

COPY

C/041/002 Incoming

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Sufco Mine
597 South SR24
Salina, Utah 84654
(435) 286-4880
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July 14, 2010

Permit Supervisor
Utah Coal Regulatory Program
Utah Division of Oil, Gas and Mining
1594 West North Temple, Suite 1210
P. O. Box 145801
Salt Lake City, Utah 84114-5801

Re: Final Midterm Review Amendment to the Canyon Fuel Company, LLC, Sufco Mine, Permit
Number C/041/0002

Dear Permit Supervisor:

The enclosed eight complete clean copies of the Final Midterm Review Amendment are being
submitted per the Division request. Attached are DOGM forms C-1 and C-2 and appropriate pages.

If you have any questions or need additional information, please contact Mike Davis at (435) 286-
4421.

Sincerely,
CANYON FUEL COMPANY, LLC
SUFSCO Mine



Kenneth E. May
General Manager

Encl.

KEM/MLD:kb

cc: DOGM Correspondence File

sufpub\govt2009\dogm\mrp\MRP midterm review Final ltr 7-14-2010.doc

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See: Incoming For additional information

Sufco Mine

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JUL 21 2010

DIV. OF OIL, GAS & MINING

APPLICATION FOR COAL PERMIT PROCESSING

COPY

Permit Change New Permit Renewal Exploration Bond Release Transfer

Permittee: CANYON FUEL COMPANY, LLC

Mine: SUFCO MINE

Permit Number: C/041/0002

Title: MRP Mid-term Review Follow-up Response

Description, Include reason for application and timing required to implement:

Mid-term review responses

Instructions: If you answer yes to any of the first eight (gray) questions, this application may require Public Notice publication.

- Yes No 1. Change in the size of the Permit Area? Acres: _____ Disturbed Area: _____ increase decrease.
- Yes No 2. Is the application submitted as a result of a Division Order? DO# _____
- Yes No 3. Does the application include operations outside a previously identified Cumulative Hydrologic Impact Area?
- Yes No 4. Does the application include operations in hydrologic basins other than as currently approved?
- Yes No 5. Does the application result from cancellation, reduction or increase of insurance or reclamation bond?
- Yes No 6. Does the application require or include public notice publication?
- Yes No 7. Does the application require or include ownership, control, right-of-entry, or compliance information?
- Yes No 8. Is proposed activity within 100 feet of a public road or cemetery or 300 feet of an occupied dwelling?
- Yes No 9. Is the application submitted as a result of a Violation? NOV # _____
- Yes No 10. Is the application submitted as a result of other laws or regulations or policies?
Explain: _____
- Yes No 11. Does the application affect the surface landowner or change the post mining land use?
- Yes No 12. Does the application require or include underground design or mine sequence and timing? (Modification of R2P2)
- Yes No 13. Does the application require or include collection and reporting of any baseline information?
- Yes No 14. Could the application have any effect on wildlife or vegetation outside the current disturbed area?
- Yes No 15. Does the application require or include soil removal, storage or placement?
- Yes No 16. Does the application require or include vegetation monitoring, removal or revegetation activities?
- Yes No 17. Does the application require or include construction, modification, or removal of surface facilities?
- Yes No 18. Does the application require or include water monitoring, sediment or drainage control measures?
- Yes No 19. Does the application require or include certified designs, maps or calculation?
- Yes No 20. Does the application require or include subsidence control or monitoring?
- Yes No 21. Have reclamation costs for bonding been provided?
- Yes No 22. Does the application involve a perennial stream, a stream buffer zone or discharges to a stream?
- Yes No 23. Does the application affect permits issued by other agencies or permits issued to other entities?

Please attach four (4) review copies of the application. If the mine is on or adjacent to Forest Service land please submit five (5) copies, thank you. (These numbers include a copy for the Price Field Office)

I hereby certify that I am a responsible official of the applicant and that the information contained in this application is true and correct to the best of my information and belief in all respects with the laws of Utah in reference to commitments, undertakings, and obligations, herein.

