

July 13, 2006

Charles Reynolds, Resident Agent
Co-Op Mining Company
P.O. Box 1245
Huntington, Utah 84528

Subject: Permit area Additions U-46484, 61048, U-61049, and U-46484, and Fee Acreages, Task No. 2526, Co-Op Mining Company, Bear Canyon Mine, C0150025

Dear: Mr. Reynolds

The Division has reviewed your application to increase Lease Additions U-46484, 61048, U-61049, and U-46484, and Fee Acreages permit areas U-46484 and U-61049.

The Division has determined that there are some deficiencies that must be addressed before a determination can be made that the requirements of the R645 Coal Mining Rules have been met, and an approval can be granted. Those deficiencies are listed as an attachment to this letter. We have also attached a list of deficiencies identified by the Manti La Sal National Forest. Please prepare your response to address their concerns as well.

Each deficiency identifies its author by that author's initials in parentheses, such that your staff can directly communicate with that individual should any questions arise relative to the preparation of Co-Op Mining Company's response to that particular deficiency.

Please note that there are no deficiencies relative to bond determination or soils.

Please respond to these deficiencies as soon as possible, but by no later than August 10, 2006, such that we may efficiently process your application.

Sincerely,

D. Wayne Hedberg
Permit Supervisor

sm

Attachments (Deficiency List & USFS comments)

cc: Karl Boyer, USFS (Price)
Ranvir Singh, OSM (Denver)
Jim Kohler, BLM (SLO)
Steve Rigby, BLM (Price)

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Deficiency List

Task No. 2526

Geology

The members of the review team include the following individuals:

Joe Helfrich [JCH]	Jim Smith [JDS]
Steve Christensen [SKC]	Priscilla Burton [PWB]
Pete Hess [PHH]	

R645-300-133.100, 301-121.200, 522, The Permittee must: • Update the “Total Area” and “TOTAL” tonnages in Table 5-1; • Update the in-place and recoverable coal reserves for “Fee Land” in Table 5-1; and • Add the in-place and recoverable coal reserves for permit area U-46484 to Table 5-1. [JDS]

Biology

R645-301-320, Additional information regarding the Bear Canyon Permit Area Addition includes the redline strike out of three paragraphs on page 3-2 05/15/2006 of the submittal received on May 22, 2006. Plate 3-1 does not include the reference areas, apparently plate 9-1 does and should be included in the text. Paragraph one can be removed, paragraphs two and three that should remain as part of the MRP. Plate 3-1 was ground truthed with the applicant on June 13, 14 and 27. The following deficiencies were noted:

- The scale of the symbols in the legend is too small to identify the vegetative communities outlined on the map. The scale in the legend needs to be accurately correlated with the vegetative communities plotted on plate 3-1.
- The permit area boundaries for the addition need to be included on plate 3-1.
- The riparian communities associated with the springs and areas of flowing water need to be represented on plate 3-1. [JCH]

R645-301-322, The proposed permit area area boundaries to be added to the current Bear Canyon permit boundary need to be identified on all plates depicting wildlife habitat. . Plates 3-2 and 3-3 were ground truthed with the applicant on June 13, 14 and 27, 2006. The following deficiencies were noted:

- Plates identifying habitat for Mountain Lion, Bobcat and Black Bear should also be included in the application.
- The proposed permit area boundaries to be added to the current Bear Canyon permit boundary need to be identified on all plates depicting wildlife habitat. [JCH]

R645-301-322, -301-333, -301-342, -301-358. The application needs to include a protection and enhancement plan that addresses the possible impacts from subsidence to fish and wildlife. Page 3-38 05/15/2006 paragraph one provides for a commitment to reseed areas impacted by subsidence with a native seed mix. This may not be a required mitigation

effort in some circumstances such as riparian species that have diminished as a result of flow patterns. The information in section R645 301.333 does not include a protection and enhancement plan that addresses the possible impacts from subsidence to fish and wildlife. The plan should include at a minimum protection measures for nesting raptors on escarpments and riparian vegetation associated with springs and reaches of flowing water. Additional information required for the Biology section include:

