



State of Utah

Department of Natural Resources

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March 1, 2005

Chuck Semborski, Environmental Supervisor
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P.O. Box 310
Huntington, Utah 84528

Subject: New Surface Facilities in Rilda Canyon, PacifiCorp, Deer Creek Mine,
C/015/0018, Task ID #2093, Outgoing File

Dear Mr. Semborski:

The submittal, a revision of Volume 11, Deer Creek Mine North Rilda Canyon Portal Facilities to incorporate new portal facilities in Rilda Canyon, was received December 21, 2004. It has been reviewed under Task #2093. We have incorporated comments from the U.S. Forest Service into this document as well.

Before the Division can approve this amendment, the Permittee must provide the information outlined in the following deficiencies, in accordance with the R645 Coal Mining Rules cited. For clarification or more information, you can contact the Division specialist whose initials are at the end of each deficiency.

PWB	Priscilla Burton	801-538-5288
JAE	Jerriann Ernsten	801-538-5214
JCH	Joe Helfrich	801-538-5290
JDS	Jim Smith	801-538-5262
WHW	Wayne Western	801-538-5263

Draft Technical Memos and a draft TA have been prepared, but final versions of these documents will not be prepared until all technical deficiencies have been resolved. Please respond to the following deficiencies by April 1, 2005.

TECHNICAL DEFICIENCIES

R645-301-113, The NOV information found in Appendix D of the Legal and Financial Volume was last revised April 18, 2003; the Permittee must update Violation Information to cover the five years preceding the date of submission of this proposed amendment [JDS].

R645-301-121.200, The Permittee must change the last paragraph on page 42 to read all asphalt material will be removed and taken to a landfill. (No asphalt may be disposed of on National Forest System land) [WHW].

R645-301-121.200, The Permittee plans to use a USGS report (USGS Open-File Report 81-539; Division February 2003 Incoming Files Record #0009) as the baseline macroinvertebrate evaluation for Rilda facilities project. The USGS survey, however, is over 20 years old and provides an evaluation only for the macroinvertebrates at the confluence. The Permittee must clarify that the USGS data may supplement (not serve as the baseline analysis) the surveys conducted during and after 2004. [JAE]

R645-301-121.200, The MRP states that the DWR and Cirrus 2004 reports conclude the baseline survey requirement for the Rilda facilities project. The MRP, however, also states that they will conduct two spring and two fall baseline surveys. The Permittee must make it clear throughout the MRP that they will collect two years of baseline data (second fall depends on project schedule in 2005). [JAE]

R645-301-122, The Permittee will provide the Division with an updated copy of the R2P2 or equivalent information [WHW].

R645-301-122, -123, The Permittee must move the information about the reclamation/reconstruction of the County Road from Section R645-301-553.130 (AOC) in the application to a section such as R645-301-542 that deals with roads [WHW].

R645-301-130, In Volume 11, Section 721, under subheading A. 8., in the section titled Aquifer Characteristics (on page 19 of the Hydrology Section of the current submittal), the first two sentences of the second paragraph describe three sources of groundwater moving through Rilda Canyon. The sources for this important information (such as studies documented in Volume 9) must be cited or referenced [USFS, JDS].

R645-301-222, The Permittee must provide the addendum to the soil survey describing the existing resources of the topsoil and subsoil storage areas [PWB].

R645-301-230, The Permittee must indicate the following in the plan:

- The topsoil storage site will be moved upslope, out of the alluvial soils shown on Map 200-1, to prevent potential impacts to groundwater flow and compaction of the wet subsurface soils;
- End dump trucks will not travel over the topsoil remaining in place, but will dump loads of soil at the end of the access road to the topsoil stockpile and tracked vehicles will be used to move the topsoil into the pile;
- After construction, an accurate accounting of the volume of topsoil stockpiled as well as any changes to the specified dimensions of the topsoil stockpile will be provided to the Division [PWB].

R645-301-232.200, The Permittee must indicate that the soil salvaged from the proposed sediment pond site will be livehauled for enhancement of the LeRoy AMR site or stockpiled for reclamation of the sediment pond area (p. 30, Exp. Practice discussion) [PWB].

