# Horse Canyon Extension
# Lila Canyon Mine

# Chapter 4
## Land Use & Air Quality

## Volume 3 of 7

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# CHAPTER 4

## 400 LAND USE AND AIR QUALITY

**410. Premining and Postmining Land Use:** Pre-mining land use of the Lila Canyon permit area includes grazing, wildlife habitat, coal mining, and limited recreation, such as hunting. Other than grazing no agricultural activities have been or are currently being performed in the permit area. Post-mining land use will not differ from land use as defined prior to the construction of the mine. Post-mining land use will include grazing, wildlife habitat, and recreational activities.

**411. Environmental Description**

**411.100** Pre-mining land use of the Lila Canyon permit area includes grazing, wildlife habitat, coal mining, and limited recreation, such as hunting. Other than grazing no agricultural activities have been or are currently being performed in the permit area.

**411.110** Pre-mining land use of the Lila Canyon permit area includes grazing, wildlife habitat, coal mining, and limited recreation, such as hunting. Other than grazing, limited agricultural activities have been or are currently being performed in the permit area. The mine permit area has not been conducive to agricultural practices due to lacking water sources, the steep, rugged terrain, and poor soil types.

To help minimize confusion a summary of Lila Canyon Permit Extension acreage is listed below:

Total federal coal held by the permittee:
5,544.01 acres. Shown on Table1-1.

Total Permitted surface acres:
5,992.07 acres combination of federal, state and private lands. Shown in Table 4-2, 4-2A and described in Section 116.100.

Surface disturbance area:

42.6 acres discussed is Section 116.100, Section 542.200, Appendix 5-8. Includes areas of undisturbed within the disturbed area.

Top Soil removal / Actual Disturbance:

25.3 Acres discussed in Section 232.100" This is the actual area anticipated to be disturbed for the life of the mine.

The permit area for the Lila Canyon mine is depicted on Plate 4-1. Included in this map are: the boundary of the permit area, the area which will include surface facilities, and the new portals. Existing roads, power lines, and railroads are identified. Private, federal, and state ownership are also identified on this plate. Wildlife habitats have been identified on Plate 3-1 and grazing allotment boundaries are depicted on Plate 4-2.

Table 4-1 lists the various owners of land within and around the permit area. The permit area is approximately 5992.07 acres. Within the permit area, 1446.64 acres comprise private land and 289.06 acres comprise state lands. The remaining 4,256.37 acres is federal land owned and managed by the United States Bureau of Land Management (BLM). Table 4-2 describes the surface ownership and Table 4-2A describes the coal ownership of the permit and surrounding area.

Lila Canyon lies within a region identified by the BLM as the Range Valley Mountain Habitat Management Plan Area ( U-6-WHA-T4). This region was designated as such by a technical committee comprising state, federal, local government agencies and private citizens. This Habitat Management Plan area was established in September 1991 to provide management for the wildlife species of the area, including federally protected wildlife and plant species, big game, upland and small game waterfowl, unique and limited high value wildlife habitat, and access management. Big game and raptor habitat within the Lila Canyon Mine permit area, along with the Range Valley Mountain HMA, have been identified on Plate 3-1.

## Table 4-1

| ENTITY | OWNER | LAND USE |
|---|---|---|
| Federal Government | U.S. Bureau of Land Management | Range Valley Mountain Habitat Management Plan<br>U-6-WHA-T4<br><br>Federal Coal Leases:<br><br>U-0126947<br>U-014217<br>U-014218<br>SL-066145<br>SL-066490<br>SL-069291<br><br>*Federal Grazing Allotments*:<br>Little Park<br>Coon Spring<br>Cove<br>Icelander<br>Range Creek<br><br>*Areas of Wilderness Character*<br>Turtle Canyon WSA |
| State Government | State of Utah | |
| County Government | Emery County* | |
| Private | Josiah and Etta Marie Eardley<br>Intermountain Power Agency<br>Bronco Coal Company<br>College of Eastern Utah<br>Brent Davies*<br>William Marsing Livestock, Inc.* | |