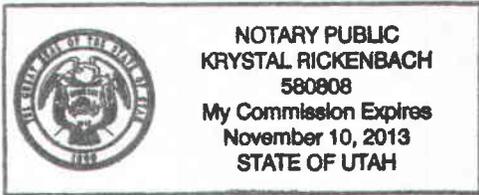
_____ KENNETH E. MAY, MINE MANAGER
Print Name

Kenneth E. May 7/19/10
Sign Name, Position, Date

Subscribed and sworn to before me this 19 day of July, 20 10

Krystal Rickenbach
Notary Public

My commission Expires: _____, 20____ }
Attest: State of _____ } ss:
County of _____ }



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The regrading plan for all mine openings is presented in Section 5.4.2.7 of this M&RP.

The regrading plan for the 4E Fan facility area will be to reclaim it for its entire length. The pre-existing slopes for the 4E Fan facility area will be restored to the extent possible and in accordance with Approximate Original Contour regulations using all the fill material stored in the pad area. The slopes will be constructed using equipment small enough to be transported through the mine such as backhoes and dozers to move the soil. The surface of the replaced soil will be prepared for reseeding as specified in Section 2.4.2 of this M&RP. Soil compaction will be avoided as much as possible through limiting the number of equipment passes over a given area. The area will be reseeded in accordance with the methods described in Section 3.40 of the permit. Since the reclaimed acreage will be the same as the pad disturbed area, erosion controls for final reclamation will be placed in essentially the same location as shown on Plate 5-2C. The reclamation soil surface and vegetation will be monitored and maintained in accordance with this M&RP.

The regrading plan for the Link Canyon Portal and Link Canyon Substation No. 1 and No. 2 facility areas will be to reclaim them for their entire length. The pre-existing slopes for the Link Canyon Portal and Link Canyon Substation No. 1 and No. 2 facility areas will be restored to the extent possible and in accordance with Approximate Original Contour regulations using all the fill material stored in the three respective pad areas. The power cable and communication boreholes at Link Canyon Substation No. 2 will be capped, sealed, and plugged with concrete as described in section 7.6.5 of this M&RP. The marker flagging as described in Section 2.3.1.1 separating the original, undisturbed topsoil surface beneath the stockpiled topsoil will need to be located and used as a guide when removing the side cast materials stored on the outslope. The slopes will be constructed using equipment such as trackhoes and dozers to move the soil. Topsoil from the Link Canyon Portal topsoil storage pile, the Link Canyon Substation No. 1 outslope topsoil storage area and the Link Canyon Substation No. 2 topsoil storage pile will be redistributed over the newly restored slope as indicated in Section 2.4.2. The surface of the replaced soil and the original, undisturbed topsoil surface beneath the stockpiled topsoil will be prepared for reseeding as specified in Section 2.4.2 of this M&RP. Soil compaction will be avoided as much as possible through limiting the number of equipment passes over a given area. The area will be reseeded in accordance with the methods

described in Section 3.40 of the permit. Since the reclaimed acreage will be the same as the pad disturbed area, erosion controls for final reclamation will be placed in essentially the same location as shown on Plates 5-2D, 5-2E, and 5-2F. The reclaimed pads, access roads, and affected slopes will be fenced with a three-strand barbwire fence to prevent damage from cattle grazing during reclamation. The reclamation soil surface and vegetation will be monitored and maintained in accordance with this M&RP.

The regrading plan for the East Spring Canyon facility is summarized below. Engineering calculations and design details associated with this regrading plan are presented in Appendix 2-4. The East Spring Canyon regrading plan was designed to meet the objectives of balancing cut and fill quantities, maintaining a geotechnically stable surface configuration, and controlling erosion. Major features of the East Spring Canyon regrading plan are:

- o Reduction of the slope at the southern end of the mine-yard fill,
- o Removal of the sedimentation pond dams and implementation of interim sediment-control measures,
- o Backfilling to remove highwalls and cut slopes to the extent possible within the objectives noted above (cut and fill balance, site stability, and erosion control),
- o Construction of an armored embankment at the inlet of the main reclamation channel, and
- o Construction of reclamation diversion channels.