R645-301-240, The Permittee must:

- Reword Section R645-301-243 regarding locations of soil sampling at reclamation, i.e., because the phrase “for each of the areas to be topsoiled” does not apply to the topsoil or experimental practice storage areas it should be removed;
- Remove the qualifying phrase “where feasible” from the commitment to replace boulders in Section R645-301-243. (Replacement of boulders is a requirement that cannot be compromised, however a percentage cover by boulders may be indicated.);
- Indicate that tracked vehicles rather than rubber tired equipment will be used for topsoil redistribution. Tracked vehicles are required because they produce less compaction [PWB].

R645-301-322, -301-333, -301-342, -301-358,

Protection and Enhancement Plan

As noted in the application, the pre-disturbed areas were reclaimed in 1988. The areas were topsoiled, re-contoured, and seeded. Because the vegetation is established and the areas are considered critical winter habitat for deer and elk there would not be a reduction in the disturbed area footprint. However, 4.4 acres or 33.6% of the proposed disturbed 13.1 acres would be considered pre-disturbed reclaimed land.

- The Permittee needs to remove or revise this section of the application because this reduced disturbed footprint method does not apply.
- Map 500-1 needs to be revised to reflect the locations and acreages of the 4.4 acres of pre-disturbed areas.

Wildlife mitigation commitments for Big Game include:

1. For the Leroy mine area, buried coal removal and landscape enhancement. Because the site was reclaimed by the Abandoned Mine Lands section of the Division of Oil Gas and Mining in 1988 it would not be considered a wildlife mitigation commitment. The removal of the buried coal will merely provide a proposed location for the construction of the sediment pond.
2. For the AML areas outside the proposed disturbed area, the permittee proposes to cooperate with the AML and USFS to reclaim and enhance the Leroy Mine area. The AML section completed this project in 1988. According the AML staff there are no future plans for additional enhancement work. This would not be considered a wildlife mitigation commitment
3. For the aspen regeneration in Meetinghouse Canyon, the permittee has proposed to cooperate with DWR in a timber harvest and aspen regeneration on 200 acres of private land.

Items 1, 2 and 3 would not be considered wildlife mitigation or enhancement/protection commitments.

- The permittee needs to include in the application a detailed plan for the regeneration of aspen on the 200 acres of private land.
- This section of the application needs to be revised to include a protection and enhancement plan that describes how the impacts to big game species from the development of the surface facilities and increased traffic along the road will be mitigated.

According to the USFS, the proposed surface disturbance will be located in the area that was to be set aside as big game mitigation for the development of the fan portal facilities in the left fork of Rilda Canyon. That being the case the permittee would also need to mitigate for the previous portal development. Any enhancement plan must include at least the overseeing agency or other group, general objective and location of the project, date of expected implementation and completion, and required reporting. Suggested mitigation projects for Big Game species include:

- The purchase of SITLA properties in Rilda Canyon;
- Funds provided to the USFS for prescribed burning;
- The purchase of properties in Mill Fork canyon;
- Participation with DWR on mule deer and elk tracking programs;
- Implementation of an employee awareness program that addresses highway deer kill and the impacts to raptors;
- Participation with USFS on a ponderosa improvement project for the flammulated owl;
- Participation with USFS on sagebrush improvement for mule deer, sage grouse, Brewers sparrow, and sage sparrow.
- Funding towards noxious weed program within Rilda and lower Huntington Canyons and;
- The protection of property from further mining activities in Meetinghouse Canyon.

For protection of Big Game species the Permittee commits to conducting construction activities during months that would minimize impacts to breeding and birthing activities.

- The plan needs to specify that construction activities would not interfere with the activities of deer and elk during periods of high stress, such as when the animals are utilizing the same area from early winter through late spring.
- Exclusionary periods (Vol. 11, p. 300-10) for elk and deer need to specify that the wintering period is from November 1 through May 15, and calving period is from May 1 through May 15.

Wetlands and Habitats of Unusually High Value for Fish and Wildlife

The proposed disturbed area will be located in Critical Deer and Elk winter range including some riparian areas. These would be considered habitats of unusually high value for these species of wildlife. The proposed disturbed area will potentially impact 13.1 acres of deer and elk critical winter range. According to estimates from Terry Nelson, (Wildlife Biologist for the Manti La-Sal National Forest), approximately 1,148 acres of critical deer and elk winter range would be potentially impacted by the development of the surface facilities and increased traffic along the road. The estimate is based on a 0.5-mile corridor of displacement along the road and around the proposed disturbed area that is scaled down using topographic features. The USFS typically requires 3 acres of mitigation for each acre impacted. The application for the proposed Rilda Canyon development area has not addressed this section of the regulations.

- The Permittee needs to address this section of the regulations.

