management Support (LMS) contractor's implementation strategy of the DRUM Verification and Validation Program (DRUM Program). This PgMP is the primary guiding document of the program. It describes how LM, the LMS contractor, and partner agencies will work as a cohesive team to execute the DRUM Program. Additionally, the PgMP is a living document and will be revised as necessary.

2.0 Introduction

The DRUM PgMP supports LM's mission of protecting human health and the environment by addressing the environmental legacy of Defense-Related Uranium Mines (mines). This includes conducting verification and validation (V&V) activities to fully understand the scope of the problem posed by these mines by determining their location, reclamation or remediation status, and their potential impacts to public safety, human health, and the environment.

3.0 Background and Overview

3.1 Background

The Atomic Energy Commission (AEC) was created in 1946 by the Atomic Energy Act. The mines that are the focus of the DRUM Program have a production history that is generally limited to the period of 1947 to 1970 (Figure 1), which is when uranium ore was sold to AEC for defense-related purposes. Following a brief transition period, after 1970, uranium ore production was conducted solely for commercial nuclear power purposes. A few of the mines kept producing after 1970.

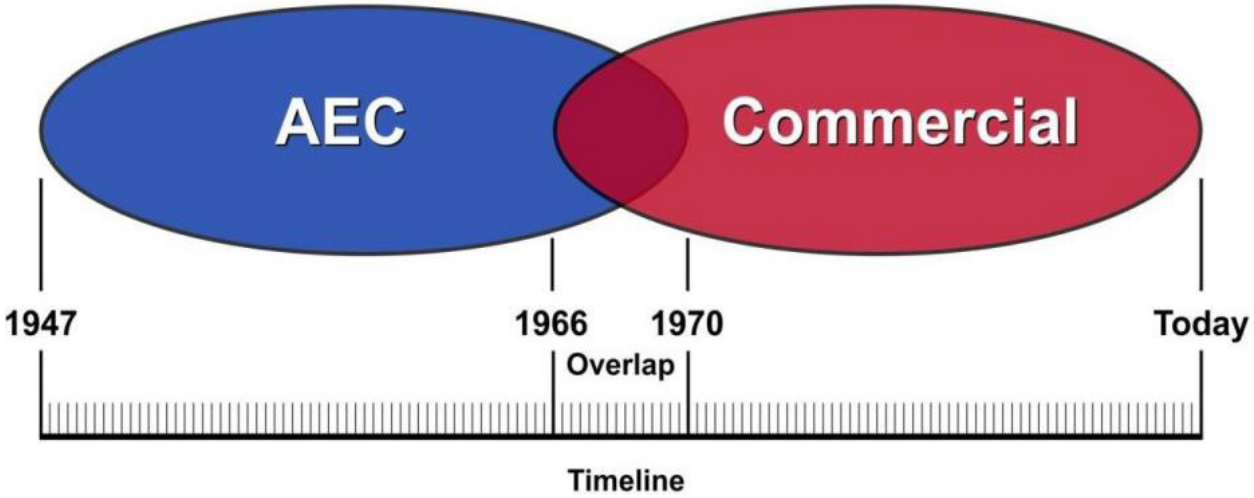

Figure 1. Timeline of Uranium Ore Production

The National Defense Authorization Act for Fiscal Year 2013, enacted January 2013, mandated that DOE prepare a Report to Congress on abandoned uranium mines. Specifically, Section 3151 of the Act states, "The Secretary of Energy, in consultation with the Secretary of the Interior and the Administrator of the Environmental Protection Agency, shall undertake a review of, and prepare a report on, abandoned uranium mines in the United States that provided uranium ore for atomic energy defense activities of the United States." The Act also requires consultation with other relevant federal agencies, affected states and tribes, and the interested public.

In August 2014, LM submitted a Report to Congress that generally addresses:

- The location of mines on federal, state, tribal, and private lands, and the status of efforts to remediate or reclaim these mines.
- The extent to which mines pose a significant radiation hazard or other public health and safety threat and cause, or have caused, water or other environmental degradation.
- A priority ranking for the reclamation and remediation of mines.
- The potential cost and feasibility of reclamation and remediation in accordance with federal law.

LM defines a mine as a feature or complex that is generally associated with a patented or unpatented mining claim (established under the General Mining Law of 1872, as amended) or a lease of federal, state, or tribal lands (DOE 2014). Information available from AEC records and various federal and state agency databases, tribal abandoned mine land programs, maps, and other documents determined that 4225 mines exist across the United States. It was further determined that approximately 2500 mines are located on lands managed by the U.S. Bureau of Land Management (BLM) and the U.S. Forest Service (USFS).

After the Report to Congress, LM help found the Abandoned Uranium Mine Multi-Agency Working Group (AUMWG), which is composed of federal agencies including DOE, the U.S. Environmental Protection Agency, BLM, the Department of the Interior, USFS, the U.S. Department of Agriculture, and the U.S. Bureau of Indian Affairs. Through the AUMWG collaboration, DOE, BLM, and USFS determined that many unknowns (i.e., status, location, ownership) still exist for the approximate 2500 mines on public lands and national forests. As a result, DOE entered into memoranda of understanding (MOUs) in 2016 with BLM and USFS to facilitate a better understanding of the scope of the problem posed by the mines. Currently, LM has signed MOUs with BLM Colorado, New Mexico, and Utah offices and the USFS Rocky Mountain Region, which includes Colorado, Wyoming, and South Dakota.

This collaborative effort with partner agencies led LM to develop a V&V Work Plan that describes the numerous activities and types of data to be collected that focus on assessing the risk to the public and environment, while reducing many of the previously mentioned unknowns. The V&V activities will be used to verify mine location, inventory features, collect radiological data, obtain soil and water samples as needed, screen mines and features using a risk-based screening approach, and summarize the information for the partner agencies to assess priorities and determine if any further action is warranted. Additionally, the site visits will identify potential physical safety hazards.

3.2 Overview

The Report to Congress provides the framework for LM's DRUM Program. The program's goal is to verify and validate 2500 mines located on BLM- and USFS-managed lands by 2022. Additional mines on private and state lands will be addressed by state abandoned mine lands (AML) programs. The program entails four projects: (1) mine data reconciliation; (2) field inventory; (3) environmental sampling; and (4) data management. Mine data reconciliation involves the review of AEC records with available information such as maps and reports and data from partner agencies to determine land ownership and locations. Field inventory confirms the location of the mines, collects information on features, and assesses potential physical safety hazards. Environmental sampling involves sampling for radionuclides and heavy metals and assessing risks posed by the mines. Data management includes upgrading the DOE DRUM Program database; improving the database's functionality to allow team members to easily access and analyze the data; revising old or adding new mine data to the database; appropriately safeguarding and sharing data with partner agencies; and maintaining the integrity of data and upkeep of the database. Figure 2 shows how the program and these projects will be managed through this PgMP.

