

DRAFT
Long-Term Surveillance Plan for
the Durita, Colorado,
UMTRCA Title II Disposal Site,
Montrose County, Colorado

November 2020



U.S. DEPARTMENT OF
ENERGY

Legacy
Management

This page intentionally left blank

**Long-Term Surveillance Plan for the Durita, Colorado,
UMTRCA Title II Disposal Site, Montrose County, Colorado
Document History**

Version No./ Revision No.	Revised	Description of Change
0.0	November 2020	Initial issue.

Approved:

Charlee Boger
Durita Site Lead
Navarro Research and Engineering, Inc.

Date

This page intentionally left blank

Contents

Abbreviations	iii
1.0 Introduction	1
1.1 Purpose	1
1.2 Legal and Regulatory Requirements	1
1.3 Role of the U.S. Department of Energy	2
2.0 Final Site Conditions	3
2.1 General Description of the Disposal Site and Vicinity	3
2.1.1 Site Ownership and Access	3
2.1.2 Directions to the Disposal Site	5
2.2 Site History	5
2.3 Site Description	7
2.3.1 Description of Surface Conditions	7
2.3.2 Permanent Site Surveillance Features	11
2.4 Disposal System Design	15
2.4.1 Heap Leach Tank Design and Stabilization	15
2.4.2 Disposal Cell Design	15
2.5 Geology, Hydrology, and Groundwater Remedy	18
2.5.1 Site Geology and Hydrology	18
2.5.2 Groundwater Quality	20
2.5.3 Groundwater Remedy	20
2.5.4 Surface Water	21
2.6 Institutional Controls	21
3.0 Long-Term Surveillance and Maintenance Requirements	21
3.1 General License for Custody and Long-Term Care	21
3.2 Requirements of the General License	22
3.3 Annual Site Inspections	22
3.3.1 Frequency of Inspections	22
3.3.2 Inspection Procedure	22
3.3.3 Inspection Checklist	23
3.3.4 Personnel	23
3.4 Annual Inspection Report	23
3.5 Follow-Up Inspections	23
3.5.1 Criteria for Follow-Up Inspections	24
3.5.2 Personnel	24
3.5.3 Reports of Follow-Up Inspections	25
3.6 Routine Site Maintenance and Emergency Measures	25
3.6.1 Routine Site Maintenance	25
3.6.2 Emergency Measures	25
3.6.3 Criteria for Routine Site Maintenance and Emergency Measures	25
3.6.4 Reporting Maintenance and Emergency Measures	26
3.6.5 Severe Weather Events	26
3.6.6 Seismic Events	26
3.7 Environmental Monitoring	27
3.7.1 Groundwater Monitoring	27
3.7.2 Vegetation Monitoring	27
3.8 Institutional Controls Monitoring	27

3.9	Records	27
3.10	Quality Assurance	27
3.11	Safety and Health	28
4.0	References	28

Figures

Figure 1.	General Location Map of the Durita, Colorado, Disposal Site	4
Figure 2.	History of the Durita, Colorado, Disposal Site	6
Figure 3.	Reclaimed Surfaces in Central Area of Durita, Colorado, Disposal Site (September 2018)	7
Figure 4.	Topographic Map of the Durita, Colorado, Disposal Site	9
Figure 5.	Site Marker at the Durita, Colorado, Disposal Site	11
Figure 6.	Entrance Warning Sign at the Durita, Colorado, Disposal Site	12
Figure 7.	Site Map of the Durita, Colorado, Disposal Site	13
Figure 8.	Cross Section, Leach Tank, Durita, Colorado, Disposal Site	16
Figure 9.	Cross Section, Disposal Cell, Durita, Colorado, Disposal Site	17
Figure 10.	Generalized Stratigraphic Column for the Durita, Colorado, Disposal Site	19

Tables

Table 1.	LTSP and the Long-Term Custodian (DOE) Requirements for the Durita, Colorado, Disposal Site	2
Table 2.	Inspection Areas for the Durita, Colorado, Disposal Site	22
Table 3.	DOE Criteria for Maintenance and Emergency Measures	26

Appendixes

Appendix A	Real Estate Documentation
Appendix B	Regulator Concurrence
Appendix C	Site Inspection Checklist and Map

Abbreviations

BLM	Bureau of Land Management
CDPHE	Colorado Department of Public Health and Environment
CFR	<i>Code of Federal Regulations</i>
D_{50}	median stone diameter
DOE	U.S. Department of Energy
EMS	Environmental Management System
ICs	institutional controls
LT	leach tank
LM	Office of Legacy Management
LTS&M	long-term surveillance and maintenance
LTSP	Long-Term Surveillance Plan
mg/L	milligrams per liter
NRC	U.S. Nuclear Regulatory Commission
TDS	total dissolved solids
UMTRCA	Uranium Mill Tailings Radiation Control Act
USC	<i>United States Code</i>

DRAFT

This page intentionally left blank

1.0 Introduction

1.1 Purpose

This Long-Term Surveillance Plan (LTSP) explains how the U.S. Department of Energy (DOE) fulfills general license requirements of Title 10 *Code of Federal Regulations* Section 40.28 (10 CFR 40.28) as the long-term custodian of the Durita, Colorado, Disposal Site (site) in Montrose County, Colorado. The DOE Office of Legacy Management (LM) is responsible for the preparation, revision, and implementation of this LTSP, which specifies requirements for inspections, monitoring, maintenance, reporting, and maintaining site records.

1.2 Legal and Regulatory Requirements

The Uranium Mill Tailings Radiation Control Act (UMTRCA) of 1978 (Title 42 *United States Code* Section 7901 [42 USC 7901]), as amended, provides for the remediation (or reclamation) and regulation of uranium mill tailings under either Title I or Title II of the act. Title I addresses former uranium mill sites that were unlicensed as of January 1, 1978, and essentially abandoned. Title II addresses uranium mill sites under specific license as of January 1, 1978. In both cases, the licensing agency for uranium production is the U.S. Nuclear Regulatory Commission (NRC) or, in the case of certain Title II disposal sites, an Agreement State. The Durita site is regulated under Title II of UMTRCA. The State of Colorado is an Agreement State, and the Colorado Department of Public Health and Environment (CDPHE) regulated the licensee's reclamation of the site.

NRC regulations in 10 CFR 40.28 establish a general license for the long-term surveillance and maintenance (LTS&M) of reclaimed UMTRCA Title II mill sites operating under a specific license as of January 1, 1978. The license is regulated by NRC or the host state to which NRC has delegated Agreement State authority. NRC regulates the general license, which applies to all UMTRCA Title II disposal sites under long-term management, even those located in Agreement States. If the host state decides not to accept responsibility for long-term custody and care of the site, DOE is designated as the licensee under the NRC general license, unless the President designates the responsibility to another federal agency. The general license becomes effective for a site when NRC (1) determines that reclamation requirements have been satisfied, (2) accepts a site-specific LTSP, (3) verifies that the licensee has paid the long-term surveillance charge to defer the cost of LTS&M, and (4) terminates the specific license. For Title II sites regulated by an Agreement State, NRC will concur in the Agreement State termination of the specific license.

Requirements for custody and LTS&M as specified in 10 CFR 40.28 and 10 CFR 40, Appendix A, Criterion 12, and as implemented in this LTSP are addressed in the sections identified in Table 1. LTS&M includes managing land use and institutional controls (ICs) and conducting inspections, monitoring, maintenance, and other measures to ensure that remediated UMTRCA disposal sites continue to perform as designed and protect public health, safety, and the environment. Long-term custody and care also include DOE's site-specific administrative activities and NRC's oversight activities. The plans, procedures, and specifications in this LTSP are based on the *Guidance for Developing and Implementing Long-Term Surveillance Plans for UMTRCA Title I and Title II Disposal Sites* (DOE 2012) (referred to hereafter as the LTSP Guidance Document). The current version of the LTSP Guidance Document and this LTSP constitute DOE's operational plan for the long-term custody and care of the Durita site.

Table 1. LTSP and the Long-Term Custodian (DOE) Requirements for the Durita, Colorado, Disposal Site

Requirement		Reference
LTSP Requirements		
1.	Description of final site conditions	Section 2.0
2.	Legal description of the site	Appendix A
3.	Description of the long-term surveillance program	Section 3.0
4.	Criteria for follow-up inspections	Section 3.5.1
5.	Criteria for maintenance and emergency measures	Section 3.6.3
Long-Term Custodian (DOE) Requirements		
1.	Notification to NRC of changes to the LTSP	Section 1.3
2.	NRC permanent right of entry	Section 3.1
3.	Notification to NRC of significant construction, actions, or repairs at the site	Sections 3.5 and 3.6

1.3 Role of the U.S. Department of Energy

In December 2003, DOE formally established LM. The mission includes conducting LTS&M at closed “legacy” sites (i.e., reclaimed but with onsite waste disposal and/or residual legacy contamination) to ensure sustainable protection of public health, safety, and the environment. LM is responsible for performing LTS&M and land stewardship activities in accordance with the NRC-accepted LTSP after the NRC general license becomes effective for the site.

During long-term stewardship, changes in site conditions may require changes to this LTSP (e.g., if periodic evaluation of the long-term groundwater and surface water monitoring program warrants modifications). In such circumstances, before implementation, LM will notify NRC of the proposed modifications and revise the LTSP accordingly for NRC acceptance (10 CFR 40.28[c][3]).

LM may consider reuse opportunities during long-term stewardship, such as livestock grazing, maintaining and enhancing wildlife habitat, or promotion of existing onsite historical trails or markers. Any reuse opportunities considered will be evaluated by LM to ensure that the reuse will not negatively impact the tailings disposal system or site features, compromise human safety or the environment, or conflict with the requirements of this LTSP or the general license. Such reuse opportunities, if implemented, will not be cause for revising this LTSP; however, consultation with NRC will be sought before implementing any such reuse opportunities.

LM implements an Environmental Management System (EMS) to incorporate life-cycle environmental considerations into LTS&M. LM’s EMS process ensures beneficial use of finite resources; minimizes wastes and adverse environmental impacts; and meets or exceeds compliance with applicable environmental, public health, and resource protection laws, regulations, and DOE requirements.

2.0 Final Site Conditions

Reclamation at the Durita mill facility in Montrose County, Colorado, consisted of stabilizing three heap leach tanks, salvaging equipment that could be decontaminated, demolishing the remaining site structures and equipment, and disposing of contaminated equipment and debris onsite. Contaminated mill site soils also were disposed of onsite. The surface was contoured to establish positive drainage, and disturbed areas were seeded with endemic plant species. All disposed of materials are isolated from the environment in buried, engineered disposal structures.

2.1 General Description of the Disposal Site and Vicinity

The site occupies 192 acres in Montrose County, approximately 100 miles south of Grand Junction and 2.5 miles west of Naturita (Figure 1) and is about 2 road miles west from the San Miguel River Valley floor at an elevation of about 5600 feet. This location is within the Canyon Lands area of the Colorado Plateau. The area is typified by relatively smooth, sloping surfaces broken by canyons with rough and precipitous topographic relief (FBD 1981).