*Close proximity to permit area

**Table 4-2**
**Surface Ownership Permit Area Both Horse Canyon and Lila Canyon**

| Township | Range | Section | State Acres | | Federal Acres | | Private Acres | |
|---|---|---|---|---|---|---|---|---|
| | | | A | B | A | B | A | B |
| 15 S | 14 E | | | | | | | |
| | | 33 | | | | | 60.70 (2) | |
| | | | | | | | 49.90 (4) | |
| | | 34 | | | | | 23.62 (2) | |
| | | | | | | | 25.68 (4) | |
| | | | | | | | 25.20 (3) | |
| 16 S | 14 E | | | | | | | |
| | | 2 | 248.30 | 0.76 | | | | |
| | | 3 | | | 127.03 | | 204.30 (4) | |
| | | 4 | | | | | 189.00 (4) | |
| | | 5 | | | | | 20.00 (1) | |
| | | 8 | | | | | 40.00 (1) | |
| | | 9 | | | | | 120.00 (4) | |
| | | 10 | | | 28.20 | | 30.85 (1) | 76.00 (1) |
| | | 11 | | | 14.78 | 108.86 | 120.19 (2) | 341.20 (2) |
| | | 12 | | 40.00 | | 600.00 | | |
| | | 13 | | | | 640.00 | | |
| | | 14 | | | | 640.00 | | |
| | | 15 | | | | 157.50 | | 120.00 (1) |
| | | 22 | | | | 40.00 | | |
| | | 23 | | | | 560.00 | | |
| | | 24 | | | | 640.00 | | |
| | | 25 | | | | 320.00 | | |
| | | 26 | | | | 80 | | |
| 16 S | 15 E | 19 | | | | 110.00 | | |
| | | 30 | | | | 190.00 | | |
| | | | State Acres | | Federal Acres | | Private Acres | |
| | | | A | B | A | B | A | B |
| SUB TOTAL | | | 248.30 | 40.76 | 170.01 | 4086.36 | 909.44 | 537.20 |
| Total “A” Horse Canyon | | | 1327.75 | | | | | |
| Total “B” Lila Canyon | | | 4664.32 | | | | | |
| | | | | | | | | |
| GRAND TOTAL | | | 5992.07 | | | | | |

**Table 4-2A**
**Coal Ownership Permit Area Both Horse Canyon and Lila Canyon**
**By Lease**

| Township | Range | Section | Federal Lease Number | State Acres | | Federal Acres | | Private Acres | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | A | B | A | B | A | B |
| 15 S | 14 E | | | | | | | | |
| | | 33 | SL-046512 | | | 60.70 | | 49.90 (3) | |
| | | 34 | SL-046512 | | | 23.62 | | 25.68 (3) | |
| | | | | | | | | 25.20 (2) | |
| 16 S | 14 E | | | | | | | | |
| | | 2 | | 248.30 | 0.76 | | | | |
| | | 3 | SL-066145 | | | 221.27 | | 110.06 (4) | |
| | | 4 | | | | | | 189.00 (4) | |
| | | 5 | | | | | | 20.00 (1) | |
| | | 8 | | | | | | 40.00 (1) | |
| | | 9 | | | | | | 120.00 (1) | |
| | | 10 | SL-066145 | | | 59.05 | 76.00 | | |
| | | 11 | SL-066145 | | | 134.97 | 130.06 | | |
| | | | SL-066490 | | | | 320.00 | | |
| | | 12 | SL-066490 | | | | 320.00 | | |
| | | | U-014218 | | | | 320.00 | | |
| | | 13 | U-0126947 | | | | 320.00 | | |
| | | | SL-066490 | | | | 320.00 | | |
| | | 14 | SL-066145 | | | | 160.00 | | |
| | | | SL-066490 | | | | 480.00 | | |
| | | 15 | SL-066490 | | | | 80.00 | | |
| | | | SL-066145 | | | | 120.00 | | |
| | | | BLM (No Coal) | | | | 77.50 | | |
| | | 22 | SL-066490 | | | | 40.00 | | |
| | | 23 | SL-066490 | | | | 560.00 | | |
| | | 24 | SL-066490 | | | | 240.00 | | |
| | | | SL-069291 | | | | 80.00 | | |
| | | | U-0126947 | | | | 320.00 | | |
| | | 25 | SL-069291 | | | | 160.00 | | |