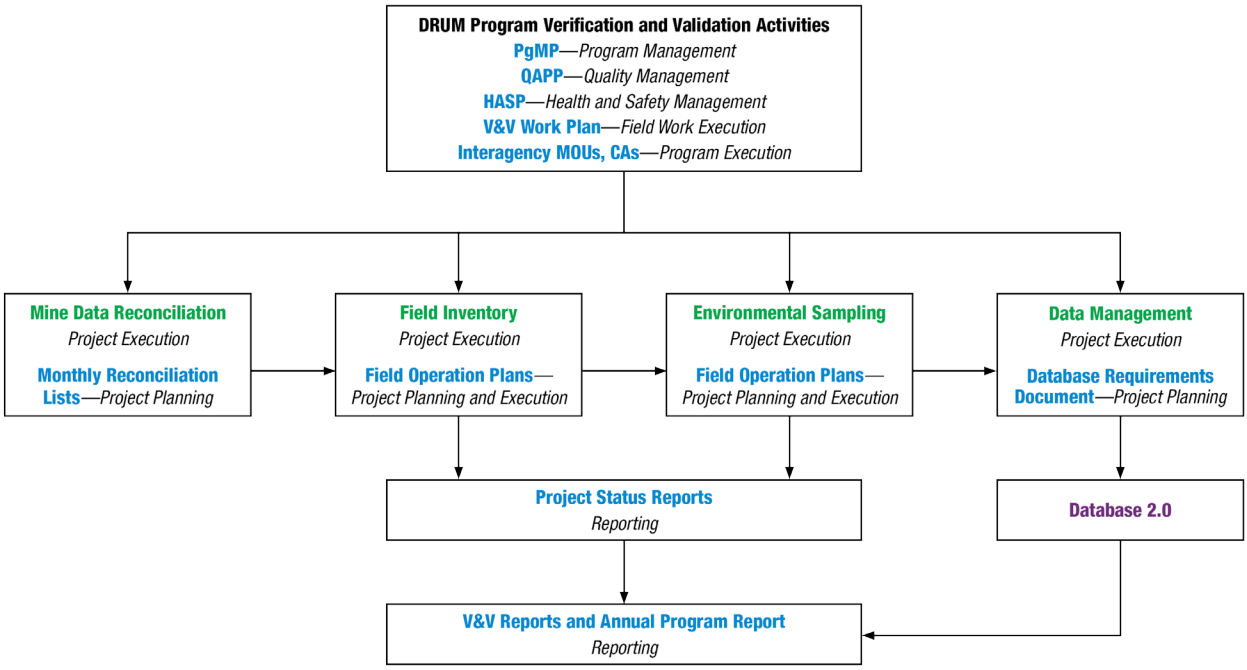

Figure 2. DRUM Program Flow Diagram

4.0 Program Authority

The authorities for LM to conduct the DRUM Program include the following:

- National Defense Authorization Action for Fiscal Year 2013
  - — DOE has the authority to undertake a review of abandoned uranium mines that provided uranium ore for defense-related activities of the United States.

- Atomic Energy Act of 1954, as amended, Title 42 *United States Code* Section 2011 (42 USC 2011) et seq.
  - DOE is authorized to protect public health and safety during its activities.
- Department of Energy Organization Act of 1977 (42 USC 7101 et seq.)
  - DOE is authorized to enter into agreements with other federal agencies to carry out its functions.
- Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) (42 USC 9601 et seq.)[1]
  - DOE is authorized to undertake response action to investigate the release or threat of release of hazardous substances on or from sites under its jurisdiction, custody, or control.

5.0 Goals, Objective, and Approach

5.1 LM Goals and Objective

The DRUM PgMP aligns with Goal 1 of the Legacy Management *2016–2025 Strategic Plan* (DOE 2016) (Strategic Plan). Goal 1's charge is "to protect human health and the environment." Objective 4 falls under Goal 1 and addresses the environmental legacy of mines. The following are strategies that will be employed by the DRUM Program to meet Objective 4:

- Improve data quality and content in the DOE national inventory of abandoned uranium mines
- Conduct site-specific reconnaissance at mines for data validation and verification
- Exchange mine information with other federal agencies and state governments to help address mines presenting the greatest risks

5.2 DRUM Program Approach

LM is partnering with state and federal agencies to implement a coordinated, multiyear DRUM Program in partnership with BLM, USFS, and state AML programs. Additional mines on private and state lands will be addressed through partnerships with the state AML programs.

The DRUM Program consists of mine data reconciliation, field inventory, environmental sampling (which includes ranking mines based on potential risks to human health and the environment), and data management.

[1] The DRUM Program is limited to field inventory and environmental sampling at mines. These activities are not subject to CERCLA requirements. However, CERCLA may be invoked if the release or threat of release of a hazardous substance exists at a mine.

Activities that will be employed to meet Objective 4 of the Strategic Plan include:

- Developing and finalizing MOUs and cooperative agreements with federal agencies and state AML programs, respectively.
- Identifying, exchanging, and discussing agency objectives, expectations, and data collection needs.
- Developing DRUM Program documents that support joint efforts with federal and state agencies.
- Analyzing historical mining data to determine land ownership and status, mine features, and location.
- Developing project areas for mine inventories and environmental sampling.
- Performing mine inventories and environmental sampling in project areas.
- Developing a priority ranking plan to rank mines for the benefit of partner agencies.
- Refining and managing the DOE DRUM Program database to accommodate new data collection, analysis, and reporting.
- Sharing information and data with partner agencies.

6.0 Program Administration

6.1 Contract Management

Effective contract management ensures that LM and LMS managers, staff, and subcontractors know what DRUM Program activities and services are to be performed under the LMS contract. Contract work definition is generally a process that progresses from LM direction and subsequent negotiations to the LMS contractor's preparation of detailed work packages. During negotiations with the LM and work package preparation, the LMS contractor prioritizes tasks to ensure that worker safety and environmental protection will not be compromised.

6.1.1 Procurement and Contracts Management

The *Procurement Manual* (LMS/POL/S04334) provides direction for the procurement of equipment, services, and subcontracts and ensures the most economical and efficient manner will be used to procure services for DRUM Program work in accordance with the federal and prime contract requirements, programmatic schedules, best commercial practices, and established safety and health requirements.

The *Integrated Work Control Process* (IWCP) (LMS/POL/S11763) document provides for initiating, authorizing, performing, and conducting work within the LMS Projects and Programs scope in the LMS contract. The IWCP defines the roles and responsibility of the LMS DRUM Program staff and subcontractors, as applicable. The LMS contractor uses subcontractors to provide services such as unmanned aerial vehicle or drones services for data collection. Part of the subcontracting process is to identify and communicate the hazards that the subcontractor may be exposed to while performing work and identify and communicate the hazards that the subcontractor tasks may cause.

6.1.2 Work Breakdown Structure

All LMS contract costs are categorized by Contract Work Breakdown Structure (CWBS), cost element, and organizational structure. For task assignment costing and performance measurement, all costs must be captured by the CWBS element.

CWBS accounting can be defined as the ability to account for all costs with the Work Breakdown Structure (WBS) network. The network collects costs at the lowest level of the network (the work package) and rolls them into successively higher levels of the WBS network. The CWBS is the official internal breakdown for the purposes of tracking approved DRUM Program work scope and budget/cost collection.

At the work package level, the definition of work must include sequence, schedule, task breakdown, labor, or any other details that specify how and when work will be performed. These details are used to determine the DRUM Program's standards and requirements for the work scope to analyze hazards, develop controls, and determine what skills and training are required. The LMS contractor also uses the details to ensure that the right resources are allocated to address safety, environmental, and operational considerations.

6.1.3 Performance Milestones

Contract performance milestones are scheduled events identified in the schedule baseline marking the due date for the accomplishment of a specified effort (work scope) or objective. A milestone may mark the start, an interim step, or the end of one or more activities. There are four types of milestones used: performance evaluation and measurement plan, contract, baseline, and internal. Each has a particular change control level and is used for tracking and reporting purposes.

LM establishes performance milestones for the DRUM Program to measure LMS performance on priority DRUM Program tasks and deliverables.

6.1.4 Budget and Cost Baseline

LMS work performance begins after LM has approved the contract task plan and after contract funding has been received. Formal task assignment controls for funds management, accounting, work authorization, performance analysis, and reporting ensure completion of the technical work scope in a cost-efficient and timely manner. The contract budget baseline is associated with the baseline milestones, and performance is tracked using earned value management tools.

The *Project Management Control Systems Manual* (LMS/POL/S04330) and the *Finance and Accounting Manual* (LMS/POL/S04342) establish the requirements and responsibilities for management of the LMS contractor's financial reporting. The LMS contractor maintains an information system to identify, assemble, analyze, classify, record, and report its transactions, events, and conditions. Management is responsible for providing appropriate communication to give employees an understanding of their roles and responsibilities regarding financial reporting objectives and controls.

