DRAFT URANIUM LEASING PROGRAM PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT

1 INTRODUCTION

The U.S. Department of Energy (DOE) has prepared the Uranium Leasing Program (ULP) Programmatic Environmental Impact Statement (PEIS) pursuant to the National Environmental Policy Act of 1969 (NEPA) (Title 42, Section 4321 and following sections of the *United States Code* [42 USC 4321 *et seq.*]), the Council on Environmental Quality's (CEQ's) NEPA regulations found in Title 40 of the *Code of Federal Regulations* (40 CFR Parts 1500–1508), and DOE's NEPA implementing procedures (10 CFR Part 1021) in order to analyze the reasonably foreseeable environmental impacts, including the site-specific impacts, of alternatives for the management of the ULP. DOE's ULP administers tracts of land located in Mesa, Montrose, and San Miguel Counties in western Colorado for the exploration, mine development and operations, and extraction of uranium and vanadium ores.

1.1 BACKGROUND

Congress authorized DOE's predecessor agency, the U.S. Atomic Energy Commission (AEC), to develop a supply of domestic uranium. In 1948, the Bureau of Land Management (BLM) issued Public Land Order (PLO) 459, which stated, "Subject to valid existing rights and existing withdrawals, the public lands and the minerals reserved to the United States in the patented lands in the following areas in Colorado are hereby withdrawn from all forms of appropriation under the public-land laws, including the mining laws but not the mineral-leasing laws, and reserved for the use of the United States Atomic Energy Commission." Subsequently, other PLOs increased or decreased the total acreage of the withdrawn lands. In addition, the Federal Government, through the Union Mines Development Corporation, acquired a substantial number of patented and unpatented mining claims, mill and tunnel site claims, and agricultural patents, until the aggregated acreage managed by AEC totaled approximately 25,000 acres (10,000 ha). The areas under consideration are located in western Colorado in Mesa, Montrose, and San Miguel Counties.

Beginning in 1949, the AEC and its successor agencies, the U.S. Energy Research and Development Administration and DOE, administered three separate and distinct leasing programs during the ensuing 60 years, as summarized in Table 1.1-1. To put the production numbers in Table 1.1-1 in perspective, domestic annual uranium production peaked in 1980 at about 44 million lb (20 million kg), of which lease production that year represented about 2.5% of the total. In addition, today's world market produces approximately 100 million lb (45 million kg) of uranium annually and consumes twice that amount. Table 1.1-2 summarizes production rates between 1974 and 1994 and between 1996 and 2008.

TABLE 1.1-1 Summary of Three Leasing Programs Administered between 1949 and 2008

Years of Operation	No. of Leases	Lease Production (millions of lb)[a]		Royalties Generated (millions of $)
		U_3O_8	V_2O_5	
1949–1962	48	1.2	6.8	5.9
1974–1994[b]	43	6.5	33.0	53.0
1996–2008	15	0.3	1.4	4.0
Totals		8.0	41.2	62.9

[a] Uranium ore is generated as uranium oxide (U_3O_8) and vanadium ore is generated as vanadium oxide (V_2O_5).

[b] Mining operations peaked in 1980.

In preparing for the 1974 leasing period, the AEC evaluated the potential environmental and economic impacts related to the leasing program. This evaluation was documented in *Environmental Statement, Leasing of AEC Controlled Uranium Bearing Lands* (AEC 1972). In 1995, DOE again evaluated the potential environmental and economic impacts related to the leasing program and documented its findings in the *Finding of No Significant Impact for the Uranium Lease Management Program* (DOE 1995a).

When the first leasing program ended in 1962, the AEC directed the lessees to close the mines (to prohibit unauthorized entry), but little was done to reclaim the mine sites. These mine sites became DOE's "legacy mine sites," discussed later in this section.

In 1974, the AEC initiated reclamation bonding requirements in its new lease agreements that ensured that all mine sites would be adequately reclaimed when lease operations ended. During this period, a new lessee could elect to incorporate an existing mine (from the previous leasing program) into its current operation. By so doing, the new lessee accepted the responsibility and liability associated with the ultimate reclamation of that mine site.

In October 1994, DOE initiated a mine-site reconnaissance and reclamation project on the lease tracts. Each lease tract was thoroughly inspected to identify all the abandoned mine sites that resulted from pre-1974 leasing activities. After this identification process, all the mining-related features associated with each site were quantified and assessed for their historic importance. In 1995, in the absence of specific guidance pursuant to the reclamation of abandoned uranium mine sites, DOE initiated discussions with BLM officials (state and local) that culminated in the establishment of a guidance document, *Uranium Closure/Reclamation Guidelines* (BLM 1995) for such sites. DOE's objective in establishing this guidance document was to assure that DOE's lease tracts were reclaimed in a manner that was acceptable to BLM so that the lands could be restored to the public domain and managed by BLM. Subsequently, DOE's "legacy" mine sites were prioritized and systematically reclaimed. Reclamation at the

TABLE 1.1-2 Summary of Uranium Ore Production from 1974 to 2008

Lease Tract	Dates of Operation 1974–1994	No. and Sizes[a] of Mines in Operation within Lease Tract 1974–1994	Total Production (tons) 1974–1994	Dates of Operation 1996–2008	No. of Mines in Operation within Lease Tract 1996–2008	Total Production (tons) 1996–2008
5	5/77–6/90	1 (L)	100,318	Did not operate	0	Did not operate
5A	Did not operate	0	0	NA[b]	0	NA
6	5/76–8/80	1 (L)	91,859	9/04–2/06	1	14,773
7	7/79–5/81	2 (1 VL, 1 M)	12,441	Did not operate	0	Did not operate
8	Did not operate	0	0	6/05–2/06	1	9,236
8A	Did not operate	0	0	NA	0	NA
9	9/78–9/80	1 (M)	34,056	5/03–2/06	1	20,671
10	5/75–8/90	4 (1 M, 3 S)	66,623	NA	0	NA
11	9/75–12/80	2 (1 M, 1 S)	46,720	Did not operate	0	Did not operate
11A	Did not operate	0	0	NA	0	NA
12	8/77–12/79	1 (S)	7,287	NA	0	NA
13	6/75–10/84	3 (1 L, 2 S)	85,863	Did not operate	0	Did not operate
13A	12/75–10/80	1 (M)	38,158	Did not operate	0	Did not operate
14	Did not operate	0	0	NA	0	NA
15	9/76–4/80	3 (S)	4,646	Did not operate	0	Did not operate
15A	9/79–1/81	2 (S)	8,842	NA	0	NA
16	12/76–6/79	4 (S)	5,709	NA	0	NA
16A	8/75–11/80	3 (S)	3,503	NA	0	NA
17	Did not operate	0	0	NA	0	NA
18	2/80–9/80	1 (M)	6,654	3/05–1/06	1	20,085
19	7/74–7/90	1 (L)	920,018	NA	0	NA
19A	Did not operate	0	0	NA	0	NA
20	Did not operate	0	0	NA	0	NA
21	10/78–12/80	1 (M)	46,542	Did not operate	0	Did not operate
22	3/77–5/82	1 (S)	8,578	NA	0	NA
22A	10/79–7/82	1 (M)	21,369	NA	0	NA
23	5/77–12/81	2 (S)	9,867	NA	0	NA
24	Did not operate	0	0	NA	0	NA

TABLE 1.1-2 (Cont.)

Lease Tract	Dates of Operation 1974–1994	No. of Mines in Operation within Lease Tract 1974–1994	Total Production (tons) 1974–1994	Dates of Operation 1996–2008	No. of Mines in Operation within Lease Tract 1996–2008	Total Production (tons) 1996–2008
25	8/78–8/80	1 (M)	14,135	Did not operate	0	Did not operate
26	12/75–12/80	2 (S)	2,547	NA	0	NA
27	8/75–4/83	4 (S)	15,923	NA	0	NA
Totals		42[c]	1,551,658		4	64,765

[a] The sizes of the mines are noted with the following abbreviations: VL = very large; L = large; M = medium; and S = small.

[b] NA indicates not applicable, meaning the lease tract was not leased, and thus, was not available for operation or production.

[c] The total of 42 mines represents 1 very large mine, 4 large mines, 9 medium mines, and 28 small mines.

final legacy mine site was completed in May 2001. DOE reclaimed a total of 161 separate mine sites on 22 lease tracts at a total cost of $1.25 million.

In July 2007, DOE issued a programmatic environmental assessment (PEA) for the ULP, in which it examined three alternatives for the management of the ULP for the next 10 years (DOE 2007). In that same month, DOE issued a Finding of No Significant Impact (FONSI), in which DOE announced its decision to proceed with the Expanded Program Alternative, and also determined that preparation of an environmental impact statement (EIS) was not required. Under the Expanded Program Alternative, DOE would extend the 13 existing leases for a 10-year period and would also expand the ULP to include the competitive offering of up to 25 additional lease tracts to the domestic uranium industry.

In 2008, DOE implemented the Expanded Program Alternative and executed new lease agreements with the existing lessees for their 13 respective lease tracts, effective April 30, 2008. In addition, DOE offered the remaining, inactive lease tracts to industry for lease through a competitive solicitation process. That process culminated in the execution of 18 new lease agreements for the inactive lease tracts, effective June 27, 2008. Since that time, two lease tracts were combined into one and another lease was relinquished back to DOE. Accordingly, there are 29 lease tracts that are actively held under lease and 2 lease tracts that are currently inactive.

Between 2009 and 2011, DOE approved seven exploration plans (one each for Lease Tracts 13A, 15A, 17, 21, 24, 25, and 26). These exploration plans primarily involved the drilling of at least one exploratory hole. To date, the approved exploration plans for Lease Tracts 15A and 17 have not been implemented. Exploration activities typically resulted in surface disturbance of less than 1 acre (0.4 ha). Disturbed lands were reclaimed by using polyurethane foam to plug holes, and by using surface soils and established seed mixtures. There was also one mine re-entry plan that was approved and implemented for Lease Tract 26. This plan included mine re-entry activities whereby information was collected within an existing mine and the mine was re-secured. DOE also approved 20 reclamation plans to reclaim disturbed areas located on Lease Tracts 5, 6, 7, 10, 11, 11A, 12, 13, 16, 16A, 17, 19, 19A, 20, 21, 22, 22A, 23, 26, and 27. All approved reclamation plans have been implemented. Reclamation activities addressed open drill holes and vents, land subsidences, and abandoned mine portals and adits. These exploration and reclamation activities are further discussed and evaluated in the cumulative impacts section (Section 4.7).

1.2 CURRENT STATUS OF THE ULP

Colorado Environmental Coalition and three other plaintiffs filed a complaint against DOE in the U.S. District Court for the District of Colorado on July 31, 2008, in which the plaintiffs alleged, among other things, that DOE's July 2007 PEA and FONSI violated NEPA by failing to consider adequately the environmental impacts of expansion of the ULP, and violated the Endangered Species Act by jeopardizing endangered species. On October 18, 2011, the Court issued an Order in which it held, among other things, that DOE had violated NEPA by issuing its July 2007 PEA and FONSI instead of preparing an EIS. In that Order, the Court invalidated the

July 2007 PEA and FONSI; stayed the 29 leases in existence under the ULP; enjoined DOE from issuing any new leases on lands governed by the ULP; enjoined DOE from approving any activities on lands governed by the ULP; and ordered that after DOE conducts an environmental analysis that complies with NEPA, the ESA, all other governing statutes and regulations, and the Court's Order, DOE could then move the Court to dissolve its injunction (Colorado Environmental Coalition v. DOE, No. 08-cv-1624 [D. Colo. Oct. 18, 2011]).

The Court later granted in part DOE's motion for reconsideration of that Order and amended its injunction to allow DOE, other Federal, state, or local governmental agencies, and/or the ULP lessees to conduct only those activities on ULP lands that are absolutely necessary: (1) to conduct DOE's environmental analysis regarding the ULP; (2) to comply with orders from Federal, state, or local government regulatory agencies; (3) to remediate certain dangers to public health, safety, and the environment on ULP lands; or (4) to conduct certain activities to maintain the ULP lease tracts and their existing facilities (Colorado Environmental Coalition v. DOE, No. 08-cv-1624 [D. Colo. Feb. 27, 2012]).