- A discussion about the existence of those threatened and endangered species listed for the county, (Emery), where the permit area additions are located,
- A current raptor survey for the permit area addition areas and a discussion about the potential impacts to these birds from subsidence,
- An evaluation of the status of Wetlands and Habitats of high value for Fish and Wildlife for the permit area addition and a discussion about the potential impacts from subsidence and
- The application also needs to include calculations that demonstrate the amount of water consumed from mining activities in acre-feet per year. This information is required for the Colorado Fish Recovery program to ensure compliance with the Endangered Species Act. [JCH]

R645-301-330, -301-331, -301-332. The application needs to include a discussion about the potential impacts to vegetation from subsidence for the permit area addition areas. The applicant needs to develop a monitoring plan and a commitment to develop a mitigation plan with DOGM, DWR, and the Forest Service in the event subsidence monitoring denotes impacts to vegetation. [JCH]

Cultural Resources

R645-301-411, The archeological survey needs to be completed for the new permit area additions as well. The survey should also include coordination with and evidence of clearances by the SHPO, (State Historic Preservation Office). [JCH]

R645-301-323, -301-411, -301-521, -301-622, -301-722, -301-731, The application needs to include Archeological Site maps and Cultural Resource maps for those acreages included in the lease addition. A class three archeological survey is required for the lease addition acreages. [JCH]

Engineering

R645-301-512.110, Mine workings to the extent known; Plates 5-2A and 5-2C must be certified by a Utah registered professional engineer. [PHH]

R645-301-512.130, all maps depicting final surface configurations or are relative to meeting the requirements for backfilling and grading must be certified by a Utah registered professional engineer. [PHH]

R645-301-512.140, Hydrology as described under R645-301-722, and as appropriate, R645-301-731.700 through R645-301-731.740, the aforementioned plates must be certified by a Utah registered professional engineer prior to the resubmittal. [PHH]

R645-301-512.250, Primary Roads, the Permittee must either submit an “as-built” design for the #4 Mine Tank seam access road and portal pad, or have the project engineer performing the analyses in Attachment B of Appendix 5-K certify the existing report/analyses. The design that is submitted must be certified by a Utah registered professional engineer. [PHH]

R645-301-521.142, The Permittee must update Plate 5-1B to show the current alignment of the permit boundary.[JDS]

R645-301-522, Coal Recovery; 1) a corrected Table 5-1, Coal Reserves-Bear Canyon Mine, which includes the in-situ as well as the recoverable tonnages for Federal permit area U-024316 (80 acres of additional reserves), Federal permit area U-46484 (1,400 acres of reserves), and the reserves associated with the private ownership fee coal, (2,740 acres of reserves). **2)** Confirmation from the USDOJ / BLM / SLO that the resource recovery and protection plan(s) is adequate for each of the Federal coal permit areas which is being proposed for addition to the Bear Canyon Mine permit area. **3)** A copy of the permit area agreement between CO-OP Mining Company and the fee coal owner allowing right-of-entry into the 2,740 acres of private mineral ownership for the purpose of conducting coal extraction activities. This permit area agreement should include a clause by which the coal owner accepts the recovery factor of 70 percent as indicated on page 5-14 of the Bear Canyon mining and reclamation plan. [PHH]

R645-301-525.110, 525.110, 525.120, 525.130, R645-301-525.200 et al., R645-301-525.300, R645-301-525.400 et al., R645-301-525.500, et al.; The Permittee must address these requirements as they relate to the proposed permit area addition. [PHH]

R645-301-525.420, The Permittee needs to reconcile subsidence projections for the Tank Seam on Plates 5-1C and 5-3. [JDS]

R645-301-525.450, 525.452, 525.453, the Permittee must develop a better method to describe how natural surface structures will be protected where they exist in areas where coal burn exists, or show that the natural surface features cannot be protected using accepted geotechnical engineering methods. This would be determined by relating the location of the surface feature with respect to the amount of coal burn in that area. [PHH]