The climate is semiarid, with a mean annual precipitation of 12 inches (based on data for Naturita) (Weather 2020). Large rainstorms occur usually from May through October (FBD 1981). The mean annual snowfall at nearby Uravan, averaged over a 56-year period ending in 2016, was 11.1 inches (WRCC 2016). Temperatures in the vicinity of the site vary from average summer highs in the 90s °F to winter lows in the 10s °F (Weather 2020).

Vegetation in the immediate vicinity of the site consists of piñon–juniper woodlands and sagebrush flats. Most of the surrounding property is administered by the Bureau of Land Management (BLM) and is not available for residential development (Hecla 2000). The vicinity is sparsely populated with the two nearest towns, Naturita and Nucla, having populations of 484 and 518, respectively, according to the 2018 American Community Survey 5-Year Estimate (Census 2018a, 2018b).

The primary land uses in the immediate surrounding vicinity are wildlife habitat, domestic livestock grazing, recreational hunting, and hiking. The nearest residence is a ranch about 1/2 mile from the site. There are no other residences within several miles.

2.1.1 Site Ownership and Access

The United States of America, by and through DOE, owns the surface and subsurface of the 192-acre site property. Supporting real estate documentation is presented in Appendix A. Access to the site is from a public highway.

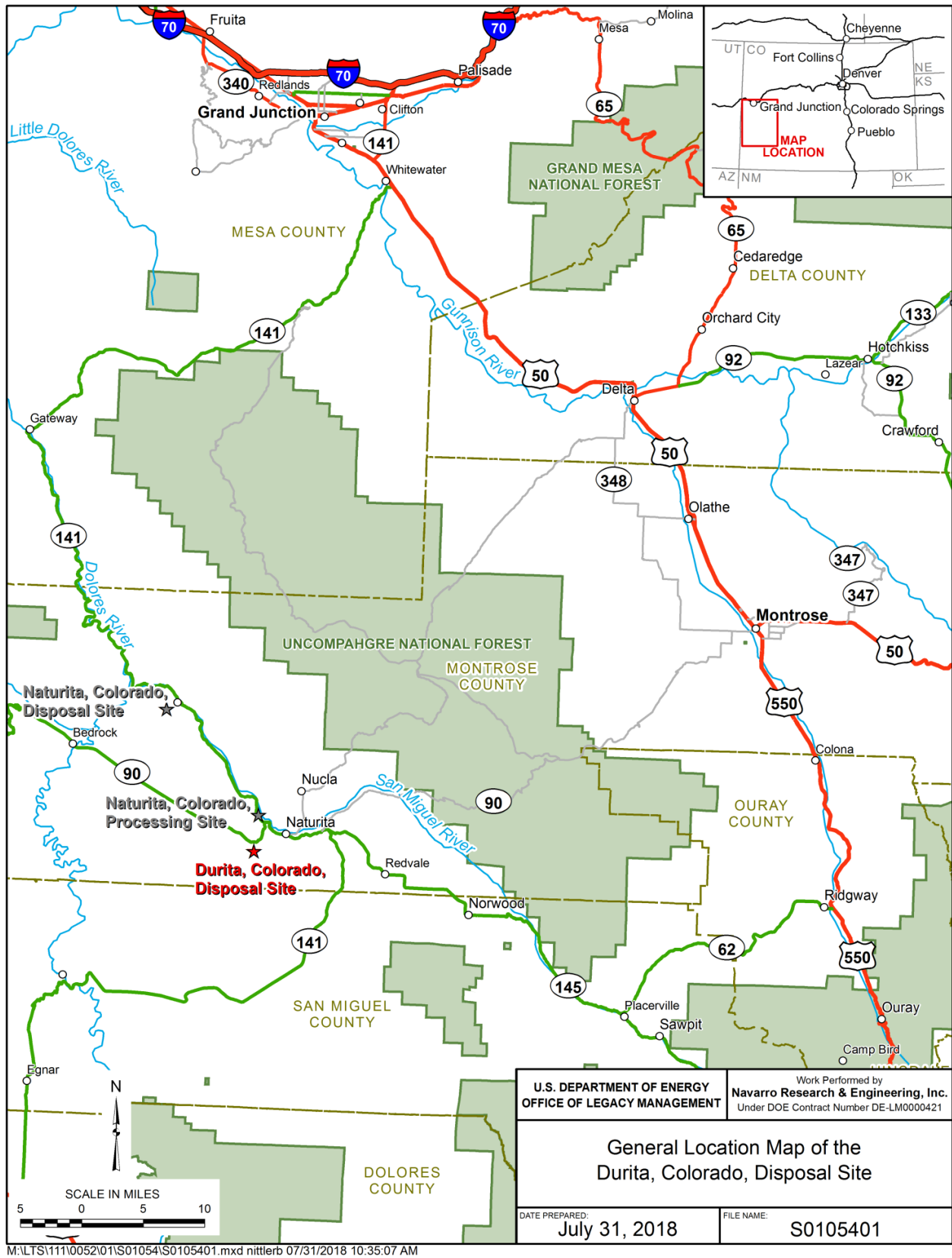


Figure 1. General Location Map of the Durita, Colorado, Disposal Site

2.1.2 Directions to the Disposal Site

Directions from Grand Junction, Colorado, to the site are as follows:

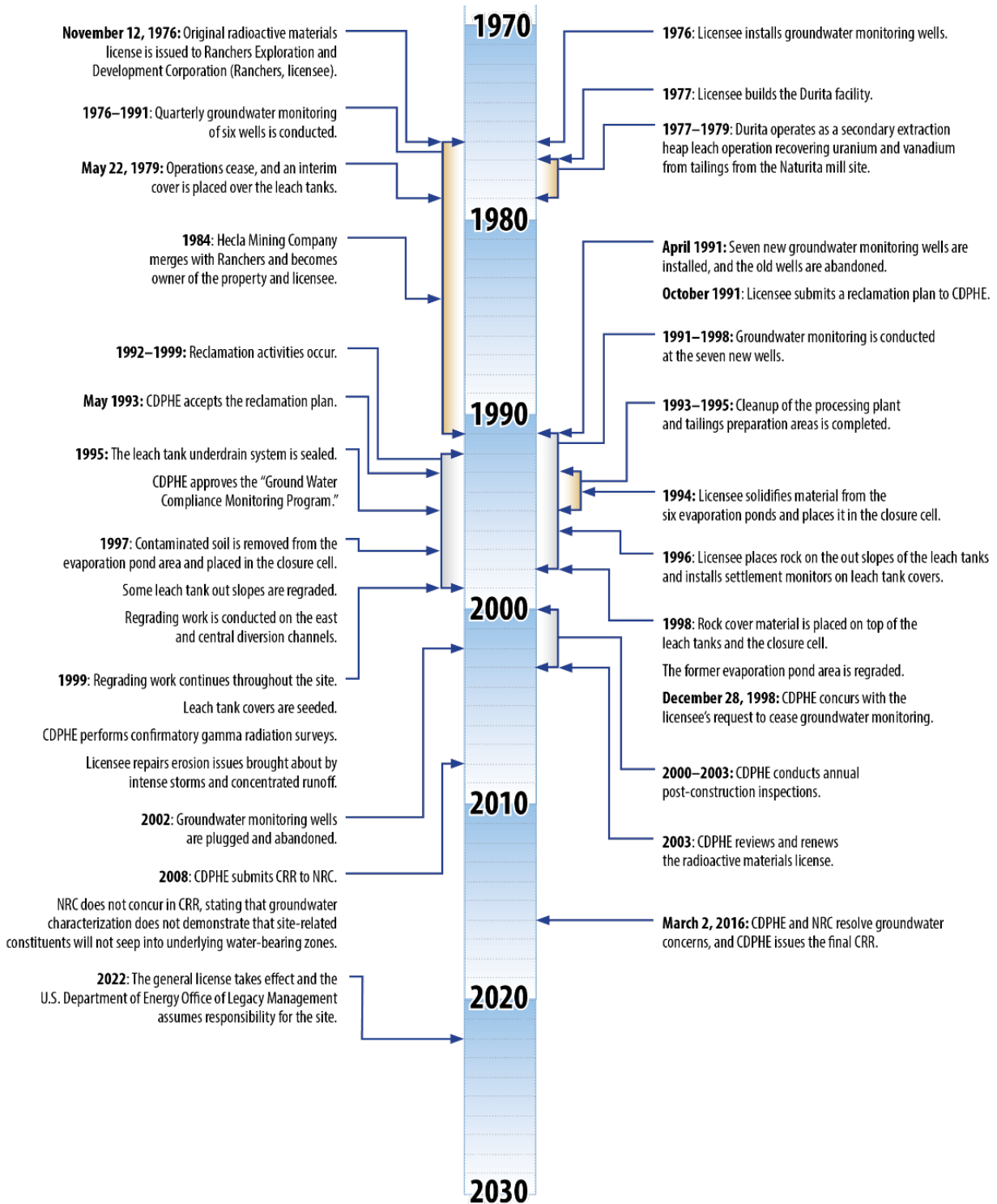
From Grand Junction, Colorado, travel south on U.S. Highway 50 approximately 11 miles to the junction with State Highway 141 near the community of Whitewater. Turn right and proceed west on State Highway 141 for approximately 94 miles, passing through the town of Gateway. At the junction with State Highway 90, turn right and proceed west approximately 2 miles to the intersection with Montrose County Road GG25 on the left. Turn left on Montrose County Road GG25 and proceed south approximately 1/2 mile to the site entrance.

2.2 Site History

The Durita facility was a secondary extraction heap leach operation built in 1977 by Ranchers Exploration and Development Corporation (Ranchers). The facility was operated by Ranchers from 1977 to 1979. Hecla Mining Company (Hecla) merged with Ranchers in 1984. The reclamation plan was developed and implemented by Hecla. All of the estimated 700,000 tons of feedstock “ore” for the mill were tailings from the Naturita mill site (Hecla 1991).

The tailings were trucked to the site and dumped into a crusher. The crushed tailings were conveyed to one of the three clay-lined heap leach tanks. When the tanks were full, the tailings surface was flooded with a dilute 5% sulfuric acid solution. The percolating acidic solution leached uranium and vanadium from the tailings. This solution was collected by slotted pipes in the bottom of each leach tank and then transferred by gravity flow to the extraction plant. Uranium and vanadium were recovered by ion exchange and solvent extraction. The waste liquid was stored in six onsite evaporation ponds. After operations ceased, the leach tanks were covered. The evaporation ponds were left uncovered to allow liquids to evaporate (Hecla 1991).

Formal decommissioning and reclamation of the site began in 1992. Equipment and facilities in the process plant and tailings process areas were demolished or salvaged. The salvaged items were decontaminated and removed from the site in accordance with the release criteria. Nonsalvaged equipment and structures were buried onsite, in place, or if contaminated, buried in the leach tanks (CDPHE 2016). Contaminated soils were excavated and placed in either the leach tanks or a disposal cell. During reclamation, no evidence of leakage from the evaporation ponds was noted, and material beneath the ponds was dry (CDPHE 2007). Final reclamation construction activities were completed in 1999 (Hecla 2000), and the history of the site is summarized in the Figure 2 timeline.