Currently, of the 31 ULP lease tracts, 29 have active leases and two do not; Lease Tracts 8A and 14 (Parcels 14-1, 14-2, and 14-3) are currently not leased. Lease Tract 8A is a small tract that is isolated and may be located entirely below (or outside) the uranium-bearing formation, which could indicate a lack of ore. Lease Tract 14 comprises three parcels (14-1, 14-2, and 14-3). There was some interest in Parcels 14-1 and 14-2 by potential lessees in the past; however, the third parcel (14-3, which lies east of 14-1) is located almost entirely within the Dolores River corridor and was never leased. Section 1.2.1 describes how DOE administers the ULP; Section 1.2.2 summarizes the requirements in the current leases; and Section 1.2.3 presents site-specific information available on the 31 ULP lease tracts.

On June 21, 2011, DOE published the Notice of Intent (NOI) to prepare this PEIS (see Volume 76, page 36097 of the *Federal Register* [76 FR 36097]). In the NOI, DOE stated that it had determined, in light of the site-specific information that DOE had gathered as a result of the site-specific agency actions proposed and approved pursuant to the July 2007 PEA, that it was appropriate for DOE to prepare a PEIS in order to analyze the reasonably foreseeable environmental impacts, including the site-specific impacts, of a range of alternatives for the management of the ULP for the remainder of the 10-year period that was covered by the July 2007 PEA. After DOE published the NOI, it notified the ULP lessees that until the PEIS process was completed, DOE would not approve any new exploration and mining plans and would not require any lessees to pay royalties.

1.2.1 DOE ULP Administrative Process

DOE's administration of the ULP includes the actions needed to manage the activities conducted at the 31 lease tracts. Table 1.2-1 lists the 31 lease tracts with applicable acreage, current lessee, and the status of each. Figure 1.2-1 shows the locations of the 31 ULP lease tracts. These actions are undertaken to assure that the program's technical and administrative objectives are accomplished. These actions include the following:

TABLE 1.2-1 Summary of the 31 DOE ULP Lease Tracts in 2011

	Lease Tract No.	Acreage	Current Lessee	County	Status[a]
1	10	638	Golden Eagle Uranium, LLC	San Miguel	No recent (post-1995) activity conducted; no area needs to be reclaimed under current conditions.
2	11	1,303	Cotter Corporation	San Miguel	One new underground mine permitted and developed; reclamation of previously disturbed areas needed.
3	11A	1,297	Golden Eagle Uranium, LLC	San Miguel	No recent (post-1995) activity conducted; no area needs to be reclaimed under current conditions.
4	12	641	Colorado Plateau Partners	San Miguel	No recent (post-1995) activity conducted; no area needs to be reclaimed under current conditions.
5	13	1,077	Gold Eagle Mining, Inc.	San Miguel	Three existing, permitted underground mines; reclamation of previously disturbed areas is needed.
6	13A	420	Cotter Corporation	San Miguel	Exploration plan (one hole) approved; drilling and reclamation of the explored area are completed.
7[b]	14 (1, 2, 3)	971	Not applicable	San Miguel	Lease tract not currently leased.
8	15	350	Gold Eagle Mining, Inc.	San Miguel	One existing underground mine; reclamation of previously disturbed areas is needed.
9	15A	172	Golden Eagle Uranium, LLC	San Miguel	No recent (post-1995) activity conducted; no area needs to be reclaimed under current conditions.
10	16	1,790	Golden Eagle Uranium, LLC	San Miguel	No recent (post-1995) activity conducted; no area needs to be reclaimed under current conditions.
11	16A	585	Energy Fuels Resources Corp.	San Miguel	No recent (post-1995) activity conducted; no area needs to be reclaimed under current conditions.
12	5	151	Gold Eagle Mining, Inc.	Montrose	One existing, permitted underground mine; reclamation of previously disturbed areas is needed.

TABLE 1.2-1 (Cont.)

	Lease Tract No.	Acreage	Current Lessee	County	Status[a]
13	5A (1, 2)	25	Golden Eagle Uranium, LLC	Montrose	No recent (post-1995) activity conducted; no area needs to be reclaimed under current conditions.
14	6	530	Cotter Corporation	Montrose	One existing permitted underground mine; reclamation of previously disturbed areas is needed.
15	7	493	Cotter Corporation	Montrose	Two existing permitted mines—one underground mine and one large open-pit mine; reclamation of previously disturbed areas is needed.
16	8	955	Cotter Corporation	Montrose	One existing permitted underground mine; reclamation of previously disturbed areas is needed.
17	8A	78	Not applicable	Montrose	Lease tract has not been leased.
18	9	1,037	Cotter Corporation	Montrose	One existing permitted underground mine; reclamation of previously disturbed areas is needed.
19	17 (1, 2)	475	Golden Eagle Uranium, LLC	Montrose and San Miguel	No recent (post-1995) activity conducted; no area needs to be reclaimed under current conditions.
20	18	1,181	Cotter Corporation	Montrose	One existing permitted underground mine; reclamation of previously disturbed areas is needed.
21	19	662	Energy Fuels Resources Corp.	Montrose	No recent (post-1995) activity conducted; no area needs to be reclaimed under current conditions.
22	19A	1,204	Energy Fuels Resources Corp.	Montrose	No recent (post-1995) activity conducted; no area needs to be reclaimed under current conditions.
23	20	627	Energy Fuels Resources Corp.	Montrose	No recent (post-1995) activity conducted; no area needs to be reclaimed under current conditions.
24	21	651	Cotter Corporation	Montrose	Exploration plan (two holes) approved; drilling and reclamation of the explored area are completed; no area needs to be reclaimed under current conditions.

TABLE 1.2-1 (Cont.)

	Lease Tract No.	Acreage	Current Lessee	County	Status[a]
25	22	224	Golden Eagle Uranium, LLC	Montrose	No recent (post-1995) activity conducted; no area needs to be reclaimed under current conditions.
26	22A	409	Golden Eagle Uranium, LLC	Montrose	No recent (post-1995) activity conducted; no area needs to be reclaimed under current conditions.
27	23 (1, 2, 3)	596	Golden Eagle Uranium, LLC	Montrose	No recent (post-1995) activity conducted; no area needs to be reclaimed under current conditions.
28	24	201	Energy Fuels Resources Corp.	Montrose	Exploration plan (eight holes) approved; drilling and reclamation of explored area are completed; no area needs to be reclaimed under current conditions.
29	25	639	Cotter Corporation	Montrose	Exploration plan (one hole) approved; drilling and reclamation of explored area are completed; no area needs to be reclaimed under current conditions.
30	26	3,989	Energy Fuels Resources Corp.	Mesa	Exploration plan (six holes) approved; drilling and reclamation of the explored area are completed; mine re-entry plan is approved, bulkhead partially removed, and assessment completed; portal is resecured; reclamation of previously disturbed areas is needed.
31	27	1,766	Energy Fuels Resources Corp.	Mesa	No recent (post-1995) activity conducted; no area needs to be reclaimed under current conditions.
Total		25,137			

[a] On October 18, 2011, a Federal district court stayed the 31 leases, and enjoined DOE from approving any activities on ULP lands. On February 27, 2012, the court amended its injunction to allow DOE, other Federal, state, or local governmental agencies, and the ULP lessees to conduct only those activities on ULP lands that are absolutely necessary, as described in the court's Order. See *Colorado Environmental Coalition v. Office of Legacy Management*, No. 08-cv-01624, 2012 U.S. DIST. LEXIS 24126 (D. Colo. Feb. 27, 2012).

[b] Least Tracts 7 and 7A were combined (February 2011 time frame) into Lease Tract 7.

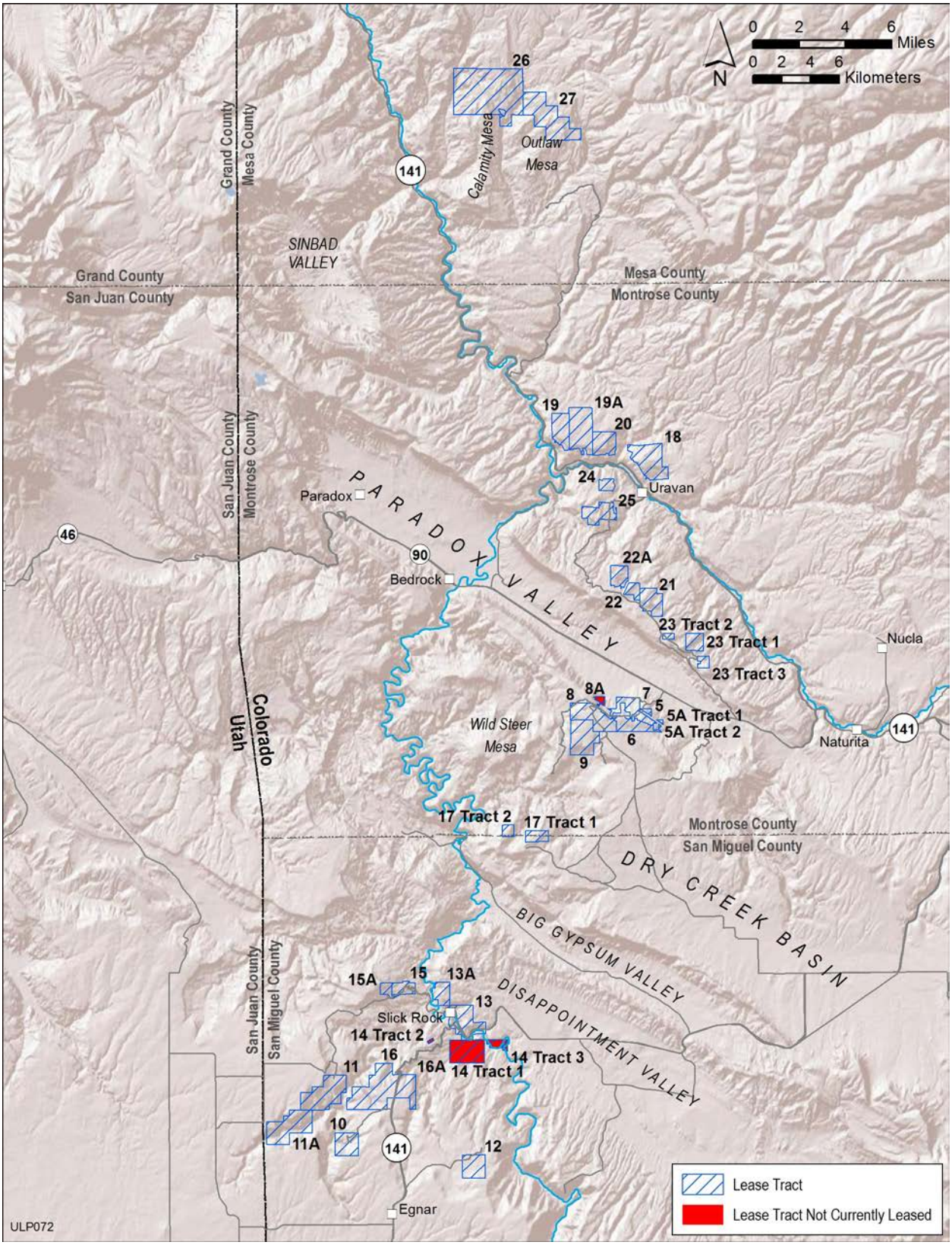

FIGURE 1.2-1 Locations of the 31 ULP Lease Tracts in Colorado

- Offer the lease tracts to the domestic uranium industry through a competitive royalty-bid process that culminates in the award of each lease to the highest qualified bidder.

- Inspect and maintain lease tract boundary markers and monuments on the lease tracts. Establish and maintain records of survey control points for said markers and monuments.

- Review lessees' exploration and mining plans, in coordination with BLM and the Colorado Division of Reclamation, Mining and Safety (CDRMS), to ensure that they are consistent with Federal, state, and local rules and regulations; existing environmental regulations; lease stipulations; and standard industry practices. Approve or deny each plan as warranted.

- Coordinate with other Federal agencies (e.g., BLM, U.S. Fish and Wildlife Service [USFWS], U.S Environmental Protection Agency [EPA]), state agencies (e.g., CDRMS, Colorado Division of Parks and Wildlife [CPW], Colorado Department of Public Health and the Environment [CDPHE]), local and tribal officials, and private entities as appropriate to address concerns that they may have. Routinely review each Memorandum of Understanding established with BLM and CDRMS to ensure that the agreements remain up to date and reflect actual work practices.

- Establish the amount of reclamation performance bonding appropriate for the amount of environmental disturbance anticipated based on an evaluation of the lessees' proposed activities, including site-specific access routes, exploration drill-hole locations, mine-site support facility locations, and proposed methods of reclamation.

