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Uranium Leasing Program Program Management Plan

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Abbreviations

AEC	U.S. Atomic Energy Commission
ATV/UTV	all-terrain vehicle/utility task vehicle
BLM	U.S. Bureau of Land Management
CDPHE	Colorado Department of Public Health and Environment
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	*Code of Federal Regulations*
CWBS	Contract Work Breakdown Structure
DOE	U.S. Department of Energy
DRMS	Division of Reclamation, Mining, and Safety
DRRP	Dolores River Restoration Partnership
DRUM	Defense-Related Uranium Mines
EC	environmental compliance
EMS	Environmental Management System
FOIA	Freedom of Information Act
FONSI	Finding of No Significant Impact
FR	*Federal Register*
IA	interagency agreement
IWCP	Integrated Work Control Process
JSA	job safety analysis
LCB	life-cycle baseline
LM	Office of Legacy Management
LMS	Legacy Management Support
MAP	Mitigation Action Plan
MOU	memorandum of understanding
NEPA	National Environmental Policy Act
OpEx	operating experience
PEA	Programmatic Environmental Assessment
PEIS	Programmatic Environmental Impact Statement
PgMP	Program Management Plan
PIC	person in charge
PL	Public Law
QA	Quality Assurance

QAM	Quality Assurance Manual
QMS	Quality Management System
RILOR	reclamation in lieu of royalties
ROD	Record of Decision
TAM	task assignment manager
ULMP	Uranium Lease Management Program
ULP	Uranium Leasing Program
USC	*United States Code*
USFWS	U.S. Fish and Wildlife Service
V&V	verification and validation
WBS	work breakdown structure

Forms Referenced in This Manual

Forms or worksheets are accessible at the Document Management SharePoint page > **Libraries** > **LMS Forms**

Plan of the Day/Plan of the Week	LMS 2130

Forms or worksheets are accessible at the Document Management SharePoint page > **LM Federal Controlled Documents Library**

Categorical Exclusion Evaluation	LM 4-20-5.0-0.0

Executive Summary

This Uranium Leasing Program (ULP) Program Management Plan (PgMP) is the program's primary planning document and outlines the structure and basis for the U.S. Department of Energy (DOE) Office of Legacy Management (LM) and its Legacy Management Support (LMS) contractor's implementation strategy for the ULP. This plan addresses the scope, administration, and approach involved in conducting the program. This PgMP is the primary guiding document of the program and describes how LM, the LMS contractor, and partner agencies will work as an efficient and cohesive team to execute the ULP. The PgMP is a living document and will be revised as necessary.

The ULP PgMP supports LM's mission of protecting human health and the environment by administrating the exploration, development, and production of uranium and vanadium ore from the DOE uranium lease tracts. Through the support of mineral extraction, LM can ensure the continued environmental stewardship of the leases and the lessees' observation of federal, state, and local requirements. The ULP provides technical support to DOE for the administration of the DOE uranium leases and includes, as a minimum, the following principle objectives:

- Provide a safe working environment for employees and provide adequate protection to the general public and the environment
- Provide fair and timely monetary return to the federal government
- Establish a climate that stimulates competition for ore supplies in the area
- Achieve an orderly development of mineral resources and maximize the extraction of ore
- Make program activities compatible with a free and open market

Additionally, the ULP includes the oversight of lessee activities, review of plans, and the monitoring, closure, maintenance, and reclamation of pre-law mines on the lease tracts. While LM's many projects are concerned with the cleanup, disposal, and monitoring of legacy sites, the ULP facilitates the leasing of uranium and vanadium resources to private companies.

The ULP traces its lineage to the U.S. Atomic Energy Commission's (AEC) Mineral Leasing Program established in 1948. While the methodology and implementation of the original AEC mission to charter and develop a domestic uranium industry remain ingrained within the ULP, the scope and implementation of the program continues to evolve.

The primary goal of the program is the protection of human health and the environment. To this end, program objectives include responsible administration of exploration, development, and production of minerals from the DOE uranium lease tracts by our lessees. Covering just over 26,000 acres of public land, the program's success continues to align with the success of the lessees of the 29 active lease tracts. Starting in January 2020, a new 10-year leasing period was initiated.

The scope of the ULP consists of LM's oversight, environmental review, and inspections of both the leases and lessees' activities with a focus on actively permitted mine sites and related infrastructure. The program modifies leases as environmental regulations change or are introduced and continually maintains the best management practices of the industry. Through responsible resource development and extraction, the program has improved site safety, wildlife habitat, and native ecosystems on the lease tracts. LM provides support to lessees while maintaining the highest environmental standards for exploration, development, and extraction of ore reserves. The ULP remains focused on public engagement, education, and outreach to promote history, environmental stewardship, and DOE's contribution to national defense and energy security.

1.0 Purpose

This 2020–2030 Uranium Leasing Program (ULP) 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 for the ULP. This plan addresses the scope, administration, and approach involved in conducting the program. This PgMP is the primary guiding document of the program. It describes how LM, the LMS contractor, lessees, and partner agencies will work as a cohesive team to execute the ULP. This PgMP is a living document and will be revised as necessary.

2.0 Introduction

The ULP PgMP supports LM's mission of protecting human health and the environment by administrating the exploration, development, and production of uranium and vanadium ore from the DOE uranium lease tracts. Through the support of mineral extraction, LM can ensure the continued environmental stewardship of the leases and the lessees' observation of federal, state, and local requirements. The ULP provides technical support to DOE for the administration of the DOE uranium leases and includes, as a minimum, the following principle objectives:

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Additionally, the ULP includes the oversight of lessee activities, review of plans, and the monitoring, closure, maintenance, and reclamation of pre-law mines on the lease tracts. While LM's many projects are concerned with the cleanup, disposal, and monitoring of legacy sites, the ULP facilitates the leasing of uranium and vanadium resources to private companies.

The concepts outlined in the *Project Management Body of Knowledge (PMBOK Guide)* (PMI 2017a) and the Project Management Institute's *Standard for Program Management* (PMI 2017b) were considered in developing this plan. These guides focus on the key concepts for successful program and project management with the most critical elements being thorough project planning and understanding the organization influences and project constraints. Other key elements are clearly defining the project scope and mitigating the project risk. This updated PgMP reflects all these key elements.

2.1 ULP History

Currently, the ULP includes 31 lease tracts, 29 of which are active. The 31 lease tracts comprise a total of 26,115 acres in western Colorado (Figure 1). The 10-year leases were issued to four different entities on January 6, 2020. The following sections describe the history of the ULP as the scope evolved along with the various federal agencies and programs involved.

2.1.1 Mineral Leasing Program

The U.S. Atomic Energy Commission's (AEC) Mineral Leasing Program, conducted from 1948 through 1962, resulted in the production of approximately 1.25 million tons of ore, yielding more than 7 million pounds of uranium, 40 million pounds of vanadium, and approximately $5 million in royalties to the federal government. The large uranium discoveries in New Mexico and Wyoming in the late 1950s resulted in an overabundance of uranium. Consequently, AEC began to limit purchases of uranium ores. Ultimately, the Mineral Leasing Program was terminated in April 1962, and the ore purchase program concluded at the end of 1970. As this original leasing program was terminated, most of the mine portals were backfilled at AEC's direction to deny entry; however, little else was done to reclaim the environmental disturbances that resulted from the program. DOE, as successor agency to AEC, inherited this legacy of abandoned mine sites and became responsible for their ultimate reclamation.

2.1.2 Uranium Lease Management Program

In the early 1970s, AEC determined that a second leasing program was warranted to recover the ore reserves remaining on AEC's withdrawn lands while milling facilities still existed in the area. The new leasing program was hailed as a means to recover the uranium resources developed by AEC, while improving the prospects for continued mill operation and encouraging further exploration and development on privately held lands.

The Uranium Lease Management Program (ULMP) was initiated by AEC in 1974 under Domestic Uranium Program Circular 8, Revised (1973). Forty-three tracts (see Figure 1), containing approximately 25,000 acres of withdrawn land, were leased to the general public through a competitive bid process (see Table 1). A 10-year leasing period was established for the ULMP, with provisions for one automatic renewal (at the discretion of the lessees) for an additional 10-year period.

The bids were percentage royalties to be paid to the federal government from the extraction of tract-specific uranium reserves. One additional tract, with limited reserves and minimal potential for development, was retained by AEC in withdrawn status; however, it was not offered for lease with the other 43 tracts.

All leases were awarded based on the highest "bid" royalty received. In addition to the bid royalties, all leases were subject to an ongoing "base" royalty that varied depending on the value of the ore produced. The bid royalty (determined by the entity who made the competitive bid) also varied from property to property and terminated after a specified number of pounds of uranium were produced.

At the end of the first 10-year lease period (1974–1984), 9 leases were relinquished, terminated, or allowed to expire without being renewed. Consequently, only 34 leases were renewed in 1984 for the second 10-year term. At the end of the second 10-year lease period (1984–1994), four additional leases were relinquished or terminated.

During the 1974–1994 lease period, the ULMP produced approximately 1.7 million tons of ore, yielding 6.5 million pounds of uranium, 33.4 million pounds of vanadium, and $52.8 million in royalties to the federal government (see Table 1).

