

0038

Canyon Fuel Company, LLC
Dugout Canyon Mine
P.O. Box 1029
Wellington, Utah 84542



*FINAL
C/007/039*

April 21, 2005

Ms. Pamela Grubaugh-Littig
Utah Division of Oil, Gas and Mining
1594 West North Temple, Suite 1210
Salt Lake City, UT 84114-5801

RE: Pace Canyon Fan Portal Amendment, Task #2104 – Soils Text Revisions, Etc.
Dugout Canyon Mine, Canyon Fuel Company, LLC, C/007/039, Carbon County, Utah

Dear Ms. Grubaugh-Littig:

Attached please find four copies of revisions as requested by Priscilla Burton and Dave Darby. These revisions include topsoil volumes to be salvaged and stored, clarification of reclamation treatments on Plate PC5-6 and geomorphology study details.

We appreciate your commitment to complete this review as quickly as possible. Please do not hesitate to contact us with concerns as they arise in your review process. We are committed to address your concerns as they arise, thus the information provided in this submittal. A copy of this submittal has been delivered to the Price field office.

Thank you for your assistance and if you have any questions please call me at (435) 636-2869.

Sincerely yours,

Vicky S. Miller

cc: Dave Spillman
Pete Hess

RECEIVED

APR 21 2005

DIV. OF OIL, GAS & MINING

APPLICATION FOR COAL PERMIT PROCESSING

Permit Change New Permit Renewal Exploration Bond Release Transfer

Permittee: Canyon Fuel Company, LLC

Mine: Dugout Canyon Mine

Permit Number: C/007/039

Title: Pace Canyon Fan Portal - Task ID #2104, TA Response - Soils Text - Chapter 2, Reclamation Plate, Etc.

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

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: 2.7 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)

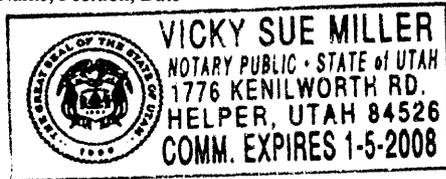
I hereby certify that I am a responsible official of the applicant and that the information contained in this application is true and correct to the best of my information and belief in all respects with the laws of Utah in reference to commitments, undertakings, and obligations, herein.

Ericomi Soss
Print Name

Vicky Sue Miller General Manager 4/20/05
Sign Name, Position, Date

Subscribed and sworn to before me this 20 day of APRIL, 2005

Vicky Sue Miller
Notary Public
My commission Expires: 1-5, 2008
Attest: State of UTAH } ss:
County of CARBON



<p>For Office Use Only:</p>	<p>Assigned Tracking Number:</p>	<p>Received by Oil, Gas & Mining</p> <p style="text-align: center; font-size: 1.2em; font-weight: bold;">RECEIVED</p> <p style="text-align: center; font-size: 1.2em; font-weight: bold;">APR 21 2005</p> <p style="text-align: center;">DIV. OF OIL, GAS & MINING</p>
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It is anticipated that the pile will be constructed in horizontal lifts of 1.5 to 2.0 feet. Tracked equipment will be used to reduce compaction. As described in Section 231.100, the stockpile will be graded to a maximum slope of 2:1 and seeded to promote surface stabilization. Some of the vegetation removed during the construction of the Dugout Canyon Mine will be incorporated into or placed on top of the stockpile. The interim reclamation seed mix described in Chapter 3 will be used for this purpose. Volume calculations for the amount of topsoil to be removed and placed in the storage pile are included in Appendix 2-6.

The Dugout Canyon Mine topsoil will be labeled and kept separate from the Soldier Canyon Mine soils. A description of the Soldier Canyon Mine topsoil stockpile area can be found in that M&RP. The Soldier Canyon Mine M&RP will be modified to allow for the storage of Dugout Canyon Mine substitute topsoil prior to the transport of the soil. The stockpiles will be isolated from the main surface area to protect the material from contaminants and unnecessary compaction that would interfere with vegetation. A sign will be installed at the base of each stockpile to identify it as a topsoil storage area. The stockpiles will be protected from wind and water erosion by being revegetated with a quick growing vegetative cover (proposed interim reclamation seed mix) and by installing berms and/or silt fence below the stockpiles to help trap sediment coming off the stockpile. These stockpiled soils will not be moved or disturbed until required for redistribution during final reclamation.