R645-301-525.700, Public Notice of Proposed Mining, the Permittee must provide the Division with a map which correlates the features of Plate 1-1, Permit Area, showing the various permit area boundaries, Plate 1-2, Surface Ownership, and Plates 5-1A and 5-1C, Blind Canyon Seam and Tank Seam Mine workings. Although Plates 5-1A and 5-1C depict anticipated mining dates for secondary extraction of pillar panels, there are no anticipated dates shown for development mining. 525.700 requires that surface

landowners be notified “at least six months prior to mining”, i.e., development mining. Therefore this map is necessary to ensure that the surface landowners are notified in the time frame required. [PHH]

R645-301-525.700, Public Notice of Proposed Mining; the Permittee must submit a mining projection map which shows the anticipated dates for Mine development in the Blind Canyon and Tank seams of the Wild Horse Ridge addition area of the Bear Canyon permit. This map must also show the permit areas, and the surface lands owners above those permit areas such that the requirements of R645-301-525.700 can be met. [PHH]

R645-301-526, the Permittee must update Appendix 5-A, such that the photos and descriptions accurately depict all existing structures in service at the Bear Canyon Mines operations including all facilities for the #1, #3, and #4 Mines. All structures relative to the #2 Mine, Tank seam, which have been reclaimed should be designated as **RECLAIMED** if the Permittee desires to retain the photos within Appendix 5-A. [PHH]

R645-301-526, Facilities and Structures, the Permittee must update Appendix 5A, including Table 5A-1, and submit photographs of any constructed facilities in the Wild Horse Ridge addition to make this information in the mining and reclamation plan current. Information relative to structures that have been reclaimed should be removed. [PHH]

Hydrology

R645-301-724.310, 728, The Permittee must provide a PHC determination that addresses all the requirements of R645-301-728 for the entire proposed permit area and adjacent areas, clearly and directly including the fee coal and fee surface on the east side of the proposed permit area. [JDS]

R645-301-724.100 and -724.200: The Permittee needs to insure that all existing water rights for the proposed permit area expansion are depicted on Plate 7-12 Water Rights, as well as listed in Table 7-6 Area Water Rights Summary. [SKC]

R645-301-724, -724.100 and -724.200: The Permittee needs to address the collection of baseline data (both surface and groundwater) in terms of the timing of mining activity (i.e. why some areas are not currently slated for monitoring). Much of the submitted baseline information is outdated. A minimum of 3 years of baseline data will be required for areas that are currently not being monitored within the proposed permit area expansion area. The Permittee should address their plan for obtaining adequate, representative and current baseline information prior to beginning mining activities in areas not currently being monitored. [SKC]

R645-301-722, -731: The Permittee needs to review Plate 7-4 and insure that the depicted monitoring points have the correct color designation as depicted in the map’s legend (ex. all water monitoring wells sites are blue and not some other color). In addition, the Permittee should insure that all points slated for monitoring are not depicted as historically monitored sites or vice versa.

- The Permittee should differentiate between the various coal seams depicted on Plate 7-4 and insure that the shapes are accurate. Upon review of the coal seam outlines, it appears that they do not line up correctly and are difficult to decipher.
- The Permittee should remove the water rights symbol in the legend of Plate 7-4, as that information is no longer depicted on that map.
- The Division recommends that different symbols be utilized in order to differentiate between sites that are springs, creeks, monitoring wells etc on Plate 7N-2. In addition, upon review of Plate 7N-2, it appears that not all the sites that were sampled in obtaining baseline information are depicted on the map. They should be included on the map. The legend does not explain what the red dots depicted on the map are.
- The Division also recommends that Plate 7N-2 be modified so that upon review of the map it's readily apparent which sites were utilized in obtaining baseline information. The current configuration of Plate 7N-2 appears to depict both proposed/current water monitoring locations and locations that were utilized solely for the collection of baseline data. A differentiation should be made between the various sampling points.
- The Permittee should clarify on Plate 7N-2 that it was produced by the hydrologic report contained within Appendix 7N. In addition, changing the title of Plate 7N-2 (Water Sampling Locations) might avoid confusion with Plate 7-4 (Water Monitoring). [SKC]