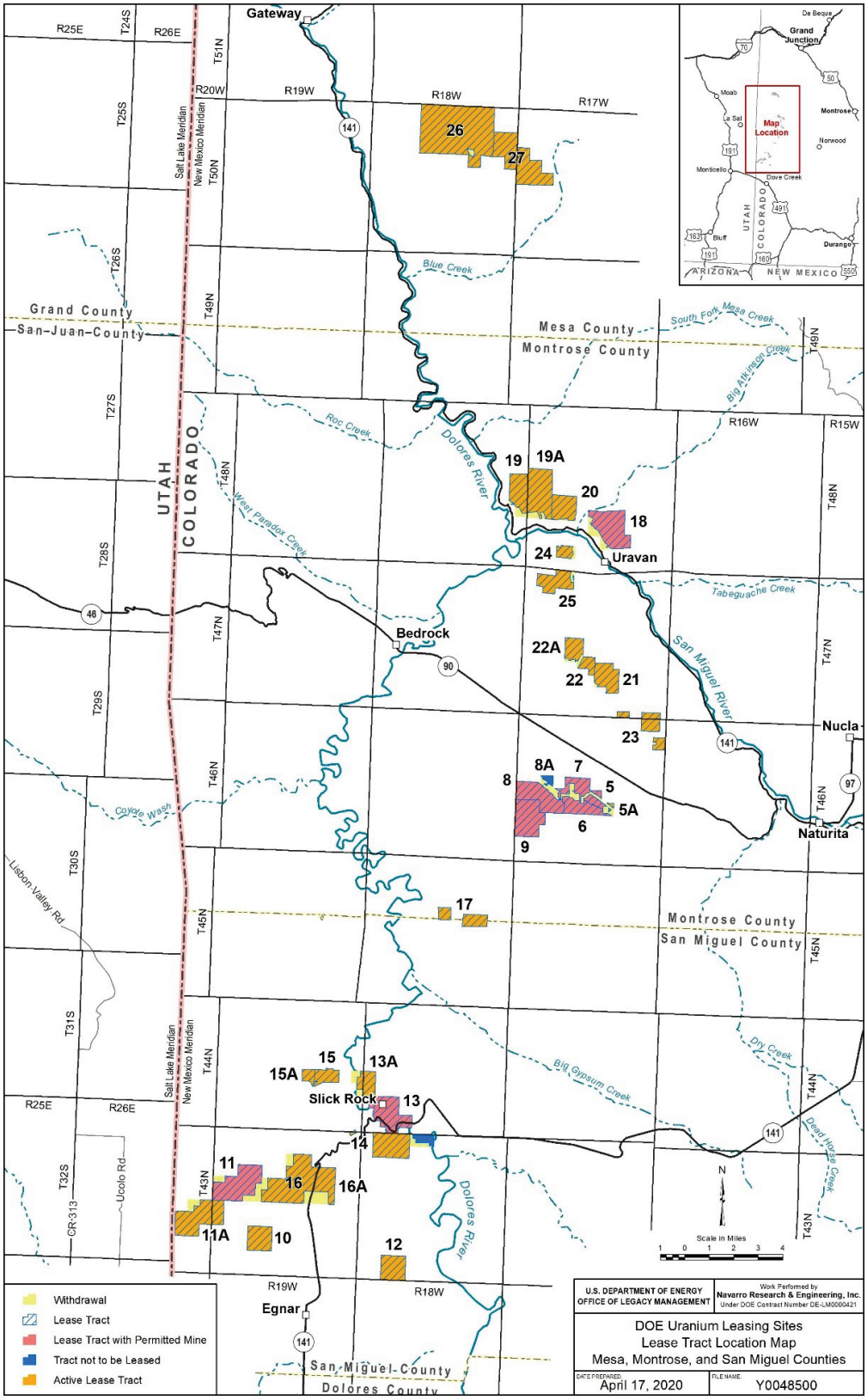

Figure 1. Lease Tract Location Map

Table 1. Summary of Lease Tract Information for the 1974–1994 Leasing Period

Lease Number	Leaseholder	Royalty Bid (%)	Royalty Bid Quantity (pounds)	Uranium Produced (pounds)	Royalty Pound Balance	Vanadium Produced (pounds)	Minimum Advanced Royalty	Production Royalty
NM–B–1	Terminated (09/02/92)	5.55	190,000	458,579.06	0	0	$58,000	$576,377.09
U–CW–2	Relinquished (04/24/85)	8.03	45,000	4,540.36	40,459.64	27,334.85	$5,000	$16,363.03
U–CW–2A	Total Minerals Corporation	22.66	35,000	0	35,000	0	$8,000	$0
U–H–3	Lady Ann Company	12.879	130,000	11,043.49	118,956.51	67,733.19	$30,500	$80,545.79
U–E–4	Energy Fuels Nuclear, Inc.	16.5	85,000	0	85,000	0	$12,500	$0
C–JD–5	Blake Mining Company	12	700,000	410,951.40	289,048.60	1,732,465.90	$188,000	$1,846,787.79
C–JD–5A	Relinquished (04/13/83)	15.82	30,000	0	30,000	0	$5,500	$0
C–JD–6	Cotter Corporation	14.2	1,200,000	279,900.99	920,099.01	1,910,421.63	$151,500	$2,052,557.25
C–JD–7	Cotter Corporation	27.3	2,800,000	46,228.04	2,753,771.96	125,445.50	$313,500	$187,740.52
C–JD–7A	Cotter Corporation	31.3	30,000	0	30,000	0	$7,500	$0
C–JD–8	Cotter Corporation	38.2	375,000	0	375,000	0	$51,000	$0
C–JD–8A	Relinquished (04/14/83)	26.22	30,000	0	30,000	0	$3,500	$0
C–JD–9	Cotter Corporation	24.3	850,000	128,593.81	721,406.19	703,775.59	$142,500	$1,344,944.18
C–SR–10	Energy Fuels Nuclear, Inc.	21.76	110,000	273,298.44	0	2,323,124.44	$31,000	$1,694,414.29
C–SR–11	Cotter Corporation	11.67	900,000	161,997.44	738,002.56	924,981.50	$136,000	$795,460.69
C–SR–11A	Relinquished (05/14/82)	36.2	300,000	0	300,000	0	$21,000	$0
C–SR–12	Relinquished (05/29/86)	11.74	180,000	24,216.30	155,783.70	233,388.20	$46,000	$170,337.34
C–SR–13	Blake Mining Company	20.6	700,000	372,747.82	327,252.18	2,765,680.73	$129,500	$3,788,809.09
C–SR–13A	Cotter Corporation	36.2	350,000	129,011.21	220,988.79	744,264.36	$51,000	$1,851,714.94
C–SR–14	George S. Fender	26	55,000	0	55,000	0	$13,500	$0
C–SR–14A	Relinquished (05/10/81)	15.82	30,000	0	30,000	0	$3,500	$0
C–SR–15	Blake Mining Company	18.6	100,000	15,602.16	84,397.84	93,286.15	$9,000	$112,018.17
C–SR–15A	Umetco Minerals Corporation	23	275,000	28,411.66	246,588.34	155,604.84	$36,000	$287,211.15
C–SR–16	Relinquished (05/29/86)	23.6	70,000	26,287.30	43,712.70	155,832.40	$17,000	$236,239.10
C–SR–16A	Relinquished (07/23/84)	37.37	30,000	12,251.95	17,748.05	102,630.96	$3,500	$136,464.44
C–WM–17	Umetco Minerals Corporation	36.2	30,000	0	30,000	0	$10,500	$0
C–WM–17A	Taminco, Inc.	10.19	45,000	0	45,000	0	$10,500	$0
C–SM–18	Cotter Corporation	15.6	1,300,000	22,553.12	1,277,446.88	97,185.97	$162,000	$53,823.44
C–AM–19	Umetco Minerals Corporation	27.76	2,800,000	3,610,072.47	0	18,433,088.96	$439,500	$29,653,162.50
C–AM–19A	Umetco Minerals Corporation	18.1	1,500,000	0	1,500,000	0	$126,000	$0

Table 1. Summary of Lease Tract Information for the 1974–1994 Leasing Period (continued)

Lease Number	Leaseholder	Royalty Bid (%)	Royalty Bid Quantity (pounds)	Uranium Produced (pounds)	Royalty Pound Balance	Vanadium Produced (pounds)	Minimum Advanced Royalty	Production Royalty
C–AM–20	Umetco Minerals Corporation	19.6	800,000	0	800,000	0	$75,000	$0
C–LP–21	Cotter Corporation	18.4	1,200,000	175,769.65	1,024,230.35	1,235,865.28	$159,000	$1,801,979.69
C–LP–22	Relinquished (11/07/84)	15.301	180,000	39,746.80	140,253.20	202,763.10	$25,500	$279,377.74
C–LP–22A	Cotter Corporation	19.9	60,000	84,474.16	0	531,798.94	$6,000	$763,193.66
C–LP–23	Terminated (03/02/82)	33.51	375,000	24,064.86	350,935.14	116,989.45	$52,000	$207,154.30
C–BL–23A	Cotter Corporation	26.22	30,000	0	30,000	0	$5,500	$0
C–BL–23B	Relinquished (10/09/84)	11.11	170,000	5,038.33	164,961.67	39,919.57	$28,500	$25,755.84
C–CM–24	Terminated (10/28/81)	11.13	90,000	0	90,000	0	$26,000	$0
C–CM–25	Cotter Corporation	25.1	600,000	62,411.33	537,588.67	255,887.94	$72,000	$586,263.78
C–G–26	Rajah Ventures, Ltd.	9.04	50,000	4,220.24	45,779.76	18,846.09	$17,000	$7,878.01
C–G–26A	Lois B. Foster	4.123	30,000	8,342.05	21,657.95	44,293.99	$18,000	$24,000.51
C–G–27	Marjorie L. Foster and Dalton Foster	10.321	140,000	82,859.45	57,140.55	350,708.67	$14,000	$469,885.68
C–G–27A	Pioneer Uravan, Inc.	26.22	30,000	0	30,000	0	$3,500	$0
U–PM–28	Never Leased in 1974							
			Total	6,503,213.89		33,393,318.20	$2,724,500	$49,050,460.01

Abbreviations:

AM = Atkinson Mesa
B = Bluewater
BL = Bitter Creek/Long Park
C = Colorado
CM = Club Mesa
CW = Cottonwood Wash
E = Elk Ridge
G = Gateway
H = Hideout Mesa
JD = Jo Dandy
LP = Long Park
NM = New Mexico
PM = Polar Mesa
SM = Spring Creek Mesa
SR = Slick Rock
U = Utah
WM = Wedding Bell Mountain

2.1.3 Uranium Leasing Program

In 1994, all the existing lease agreements were allowed to expire, and this allowed DOE to prepare a National Environmental Policy Act (described in Title 42 *United States Code* 4321 [42 USC 4321 et seq.]) (NEPA) Programmatic Environmental Assessment (PEA) for a potential extension of the leasing program, which was completed in July 1995. On August 22, 1995, a Finding of No Significant Impact (FONSI) was issued for the proposed action. Based on the PEA and FONSI, DOE determined that the leasing program should continue and extended offers to the existing lessees for new 10-year leases. The new lease agreements were patterned after the 1974 agreement but were modified to incorporate new administrative requirements and the additional environmental obligations outlined in the PEA. During lease negotiations, the lessees of 15 lease tracts chose not to continue leasing with the program and reclaimed and relinquished their respective tracts back to DOE. Accordingly, new 10-year lease agreements were executed with Cotter Corporation, effective March 20, 1996, and three new lease agreements were executed with Blake Mining Company, effective January 27, 1997. The ensuing leasing program and its associated activities was recognized as the Uranium Leasing Program, to differentiate it from the earlier 20-year program. Two lease tracts (C-LP-22A and C-BL-23A) were subsequently fully reclaimed and relinquished back to DOE.

In April 2003, Cotter Corporation resumed mining operations on lease tract C-JD-9. During the first two years, three additional lease tracts were brought back into production. Mining operations ceased on all tracts in November 2005. During this brief period, the four lease tracts produced approximately 64 thousand tons of ore, yielding 600 thousand pounds of uranium, 1.5 million pounds of vanadium, and $6.0 million in royalties to the federal government.

Through a series of lease modifications, the leases were extended through April 30, 2008. These extensions allowed DOE to perform its second PEA, which was completed in July 2007 and resulted in a FONSI supporting the continuation of the program for a fourth 10-year period. As the program continued, lease tracts were redefined to include the adjacent invalid claims, or portions thereof, located within the withdrawal boundary. DOE also decided to combine some of the less favorable lease tracts with the more desirable adjacent lease tracts. In April 2008, DOE executed new 10-year lease agreement with the existing lessees. In June of 2008, DOE executed new 10-year lease agreements with the successful bidders for 18 inactive lease tracts. The one remaining tract received no bids and was placed on inactive status indefinitely. (Table 2)

Table 2. Summary of Lease Tract Information for the 1995–2018 Leasing Period

Lease Number	Lessee	Date of New Lease	Royalty Bid (%)	Royalty Bid Quantity (pounds)	Annual Royalty ($)
C–JD–5	Gold Eagle Mining, Inc.	01/27/1997	12.000	289,000	6,600
C–JD–6	Cotter Corporation	03/20/1996	14.200	920,000	16,600
C–JD–7	Cotter Corporation	03/20/1996	27.300	2,754,000	45,800
C–JD–7A	Cotter Corporation	03/20/1996	31.300	30,000	2,500
C–JD–8	Cotter Corporation	03/20/1996	38.200	375,000	8,000
C–JD–9	Cotter Corporation	03/20/1996	24.300	721,000	13,500
C–SR–11	Cotter Corporation	03/20/1996	11.670	738,000	13,700
C–SR–13	Gold Eagle Mining, Inc.	01/27/1997	20.600	327,000	7,200
C–SR–13A	Relinquishment requested on 03/06/2003				
C–SR–15	Gold Eagle Mining, Inc.	01/27/1997	18.600	84,000	3,300
C–SM–18	Cotter Corporation	03/20/1996	15.600	1,277,000	22,300
C–LP–21	Cotter Corporation	03/20/1996	18.400	1,024,000	18,300
C–LP–22A	Relinquishment approved on 10/03/2002				
C–BL–23A	Relinquishment approved on 01/04/2001				
C–CM–25	Cotter Corporation	03/20/1996	25.100	538,000	10,600
			Total	9,077,000	$168,400

2.1.4 Abandoned Mine Site Reclamation Program

In 1994, DOE initiated an abandoned mine site reclamation program to address the AEC legacy mine sites. To support this program, DOE initiated discussions with the U.S. Bureau of Land Management (BLM) to establish a reclamation strategy that was protective of human health and the environment. A reclamation guidance document was developed and used to standardize all subsequent reclamation activities.