ABBREVIATIONS			
CDPHE	Colorado Department of Public Health and Environment	NRC	U.S. Nuclear Regulatory Commission
CRR	Completion Review Report		

Figure 2. History of the Durita, Colorado, Disposal Site

2.3 Site Description

2.3.1 Description of Surface Conditions

The site includes three reclaimed heap leach tanks, surface water diversion structures, and a riprap-armored disposal cell containing the contaminated sludges and salts from six reclaimed evaporation ponds. Reclaimed surfaces are graded and protected from erosion with a combination of rock armoring, contouring, and revegetation to achieve the necessary surface water run-on and runoff control and erosion protection to satisfy the longevity design requirements (Figure 3). The revegetated surfaces have been reseeded with a mix of plants that has proven to be successful in reclaiming disturbed areas at the site and will help provide for soil stability.



Figure 3. Reclaimed Surfaces in Central Area of Durita, Colorado, Disposal Site (September 2018)

The contaminated tailings materials are contained in three reclaimed heap leach tanks, identified as LT-201, LT-202, and LT-203, and a disposal cell. Some mill debris and contaminated mill site soils were disposed of at the toe of the tanks. A combination of contoured topography, drainage swales, and diversion channels convey incident surface water away from the leach tanks and the evaporation pond cell, and off the site.

Leach tank LT-203 occupies approximately 13 acres including the side slopes. Leach tanks LT-201 and LT-202 occupy a combined area of approximately 22 acres. The disposal cell, including side slopes, occupies approximately 8 acres of the 192-acre disposal site property. The entire site property is fenced with a combination of chain-link fence and barbed-wire stock fence. Site topography is shown in Figure 4.

This page intentionally left blank

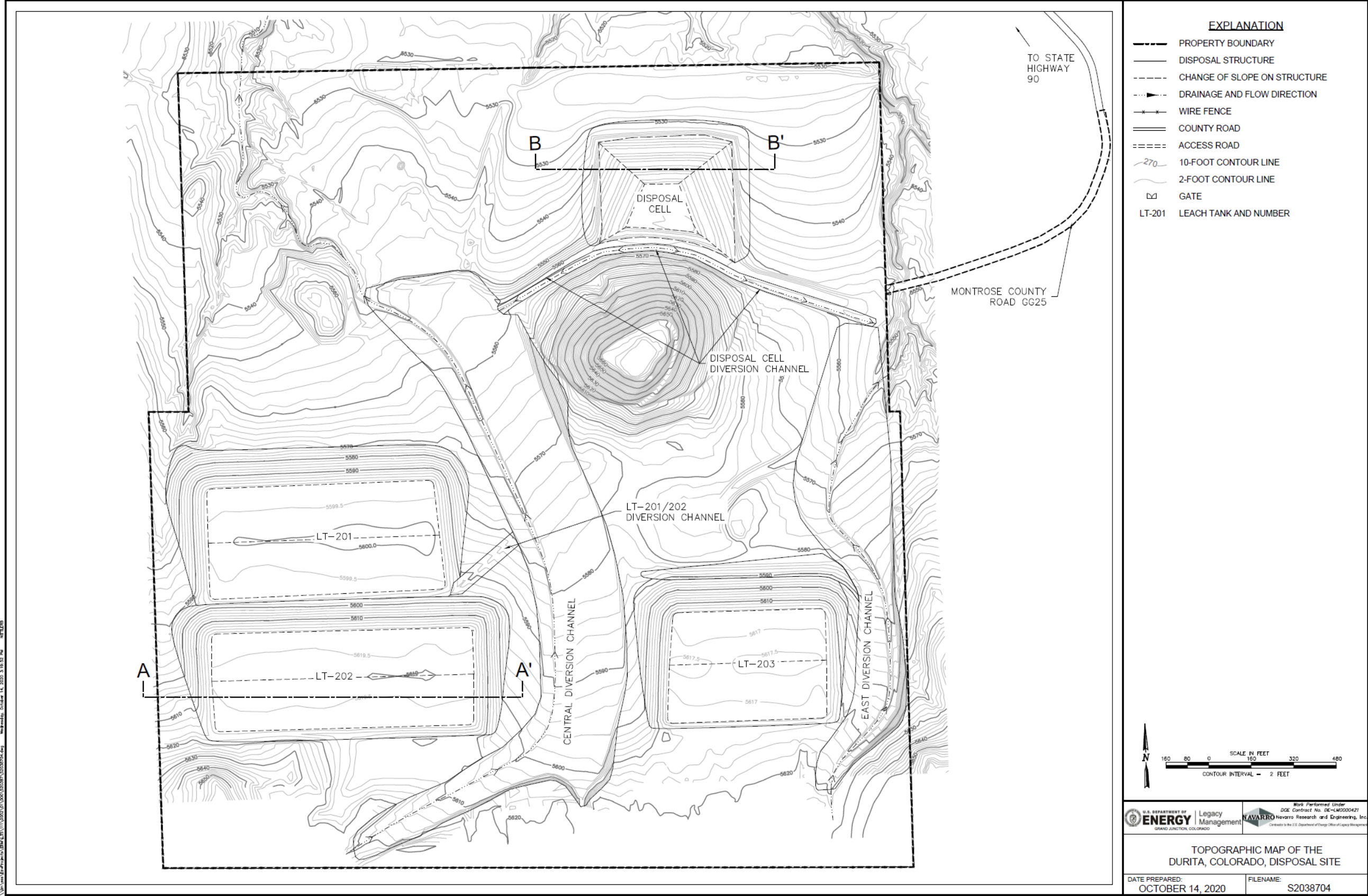


Figure 4. Topographic Map of the Durita, Colorado, Disposal Site
(indicates locations of cross sections found in Figure 8 and Figure 9)

This page intentionally left blank

2.3.2 Permanent Site Surveillance Features

The permanent site surveillance features at the site consist of 11 perimeter signs, an entrance sign, six boundary monuments, and a site marker. These features will be inspected and maintained as part of the ICs for the site.

The entrance sign is located on the west side of the site, off the access road, and displays the DOE 24-hour telephone number and the address for the LM website. The site marker identifies the location and contents of the disposal cell and leach tanks (Figure 5). The perimeter “No Trespassing” signs are mounted on the perimeter fence (Figure 6), and the locations of the permanent site surveillance features are shown in Figure 7.