The estimated cut quantity for East Spring Canyon is approximately 74,734 cubic yards with an estimated fill of 71,173 cubic yards (see Appendix 2-4). The difference between these two quantities is anticipated to be balanced by compaction. Regrading activities will continue until the final surface configuration defined by Plates 5-3A&B and 5-4 has been achieved. Details regarding topsoil placement and revegetation following regrading are provided in Chapters 2 and 3, respectively.

Building and Utility Demolition. Prior to significant regrading activities at the East Spring Canyon facility, existing buildings, walls, utilities, coal-handling facilities, and other above-ground structures will be removed from the area. To the extent possible, these structures and facilities will be salvaged.

Those materials requiring off-site disposal will be placed in a licensed landfill. Final decisions regarding salvage or disposal of structures and equipment will be made just prior to reclamation following an assessment of the salvageability of the structures and equipment. If foundations and buried utilities will not interfere with regrading activities, they will be left in place for on-site burial. The water and sewer lines were installed and buried prior to Aug. 3, 1977 under a Special Use Permit with the Forest Service and will be left in place upon completion of mining activities.

Southern Slope Regrading. The present slope at the southern end of the mine yard will be cut from its existing continuous slope of approximately 1.4H:1V to a slope of 2.5H:1V in the center of the slope. The regraded slope will taper along the east and west sides of the slope to blend with the natural slopes. The recontoured slope will have 10-foot wide benches on 80-foot vertical centers to collect slope runoff and minimize the potential for erosion.

Proposed post-reclamation contours of the East Spring Canyon site are presented in Plate 5-3A&B. Analyses presented in Appendix 2-4 indicate that the fill under this configuration will have a minimum static safety factor against failure of 1.51.

Backhoes, loaders, dozers, and other appropriate earthmoving equipment will be used to regrade the southern slope. Material removed from the southern slope will be backfilled as described below to reduce cut slopes in the mine yard and achieve the final surface configuration presented on Plate 5-3A&B.

Primary Sedimentation Pond, Overflow Pond and Dam Removal and Interim Sediment Control. The existing primary sedimentation pond at the base of the mine-yard fill slope will be removed to allow construction of the main reclamation stream channel. All of the fill material from the pond and the dam west of the reclamation channel will be removed. This material will be used as fill in the mine-yard area as needed to reduce final slope grades. The pond and dam fill material east of the reclamation channel will be cut back to a 2H:1V slope above the rock channel. The regrading plan for the overflow pond will be to reclaim the area for its entire length. The pre-existing slopes and channel for the overflow pond area will be restored to the extent possible and in accordance with

Approximate Original Contour regulations using all the fill material stored in the dam. Topsoil from the overflow pond topsoil storage pile will be redistributed over the newly restored slopes. Removal of the primary sedimentation pond, overflow pond and dam will be accomplished using backhoes, loaders, dozers, and other appropriate earthmoving equipment.

Immediately following removal of the sedimentation pond and dam, silt fences will be installed for interim sediment control at the locations noted on Plate 5-3A&B to control erosion prior to revegetation success. Immediately following removal of the overflow pond and dam, silt fences will be installed for interim sediment control at locations below the area to control erosion prior to revegetation success. These silt fences will be installed as noted in Figure 5-3. In addition to silt fences, straw-bale dikes may be installed on a temporary basis as necessary to control localized erosion prior to the establishment of revegetation efforts. If installed, locations of the straw-bale dikes will be selected to reduce sediment contributions to runoff based on field observations. Straw-bale dikes will be installed as noted in Figure 5-3.

Backfilling and Compaction. All vegetation, organic matter, and debris will be cleared from areas to receive fill. The cut material from site regrading, sedimentation pond removal, and channel excavation will be placed as fill and graded to facilitate drainage from the mine site and contributing side areas. All fill placed during recontouring of the site will be compacted to at least 85 percent of maximum Proctor density (ASTM D698). Compaction will be accomplished using repeated passes of rubber-tired equipment, rollers, and other appropriate equipment.