In 1997, DOE performed a comprehensive reconnaissance survey of all lease tracts to identify and assess all legacy mine sites. During the next four years, these legacy sites were systematically reclaimed; reclamation was completed at the final legacy site in May 2001. In the early 2000's numerous unpatented mining claims became invalid. Those within the withdrawal boundaries were incorporated into the lease tracts, and DOE accepted the liability for the legacy mine sites contained therein. From 2009 through 2011, DOE reclaimed these additional legacy mine sites.

In summary, 182 separate and distinct mine sites were reclaimed at a total cost of $2,298,000. This included the permanent closure of 199 mine portals and openings, the fabrication and installation of 74 bat gate structures, the permanent closure of 19 shafts and 137 vent holes, the backfilling of open pits and trenches with 145,000 cubic yards of material, the recontouring of 177,000 cubic yards of mine waste rock materials, and the revegetation of 185 acres of disturbed land with native species of grasses, forbs, and shrubs.

2.1.5 Litigation

On July 31, 2008, four environmental organizations filed suit against DOE and the ULP in U.S. District Court for the District of Colorado (Court), alleging that DOE violated NEPA by issuing the 2007 PEA and FONSI and "not taking a hard look at the potential environmental impacts of future ULP activities." A second complaint was added in April 2009 alleging that DOE also violated the Endangered Species Act (16 USC 1531 et seq.) by "not adequately addressing the potential environmental impacts of future ULP activities to the four endangered Colorado River fish."

On June 30, 2011, DOE notified its lessees of its intent to prepare a programmatic environmental impact statement (PEIS) for the ULP. At that time, DOE advised the lessees that during the PEIS process, estimated to take 12–15 months to complete, DOE would be unable to approve any new ground-disturbing activities (exploration or mining plans) on the lease tracts. DOE further advised the lessees that their annual royalties paid for the 2011–2012 lease year ensured that their lease tracts were in good standing, and would remain so during the PEIS process, and that no further royalties would be required until after the PEIS process was completed. Finally, DOE advised the lessees that the "reasonable diligence" portion of Article IV of each lease agreement was waived for the same time period.

On October 18, 2011, the Court ruled in the plaintiff's favor and issued an injunction against DOE that prohibited all lease-related activities until DOE performed an environmental analysis that adequately addressed all potential environmental impacts of future ULP activities. This included site-specific activities, which according to the Court were not adequately addressed in the 2007 PEA and FONSI. On February 27, 2012, the Court amended its ruling to allow DOE

and its lessees to perform activities that were necessary to maintain permits and the tracts and in an environmentally sound condition.

DOE completed its final PEIS in March 2014 and issued a Record of Decision (ROD) in May 2014 supporting the implementation of its preferred alternative continuation of the ULP for an additional 10-year period. Subsequent to the ROD, DOE submitted the Administrative Record for the PEIS and ROD to the Court for consideration.

In April 2017, DOE filed a motion with the Court to dissolve the injunction. In February 2018, the Court ruled that DOE had satisfied its obligation under NEPA; however, it directed DOE to consult further with the U.S. Fish and Wildlife Service (USFWS) concerning water depletion and its effects on the four endangered Colorado River fish species. In May 2018, DOE submitted a supplemental biological assessment to USFWS that provided the water depletion data as directed by the Court. USFWS responded in June 2018 that the new information did not alter its original ecological opinion—that mining activities related to the continuation of the ULP would not adversely affect the four fish species or their habitat. In July 2018, DOE filed a second motion with the Court to dissolve the injunction and enter final judgement in the case.

On March 18, 2019, the Court ruled in DOE's favor, dissolved the injunction against DOE and the ULP, and closed the case. Following the 60-day appeal period wherein the plaintiffs took no actions, the DOE Office of the General Council advised DOE that it was free to develop a path forward for the ULP, including the implementation of its preferred alternative as defined in the final PEIS and ROD, and to continue the program for an additional 10-year period and execute new leases with the existing lessees.

2.1.6 Continuation of the ULP

Once the injunction was dissolved, DOE worked with lessees to review and execute new 10-year lease agreements, that became effective January 6, 2020 for three lessees and July 6, 2020 for one lessee. The lease agreements were revised to incorporate new environmental requirements and stipulations outlined in the final PEIS. These new lease agreements also incorporated a change to the production royalty methodology. The new calculation removed the base royalty and bid quantity and revised the bid royalty to be equitable to DOE and the lessee.

3.0 Program Authority

LM, through DOE and its predecessor agency AEC, has authority to control, lease, and administer the uranium lease tracts according to the following:

- The Atomic Energy Act of 1946 (PL 79-585) [Section 12(a) 7]:
  - "In the performance of its functions, the Commission is authorized to acquire, purchase, lease, and hold real and personal property as an agent of and on behalf of the United States and to sell, lease, grant, and dispose of such real and personal property as provided in this act."

- Amendment to Section 5(b) 6 of the Atomic Energy Act of 1946, effective August 13, 1954:
  - "The commission is authorized, to the extent it deems necessary to effectuate the provisions of this Act, to issue leases or permits for prospecting for, exploration for, mining of, or removal of deposits of source materials in lands belonging to the United States…"
- Public Land Order 459, Volume 13 *Federal Register* page 1763 (13 FR 1763), "Colorado; Withdrawing Lands and Reserved Minerals in Patented Lands for the Use of the Atomic Energy Commission"
- Public Land Order 494 (13 FR 3870), "Colorado and Utah; Withdrawing Public Lands and Reserving Minerals in Patented Lands for Use of the Atomic Energy Commission"
- Public Land Order 565 (14 FR 1006), "Colorado and Utah; Withdrawing Public Lands and Reserved Minerals in Patented Lands for Use of Atomic Energy Commission; Revoking in Part PLO No. 494"
- Public Land Order 698 (16 FR 1638), "Colorado; Revoking in Part PLO Nos. 459 and 494"
- Public Land Order 779 (17 FR 160), "Colorado; Withdrawing Public Lands and Reserved Minerals in Patented Lands for Use of the United States Atomic Energy Commission. Amended by PLO No. 825 (17 FR 4576)"
- Public Land Order 1495 (22 FR 7313), "Colorado; Withdrawing Public Lands for Use of the Atomic Energy Commission. Corrected by PLO No. 1533 (22 FR 8536)"
- Title 10 *Code of Federal Regulations* Section 760 (10 CFR 760), "Domestic Uranium Program"
- DOE is authorized to enter into agreements with other federal agencies to carry out its ULP functions. Certain of these other agencies (BLM) have authority under the Comprehensive Environmental Response, Compensation, and Liability Act (42 USC 9601 et seq.) (CERCLA)

3.1 Regulatory Drivers

Numerous regulations are in place at the federal, state, local, and tribal level according to which LM maintains programmatic compliance and provides oversight of lessee activities. These regulations guide the actions performed by LM, the LMS contractor, and lessees. On a federal level, various Executive Orders, DOE orders and policies, and BLM requirements apply to ULP. The ULP activities also must adhere to applicable state requirements established by the Colorado Department of Public Health and Environment (CDPHE) and the Colorado Division of Reclamation, Mining, and Safety (DRMS) which are the main regulatory agencies involved in the ULP. The following sections outline the regulatory drivers for LM and lessee activities.

3.1.1 LM Program Oversight and Routine Activities

LM and the LMS contractor have ultimate responsibility for ensuring lessee activities are in accordance with applicable environmental and programmatic compliance regulations and lease stipulations. Requirements flow from the LM program office to the LMS contractor through the work authorization directives and regulatory requirements included in the LMS contract.

The applicable environmental, safety, and health requirements that apply to LM's oversight of the ULP and routine activities performed by LM and the LMS contractor are outlined in the following documents, manuals, and procedures:

- *Uranium Leasing Program Mineral Leasing Procedures Manual* (LMS/PRO/S04344) (Mineral Leasing Procedures Manual)
  - Defines the procedures and requirements that guide both federal and contractor personnel in conducting activities for administering the ULP.
- *Final Uranium Leasing Program Programmatic Environmental Impact Statement* (DOE 2014b) and "Record of Decision for the Uranium Leasing Program Programmatic Environmental Impact Statement" (79 FR 26956) (ROD)
  - Establishes the environmental impacts and mitigation measures that apply to ULP exploration, mining, and reclamation activities and requires additional lease-tract-specific environmental analysis in accordance with NEPA.
- *Environmental Protection Manual* (LMS/POL/S04329)
  - Provides the environmental and regulatory compliance requirements and programs that are generally applicable to activities conducted by the LMS contractor.
  - Lists the major federal environmental statutes, Executive Orders, and DOE requirements that govern many of the activities performed by the LMS contractor.
- *Worker Safety and Health Program (10 Code of Federal Regulations 851 Implementation)* (LMS/POL/S14697)
  - Describes the work processes, plans, and procedures that implement the applicable requirements of DOE promulgated in 10 CFR 851, "Worker Safety and Health Program."

3.1.2 Lessee Activities

A lease agreement is in place for each lessee which establishes the terms and conditions of performing exploration, mining, and reclamation activities on the lease tracts. Article XI of each lease requires the lessees to comply with all applicable statutes and regulations, including specific requirements identified in Appendix C of the lease. The specific requirements include but are not limited to those that affect mining and exploration disturbances on each specific tract.

Lessees are required to submit plans for all proposed exploration and mining activities in accordance with the Colorado Mined Land Reclamation Board and Articles XII and XIII of the lease agreement. These plans are reviewed in accordance with DOE's NEPA regulations and policies and are approved or disapproved with the cooperation and input from federal and state agencies, including local BLM officials and representatives from Colorado DRMS.

4.0 Goals and Objectives

This section identifies the LM goals and objectives of the ULP.

4.1 Program Goals

The ULP aligns with Goal 1 of the LM *2020-2025 Strategic Plan* (DOE 2020a) (Strategic Plan) which is "to protect human health and the environment." The ULP mission is demonstrated by the program's stewardship of federal lands withdrawn for uranium and vanadium development and production. While these lands were originally withdrawn for national security purposes, the program's main objective has evolved to focus on environmental stewardship of these lands through all stages of resource development and extraction. ULP has taken a proactive approach to mitigate environmental impacts and reclaim physical hazards of historical pre-law mines within the lease tracts. These actions have removed safety and environmental hazards with the potential to impact the public, the environment, livestock, and wildlife and have reestablished native topography, vegetation, and ecosystems on former mine sites.