- Monitor lessees' exploration, mine-development, and ore-production activities to ensure compliance with Federal, state, and local environmental regulations and lease stipulations. Identify adverse conditions that need to be addressed and advise the lessees accordingly.

- Review exploration drill-hole logs, drill-hole maps, mine maps, and quarterly reports submitted by the lessees to assess the lessees' progress and verify conditions witnessed during field inspections.

- Review Federal and state mine safety inspection records and reports to identify significant violations or adverse trends and determine whether actions are warranted.

- Monitor and track market prices (spot and long term) for uranium oxide (U_3O_8) and vanadium oxide (V_2O_5) (uranium ore is generated as uranium

oxide and vanadium ore is generated as vanadium oxide) and keep abreast of activities occurring within the world uranium and vanadium industries.

- Develop and maintain procedures to process and maintain records of ores produced from the DOE lease tracts and delivered to a mill or other receiving station for processing. Calculate the resulting royalties due and payable to DOE. Ensure that royalty payments are submitted in accordance with the lease agreements. Maintain records associated with the number of miles traveled by ore trucks on Federal, state, and county roadways. Ensure that lessees' pulp ore samples are analyzed in accordance with lease agreement requirements.

- Maintain a record of and provide for the routine surveillance of concurrent surface activities (e.g., activities associated with oil and gas leases and special use permits) that are authorized by other agencies with surface-management jurisdiction.

- Evaluate sample plants to verify that they or other facilities receiving lease tract ores have adequate procedures for weighing, sampling, and assaying said ores and for reporting the results to DOE.

- Monitor lessees' reclamation activities to ensure that they comply with Federal, state, and local environmental regulations and lease stipulations. Ensure that these activities are consistent with existing exploration and mining plans and standard industry practices. Monitor post-reclamation sites for 3 to 5 years to assure that adequate vegetation is successfully re-established at the site.

- Oversee the relinquishment of lease agreements when requested by a lessee or the termination of lease agreements for cause when directed by DOE.

Determine the eligibility of inactive, reclaimed lease tracts for restoration to the public domain under BLM's management. Prepare a Request to Relinquish Lands and submit it to the BLM Colorado State Office for processing. Help BLM officials review the Request, and monitor its status until the restoration process is complete.

1.2.2 Lease Requirements

Facsimiles of two generic leases currently utilized for the DOE ULP are shown in Appendix A. (The leases could be modified in the future as a result of this ULP PEIS process.) These two generic leases are the same except for how the royalty payment is determined. Before conducting any exploratory or mining activity, the lessee is required to file a "Notice of Intent to Conduct Prospecting Operations" or "Reclamation Permit Application" with the Colorado Mined Land Reclamation Board for the review and approval of the CDRMS. The lessee is then required to submit three copies of a detailed Exploration Plan or Mining Plan to DOE. This plan must

include a site-specific environmental analysis and a description of measures to be taken to assure compliance with all Federal, state, and local laws (including all potential impacts that could result in downstream or off-site environmental and/or resource degradation, and air quality or health-related impacts). In addition, the lessee must consult with all pertinent Federal, state, and local agencies—including, but not limited to, the BLM, USFWS, U.S. Army Corps of Engineers (USACE), EPA, CPW, State Historic Preservation Officer (SHPO), and Indian tribal governments—to determine the presence and/or location of all endangered, threatened, and sensitive plant and wildlife species; known cultural resources; and floodplain and wetland areas. Plans are reviewed by DOE in coordination with BLM and CDRMS, and upon DOE's approval, the actions described in the plan can commence. DOE and other appropriate agencies must be notified in writing if the lessee wishes to change part of the plan, and no change can take place until approval is given. After the plan is approved, but before any ground-disturbing activity can commence, the lessee must file a performance bond (the amount is established by DOE) in coordination with CDRMS. This coordination is reflected in the Memorandum of Understanding (MOU) between DOE and CDRMS (DOE and CDRMS 2012).

Upon termination of the lease, the lessee has 180 days to reclaim and return the land to DOE, unless other arrangements have been agreed to in advance. The lessee is required to remove all equipment, stockpiles, and evidence of mining, unless the improvement is a structural support needed to maintain the mine.

1.2.3 Site-Specific Information for the ULP Lease Tracts

In addition to information about the 31 lease tracts presented in Table 1.2-1 (and Figure 1.2-1), site-specific information on 8 of the 31 lease tracts where existing permitted mines are located is summarized in this section. This information, in addition to other site-specific information (in Tables 2.2-1 and 2.2-2) and assumptions discussed in Section 2.2, is used as the basis of the evaluation for potential impacts discussed in Chapter 4. The information for Lease Tracts 5, 6, 7, 8, 9, 11, 13, and 18 discussed in the sections that follow includes the location of the existing permitted mine(s), activities conducted to date, amount of ore generated, and royalty realized. Finally, Table 1.2-2 lists the estimated ore reserves that remain at each of the 31 lease tracts.

1.2.3.1 ULP Lease Tract 5

On Lease Tract 5, the C–JD–5 mine is located in Sections 21 and 22, T 46 N, R 17 W, NMPM, in Montrose County, Colorado (see Figure 1.2-2). The original lease was executed effective June 12, 1974. A royalty bid of 12.00%, payable on ores containing 700,000 lb (318,000 kg) of U_3O_8 secured the lease.

A mining plan was submitted on June 10, 1976, proposing entry by a 16-ft (4.9-m) diameter, 320 ft (98 m) deep, shaft located in the northwest corner of the property. The lessee began sinking the shaft shortly after the plan was approved, and the shaft was bottomed in early

TABLE 1.2-2 Estimated Remaining Ore Reserve at the ULP Lease Tracts

ULP Lease Tract	Remaining Ore Reserves[a] (lb U_3O_8)
5	230,000
5A	30,000
6	850,000
7	2,800,000
8	330,000
8A	30,000
9	630,000
10[b]	0
11	740,000
11A	300,000
12	160,000
13	330,000
13A	220,000
14	85,000
15	84,000
15A	250,000
16	44,000
16A	18,000
17	75,000
18	1,200,010
19[b]	0
19A	1,500,000
20	800,000
21	1,000,000
22	140,000
22A[b]	0
23	550,000
24	90,000
25	540,000
26	68,000
27	87,000
Total remaining ore reserves	13,000,000

[a] Amount shown equals the lease "bid quantity" minus the total production to date. Values have been rounded to two significant figures.

[b] The lease "bid quantity" has been produced from this tract; any additional reserves that may exist have not been quantified.

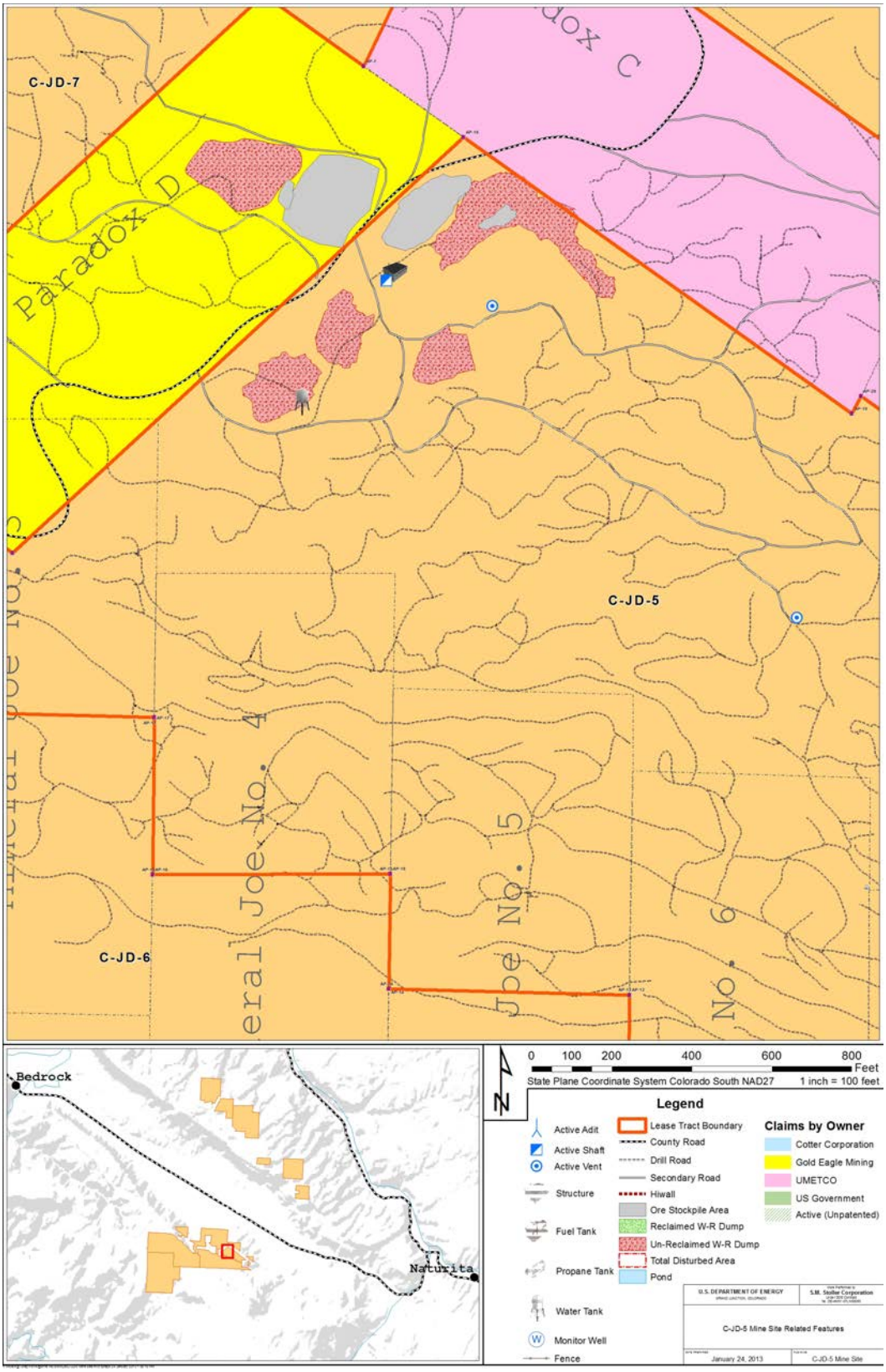

FIGURE 1.2-2 Location of C-JD-5 Mine on Lease Tract 5

April 1977. The ore zone was encountered almost immediately and the initial shipment of ore was made on May 26, 1977. As mining continued, a second level was developed that ultimately yielded the bulk of the mine's production. The mine was extended to the west and south and connected with the old Paradox D and Mineral Joe No. 4 mines, respectively; during this time, the mine maintained consistent ore production at approximately 3,000 tons (2,700 metric tons) per month. The mine was shut down in early 1980 due to a lack of economical ore reserves.

Mining resumed briefly in 1989 (as the mine's economics improved) and production continued through June 1990. In March 1998, Gold Eagle Mining, Inc. (GEMI), notified DOE of its intensions to resume operations at the mine. Subsequent to DOE's approval, GEMI upgraded the mine's entire infrastructure to current standards and code. Unfortunately, GEMI could not secure a milling agreement and no ore production occurred. At that time, the mine was placed on standby status.

A total of 136,000 tons (123,000 metric tons) of ore, containing 466,000 lb (211,000 kg) of U_3O_8 and 1,812,000 lb (822,000 kg) of V_2O_5, have been produced and sold from the mine. Royalties paid for this lease tract (production royalties plus annual royalties) total $2,154,000.

1.2.3.2 ULP Lease Tract 6

On Lease Tract 6, the C-JD-6 mine is located in Sections 21 and 22, T 46 N, R 17 W, NMPM, in Montrose County, Colorado (see Figure 1.2-3). The original lease was executed effective April 18, 1974. A royalty bid of 14.20% payable on ores containing 1,200,000 lb (544,000 kg) of U_3O_8 secured the lease.

A mining plan was submitted in September of 1975 proposing access through the Duggan Adit, which is located on adjacent, privately held unpatented claims. The plan was approved and development work began the following April. The first ore shipment from the mine was made on May 12, 1976; however, the true production cycle did not begin until August 1977. Mining continued much the same until May 1980, at which time Cotter Corporation announced a temporary shutdown of operations effective August 8, 1980.