Side hill embankments, where the width (including bench cuts) is too narrow to allow access

by compaction equipment, will be initially constructed by end dumping, but only to a width necessary to allow compaction equipment access. After this is achieved, the fill will be placed in lifts and compacted to at least 85 percent of maximum Proctor density. Lifts will be placed with a thickness when compacted of no more than 8 inches. Care will be taken to ensure that fill materials are not frozen during placement or compaction. Any areas that are damaged by freezing will be reconditioned, reshaped, and recompacted to at least 85 percent of maximum Proctor density. All fill placement and compaction activities will be overseen by an experienced engineer.

Construction of Main Channel Inlet. The main reclamation channel to be constructed at the site will convey water from East Spring Canyon and Mud Spring Hollow above the mine to East Spring Canyon below the mine. The proposed location of this channel is shown on Plate 5-3A&B. Details regarding channel design are provided in Appendix 2-4.

Deposition of naturally-occurring sediment will occur where East Spring Canyon and Mud Spring Hollow enter the main reclamation channel due to abrupt changes in channel gradient (12 to 17 percent in the natural channels and 2 to 10 percent in the reclamation channel). Therefore, the inlet section for the reclamation channel was designed to provide for sediment accumulation. This inlet will also direct flows from the two undisturbed canyons to the reclamation channel.

The sedimentation area of the inlet section will be constructed by excavating all fill from the section down to undisturbed native materials. The minimum depth of excavation will be 7 feet even if this excavation must occur in bedrock. The excavated bank of the inlet section will be reinforced with riprap where this bank occurs on fill. No reinforcing will be used where the excavated bank occurs in bedrock. The reinforced bank will be keyed into bedrock to prevent underflow via piping. Bank reinforcing will consist of riprap underlain by filter fabric as detailed in Appendix 2-4.

During excavation of the inlet section, the existing bypass culverts for East Spring Canyon and Mud Spring Hollow will be removed.

Construction of Reclamation Channels. Reclamation channels will be constructed at the locations shown on Plate 5-3A&B. The main reclamation channel will be constructed along the east side of the existing fill into bedrock. East and west collector channels will be constructed to capture runoff from undisturbed areas and convey this runoff to the main channel. Intercept channels will also be placed on the southern slope following regrading to minimize erosion of the slope. Details regarding the design and construction of these channels are provided in Appendix 2-4. A summary of the reclamation channel design parameters is presented in Table 5-5.

The main reclamation channel downstream from the inlet will consist of trapezoidal sections cut into bedrock. Bottom widths on these sections will range from 10 to 17.5 feet, with side slopes varying from 1H:1V to 0.75H:1V. The narrower width and steeper side slope will occur where the bottom gradient of the channel is steepest.

All existing fill will be removed from the alignment of the main reclamation channel to ensure that the channel bottoms in bedrock. During this excavation, sections of the channel may be cut deeper than is desirable to maintain the necessary gradient (see Table 5-5). In such areas, coarse rock from the channel excavation will be used to fill undesirable depressions. This rock fill will then be covered with 12 inches of grout meeting the specifications described in Section 5.4.8 of Appendix 2-4.

The main reclamation channel will discharge into the existing stilling basin downstream from the sedimentation pond. No modification of the existing stream channel will occur downstream from the stilling basin.

The west collector channel will be excavated primarily into bedrock at the western edge of the existing mine site. This channel will collect runoff from undisturbed areas west of the site and convey this runoff across the site to the stilling basin downstream from the existing

TABLE 5-5
 Reclamation Channel Design Summary

Reach	Bottom Slope (ft/ft)	Side Slope (H:V)	Bottom Width (ft)	Bank Height (ft)	Design Velocity (ft/s)	Design Flow Depth (ft)
Main Channel						
1	Varies	Varies	Varies	7.0	Varies	Varies
2	0.100	1:1	17.5	6.0	22.67	2.73
3	0.065	1:1	17.5	6.0	19.59	3.10
4	0.020	1:1	17.5	7.5	13.06	4.38
5	0.571	0.75:1	10.0	5.5	46.14	2.31
6	0.546	0.75:1	10.0	5.5	45.41	2.34
7	0.356	1:1	17.5	5.5	34.58	1.87
8	0.151	1:1	17.5	5.5	26.01	2.41
West Collector Channel						
A-1	0.020	1:1	2.0	2.0	3.27	0.59
A-2	0.020	1:1	2.0	2.0	4.07	0.85
A-3	0.018	1:1	3.0	3.0	4.62	1.07
A-4	0.015	1:1	3.0	3.0	4.61	1.27
A-5	0.501	1:1	2.0	3.0	16.39	0.52
East Collector Channel						
B-1	0.010	1:1	2.0	2.0	2.60	0.71
B-2	0.060	1:1	2.0	2.0	4.87	0.42
B-3	0.270	1:1	3.0	3.0	10.67	0.41
B-4	0.125	1:1	2.0	2.0	6.23	0.34
B-5	0.526	1:1	2.0	3.0	12.69	0.34