R645-301-724.100, -724.200: The Permittee will need to do a section-by-section review of the water rights in the proposed permit area expansion area and insure that all of them are depicted on Plate 7-12. [SKC]

R645-301-724.310, -728: Probable Hydrologic Consequences Determination

- The Permittee must provide a PHC determination that clearly and directly addresses all the requirements of R645-301-728 for the entire proposed permit area, adjacent areas as well as the private property addition on the east side of the proposed permit area.
- The Permittee should provide a detailed discussion as to the probable hydrologic consequences of undermining the Left and Right Fork of Fish Creek.

R645-301-731.210, -731.220: Surface and Groundwater Monitoring; The Permittee should provide a detailed explanation as to why certain state appropriated water rights are to be monitored while others are not.

- The Permittee should also provide a commitment to begin monitoring all state appropriated water rights a minimum of three years prior to actively mining any area containing a state appropriated water right.
- The Permittee needs to commit to the sampling of all state appropriated water rights within the Tank Seam mining area. Plate 7-14 as well as Table 7-14 would need to be updated to reflect this commitment [SKC]

R645-301-731.210 Groundwater Monitoring; The Permittee should amend the language on Page 7M-13 of the MRP to allow for three years of water monitoring on Springs FBC-8, FBC-9, FBC-10 and FBC-11 prior to mining the area.

- The Permittee needs to insure that all sites slated for monitoring within the proposed

permit area expansion area are in Table 7-14 of the MRP and on Plate 7-4 (example springs SCC-4, SCC-6 and SCC-7).

- The Permittee should address the current status of MW-116 on page 7-55 of the MRP as it is no longer capable of being monitored.
- The Permittee needs to address the status of springs SBC-18 and SBC-12. They are depicted on Plate 7-4 as historically monitored sites, however; they were initially submitted as proposed/active water monitoring sites. It appears that SBC-12 was at one point labeled 16-7-13-1. Spring 16-7-13-1 is depicted in two locations on Plate 7-4. The Permittee should address these discrepancies in the subsequent response.
[SKC]

R645-301-731.220 Surface Water Monitoring

- The Permittee should establish monitoring points for both the Right and Left Fork of Fish Creek in areas above the projected potential subsidence zones and mine workings.
- The Permittee should also establish a plan to monitor both the Left and Right Fork of Fish Creek for subsidence related impacts. The monitoring plan should provide for inspection and data collection of areas potentially impacted by subsidence before, during and after the long wall panel reaches the stream channel.
- The Permittee needs to update the list of streams to be monitored on page 7-57 of the MRP. [SKC]

R645-301-731.50: The submittal does not adequately address the replacement of state appropriated water supply. The Permittee must provide a description of the measures to be taken to replace adversely affected state-appropriated water supplies or to mitigate or remedy any subsidence-related material damage to the land and protected structures.
[SKC]

R645-301-729, The Permittee needs to address the hydrologic deficiencies listed in this technical memo (Task ID #2292) before the Division can update the Gentry Mountain Cumulative Hydrologic Impact Area with information regarding the proposed permit area additions.
[SKC]

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Incoming
0150025
Task 2526
ok

From: Karl M Boyer <kboyer@fs.fed.us>
To: <joehefrich@utah.gov>
Date: 7/10/2006 4:28:45 PM
Subject: Bear Canyon Mine Comments

Joe:

The attachment contains our comments. Dale's comments are first and address primarily the text. Mine are next and address primarily the plates.

We will need to officially send these with a letter later on.