In May 2004, the lessee, Cotter, notified DOE of its intensions to resume operations at the mine. Subsequent to DOE's approval and following several weeks of site preparation, Cotter resumed mining activities on August 2, 2004. Production continued through November 2005, at which time mining was suspended and the mine was placed on standby status. In 2008, Cotter installed a lysimeter downgradient of the mine site to determine whether near-surface soils or rock formations contain moisture that could affect (or be affected by) the mine site. The lysimeter is monitored monthly.

A total of 107,000 tons (97,000 metric tons) of ore, containing 350,000 lb (159,000 kg) of U_3O_8 and 2,248,000 lb (1,020,000 kg) of V_2O_5, have been produced and sold from the mine. Royalties paid for this lease tract (production royalties plus annual royalties) total $2,946,000.

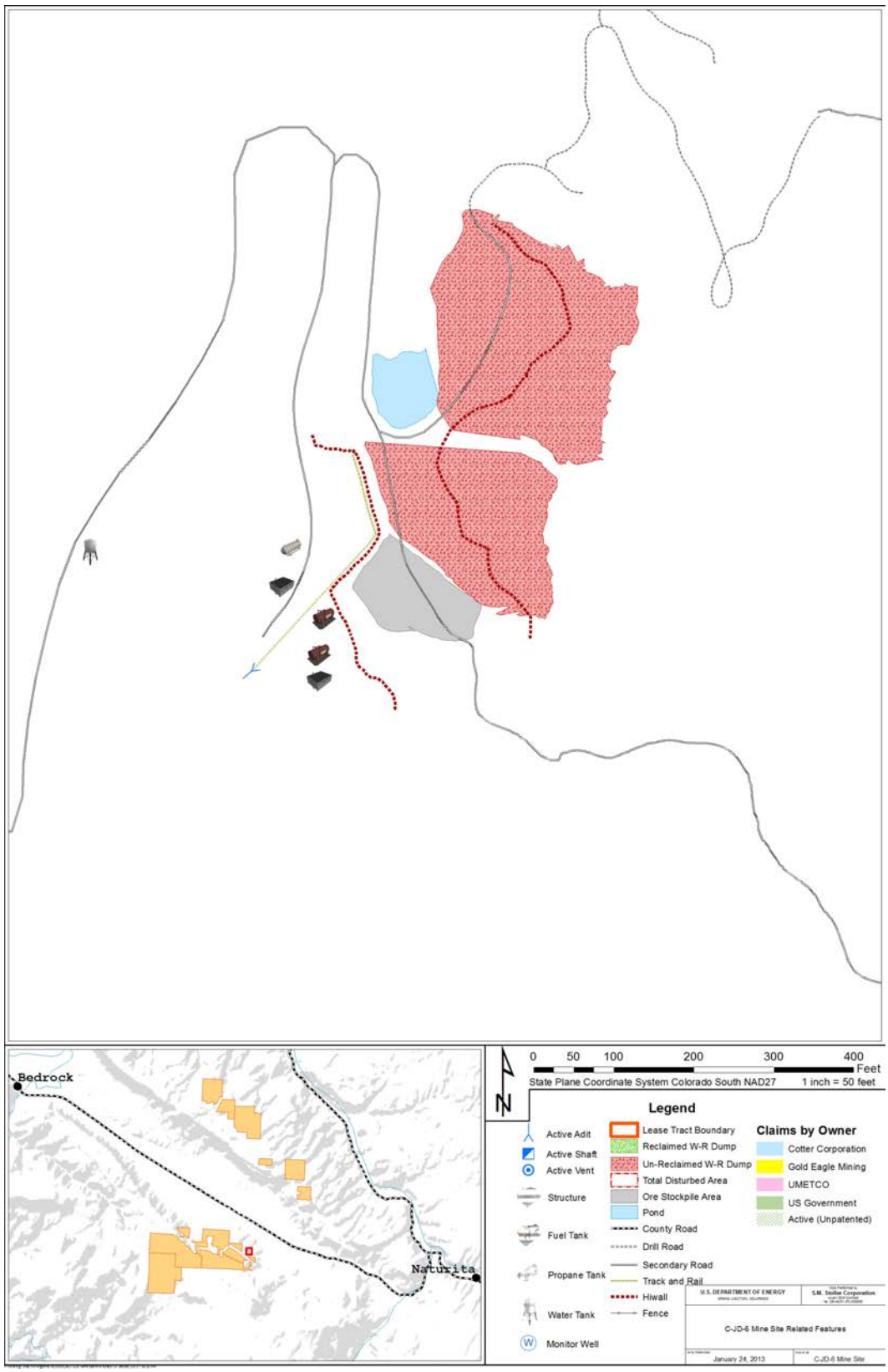

FIGURE 1.2-3 Location of C-JD-6 Mine on Lease Tract 6

1.2.3.3 ULP Lease Tract 7

On Lease Tract 7, the C-JD-7 mine is located in Sections 16, 20, 21, and 22, T 46 N, R 17 W, NMPM, in Montrose County, Colorado (see Figure 1.2-4). The original lease was executed effective April 18, 1974. A royalty bid of 27.30% payable on ores containing 2,800,000 lb (1,270,000 kg) of U_3O_8 secured the lease.

An underground mining plan was submitted in November 1976 proposing entry through a 1600-ft (490-m) decline in the northern portion of the tract. The plan was approved and development work was initiated the following May. Following numerous delays, including the encountering of sugar sands, which require continuous support, the incline was finally bottomed in December 1978. Water was then encountered in the drift and two evaporation ponds were constructed to support dewatering activities. The first ore was shipped in July 1979 and production continued through May 1980, at which time Cotter Corporation announced a temporary shutdown of operations effective May 22, 1980. In June 1980, the water treatment system was redesigned (another pond was built) to bring the mine-water treatment system into compliance with the existing NPDES permit. In June 2005, Cotter notified DOE of its intensions to resume operations at the mine. Subsequent to DOE's approval, Cotter began rehabilitating the underground mine workings to support future production activities. This work continued through November 2005, at which time development activities were suspended and the mine was placed on standby status.

During May 1979, Cotter submitted an open pit mining plan for the property that would require the removal of 13 million tons (12 million metric tons) of overburden and affect some 650 acres (260 ha). The plan was approved in November and Cotter entertained bids on two separate contracts. The first contract was for the removal of the vegetation; that work was initiated in January 1980. The second contract was for Phase 1 of stripping the overburden, which began in April 1980. Phase 1 activities included utilizing the northern portion of Lease Tract 7A (also a Cotter lease tract) for the spoils pile. Stripping activities continued at a rate of 1,000,000 yd^3 (765,000 m^3) per month for 13 months, until March 31, 1981, at which time the mine was placed on standby status due to declining market conditions. Once in production, the operation was expected to produce 500 tons (450 metric tons) of ore per day, averaging 0.30% U_3O_8.

On February 16, 2011, DOE executed a modification to the lease that incorporated Lease Tract 7A into 7, recognizing that the two lease tracts were inseparable due to the open-pit mining operation.

A total of 12,000 tons (11,000 metric tons) of ore, containing 46,000 lb (21,000 kg) of U_3O_8 and 125,000 lb (57,000 kg) of V_2O_5, have been produced and sold from the mine. Royalties paid for this lease tract (production royalties plus annual royalties) total $1,442,000.

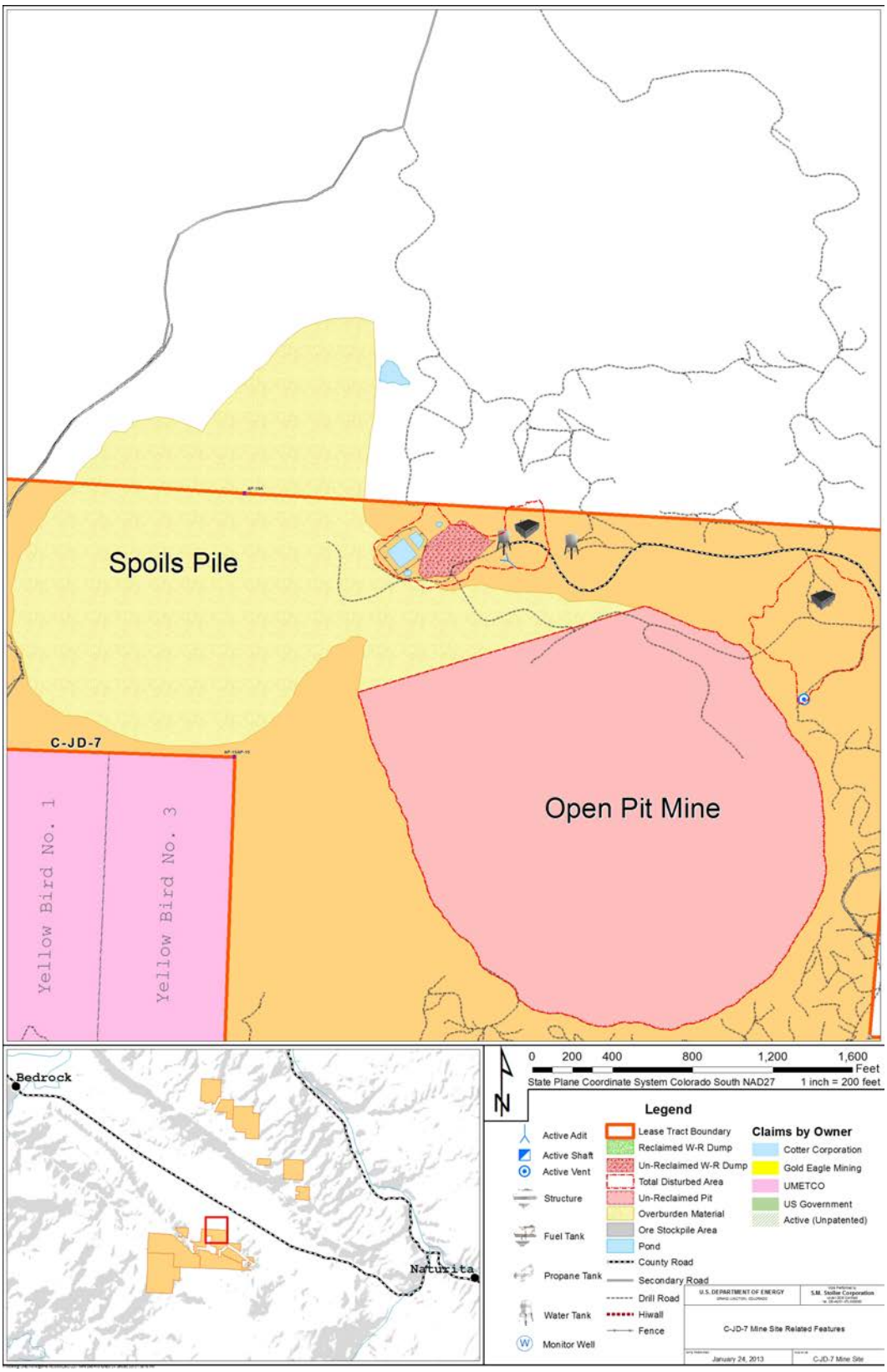

FIGURE 1.2-4 Location of C-JD-7 Mine on Lease Tract 7

1.2.3.4 ULP Lease Tract 8

On Lease Tract 8, the C-JD-8 mine is located in Sections 17, 18, 19, and 20, T 46 N, R 17 W, NMPM, in Montrose County, Colorado (see Figure 1.2-5). The original lease was executed effective April 18, 1974. A royalty bid of 36.20% payable on ores containing 375,000 lb (170,000 kg) of U_3O_8 secured the lease.

In January 1984, a mining plan was submitted proposing access through the Opera Box Adit, which is located on an adjacent, privately held patented claim. This plan was approved on November 18, 1985; however, it was never acted upon. A revised mining plan, updated to meet current requirements, was submitted in December 2004 and was approved January 21, 2005. Cotter Corporation enlarged the existing Opera Box portal and the main haulage drift to accommodate larger, more modern equipment. The first ore shipment from the mine was made in June 2005 and production continued through November 2005, at which time mining was suspended and the mine was placed on standby status. In 2008, Cotter installed a lysimeter downgradient of the mine site to determine whether near-surface soils or rock formations contain moisture that could affect (or be affected by) the mine site. The lysimeter is monitored monthly.

A total of 9,000 tons (8,000 metric tons) of ore, containing 46,000 lb (21,000 kg) of U_3O_8 and 178,000 lb (81,000 kg) of V_2O_5, have been produced and sold from the mine. Royalties paid for this lease tract (production royalties plus annual royalties) total $1,264,000.