sedimentation pond. The channel will consist of trapezoidal sections with bottom widths and depths of 2 to 3 feet. The downstream portion of this channel will be constructed in bedrock where it flows down the slope to the main reclamation channel.

The northern portion of the west collector channel will cross fill. At this location, a triangular channel will be constructed, consisting of riprap underlain by filter fabric. Riprap specifications and other details regarding the design and construction of the west collector channel are provided in Appendix 2-4.

A tributary of the west collector channel will be constructed along the top of the regraded southern slope. This tributary will preclude runoff from flowing down the slope, thereby also precluding excessive erosion of the slope. The tributary will be triangular in shape and constructed of riprap overlying filter fabric as noted in Appendix 2-4.

The east collector channel will be cut into bedrock at the head of the existing cut slope along the east side of the mine site. This channel will have two outlets, conveying runoff from undisturbed areas to the main reclamation channel and to the stilling basin downstream from the sedimentation pond. The channel will consist of trapezoidal sections with bottom widths and depths of 2 to 3 feet. Details regarding the design and construction of the east collector channel are provided in Appendix 2-4. The downstream portion of this channel will be constructed in bedrock where it flows down the slope to the main reclamation channel.

Two intercept channels will be constructed on the regraded southern slope. The purpose of these channels will be to reduce the effective slope length, thus minimizing the potential for erosion of the slope. The channels will be constructed on benches that are placed to divide the slope into thirds (see Plate 5-3A&B). The intercept channels will be triangular and lined with riprap and filter fabric. They will discharge to the main reclamation channel. Details regarding the design and construction of the intercept channels are provided in Appendix 2-4.

5.4.2.3 Final Surface Configuration Maps and Cross Sections

Final surface configuration maps and cross sections for the East Spring Canyon site are provided on Plates 5-3A&B and 5-4, respectively. The primary access road to the mine yard will be removed at the permit boundary. Existing public access roads within the permit area will remain following reclamation. No facilities related to the coal mining operations will remain in the permit area following reclamation. Information regarding the final surface configuration of the waste-rock disposal site is provided in Volume 3. Final surface configuration maps and cross sections for the 4E Fan facility, Link Canyon Substation facility and all out-by mine portals are provided on Plates 5-2C, 5-2D, 5-2E and 5-2F, respectively.

5.4.2.4 Removal of Temporary Structures

All surface structures associated with the mining operation will be removed as outlined in Section 5.4.2.2. A description ensuring that all structures and sedimentation ponds have been removed will be provided to the UDOGM before seeking bond release or abandoning the permit area.

5.4.2.5 Removal of Sedimentation Ponds

Information regarding removal of primary sedimentation ponds and overflow pond associated with the SUFCA Mine is provided in Section 5.4.2.2 for the East Spring Canyon facility and in Volume 3 of this M&RP for the waste rock disposal site. The timetable for removal of the minesite ponds is indicated in Figure 5-2.

5.4.2.6 Roads

The primary mine access road will be reclaimed beginning at the guard shack at the entry to the mine yard. This road will be regraded by removing any remaining asphalt, removing fill from beneath the road to the natural ground surface, and placing the fill against the adjacent cut slope. Placement and compaction of the backfill material will be as indicated in Section 5.2.4.2.

Proposed reclamation contours following closure of the mine access road are presented in Plate 5-3A&B. The roadside culvert referred to as Pipe No. 5 (see Chapter 7) that exists immediately south of the guard shack will be retained for runoff control along the unreclaimed portion of the road.