Karl

(See attached file: Bear Canyon Mine Comments.pdf)

CC: Dale Harber <dharber@fs.fed.us>, Betsy Hamann <bhamann@fs.fed.us>, Kevin Albrecht <kalbrecht@fs.fed.us>, Mesia Nyman <mnyman@fs.fed.us>, <waynehedberg@utah.gov>

Forest Service Comments
Bear Canyon Mine Permit Revision
July 2006

General comments:

1. The maps are at varying scales, some are on a base of UTM coordinates, and some are on a base of township, range, and section. All maps should show section lines and be at the same scale so that they may be overlain to evaluate impacts to other resources.
2. The impacts of subsidence on other resources are a primary concern of the Forest Service. These impacts can not be evaluated in the NEPA document until Co-op provides a map showing the proposed mining plan and predicted subsidence. This may prevent the Forest Service from being able to consent to the mine plan modification in time to meet Co-op's desired schedule.
3. The Forest Service is proceeding under the assumption that a mining plan for only the Tank seam will be provided. Consent to the mine plan modification would limit mining to the Tank seam only, and an additional NEPA analysis and consent would be required for mining other seams.

Specific comments:

Page 3-3, Vegetation

The "Scope" section has been deleted. The section should remain, including the requirement to maintain vegetation reference areas.

Page 3-28, Lease 61048 & 61049 Addition

The only wildlife data added for these lease additions is on deer and elk habitat. The sections on aquatic wildlife habitat, terrestrial wildlife habitat, mammals, birds, amphibian, and reptiles in the approved MRP (pages 3-23 to 3-28) must also be supplemented.

Page 3-28, Listed or Proposed Endangered or Protected Species of Plants and Animals

The new text does not fit with Fig. 3-1 of the approved MRP. There is not a clear distinction between T&E species and sensitive species. There should be an explanation of why App. 3M covers bats and flammulated owls when they are not even mentioned in the text on page 3-28.

Page 3-32, Habitats and Areas of High Value

Deer and elk fawning/calving areas and winter range areas are also high value habitat, in addition to the riparian areas.

Page 3-38, Protection of Vegetative Resources

Stating that impacted areas will be revegetated with a native seed mix is not adequate. For National Forest System lands, a FS approved seed mix must be

used. The reclamation standard is 90% of the vegetation of the surrounding area, not more than 10% weeds, and no noxious weeds.

Page 3-43, Amphibians

List the three amphibian species in the permit area and their required habitat. Provide some rationale for why the species and their habitat are not likely to be affected.

Page 3-43, Reptiles

List the reptiles and their required habitat. Provide some rationale for why the species and their habitat are not likely to be impacted.

Page 3-68, last paragraph

Provide some background on the purpose and need for the raptor prey base study, and briefly explain the results, especially those related to coal mining.

Page 3-70, first complete paragraph

Is surveying every 5 years adequate? Is Co-op still participating with the other coal companies in the annual raptor monitoring?

Page 3-70, last paragraph

Delete "...by dynamiting the sides and making the crack passable." with "...in a method acceptable to the Surface Management Agency or the surface owner."

Page 5-16, Subsidence Control Plan

A map showing the panel locations in the Tank seam, areas of predicted subsidence, and amount of predicted subsidence, must be provided. It is not possible to evaluate the impacts to non-coal resources without these data.

Page 7-44, Probable Hydrologic Consequence Determination, third paragraph

A 100 (foot?) barrier along streams may not be adequate. It should be designed based on overburden and angle-of-draw. Explain if tension fracturing is expected at the surface, and what impacts there may be on the hydrology. This is another item that requires proposed mine plan and predicted subsidence data.

1) General Comment:

Lines crossing each other and representing different information must be in different colors or different line weights. Example: Plate 6-7, the isopachs cross over the line merging with another coal seam. This type of thing needs to be corrected on all maps where it occurs.

2) General Comment:

Map symbols should be consistent on all maps. Examples: Plate 6-8, Structure

Contour Map, Bear Canyon Seam has three different colors for its structural contours. Plate 6-7, Isopach Map, Bear Canyon Seam uses two different colors for its contours.