ULP currently employs, or will employ, numerous strategies to fulfill its mission and meet the goals of the Strategic Plan including:

- Ensuring that lessees maintain lease tracts in accordance with federal and state regulations, lease stipulations, and conditions consistent with environmental stewardship best practices.
- Acting as a liaison to assist lessees in navigation of regulatory requirements.
- Maintaining professional relationships with industry and regulatory organizations for the benefit of the lessees and to stay apprised of industry best practices and potential regulation that may impact the lessees or ULP.
- Addressing the environmental legacy and human health and safety risks posed by pre-law mine sites within the lease tracts in conjunction with land management agencies and state and tribal governments.
- Providing oversight, monitoring, and maintenance of lease tracts.
- Maintaining a presence in local communities through outreach and education, remaining involved with mining-related organizations, cultivating relationships with supporting businesses to better understand their needs, communicating program plans, and improving the impact of the program on the communities.

4.2 Program Objectives

In support of Goal 1, the objectives of the ULP are to:

- Perform site-specific inspection of active mine sites on an annual basis and summarize findings in annual status reports.
- Complete opportunistic field inspections on a more frequent basis to identify potential issues or concerns.
- Protect the public, livestock, and wildlife through safeguarding mining features on the lease tracts.
- Provide lessees with the tools and regulatory support to streamline the environmental review, related surveys, and NEPA evaluation process.

- Track, compute, and provide the spot and long-term market price of uranium and vanadium to lessees on a weekly basis and formally establish the value of lease tract ore on a quarterly basis.
- Document and maintain a history of lease-specific data and information.
- Complete reclamation activities, as necessary, on pre-law mine sites to protect the public, the environment, livestock, and wildlife.

5.0 Program Administration

5.1 Contract Management

Effective contract management ensures that LM and LMS managers, staff, and subcontractors have a clear outline and understanding of what ULP activities and services are to be performed under the LMS contract. The process of contract work generally starts with LM direction and progresses to the contractor's preparation of detailed work packages. Throughout the process, the LMS contractor prioritizes tasks to ensure that worker safety and environmental protection will not be compromised within the final approved work package.

5.1.1 Procurement and Contracts Management

The *Procurement Manual* (LMS/POL/S04334) provides direction for the procurement of equipment, services, and subcontracts and ensures that the most economic and efficient methods will be used. All procurement services for ULP work will be made in accordance with federal and prime contract requirements, programmatic schedules, best commercial practices, and established safety and health requirements.

5.1.2 Work Breakdown Structure

All LMS contract costs are categorized by Contract Work Breakdown Structure (CWBS), cost element, and organizational structure. For task assignment cost 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 within 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. Integrated work packages roll up to a control account managed by a control account manager. The CWBS is the official internal breakdown for the purposes of tracking approved ULP work scope as well as budget and 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 ULP'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.

5.1.3 Performance Milestones

Contract performance milestones are 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 an established change control level and is used for tracking and reporting purposes.

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

5.1.4 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 LMS financial reporting. The LMS organization maintains a cost management information system to identify, assemble, analyze, classify, record, and report its transactions, events, and conditions. Clear and concise communication of roles and responsibilities regarding financial reporting objectives and controls to employees is the responsibility of management.

5.1.5 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 for how the LMS organization will support LM in implementing the ULP. The 5-year LCB will include all scope elements described in this plan, including general lease administration, compilation and documentation of royalties, implementation of mitigation actions identified in the PEIS, review of lessees' plans and activities, and monitoring and maintenance of pre-law mines located on the lease tracts.

5.1.6 Baseline Change Proposals

The LMS 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, and schedule. 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 direction in

the *Project Management Control Systems Manual*, the TAM will ensure that an accurate and complete baseline change proposal form has been prepared.

5.2 Schedule

5.2.1 Life-Cycle Baseline Schedule

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

5.2.2 Program Schedule

The program schedule is a collaborative effort by LM and the LMS contractor to plan key tasks and identify 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. Figure 2 presents the overall ULP schedule.

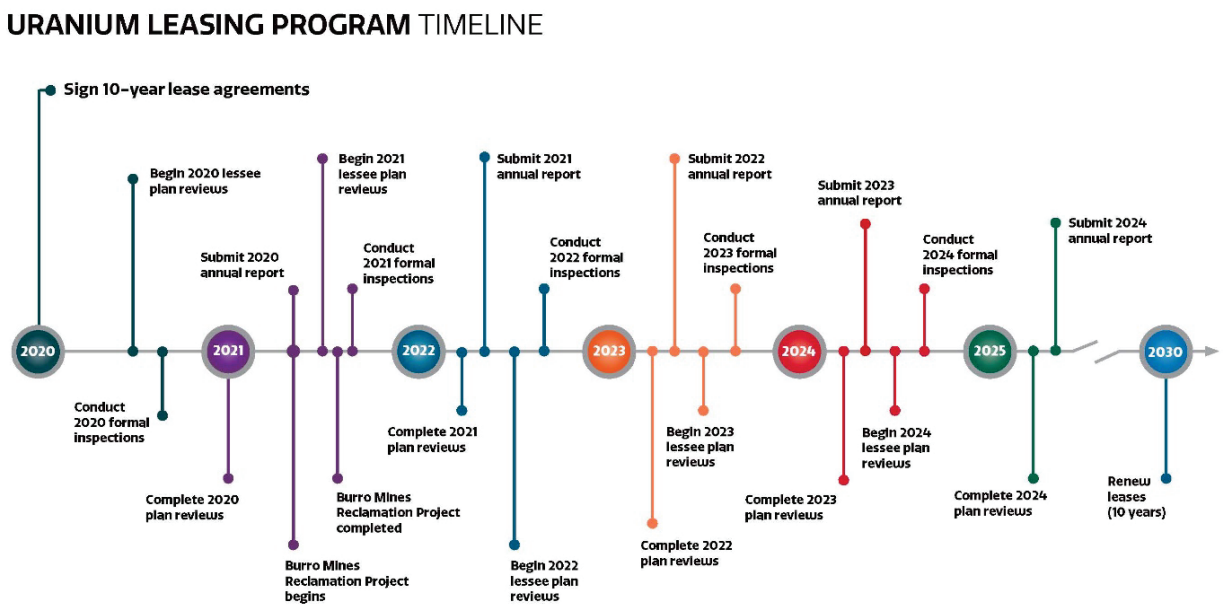

Figure 2. Program Schedule

5.3 Records Management

The *Records Management Manual* (LMS/POL/S04327) establishes the requirements and responsibilities for the management of LM and LMS records. Records created or received during the performance of the ULP are maintained at the LM office at Grand Junction, Colorado, the National Archives and Records Administration in Broomfield, Colorado, and the LM Business Center at Morgantown, West Virginia. A ULP 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, the location where these files will be stored, and the retention schedule for the ULP 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 program 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.

The ULP generates records that include (but are not limited to):

- Quarterly reports from lessees.
- Royalty calculation and correspondence.
- Exploration and mining plans.
- Uranium and vanadium pricing.
- Environmental permits, related surveys, and NEPA documentation.
- Inspection reports.
- Reclamation bond calculations.
- Exploration maps, assay information, drill logs, and analytical reports provided by the lessees.
- Regulatory agency correspondence and other lease tract correspondence.
- Trip reports.
- Maps and figures.

LMS Records staff and the ULP administrative assistant will manage record storage. LM administrative support will manage the storage of records prepared by the LMS contractor for LM's distribution.

6.0 Program Scope

The ULP is the latest chapter in a legacy of land stewardship dating back to the AEC Mineral Leasing Program in 1948. While the methodology and focus of the program has evolved from being entirely related to national defense to supporting commercial nuclear power, the primary scope of the ULP is to facilitate responsible exploration for, development, and production of domestic sources of uranium and vanadium from the lease tracts in the most environmentally sound manner possible. Additionally, the ULP provides lessees with support in maintaining the leases. Further refinement of the scope may occur as the program progresses through subsequent leasing phases, regulatory updates, and other changes.

6.1 Program Implementation

Implementing the ULP requires program documents 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 accessing the work. The documents indicate how responsibilities flow from management to the workers and down to subcontractors or suppliers, as applicable.

The *Integrated Work Control Process* (LMS/POL/S11763) (IWCP) document provides guidance for initiating, authorizing, performing, and conducting work within the LMS Projects and Programs scope in the LMS contract. The IWCP defines the roles and responsibilities of the LMS ULP staff and subcontractors, as applicable. The LMS organization may use subcontractors to provide services such as reclamation activities at mine sites or surveying. 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. This process is also utilized to ensure that all applicable state and federal requirements are identified and met.

Implementing the ULP relies upon its lessees who propose operation plans. ULP personnel review, authorize, and inspect the operations plans. The program provides lessees with technical services to facilitate the development of lessee plans, including ecological, geologic, mining, and reclamation expertise.

The LMS Projects and Programs group includes the ULP. 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. Work implementation is carried out in accordance with the LMS IWCP.

6.2 Uranium Leasing Plans

The activities performed as part of the ULP are described in detail in the Mineral Leasing Procedures Manual which provides specific guidance and direction in the performance of a task or project activity. A brief summary of the plan is provided below.

6.2.1 Mineral Leasing Procedures Manual

The ULP is a program unique to LM in that many of the activities performed are responsive to lessee needs and requests and therefore cannot necessarily be scheduled in advance. The Mineral Leasing Procedures Manual clearly defines the roles and process for both federal and contractor personnel in conducting routine activities for administering the ULP. This is an evolving manual that is reviewed every three years and updated and expanded as necessary. This manual is controlled and issued in accordance with the contractor's *Document Management Manual* (LMS/POL/S09818) requirements.

6.3 Program Management

Program management includes the functional support of Safety and Health (Section 3.1.1), Quality Assurance (Section 11.0), Environmental Compliance (Section 10.0), Public Affairs (Section 15.0), and budgeting and scheduling (Section 7.0). Program management includes the development and revision of program-related documents to support the ULP. Program management also implements the PgMP and requirements of the prime contract.

7.0 Program Approach

LM, under the auspices of DOE, currently offers 30 separate mineral estates for lease to U.S.-based mining companies for domestic production of uranium and vanadium ores. In the current leasing program, the primary focus has been on the administration of uranium and vanadium ores developed and produced from the leases, monitoring and maintenance of the lease tracts so that they are in the best possible ecologic conditions, and reclamation and closure of pre-law mines that fall within the withdrawal but were not in the original lease tract boundaries. LM has established memoranda of understanding (MOUs) with several federal, state, and local agencies and groups to efficiently and effectively administer the ULP.

The following activities are necessary for successful implementation of the ULP:

- Performing cursory and formal inspections of lease tract condition, previously reclaimed or closed sites, and active mining infrastructure (both surface and underground)
- Identifying new or historical data, exchanging information with lessees or other agencies, and synchronizing agency and private company objectives, expectations, and needs in the most efficient manner
- Refining, managing, and continually updating the ULP geodatabase to accommodate data collection, analysis, and reporting
- Sharing information and data with partner agencies, lessees, and other organizations when appropriate
- Conducting outreach activities to educate and keep the public up-to-date on the activities of the ULP
- Participating in professional associations and attending industry conventions to stay current with industry operational experiences, challenges, and best practices

7.1 Work Breakdown Structure

The ULP is currently defined as a subtask of DOE Task Assignment 113, Uranium Related Programs, and contains five distinct work packages as described below. These work packages were established based on routine activities that are conducted on a continual basis. LM approves all work scope, schedules, and budgets prior to the initiation of activities, and performance is measured in accordance with a DOE-approved cost and schedule control system.