A portion of the topsoil/growth medium salvaged from the Pace Canyon fan portal site will be stockpiled at the site (Plate PC5-2). Approximately ~~2,128~~ **3,192** cubic yards of topsoil will be stripped from the site. Two ~~he~~ topsoil stockpile **on site have** ~~has~~ been designed to hold approximately **1,206** ~~2,195~~ cubic yards ~~in case additional topsoil is discovered during stripping.~~ ~~Should The quantity of salvagable topsoil exceed the pile designs,~~ The additional soil will be stored at the Dugout Canyon Mine topsoil storage area. Topsoil volume calculations and topsoil stockpile design calculations can be found in Appendix 2-9.

232 Topsoil and Subsoil Removal

232.100 Topsoil Removal and Segregation

to be distributed on reclaimed surfaces within the disturbed area boundary (Appendix 2-6). An estimated 14.7 acres within the disturbed area will receive topsoil. Based on the estimated quantity of available topsoil and the area to be covered, approximately 13.8 inches of topsoil will be placed in the reclaimed areas.

The Pace Canyon topsoil (approximately 18" ±2") will be distributed to the disturbed areas illustrated on Plate PC 5-6. Topsoil will not be distributed on the realigned road segment or topsoil stockpiles. The area above the portal and the channel diversion area will have topsoil stripped and stockpiled immediately adjacent to these areas temporarily (Plate PC5-2). This topsoil will be surrounded with a silt fence for protection until the soil can be replaced, mulched, gouged and reseeded. The replacement will immediately follow the completion of construction of the portal and channel diversion. Plate 7-5A in Appendix 7-12, shows the location of soil/vegetation treatments at the fan facility.

Compaction. To prevent compaction of topsoil, soil moving equipment will refrain from unnecessary operation over spread topsoil. Front-end-loaders and other wheel mounted equipment may be used to transport and dump topsoil. However, to minimize compaction, only track-mounted equipment (e.g. bulldozers, trackhoes) will be used to spread the topsoil. The topsoil will be loosened prior to seeding as described in Section 341.200 of this M&RP.

Erosion. Care will be exercised to ensure the stability of topsoil on graded slopes to guard against erosion during and after topsoil application. Erosion control measures may include but not be limited to surface roughing and deep gouging.

242.200 Regrading

Since the Dugout Canyon mine area has been disturbed by previous mining activities, there are no private or public topographic maps which can be used to accurately determine the original geometric configuration of the canyon. Prior to topsoil redistribution, the disturbed area in Dugout and Pace Canyon will be regraded to agree with final reclamation topography (Chapter 5).

Canyon Fuel Company, LLC
SCM/Dugout Canyon Mine

Mining and Reclamation Plan
April 20, 2005

APPENDIX 2-9

Pace Canyon Fan Facilities
Topsoil and Storage Pile Calculations



Topsoil Calculations

General

- The outslopes of the topsoil stockpiles and berms are assumed to be 2:1. The angle of repose for soils in this area are in excess of 50° . Thus, the assumption is valid. Topsoil stockpiles for the Regas holes have successfully been built using 1:1 slopes.
- This site has been previously disturbed. Thus, topsoil resources are limited. 18 inches of topsoil will be stripped and stockpiled from areas impacted by construction with the exception of the current road area and areas only temporarily disturbed. Such as the area impacted by portal construction. (See Plate PC.7-5A)
- Berms will be constructed of subsoil not topsoil.
- Topsoil stripped from temporarily disturbed areas will be stockpiled separately. This topsoil will be protected with silt fences until it is replaced, mulched, gauged and reseeded. These areas include the area above the portal and channel diversion area.