1.2.3.5 ULP Lease Tract 9

On Lease Tract 9, the C-JD-9 mine is located in Sections 19, 29, and 30, T 46 N, R 17 W, NMPM, in Montrose County, Colorado (see Figure 1.2-6). The original lease was executed effective April 18, 1974. A royalty bid of 24.30% payable on ores containing 850,000 lb (386,000 kg) of U_3O_8 secured the lease.

A mining plan was submitted in February 1977 proposing entry through a 1700-ft (520-m) incline of –17.5% in the south-central portion of the tract. The plan was approved and development work began in May. Numerous delays were encountered while sinking the decline; however, it was finally bottomed in March 1978 and development drift work continued toward different ore bodies. Water was soon encountered and two evaporation ponds were constructed to support dewatering activities. Some ore was encountered in August 1978 and the initial ore shipment was made. The ore production rate soon increased and ore shipments were made on a regular basis until May 1980 when Cotter Corporation announced a temporary shutdown of operations effective August 8, 1980.

On April 28, 1998, Cotter submitted a plan to construct two new mine-water treatment ponds and decommission the existing pond system on top of Monogram Mesa. Construction of the ponds was completed, but the ponds were never lined or put into service and the existing pond system was never decommissioned.

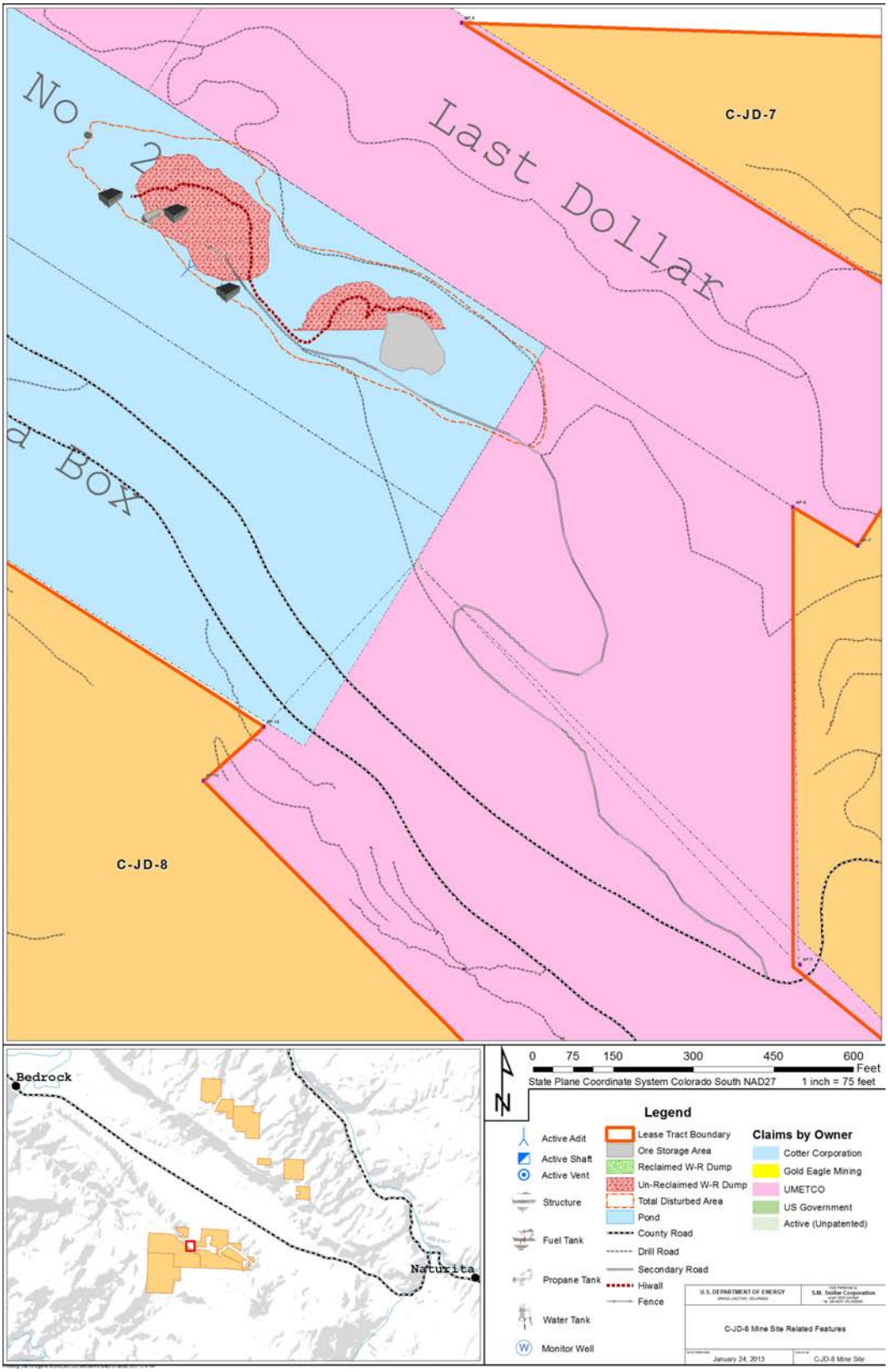

FIGURE 1.2-5 Location of C-JD-8 Mine on Lease Tract 8

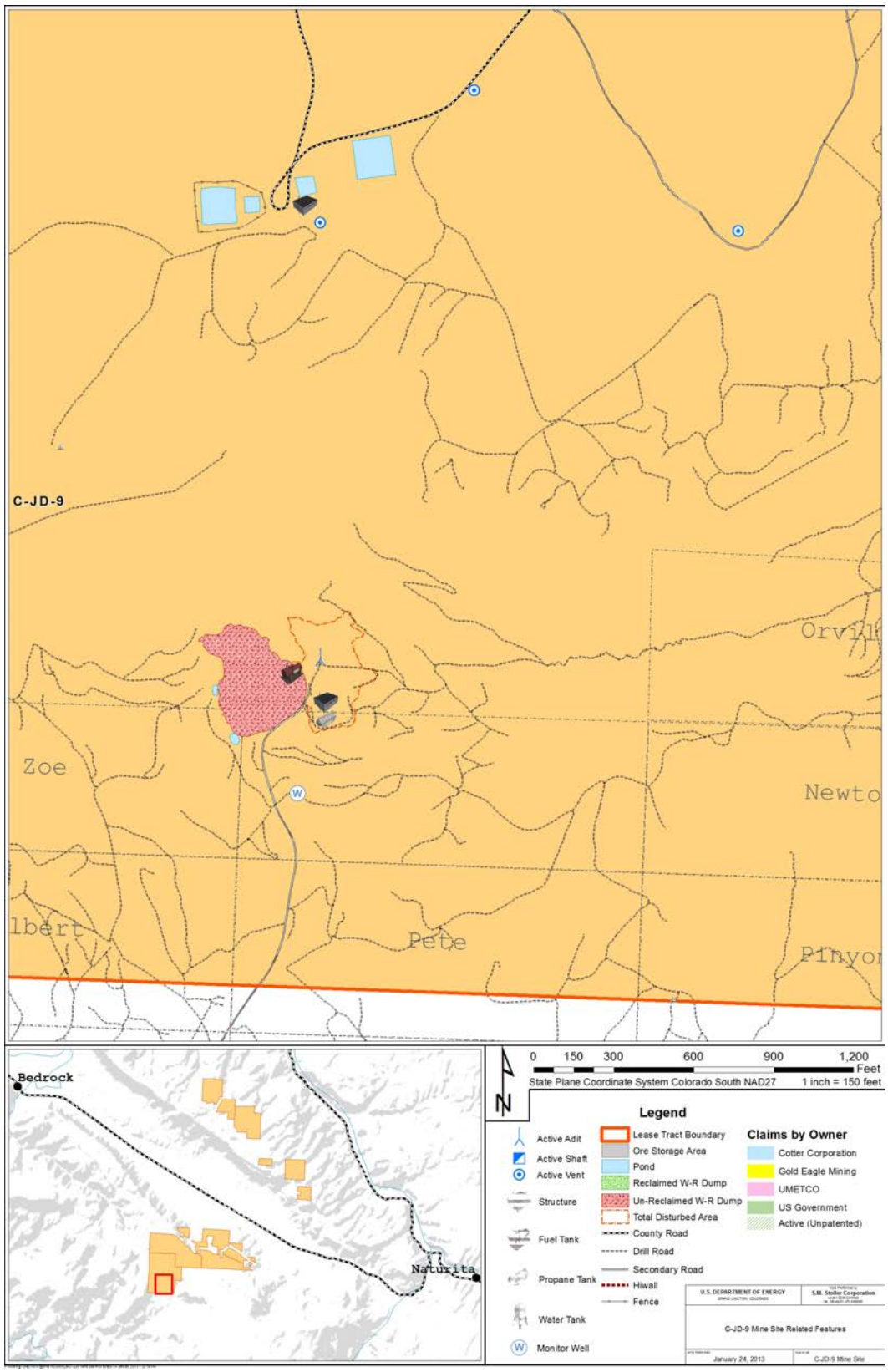

FIGURE 1.2-6 Location of C-JD-9 Mine on Lease Tract 9

In March 2003, Cotter advised DOE of its plans to resume mining operations at the site. Following several weeks of site preparation, Cotter resumed production activities at the mine. Mine production activities continued through November 2005, at which time mining was suspended and the mine was placed on standby status. In 2008, Cotter installed a lysimeter downgradient of the mine site to determine whether near-surface soils or rock formations contain moisture that could affect (or be affected by) the mine site. In addition, in December 2006 DOE approved the installation of a groundwater monitoring well downgradient of the mine site. The lysimeter and monitoring well are monitored and sampled monthly. In October 2008, Cotter notified DOE of a rockfall that had recently occurred at the mine, approximately 100 ft (30 m) down the main haulage drift from the portal. In discussions between DOE and Cotter, Cotter concluded that it would assess the situation and options.

A total of 55,000 tons (50,000 metric tons) of ore, containing 223,000 lb (101,000 kg) of U_3O_8 and 1,112,000 lb (504,000 kg) of V_2O_5, have been produced and sold from the mine. Royalties paid for this lease tract (production royalties plus annual royalties) total $2,586,000.

1.2.3.6 ULP Lease Tract 11

On Lease Tract 11, the C-SR-11 mine is located in Sections 8, 17, and 18, T 43 N, R 19 W, NMPM, in San Miguel County, Colorado (see Figure 1.2-7). The original lease was executed effective June 12, 1974. A royalty bid of 11.67% payable on ores containing 900,000 lb (408,000 kg) of U_3O_8 secured the lease.

A number of different mining plans were submitted and approved for the lease tract, proposing re-entry into existing mines and resumption of mining activities through existing mine workings. However, only two operations bear any significant recognition: the Brighton and Ike mines. The Brighton mine, located along the rim of Summit Canyon, was in production from December 1975 through April 1977. The Ike mine complex, mined through the Dawson Incline, was in production from August 1975 through mid-December 1980. This operation included some initial work in the existing Ike No. 2 mine, in addition to development of and production from a nearby incline on the Radium No. 8 claim adjacent to the lease tract along the northeast corner. In December 1980, mining activities on the lease tract were suspended and the mines were placed on standby status. In 1999, Cotter Corporation initiated reclamation activities at the Brighton and Ike mines, as well as on legacy mine sites located on the lease tract. The mine portals and ventilation shafts were permanently sealed and closed; the mine waste-rock dumps were recontoured to blend in with the surrounding natural topography, and the disturbed areas were reseeded. These activities were completed in the fall of 2000.

In February 2005, Cotter proposed a new mine for the lease tract located in the south-central portion of the property. Entry was to be gained from a 1,300-ft (400-m) decline, and DOE approved the plan in June 2005. Mine development work began almost immediately and continued through November 2005, at which time mining activities were suspended and the mine was placed on standby status. At that time, the decline had been advanced approximately 250 ft (76 m).