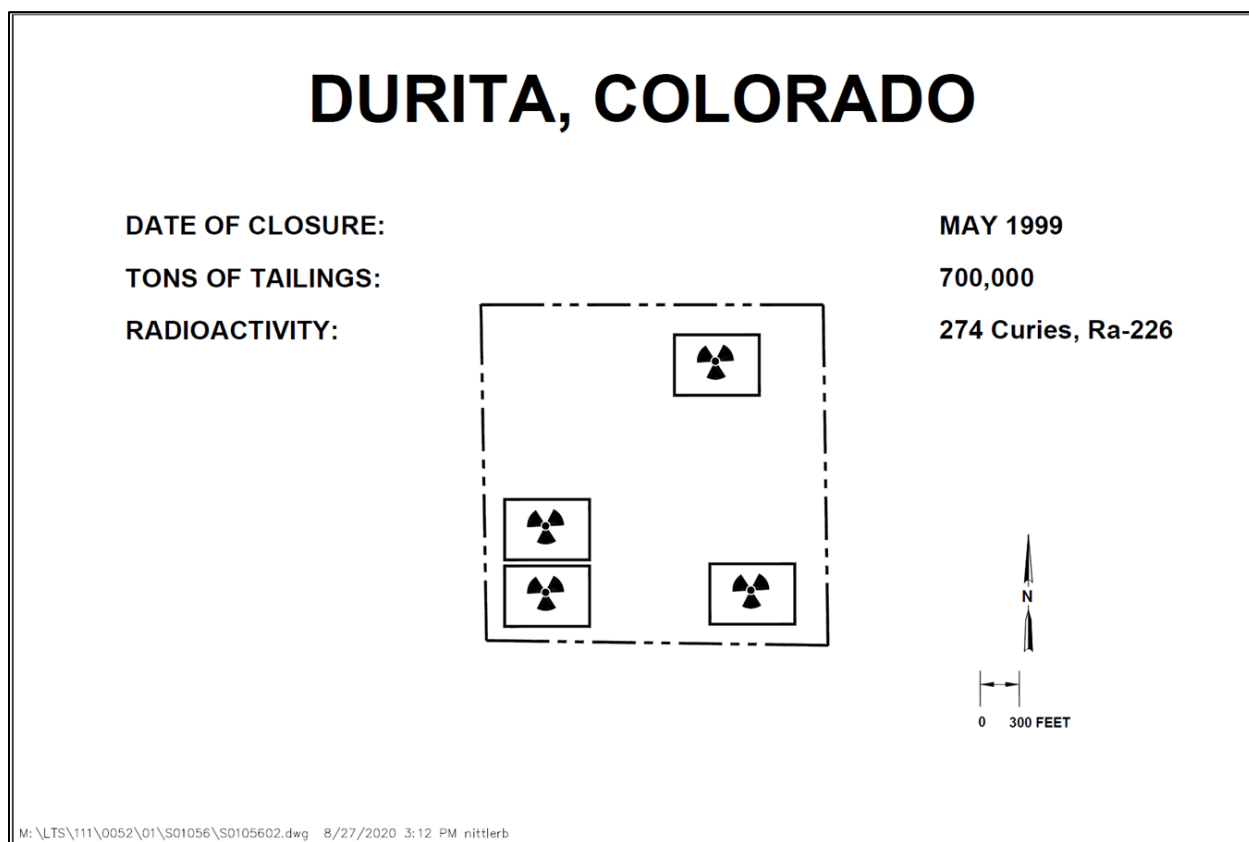


Figure 5. Site Marker at the Durita, Colorado, Disposal Site

DRAFT

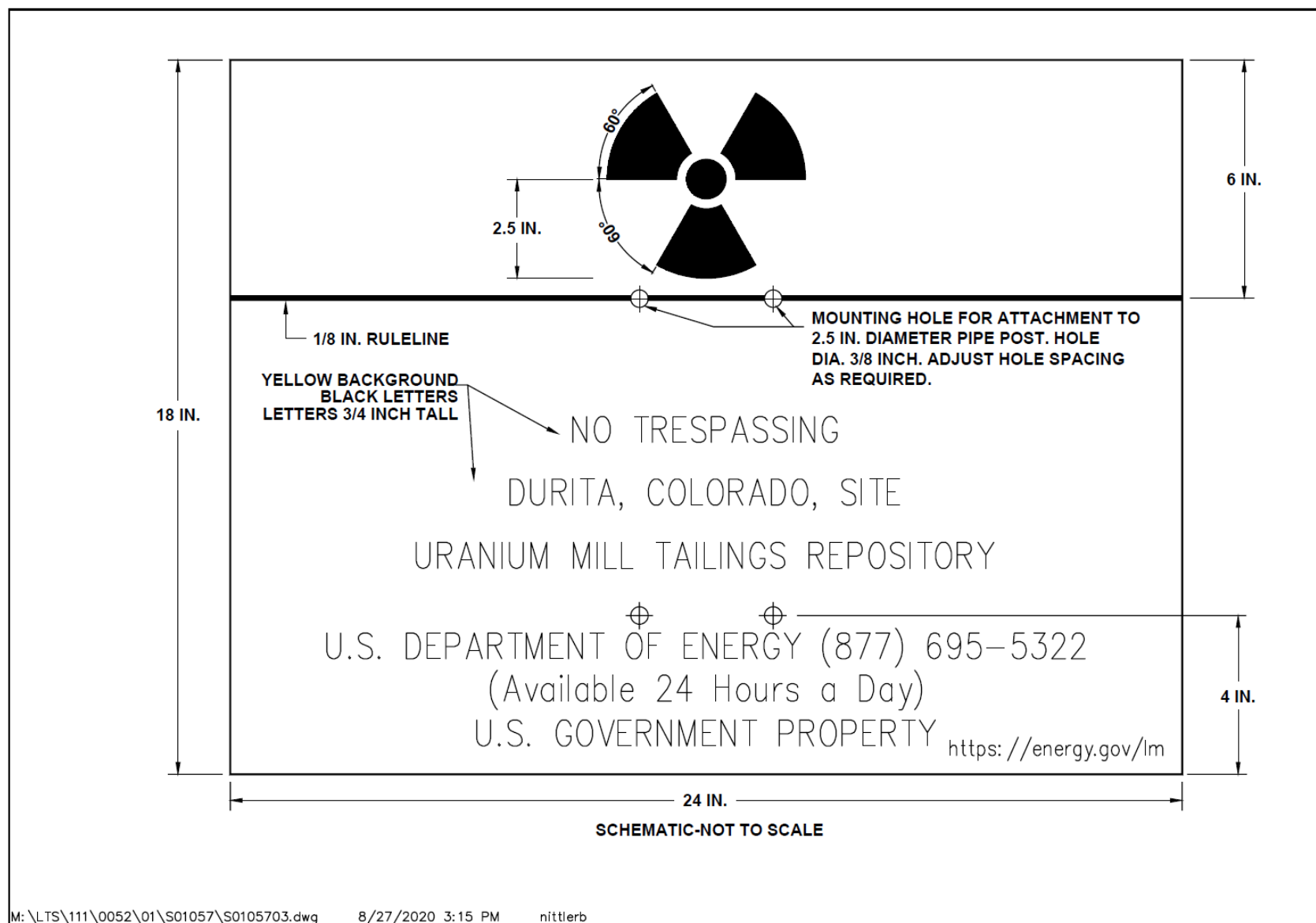


Figure 6. Entrance Warning Sign at the Durita, Colorado, Disposal Site

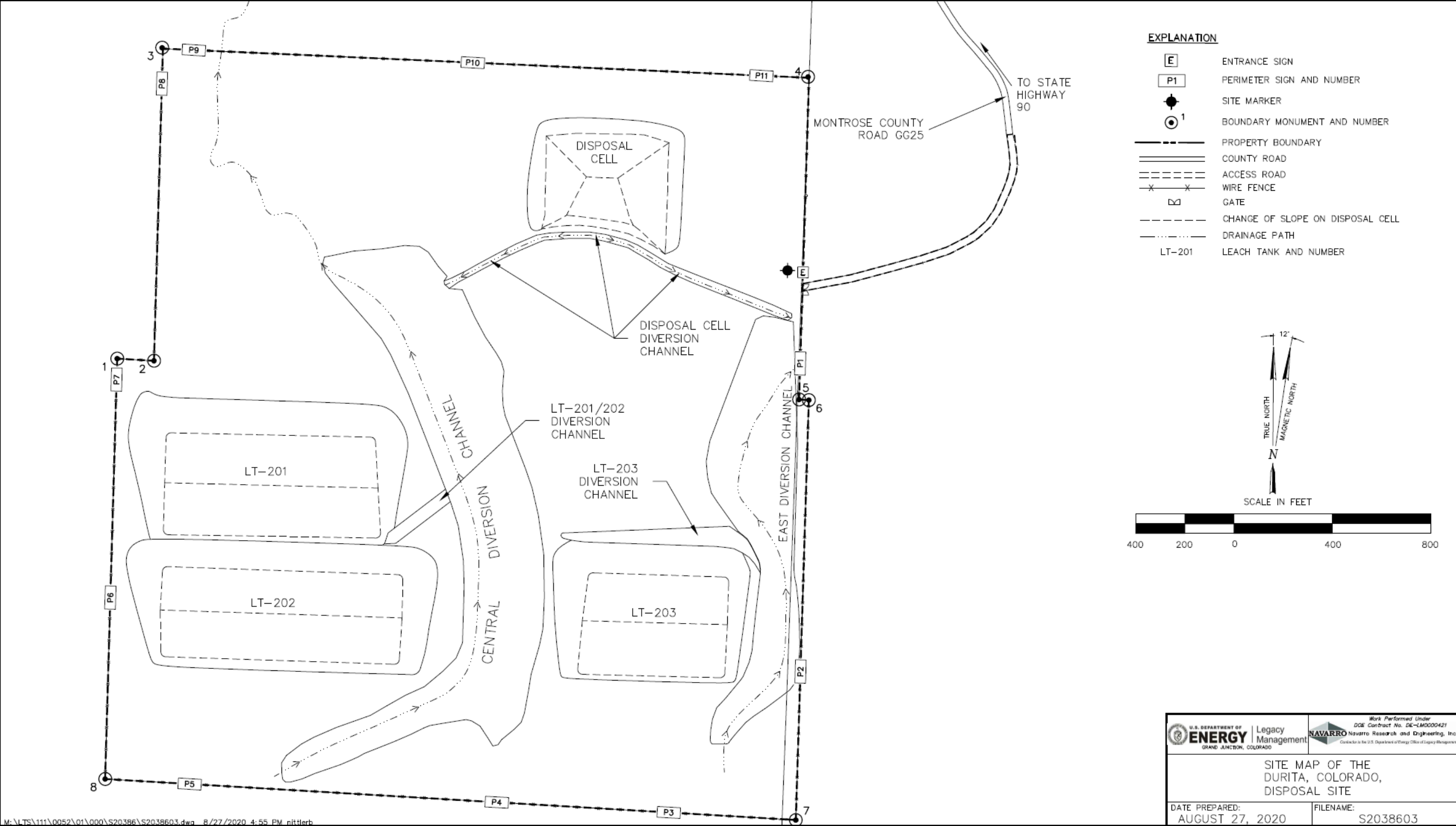


Figure 7. Site Map of the Durita, Colorado, Disposal Site

This page intentionally left blank

2.4 Disposal System Design

2.4.1 Heap Leach Tank Design and Stabilization

Initially, tailings were placed in three heap leach tanks constructed by Ranchers in the native Mancos Shale on the site. The tanks were designed to contain a total of 727,500 cubic yards of material (FCER 1977). Uranium was recovered by flooding the tanks with a dilute sulfuric acid solution that leached uranium and vanadium from the tailings and then was discharged through slotted collection pipes beneath the tailings (but above the clay liner), then piped to the site recovery plant.

The leach tank tailings materials consisted of sandy soils with some silt and clay. They were unsaturated and have been in place since 1980 (CDPHE 2016). The licensee stabilized the leach tanks after the leaching process was complete; stabilization involved contouring and covering the tanks with 2 to 2.5 feet of clean soil. Additional soil cover was placed on the leach tanks to reduce the radon emanations to below 20 picocuries per square meter per second, resulting in a final cover thickness of 5.28 feet (Dames & Moore 1978, CDPHE 2016) (Figure 8). The side slopes of the leach tanks were regraded to a slope of 5H:1V from a slope of 2H:1V. The side slopes are covered with a 6-inch-thick layer of riprap. Some of the material used in the regrading was cut from the crest of the existing tanks, and the remainder was obtained from approved borrow sources. Process plant debris including concrete foundations, pads, support structures, tanks, and other materials not decontaminated in accordance with release criteria was also placed on the out slopes of LT-201 and LT-203. The top slopes of the leach tanks were graded to slopes of 0.5% and vegetated for erosion protection, and rock was placed on the side slopes with rock size calculated to withstand the erosive forces of the probable maximum precipitation event of 8.4 inches per hour of rainfall (CDPHE 2016, Hecla 2000).

2.4.2 Disposal Cell Design

Six evaporation ponds contained residual soils and liquids that were byproducts of the leachate-extraction process. They occupied an area of approximately 13.4 acres. The salts, gels, and liquids were mixed and solidified and consolidated into a single 4-acre repository (disposal cell). The evaporation pond materials were mixed with Mancos Shale to solidify and neutralize the contaminants present.

A minimum 12-inch-thick clay liner was constructed for the bottom of the disposal cell. Four small (80 feet wide \times 80 feet long \times 10 feet deep) lined raffinate ponds were located near the north side of LT-201. The raffinate was mixed in place with Mancos Shale so it could be solidified sufficiently to be hauled to the evaporation ponds, mixed with the solidified pond material, and encapsulated in the closure cell (CDPHE 2016). The cover/radon barrier is 8.7 feet thick (Figure 9). A minimum of 6 inches of rock cover was placed on all closure cell slopes (top and outer slopes). The top surface and flatter outer slopes (20% and 13%) were covered with median stone diameter (D_{50}) = 2-inch rock. The steeper outer slopes (3:1) were covered with D_{50} = 3.6-inch rock. Rock thickness averaged 6.8 inches and was not less than 6 inches (Hecla 2000).