Ave. topsoil depth = 18"

Area to be stripped of topsoil = 57,460 ft²

Volume of topsoil = (57,460 ft²)(1.5ft) = 86,190 ft³ = 3,192 CY

The Average End Area method will be used to estimate the volume in the topsoil stockpiles. The areas used in the calculation were generated in AutoCad using 1 Foot contours

Shaft Area Topsoil Stockpile

<u>Elevation (ft)</u>	<u>Area (ft²)</u>	<u>Volume (ft³)</u>
7028	0	114
7029	228	315
7030	401	479
7031	558	607
7032	655	740
7033	826	871
7034	916	964
7035	1011	989
7036	967	928
7037	890	840
7038	790	733
7039	675	618
7040	562	554
7041	547	545
7042	543	542
7043	541	538
7044	535	537
7045	539	521
7046	503	488
7047	473	461
7048	449	440
7049	430	420
7050	410	386
7051	363	337
7052	310	289
7053	269	251
7054	233	218
7055	202	186
7056	170	153
7057	137	124
7058	110	96
7059	83	
		<u>15,284 ft³ = 566 CY</u>

Portal Area Topsoil stockpile

<u>Elevation (ft)</u>	<u>Area (ft²)</u>	<u>Volume (ft³)</u>
7016	6	59
7017	117	197
7018	278	326
7019	374	397
7020	420	447
7021	473	507
7022	542	580
7023	617	656
7024	695	742
7025	789	888
7026	986	1016
7027	1046	1071
7028	1096	1158
7029	1220	1311
7030	1402	1417
7031	1433	1371
7032	1309	1237
7033	1165	1091
7034	1017	940
7035	864	785
7036	706	624
7037	541	460
7038	379	
		<u>17,280 ft³ ⇒ 640 CY</u>

Total Stockpile capacity = 566 CY + 640 CY = 1206 CY

1,206 CY < 3,192 ∴ 1,986 CY will need to be hauled to an alternate storage site.

Alternate Topsoil Stockpile

Volume of topsoil to be stored = 1986 CY

The footprint of the topsoil stockpile will need to be approximately 80' x 100'.

Slopes will be 2H:1V

<u>Height</u>	<u>Dimensions</u>	<u>Area</u>	<u>Volume</u>
0	80 x 100	8000	
2	72 x 92	6624	14624
4	64 x 84	5376	12000
6	56 x 76	4256	9632
8	48 x 68	3264	7520
10	40 x 60	2400	5664
12	32 x 52	1664	4064
13	28 x 48	1344	1504
			<hr/> 55008 ft ³ = 2037 CY

2037 CY > 1986 CY ∴ OK

The topsoil stockpile will need to be 80' x 100' x 13' to hold all of the expected topsoil.

LIST OF PLATES

Plate

- 5-1 Previously Mined Areas
- 5-2 Surface Facilities
- 5-3 Surface Facilities Cross Sections
- 5-4 Existing Surface Topography
- 5-5 Reclamation Surface Topography
- 5-6 Reclamation Cross Sections
- 5-7 Proposed Mine Sequence and Planned Subsidence Boundary

The following plates are located in Appendix 5-10

- PC 5-2 Pace Canyon Fan Surface Facilities and Cross-Sections
- PC 5-4 Pace Canyon Fan Existing Surface Topography
- PC 5-5 Pace Canyon Fan Reclamation Topography and Cross-Sections
- PC5-6 Pace canyon Fan Reclamation Treatment Map

LIST OF APPENDICES

Appendix

- 5-1 **DELETED IN MAY 1999 REVISION**
- 5-2 Approvals for Waste-Rock Disposal
- 5-3 Carbon County Waste Disposal Agreement
- 5-3A Dugout Canyon Mine Wastewater Disposal Approval
- 5-4 Slope Stability Analyses
- 5-5 Cut and Fill Calculations
- 5-6 Reclamation Bond Estimate
- 5-7 Waste-Rock Analyses

overland conveyor systems (other than the material-handling conveyors in the mine yard) will be associated with the permit area. Drainage structures associated with the roads are discussed in Section 752.200 of this M&RP. Typical cross sections of the primary roads are provided on Figure 5-1. Refer to Sections 527.100 and 527.200 for additional information concerning roads to be used during the mining operation. As shown on Plate PC5-2 the existing road in Pace Canyon will be realigned to allow construction of the facility. However, after construction is complete the realigned road will be treated the same as the **BLM road above and below the realigned segment adjacent to the fan site. A pre-existing locked gate below the fan site precludes public access to this BLM road.** ~~rest of the private road.~~ A typical cross-section of the realigned ~~private~~ road is provided in Appendix 5-10.

