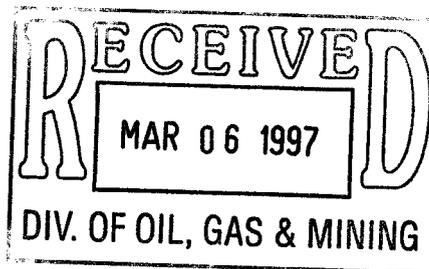




Canyon Fuel Company, LLC
 Soldier Canyon Mine
 P.O. Box 1029
 Wellington, Utah 84542
 801/637-6360 Fax: 801/637-0108



March 4, 1997

Daron Haddock
 Permit Supervisor
 Division of Oil, Gas and Mining
 Box 145801
 Salt Lake City, Utah 84114-5801

Re: Technical Deficiencies, Soldier Canyon Mine, Alkali Lease Significant Revision,
 ACT/007/018-96-1

Dear Mr. Haddock:

The following are our responses to the above referenced deficiencies. Five copies of each change proposed as a result of these responses are enclosed for replacement or insertion into the M&RP. Form C-2 is also enclosed.

Identification of Interests

R645-301-112

1. The application needs to show the names and addresses of all owners of record of surface and mineral property within and contiguous to the proposed permit area.

Louise Iriart has been removed as an owner of contiguous subsurface property and the names and addresses of three additional contiguous surface property owners have been added. This change requires the replacement of pages 1-66 and 1-67 in the Alkali Revision. Also page 1-4 has been revised to show the correct page number where corporate addresses are located.

Insurance and Proof of Publication

R645-301-117

1. After the applicant has advertised the proposed revision, the applicant will need to submit a proof of publication.

A copy of the proof of publication is included.

Geologic Resource Information

R645-301-623, -301-724

1. Strike-and-dip, faults, and other structural geology features are not shown on the geology map - Map 6.22-7.

Map 6.22-7 has been revised to show regional strike and dip of the formations based on drill hole data in the Alkali Lease area. No faults have been found in the area.

Hydrologic Resource Information

R645-301-720

Groundwater Information

1. Status of water rights 203 and 4124

Page 7-6 of the Alkali Revision has been revised to include brief descriptions of the uses of waters associated with water rights 203 and 4124.

2. Correct location of spring CC-53.

Exhibit 7.21-1 has been revised to show the correct location of spring CC-53 and this spring has been designated as Spring 5 which is the designation used for this monitoring location in the existing permit.

3. Re-labeling of spring 5 to CC-53 is confusing and without apparent reason or purpose.

Exhibit 7.21-1 has been revised to change spring designations CC-36, CC-40, and CC-53 to 23, 24 and 5 respectively. Table 7.24-1 has been revised to show CC-53 as another designation of Spring 5. This table has also been revised to make it consistent with the monitoring program determined by the PHC document found in Appendix 7M. Table 7.31-1 has also been revised to be consistent with Table 7.24-1. These changes require replacement of pages 7-7, 7-8 and 7-157.

4. Locations of five of the eight springs listed as ground water monitoring sites have been left off the map.

All of the sites determined by the PHC to be used for monitoring purposes are shown on Exhibit 7.21-1. Not all of the sites listed in Table 7.24-1 are monitoring locations. Sites listed in Table 7.24-1 which are not monitoring sites will not be shown on Exhibit 7.21-1 but these sites are shown on maps contained in appendices 7M and 7N.

5. Neither Exhibit 7.21-1 nor Table 7.24-1 contain any information on the three springs in the Coal Creek drainage that are discussed on page 7-50 of the Alkali Tract Significant Revision.

Reference to three Alkali Tract springs which are in the Coal Creek drainage has been eliminated from the text of page 7-50 in the revision. This change requires replacement of page 7-50.

6. Of thirty springs listed in Appendix C of Appendix 7M only springs CC-36, CC-40, and CC-53 are marked on Exhibit 7.21-1.