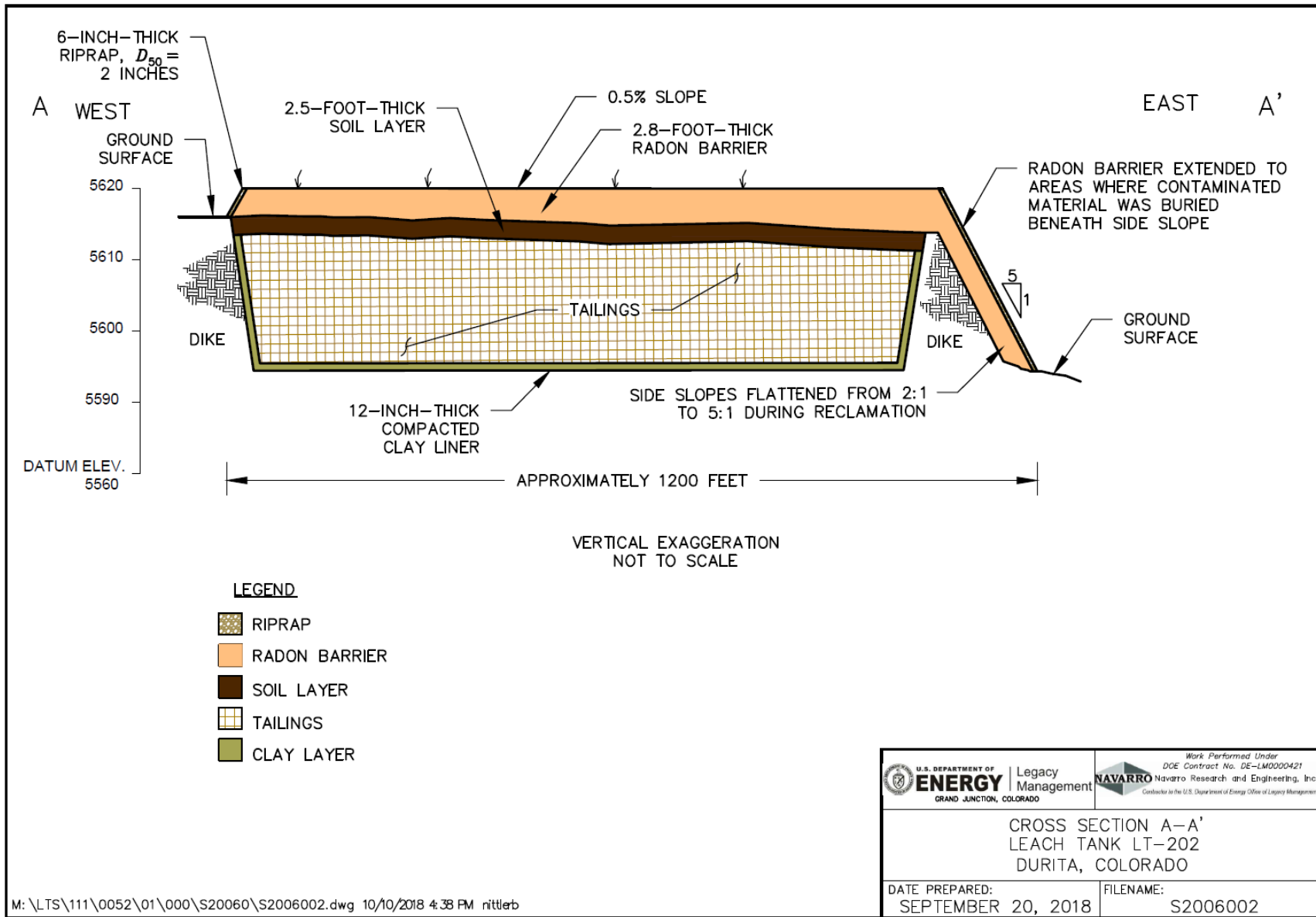


Figure 8. Cross Section, Leach Tank, Durita, Colorado, Disposal Site

DRAFT

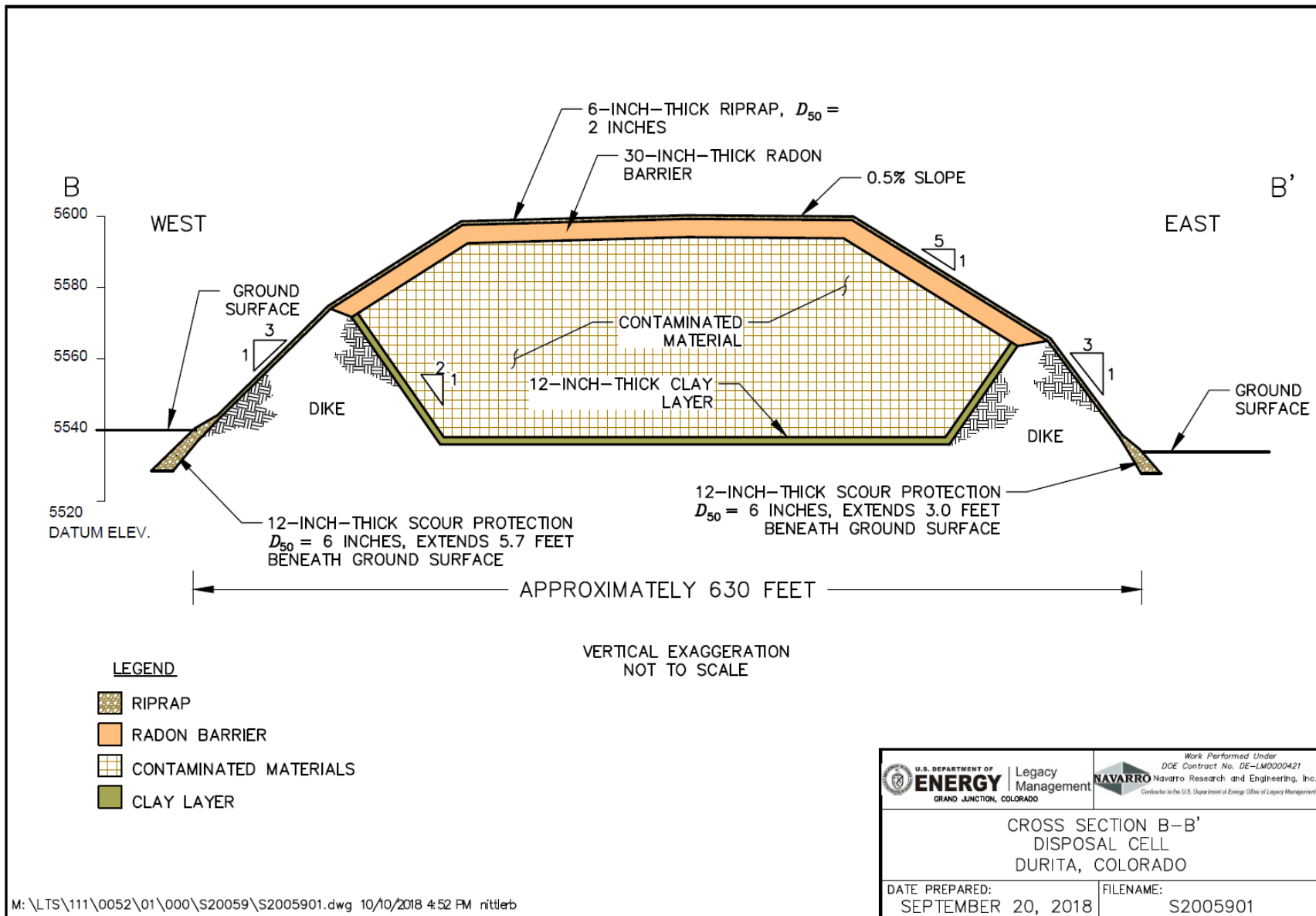


Figure 9. Cross Section, Disposal Cell, Durita, Colorado, Disposal Site

2.5 Geology, Hydrology, and Groundwater Remedy

2.5.1 Site Geology and Hydrology

The site is situated on gently north-sloping terrain at the southeast end of the Paradox Valley. The Mancos Shale directly underlies the site. Most of the site is covered with alluvial/colluvial sandy clay soil as much as 20 feet thick containing variable amounts of sandstone rock fragments, primarily of cobble-to-boulder size. Near the east-central part of the site, a remnant of the Mancos Shale forms a hill approximately 100 feet high above the surrounding terrain. The Mancos Shale is partially eroded in the site area, and its present thickness ranges from about 20 feet at the southwest corner to more than 70 feet at the north edge of the site (excluding the hill) (Hecla 1991).

The Mancos Shale overlies the Dakota Sandstone. The contact between the two formations is distinct in outcrops north and south of the site but less so under the site, where it appears to be gradational in most places. Both formations dip toward the axis of a doubly plunging syncline that trends west-northwest to east-southeast across the northern one-third of the site. The dips are 1–5° on the south flank of the syncline underlying the site. In general, this structural dip is steeper than the slope of the surface terrain, causing the Mancos/Dakota contact to crop out. Geologic field reconnaissance did not identify faults or other significant structural features in the Mancos Shale or Dakota Sandstone under the site (Hecla 1991).

Under the site, the Mancos Shale is a calcareous to carbonaceous gray shale with thin lenses or beds of ferruginous sandstone. The Dakota Sandstone also contains some carbonaceous shale and coal but is mostly friable to moderately cemented, tan to gray sandstone at shallow depths below the site (Hecla 1991).

The results of the site groundwater characterization and monitoring program indicate that there are two stratigraphic units under the site that appear to be hydraulically connected and constitute a single uppermost water-bearing unit. Over most of the site, the uppermost water-bearing stratum is an interbedded sandstone–claystone unit, the top of which occurs from 20 to 55 feet below ground surface. This unit varies in thickness but at a minimum is 10 feet thick. The yields from this water-bearing unit are low, with maximum values approaching 1 gallon per minute (Hecla 1991). Figure 10 shows a generalized stratigraphic column of the formations beneath the site.

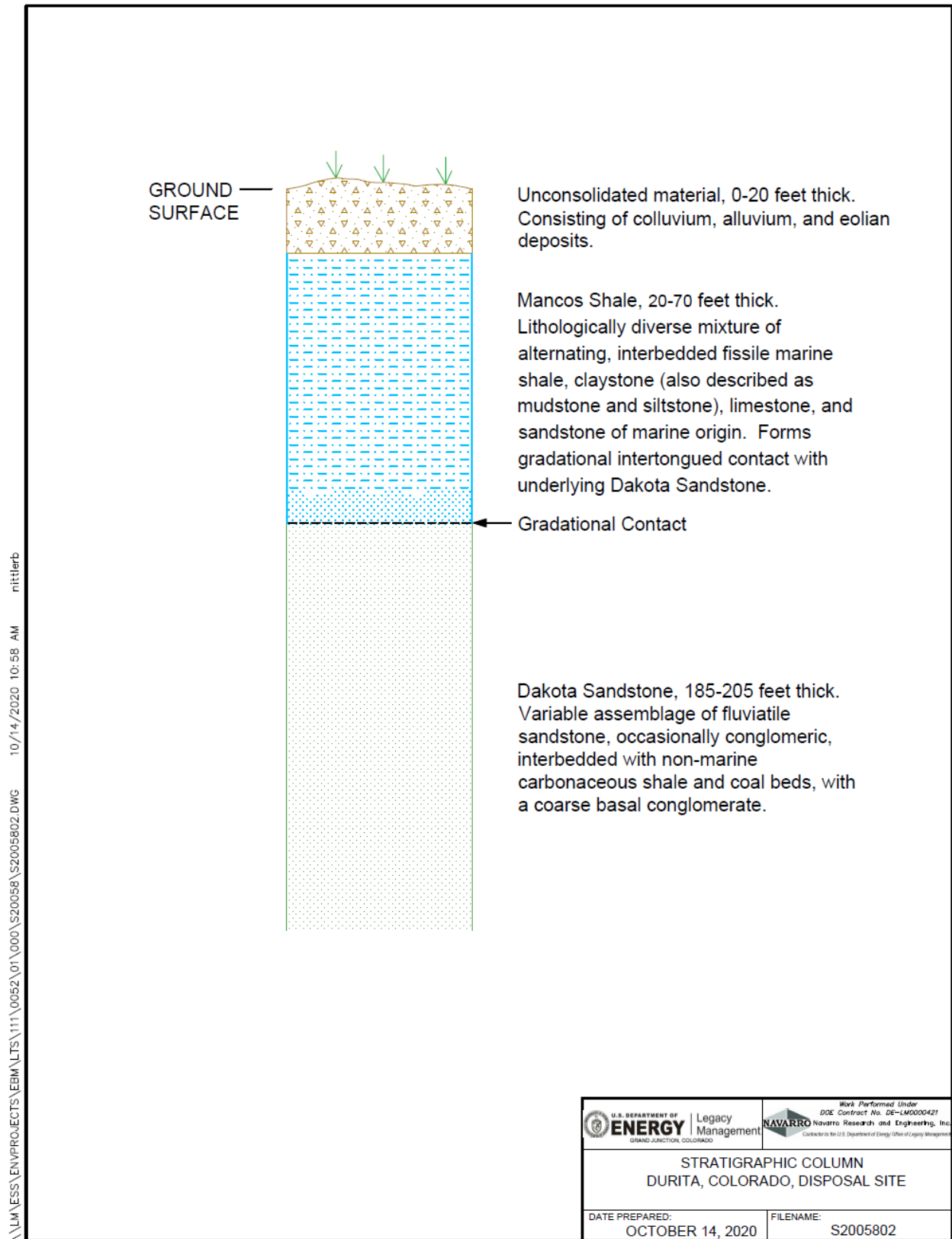


Figure 10. Generalized Stratigraphic Column for the Durita, Colorado, Disposal Site

2.5.2 Groundwater Quality

Initial water quality analyses indicated that naturally occurring total dissolved solids (TDS) levels at the site are nearly 10 times greater than the Environmental Protection Agency's drinking water standard. Sulfate levels also naturally exceed drinking water standards. The pH ranges from 7.41 to 8.60 standard units, indicating that the water is slightly to moderately alkaline, with the highest pH levels exceeding drinking water standards. Sulfate, TDS, and pH levels were determined to be the result of the naturally occurring geochemical environment in the water-bearing unit. Concentrations of radiochemical parameters were lower than drinking water standards and showed no significant difference between upgradient and downgradient locations. Metals and other inorganic constituent concentrations were determined to be very low or below analytical detection levels. All organic constituents required for sampling were under detection limits (Hecla 1991).