6.1.5 Life-Cycle Baseline

Contract Life-Cycle Baseline (LCB) planning information helps support the LM organization and a number of its orders and procedures. LCB planning is the starting point for contract budget planning and is used throughout the planning cycle. LCB planning provides the context for the budget and for how contract work is prioritized and executed.

The near-term 5-year LCB lays out a strategy of how the LMS contractor will support LM in implementing the DRUM Program. LMS support for the DRUM Program will increase to meet the DRUM Program's performance measure of completing V&V work for 2500 mines by the end of 2021.

6.1.6 Baseline Change Proposals

The LMS contract change control procedure is a formal, documented process in which changes are proposed to a task assignment budget or performance measurement baseline, including scope, budget, schedule, and parameters, due to modifications in requirements, design development, or desired improvements. Changes are controlled to maintain the validity and integrity of the task assignment baseline. A baseline change proposal is an internal change to the performance measurement baseline that is initiated by the LMS Task Assignment manager (TAM) when a potential scope, schedule, or budget change has been identified. The TAM obtains technical direction from LM for the change being requested in the baseline. By following the directions in the *Project Management Control Systems Manual*, the TAM will ensure that an accurate and complete baseline change proposal form has been prepared.

6.2 Schedule

The DRUM Program schedule is approved as part of an integrated time-phased plan for accomplishing work scope requirements. The scheduling process is initiated and planned using project team members who develop duration and cost estimates that are realistic, aligned with program objectives, and risk-informed through supporting analysis, assumptions, and documented basis of estimates.

Schedule management is implemented through the use of sound management practices, including risk management and baseline change control. The schedule provides the time-phasing of cost expenditures for approved work scope that supports the LM requirements. The *Project Management Control Systems Manual* presents the procedures involved in developing schedules, using the performance measurement baseline, and controlling the schedule for task assignments managed under the LMS Earned Value Management System.

6.2.1 Contract Schedule

Contract schedules that are consistent with the WBS, integrated with the cost baseline, and represent all site and activity work scope shall be developed. An approved schedule baseline that clearly depicts critical path activities and milestones will be established.

6.2.2 Program Schedule

The Program Schedule is a collaborative effort by LM and LMS to plan key tasks and identifies start and end dates as well as interdependencies with other schedule tasks. Critical milestones and deliverables are also identified. The Program Schedule is a management tool that is updated regularly and shared with partner agencies for communications and coordination.

6.3 Records Management

The *Records Management Manual* (LMS/POL/S04327) establishes the requirements and responsibilities for the management of LM and contractor records. Records created or received during performance of the DRUM Program are maintained at the offices in Grand Junction, Colorado, and LM Business Center in Morgantown, West Virginia. A DRUM Program LM File Plan provides structure for developing and implementing continuous, systematic, and cost-effective controls over each phase of the records life cycle: creation or receipt, maintenance and use, and disposition.

A project-specific file plan identifies the records to be generated, file locations, and retention schedule for DRUM Program records. The file plan is augmented by the *Records Management Manual*, which establishes the requirements for preparing, preserving, and storing records. Project personnel work with the Records Management lead to ensure that project records are correctly identified and maintained in accordance with the applicable file plan. Modifications to the file plans shall be submitted to the Records Management lead and are subject to review and approval by the TAM.

All records generated during the DRUM Program, including analytical reports, field data sheets, field calibration records, trip reports, chain-of-custody forms, and data validation documentation are stored electronically in a task-specific folder in a protected network location. After all the information is completed, the designated records coordinator in the Records Management organization captures the contents of the folder for inclusion as records. Retention time for these records is 75 years.

7.0 Program Scope

The goal for the DRUM Program is to conduct V&V for over 2500 mines by 2022. LM, LMS, and partner agencies' personnel will coordinate activities at the mines through scoping meetings to define scope and perform the work.

7.1 Program Implementation

Implementing the DRUM Program requires each guiding program document to specify how the LMS functions are to be carried out and identify who has the responsibility and authority to carry out those functions. Depending on the complexity of the document, it may specify the organizational structure, functional responsibilities, levels of authority, and interfaces for those managing, performing, and assessing the work. The documents indicate how responsibilities flow from management to the worker and down to subcontractors or suppliers as applicable.

The LMS Projects and Programs group includes the DRUM Program. Project management personnel are responsible for setting priorities, project management and planning, reporting, client interface, regulatory interface, and work authorization.

Project management personnel receive input from functional support groups. Implementing work is done in accordance with the LMS IWCP.

7.2 DRUM Program Plans

The activities performed on the DRUM Program are covered under multiple plans that provide specific guidance and direction in the performance of a task or project activity. These plans are the V&V Work Plan, Quality Assurance Program Plan, Health and Safety Plan, and Field Operations Plans. A brief summary of the purpose of each plan is provided.

7.2.1 General V&V Work Plan

The V&V Work Plan provides field team personnel guidance in the performance of V&V activities at a mine. This includes the collection of mine-related features utilizing a GPS device, radiological data collection, soil and water sampling if required, and photo documentation of mine-related features.

7.2.2 Quality Assurance Program Plan

The QAPP provides that environmental data collected during V&V activities at a mine will be of sufficient quantitative and qualitative value for use in determining whether data-quality objectives are being met. The data provided to the partner agencies will be used to supplement documentation of the existing mine conditions.

7.2.3 Health and Safety Plan

The Health and Safety Plan provides for the requirements of the LMS Worker Safety and Health Program and the Integrated Safety Management System, which are the high-level programs that encompass DRUM Program worker safety and health and set forth the parameters for how the LMS contractor integrates safety into program activities.

7.2.4 Field Operations Plans

Field Operations Plans provide the details of activities to be performed on lands administered by partnering agencies. Each plan outlines the organizational structures of LM, the LMS contractor, and partner agencies; the mines where V&V activity will be performed; special circumstances that need to be addressed before, during, or after V&V activities; and emergency contacts and locations of medical facilities relevant to where V&V activities are being performed.

7.3 Program Management

Program management includes the functional support of Safety and Health, Quality Assurance, Environmental Compliance, Public Affairs, and budgeting and scheduling. Program management includes the development and revision of program-related documents to support the DRUM

Program. Program management also implements the PgMP and requirements of the prime contract.

7.4 DRUM Program Projects

The DRUM Program has four main projects that are ongoing and concurrent.

7.4.1 Mine Data Reconciliation

AEC production records were used to identify defense-related mines. This was supplemented with information from federal and state agency databases, a tribal abandoned mine land program, private company and public input, and maps and other documents. The data reconciliation effort will expand upon this initial effort. The LMS contractor will work with federal land management agencies to utilize the data available in the agency databases and reconcile it with available sources of information to better identify locations of mines for field inventory.

Numerous sources of information are used during the reconciliation process, which includes location verification, merging of duplicates, and establishing the locations of new mines. The mine location reconciliation process is most efficient when all of the mines in a given geographic area or mining district are considered together. Location data sources are numerous and include those published by USGS (topographic maps of various historic dates, geologic maps, professional papers, bulletins, Mineral Resources Data System), AEC Area Economic Maps (mining district maps and reports), the DOE National Uranium Resource Evaluation (quadrangle evaluations, and other reports), the U.S. Bureau of Mines (Minerals Availability System database), state geological surveys (maps, reports, and lists of uranium occurrences and mines), and geological societies/organizations (guidebooks and publications on uranium mines). Detailed mine location information is also available from BLM in the form of mining claim records and from private mining companies in the form of claim maps.

7.4.2 Field Inventory

Field inventories confirm the locations of mines, collect information on mine features, and help assess potential physical safety hazards. Field inventory scope will be a collaborative effort between LM, the LMS contractor, and partner agencies. The state AML programs will perform the majority of the field inventory efforts; BLM and USFS may also self-perform field inventory depending on resources and capabilities. The LMS contractor will perform field inventory as needed where there is no coverage by the partnering agencies and coordinate with partner agencies on mines to be inventoried for that field season.