7.1.1 Project Administration

Program personnel, in the support of LM, will coordinate, plan, and provide technical and administrative support to the LM ULP program manager for the administration of the lease tracts. The LMS ULP lead ensures that specific tasks of the program are carried out in accordance with established policies and procedures. Specific tasks include, but are not limited to:

- Developing life-cycle and annual budgets and schedules based on the scopes of work provided by LM.
- Reporting monthly the earned value progress against cost and schedule targets.
- Conducting public outreach and stakeholder engagement (acting as liaison between LM and other federal, state, and local agencies, tribal entities, and other interested parties).
- Periodically reviewing MOUs and other programmatic documents and revising them as appropriate.
- Monitoring industry activities, including market prices for uranium and vanadium resources.
- Issuing or terminating lease agreements.
- Training and professional development.

7.1.2 Lessee Plans and Activities

The ULP, in accordance with the lease agreements signed by the lessees, reviews exploration and mining plans submitted to LM for approval. Such plans include applicable NEPA documentation, required surveys, and results of cultural resources and listed species consultations. Plans must be approved before surface-disturbing activities are initiated or surface facilities are constructed on the lease tract. The ULP will include partner agencies, as applicable, according to established MOUs. Additionally, ULP personnel establish reclamation performance bonds to ensure that each lessee's financial warranties are adequate to cover full reclamation of the lessee's lease-related operations. ULP personnel also monitor the lessee's operations, both surface and underground, to ensure that all activities are conducted in accordance with approved plans, current regulations, and standard industry practices. ULP personnel monitor the lessee's ore production activities and royalty payments to ensure that the government gets a fair monetary return for the exploitation of its mineral resources. Finally, ULP personnel monitor the lessee's reclamation activities to ensure that all disturbed areas are restored to their pre-mining conditions, as practicable.

7.1.3 Annual Inspections

ULP personnel will routinely monitor all lease tracts to identify any physical or environmental conditions that need to be addressed and then mitigate those conditions. Formal, annual inspections of all lease tract operations with active permits will be conducted to assess those operations using the standard of the approved plans. A representative or representatives of the lessee are encouraged to join the inspections as are other interested regulators in order to facilitate communication. Attempts will be made to include DRMS and BLM on permitted mine site inspections. The results of the annual inspections will be documented in an annual inspections report that will be submitted to LM for review and consideration.

Milling and other processing facilities receiving lease tract ores will be inspected on an annual basis to ensure that the facilities are performing all activities and operations in accordance with industry standards. A formal inspection report will be generated to document the results of the inspection and any recommendations made. This report will be submitted to LM for review and consideration.

All lease tracts will be routinely inspected to assess ecological conditions (primarily the existence of noxious weeds and other undesirable plant species). The lessee will be apprised of conditions associated with their lease-related activities, and ULP personnel will focus weed control activities on all other areas. BLM and county weed programs will be enlisted to assist with these weed control efforts.

7.1.4 Data Management

A major portion of the success of the ULP is dependent on proper management of data. Data must be properly managed during collection, use, and storage to ensure the integrity and viability of this program. The data will be managed through software products such as ArcGIS, AutoCAD, and other custom applications as appropriate. Data include (but are not limited to) geospatial or tabular information regarding individual mine features, production data, historical and cultural features, radiological data, and mine surface and underground infrastructure. Chemical data, collected by LMS personnel, will be stored in Microsoft structured query language server databases and will be validated according to the *Environmental Data Validation Procedure* (LMS/PRO/S15870) and managed according to the *ESDM Environmental Data Management Team Work Procedures* (LMS/PRO/S13473). Chemical data include the results of laboratory analysis of soil and water samples collected on or near the lease tracts.

ULP personnel routinely collect, assess, and manage all geospatial data collected that are related to the DOE lease tracts and adjacent areas. ULP personnel also collect, assess, and manage all geospatial data received from the lessees relative to their DOE lease tracts and adjacent areas. As part of this effort, ULP personnel will upload all data into a geospatial database that will be used to store and manage the data and subsequently produce maps and three-dimensional models of explorations drilling data, mine workings, and mineral resources. Data and models will be made available to lessees upon request and when appropriate.

7.1.5 Reporting

Under this work package, ULP personnel will develop, prepare, and revise all project plans, reports and procedures, to include at a minimum: the PgMP, annual status and activities reports, annual lease tract inspection reports, annual mitigation action reports, annual mill inspection reports, the Mineral Leasing Procedures Manual, and lease tract resumes. Other documents may be included as the need arises.

7.2 Reclamation In Lieu Of Royalties

In accordance with Article XVI of the lease agreements, LM may enter negotiations with lessees to reclaim abandoned uranium mine sites and associated features on lessees' lease tracts in lieu of annual royalty payments to the government. Reclamation in lieu of royalties (RILOR) is optional for lessees, with the value of the reclamation work to be performed assessed by ULP

personnel in accordance with the LM realty officer and others. Some features associated with the abandoned mines may be left intact (barring imminent safety hazards) because they are considered historically significant.

7.2.1 Burro Mines Complex Reclamation

This project is an imminent activity to be completed in 2021. The Burro Mines Complex, on lease tract C-SR-13 near Slick Rock, Colorado, is a pre-law uranium and vanadium mine that produced ore from three shafts (Burro No. 3, Burro No. 5, and Burro No. 7) located immediately adjacent to, but off, the lease tract and the Burro Tunnel Site within the lease boundary. The majority of the ore produced from this complex originated off the lease tract from lode claims. The majority of the waste rock produced from the Burro Tunnel was piled onto the lease tract. The toe of this multi-tiered waste rock dump protrudes into the ephemeral Burro Canyon Wash where precipitation runoff during major storm events could erode the pile and transport material into the Dolores River.

This will be the largest reclamation project undertaken by the ULP to date. The proposed plan for this reclamation project is to remove waste rock from the Burro Tunnel waste rock dump and relocate it to an abandoned gravel pit south of the mine site which is still on the lease tract. In addition to the Burro Tunnel mitigation, the project plans to remove the crown of the Burro No. 3 and Burro No. 5 waste rock dumps to reduce the steep side slopes and minimize the potential for erosion. This material will also be relocated to the same disposal site. The Burro No. 7 site has been previously reclaimed and remains in good condition with established vegetation.

The gravel pit will be excavated to maximize fill potential and to stockpile soil material for subsequent reclamation activities. The Burro waste rock will be enveloped inside the pit between the bedrock and excavated soil. The gravel pit will then be recontoured to blend in with the surrounding undisturbed topography, stabilized to prevent erosion, and reseeded with native vegetation. The Burro Tunnel site will be reclaimed in the same fashion as the gravel pit but will be left in a state that will allow for future mining operations to access ore deposits through this portal.

7.3 Dolores River Restoration Partnership

LM and the Dolores River Restoration Partnership (DRRP) have worked together for nearly a decade to manage the riparian habitat along the Dolores River as it passes through two lease tracts in the Slick Rock area of southwestern Colorado. The DRRP consists of other various federal, state, and local communities, nonprofit and private companies, and private landowners. The purpose of the DRRP is to restore the riparian corridor of the Dolores River and includes control of nonnative invasive plant species, revegetation, long-term monitoring and maintenance, education, and communication.

7.4 Working File Index

The ULP working file index defines project records, file organization, records custodians, active file locations, file transfer instructions, file retention, bar coding instructions, and other project-

specific records guidance that is needed to effectively manage ULP records. The ULP working file index is maintained and accessible electronically.

In accordance with the *Document Management Manual*, project records shall be labeled with the appropriate file index number at the time of creation. The record creator should designate the applicable file numbers. The file name and number should be included in the distribution list (or cc's if correspondence) if the list is part of the record or placed on the face of the record in the upper or lower right-hand corner.

8.0 Program Organization

The program organization structure defines the organizational elements to plan and implement work. The LM Uranium Mine Team Lead and LM ULP program manager are responsible and accountable for program and project management, contractor oversight and performance evaluation, and interagency coordination. The LMS TAM is responsible and accountable for successful execution of the contractor's scope of work and for adherence to regulatory and contractual requirements. Efficient execution of the above roles is imperative to the overall success of the ULP.

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 ULP operates out of the Grand Junction and Westminster locations and is managed by the LM Uranium Mine Team Lead and the LM ULP program manager.

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 the contract. The ULP is part of the Uranium Related Programs task order, which is managed by the TAM. The TAM is supported by the ULP project manager, direct staff, and mission support organizations. Field operations are based out of the LM office at Grand Junction, Colorado. Daily operations conducted by the LMS contractor are facilitated by a staff that includes the project manager, project lead, field operations manager, and mining engineer.

8.3 Roles and Responsibilities

The LMS contractor consults with lessees and partner agencies to develop scope and projects for the ULP. Lessees submit their proposed plans to LM and the LMS contractor for review and approval. LM provides direction to the ULP project manager about what activities need to be conducted. From there, the ULP project manager provides direction to ULP staff and support organizations to execute the work associated with the program. Working closely with LM and the TAM, the ULP project manager ensures that technical milestones and program objectives are accomplished and that program controls are implemented. The LM realty officer is responsible for contractual-related actions associated with current lease agreements and communicating contractual-related decisions to the respective lessees.

8.4 Interagency Roles, Responsibilities, and Agreements

8.4.1 BLM

DOE has an MOU (BLM and DOE 2015) with the BLM district and field offices for areas in which the lease tracts are located. The purpose of this MOU is to identify individual and shared roles and responsibilities of DOE and BLM regarding the ULP, specifically concerning the management of the withdrawn lands and the development of vanadium and uranium ores. This MOU includes the following:

- Lease issuance, negotiation, and management
- Review and approval responsibilities for exploration, mining, and reclamation plans
- Review of site-specific environmental documents resulting from NEPA
- Conduct supporting environmental surveys, consultations, and permitting
- Field reviews of lessee exploration, mining, and reclamation activities
- Financial assistance
- Conflict resolution

DOE also has an interagency agreement (IA) with the BLM district and field offices for areas in which the lease tracts are located. The purpose of this IA is to provide the financial instrument for the limited areas of the MOU and additional scope where DOE has committed to disbursement of funds in support of the ULP.

8.4.2 Colorado DRMS

The MOU with Colorado DRMS (DOE and DRMS 2015) pertains primarily to management of withdrawn lands. The purpose of this MOU is to identify individual and shared roles and responsibilities of DOE and DRMS regarding the ULP, specifically concerning the development and mining of vanadium and uranium ores. Items covered in this MOU include:

- Individual agency responsibilities.
- Financial warranty and bonding procedure.
- Review of site-specific environmental documents resulting from NEPA.
- Inspection.
- Enforcement.
- Conflict resolution.