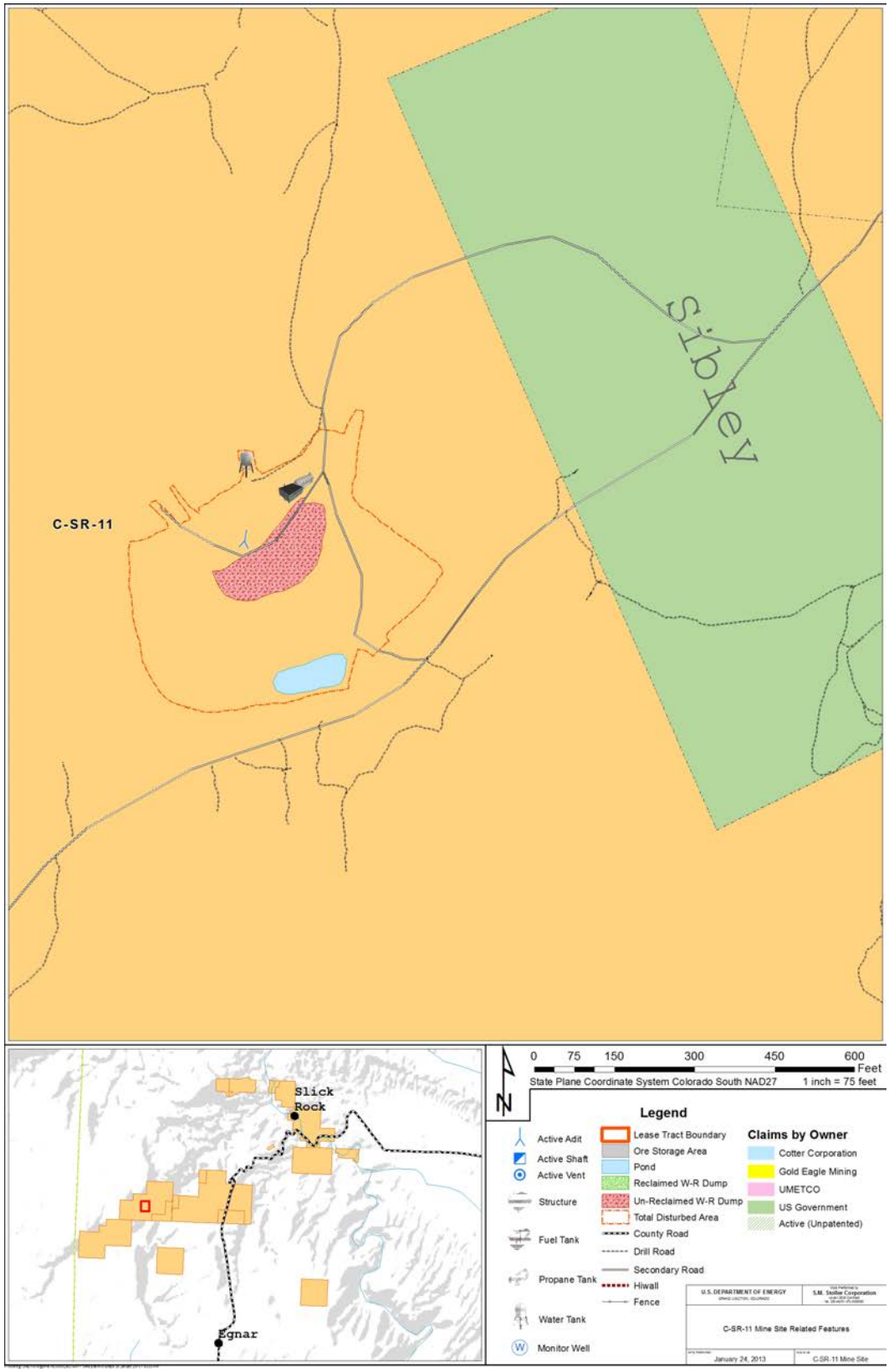

FIGURE 1.2-7 Location of C-SR-11 Mine on Lease Tract 11

A total of 47,000 tons (43,000 metric tons) of ore, containing 162,000 lb (73,000 kg) of U_3O_8 and 925,000 lb (420,000 kg) of V_2O_5 have been produced and sold from the lease tract mines. Royalties paid for this lease tract (production royalties plus annual royalties) total $1,200,000.

1.2.3.7 ULP Lease Tract 13

On Lease Tract 13, the C-SR-13 mine is located in Sections 29, 30, 31, 32, and 33, T 44 N, R 18 W, NMPM, in San Miguel County, Colorado (see Figure 1.2-8). The original lease was executed effective May 24, 1974. A royalty bid of 20.60% payable on ores containing 700,000 lb (318,000 kg) of U_3O_8 secured the lease.

The initial mining plan submitted in January 1975 proposed entry through the Burro Tunnel Mine. The mine portal and a portion of the main haulage drift are located on the lease tract but provide access to the Burro Mine complex, which is located immediately north of the lease tract on the privately held unpatented Burro claims. The plan was approved and production began from an area along the northern boundary of the lease tract in an area of the Burro Mine complex where ore was showing in the heading. Production continued from there and extended southward toward the Ellison Mine. The initial shipment of ore was made in June 1975 and production continued through 1981, at which time the mine was placed on standby status. A second mining plan (the New Ellison Mine) was submitted in November 1978 proposing entry through a new decline into the area northeast of the existing Ellison mine, with which it would connect for ventilation. The plan was approved and development began in May 1979. The incline was bottomed in August 1980 and development continued through December of that year. Although ore is showing in several headings, the operation was limited to development and no ore was produced. In March 1981, the mine was expanded to connect with the existing Ellison mine, establishing a ventilation pathway and a secondary escapeway. Shortly afterward, operations ceased and this mine was also placed on standby status. Other operations were conducted sporadically during this time and include mines such as Hawkeye and Herbert. However, ore shipments from these operations were small and relatively insignificant when compared to the operation at the Burro Mine complex. These smaller mine sites have since been reclaimed. The mine portals were gated to conserve bat habitat, or were permanently sealed and closed; the mine-waste-rock dumps were recontoured to blend in with the surrounding, natural topography; and the disturbed areas were reseeded.

A total of 86,000 tons (78,000 metric tons) of ore, containing 323,000 lb (147,000 kg) of U_3O_8 and 2,766,000 lb (1,255,000 kg) of V_2O_5, have been produced and sold from the lease tract. Royalties paid for this lease tract (production royalties plus annual royalties) total $4,047,000.

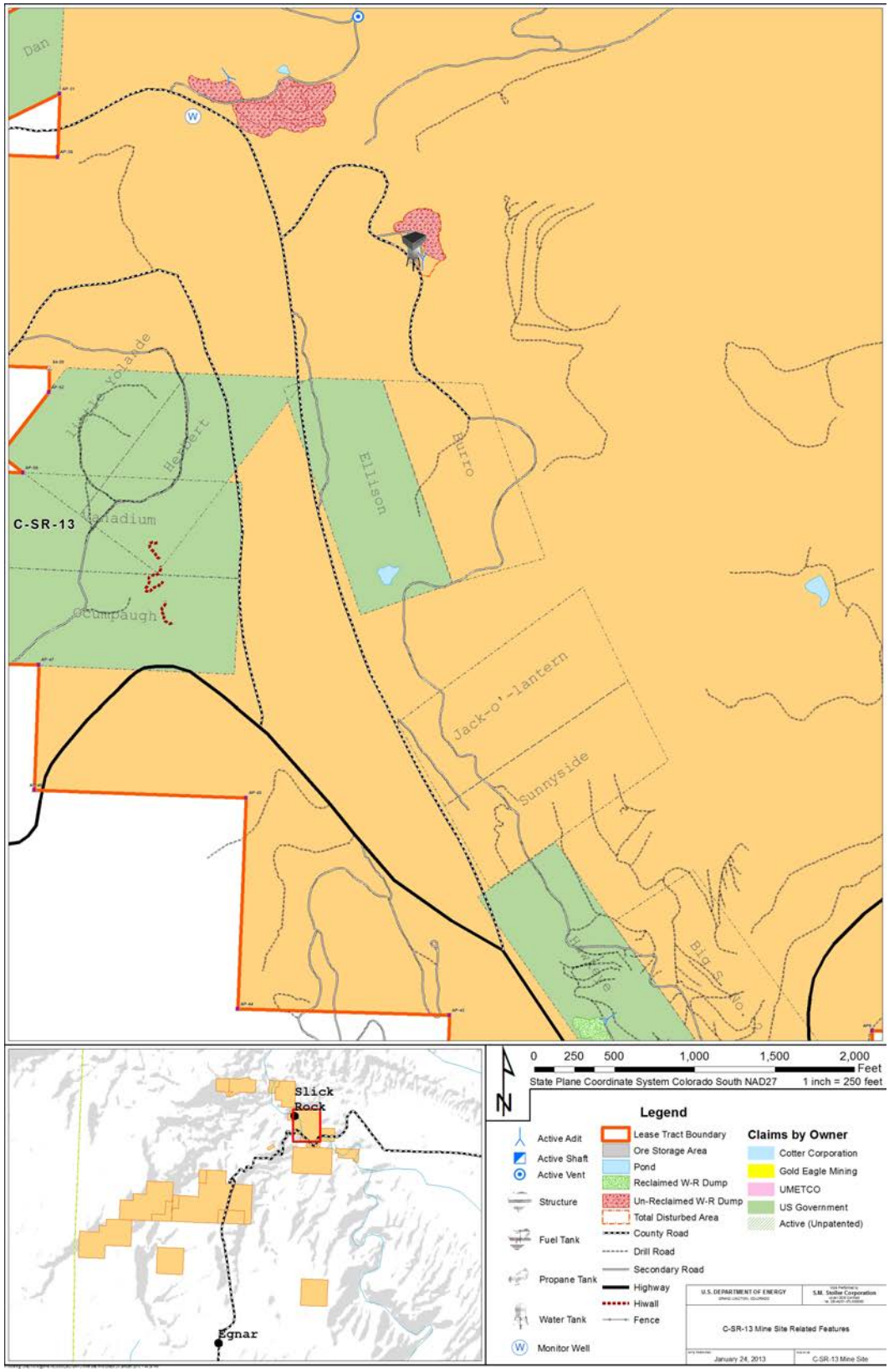

FIGURE 1.2-8 Location of C-SR-13 Mine on Lease Tract 13

1.2.3.8 ULP Lease Tract 18

On Lease Tract 18, the C-SM-18 mine is located in Sections 21, 22, 26, 27, and 28, T 48 N, R 17 W, NMPM, Montrose County, Colorado (see Figure 1.2-9). The original lease was executed effective April 18, 1974. A royalty bid of 15.60% payable on ores containing 1,300,000 lb (590,000 kg) U_3O_8 secured the lease.

A mining plan was submitted in March 1978 proposing entry through a 1540-ft (470-m) decline in the northwestern portion of the lease. The plan was approved and development began in late May. After numerous delays, the incline was bottomed in September 1979 and production began in December of that year. The initial shipment of ore was made in February 1980. Production continued until May when Cotter Corporation announced a temporary shutdown of operations effective May 22, 1980. The mine was placed on standby status and remained so until October 2000. At that time, Cotter submitted a reclamation plan for a portion of its mining operations on Lease Tract 18. The plan was approved by DOE in January 2001 and reclamation activities were completed in February. The mine portal and ventilation shaft were permanently sealed and closed; the mine-waste-rock dump was recontoured to blend in with the surrounding, natural topography; and the disturbed areas were reseeded. The maintenance shop building was left intact to support Cotter's continuing operations on the lease tract.

In September 2004, Cotter submitted a new mining plan, proposing entry into the southern portion of the lease tract through the Wright Mine located on an adjacent, privately held patented claim. DOE approved the plan in October 2004 and site preparation activities began almost immediately. Mining was initiated in the first quarter of 2005 and shipments of lease tract ore began in March. Mining was suspended in November 2005 and the mine was placed on standby status. In 2008, Cotter installed a lysimeter downgradient of the mine site to determine whether near-surface soils or rock formations contain moisture that could affect (or be affected by) the mine site. The lysimeter is monitored monthly.

A total of 27,000 tons (24,000 metric tons) of ore, containing 136,000 lb (62,000 kg) of U_3O_8 and 1,163,000 lb (528,000 kg) of V_2O_5, have been produced and sold from the mine. Royalties paid for this lease tract (production royalties plus annual royalties) total $1,950,000.

1.3 PURPOSE AND NEED FOR AGENCY ACTION

In light of the site-specific information that DOE has gathered as a result of the site-specific agency actions proposed and approved pursuant to the July 2007 PEA/FONSI, it is now appropriate for DOE to prepare a PEIS in order to analyze the reasonably foreseeable environmental impacts, including the site-specific impacts, of the range of reasonable alternatives for the management of the ULP.