Mine inventories will be conducted before V&V teams visit individual mines to maximize the efficiency of the field effort. The inventory team verifies that the mine is the intended target, defines the total disturbed area, uses a GPS unit to locate mine features, and takes photos. It also completes other measurement and evaluation tasks used by partner agencies. Pertinent information collected by the inventory team is transmitted to the V&V team to prepare and facilitate the V&V work.

7.4.3 Environmental Sampling

The purpose of environmental sampling is to improve DOE's understanding of the potential human health and environmental risks the mines pose. Additionally, sampling activities will help partner agencies prioritize mines to determine if mine closure, reclamation or cleanup is needed or if no further action is required. Activities will be managed by the LM and LMS project managers working on the mines identified by partner agencies.

Environmental sampling activities include gamma radiation surveys, soil and water sampling, and risk-screening activities. These activities will be performed by the LMS contractor with input and review by LM and partner agencies. Environmental sampling activities also include data analysis and priority rankings of physical safety hazards and risks to human health and the environment for each mine. Priority rankings are also based on field observations using a multiple-lines-of-evidence approach.

7.4.3.1 Gamma Radiation Surveys

Gamma radiation surveys will be performed at each mine to identify areas with elevated levels that could pose potential radiological risks to the public and to establish general exposure rates. The gamma survey identifies the spatial variability of radionuclides in soil (primarily uranium ores) due to the natural mineralization in the area (background) and the distribution of waste rock materials. Using GPS location data, the survey results map the extent and magnitude of the gamma radiation levels at the mine.

7.4.3.2 Soil Sampling

Soil samples will be collected from most waste rock piles and from an area designated as background for a mine or a group of mines. The V&V team will determine if soil samples need to be collected from ephemeral drainages by using the gamma radiation detector and visual evidence to determine if radiological material has migrated from the mine into nearby drainages or onto the surrounding landscape.

7.4.3.3 Water Sampling

Water sampling will be performed at mines on a limited basis since most mines are dry and are located in arid climates. A surface water sample will be collected from nearby seeps and ponds when they appear to be mine-related and in those circumstances when the mine entry is discharging water to the land surface.

7.4.3.4 Risk Screening

The DRUM Program ranking process is designed to optimize risk evaluation by providing flexibility to the risk evaluator. To achieve this flexibility, the priority ranking for each mine is based on evaluating the physical safety hazards as well as potential risks to human health and the environment. The rating for each factor is based on field observations, field data, laboratory data, and established radiological and constituents of interest screening levels using a multiple-lines-of-evidence approach. The priority ranking plan allows principal features to be scored so a more complete picture of the mine is reflected in the data. These multiple lines of evidence will allow

land-use managers the opportunity and flexibility to query specific criteria, allowing more accurate searches for information as needs require.

7.4.4 Data Management

A chief component of the DRUM Program is partnerships with other federal and state agencies that have shared responsibilities and concerns with AMLs and their risks. To facilitate and expedite the DRUM Program, on a case-by-case basis, LM intends to coordinate and utilize existing state AML programs for V&V inventory activities. To ensure that the data collected by the partner agencies meet the needs of the DRUM Program and are readily incorporated into the DRUM Program database, LM staff will outline in the scope of work and other oversight documents data requirements in terms of type, quality, and format necessary for the DRUM Program. This governance will also include schedules for receiving data and methods for data delivery. Each of these elements will work to ensure that the data collected by the partner agencies can be input to the DRUM Program database with minimum editing and manipulation.

Data and related information generated for the DRUM Program is managed in the DRUM Program database. The initial database was created to support the 2014 Report to Congress, but has limited functionality and analytical capabilities with respect to newly collected data, particularly data collected through V&V activities.

The upgrade of the database will go through the LM and LMS information technology governance and design process, which involves the development of a business case, project charter, and system requirements document to guide and govern the database system design, development, and deployment. The system design, development, and deployment will be iterative in terms of building in various functional analytical and program management elements and tools. This phased approach reflects the need to be able to get an upgraded system running in a timely manner to support initial V&V activities while continuing to address the long-term needs for the DRUM Program for analyzing and disseminating data along with facilitating day-to-day activities. The first-phase system component deployment is projected to occur in the fall of 2017, with subsequent phases to be determined by LM and LMS staff.

7.4.4.1 Data Dissemination

In accordance with the goals of the DRUM Program and as governed by agreements formed with other federal and state agencies, the DRUM Program will provide reports and other data to support the efforts of these agencies. LM will provide guidance to LMS to govern the data to be shared and the dissemination methods to be utilized. The LM File Transfer Protocol service via the GlobalSCAPE Enhanced File Transfer client will be utilized to allow for transfer of files to and from LM and partner agencies. Data provisions may include, but not be limited to, access and security, use restrictions and limitations, request and delivery methods, and updates and revisions. Due to the various agreements and needs of the other agencies, it is anticipated that the procedures and protocols may vary slightly by agency, but they will always meet a certain standard minimum level.

8.0 Program Organization

The program organization structure defines the organizational elements in which work will be planned and implemented. The LM Uranium Mine Team Lead is responsible and accountable for program and project management, contractor oversight and performance evaluation, and interagency coordination as well as the overall success of the DRUM Program. The LMS TAM is responsible and accountable for successful execution of the contractor's program scope of work according to regulatory and contractual requirements.

In addition to the LM and LMS program organizations, partner agencies such as BLM, USFS, and state AML programs will provide support to the DRUM Program. Examples of how partner agencies will contribute to the program include providing LM and LMS access to mines on lands under their jurisdiction and conducting field inventories at mines on federal public lands as well as state and private lands. Figure 3 shows the collaboration between LM, LMS, and partner agencies.

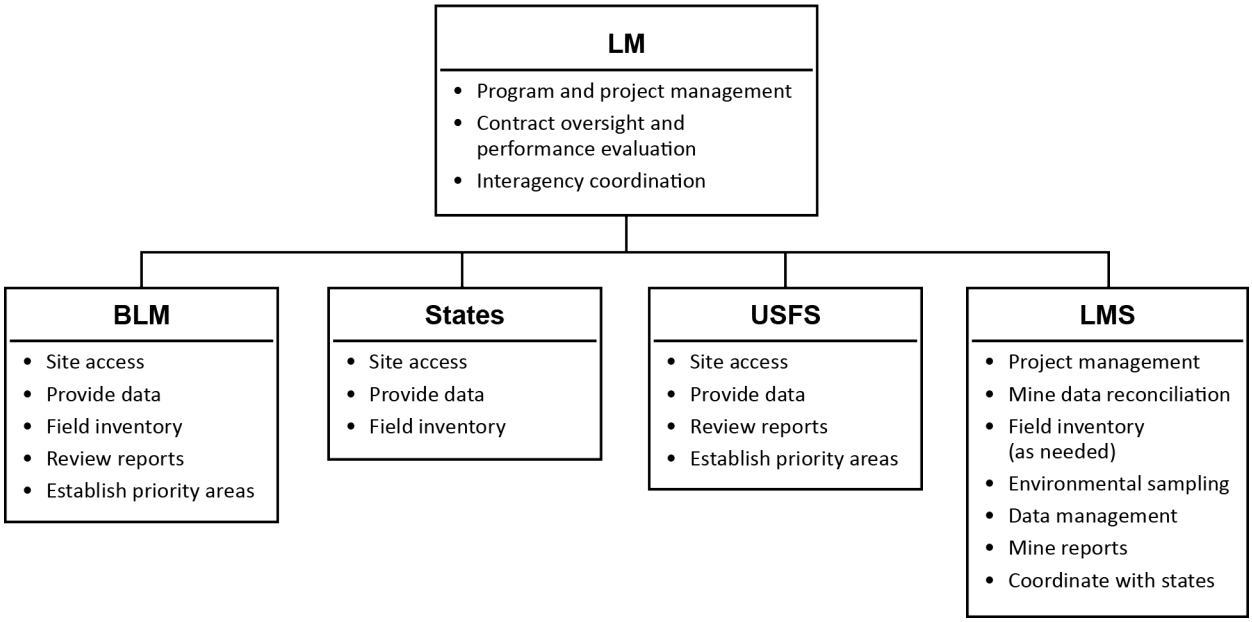

Figure 3. Collaboration Between LM, LMS, and Partner Agencies

8.1 Office of Legacy Management

The LM organization is a DOE headquarters office that is managed from Washington, D.C., Grand Junction and Westminster, Colorado, and Morgantown, West Virginia. The DRUM Program operates out of the Grand Junction and Westminster locations and is managed by the LM Uranium Mine Team Lead. The LM Uranium Mine Team also consists of a program coordinator, a senior technical advisor, data manager, and project managers.