8.4.3 State Mined Land Reclamation Board Regulations

The Colorado Mined Land Reclamation Act of July 1, 1976 requires notification and permitting of all exploration and mining operations within the State of Colorado. The act further requires that operations must comply with performance standards similar to those cited in the DOE leases. DRMS administers the State board program that requires surety bonds to guarantee performance under these standards. Only minimal bonds are required by the State of Colorado if

the operators are bonded by other agencies, such as DOE, and those bonding amounts are deemed adequate. The State regulations act as double indemnity against environmental damage by DOE lessees. In the event of default, the board has the additional leverage of seeking restraining orders or injunctions on all the operators' activities within the state. The Colorado State Mined Land Reclamation Board works with LM and the LMS contractor on potential rule changes and other items that potentially affect the lease tracts.

9.0 Reporting

9.1 Annual Status Report

On an annual basis, the LMS contractor prepares a comprehensive summary of the lessees' activities to demonstrate the progress that was made and the effectiveness of the mitigative measures that were implemented. This annual status report includes the status of the lessees' activities as they relate to approved lessee plans and the lease-tract-specific *Mitigation Action Plan* (LMS/POL/Y00368) (MAP). After the LMS contractor finalizes the report, a condensed version with sensitive information extracted will be uploaded onto the ULP website and made available to other federal, state, and local agencies and the public. In addition to this report, the LMS contractor will report the status of any ongoing MAPs in the DOE annual NEPA planning summary, which is an annual report provided to the DOE Office of the General Counsel.

9.2 Annual Inspection Reports

Annual inspections of all lessee mining operations are conducted to assess the physical infrastructure and condition of all active lease tracts. Site conditions will be examined in accordance with federal, state, and local health, safety, and environmental regulations to identify adverse safety and environmental issues that need to be addressed. The lessees are apprised of any such issues. Following the inspections, a report is prepared outlining the results of the inspections and the mitigative actions recommended. This report is forwarded to LM with a schedule for the proposed completion of the mitigation activities. Additional inspections are conducted as needed to verify that any mitigative actions required are satisfactorily completed.

9.3 Annual Mitigation Report

In accordance with LM's *Uranium Leasing Program Mitigation Action Plan for the Final Uranium Leasing Program Programmatic Environmental Impact Statement DOE/PEIS-0472* (DOE 2014d), LM is required to submit an annual summary report of mitigation activities completed by the program's lessees. The report includes actions pertaining to mining, exploration, or reclamation on a site-specific basis related to plans submitted to LM by the lessees. LM will utilize this report to inform federal, state, and local agencies of the actions completed by the lessees.

9.4 Dolores River Restoration Partnership Report

The DRRP is a coalition of public and private organizations working to restore the riparian corridor of the Dolores River in western Colorado and eastern Utah. LM's role in this

partnership, defined by a 2015 MOU between DOE and DRRP, has led to the physical removal of invasive species and the reestablishment of native vegetation on 3.3 miles of the Dolores River as it passes through two of the ULP lease tracts. The LMS contractor conducts a monitoring program to assess the success over time and summarizes its findings in an annual report that is submitted to LM for review and consideration.

10.0 Environmental Management System

Environmental protection is conducted under the umbrella of the Environmental Management System (EMS) run jointly by LM and the LMS contractor. The EMS mandates compliance with applicable environmental regulations to ensure that air, water, land, and other natural and cultural resources are protected. The EMS has two areas of focus: environmental compliance (EC) and environmental sustainability. The EC component implements federal, state, tribal, and local regulatory requirements, agreements, and permitted activities. The environmental sustainability component promotes and integrates sustainability initiatives into all phases of work. The EMS implementation strategy is documented primarily in the following:

- LM's *Environmental Policy* (LM Policy 436.1C)
- LM's *EMS Description* (LM Procedure-3-20-12.0)
- The LMS *Environmental Protection Manual* provides an overview of EC programs and requirements that are applicable to LM and LMS work activities
- The LMS *Environmental Instructions Manual* (LM-Procedure-3-20-12.0-0.1, LMS/POL/S04338) provides instructions and procedures to implement environmental requirements such as managing hazardous and radioactive waste, evaluating chemical inventories, and preventing and responding to spills
- The LMS *Environmental Management System Description* (LMS/POL/S04346) describes the mechanisms for implementing the EMS
- The LMS *Environmental Management System Teams Manual* (LM-Manual-3-20.3-1.0-1.0, LMS/POL/S11374) describes the EMS sustainability teams, EMS support teams, and project teams

The authorities related to the EMS for the ULP are described below. The LMS contractor manages the work it performs in a manner that protects natural and cultural resources in accordance with federal, state, local, and tribal laws, regulations, DOE policy, and executive orders.

10.1 Environmental Compliance

The LMS contractor's EC organization provides oversight and support to help ensure that ULP activities are planned and performed in compliance with lease agreements and applicable environmental laws and regulations, including DOE policy and Executive Orders. These include but are not limited to the federal laws listed below. Equivalent or additional requirements at the state (e.g., CDPHE and DRMS requirements) and local (e.g., Mesa, Montrose, and San Miguel Counties) level may also apply to activities on ULP lease tracts.

- Bald and Golden Eagle Protection Act (16 USC 668)

- Clean Air Act (42 USC 7401 et seq.)
- Clean Water Act (33 USC 1251 et seq.)
- Endangered Species Act
- Federal Insecticide, Fungicide, and Rodenticide Act (7 USC 136 et seq.)
- Federal Noxious Weed Act (7 USC 2801 et seq.)
- Floodplain Management (Executive Order [EO] 11988)
- Migratory Bird Treaty Act (16 USC 703-712)
- NEPA
- National Historic Preservation Act (16 USC 470)
- Protection of Wetlands (EO 11990)
- Resource Conservation and Recovery Act (42 USC 6901 et seq.)
- Toxic Substances Control Act (15 USC 2601-2629)

10.1.1 Environmental Planning and Review

NEPA requires an environmental review for any action that occurs on federal land, any federally funded action, or any federal decision that would result in potential impacts upon the environment. An early review for environmental requirements often assists in better project planning and reduces potential impacts upon the environment. The federal agency taking the action or making the decision must conduct and document the NEPA review. The 2014 PEIS and ROD identify the preferred alternative to continue the ULP for an additional 10-year period. The PEIS requires that lease-tract-specific NEPA evaluations tier from the PEIS and be conducted for proposed exploration, mining, and reclamation plans. The ULP work is often conducted with partner agencies with roles and responsibilities described through MOUs as well as private mining companies. Work may also be performed by LM/LMS personnel, such as weed control on those tracts not under lease as described below. Information from government or private NEPA documents may be used as appropriate in DOE's lease-tract-specific NEPA evaluations for the ULP. DOE's NEPA expectations are summarized in DOE Policy 451.1, and DOE's NEPA implementing procedures are outlined in 10 CFR 1021.

As stipulated in lease agreements, lessees are responsible for providing the site-specific environmental review and analysis information to support LM's NEPA review process for proposed exploration, mining, and reclamation plans. Depending on the scope of work, exploration and reclamation activities may fall under the class of actions that meet the criteria for DOE NEPA categorical exclusions, whereas, for proposed mining actions, lessees are required to provide site-specific environmental analysis information to LM to support a NEPA environmental assessment at a minimum. LM and the LMS contractor will review and evaluate the site-specific environmental analysis for completeness and coordinate with lessees throughout the NEPA evaluation process.

A NEPA review and subsequent *Categorical Exclusion Evaluation* (LM 4-20-5.0-0.0) are used to document that routine activities performed by LM, the LMS contractor, and the lessees have

been evaluated and were determined to fit within classes of actions that do not individually or cumulatively have a significant effect on human health or the environment.

- Examples of routine activities performed by LM and the LMS contractor include site inspections, vegetation and noxious weed management, general maintenance, addressing safety and environmental hazards, site characterization, and administrative actions.
- Examples of routine activities performed by the lessee include inspection and monitoring of lease tract conditions; maintaining access roads, equipment, and mine-related features; addressing safety hazards; disposal of excess equipment and waste; collecting environmental samples; maintaining stormwater controls; and noxious weed and vegetation management.

10.1.2 Guiding Documents

The following key programmatic documents set the environmental planning and compliance framework for the ULP:

- *Biological Opinion Regarding the Effects to the Western Yellow-billed Cuckoo and the Gunnison Sage-Grouse from the Management of a Uranium Leasing Program in Western Colorado by the Department of Energy* (DOE 2017)
- *Cultural Resource Management Plan* (LM Plan 3-3-1.0-0.1)
- *Final Uranium Leasing Program Programmatic Environmental Impact Statement*
- *Programmatic Agreement Among the U.S. Department of Energy-Office of Legacy Management, the U.S. Department of the Interior-Bureau of Land Management-Colorado State Office, the Colorado State Historic Preservation Office, and the Pueblo of Zuni Regarding the Uranium Leasing Program within Mesa, Montrose, and San Miguel Counties, Colorado* (DOE 2014c)
- *Programmatic Biological Assessment on the Western Yellow-Billed Cuckoo and Gunnison Sage-Grouse* (DOE 2016)
- "Record of Decision for the Uranium Leasing Program Programmatic Environmental Impact Statement"
- *Uranium Leasing Program Mitigation Action Plan for the Final Uranium Leasing Program Programmatic Environmental Impact Statement DOE/EIS-0472*

11.0 Quality Assurance

The *Quality Assurance Manual* (LMS/POL/S04320) (QAM) describes a Quality Management System (QMS) that incorporates the requirements of ISO 9001:2015, *Quality Management Systems – Requirements*; DOE Order 414.1D, *Quality Assurance*; and other customer-requirement documents. This QMS describes a "Plan-Do-Check-Act" cycle that promotes continual improvement in all work activities. Any work performed by or for the LMS contractor must comply with the QMS requirements. Elements of the QMS apply to all LMS contractor activities and work products. The achievement of quality is the responsibility of those who manage and, most importantly, those who perform the work. Each person is required to do their job in accordance with procedures and other requirements.

ULP incorporates QMS requirements using a graded approach, as defined in the *Quality Assurance Manual*. The graded approach provides a flexible, efficient, and effective means of controlling items and activities to assure that the required quality is achieved and is commensurate with its importance and risk. The ULP lead notifies the Quality Assurance (QA) manager of new work or significant changes in scope. Depending on the circumstance, a Quality Assurance Project Plan may be developed in accordance with the QAM to further define specific QA requirements for the ULP.

11.1 Assessments and Performance Evaluations

Assessments, which are evaluations of the ULP work tasks, will be performed at a frequency commensurate with the risk and importance of the activity or as dictated by a requirement. They must also be conducted using criteria describing acceptable work performance and should promote continual improvement. Assessments identify issues, opportunities for improvement, noteworthy practices, lessons learned, or problems that hinder the organization from achieving its objectives. Assessments will be planned, scheduled, conducted, and tracked according to the requirements outlined in the QAM.

The ULP management will work with the Quality and Performance Assurance representatives to plan assessments based on the criteria listed above. The frequency will be determined by ULP management and may occur as a result of special request from other parties. The scope of the assessments should highlight the highest risks of non-conformance in the program and in what areas there are opportunities for improvement. The assessment plan will generally be a combination of management assessments and surveillances. The ULP may also be subject to independent assessments, external assessments, or supplier evaluations (as described in the QAM).