The underlying purpose and need for agency action is to support the implementation of the Atomic Energy Act (AEA) (42 U.S.C. §§ 2096–2097), which authorized and directed DOE to develop a supply of domestic uranium and to issue leases for the mining of uranium and other

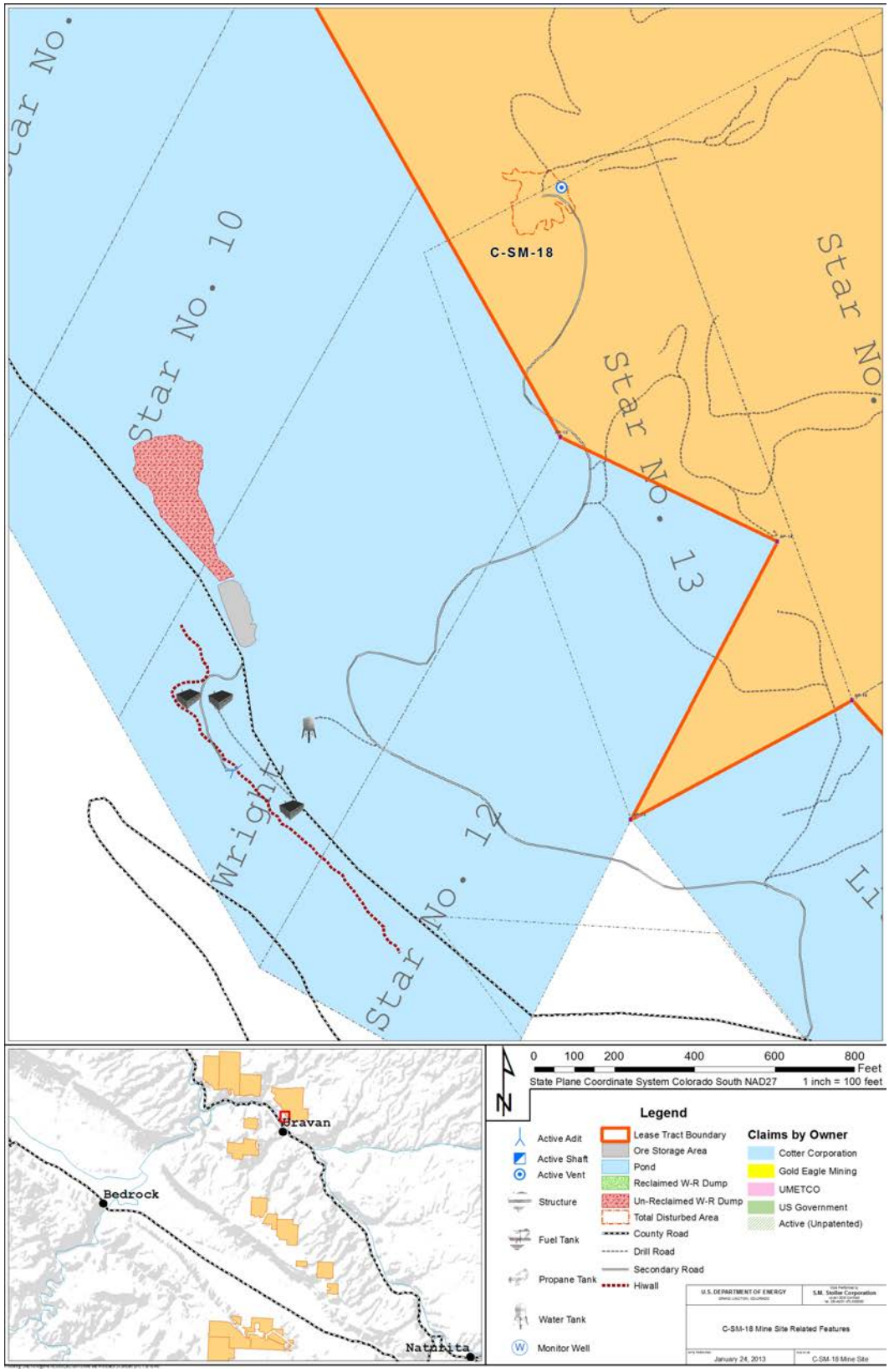

FIGURE 1.2-9 Location of C-SM-18 Mine on Lease Tract 18

source materials to effectuate the provisions of the AEA, and the implementation of the Energy Policy Act of 2005 (Public Law [P.L.]109-58), which emphasized the reestablishment of nuclear power (Sections 601 through 657). In support of these statutes, DOE needs to determine the future course of the ULP, including whether to continue leasing some or all of the withdrawn lands and Government-owned patented claims (referred to as "DOE-managed lands") for the exploration and production of uranium and vanadium ores.

1.4 PROPOSED ACTION

DOE's proposed action is to decide whether to continue the ULP and, if it decides to continue the ULP, to determine which alternative to adopt in order to manage the ULP. DOE developed the range of alternatives by carefully considering DOE's underlying need for action and comments received during the public scoping period for this Draft ULP PEIS.

1.5 SCOPE OF THIS DRAFT ULP PEIS

This Draft ULP PEIS evaluates five alternatives for managing the ULP for which there are 31 lease tracts located in Mesa, Montrose, and San Miguel Counties in western Colorado. These alternatives address the range of reasonable options, which involve (1) terminating the leases and conducting reclamation where needed, with DOE continuing to maintain oversight of the lands without uranium leasing; (2) terminating the leases and conducting reclamation where needed, relinguishing the lands for potential management by BLM and public domain lands, and terminating the DOE ULP; and (3) continuing the ULP with associated exploration, mine development and operations, and reclamation at some or all of the 31 lease tracts. At the time that this Draft ULP PEIS was being prepared, 29 of the 31 lease tracts were actively held under lease, and the remaining 2 tracts had not been leased.

Of the 31 lease tracts, 11 are located in San Miguel County, 17 are located in Montrose County, 2 are located in Mesa County, and 1 is located in both San Miguel and Montrose Counties. The lease tracts vary in size from as small as 25 acres (10 ha) to as large as about 4,000 acres (1,600 ha).

The 29 active leases are held by five companies: (1) Golden Eagle Uranium, LLC; (2) Cotter Corporation; (3) Gold Eagle Mining, Inc.; (4) Colorado Plateau Partners; and (5) Energy Fuels Resources Corporation, Inc.

This Draft ULP PEIS evaluates the three mining phases associated with the underground and surface open-pit mining methods. These phases are the exploration phase, mine development and operations phase, and reclamation phase. Resource areas evaluated are discussed in Chapter 2. The evaluation discussed in this Draft ULP PEIS incorporates site-specific information available regarding the ULP lease tracts (e.g., current status, previous mining operations that occurred, and other environmental information). In addition, since as of now there have been no new mine plans (i.e., for exploration, mine development and operations, or

reclamation) submitted to DOE by the lessees, the location of where new, future, potential mining would take place and other associated details are not currently known. Hence, the evaluation conducted in this Draft ULP PEIS also incorporates assumptions for developing a reasonable scenario that could represent an upper bound level of possible future mining activity for each of the alternatives, as appropriate. These assumptions are discussed in Chapter 2.

1.6 NEPA PROCESS FOR THE ULP

After this PEIS is completed and at least 30 days after the EPA issues a notice of availability of the Final PEIS, DOE may issue a Record of Decision (ROD) announcing DOE's selection of an alternative for the continued management of the ULP. Section 2.6 of this Draft PEIS identifies DOE's preferred alternative (i.e., Alternative 4, to continue with exploration, mine development and operations, and reclamation on the 31 DOE ULP lease tracts for 10 years or another reasonable time period). After the ROD is issued, as plans (for exploration, mine development and operation, and reclamation) are submitted by the lessees to DOE for approval, further NEPA review for a given action would be conducted. The level of follow-on NEPA review to be done (e.g., categorical exclusion determination, environmental assessment, or environmental impact statement) would depend on the action being proposed by the lessees, as indicated in the plans submitted. This NEPA review would be conducted to inform DOE's decision on approval of the plans, including the conditions DOE would require to mitigate potential impacts. As discussed in Section 1.2.1 (where requirements of current leases are summarized), no activity can be undertaken by the lessees until DOE has approved the plans submitted. DOE's review would be conducted in consultation with Federal, state, and local agencies. Tribal consultation would also be undertaken for site-specific actions, as appropriate. Public participation on the follow-on NEPA review would occur in a manner consistent with the level of review conducted and with DOE and CEQ regulations. Section 1.6.1 discusses the public participation process for this PEIS.

1.6.1 Public Participation on the PEIS

During the preparation of this PEIS, opportunities for public participation have been and are being provided (see Figure 1.6-1). Consistent with CEQ requirements (40 CFR 1501.7) and DOE NEPA implementation procedures (10 CFR 1021.311), an early and open scoping process was carried out to determine the scope of the PEIS and identify significant issues related to the proposed action. An NOI was issued for public review, and a public scoping process was conducted. Public participation is also being solicited for the review of this Draft ULP PEIS during the public comment period. NEPA requires that comments on the Draft ULP PEIS be evaluated and considered during the preparation of the Final ULP PEIS and that a response to comments be provided.

The NOI (76 FR 36097) to prepare this ULP PEIS was issued on June 21, 2011, and a supplemental notice (76 FR 43678) was issued on July 21, 2011, to announce the four public scoping meetings and their locations and to announce the extension of the public scoping period

to September 9, 2011. Public scoping meetings were held in Montrose, Telluride, and Naturita in Colorado and in Monticello, Utah.

In addition to presenting comments at the scoping meetings, stakeholders were also able to mail comments directly to DOE or submit comments through the project web site (http://ulpeis.anl.gov/). A total of 287 unique "comment documents" were submitted by individuals, organizations, and government agencies to provide comments on the scope of the PEIS. A comment document is a written document, an e-mail submission, or an oral presentation given during a scoping meeting that provided comments on the scope and content of the PEIS. A single comment document may contain multiple comments on one or more issues. There were 61 comment documents provided at the scoping meetings; 164 were mailed to DOE (counting both e-mails and regular mail), and 62 were submitted electronically through the project web site. Of these comment documents, 8 were received from Federal, state, or local government agencies, with the remainder being from individuals or other organizations. Comment documents were received from 13 states; of the 262 comments for which a state of origin was identified, approximately 88% were from Colorado within the potentially affected areas.

FIGURE 1.6-1 NEPA Process for This PEIS

Comments received during the public scoping period focused on whether or not the ULP or uranium mining at the lease tracts should be continued. Representative comments and DOE responses are provided as follows. The first set of comments (Section 1.6.2) consists of those comments determined to be within the PEIS scope, and the second set (Section 1.6.3) consists of those determined to be outside the scope of the PEIS. A detailed discussion on the comments received is presented in Appendix B.

1.6.2 Comments Considered within PEIS Scope

- *The current leases should be terminated and reclamation conducted, after which uranium mining should not be conducted on the lands. The lands could be restored to the public domain under BLM oversight and the DOE ULP terminated.*

  Alternatives 1 and 2 evaluated in this Draft ULP PEIS address this comment. Under Alternative 1, all leases on the 31 lease tracts would be terminated, and reclamation would be conducted where needed. The lands would then be maintained per DOE oversight without leasing for uranium mining. Alternative 2 evaluated in this Draft ULP PEIS is similar to Alternative 1,

except once reclamation was completed by lessees, DOE's jurisdiction would return to BLM, if approved by DOI/BLM (in accordance with 43 CFR § 2372.3). If approved, the land would be managed by BLM under its multiple use policies. DOE's uranium leasing program would end.

- *DOE should continue with the ULP and continue to make the 31 lease tracts available for exploration, mine development and operations, and reclamation, as was the case before the preparation of the PEIS was initiated.*

  Alternatives 4 and 5 evaluated in this Draft ULP PEIS address this comment. Under Alternative 4, DOE would continue the ULP with the 31 lease tracts for the next 10-year period or for another reasonable period. Alternative 5 is similar to Alternative 4 except that the lease period is limited to the remainder of the current 10-year lease period, and the leases would continue exactly as they were issued in 2008.

- *DOE should prohibit any further mining or exploration until reclamation has been completed on existing or old leases.*

  As mentioned above, reclamation would be conducted where needed as part of the alternatives evaluated in this Draft ULP PEIS. In addition, all legacy mine sites located on the DOE lease tracts have already been reclaimed.

- *DOE should stipulate protection of the Dolores and San Miguel River watersheds.*

  The preferred alternative includes a requirement for future mines to be at least 0.25 mi (0.40 km) from the Dolores River. The San Miguel River is about 0.3 mi (0.54 km) from the closest lease tracts. The evaluation for water quality discussed in the Draft ULP PEIS considers both the Dolores and San Miguel Rivers.