| Table 4-2A Continued<br>Coal Ownership Permit Area Both Horse Canyon and Lila Canyon | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | U-0126947 | | | | 120.00 | | |
| | | | U-014217 | | | | 40.00 | | |
| | | 26 | SL-066490 | | | | 40 | | |
| | | | SL-069291 | | | | 40.00 | | |
| 16 S | 15 E | 19 | U-0126947 | | | | 110.00 | | |
| | | 30 | U-0126947 | | | | 190.00 | | |
| | | | | State Acres | | Federal Acres | | Private Acres | |
| | | | | A | B | A | B | A | B |
| SUB TOTAL | | | | 248.30 | 0.76 | 499.61 | 4663.56 | 579.84 | 0.00 |
| Total "A" Horse Canyon | | | | 1327.75 | | | | | |
| Total "B" Lila Canyon | | | | 4664.32 | | | | | |
| | | | | | | | | | |
| GRAND TOTAL | | | | 5992.07 | | | | | |

Please note:
(1) UEI
(2) Eardley
(3) Bronco Coal Company
(4) CEUF

Federal coal leases relative to the Lila Canyon Mine permit area are depicted on Plate 5-4. There are six federal coal leases comprising the permit area, all of which are assigned to Utah American Energy, Inc. The acreage for each lease is presented on Table 1-1.

Grazing allotments in the Lila Canyon Mine permit area are depicted on Plate 4-2. These grazing allotments have remained unchanged for the past 10 years. The permit area is located primarily within the Little Park Allotment and to a lesser extent within the Cove Allotment. Table 4-3 , along with Plate 4-2, describes the allotments, owners, acreage, and animal unit month (AUM's).

The boundary of the Turtle Canyon Wilderness Study Area (WSA) in relation to the permit area is shown on Plate 4-4.

## Table 4-3 Grazing Allotments

| ALLOTMENT# | ALLOTMENT | OWNER | ACREAGE | AUM's |
|---|---|---|---|---|
| 24031 | Cove | Boyd Marsing | 12,754 | 750 |
| 34029 | Coon Spring | Boyd Marsing | 6,879 | 300 |
| 437039 | Icelander | James Jensen<br>Dix Jensen | 43,897 | 3016 |
| 34066 | Little Park | Edwin Jensen<br>Glen Jensen | 18,473 | 242 |
| 24096 | Range Creek | Waldo Wilcox | 43,900 | 284 |

## 411.120 Land use Description

The Lila Canyon Mine permit area has not and does not support a diversity of land uses due to soil types, topography, and hydrology of the area. The land surface of the permit area consists of rugged, southwest facing cliffs of the Book Cliffs. Many of which are deeply dissected by steep ephemeral drainages. The elevation in the mine permit area ranges from approximately 5,600 feet to 5,800 feet near and around the surface facilities site, to approximately 6,500 feet at the proposed portals location. The elevations along the ridge top predominantly range between 8,800 feet and 9,300 feet. The elevation at the top of Lila Canyon, near the mouth of the creek, is 8,530 feet. Large boulders and sandstone slabs clutter the sides and bottoms of cliff areas, as a result of cliff weathering. The base of the Book Cliffs consists of Mancos Shale Lowlands, of numerous southwesterly oriented ridges and drainages.

Three noteworthy drainages lie within and around the permit area. Grassy Wash originates in the area between Horse Canyon and Lila Canyon and flows southwest and south toward the Price River. The transportation and utility corridor will depart from Highway 191, Route 6 at the northeast corner of Section 1, Township 17S Range 13E and progress in the northeast direction to the mine permit area. The new road will cross the Grassy Wash drainage near the southwest corner of section 29, Township 16S Range 14E. The Marsh Flat drainage originates within close proximity of the mine permit area at Township 16S Range 14E Section 35. This drainage flows in the southwest direction toward the Price River. The Little Park Wash bisects the permit area in the north-south direction. This drainage enters the north bound of the permit area at an approximate elevation of 7,600 feet and leaves the southern bound of the permit area at an elevation of 6,200 feet. This drainage essentially parallels the western edge of the Book Cliffs and flows throughout the permit area at elevations of above 6,400 feet. Little Park Wash eventually drains into the Price River about eight miles down gradient of the southern bound of the mine permit area.