8.2 Legacy Management Support Contractor

The LMS organization provides support to LM through project execution and ongoing LM program support functions, as required by contract. Task Assignment 113 Uranium Related Programs is where support for the DRUM Program resides. The LMS support lead for the DRUM Program is the Task Assignment 113 TAM. The TAM is supported by direct staff and Mission Support organizations. Field activities are operated from Grand Junction, Colorado. The LMS DRUM Program organization chart is shown in Figure 4.

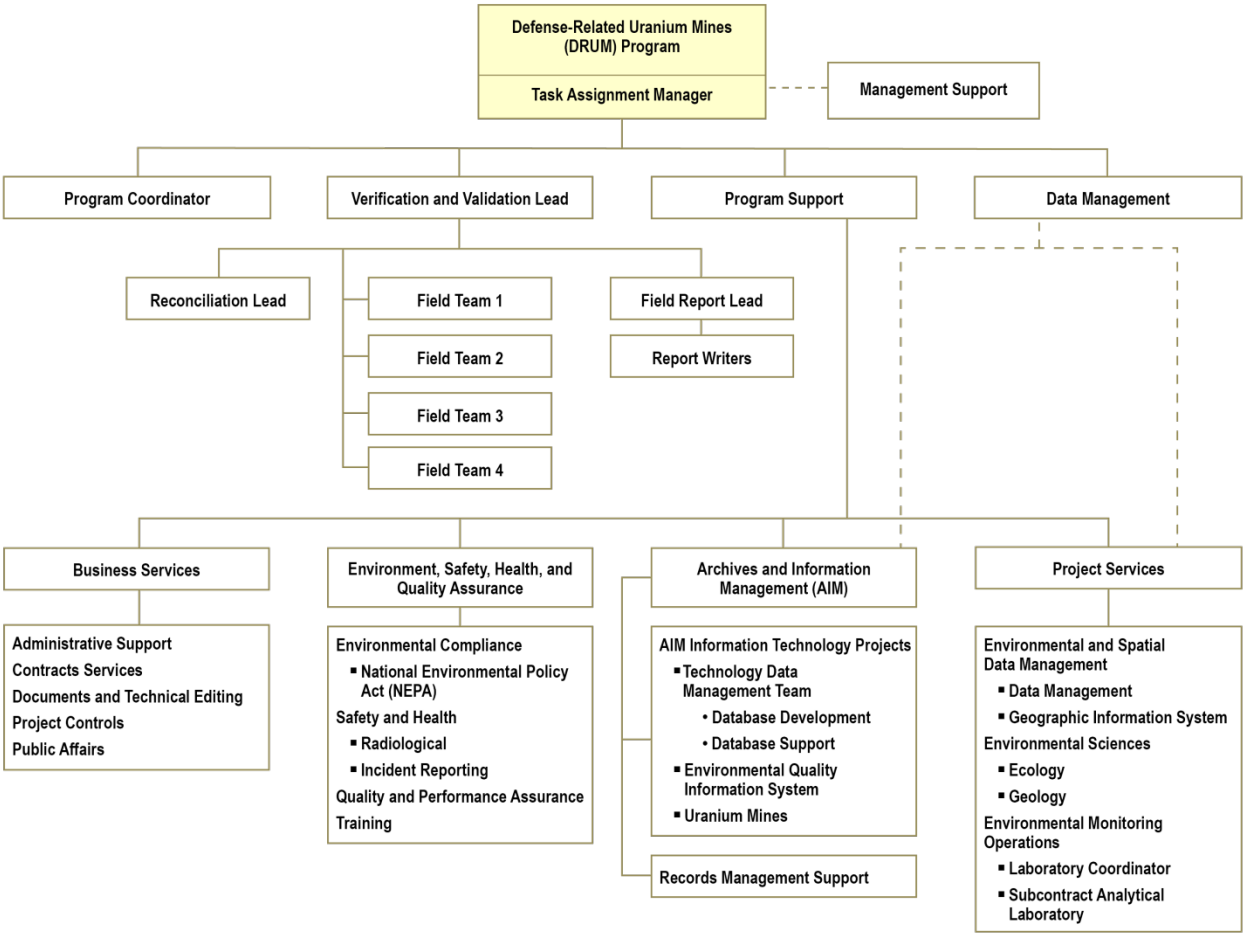

Figure 4. LMS DRUM Program Organization

8.3 Roles and Responsibilities

LM consults with partner agencies to develop scope and projects for the LMS contractor. LM and partner agencies offer input on program and project documents, mine reconciliation efforts, location and scope of field projects, and schedules. LM provides direction to the LMS TAM about what activities need to be conducted, and the LMS TAM provides direction to LMS staff to execute the work associated with the program.

8.4 DRUM Program Team

The DRUM Program Team is composed of LM and LMS personnel who manage, oversee, perform, and report on all work activities. Table 1 provides a list of LM and LMS personnel roles and responsibilities for the DRUM Program Team.

Table 1. DRUM Program Key Positions

Roles	Responsibilities
LM Positions (federal)	
Uranium mine team lead	Program management, contract task management
Program coordinator	Programmatic and interagency coordination and contract subtask management
Senior technical advisor	Development of technical approaches for the program; advisor to program and project personnel on technical issues
Project managers	Development of agreements and management of project activities in assigned states and agency areas
Data manager	Management of the DOE DRUM Program database upgrade and oversight of data management activities
LMS Positions (contractor)	
Task assignment manager	Program and project management
Program coordinator	Programmatic coordination and support
Radiological control manager	Implements 10 CFR 835 and LMS *Radiological Control Manual*
Safety and health specialist	Performs project safety and health requirements and oversight
Senior geologist	Provides reconciliation of mine locations, a search of references, and field team support
V&V lead	Provides daily project direction, project updates, and scheduling
Quality and performance assurance specialist	Provides quality assurance program and project oversight
Environmental compliance specialist	Provides environmental compliance program and project support
Public affairs specialist	Provides public affairs program and project support
Records management specialist	Provides records management program and project support
Project controls analyst	Provides budget and schedule program support
Data manager	Maintains DRUM Program database; provides database support and tables and figures for miscellaneous activities and reports
Report writer	Prepares program and project reports
Field team lead	V&V team member directing all field activities
Radiological specialist	V&V team member providing radiological surveys
Field team ecological specialist	V&V team member providing ecological and environmental support
Field team geologist	V&V team member providing soil sampling and overall support

Abbreviation:
10 CFR 835 = Title 10 *Code of Federal Regulations* Section 835

8.4.1 LMS Contractor Staffing

The LMS contractor staffing will support LM in achieving its goal of accomplishing V&V of 2500 mines by 2022.

LMS has two field teams operating out of the LM office in Grand Junction, Colorado. Two more field teams will be staffed, trained, and equipped by the end of the FY2017. Additional support staff will also be hired to fill management, technical, and support positions. Examples of the disciplines and personnel required for the DRUM Program include:

- Program management, environmental, safety and health, quality, public relations, budgeting and scheduling
- Geologist, mining engineer, environmental scientist, GPS expert, radiological specialist
- Database management, ArcGIS geographical information system/mapping, researchers, report writers, technical editors, and document production

Currently, LM's project managers are managing the program by the grouping of locations: (1) Utah, (2) Colorado and New Mexico, and (3) USFS-administered lands. Additional states and partner agencies will be added as the program progresses. These factors will also influence decisions on staffing and deployment.