11.2 Lessons Learned

Lessons learned are captured in the LMS contractor's "operating experience" (OpEx) system. The OpEx system disseminates lessons learned from past activities to improve work processes, equipment operation, quality, safety, and cost-effectiveness. The ULP will document lessons learned from ongoing activities 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 primary 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 (10 Code of Federal Regulations 851 implementation)*, *Integrated Safety Management System Description* (LMS/POL/S14463), and the *Environmental Management System Description* 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 Program, the *LMS Safety and Health Program* (LMS/POL/S20043), and other applicable safety and health plans and procedures.

12.1 Job Safety Analysis

The job safety analysis (JSA) is used by the LMS contractor to identify unique hazards associated with each task and identify appropriate hazard controls for the tasks using the hierarchy of controls. The JSA is also used to identify bounding conditions, required permits (e.g., penetration permit), personal protective equipment, and training requirements. Specific requirements for the JSA may be found in the *Job Safety Analysis* (LMS/PRO/S16030).

12.2 Personnel Protection

Employees will follow good safety, industrial hygiene, and radiological control practices and procedures to ensure that personal exposure to physical safety, radiation, chemical, toxic material, and other personnel hazards is kept as low as reasonably achievable. In particular, operations personnel will 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 using as low as reasonably achievable and best practices
- 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 utilize stop work authority to take 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 analysis

12.3 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, the LMS organization 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 made to further reduce exposures and releases to levels as low as reasonably achievable. The LMS contractor remains fully committed to implementing a radiological control program of the highest quality that consistently meets these objectives.

The ULP is unique in that radioactivity may be consistently encountered in the course of its execution as it is naturally associated with the development and extraction of uranium ore. Due to this unique circumstance, ULP personnel routinely utilize intrinsic knowledge and industry best practices that other LMS contractor personnel may not be familiar with. Therefore, field

activities (especially mine inspections) are always conducted under the direction and guidance of highly trained ULP personnel.

Unusually high or significantly elevated radiation levels or surface radioactivity at a ULP lease tract (previously identified or suspected) will be brought to the attention of the ULP project manager, the ULP site lead, and the LMS Radiological Control manager immediately. Radiological characterization of the ULP lease tract will be performed by the LMS Radiological Control organization, and proper radiological controls, except where lessees have instituted controls, in accordance with the *Radiation Protection Program Plan* (LMS/POL/S04373) and the *Radiological Control Manual* (LMS/POL/S04322), will be implemented for the ULP lease tract, as necessary.

13.0 Program Risk Management

LM guidance directs that a contingency be applied to all LM activities due to 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 ULP is unique to LM in that the majority of the work scope is entirely reactive to and dependent upon the activities of the lessees. The ULP is currently authorized to perform field work and to evaluate lessee plans for exploration, mining, and reclamation. The biggest sources of uncertainty for achieving ULP goals are likely to include: fluctuations in commodity prices inherent in speculative markets, the availability of milling facilities or contracts, and downstream regulatory uncertainty. The ULP potential risk conditions and consequence are summarized in Table 3.

Table 3. Program Risk Screening

Risk Condition	Consequence
Low/variable commodity prices	Staffing, scope, and schedule reduction; lack of capital expenditures by lessees
Environmental litigation	Loss of regulatory authority, repetition or expansion of environmental review
Lack of ore processing	Source material cannot be processed without a U.S. Nuclear Regulatory Commission licensed mill and limited capital infusion
Inability to negotiate a fair market milling contract	Inability to develop and extract ores or spur outside infusion of capital
Regulatory changes	Impediments and escalated cost of production for existing mining operations and conditions

The ongoing activities of the program will increase the risks associated with regulatory authority, governmental environmental policy changes, economic and commodity market fluctuations, and ore development and extraction technical concerns. Strategies to overcome and mitigate these risks will be identified in project-specific implementation plans. As the program continues, the probability will increase that one or more of these potential risks will be realized. However, the overall ULP risk is moderate.

The ULP is determined to keep the potential consequences of realized risks to the program to a minimum. Utilization of operational experience gained over the last several leasing periods will assist in ensuring the program's success. Oversight from experienced and seasoned personnel familiar with the caveats of the ULP will also assist in ensuring the program's success. The mitigation strategies of the risks described above are summarized in Table 4.

Table 4. Program Risk Management

Risk Condition	Management
Low or variable commodity prices	Acceptance through reduction in activities
Environmental litigation	Mitigated by vigorous environmental review and implementation of best management practices
Lack of ore processing	Reduction through effective communication and alternative feed scenarios
Inability to negotiate a fair market milling contract	Development and maintenance of a professional relationship with mill operators
Regulatory changes	Proactive monitoring of proposed regulatory changes and evaluation of possible impacts

As the program progresses, it will be the goal of ULP personnel to acknowledge risks as well as cultivate and develop multiple potential solutions to possible risks. Specific strategies will be outlined as necessary, and lessons learned from each experience will be recorded. Other management strategies will likely become apparent as risk conditions evolve, diverge, or dissipate.

14.0 Program Communications

Effective, comprehensive, and consistent communication is fundamental to a positive branding of the ULP. A positive brand and program image are vital to the success of this program. Organizations participating in the program include LM, the LMS contractor, partner agencies, tribal organizations, private property owners, and lessees. This section describes how effective communications will occur within and among these organizations.

14.1 LM/LMS Communication

LM will have regularly scheduled (weekly) team meetings where programmatic issues are addressed, current activities are reviewed, and planning for future work is discussed. A network share drive provides a repository for ULP documents and other technical information pertinent to the program. This network share drive is accessible by LM and LMS personnel. Access to the drive is granted to project personnel and select functional support staff to maintain site integrity.

14.1.1 Weekly Team Meetings

Regularly-scheduled staff meetings are conducted at all levels of LMS contractor management to ensure program integration. A weekly meeting between the program manager and staff will take place. Information is provided to staff during routine group meetings. Pertinent safety information delivered during LMS staff meetings is communicated to all relevant personnel during pre-job briefings or the next available opportunity. Safety information requiring prompt attention is communicated immediately via email or by phone.

14.1.2 ULP SharePoint Site

Documents for the ULP are managed using a dedicated SharePoint site. SharePoint is a web-based collaborative platform that integrates with Microsoft Office and serves as a document management and storage system. The SharePoint system consists of a central area for individual project folders, templates, spreadsheets, and communication tools such as the discussion board. Access to the site is only granted to project personnel to ensure integrity.

14.1.3 DRUM Program Interface

The Defense-Related Uranium Mines (DRUM) Program is a LM program developed for the verification and validation (V&V) of approximately 2500 abandoned uranium mines on public land. 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, which is when uranium ore was sold to AEC for defense-related purposes. V&V activities are conducted to fully understand the scope of the risks posed by these mines by determining their location, reclamation or remediation status, and potential impacts on public safety, human health, and the environment.

A subset of DRUM sites are within the lease tracts, having produced ore from the mineral estates or having been incorporated into the lease tracts after the underlying claims became invalid. ULP has conducted inventory, closure, reclamation, or maintenance activities on these mines in the past in addition to similar work performed for BLM on adjacent mines in the 1990s and 2000s. ULP works closely with the DRUM Program to share expertise, inventory location data, closure methodology and condition, and reclamation status and information previously collected by ULP personnel in order to assist with V&V activities. The DRUM Program will conduct V&V activities on the lease tracts in the near future. The information collected will identify any issues or action items to be addressed by the lessee or through RILOR before the eventual relinquishment of withdrawn lands back to BLM at the end of the ULP. The data provided by the DRUM Program will also act as a snapshot of the current condition of each of the lease tracts.

14.2 Internal Communications

Sustained integration of the different groups inside the LMS organization requires teamwork and mutual understanding between workers and management. Teamwork and understanding can be promoted only through effective communication that flows up, down, and side to side throughout the organization. The LMS organization is committed to ensuring effective communication by actively soliciting worker feedback. Employees can communicate directly with the LMS program manager and other task assignment 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 as well as current versions of policies and procedures. For example, workers and managers participate in safety and health planning at all levels, including hazard controls and tailgate meetings, and employees at every level have stop-work authority. The Employee Concerns Program is an additional mechanism for communication within the organization.

14.2.1 Pre-Job Briefings

A pre-job briefing is an interactive discussion between the line manager and work participants regarding the work scope, anticipated hazards, planned mitigation controls, 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 and are adequately trained for 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 and routine LMS activities (e.g., field data collection or cursory inspections).

14.2.2 Work Authorization

Work authorization is initiated by the line manager by listing the specific job tasks necessary for completion. Each job task defines the type of work to be performed and the designated person in charge (PIC) for that job task. The work authorization will typically be described in the *Plan of the Day/Plan of the Week* form (LMS 2130) as defined by *LMS Projects and Programs Manual* (LMS/POL/S05760) and *Integrated Work Control Process*. Job tasks may be added to the previously approved scope of work by the PIC or line manager. Upon completion, the signed form will be stored as a record with the line manager for the time required.

15.0 Public Relations

The LMS Public Affairs program includes national, intergovernmental, and local stakeholder involvement; public affairs and outreach; 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.

Public involvement will be a routine component of program operations and planning activities. Public Affairs accommodates a full range of diverse viewpoints and values in all phases of a decision-making process. This enables LM to make better decisions and build mutual understanding and trust in a way that is consistent with program branding as portrayed to stakeholders and the public.

Due to the fact that ULP lease tract locations are on federally managed land, most public affairs activities (public meetings, press releases, etc.) will be coordinated with the appropriate federal agency, typically BLM.

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 (5 USC 552) (FOIA). This law provides any person with the statutory right to obtain access to government information in executive branch agency records and is often described as the law that keeps citizens knowledgeable about their government.

All FOIA requests received by the program are directed to the FOIA coordinator and follow protocols established by LM. The investigatory records, specifically mine locations and cultural features collected by the ULP that could reasonably be expected to endanger the life or physical safety of any individual are redacted and not disclosed. These mines, and particularly their features, are considered an attractive nuisance. The mines generally have openings, structures, equipment, and objects that are both dangerous and irresistibly inviting or intriguing to the public. The physical condition of these uranium mines has the potential to cause serious bodily harm to the public and specifically to recreators and tourists.

Additionally, the chemical, radiological, geophysical, geological, metallurgical, and industrial practices and records of current or past lessees entrusted to the ULP are proprietary to the program and lessee and not generally disclosed. If disclosed, the dissemination of information would provide competing companies with an unfair market advantage in the exploration and beneficiation of resources adjacent to the lease tracts.

Mineral reserves and resources are commercially valuable. The earth's surface near these deposits often contains cultural resources or is a cultural resource in itself. Abandoned mine sites likewise contain mineral resources and cultural resources and often serve as habitat for threatened and endangered species. Disclosure of specific mine location information may lead to unauthorized excavation, vandalism, and theft and have adverse consequences for human safety, cultural resource protection, and wildlife protection.

15.2 Stakeholder Inquiries

Public inquires will be sent to the LM Uranium Mine Team Lead (or delegated individual) to coordinate a response. The LM Uranium Mine Team Lead will engage the LM Communication, Education, and Outreach Team as necessary. Some inquiries must be coordinated with the DOE Office of Congressional and Intergovernmental Affairs (LM Procedure 3-11-5.0-0.1).

15.3 Stakeholder Engagement

The ULP recognizes the value of stakeholder involvement in making decisions regarding the program's activities and operations. DOE routinely solicits input from other federal and state agencies (primarily DRMS and BLM) prior to making decisions concerning the program. Through the Public Affairs team, ULP has compiled and maintains a list of stakeholders and other interested parties. This list is used to disseminate ULP information or solicit input for the decision-making process. Additionally, LM maintains a website for ULP that contains general information about the program; this website can be found at https://www.energy.gov/lm/services/property-management/uranium-leasing-program.