Exhibit 7.21-1 shows Water Monitoring Locations. Spring locations which are not used for water monitoring will not be shown on this map.

7. References on page 7-2 and Table 7.28-1 to Exhibits 7.24-1 and 7.24-2 are not clear because these exhibits are not in the permit or revision.

Page 7-2 has been revised to eliminate reference to Exhibit 7.24-1. Table 7.28-1, pages 7-78 through 7-82, has been eliminated from the permit along with reference to this table on page 7-76. These pages with the appropriate strike-out text are included for replacement.

8. Concentrations for total manganese are not given in Appendix 7M or elsewhere in the Alkali Tract Significant Revision.

The approved parameter list for water monitoring at Soldier Canyon is contained in Table 7.31-2, page 7-109 of the original M&RP. This table does not specify total manganese as a required parameter. Also page 7-123 of the original M&RP specifies that the parameters listed in Table 7.31-2 are for dissolved constituents. The approved M&RP does not require monitoring for total manganese. However, the monitoring program proposed in the Mayo PHC (Appendix 7M) does include both total and dissolved manganese as shown in Tables 7.31-3 and 7.31-4 of the Alkali Lease Significant Revision.

9. Locations of the monitoring wells at the previously proposed waste rock disposal site are shown on Exhibit 7.21-1, but the symbol for these wells is mislabeled in the map legend.

Exhibit 7.21-1 has been corrected.

10. Springs CC-36 and CC-40 are marked as surface water monitoring points on Exhibit 7.21-1.

Exhibit 7.21-1 has been corrected.

11. Well 11-2 is listed in Tables 7.24-1 and 7.24-4 but it is not shown on Exhibit 7.21-1 and there is no other information on well 11-2 in the Alkali Tract Significant Revision.

Well 11-2 is discussed on page 71 of Appendix 7M in which it is recommended that this well continue to be monitored in conjunction with the Dugout Canyon permit rather than as a part of the Soldier Canyon permit. This is because the location of this well is closer to the proposed Dugout permit area. This well is therefore no longer shown as a monitoring location on Exhibit 7.21-1 of the Soldier Canyon permit.

12. Have the spring discharge, underflow, ground water recharge, consumption, and storage volumes on pages 7-28, 7-33, 7-64, and 7-153 been updated?

Pages 7-28, 7-33, and 7-64 have been updated to reflect addition of the Alkali Lease and elimination of the state leases. Revising page 7-64 also required the revision of Table 7.24-3, page 7-19. Page 7-153 (Figure 7.28-20) reports historical data so it has not been changed.

13. The descriptions of water level changes on page 7-30 for wells 5-1 and 10-2 are switched in comparison to what is given in Figure 7.24-3 and Figure 17 and Table 7 in Appendix 7M.

Page 7-30 has been corrected to agree with Figure 7.24-3 and Appendix 7M.

14. No baseline or operational data are included in the Alkali Revision for springs 7, 23, and 24, all of which are listed in Table 7.24-1.

Spring 7 is not a monitoring site. Baseline data for springs 23 (CC-36) and 24 (CC-40) are contained in Appendix 7N.

15. On pages 54 and 62 of Appendix 7M reference is made to rapid loss of production of water production wells #1 and #2. There is no further information on these wells in the Alkali Tract Significant Revision.

Pages 41, 53, 61, and Figure 9 of Appendix 7M have been revised. Wells #1 and #3 (#2 is a typo) are located at the Pinnacle mine of Andalex Resources. This revision does not change the substance of Appendix 7M.

16. For Spring 10 there is no fault mapped and no source for an upward gradient from the Blackhawk Formation to the surface.

The M&RP and Appendix 7M suggest that Spring 10 water flows from a fracture. In the area of Spring 10 the surface is alluvium which obscures any surface expression of a fracture so the fracture has not been mapped and it therefore not shown. The source of the Spring 10 water is unknown. It is suggested that since this water is similar, chemically and isotopically, to deeper waters that the source of Spring 10 is a deep source. The actual source and reason for the upward gradient will probably never be known.