8.4.2 LM/LMS and Partner Agency Field Responsibilities

Specific field data collection responsibilities related to the DRUM Program are defined in the V&V Work Plan. The V&V Work Plan guides LMS and partner agencies' field personnel on how to prepare for and perform V&V activities. The DRUM Program also has a Health and Safety Plan and Quality Assurance Program Plan that provides LMS field and support personnel as well as LM personnel with guidance on how to conduct program project activities safely and effectively.

LM partner agencies will conduct field inventories of mines on federal-managed, state, and private lands. Agencies and their contractors will coordinate their activities with LM and the LMS contractor and provide inventory data to assist LMS personnel in preparing for environmental sampling activities. Partner agencies, LM, and LMS will coordinate field activities on a regular basis to avoid duplication of effort and to ensure the success of the DRUM Program.

8.5 Interagency Roles, Responsibilities, and Agreements

LM is responsible for developing and managing MOUs and cooperative agreements. MOUs are established with BLM and USFS, and LM is pursuing cooperative agreements with state AML programs. The scope of the MOUs and cooperative agreements is for partner agencies to review program-related documents; coordinate with LM and LMS to plan and implement DRUM Program field projects; assist with mine data reconciliation; perform field inventory; provide site access; observe environmental sampling activities; and perform other-related efforts. The ability of federal land management and state AML programs to conduct field inventory activities is contingent upon the availability of LM funding. Partner agencies will provide data in a timely manner to assist the LMS contractor in conducting environmental sampling activities.

8.5.1 State Agencies

The LMS contractor will engage state AML programs in performing field inventory activities. State AML programs have extensive experience and established procedures for completing mine

inventories; therefore, it will be advantageous for them to take an active role in producing field inventories. Additionally, many state AML programs have the authority to conduct activities on state and private land, which will facilitate inventory work on mines identified as having state, private, or mixed ownership. Engaging the states early on will allow for coordinated field activities that maximize time and resources.

8.5.2 BLM

BLM state offices will be the primary contact for V&V efforts on federal public lands. BLM state and field offices will work with LM and the LMS contractor on mine data reconciliation and will provide input on field activities. Depending upon available resources and capabilities, BLM may self-perform field inventories in conjunction with the state AML programs or coordinate access for states to perform field inventories. BLM will coordinate access for the LMS contractor to perform environmental sampling. BLM authorities that support the DRUM Program include:

- Federal Land Policy and Management Act of 1976, 43 USC 1701, et seq.
  - BLM has broad authority to manage public lands and to protect public health and welfare from risks associated with abandoned mines on public lands. BLM is authorized to enter into agreements with other federal agencies to carry out its responsibilities to manage public lands.
- Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended, 42 USC 9601, et seq.[2]
  - BLM is authorized to undertake response action to investigate the release or threat of release of hazardous substances on or from sites under its jurisdiction, custody, or control.

Because the mines are on BLM-administered lands, BLM has the governing National Environmental Policy Act (NEPA) responsibility and authority and will determine the need for NEPA evaluation as necessary.

8.5.3 U.S. Forest Service

The respective USFS regional office will be the primary contact for V&V efforts in national forests. USFS regional and district offices will work with LM and the LMS contractor on mine data reconciliation and provide input on field activities. Depending upon available resources and capabilities, USFS may self-perform field inventories in conjunction with the state AML programs or coordinate access for states to perform field inventories. USFS will also help facilitate environmental sampling efforts by coordinating site access for the LMS contractor. USFS authorities which support the DRUM Program include:

- Federal Land Policy and Management Act of 1976, 43 USC 1701, et seq.
  - USFS has broad authority to manage public lands and to protect public health and welfare from the risks associated with abandoned mines on public lands. USFS is

[2] The DRUM Program is limited to field inventory and environmental sampling at mines. These activities are not subject to CERCLA requirements. However, CERCLA may be invoked if the release or threat of release of a hazardous substance exists at a mine.

authorized to enter into agreements with other federal agencies to carry out its responsibilities to manage these public lands.

- Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended, 42 USC 9601 et seq., and authorities as delegated by Executive Order 12580.[3]
  - As a CERCLA Lead Agency, USFS is authorized to undertake response actions to investigate the release or threat of release of hazardous substances on or from sites present on USFS-managed lands per Executive Order 12580.

Because the mines are on USFS-administered lands, USFS has the governing NEPA responsibility and authority and will determine the need for NEPA evaluation as necessary.

8.5.4 AUM Multi-Agency Working Group

LM leads the federal AUMWG. Federal agencies represented include DOE, the U.S. Environmental Protection Agency, BLM, the Department of the Interior, USFS, the U.S. Department of Agriculture, and the U.S. Bureau of Indian Affairs. AUMWG agencies use a coordinated approach to share expertise and leverage resources to address problems posed by AUMs. DRUM Program sites are a large subset of AUMs. The AUMWG developed an Abandoned Uranium Mine Strategy in 2015 titled, "Addressing Human Health, Environmental, and Safety Risks at Abandoned Mine Lands Sites." This strategy is accompanied by an action plan that identifies what the agencies will accomplish in fiscal years 2016–2020. The action plan calls for the physical inventory, assessment, reclamation, and remediation of AUMs posing the greatest risks to human health and the environment. The DRUM Program helps LM achieve the goals established in the action plan.

9.0 Reporting

Reporting is an important function of the DRUM Program. Reporting tracks progress in meeting milestones and documents program achievements. LM and partner agencies will require status updates on the progress of DRUM project activities, early notification of imminent hazards discovered at any mine, and data reconciliation, V&V, and annual program reports.

9.1 Program and Project Status

DRUM Program progress will be reported within the team and to partner agencies. Periodic meetings and teleconference calls with LM, the LMS contractor, and partner agencies will be used to effectively communicate details and status of DRUM Program activities. LMS personnel will provide LM with status reports on V&V projects and reports, at a minimum, on a monthly basis. LM will then update partner agencies with this information. Weekly teleconference calls between LM and LMS personnel will also be utilized to provide updates on programmatic issues, discuss field activities and schedule, and plan future work.

[3] The DRUM Program is limited to field inventory and environmental sampling at mines. These activities are not subject to CERCLA requirements. However, CERCLA may be invoked if the release or threat of release of a hazardous substance exists at a mine.

9.2 Mine Data Reconciliation Reports

Reconciled mine data will be reported by LMS personnel both weekly and monthly to LM showing the progression of reconciliation efforts. Reconciliation reports will provide LM with documentation of progress and include basic information for each reconciled mine, including LM ID, mine name, locality information, coordinates, land status, and historic production size. Reconciliation efforts will be focused within a mining district or geographic area. Upon completion of reconciliation activities, LMS staff will assemble a data package with reconciled mine data and geodatabase feature classes. The data package will be utilized by LM and LMS personnel for V&V project planning and can be provided to partner agencies as needed.

9.3 V&V Reports

V&V reports will be prepared for each mine at the completion of V&V work. These reports will be generated as work progresses throughout the year and will summarize what records were searched, methodology of equipment used, field screening, and laboratory results. Reports will also offer priority ranking of physical safety hazards and potential risks to human health and the environment and will be provided to the appropriate partner agency for its use in developing future decisions relative to the mine.

9.4 Annual Program Reports

These reports provide a detailed summary of the LM DRUM Program activities and achievements for the appropriate calendar year and will be provided to LM. The annual report will discuss what administrative, reconciliation, field inventory, and V&V activities were performed for that year.

10.0 Environmental Compliance

The *Environmental Procedures Catalog* (LMS/POL/S04325) contains administrative and technical procedures that may be used for guidance in planning and conducting field activities. In many instances, the procedures in this catalog present procedural options or general considerations for completing a task; therefore, site-specific planning documents or statements of work are also necessary. The activity-specific procedures in this catalog provide the technical foundation for sampling and data acquisition activities based on research and industry standards.

