

C/007/039 Incoming ✓  
#5562



**Canyon Fuel  
Company, LLC**

A Subsidiary of Bowie Resource Holdings, LLC

**Dugout Canyon Mine**

P.O. Box 1029  
Wellington, Utah 84542  
(435) 637-6360  
Fax (435) 636-2897

RECEIVED

NOV 28 2017

DIV. OF OIL, GAS & MINING

November 28, 2017

Coal Regulatory Program  
Division of Oil, Gas and Mining (DOG M)  
1594 West North Temple, Suite 1210  
Salt Lake City, Utah 84114-5801

Subject: Permit Modification, Dugout Canyon Mine, Canyon Fuel Company, LLC,  
C/007/039, Carbon County, Utah

Dear Mr. Haddock:

The Dugout Canyon Mine extracted its last longwall panel in 2012. Since then, all mining has been first mining only and no additional secondary mining is planned. Furthermore, all monitored subsidence points have now stabilized, and in accordance with the approved M&RP, can be withdrawn from routine monitoring. Canyon Fuel Company, LLC hereby files the enclosed application to update permit C/007/039. This is intended to better describe and recognize the current status of our subsidence monitoring program. Enclosed, please find a redline strikeout and clean copy prepared for incorporation into Dugout's Mining and Reclamation Plan.

Should you have any questions please contact Bill King at (435) 636-2898 or David Spillman at (435) 636-2872.

Sincerely,

David G. Spillman, P.E.  
Technical Services Manager

**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:** Subsidence Permit Modification

**Description, Subsidence Monitoring Requirements and Results**

**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 one (1) review copy of the application.**

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.

David Spillman David Spillman Engineering Manager  
 Print Name Sign Name, Position, Date  
November 27, 2017

Subscribed and sworn to before me this 27 day of November, 2017.

Carmen Humphrey  
 Notary Public

My commission Expires: Nov. 16, 2018 }  
 Attest: State of Utah } ss:  
 County of Carbon }



<b>For Office Use Only:</b>	<b>Assigned Tracking Number:</b>	<b>Received by Oil, Gas &amp; Mining</b>



Dugout M&RP

Chapter 5

Page 5-30

Dugout Canyon Mine Permit Number C/007/039

Canyon Fuel Company

**Redline Strikeout**

Title page for reference only



Annual re-surveys of the mine permit area will produce vertical control at the same sites as the previous year. Information on each site will be produced annually while the area underlying the site is being actively mined or is still potentially subsiding. The subsiding areas which show no change for two consecutive years will be considered stable and will be omitted from further annual surveys. If additional secondary mining is anticipated within the stable areas, these areas will again be added to the annual surveys. The Mine's Annual Report for 2016 verify's no subsidence change for the established control points for two consecutive years (See Dugout Canyon Mine's 2016 Annual Report). Indicating the period of potential subsidence is complete and no further annual subsidence surveys will be completed unless secondary mining is re-established at the Mine.

In addition to the ground surveys, aerial photogrammetric methods will be included in the surveys when the areas become too large to feasibly handle with ground surveys. This method may be added to enhance the ground surveys and to cover larger areas as the mine expands. Visual checks for subsidence will be made during all surface activities, especially during water monitoring activities. These visual surveys will be used to detect surface irregularities and surface cracks.

Visual ground checks for subsidence will be made of areas surrounding monitored seeps, springs and streams during hydrologic monitoring. In addition, roads used to access hydrologic monitoring stations will be visually checked for evidence of subsidence during monitoring activities. The observations made during hydrologic monitoring will be included in the Mine's Annual Report.

**Anticipated Effects of Subsidence.** Based on experience in the region and the results of investigations performed by Dunrud (1976), future subsidence in the permit area is anticipated to result in the formation of tension cracks, with these cracks healing to some degree following formation. It is further anticipated that no substantial damage will occur to rangeland conditions as a result of subsidence within the permit area. The only potential effects in that respect will be the exposure of plant roots where tension cracks form.

It is not anticipated that material damage will occur to streams as a result of subsidence. Gentry and Abel (1978) demonstrated that topographic lows (e.g., stream channels) tend to be protected by upwarping of adjacent slopes during subsidence. Therefore, mining-induced surface fracturing should be very limited (or nonexistent) within stream channel areas. Any fracturing that does occur in stream channels is likely to fill rapidly as a result of sedimentation.

It is also not anticipated that subsidence will significantly affect springs within the permit and adjacent areas. Von Schonfeldt et al. (1980) found that uniform subsidence "rarely causes problems to renewable resources such as aquifers, streams, and ranch lands." Since second mining will occur uniformly across the permit area, the resulting subsidence should also be uniform, minimizing the potential impacts to overlying springs.

Dugout M&RP

Chapter 5

Page 5-30

Dugout Canyon Mine Permit Number C/007/039

Canyon Fuel Company

**Clean Copy**

Title page for reference only



Annual re-surveys of the mine permit area will produce vertical control at the same sites as the previous year. Information on each site will be produced annually while the area underlying the site is being actively mined or is still potentially subsiding. The subsiding areas which show no change for two consecutive years will be considered stable and will be omitted from further annual surveys. If additional secondary mining is anticipated within the stable areas, these areas will again be added to the annual surveys. The Mine's Annual Report for 2016 verify's no subsidence change for the established control points for two consecutive years (See Dugout Canyon Mine's 2016 Annual Report). Indicating the period of potential subsidence is complete and no further annual subsidence surveys will be completed unless secondary mining is re-established at the Mine.

In addition to the ground surveys, aerial photogrammetric methods will be included in the surveys when the areas become too large to feasibly handle with ground surveys. This method may be added to enhance the ground surveys and to cover larger areas as the mine expands. Visual checks for subsidence will be made during all surface activities, especially during water monitoring activities. These visual surveys will be used to detect surface irregularities and surface cracks.

Visual ground checks for subsidence will be made of areas surrounding monitored seeps, springs and streams during hydrologic monitoring. In addition, roads used to access hydrologic monitoring stations will be visually checked for evidence of subsidence during monitoring activities. The observations made during hydrologic monitoring will be included in the Mine's Annual Report.

**Anticipated Effects of Subsidence.** Based on experience in the region and the results of investigations performed by Dunrud (1976), future subsidence in the permit area is anticipated to result in the formation of tension cracks, with these cracks healing to some degree following formation. It is further anticipated that no substantial damage will occur to rangeland conditions as a result of subsidence within the permit area. The only potential effects in that respect will be the exposure of plant roots where tension cracks form.

It is not anticipated that material damage will occur to streams as a result of subsidence. Gentry and Abel (1978) demonstrated that topographic lows (e.g., stream channels) tend to be protected by upwarping of adjacent slopes during subsidence. Therefore, mining-induced surface fracturing should be very limited (or nonexistent) within stream channel areas. Any fracturing that does occur in stream channels is likely to fill rapidly as a result of sedimentation.

It is also not anticipated that subsidence will significantly affect springs within the permit and adjacent areas. Von Schonfeldt et al. (1980) found that uniform subsidence "rarely causes problems to renewable resources such as aquifers, streams, and ranch lands." Since second mining will occur uniformly across the permit area, the resulting subsidence should also be uniform, minimizing the potential impacts to overlying springs.