Radionuclides commonly found in relatively high concentrations in tailings from uranium acid leach mills are radium-226, lead-210, polonium-210, thorium-230, and uranium. Metals including barium, beryllium, cadmium, chromium, nickel, antimony, lead, mercury, silver, molybdenum, and vanadium may be found in elevated concentrations, as may the regulated nonmetals nitrate, cyanide, selenium, and arsenic. Some chemicals such as organic tertiary amines mixed with the dilutants kerosene or benzene also may be present, along with sulfates from the addition of sulfuric acid to the process (CDPHE 2016).

The licensee installed new wells in 1991 and initiated a comprehensive groundwater sampling program. Groundwater samples were analyzed for all the constituents above except antimony, nitrate, and polonium-210. Polonium-210 was analyzed for in 1995 and was not detected. Concentrations of metals and other inorganic constituents were determined to be less than analytical detection levels. Molybdenum exceeded the detection level at well MW-13 (0.08 milligrams per liter [mg/L]). Barium concentrations ranged from 0.01 to 0.05 mg/L, well below drinking water limits. The concentrations of radiochemical parameters were all below Safe Drinking Water Act standards and showed no significant difference between upgradient and downgradient locations. Uranium activity was highest in the upgradient and cross-gradient wells along the eastern side of the site. These concentrations are consistent with those derived from marine shales such as the Mancos Shale rather than from onsite seepage from the surface (DOE 2011).

2.5.3 Groundwater Remedy

The uppermost water-bearing unit under the site is not considered to be a potential drinking water resource. The unit has a very limited lateral extent and poor yields, and its water quality does not meet drinking water standards. Additionally, there has been no detectable impact on water quality due to operations at the Durita site. Therefore, no groundwater corrective actions were required or performed (Hecla 1991).

From more than 19 years of monitoring data, CDPHE determined there was no evidence of contamination to the groundwater, that the source of potential contamination had been removed and controlled using appropriate engineering procedures, and that the Mancos Shale beneath the site is suitable for preventing any future contaminant migration (CDPHE 2007, CDPHE 2016). Therefore, all groundwater monitoring wells associated with the site were decommissioned, and

no groundwater monitoring is required as part of the groundwater remedy and long-term custody requirements for the site.

2.5.4 Surface Water

No perennial streams exist on the site. Dry Creek, which passes near the northwest corner of the site, has seasonal flows. Several ephemeral drainages originate in, or cross through, the site. Gully formation and active headcutting of some drainages in the vicinity of the site indicate that degradation is the predominant geomorphic process (Hecla 1991).

All site drainages discharge to Dry Creek within 1/2 mile north of the site. Dry Creek joins the San Miguel River about 2 miles north of the site, and the San Miguel joins the Dolores River about 20 miles northwest of the site (Gamble 1992). Some areas of Dry Creek west of the Durita site show evidence of continuous near-surface water saturation by the presence of phreatophytes (CDPHE 2016).

2.6 Institutional Controls

Physical ICs consist of the site surveillance features (Section 2.3.2), access controls such as fences and gates, and the disposal structures. Upon the issuance of the general license, federal ownership of the property becomes an IC that ensures effective land-use control.

3.0 Long-Term Surveillance and Maintenance Requirements

3.1 General License for Custody and Long-Term Care

Under UMTRCA, Section 202 [a], the host state has the right of first refusal for long-term custody of Title II disposal sites. On April 2, 1996, the State of Colorado exercised its right of first refusal and declined the custody and long-term care of the Durita site (Romer 1996). Because the State declined this right, the site transitioned to DOE for long-term custody upon termination of the specific license in 2022.

NRC has accepted this LTSP and concurred with the State of Colorado's termination of the licensee's Colorado Radioactive Materials License (317-02), and NRC's general license for long-term custody took effect (10 CFR 40.28[b]) (Appendix B). Concurrent with this action, the deed and title to the site surface were transferred from the licensee to DOE. Although disposal cells are designed to last "for up to 1000 years, to the extent reasonably achievable, and, in any case, for at least 200 years" (10 CFR 40, Appendix A, Criterion 6), there is no termination of the general license for DOE's long-term custody of the site (10 CFR 40.28[b]).

Representatives of NRC must be guaranteed permanent right of entry for periodic site inspections. Perpetual access to the site is gained from a public county road.

3.2 Requirements of the General License

To meet the requirements of the NRC license in 10 CFR 40.28, and in Criterion 12 in 10 CFR 40, Appendix A, the long-term custodian must, at a minimum, fulfill the following requirements. The section in this LTSP where each requirement is addressed is in parentheses in the following list:

- Annual site inspections (Section 3.3)
- Annual inspection report (Section 3.4)
- Follow-up inspections and inspection reports, as necessary (Section 3.5)
- Site maintenance, as necessary (Section 3.6)
- Emergency measures in the event of catastrophe (Section 3.6.2)
- Environmental monitoring, if required (Sections 3.7.1 and 3.7.2)

3.3 Annual Site Inspections

3.3.1 Frequency of Inspections

At a minimum, sites must be inspected annually to confirm the integrity of visible features at the site and determine the need, if any, for maintenance, additional inspections, or monitoring (Criterion 12 in 10 CFR 40, Appendix A). To meet this requirement, DOE will inspect the site once each calendar year. The date of the inspection may vary from year to year, but DOE will endeavor to inspect the site approximately once every 12 months unless circumstances warrant a variance. Any variance to this inspection frequency will be explained in the inspection report. DOE will notify NRC of the inspection at least 30 days in advance of the scheduled inspection date.

3.3.2 Inspection Procedure

The site will be divided into inspection areas. Each inspection area is inspected by walking a series of unspecified traverses across each area so the entire site is inspected. Within each area, inspectors examine specific site surveillance features, such as boundary monuments, signs, site markers, and other features listed on the Site Inspection Checklist (Appendix C). Table 2 lists the inspection areas for the site.

Table 2. Inspection Areas for the Durita, Colorado, Disposal Site

Inspection Area	Description
Disposal site	Area within the site boundary
Site perimeter	Boundary monuments, entrance and perimeter signs, fence
Outlying area	Visual observation from within the site boundary of surrounding property at least approximately 0.25 mile beyond the site boundary

The annual inspection will be a visual walkthrough. The primary purpose of the inspection will be to look for evidence of ground surface degradation, such as cover cracking or settlement, wind or water erosion, vegetation condition, and animal or human intrusions that could result in

adverse impacts. Disposal site inspection techniques are described in detail in Attachment 3 of the LTSP Guidance Document (DOE 2012).

In addition to inspecting the site itself, inspectors will note changes in the surrounding area. Significant changes within this area could include development or expansion of human habitation, erosion, road building, oil and gas development, uranium exploration, or other changes in land use.

Inspectors take photographs to document conditions and observations of the inspection areas and site surveillance features. Observations may include evidence of vandalism or a slow modifying process, such as rill erosion, that should be monitored more closely during annual site inspections. Photographs are documented in a photograph log.

3.3.3 Inspection Checklist

The inspection checklist guides the inspection process. A representative inspection checklist for the Durita site is presented in Appendix C. The checklist is reviewed and revised before each annual inspection. At the end of the site inspection, inspectors will make notes about revisions to the checklist, if necessary, in anticipation of the next annual site inspection. Revisions to the checklist address observations or potentially changing site conditions that must be inspected and evaluated during the next inspection.

3.3.4 Personnel

Annual inspections will be performed by a minimum of two inspectors. Inspectors will be experienced scientists or engineers who have been trained to perform inspections through participation in previous site inspections.

Scientists will include geologists, hydrologists, biologists, and environmental scientists representing various fields (e.g., ecology, soils, range management). Engineers will typically be trained in civil, geotechnical, or geological engineering. Inspectors who have specific expertise to evaluate site conditions and make recommendations will be selected.

3.4 Annual Inspection Report

Results of the annual site inspection are included in an annual inspection report that is submitted to NRC within 90 days of the last UMTRCA Title II site inspection of that calendar year (10 CFR 40, Appendix A, Criterion 12). If the annual report cannot be submitted within 90 days, DOE will notify NRC of the circumstances. The annual inspection report includes the annual inspection results for all UMTRCA Title II sites licensed under 10 CFR 40.28.

3.5 Follow-Up Inspections

DOE might conduct a follow-up inspection in response to unusual observations from routine inspections, reports of unusual damage or disruption, or extreme natural events.

3.5.1 Criteria for Follow-Up Inspections

The following circumstances would necessitate a follow-up inspection:

- A condition is identified during the annual site inspection or other site visit that requires personnel, perhaps with specific expertise, to return to the site to evaluate the condition
- DOE is notified by a citizen or outside agency that conditions at the site are substantially changed
- An extreme natural event occurs, such as fire or flooding

DOE might request the assistance of local agencies to confirm the seriousness of a condition before conducting a follow-up inspection or emergency response. The public may use the 24-hour DOE telephone number posted prominently on the entrance sign to request information or report a problem at the site.

Once a condition or concern is identified, DOE will evaluate the information and determine whether a follow-up inspection is warranted. Conditions that may require a routine follow-up inspection include erosion, changes in vegetation, storm damage, trespassing, minor vandalism, or the need to evaluate or define maintenance tasks.

Conditions that threaten the safety or integrity of the site may require a more immediate (nonroutine) follow-up inspection. A disastrous storm, a major seismic event, fires, and deliberate human disturbance of the site are among these conditions.

DOE will use a graded approach with respect to follow-up inspections. The urgency of the follow-up inspection will be in proportion to the seriousness of the condition. The timing of the inspection may be governed by seasonal considerations. For example, a follow-up inspection to investigate a vegetation problem may be scheduled for a particular time of year when growing conditions are optimum. A routine follow-up inspection to perform maintenance or to evaluate erosion might be scheduled to avoid seasonal weather.