- *Potential impacts from uranium mining at the DOE ULP lease tracts on air quality, water quality, human health, socioeconomics, transportation, views from sensitive areas, and cultural resources should be evaluated.*

  Chapter 4 of this Draft ULP PEIS analyzes the potential impacts associated with human health and environmental resource areas listed. Potential impacts on noise, soil resources, land use, ecology, environmental justice, and waste management are also analyzed.

- *DOE should undertake its duties under Section 7 of the ESA.*

  DOE is engaged in consultation with the USFWS pursuant to Section 7 of the ESA. A biological assessment (BA) is also being prepared as part of this

consultation. Chapter 6 of this Draft ULP PEIS presents a summary of this consultation.

- *DOE should collaborate with other agencies, including the CDRMS, BLM, and EPA.*

  DOE is collaborating with various agencies, including CDRMS, BLM, and EPA, on this PEIS process. Section 1.9 presents a list of the cooperating agencies and the commenting agencies.

- *The review and approval process must include a site-specific NEPA review for each proposed mining operation.*

  The PEIS utilizes site-specific data that is available and contains a discussion of the NEPA process that would be conducted once site-specific and project-specific mine plans were submitted by the lessees to DOE for review and approval.

- *Include impacts from the release of radioactive and other toxic materials into the atmosphere from mining and milling operations.*

  The Draft ULP PEIS addresses the potential impacts from the release of material associated with the ore production. The potential impacts of milling operations are outside the scope of the proposed action, but the transportation of ore generated from the ULP lease tracts to the mills and the cumulative impacts from the mills are evaluated in this Draft ULP PEIS.

- *Address the long-term impacts on human health, livestock, and wildlife, including food sources, both locally and regionally, due to mining and milling activities. The PEIS must consider health effects of mining and milling, including cancer incidence, on the human population in towns neighboring the mining operation, workers, and local residents.*

  The analyses of impacts on human health and ecological resources (on livestock and wildlife) address the concern about potential impacts from mining operations. The analysis of human health impacts in Chapter 4 considers the population within a 50-mi (80-km) radius of the lease tract. The region of influence (ROI) for human health impacts was a 50-mi (80-km) radius of the lease tracts. A larger radius of 50 mi (80 km) was selected as the ROI to assess the potential impact as to the population as a whole (i.e., for collective dose evaluation). At this distance, the individual doses would have dropped to negligible levels (<0.1–0.2 mrem/yr), which supports the selection of 50 mi (80 km) as the ROI. The analysis for potential impacts on ecological resources addresses resources in the three counties that encompass the 31 lease tracts. The cumulative impacts evaluated in this Draft ULP PEIS (see

Section 4.7) address a 50-mi (80-km) radius of the lease tracts and include the White Mesa and Piñon Ridge Mills.

1.6.3 Comments Considered outside PEIS Scope

- *Because of unstable uranium markets and the uncertainty of future commercial development of nuclear power facilities, uranium should be preserved for the future use by the American people until it becomes critical for national strategic energy purposes.*

  The issue presented is not within the scope of the purpose and need for DOE's action (described in Section 1.3 of this Draft PEIS).

- *Analyze a No Action Alternative that would allow the leases to lapse with no reclamation conducted.*

  The option of not performing reclamation when leases lapse or are terminated is not consistent with the requirements of the leases, the ULP, and applicable laws and is therefore not considered a reasonable alternative to evaluate in this Draft PEIS.

- *Analyze the economic benefits of fully reclaiming and rehabilitating all Federal and state lands in the Uravan Mineral Belt and compare that to the economic benefit of maintaining the existing uranium leases over the next 5 years.*

  The economic study suggested is not relevant and is considered outside the scope of this Draft ULP PEIS. It does not meet the purpose and need for DOE's action (described in Section 1.3 of this Draft ULP PEIS).

- *Include an alternative that requires old, inactive, and/or abandoned mines to be reclaimed before new leases are granted or any new mines are established.*

  DOE has reclaimed all abandoned mines within its purview. The 29 leases that currently exist have been in place since 2008, and all mining activities are currently on hold until the completion of this PEIS process.

1.7 OTHER RELATED, SIMILAR, CONNECTED, OR CUMULATIVE ACTIONS

Consistent with NEPA requirements, the identification of related, similar, connected, or cumulative actions to the ULP proposed action was conducted. There are other uranium mining projects planned by other entities for areas near the ULP lease tracts (e.g., Sunday Mines [see Section 4.7.2.2.5]). Although these actions are similar in type of activities conducted and

potential impacts on the environment and human health, they are not considered connected to the ULP proposed action, because these other uranium mining projects could or would occur regardless of the ULP proposed action. These projects are, however, included in the cumulative impacts evaluation discussed in Section 4.7 of this Draft ULP PEIS, because they could occur within the region of cumulative effects and at the same time frame considered for the ULP proposed action.

The proposed or ongoing uranium ore milling activities at the proposed Piñon Ridge Mill and at the existing White Mesa Mill could be considered related but not connected to the ULP proposed action. That is, the ore generated from the ULP proposed action could be processed at these nearby mills; however, the White Mesa Mill can continue operating as it currently does and the proposed Piñon Ridge Mill can be constructed and operated regardless of the ULP proposed action. Similar to the uranium mining projects discussed above, the impacts or potential impacts from these two mills are also included in the cumulative impacts evaluation discussed in Section 4.7 of this Draft ULP PEIS.

In its capacity as a cooperating agency for the ULP PEIS process, CPW provided the following information on an activity that could be related to the ULP proposed action and alternatives evaluated. CPW has been participating in the Dolores River Dialogue (DRD), a coalition of diverse interests whose purpose is to explore management opportunities and build support for and take action to improve the ecological conditions downstream of McPhee Reservoir on the Dolores River. The DRD also seeks to honor water rights, protect agricultural and municipal water supplies, and facilitate the continued enjoyment of rafting and fishing on the Dolores River. A subcommittee of the DRD is the Lower Dolores River Working Group (LDWG), a group that was formed specifically to explore alternatives to the National Wild and Scenic River Act (WSRA) designation. This group identified a “National Conservation Area” (NCA) as its alternative to the current Federal identification of the Dolores River as suitable for WSRA designation. Establishment of an NCA requires Congressional action. Since July of 2010, a legislative subcommittee appointed by the LDWG has been working to define the parameters and goals of the legislation while ensuring the protection of identified Outstandingly Remarkable Values under the WSRA. Part of this effort has contemplated a Federal mineral withdrawal within 0.25 mi (0.4 km) of the Dolores River that could affect the DOE ULP and this PEIS.

1.8 CONSULTATION

For the Draft ULP PEIS, DOE is complying with Executive Order (E.O.) 13175 and with Section 7 of the ESA by engaging in consultation on a government-to-government basis with Native American tribes and with the USFWS, respectively. Chapter 6 of this Draft ULP PEIS presents a discussion of the consultation activities to date.

The Government-to-government relationship with Indian tribes was formally recognized by the Federal Government with E.O. 13175 on November 6, 2000, and DOE is coordinating and consulting with Indian tribal governments, Indian tribal communities, and tribal individuals whose interests might be directly and substantially affected by activities on the ULP lands. As

part of this consultation, DOE has contacted 25 Indian tribal governments to communicate the opportunities for Government-to-government consultations by participating in the planning and resource management decision-making throughout the ULP PEIS process. Five are participating as cooperating agencies, and four are participating as commenting agencies (see Section 1.9).

In the NOI (76 FR 36097) to prepare the ULP PEIS, DOE stated that it is preparing to enter into consultation with the USFWS, in compliance with Section 7 of the ESA, concerning DOE's management of the ULP. Section 7 of the ESA requires Federal agencies to consider the effect of their undertakings on species listed under the ESA and to consult with the USFWS to ensure that the action or actions that they fund, authorize, or permit are not likely to jeopardize the continued existence of any listed species or result in the destruction or adverse modification of the critical habitat of such species. DOE and the USFWS have initiated the informal consultation, and DOE has prepared a draft biological assessment (BA) that will be reviewed by the USFWS as part of this consultation process. DOE has also provided the USFWS with updates on the ULP PEIS project schedule. Details are discussed in Chapter 6 of this Draft ULP PEIS.

1.9 COOPERATING AND COMMENTING AGENCIES

DOE invited various Federal, state, and county agencies and tribal nations to participate either as a cooperating agency or commenting agency in the preparation of this Draft ULP PEIS. Since January 2012, monthly telephone conferences have been held between DOE and the cooperating agencies to develop the Draft ULP PEIS. The following government agencies and tribal groups are participating as cooperating agencies by providing their expertise and required knowledge about various areas required during the preparation of the Draft ULP PEIS:

1. *BLM:* Jurisdictional responsibilities in land use planning, designations, or restrictions on and surrounding DOE-withdrawn lands; and an understanding of the potential impacts from increased mining and oil and gas exploration and development. An MOU between the BLM and DOE (BLM and DOE 2010a) is currently in place that identifies the individual and shared roles and responsibilities of DOE and the BLM with respect to the DOE ULP (see Section 5.4 for a summary of this MOU).

2. *EPA:* Expertise in addressing the protection of human health and the environment (e.g., water quality, air quality, and radiation protection).

3. *Colorado Department of Transportation (CDOT):* Knowledge of local and regional transportation systems including primary and secondary highways.

4. *CDRMS:* Expertise in mining and reclamation and the safety requirements attendant to these activities. An MOU between DOE and CDRMS (DOE and CDRMS 2012) is currently in place for the purpose of promoting coordination between DOE and CDRMS to result in efficient and effective oversight of

uranium and vanadium mining on the DOE ULP lease tracts (see Section 5.4 for a summary of this MOU).

5. *CPW:* Expertise in addressing the protection of wildlife.

6. *Mesa County Commission:* Expertise in identifying limits to mitigate potential impacts that energy development activities, such as uranium mining, would have on the county's economy, residents, and the environment, including its primary and secondary roadways.

7. *Montrose County Commissioners:* Expertise in socioeconomic, transportation, and water quality issues related to the county.

8. *San Juan County Commission:* Expertise in identifying limits to mitigate potential impacts that energy development activities, such as uranium mining, would have on the county's economy, residents, and the environment, including its primary and secondary roadways.

9. *San Miguel County Board of Commissioners:* Expertise in identifying limits to mitigate potential impacts that energy development activities, such as uranium mining, would have on the county's economy, residents, and the environment, including its primary and secondary roadways and land use and planning.

10. *Navajo Nation:* Knowledge of cultural resources in the area.

11. *Pueblo of Acoma Tribe*: Knowledge of cultural resources in the area.

12. *Pueblo de Cochiti Tribe*: Knowledge of cultural resources in the area.

13. *Pueblo de Isleta Tribe*: Knowledge of cultural resources in the area.

14. *Southern Ute Indian Tribe:* Knowledge of cultural resources in the area.

The following agencies and tribal groups chose to participate as commenting agencies and are included in the project distribution list to receive the Draft ULP PEIS for review and comment:

1. USFWS,

2. U.S. Nuclear Regulatory Commission (NRC),

3. CDPHE,

4. Utah Department of Transportation (UDOT),

5. Hopi Nation,

6. Ute Indian Tribe,

7. Ute Mountain Ute Tribe, and

8. White Mesa Ute Tribe.

1.10 ORGANIZATION OF THIS DRAFT ULP PEIS

The remainder of this Draft ULP PEIS is composed of the following chapters and appendices:

- Chapter 2 describes the alternatives evaluated in this Draft ULP PEIS and compares them with regard to their potential environmental and human health impacts.

- Chapter 3 presents a discussion of the affected environment for each of the resource areas analyzed in this Draft ULP PEIS utilizing site-specific information.

- Chapter 4 provides the results of the evaluation of potential environmental and human health impacts based on site-specific information and assumptions, as appropriate.

- Chapter 5 summarizes applicable requirements relative to the proposed action.

- Chapter 6 summarizes all consultation activities conducted for the proposed action.

- Chapter 7 presents an index for this Draft ULP PEIS.

- Chapter 8 lists references cited in the preparation of this Draft ULP PEIS.

- Appendix A provides examples of leases.

- Appendix B provides a summary of comments received during the public scoping period.

- Appendix C describes the assumptions for the impacts analyses.

- Appendix D describes the methodology used for the impacts analyses.

- Appendix E provides a list and discussion of threatened and endangered species.

- Appendix F contains the letters of consultation.
- Appendix G provides the list of preparers for this Draft ULP PEIS.
- Appendix H provides the contractor disclosure statement.

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