- The application needs to describe how these areas will be protected. Portions of the revised information in the previous section (Protection and Enhancement Plan) may also be used to address this section of the regulations [JCH].

R645-301-322.100, -322.200, The Permittee must:

- Conduct the spring and fall aquatic post-disturbance surveys the first spring and fall after construction begins for the Rilda facilities site [JAE].
- Conduct the spring macroinvertebrate every three years after construction begins for the Rilda facilities site. The Permittee will provide all reports in Annual Reports. All surveyors must use the same protocol and sampling locations provided in the 2004 Walker document [JAE].

R645-301-333, The Permittee must provide a plan to enhance, protect, or maintain the quality of the large cavern (adit) throughout the operation and reclamation phases, such as providing a sign for construction workers to avoid areas beyond markers [JAE].

R645-301-323, Page 16 paragraph 3 references the big game species maps. The maps are incorrectly noted as 300-2, 3 and 4. The reference needs to be revised to indicate that the deer, elk and moose habitat are located on Maps 300-3, 4, and 5. The maps need to include the size and location of the proposed 13.1-acre disturbance [JCH, JAE].

R645-301-333, -342, -358, The application needs to include an exclusionary period during the reclamation of the site. The plan must specify that reclamation activities would not interfere with the activities of deer and elk during periods of high stress, such as when the animals are utilizing the area from early winter through late spring. Exclusionary periods for elk and deer must specify that the wintering period is from November 1 through May 15, and calving period is from May 1 through May 15 [JCH, JAE].

R645-301-333, The Permittee must update all equations and justifications with supporting documentation leading to the overall sum of water depletions or additions. This update must include actual usage for all of the Deer Creek mining operations as well as the estimated usage for mining operations from the proposed Rilda facilities project [JAE].

R645-301-333.300, The Permittee commits to participate with USFS, UDWR and private property land owners (CW Mining and

PacifiCorp) to rehabilitate Rilda Creek below Rilda Canyon Springs. The Permittee must provide more specifics of the project, such as proposed dates, overseeing agencies, and points on how the Permittee will participate (monetary, man power, etc.) [JAE].

R645-301-341.210, The Permittee must commit to use Table 300-9 seed mix in the reclaimed topsoil stockpile area [PWB].

R645-301-356, The Permittee must provide a NRCS 2004 evaluation of productivity and range condition for this site. Illustrate that surveyors conducted or will conduct the vegetation survey and NRCS evaluation within a normal precipitation year prior to disturbance. If the Division authorizes the use of baseline, the Permittee must bring the cover to at least 50% with a species composition that is comparable to proposed redisturbed area. The Permittee must address these standards in section 301-350 (p. 300-26) [JAE].

R645-301-411.144, The Permittee must update references of historic resource surveys to include the Senulis 2004 report [JAE].

R645-301-422, The Permittee must include either a copy of the Division of Air Quality's approval order (DAQE-AN0239003-02) or equivalent information in the MRP. Without the information, the Division cannot complete their review of the air pollution control plan [WHW].

R645-301-512.200, The Permittee must have the road designs in Section R645-301-553.130 certified by a licensed registered professional engineer [WHW].

R645-301-521.100, -521.110, -521.140, The Permittee must include one mine map that shows all mined and proposed mining areas for the Hiawatha Seam. The map needs to include the rock tunnels associated with the North Rilda Portal Facilities [WHW].

R645-301-521.120, The Permittee must label all manmade features on Map 500-1 (such as the spring collection system and underground pipes) and increase the font size so all lettering is legible [WHW].

R645-301-521.120, -141, The Permittee must submit a pre-existing surface configuration map at a scale of 1 inch equals 100 feet; the map must also show the location of each cross-section and all existing manmade features such as pipelines. Because of the valuable information on Map 500-1, the Division recommends that the

Permittee submit an additional map and not replace Map 500-1 [WHW].

R645-301-521.150, -521.190, The Permittee must provide the Division with maps and cross sections that show the pre-disturbed areas at a scale of 1-inch equals 100 feet. The cross sections must cover the entire disturbed area on intervals of not less than one every 50 feet. The Division needs the predisturbance, operational, and reclamation maps at the same scale so that the Division can overlay the maps [WHW].

R645-301-521.150, -521.190, The Permittee must include operational maps that show the location of cross sections at a scale of 1 inch equals 100 feet. The cross sections need to be at 50 foot intervals for all significant areas such as the main mine area, the topsoil storage area, the subsoil area, and the topsoil storage area by the sediment pond [WHW].