- 3) General Comment:
All maps should be on the same scale.
- 4) General Comment:
It would be very helpful if all maps had a green line (or some other appropriate color) showing the Forest boundary.
- 5) General Comment:
Use the Township, Range, Section system (Rectangular Survey System) on all maps. Currently some are on township and range while others are on UTM coordinates.
- 6) General Comment:
All agencies should be supplied with the same, most recently updated documents so we are all reviewing the same material.
- 7) General Comment:
A mine plan is presented for the Tank Seam only (Plate 5-1C); therefore, an environmental analysis will only address that area. Environmental analyses will be performed for other areas as new mine plans are submitted.
- 8) General Comment:
 - a) On all plates that depict a merge line (between two or more coal seams) that cuts off the contours (for isopachs, structure, interburden, overburden), continue the contours into the merged seam while retaining the merge line (using a differently colored line). Plate 6-12 of the Original Submittal does this. Presently, on all except Plate 6-12, the contours stop at the merge line (see Plates 6-3, 6-6, 6-7, 6-8, 6-9).
 - b) For contours that merge from one seam to another, consider a means by which the seams can be differentiated, i.e., different colors or different line weights.
- 9) General Comment:
Comments 1 through 8 also apply to Plates 6-10, 6-11, 6-12, 6-13 and any others with these deficiencies that were reviewed during the first submittal.
- 10) Plate 1-1, Permit Area:
The plate should show the Forest Service boundary and the new permit areas, in addition to the other information; this would make the project easier to understand.
- 11) Plate 1-2, Surface Ownership:
T.16 S., R. 8 E., S ½ SE ¼, Section 21 should show the Forest Service as the surface owner. The Public Room of the BLM State Office confirmed that the Forest Service is the surface owner for this area (phone conversation between Forest

Service personnel and Public Room employee, July 5, 2006).

12) Plate 5-1A, Blind Canyon Seam:

- a) The potential subsidence zone shown on the map is identical to the mine workings for the Tank Seam shown in Plate 5-1C. Please clarify.
- b) Identify the thin black line running through the subsidence zone.
- c) Explain what is meant by "LOW COAL AREA" in the subsidence zone.
- d) If the projected subsidence zone is for the Tank Seam, then so state.
- e) The subsidence zone boundary could not follow the outline of the mine workings so closely. Several factors affect the subsidence limits.

13) Plate 5-1B, Bear Canyon --No.1 Mine:

- a) This map needs to be on a more meaningful scale and on the Rectangular Survey System (as stated previously).
- b) If future mine workings are planned for this area, then show them on the map.
- c) Make it clear which seam the map shows.

14) Plate 5-1C, Tank Seam:

The subsidence zone boundary could not follow the outline of the mine workings so closely. The subsidence effects will be dependent upon variables such as depth of overburden and topographic features.

15) Plate 5-3, Subsidence Map:

- a. The title should indicate the seam that the subsidence is for.
- b. The map should show the outside limits of the subsidence zone with a heavy colored line. Within the subsidence zone, one or two foot contours should be used to show the predicted subsidence throughout the entire area.
- c. Is the subsidence shown in Plate 5-3 for previous workings or future workings?
The subsidence zone doesn't correlate to the future mine workings shown on Plates 5-1A and 5-1C. Show the current and projected Tank Seam mine workings with the projected subsidence zone above them.

16) Plate 6-6, Overburden Map, Bear Canyon Seam:

- a) The contour interval is 200 feet, but a 100 foot interval is shown between 1600 and 1700.
- b) Remove the large note that states "See Plate 6-6".

17) Plate 6-9, Interburden Isopach Map:

- a) The interburden contours are not labeled with the distances between coal seams.
- b) The contours don't make sense, i.e., two of the contours connect with the "merge line". This means that more than one thickness merges to zero; it doesn't make sense.
- c) If the two seams merge, then the point of mergence should be represented by the zero interburden contour.

18) Plate 7-4, Water Monitoring:

- a) Show the mine workings for each seam in a different color.
- b) The lines representing the Tank Seam mine workings cross and interconnect with those of lower seams. The lines need to be redrawn correctly and colored differently.