The *Environmental Protection Manual* (LMS/POL/S04329) provides an overview of the environmental and regulatory compliance requirements and describes the implementation of environmental compliance and monitoring programs.

10.1 NEPA Compliance

The DRUM Program work is being conducted with partner agencies with roles and responsibilities described through MOUs. At the request of the current partner agencies, BLM and USFS, the need for and level of NEPA evaluation will be determined by BLM and USFS through their respective NEPA processes. As the DRUM Program progresses beyond BLM and

USFS lands and LM engages with other agencies, LM and partner agencies will coordinate NEPA compliance on a case-by-case basis.

10.2 Regulatory Drivers

The authorities for LM to conduct the DRUM Program are addressed in Section 4.0, "Program Authority." The LMS contractor manages the work it performs for LM in a manner that protects natural resources in accordance with (1) federal, state, and tribal regulations and guidance and (2) applicable executive orders. The LM Environment, Safety, and Health Policy requires LM to effectively integrate the environmental management of natural resources into all activities. Partner agency regulatory drivers will be incorporated, if needed.

11.0 Quality Assurance

The *Quality Assurance Program Description* (LMS/POL/S13806) and the *Quality Assurance Manual* (LMS/POL/S04320) describe a quality assurance management system that incorporates the requirements and philosophy of LM's requirements. Any work performed by or for the contractor must comply with the requirements of these manuals. Elements of the quality assurance program apply to all activities and all LMS contractor work. The achievement of quality is the responsibility of the people who manage and, most importantly, the people who perform the work. Each person is expected to do his or her job in accordance with procedures and other requirements.

11.1 Quality Assurance Program Plan

The *Defense-Related Uranium Mines Quality Assurance Program Plan* (LMS/DRM/S15867) is intended for use by partner agencies and LMS personnel performing various tasks, such as evaluating historical information, collecting new data, and preparing reports for the DRUM Program.

The ultimate success of the DRUM Program depends on the quality of the environmental data collected and used in decision-making, and this may depend on the adequacy of the Quality Assurance Program Plan and its effective implementation. All parties involved in the DRUM Program (i.e., data users, data producers, decision makers) shall be involved in the planning process to ensure that their needs are adequately defined and addressed.

11.2 Quality Assurance Requirements

Processes for the collection of environmental data will be defined, controlled, verified, and documented. The data collection design process includes the establishment of performance objectives, the design of field sampling methods and procedures, sample handling and custody, analytical test methods, data validation and verification methods, techniques for assessing limitations on data use, data management, and data reporting to satisfy the performance objectives.

11.2.1 Data Management

Data that will be used to characterize environmental conditions or processes must be qualified according to its intended use. Data that are not collected under known controlled conditions and plans must be qualified. Data qualification must be performed according to approved procedures specified during design, which include the decision process and factors used to determine the qualification method. The process may include the application of statistical methods during the assessment. Data acceptance will be based on reconciliation with the performance measures originally established for the project.

11.2.2 Assessments

Assessments should be conducted at a frequency commensurate with the risk and importance of the activity or as dictated by requirement, must be conducted using criteria describing acceptable work performance, and should promote improvement.

11.2.3 Lessons Learned

The lessons-learned system disseminates lessons learned from past activities for the improvement of work processes, equipment operation, quality, safety, and cost effectiveness. The DRUM Program will document lessons learned from the pilot season and ongoing V&V efforts and incorporate lessons learned from other programs.

12.0 Safety and Health

Protection of the safety and health of workers and the public is the prime consideration during all LMS contractor activities. Plans and procedures have been developed and implemented for the protection of the safety and health of workers, the public, and the environment. These plans and procedures include the *Worker Safety and Health Program* (LMS/POL/S14697), *Integrated Safety Management System Description* (LMS/POL/S14463), and the *Environmental Management System Description* (LMS/POL/S04346) and implement the requirements of laws, regulations, orders, and standards applicable to LMS activities. All employees shall adhere to the requirements of the Worker Safety and Health Programs and the *Safety and Health Manual* (LMS/POL/S04321) and other applicable safety and health plans and procedures. The *Defense-Related Uranium Mines Health and Safety Plan* (LMS/DRM/S15804) will be followed during the performance of V&V activities.

12.1 Personnel Protection

Employees shall follow good safety, industrial hygiene, and radiation-protection practices and procedures to ensure that personal exposure to radiation, chemicals, toxic materials, and other personnel hazards is kept as low as reasonably achievable. In particular, operations personnel shall do the following:

- Adhere to posted personal protection requirements, and observe proper practices and precautions
- Correctly use appropriate monitoring instruments, and take appropriate action in response to monitoring or system status indicators

- Be aware of personal exposure, such as radiological or chemical exposures, and take appropriate action to minimize exposures
- Be knowledgeable of the requirements listed in work control documents, such as workflow documents and job safety analyses
- Promptly report protection deficiencies and hazards to their immediate supervisor, safety and health personnel, or the site operations lead; in addition, operators should take appropriate immediate action to reduce or correct the hazards
- Inform the site operations lead before performing activities that could significantly change facility or site conditions
- Wear required personal protective equipment as designated in the job safety analyses

12.2 Radiological Protection

It is the policy of the LMS contractor to conduct radiological operations in a manner that ensures the safety and health of all its employees, subcontractors, and the general public. In achieving this objective, LMS ensures that radiation exposures to its workers and the public and releases of radioactivity to the environment are maintained below regulatory limits and that efforts are taken to further reduce exposures and releases to levels as low as reasonably achievable. The LMS contractor is fully committed to implementing a radiological control program of the highest quality that consistently reflects this policy.

V&V work performed at the mines will also follow the requirements of the *Radiation Protection Program Plan* (LMS/POL/S04373) and the *Radiological Control Manual* (LMS/POL/S04322). Specific requirements, limitations, goals, and actions associated with radiation protection for this project are defined in the *Defense-Related Uranium Mines Health and Safety Plan*. Fieldworkers will wear thermoluminescent dosimeters to evaluate their radiological exposure. If dosimeters are not available, handheld gamma radiation instruments will be used instead.

13.0 Program Risk Management

LM guidance directs that a contingency be applied to all LM activities because of the uncertainties associated with long-term program management. This contingency includes assessing the probability of a major event negatively impacting the program and the uncertainty associated with the assumptions and costs of performing the planned activities. An analysis of the potential for risk not covered in budget estimates and schedules provides the program manager an opportunity to develop mitigating measures to reduce the probability of a risk to the program goals.

13.1 Statement of Risk

The DRUM Program is authorized to perform V&V to collect additional field data at mines. LM is working with other agencies, primarily BLM and USFS, to perform V&V activities on mines on lands managed by those agencies. The amount of participation by federal and state partners in achieving program goals is still being defined. The biggest uncertainty for achieving the LCB

goals is likely to be the availability of requested out-year funding. The DRUM Program's potential risks and mitigation measures are summarized in Table 2.

Table 2. Program Risk Screening

Potential Risk	Mitigation Measure
Funding	Staffing, scope, and/or schedule reduction
Partner agency role/responsibility	MOUs, operation plans
Stakeholders	Communication plans
Litigation	Regulatory authority, data quality

It is likely that the DRUM Program scope will increase over the years as more attention is given to mines and the number of mines requiring V&V grows. As the program grows, the probability that one or more of the issues identified in the Statement of Risk is likely to occur. However, the severity of any potential negative impact to the program is expected to be marginal. Overall, DRUM Program risk is considered moderate.

14.0 Program Communications

14.1 Internal LM Communication

LM will have weekly team meetings where programmatic issues are addressed, current activities are reviewed, and planning for future work is discussed. A network share drive has been set up that provides a repository for DRUM Program reports and other technical information pertinent to the program.