17. There are no baseline data for Springs CC-36 and CC-40.

Table 7.24-1 shows that Springs 23 and 24 are the same springs as CC-36 and CC-40 respectively and the footnote for this table states that baseline data for these springs are contained in Appendix 7N.

18. The monitoring plan does not include the option of continuing to monitor Well 5-1 in the case that Well 6-1 cannot be made useable.

The fact that the information from Well 5-1 is of so little use that continued monitoring is not justified has nothing to do with Well 6-1. The value of data obtained by monitoring Well 5-1 must stand on its own merit or lack thereof. The PCH has determined that monitoring of Well 5-1 should be discontinued and Well 6-1 should continue to be monitored if it can be recovered.

19. The quarterly and semi-annual water quality sampling schedule is tied to annual precipitation, but the explanation in Table 7.31-2 is unclear.

A clarifying note has been added to Table 7.31-1.

20. Cessation of monitoring of springs 4 and 8 in the Flagstaff and North Horn Formations after one year appears to be without basis and contrary to the stated purpose of the monitoring plan.

Page 7-165 in the Alkali Revision states that the chemical character of the groundwater systems are well established based on previous monitoring and that historical data strongly suggest that the

character of the water in the Flagstaff and North Horn Formations will not be affected by mining. It further states that the PHC investigation demonstrates that the groundwater systems in the Flagstaff and North Horn are not connected with the systems in the Blackhawk Formation. Mayo in Appendix 7M states that the groundwater systems in these two formations are perched and respond directly to snowmelt and to drought and wet years. This means that the flows of these springs are dependant on annual events and one year of monitoring after mining has ceased in the area should detect any effect on the springs.

21. What appears to be a typo on page 7-165 identifies spring 30, rather than spring 10, as one of the springs to be monitored.

This is not a typo. Spring 30 is discussed in the PHC (Appendix 7M) as being associated with the Dugout area. Since the same PHC applies to both Dugout and Soldier Canyon it may be a little confusing. Spring 30 will be monitored as a requirement of the Dugout permit.

22. Locations described in Table 7.24-1 do not agree with locations shown on Exhibit 7.21-1 for G-2, G-5, G-6 and particularly for G-8 and G-9.

The location descriptions in Table 7.24-1 for the above referenced monitoring stations have been corrected.

Surface-water Information

1. Soldier Canyon must include surface water information for the Coal Creek area. This includes Coal Creek quantity and quality information and spring and seep information.

Surface water information for Coal Creek is addressed in Appendix 7N which contains the seep and spring survey performed by E.I.S. in May 1994. Dr. Alan Mayo has prepared an addendum to the PHC prepared by Mayo and Associates for this area. This addendum deals with the characteristics of Coal Creek and recommends that no monitoring be conducted. The reason for this recommendation is that mining in the Coal Creek drainage is projected to take place only beneath dry tributaries to Coal Creek. No mining will occur beneath or west of Coal Creek itself. No breakouts or other openings are planned for the Coal Creek drainage so there will be no surface disturbance within this drainage. The hydrology of Coal Creek and the potential for impact from mining are well understood. For these reasons Mayo concludes that monitoring of Coal Creek will not yield useful information and is therefore not recommended.

2. Table 7.24-1 lists surface water monitoring sites G-1, G-3, and G-4 that are not shown on Exhibit 7.21-1.

Table 7.24-1 has been corrected to show that G-1 is no longer a sampling site and should therefore not be shown on Exhibit 7.21-1. Sites G-3 and G-4 are not sampling sites so they are not shown on Exhibit 7.21-1.

3. Concentrations for total manganese are not given in Appendix 7M or in the Alkali Revision.

The approved monitoring plan does not require that samples be analyzed for total manganese. The monitoring plan proposed in the Alkali Revision does include total manganese as a parameter.

4. Exhibit 7.21-1 indicates NPDES discharge point 006, at the south end of the Proposed Refuse Disposal Site is a spring.