Water uses within the mine permit area are limited to stock watering, mining, and domestic uses at mine sites. Sources for water within and around the Mine Permit area include various springs, ephemeral washes, Little Park Wash, Horse Canyon Creek, and one underground water well historically used for sprinkling purposes for operation and maintenance of the mine. A water rights search was conducted for the mine permit area and is included within Table 7-2.

Due to topography, limited available water resources, soil types, limited access, and remote location, it is evident that the land within the mine permit area historically has not been capable of supporting a diversity of uses. The greatest variety of compatible uses for this land is a combination of recreation, wildlife habitat, grazing, and coal mining.

**411.130** According to Bryant Anderson, administrator of Emery County Planning and Zoning (Anderson, 1998), all land within the Mine Reclamation Permit area is zoned M&G-1 for mining and grazing. Grazing is the most pervasive existing use of the land in the Lila Canyon area.

The BLM is the land manager for most of the area within the permit. The permit area consists of 5,992.07 acres of which the BLM manages 4256.37 of the acres. Within the permit area there are 1446.64 privately owned acres and 289.06 State owned acres. Refer to Plate 4-1 for ownership boundaries.

The Turtle Canyon Wilderness Study Area (WSA) overlaps a small portion of the permit area. No surface facilities or associated impacts will occur within the WSA.

**411.140.** Cultural and historical resources investigations have been performed in the vicinity of the permit area in the past. Significant studies include “An Archaeological/Historical Inventory of Kaiser Steel corporation Horse Canyon Mine Lease, East Carbon

County, Utah". This report was written in March 1986 by Don Southworth and Asa S. Nielson for the Mining and Reclamation Plan submitted to the Division by Intermountain Power Agency. A cultural Resource Inventory of the Kaiser Steel Corporation South Lease Mine Property and a Test Excavation (42EM1343 in Emery County, East Central Utah conducted by Rebecca Rauch (1981). These and additional survey reports of the area are included in Appendix 4-1.

Detailed archeological ground surveys were conducted at the Lila Canyon mine site and associated disturbed area, by Montgomery Archaeological personnel. This survey was conducted in 1998 and 1999 and is included within Appendix 4-1.

Within the Horse and Lila Canyon Permit areas and the nearby Southern portion of the Kaiser Steel Corporation South Lease mine property, there are five known historic resources that are either on or eligible for listing on the National register. There is one listed site (42EM1222) 2.5 miles from the facility area. One eligible site (42EM1343) has been recovered and another (42EM2517) will be recovered prior to construction. The other two eligible sites (42EM2255 and 42EM2256) are not expected to be impacted by operations.

**411.141.** Historic resources are depicted on Plate 4-3.

**411.141.1** The locations of listed or eligible cultural and historical resources in the area are discussed in Appendix 4-1 and shown on Plate 4-3.

There are no publicly owned parks.

**411.141.2** No cemeteries are located in or within 100 feet of the proposed permit area.

**411.141.3.** No land within the proposed permit area is within the boundaries of any units of the National System of Trails or the Wild and Scenic Rivers System.

**411.142.** Consultation efforts for cultural and historical resources

are in process. Final concurrence from the SHPO will be included in this MRP prior to permit approval.

UEI will also include measures to prevent or minimize adverse impacts to listed sites within the permit area, if sites are discovered during the consultation process.

**411.143.** The Operator has provided archeology survey reports. Two of these surveys included intensive survey and analysis of areas that would be directly impacted by the Lila Canyon mining operations.

Two other surveys include spot surveys and analysis of areas that are expected to have a low probability of indirect mining impacts to the surface.

**411.144** Of the nineteen cultural and historical sites identified in the area, only one, 42EM1222, is listed on the National Register of Historic Places. This site is approximately 2.5 miles from the Lila Canyon surface facility and therefore, impacts are not expected to occur at this site.

BLM will develop a recovery plan for 42EM2517 that will occur after mine plan approval and before construction.

**411.200.** Previous mining and exploration activities have occurred within the proposed permit area within the last twenty years. In the mid-1950's, the road along the bottom of Lila Canyon was constructed to allow exploration of the resources. The road intersects the Horse Canyon Highway approximately 1.4 miles to the north and loops back to the south to intersect Highway 191 and 6 to the south (see Plate 4-1). Two sealed breakouts (Plate II-2 of Horse Canyon Plan) are located in the left fork of Lila Canyon where the Lila Canyon fan was installed in the 1950's. The Lila Canyon fan was used until the closure of Horse Canyon post 1977, and therefore, the current Coal Regulatory Program has jurisdiction over this disturbance and it is included in the permit area.