14.2 Partner Agency Relations

LM will communicate with its partner agencies through small group meetings, conferences, briefings, telephone, email, and the LM website. LM will work with partner agencies to determine the scope of work to be performed that includes the mine districts where V&V activities will be performed, any specific actions required that are not part of the V&V Work Plan, specific reporting requirements, and any other requirement determined to be necessary. LM will provide status updates at a minimum on a monthly basis to brief partner agencies as to where V&V activities are being performed and what V&V reports are completed.

The LMS contractor will communicate and work directly with the partner agencies representatives in the field.

14.3 LM/LMS Communication

Team meetings via teleconference or face-to-face will be held on a weekly basis or more often if needed. Continual interaction between LM and LMS team members to work on specific work products, exchange ideas, and discuss issues is key to the program's success. Weekly status tracking will be used to determine which mines are in progress and which ones are complete.

Formal communication tools, such as monthly financial reporting, as required by the prime contract, will be performed.

14.4 Internal LMS Communication

Sustained integration of safety and environmental management requires teamwork and mutual understanding between workers and management. Teamwork and understanding can be promoted only through effective communication that flows both up and down through the organization. The LMS contractor is committed to ensuring effective communication and promotes it in several ways. Managers participate in walkdowns and tailgate meetings; each worker has the ability to communicate directly with the LMS program manager and other managers if concerns cannot be resolved at the line management level. All workers have access to the LMS contractor section of the LM Intranet, which is used to communicate organizational goals, achievements, or concerns and current versions of environment, safety, and health policies and procedures. Workers are asked to participate in project environment, safety, and health planning, including the development of hazard controls, and worker feedback is actively solicited.

Communication between field team leads and the Operations manager will be held daily, or as often as necessary, to ensure that V&V activities are proceeding as directed, identify issues that may arise during field work, and provide direction on the performance of field activities as needed.

14.4.1 Weekly Team Meetings

Routine staff meetings are conducted by all levels of LMS contractor management. Once each week, a meeting between the program manager and senior staff is held. Information from the senior staff meeting is provided to lower-level staff members during their routine group meetings. Pertinent safety information that comes from staff meetings at any level is communicated to field personnel during the next pre-job briefing. Safety information requiring prompt attention is communicated immediately via email.

14.4.2 Pre-Job Briefings

A pre-job briefing is an interactive discussion between the line manager and work participants regarding the work scope, hazards, mitigations, and responsibilities associated with an activity.

Initial pre-job briefings are conducted for large or complex projects to ensure that all personnel performing, overseeing, or supporting work activities understand the project requirements. Initial pre-job briefings cover additional information that is not required during routine daily pre-job safety meetings.

Pre-job safety meetings cover both daily pre-job briefs typically performed for complex projects (e.g., construction projects, drilling) and routine LMS activities (e.g., field data collection or site reconnaissance).

14.4.3 Work Authorization

All work is controlled and authorized by the individual site Plan of the Day (POD) or Plan of the Week (POW) using the POD/POW form. The purpose of the POD/POW form is to document site lead authorization of work activities at a project site. Only work that is authorized shall be performed by LMS or subcontractor personnel. The site lead authorizes work activities only after verifying that the work activity is within the contractually approved scope, that the work has been adequately defined and planned, that appropriate work controls have been established, and that qualified personnel and necessary equipment are available to safely perform the work activity.

15.0 Public Relations

The LMS Public Affairs program includes national, intergovernmental, and local stakeholder involvement; public affairs and outreach; and community involvement required for the acquisition, maintenance, dissemination, and delivery of program and project knowledge and information. The *Public Affairs Manual* (LMS/POL/S11690) provides the responsibilities of, requirements of, and procedures followed by the Public Affairs program.

The policy of LM and LMS is that public involvement must be a routine component of program operations and planning activities. The purpose of this policy is to bring a full range of diverse stakeholder viewpoints and values into the decision-making process early, enabling LM to make better decisions and build mutual understanding and trust among LM, the LMS contractor, and the public.

Because the DRUM Program involves working on other federal agencies' (BLM and USFS) managed lands, most public affairs activities (public meetings, release of statements to the press) will be coordinated with those agencies.

15.1 Freedom of Information Act

The DOE Office of Information Resources is responsible for administering policies, programs, and procedures to ensure the agency's compliance with the Freedom of Information Act (FOIA) (5 USC 552). This Act is a law that gives individuals the right to access information from the federal government. It is often described as the law that keeps citizens knowledgeable about their government and provides any person with the statutory right, enforceable in court, to obtain access to government information in executive branch agency records.

All FOIA requests received by the program are directed to the FOIA coordinator and follow protocols established by LM.

15.2 Stakeholder Inquiries

Public inquiries will be sent to the LM Mine Team Lead (or delegated individual) to coordinate a response. The LM Mine Team Lead will engage the LM Public and Intergovernmental Engagement Team as necessary. Some inquiries must be coordinated with the DOE Office of Congressional and Intergovernmental Affairs (LM Procedure 513.1C).

16.0 Program Completion

The DRUM Program is focused on completing V&V work on 2500 mines on federal land in 5 years. The plan will be fully implemented when the 2500 V&V tasks are complete, all associated reports are written, and supporting data is entered into the upgraded DRUM Program database. LM will then evaluate its progress and determine if another plan will be developed to address the remaining mines identified in the DRUM Report to Congress.

16.1 Program Closeout

As described in the IWCP document, a Project Completion Report may be required by the TAM if the DRUM Program ends after the V&V work for 2500 mines is completed. An example table of contents for a Project Completion Report is included in the IWCP document as Appendix C.

16.2 Long-Term Responsibilities

Records will be retained in the LM Business Center until the established retention period has expired or transfer to another facility is required to comply with approved disposition. If transfer is required, Records Management personnel will perform the necessary tasks, as applicable, including acknowledgment of receipt.

Individual records or boxes of records may be retrieved from inactive storage with the approval of the responsible organization. Records covered under the Privacy Act can only be retrieved or viewed by the responsible organization.

17.0 References

DOE (U.S. Department of Energy), 2014. *Defense-Related Uranium Mines Report to Congress*, August.

DOE (U.S. Department of Energy), 2016. *2016–2025 Strategic Plan*, DOE/LM-1477, Office of Legacy Management, May.

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Finance and Accounting Manual, LMS/POL/S04342, continually updated, prepared by Navarro Research and Engineering, Inc., for the U.S. Department of Energy Office of Legacy Management.

Integrated Safety Management System Description, LMS/POL/S14463, continually updated, prepared by Navarro Research and Engineering, Inc., for the U.S. Department of Energy Office of Legacy Management.

Integrated Work Control Process, LMS/POL/S11763, continually updated, prepared by Navarro Research and Engineering, Inc., for the U.S. Department of Energy Office of Legacy Management.

Procurement Manual, LMS/POL/S04334, continually updated, prepared by Navarro Research and Engineering, Inc., for the U.S. Department of Energy Office of Legacy Management.

Project Management Control Systems Manual, LMS/POL/S04330, continually updated, prepared by Navarro Research and Engineering, Inc., for the U.S. Department of Energy Office of Legacy Management.

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Radiation Protection Program Plan, LMS/POL/S04373, continually updated, prepared by Navarro Research and Engineering, Inc., for the U.S. Department of Energy Office of Legacy Management.

Radiological Control Manual, LMS/POL/S04322, continually updated, prepared by Navarro Research and Engineering, Inc., for the U.S. Department of Energy Office of Legacy Management.

Records Management Manual, LMS/POL/S04327, continually updated, prepared by Navarro Research and Engineering, Inc., for the U.S. Department of Energy Office of Legacy Management.

Safety and Health Manual, LMS/POL/S04321, continually updated, prepared by Navarro Research and Engineering, Inc., for the U.S. Department of Energy Office of Legacy Management.

Worker Safety and Health Program (10 Code of Federal Regulations 851 Implementation), LMS/POL/S14697, continually updated, prepared by Navarro Research and Engineering, Inc., for the U.S. Department of Energy Office of Legacy Management.