LMS Public Affairs will evaluate the level of stakeholder involvement for LM programs, as described in the *Public Affairs Manual*. Public Affairs maintains a stakeholder database that includes individuals that have requested notification regarding ULP activities, including federal and state agencies and officials, tribal governments, environmental organizations, lessees, and the public. Read-only user privileges are granted on a case-by-case basis by requests for permission from the LM task assignment lead. Public Affairs plans and coordinates stakeholder engagement and provides logistical support.

Formal communication with stakeholders will be coordinated through Public Affairs. The LMS contractor will ensure content communicated with stakeholders is reviewed by subject matter experts and approved by LM and LMS senior management before being posted online through the LM public website, social media, or other public communication efforts. Public Affairs may assist with information distribution to stakeholders upon approval of the LM site manager or designee prior to distribution.

15.4 Education and Outreach

Public Affairs also coordinates community outreach activities to help brand the ULP and educate the public. Uranium mining has played a significant role in our nation's history and has dramatically impacted the communities around the lease tracts. The ULP plans to continue to educate the public about the history of the program and its continued role in the mining industry. ULP will continue to build relationships with key local and regional media outlets to secure coverage that includes LM message points and perspectives.

16.0 Program Completion

The ULP is currently scheduled to operate until 2055. Upon completion of the program's objective, LM's long-term goal is for the lands and mineral estates held under its administrative control to be restored to the public domain. The procedure set forward in Part 13 of the Mineral Leasing Procedures Manual details the steps to be taken in restoring the lands upon the decision to end the program.

16.1 Program Closeout

As described in the IWCP document, a project completion report may be required by the TAM when the ULP ends. ULP personnel will consolidate the official lease tract files and provide them to the appropriate records coordinator for storage.

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 appropriate, including acknowledgment of receipt.

Monitoring and periodic maintenance of reclaimed sites will continue until BLM has accepted the return of the mineral estates, at which time BLM will need to release DOE from any further liability concerning the ULP.

17.0 References and Resources

5 USC 552. "Freedom of Information Act," *United States Code*.

7 USC 136 et seq. "Federal Insecticide, Fungicide, and Rodenticide Act," *United States Code*.

7 USC 2801 et seq. "Federal Noxious Weed Act," *United States Code*.

10 CFR 760. U.S. Department of Energy, "Domestic Uranium Program," *Code of Federal Regulations.*

10 CFR 851. U.S. Department of Energy, "Worker Safety and Health Program," *Code of Federal Regulations*.

10 CFR 1021. U.S. Department of Energy, "National Environmental Policy Act Implementing Procedures," *Code of Federal Regulations*.

13 FR 1763. U.S. Department of the Interior, "Colorado; Withdrawing Lands and Reserved Minerals in Patented Lands for the Use of the Atomic Energy Commission," *Federal Register*, March 25, 1948.

13 FR 3870. U.S. Department of the Interior, "Colorado and Utah; Withdrawing Public Lands and Reserving Minerals in Patented Lands for Use of the Atomic Energy Commission," *Federal Register*, July 7, 1948.

14 FR 1006. U.S. Department of the Interior, "Colorado and Utah; Withdrawing Public Lands and Reserved Minerals in Patented Lands for Use of Atomic Energy Commission; Revoking in Part PLO No. 494," *Federal Register*, February 25, 1949.

15 USC 2601-2629. "Toxic Substances Control Act," *United States Code*.

16 FR 1638. U.S. Department of the Interior, "Colorado; Revoking in Part PLO Nos. 459 and 494," *Federal Register*, February 12, 1951.

16 USC 470. "National Historic Preservation Act," *United States Code*.

16 USC 668. "Bald and Golden Eagle Protection Act," *United States Code.*

16 USC 703-712. "Migratory Bird Treaty Act," *United States Code*.

16 USC 1531 et seq. "Endangered Species Act," *United States Code.*

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30 USC 611 et seq. "Surface Resources Act," *United States Code*.

33 USC 1251 et seq. "Clean Water Act," *United States Code*.

42 USC 2011 et seq. "Atomic Energy Act," *United States Code*.

42 USC 4321 et seq. "National Environmental Policy Act," *United States Code*.

42 USC 6901 et seq. "Resource Conservation and Recovery Act," *United States Code*.

42 USC 7401 et seq. "Clean Air Act," *United States Code*.

42 USC 9601 et seq. "Comprehensive Environmental Response, Compensation, and Liability Act," *United States Code*.

43 USC 1701, et seq. "Federal Land Policy and Management Act of 1976," *United States Code*.

79 FR 26956. U.S. Department of Energy, "Record of Decision for the Uranium Leasing Program Programmatic Environmental Impact Statement," *Federal Register*, May 12, 2014.

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

DOE (U.S. Department of Energy), 2014b. *Final Uranium Leasing Program Programmatic Environmental Impact Statement*, DOE/EIS-0472, Office of Legacy Management, March.

DOE (U.S. Department of Energy), 2014c. *Programmatic Agreement Among the U.S. Department of Energy-Office of Legacy Management, the U.S. Department of the Interior-Bureau of Land Management-Colorado State Office, the Colorado State Historic Preservation Office, and the Pueblo of Zuni Regarding the Uranium Leasing Program Within Mesa, Montrose, and San Miguel Counties, Colorado*, U.S. Department of Energy, April.

DOE (U.S. Department of Energy), 2014d. *Uranium Leasing Program Mitigation Action Plan for the Final Uranium Leasing Program Programmatic Environmental Impact Statement DOE/PEIS-0472*, LMS/ULP/Y00368, Office of Legacy Management, November.

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EO (Executive Order) 11988. *Floodplain Management*, May 24, 1977.

EO (Executive Order) 11990. *Protection of Wetlands*, May 24, 1977.

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LM Plan 3-3-1.0-0.1, *Cultural Resources Management Plan*, LM/S07371, Office of Legacy Management, November 2019.

LM Policy 436.1C, *Environmental Policy*, U.S. Department of Energy, February 22, 2017.

LM Procedure 3-11-5.0-0.1, *Processing Records Requests*, Office of Legacy Management, approved March 3, 2018.

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Environmental Protection Manual, LMS/POL/S04329

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Finance and Accounting Manual, LMS/POL/S04342

Integrated Safety Management System Description, LMS/POL/S14463

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PL 79-585, "Atomic Energy Act of 1946," Public Law.

PL 95-91, Stat. 565, "Department of Energy Organization Act," Public Law.

PMI (Project Management Institute) 2017a. *Project Management Body of Knowledge (PMBOK Guide)*.

PMI (Project Management Institute) 2017b. *The Standard for Program Management*.

17.1 Relevant Links

https://www.energy.gov/lm/services/property-management/uranium-leasing-program

18.0 Glossary

Annual royalty: The amount specified in each lease agreement that is due and payable to LM at the beginning of each lease year so that the lessee may retain the lease for the ensuing year.

Beneficiation: In the mining industry or extractive metallurgy, beneficiation is any process that improves the economic value of the ore by removing the gangue minerals, which results in a higher-grade product and a waste stream.

Cursory inspection: See informal inspection.

Extractive metallurgy: The practice of removing valuable metals from an ore and refining the extracted raw metals into a purer form.

Formal inspection: A detailed inspection (compared to an informal or cursory inspection), typically conducted on foot or by all-terrain vehicle/utility task vehicle (ATV/UTV), that focuses on known areas containing physical safety or environmental hazards on the lease tracts. Both legacy mine sites and active operation areas are inspected.

Gangue: The subeconomic material in which ore is found. After separation from the ore, gangue material is referred to as waste rock or tailings.

Highwall: The excavated, generally vertical, face of exposed overburden.

Informal inspection: A less detailed inspection (compared to a formal inspection), typically conducted by vehicle or ATV/UTV, that focuses on the discovery of changes or potential changes in physical safety and environmental conditions on the lease tracts. The finding of such conditions may warrant a follow-up formal inspection.

Lease agreement: The document in which the lessee is permitted certain rights with respect to a given lease tract. Those rights include, among others, the right to explore for, develop, and mine ores containing uranium, vanadium, and associated minerals.

LM ULP program manager: The LM employee who is responsible for programmatic oversight of the ULP and who ensures that technical and administrative objectives and milestones are accomplished. He or she enlists the assistance of an LM realty officer to enter into, administer, and terminate ULP contracts and make contractual determinations and findings on behalf of LM.

Mine entry: A point at which people, wildlife, or material can enter or leave an underground mine. Mine entries include adits and shafts but do not include ventilation raises meant for the intake or exhaust of mine air.

Ore: A naturally occurring solid material from which a metal or valuable mineral can be profitably extracted.

Physical feature: Term used to describe an excavation created for the purpose of exploring for, extracting, or developing an ore body and consequent openings in the ground surface which result from such activities. Examples of physical features include trenches, prospects, pits, shafts, adits, vents, and subsidences.

Pre-law mine: A mine that ceased operation prior to 1977 and has no responsible party.

Procedures: Documented, detailed instructions that specify or describe how, and in what sequential order, required technical and administrative activities are to be performed.

Public land: Land managed by a governmental agency for use by the public (excluding tribal land and any land managed under the auspices of the U.S. Bureau of Indian Affairs). This includes land managed by the U.S. Bureau of Land Management, the U.S. Forest Service, the U.S. Fish and Wildlife Service, the National Park Service, and the U.S. Bureau of Reclamation.
Reclamation: In non-CERCLA actions, waste rock or other portions of the mine, such as roads or ponds, have been recontoured or graded to a stable condition. The primary purpose of these actions is to minimize the potential for future erosion and make items blend with the original site topography. This may include covering the site with enough topsoil to enhance revegetation.

Remediation: In CERCLA actions, response actions taken, or an Action Memorandum signed to mitigate the release or potential release of CERCLA hazardous substances. The primary purpose of these actions is to mitigate potential risks to human health and the environment. Such actions include, but are not limited to, consolidation areas or repositories.

Source material: Material containing non-enriched uranium as found in nature. Ores containing uranium, thorium, or any combination thereof, at one-twentieth of one percent (0.05%) or more by weight are source material.

Subsidence: Downward deflection of the earth's surface as a result of a roof (back) failure in an underlying mine. The result of subsidence may be a shallow trenchlike feature, a vertical hole, or a broad downward deflection of the ground surface. A subsidence feature might or might not be open to the underground mine workings.

Tailings: The materials left over after the process of separating the valuable fraction from the uneconomic fraction of an ore. Tailings are distinct from waste rock which is displaced during mining without being processed.

ULP lead: The contractor employee designated to administer the ULP and otherwise carry out the specific tasks assigned by the LM ULP program manager.

Verification and validation (V&V): The act of verifying old records and validating current mine conditions as part of the DRUM Program. Verification consists of documenting mine records, including location and production data, and validation consists of field inventory and sampling to document current mine conditions. Collectively, V&V is the process of reconciling mine data, inventorying mine features, performing environmental sampling, and documenting results in a database and report that provides a risk scoring assessment to federal land management agencies.

Waste rock: Subeconomic materials associated with an orebody of interest which, due to their value, are disposed of onsite. Waste rock may contain constituents of interest, may exhibit elevated gamma radiation, and may become economical at some point in the future.

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