**411.210.** Coal was removed from the outcrop of Horse Canyon and transported back through the Horse Canyon Mine.

Excavation indicates only a small amount of coal was previously removed.

**411.220.** In the past, coal was removed from the Sunnyside Seam.

**411.220.** Because the old portal has been sealed, it is difficult to ascertain the total amount of coal which had been removed.

**411.240.** The exact date of the coal outcrop excavations is unknown. It is believed that coal was removed during the late 1950's or early 1960's.

**411.250.** The land use prior to outcrop excavation was the same as currently exists within the area. Wildlife habitat, grazing, and coal exploration was previously and is currently the predominant land use in the area.

## 412. Reclamation Plan

**412.100.** Post mining land use will be the same as currently exists today, that being: wildlife habitat, grazing, and limited recreational activities.

**412.110.** After all mining activity has been completed and the disturbed area regraded and reseeded, the site will enter a post reclamation phase. During the first ten years, the site will be monitored for vegetative success and erosion control. The reclaimed, revegetated area may be fenced to discourage livestock grazing until final reclamation has been achieved and the reclamation bond released.

Support activities to achieve the post-mining land use plan included: site monitoring, remedial actions including regrading, reseeding, remulching and replanting; and fencing as necessary to restrict access and grazing on the site until the reclamation bond has been released.

**412.120.** After the reclamation bond has been released, the property will be returned to the care of the surface land

owners, which, for the most part, is the BLM. Management of the site will be according to the BLM's current range management plan for the region existing at that time.

**412.130.** Since premining land use is the same as postmining land use this section is not applicable.

**412.140.** This post-mining program is in accordance with the Emery County and BLM management framework plans. See Correspondence with Emery County Zoning Administrator, Bryant Anderson, and the BLM, regarding the zoning of lands within the Lila Canyon Extension included within Appendix 4-2. A Large Scale Industrial Site Plan was required by the county for any significant mining or industrial operations. A copy of the approval for the Large Scale Industrial Site Plan can be found in Appendix 4-2.

Based on the desire expressed by the BLM and/or Emery County, at the time of reclamation of the mine site, mine personnel would agree to work with the BLM and/or Emery County to achieve future land use objectives.

**412.200.** A Large Site Plan Approval has been filed with Emery County regarding the plans to mine coal in the Lila Canyon area. The approval process and a copy of this application are included in Appendix 4-2. A copy of the BLM post mine land use determination can be found in Appendix 4-2.

**412.300.** The mine operator does not propose to leave fills containing excess spoil.

## 413. Performance Standards

**413.100** All disturbed areas will be restored to the conditions equal to or better than existed prior to disturbance.

**413.200** Wildlife habitat and grazing will resume following reclamation activities of the mine site. No alternative

postmining land uses, nor higher or better uses are being proposed.

**413.300.** No alternative post-mining land use is being proposed at this time.

**414.** Premining Land use: It is the operations intent to return the mine properties to its pre-mine use. The reclamation practices to be implemented as outlined in chapter five have a proven record of success.

**420. Air Quality.**

**421.** Compliance with the Clean Air Act: Mining and reclamation operations will be conducted in compliance with the requirements of the Clean Air Act and other applicable state, federal statues.

**422.** Compliance Efforts: Appendix 4-3 contains the "Intent to Approve" and the actual "Approval Order" for the air quality permit obtained from the Utah Bureau of Air Quality. The initial air quality permit is for 1.5 million tons. Revisions to the air quality permit will be made to accommodate future increases in production.

**423.** Since Lila Canyon Mine is an underground operation this section is not applicable.

**423.100** Since Lila Canyon Mine is an underground operation this section is not applicable.

**423.200** Since Lila Canyon Mine is an underground operation this section is not applicable.

**424.** Since Lila Canyon Mine is an underground operation this section is not applicable.

**425.** Since Lila Canyon Mine is an underground operation this section is not applicable.

# REFERENCES

Stephens, Don, U.S. Bureau of Land Management, Federal Coal Leases Map, 1990.

Division of Water Rights, PLAT program

Emery County Recorder's Office