Exhibit 7.21-1 has been corrected.

5. The figure of 6.641 acres given as the area of the proposed LOM area on page 7-46 has not been updated to include the Alkali Tract Significant Revision.

Page 7-46 has been revised to include the addition of the Alkali Tract and elimination of the state leases.

6. No baseline or operational data are included in the Alkali Tract Revision for surface water monitoring points G-6 through G-10.

These sites are proposed in this revision as new monitoring sites which have not been previously monitored. No baseline or operational data exist yet.

7. Exhibits 7.21-1 and 7.21-2 make no distinction as to whether streams are perennial, intermittent or ephemeral.

Flow characteristics of the streams within the permit area are discussed in Section 700 of the Soldier Canyon permit and in appendices 7M and 7N. It is believed that the data available do not allow determinations of which reaches of streams are perennial, intermittent or ephemeral, accurately enough to plot such reaches on maps.

8. Surface water stations G-1 and G-2 must be maintained as part of the surface water monitoring plan.

Station G-1 is located over 2 miles north of the disturbed area. Station G-6 which is proposed to replace G-1 is located just above the disturbed area. Station G-2 is proposed to be maintained until after mining has ceased in the Pine Canyon area.. Station G-6 will provide the information previously provided by station G-1 and in fact will provide more accurate information because it is closer to the disturbed area. Page 7-166 of the amendment has been revised to indicate that Station G-1 will continue to be monitored until two-years of data have been obtained from Station G-6.

9. Soldier Canyon must monitor Coal Creek as part of their surface water monitoring plan.

According to the regulations the PHC determines the monitoring plan. The Soldier Canyon PHC Addendum concludes that monitoring Coal Creek is not required.

10. The quarterly and semi-annual water quality sampling schedule is tied to annual precipitation, but the explanation in Table 7.31-2 is unclear.

A clarifying note has been added to Table 7.31-1.

11. It appears that surface water monitoring sites G-4 and G-7 are the same.

G-4 has not been used as a monitoring site so we do not know its exact location. Station G-7 is proposed for the same general area as G-7 but has been selected in the field by Dr. Mayo and this location may not correspond with the old G-4 location.

12. It appears that surface water monitoring sites G-3 and G-9 may be the same, but the description of G-9's location in Table 7.24-1 does not agree with the location shown on Exhibit 7.21-1, and there is no explanation given for G-3 being renamed G-9.

The reason for establishing G-9 as a monitoring station is the same as given in number 29 above. G-3 is not a monitoring station so its exact location is unknown. The location of G-9 may or may not correspond to G-3. The location described for G-9 in Table 7.24-1 has been corrected.

Probable Hydrologic Consequences

R645-301-728

1. The applicant must consider how increased flow volumes in the low flow months will affect downstream geomorphology and vegetation. Further, the applicant must analyze the effects of mining on flow and water quality in the Coal Creek watershed.

An addendum to Appendix 7M has been prepared by Mayo and Associates addressing these issues.

2. Figures 7.28-1 and 7.28-3 do not show the correct outline of the Alkali Tract.

Figures 7.28-1 and 7.28-3 have been revised to show the correct permit boundary.

Subsidence Control Plan

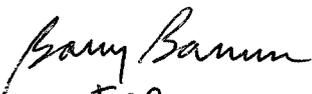
R645-301-525

1. The operator has failed to provide information on how subsidence monitoring will be conducted in the Alkali lease area.

The second incidental boundary change for Soldier Canyon Mine, which is now an approved part of the M&RP, indicates where the first subsidence monitoring station for the Alkali lease will be installed. See Exhibit 5.25-1 which was submitted with the second IBC. All other information in the M&RP regarding subsidence monitoring also applies to the Alkali lease area.

If there are any questions, please contact Barry Barnum at 636-2669. Thank you for your help with this matter.

Sincerely,



FOR

Rick Olsen

General Manager, Soldier Canyon Mine