Recontouring of the road surface near the guard shack will result in closure of the road to traffic. In addition, "Dead End" signs that meet UDOT specifications will be placed in the center of the access road where regrading begins and on the access road in Sec. 11, T. 22 S., R. 4 E., where the Convulsion Canyon road departs from the access road to the mine.

The sedimentation pond access road will be reclaimed for its entire length. This road will be regraded by removing fill from beneath the road to the natural ground surface and placing the fill against the adjacent cut slope. Placement and compaction of the backfill material will be as indicated in Section 5.2.4.2. Proposed reclamation contours following closure of the sedimentation pond access road are presented in Plate 5-3A&B. This road will be closed to traffic following reclamation by virtue of its non-existence.

The Link Canyon Portal and Link Canyon Substation No. 1 and No. 2 access roads will be reclaimed for their entire length the same way as the Link Canyon Portal and Link Canyon Substation No. 1 and No. 2 facility areas as described in Section 5.4.2.2 of this M&RP. Original contours of the Link Canyon Portal access road are presented on Plate 5-2F. Original contours of the Link Canyon Substation No. 1 and No. 2 access roads are presented on Plates 5-2D and 5-2E. These roads will be closed to traffic following reclamation by virtue of their non-existence.

Following regrading of the roads, topsoil will be applied to the regraded surfaces and the area will be revegetated. Topsoiling and revegetation activities are discussed in Chapters 2 and 3, respectively.

5.4.2.7 Final Abandonment of Mine Openings and Disposal Areas

Abandonment of Openings. All mine openings will be sealed at least 25 feet inside the mine opening. Prior to installation of the seal, all loose material will be removed from the roof, floor, and rib of the mine within three feet of the seal area. The seal will then be constructed using solid concrete blocks (average minimum compressive strength of 1,800 psi) with nominal dimensions of 6 inches high, 8 inches wide, and 16 inches long. Mortar will consist of one part cement, three parts sand, and no more than seven gallons of water per sack of cement.

The seal will be recessed at least 16 inches deep into each rib and 12 inches deep into the floor. No recess will be made into the roof. In the bottom course, each block will be laid with its long axis parallel to the rib. The long axis in succeeding higher courses will be perpendicular to the long axis of the blocks in the preceding course. An interlaced pilaster will be constructed in the center.

The seals will have a thickness of approximately 16 inches. Following seal construction, the entries will be backfilled from the seal to the outside surface with soil that is sloped at the surface to match the final slope at the entry. Due to the location of some entries that do not have surface access, such as the 4E Fan facility, the entries will be backfilled from inside the mine before the seal construction. Due to safety reasons, some entries that are completely cribbed off due to bad roof conditions, such as the 3E Portals and Quitcupah Portals, will need to be backfilled with the use of explosives to blast the cribs and roof rock down to fill the entry before the seal construction. The surface soil will then be raked and revegetated with the approved seed mixture.

Alternatively, a cast in place MSHA approved seal will be installed with a minimum thickness of 3 feet and with a minimum compressive strength of 200 psi.

Disposal of Excess Spoil. No excess spoil is generated in the permit area.

Disposal of Coal Mine Waste. All coal mine waste generated at the SUFCA Mine is disposed of at the waste-rock disposal site. Information regarding disposal practices and reclamation plans for this facility is provided in Volume 3.

Disposal of Non-Coal Mine Wastes. All non-coal (non-waste rock) waste generated from mining and reclamation operations is disposed of as outlined in Sections 5.2.1.1 and 5.2.8.3. Following cessation of mining activities, non-coal mine waste that is still temporarily stored at the site will be removed and disposed of in the Sevier County Landfill. Non-coal waste that is generated during the course of reclamation (i.e., as a result of building demolition) will likewise be disposed of at an off-site location (either the Sevier County Landfill or an alternative state-approved solid-waste disposal area).

5.4.2.8 Estimated Cost of Reclamation

The estimated cost to reclaim the SUFCO Mine surface facilities is provided in Appendix 5-9.