In the event of “unusual damage or disruption” (10 CFR 40, Appendix A, Criterion 12) that threatens or compromises site safety, security, or integrity, DOE will:

- Notify NRC pursuant to 10 CFR 40, Appendix A, Criterion 12 or 10 CFR 40.60, as applicable.
- Begin the DOE environment, safety, and health reporting process (DOE Order 231.1B Chg 1; or current guidance).
- Respond with an immediate follow-up inspection or emergency-response team.
- Implement measures as necessary to contain or prevent the dispersion of radioactive materials (Section 3.6).

3.5.2 Personnel

Inspectors assigned to follow-up inspections will be selected on the same basis as they are for the annual site inspections (Section 3.3.4).

3.5.3 Reports of Follow-Up Inspections

Results of routine follow-up inspections will be included in the next annual inspection report (Section 3.4). Separate reports will not be prepared unless DOE determines that it is advisable to notify NRC or another outside agency of a problem at the site.

If follow-up inspections are required for more serious or emergency reasons, DOE will submit to NRC a preliminary report of the follow-up inspection within the required 60 days (10 CFR 40, Appendix A, Criterion 12).

3.6 Routine Site Maintenance and Emergency Measures

3.6.1 Routine Site Maintenance

UMTRCA disposal sites are designed and constructed so that “ongoing active maintenance is not necessary to preserve isolation” of radioactive material (10 CFR 40, Appendix A, Criterion 12). The disposal cell has been designed and constructed to minimize the need for routine maintenance. If an inspection reveals damaged or missing site surveillance features (e.g., signs, site marker, and boundary monuments), the features will be repaired or replaced as necessary. If a structure has failed or has been degraded in a way that might compromise site protectiveness (but is not considered to be an emergency), repairs will be conducted to reestablish the integrity of the disposal system.

3.6.2 Emergency Measures

Emergency measures are the actions that DOE will take in response to “unusual damage or disruption” that threatens or compromises site safety, security, or integrity. DOE will contain or prevent the dispersal of radioactive materials in the unlikely event of a breach in cover materials.

3.6.3 Criteria for Routine Site Maintenance and Emergency Measures

Site intervention measures, from minor routine maintenance to large-scale reconstruction following potential disasters, lie on a continuum. Although 10 CFR 40.28(b)(5) requires that increasingly serious levels of degradation trigger particular DOE responses, the criteria for those responses are not easily defined because the nature and scale of all potential problems cannot be foreseen. The information in Table 3, however, serves as a guide for appropriate DOE responses. The table shows that the primary difference between routine maintenance and an emergency response is the urgency of the activity and the degree of threat or risk. DOE’s priority level, in the left column of Table 3, bears an inverse relationship to DOE’s estimate of the probability of occurrence; the highest priority response is believed to be the least likely.

Table 3. DOE Criteria for Maintenance and Emergency Measures

Priority	Description ^a	Example	Response
1	Breach of leach tank(s) or disposal cell with dispersal of radioactive material.	Seismic event that exceeds design basis and causes massive discontinuity in cover.	Notify NRC. Immediate follow-up inspection by appropriate DOE emergency-response personnel. Emergency actions to prevent further dispersal, recover radioactive materials, and repair breach.
2	Breach of leach tank(s) or disposal cell without dispersal of radioactive material.	Partial or threatened exposure of radioactive materials.	Notify NRC. Immediate follow-up inspection by appropriate DOE emergency-response personnel. Emergency actions to repair the breach.
3	Breach of site security.	Human intrusion, vandalism.	Restore security; urgency based on assessment of risk.
4	Maintenance of specific site surveillance features.	Deterioration of site markers, signs, and boundary monuments.	Repair at first opportunity.
5	Minor erosion or undesirable changes in vegetation.	Erosion not immediately affecting leach tank(s) or disposal cell; invasion of undesirable plant species.	Evaluate, assess impact, and respond as appropriate.

Note:

^a Other changes or conditions will be evaluated and treated similarly on the basis of perceived risk.

3.6.4 Reporting Maintenance and Emergency Measures

Routine maintenance completed during the previous 12 months will be summarized in the annual inspection report.

In accordance with 10 CFR 40.60, within 4 hours of discovery of any Priority 1 or Priority 2 event such as those listed in Table 3, DOE will contact the NRC 24-Hour Operations Center for Emergencies at (301) 816-5100 and notify the following office at NRC:

Materials Decommissioning Branch
Division of Decommissioning, Uranium Recovery, and Waste Programs
Office of Nuclear Material Safety and Safeguards

3.6.5 Severe Weather Events

DOE receives notifications of severe weather and will conduct follow up inspections when weather events occur that can result in damage to engineered disposal system or other site features.

3.6.6 Seismic Events

As discussed in the LTSP Guidance Document (DOE 2012), DOE subscribes to the U.S. Geological Survey National Earthquake Information Center for notification when an earthquake is of sufficient magnitude to threaten a disposal site. This service provides data on the magnitude of the event and the location of the epicenter. DOE receives an email notification if a seismic event of magnitude 3.0 or greater occurs within 0.3° of longitude (about 20 miles) of the

site. DOE estimates the peak ground acceleration to determine if the event resulted in exceedance of the design basis for the site's leach tanks and disposal cell.

3.7 Environmental Monitoring

3.7.1 Groundwater Monitoring

Site groundwater poses no unacceptable risk to public health, safety, or the environment because seepage of processing-related contamination into the uppermost aquifer has not been detected and natural groundwater quality, due to the site geology, does not meet drinking water standards. Characterization and analysis showed that there is no discharge of groundwater from the uppermost aquifer to deeper aquifers or surface waters (CDPHE 2016, cite NRC concurrence). Therefore, groundwater monitoring is not necessary to maintain protectiveness, and DOE does not conduct groundwater monitoring at the site. There are no monitoring wells at the site.

3.7.2 Vegetation Monitoring

To promote soil stability, large areas of the site have been revegetated. The tops of the leach tanks and parts of the diversion/drainage channels are the most critical vegetated surfaces. The condition of site vegetation will be evaluated during the annual inspections to determine if intervention is necessary to promote vegetation health and maintain erosion resistance. A qualified range scientist or plant ecologist will be consulted with respect to vegetative health at the site.

3.8 Institutional Controls Monitoring

Federal land ownership is the primary IC that serves to ensure long-term protectiveness at the site. Monitoring of physical ICs will be conducted during the annual inspection. During the inspection, DOE will check the site for unauthorized entry, surrounding land use, and disturbance of site features.

3.9 Records

DOE receives and maintains records to support postclosure site maintenance and provide historical information for long-term stewardship. Site records contain critical information required to protect public health, safety, and the environment, manage land and assets, protect the legal interests of DOE and the public, and mitigate community impacts resulting from the cleanup of legacy waste. The records are managed in accordance with the appropriate records management requirements as specified in the *Records and Information Management Transition Guidance* (DOE 2016 or current guidance). Inactive records are preserved in collections under DOE's control.

3.10 Quality Assurance

All activities related to the surveillance and maintenance of the site will comply with appropriate DOE orders and other requirements as specified in the LTSP Guidance Document (DOE 2012 or current guidance). Quality assurance requirements are routinely fulfilled by use of a work-planning process, standard operating procedures, trained personnel, documents and records

maintenance, and assessment activities. Requirements will be transmitted through procurement documents to subcontractors when appropriate.

3.11 Safety and Health

Safety and health requirements and procedures for DOE activities are consistent with DOE orders, federal regulations, and applicable codes and standards as specified in the LTSP Guidance Document (DOE 2012 or current guidance). A job safety analysis is used to identify specific hazards associated with the anticipated scope of work, including inspections and maintenance, and provide direction for the control of these hazards. Prior to entering the site, all personnel accessing the site are briefed on the safety and health requirements associated with the site and any work to be performed, such as sign replacement or the use of all-terrain vehicles.

4.0 References

10 CFR 40, Appendix A. U.S. Nuclear Regulatory Commission, “Criteria Relating to the Operation of Uranium Mills and the Disposition of Tailings or Wastes Produced by the Extraction or Concentration of Source Material from Ores Processed Primarily for Their Source Material Content,” *Code of Federal Regulations*.

10 CFR 40.28. U.S. Nuclear Regulatory Commission, “General License for Custody and Long-Term Care of Uranium or Thorium Byproduct Materials Disposal Sites,” *Code of Federal Regulations*.

42 USC 7901. “Title II of the Uranium Mill Tailings Radiation Control Act of 1978,” *United States Code*.

CDPHE (Colorado Department of Public Health and Environment), 2007. Joseph Vranka, Program Manager, letter (about Colorado Radioactive Materials License #317-02, Response to NRC Geologist’s Report Regarding Groundwater at the Hecla-Durita Site) to Ms. Janet Schleuter, U.S. Nuclear Regulatory Commission, November 8.

CDPHE (Colorado Department of Public Health and Environment), 2016. *Final Completion Review Report for the Hecla Mining Company Durita Facility Montrose County, Colorado*, March 2.

Census (U.S. Census Bureau), 2018a. “Naturita town, Colorado,” <https://data.census.gov/cedsci/profile?g=1600000US0853120>, accessed August 26, 2020.

Census (U.S. Census Bureau), 2018b. “Nucla town, Colorado,” <https://data.census.gov/cedsci/profile?g=1600000US0854935>, accessed August 26, 2020.

Dames & Moore, 1978. *Analysis of Tailings Disposal for Ranchers Exploration and Development Corporation, Naturita, Colorado*, January.

DRAFT

DOE (U.S. Department of Energy), 2011. *Natural Contamination from the Mancos Shale*, LMS/S07480, ESL-RPT-2011-01, Office of Legacy Management, prepared by the Environmental Sciences Laboratory, April.

DOE (U.S. Department of Energy), 2012. *Guidance for Developing and Implementing Long-Term Surveillance Plans for UMTRCA Title I and Title II Disposal Sites*, LMS/S00336, Office of Legacy Management, November.

DOE (U.S. Department of Energy), 2016. *Records and Information Management Transition Guidance*, Guide 243.1B, Office of Legacy Management, May.

DOE Order 231.1B Chg 1, *Environment, Safety and Health Reporting*, U.S. Department of Energy, November 28, 2012.

FBD (Ford, Bacon & Davis Utah Inc.), 1981. *Engineering Assessment of Inactive Uranium Mill Tailings, Naturita Site, Naturita, Colorado*, July.

FCER (Four Corners Environmental Research), 1977. *Environmental Report: Proposed Uranium Mill Tailings Leaching Operation at Naturita*, January.

Gamble, 1992. Gary Gamble, Environmental Engineer, Hecla Mining Company, letter (about Radiation Control Division Completeness Review of Durita Site Reclamation Plan) to Donald Simpson, Senior Geologist, Radiation Control Division, Colorado Department of Health, February 21.

Hecla (Hecla Mining Company), 1991. *Final Reclamation Plan, Durita Site, Colorado Radioactive Materials License No. 317-02*, October.

Hecla (Hecla Mining Company), 2000. *Long-Term Monitoring and Maintenance Program*, March.

NRC (U.S. Nuclear Regulatory Commission), XXXX. concurrence

Romer, 1996. Roy Romer, Governor of Colorado, letter (Declining Custody of Title II Sites) to Joseph Virgona, Project Manager, Grand Junction Projects Office, U.S. Department of Energy, April 2.