A draft environmental assessment (EA) was prepared by the BLM for the Pace Canyon Fan facilities, however OSM and BLM determined a final EA was not required (e-mail, January 24, 2005). BLM comments associated with the proposed fan facilities will be submitted to UDOGM following their review of the M&RP (Personal communications, January 31, 2005, between Vicky Miller (Canyon Fuel Company), David Spillman (Dugout Canyon Mine) and Stan Perks (BLM).

Three material handling conveyors will be constructed on the surface at the mine site. As noted on Plate 5-2, the mine conveyor will transport coal from the mine to the coal stock pile. The reclaim belt will convey coal from the stock pile (via a reclaim tunnel) to the crushing facility. The loadout belt will convey coal from the crusher to the truck loading bin, from which the coal will be loaded into trucks for off-site transport. Each conveyor will be of sufficient size to handle the production levels coming from the mine and the anticipated truck loading rates. Conveyor widths will range from 42 to 60 inches.

Other Relevant Information. Information regarding the BLM surface lease in NW¼ SW¼ Sec. 23, T. 13 S., R. 12 E. is provided in Appendix 1-3. A legal description of the permit boundaries is provided in Section 114 of this M&RP.

521.200 Signs and Markers

Monitoring and Mitigation Plan Pace Creek

Dugout Canyon Mine plans to leave a barrier under the majority of Pace Creek within the permit boundary. The stretches of Pace Creek (10/04 mine map) which are planned for undermining are above entry development, not longwall panels. There is approximately 1000 feet of stream channel having over 500 feet of cover planned for mining in 2007, 400 feet has approximately 900 feet of cover planned for mining in 2008 and approximately 100 feet has 1250 feet of cover planned for mining in 2008-2009. A surface water monitoring and mitigation program will be initiated in this area prior to potential subsidence occurring. This monitoring program will include conducting a pre-mining subsidence ~~video-tape~~ **photographic** survey of the stream channel from surface water monitoring location PC1A to where Pace Creek leaves the SW $\frac{1}{4}$ SW $\frac{1}{4}$ Section ~~2220~~, T13S, R13E **and a single reference site below the Pace Canyon fan site**. The purpose of the ~~video~~ **photographs** will be to provide a visual record of the stream channel prior to mining disturbance. Five **reference** sites will be identified within the ~~video-taped~~ **photographed** portion of Pace Creek where the monitoring of surface ground water flows, channel width and general geomorphology will occur. **These reference sites will be established during low flow in the creek and monitored as outlined by the USDA Forest Service (*Stream Channel Reference Sites: An Illustrated Guide to Field Technique*. General Technical Report RM-245, Harrelson et al., 1994).** The ~~video~~ **photographing** of Pace Creek and the selection of monitoring sites will be done **in no later than** the Spring of 2006 and submitted as part of the 2006 annual report.

The surface water flows and channel width at these stations will be monitored on a monthly basis, when accessible, while mining is occurring within the 15 degree angle-of-draw of the stream channel. The Division will be notified if the area is inaccessible due to road or climatic conditions and the monitoring could not be accomplished. Once mining has been completed within the angle-of-draw, the sites will be monitored annually for up two years following undermining. A report on the subsidence related impacts, if any, to the surface water flows, will be provided monthly to the Division during monthly monitoring and annually during annual monitoring.

Mitigation will implement the Best Technology Currently Available in association with the repair of damage to the Pace Creek stream channel. The repairs may include the use of bentonite/soil mixes to fill persistent cracks that appear to be diverting water. Bentonite may also be used to line portions of the creek floor where leakage appears to be occurring. Other methods or chemicals, if environmentally safe and available, may be employed if bentonite and/or bentonite/soil mixes are ineffectual.