Weather (The Weather Channel), 2020. "Naturita, CO Monthly Weather," <https://weather.com/weather/monthly/l/1b47f66c...>, accessed August 26, 2020.

WRCC (Western Regional Climate Center), 2016. "Uravan, Colorado Period of Record: 11/17/1960 to 01/31/2016," <https://wrcc.dri.edu/cgi-bin/cliMAIN.pl?co8560>, accessed August 26, 2020.

This page intentionally left blank

DRAFT

Appendix A

Real Estate Documentation

DRAFT

This page intentionally left blank

Legal Description of Site

General

Documentation of Acquisition

A. Surface Acquisition in Fee

(1) Legal description

A tract of land being the South $\frac{1}{2}$ of the Northeast $\frac{1}{4}$ and the North $\frac{1}{2}$ of the Southeast $\frac{1}{4}$ Section 34, Township 46 North, Range 16 West, New Mexico Principal Meridian, Montrose County, Colorado, containing 160 acres more or less.

The real estate correspondence and instruments are maintained and filed by the U.S. Department of Energy, Grand Junction, Colorado.

(2) Recorded

A copy of the recorded deed will be included when available.

B. Jurisdiction of Surface Acquired Through Withdrawal

(1) Legal description

A parcel of land being described as follows:

The Basis of Bearings for the descriptions hereon is referenced to the south line of the north half of the southeast quarter of the said Section 34 as shown on the "HECLA MINING COMPANY, DURITA SITE, BOUNDARY MAP" recorded at Reception 823 in the office of the Clerk and Recorder of Montrose County on June 8, 2004.

Considering the aforementioned south line of the north half as bearing North $88^{\circ} 17' 56''$ West, a distance of 2629.67 feet. Its west terminus being monumented with a 3-inch diameter aluminum pipe with a 3-1/4-inch diameter aluminum cap inscribed "**HECLA BOUNDARY : S 1/16 : C|C : S34 : 2004: LS 24299**" for the Center South Sixteenth corner of the said Section 34 and at its east terminus being monumented with a 3-inch diameter aluminum pipe with a 3-1/4-inch diameter aluminum cap inscribed "**HECLA BOUNDARY : S 1/16 : 34 | 35 : 2004: LS 24299**" for the South Sixteenth corner common to the said Sections 34 and 35.

The below descriptions are generated and derived from the record dimensions and monuments as shown on the aforementioned "HECLA MINING COMPANY, DURITA SITE, BOUNDARY MAP" and are not the result of a recent field survey made on the ground for this description.

DRAFT

ADDITIONAL AREA

A tract of land situated in the southwest quarter and the southeast quarter of Section 34 and in the southwest quarter of Section 35 in Township 46 North and Range 16 West of the New Mexico Principal Meridian, in the County of Montrose, State of Colorado and being described as follows:

Beginning at a 3/4-inch diameter by 30-inch-long rebar with a 2-inch diameter aluminum cap inscribed “**DEL-MONT : T46N R16W : 1/4 : S34 | S35 : 2004 : LS24299**” for the East Quarter corner of the said Section 34;

THENCE, South 88° 15' 30" East a distance of 40.02 feet;

THENCE, parallel with east line of the southeast quarter of said Section 34, South 00° 05' 00" West, a distance of 1711.67 feet;

THENCE, parallel with said south line of the north half of the southeast quarter of Section 34, North 88° 17' 56" West, a distance of 2768.80 feet;

THENCE, parallel with west line of said north half of the southeast quarter of Section 34, North 00° 03' 01" West, a distance of 1713.75 feet to the north line of the southwest quarter of said Section 34;

THENCE, along said north line of the southwest quarter of Section 34, South 88° 15' 30" East a distance of 100.05 feet to a 3/4-inch diameter by 30-inch-long rebar with a 2-inch diameter aluminum cap inscribed “**DEL-MONT : T46N R16W : C 1/4 : S34 : 2004 : LS24299**” for the Center Quarter corner of the said Section 34;

THENCE, along the west line of the said north half of the southeast quarter of Section 34, South 00° 03' 01" East a distance of 1313.50 feet to the Center South Sixteenth corner of the said Section 34 described in the above Basis of Bearing statement;

THENCE, along the said south line of the north half of the southeast quarter of Section 34, South 88° 17' 56" East, a distance of 2629.67 feet to the said South Sixteenth corner common to the said Sections 34 and 35 described in the above Basis of Bearing statement;

THENCE, along said east line of the southeast quarter of said Section 34, North 00° 05' 00" East a distance of 1311.54 feet to the **Point of Beginning**.

The above described Parcel having an area of 1,291,521 square feet or 29.65 acres of land and is subject to any easements, conditions and restrictions that may exist on or within its lines.

Said parcel is subject to an existing access road described in Department of Interior, Bureau of Land Management case recordation at serial number COC 057170 and also an existing access road described in Department of Interior, Bureau of Land Management case recordation at serial number COC 025530.

DRAFT

(2) Recorded

A copy of the Public Land Order will be included when available.

C. Subsurface Rights Acquired in Fee

(1) Legal description

All of the Grantor's right and title in and to all of the oil, gas and other minerals in, on and under the following described property:

160 acres, more or less, located in the S½ NE¼ and N½ SE¼, Section 34, Township 46 North, Range 16 West, N.M.P.M Montrose County, Colorado.

(3) Recorded

A copy of the recorded deed will be included when available.

D: Jurisdiction of Subsurface Rights Acquired Through Withdrawal

A copy of the Public Land Order will be included when available.

DRAFT

This page intentionally left blank

DRAFT

Appendix B

Regulator Concurrence *(forthcoming)*

DRAFT

This page intentionally left blank

DRAFT

Appendix C

Site Inspection Checklist and Map

DRAFT

This page intentionally left blank

DRAFT

Inspection Checklist: Durita

Date of This Revision:
Last Annual Inspection:
Inspectors:

Next Annual Inspection (Planned):

No.	Item	Issue	Action
1	Notification	Required regulator notifications	Contact NRC and CDPHE 30 days before inspection.
2	Access	Access to the site is through a vehicle gate off a DOE-owned access road from Montrose County Road GG25.	Check condition of the gate, and confirm it is locked.
3	Specific site surveillance features	See list below.	Inspect and assess need for repairs.
4	Disposal site	Deep-rooted vegetation on leach tanks and closure cell; headcutting erosion at central diversion channel discharge	Check for evidence of settling, erosion, or other modifying processes.
5	Site perimeter	Perimeter fence must be adequate to prevent livestock entry; warning signs and other site surveillance features must be maintained and functional.	Walk the perimeter of the site, and check the surveillance features and for indications of entry, erosion, or other disturbance or maintenance needs.
6	Outlying area	Adjacent BLM property has been used for dumping; private lane adjoins a portion of the DOE property.	Check the area outside the site perimeter (a distance of about 0.25 mile) for erosion, changes in land use, other disturbance, or other features of possible concern.

Checklist of Site-Specific Surveillance Features: Durita

Feature	Comment
Access road	Access is from a gravel road off Montrose County Road GG25
Boundary monuments	Total: 4
Perimeter/entrance Signs	Total: 12 (11 perimeter and 1 entrance sign)
Site marker	1

This page intentionally left blank

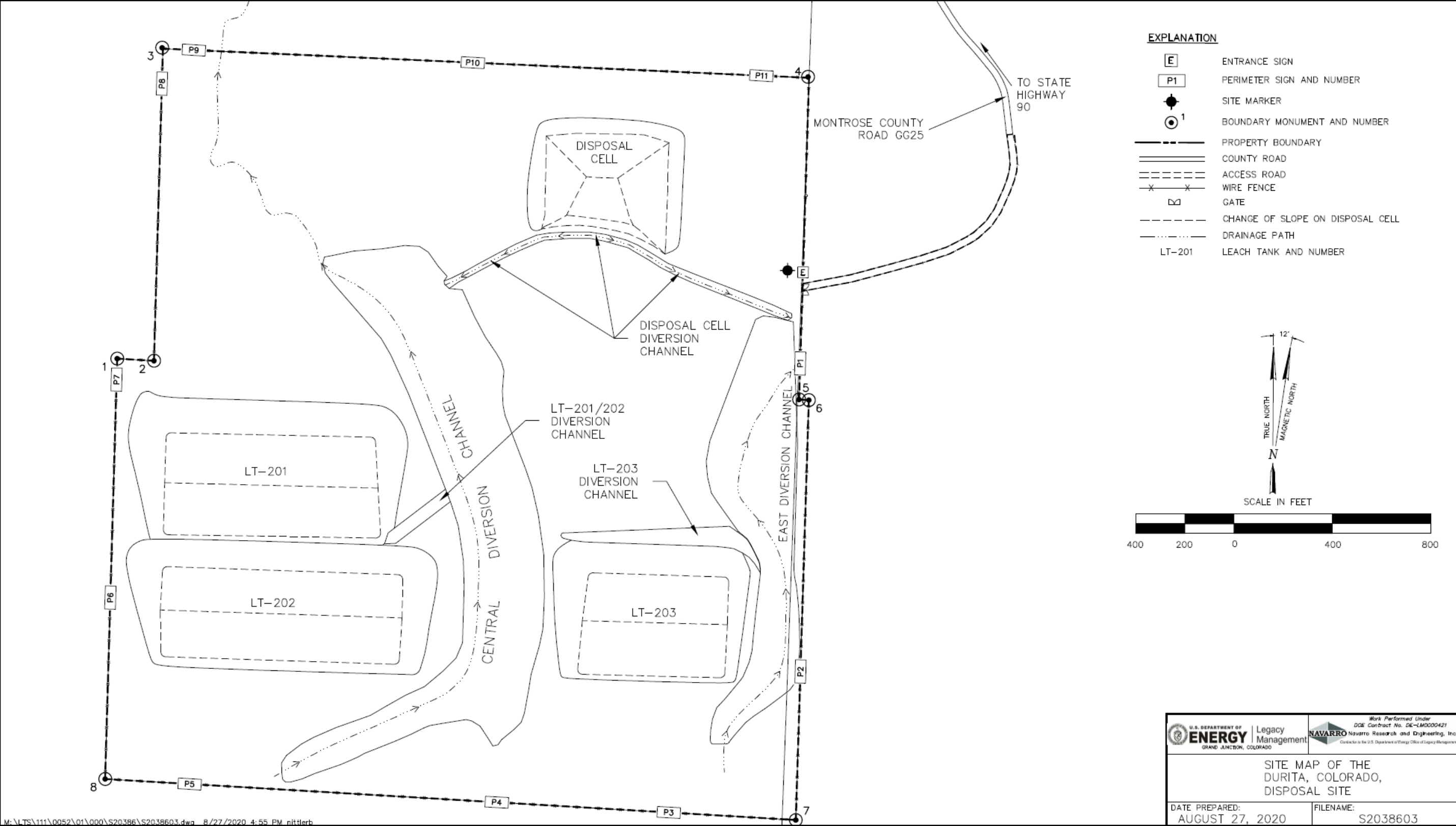


Figure C-1. Site Map of the Durita, Colorado, Disposal Site

This page intentionally left blank