R645-301-521.180, -521.190, The Permittee must use consistent names for all structures in the physical facilities list (Section 521.180), the physical facilities map (Map 500-3), and the bond calculations. Examples include but are not limited to: collection tanks or tank, parking stalls or parking lots, underground vehicle parking garage or parking garage, mine ventilation fan or fan, trans or substation, water tank or culinary water tank, septic tank or 20,000-gallon black water tank. All items shown on the Map 500-3 must be listed in Section 521.180 and vice versa. Examples include but are not limited to powerlines other than the 25 KV line, generators, non-coal waste, sand storage, rock waste, gravel storage, covered storage, retaining structures, rock dust silo, oil shed, fuel dock, lift station, pump station and generator [WHW].

R645-301-521.190, The Permittee must show the location of the snow storage areas on Map 500-3. The Division needs that information in order to evaluate the snow storage plan. The Permittee must describe what areas will have asphalt or concrete surfaces and what material will be stored on site (the Division and USFS are interested in the potential for ground-water contamination), and describe the source of the culinary water supply [WHW].

R645-301-527.200, The Permittee must provide designs for all roads such as the access road to the topsoil storage pile and the subsoil storage area [WHW].

R645-301-527.200, The Permittee must show the location of County Road 306 on Figure 500-4 for each phase of mining including premining, operation and reclamation [WHW].

R645-301-528, The Permittee must include in the narrative information about the plans for temporary storage of coal mine waste at the North Rilda Portal Facility and that they will only place coal mine waste in the waste rock bunker labeled on Map 500-3 [WHW].

R645-301-537, The Permittee must state how the final grading of the excess 5,809 yd³ of subsoil will affect the experimental practice [PWB].

R645-301-537.100, The Permittee must classify each road in the disturbed area as primary or secondary. Those include access roads to the topsoil storage area and the subsoil storage area [WHW].

R645-301-542.300, -532.310, The Permittee must modify cross-section A-A' on Map 500-4, sheet 5 of 5, to show how the reclaimed slope will tie into the undisturbed slope [WHW]].

R645-301-542.320, The Permittee must identify each reclamation facility or feature, such as trailheads and public parking lots, on Map 500-5. In addition, the Permittee must place a legend on Map 500-5 that identifies line types [WHW].

R645-301-542.310, -533.130, The Permittee must have a licensed registered professional engineer certify that the reclamation designs will meet the minimum safety factor requirement of 1.3 and that the slopes will be at an angle that is less than the angle-of-repose [WHW].

R645-301-542.320, The Permittee must state if the spring collection system will remain in place after final reclamation or if the spring system will be modified [WHW].

R645-301-542.600, The Permittee must include a detailed reclamation plan for each road that they will reclaim [WHW].

R645-301-732.210, 733.200, In most of Volume 11 it is clear that the sedimentation pond is temporary and will be removed and reclaimed when mining operations cease. Volume 11, Hydrology Appendix B, Section 3.5 describes a "temporary" pond that will be used during construction but will be replaced by a "permanent" pond for mine operation. The Permittee needs to revise Section 3.5 of Volume 11, Hydrology Appendix B so it is clear there will be no permanent

impoundment or sedimentation pond at the Rilda Canyon portal facilities [JDS].

R645-301-733, Reclamation of the clay liner for the sedimentation pond is discussed in Volume 11, Sections 533 and 553 but not in Volume 11, Hydrology Appendix B, which is referred to in Section 533 as the location for the pond design. For clarity and consistency, the construction and reclamation of the clay liner needs to be included in the Drainage and Sediment Control Plan, Volume 11, Hydrology Appendix B [PWB, JDS].

R645-301-742, In Volume 11, Hydrology Appendix B, Section 2.11, the Permittee indicates that at ASCA-4 and ASCA-5 at soil storage areas, silt fences will be removed after vegetation is established or two years. A specified time limit is not acceptable and the two-year limit must be removed from the plan. Sediment control must be designed, constructed and maintained using the best technology currently available, and if vegetation or other methods cannot be shown to be providing adequate sediment control, the silt fencing will need to be maintained [PWB, JDS].

R645-301-744.100, Plans for controlling discharges at the outlet to the sedimentation pond are given in general terms in Volume 11, Hydrology Appendix B, Sections 3.1 and 3.4, but no plans were found in Volume 11 regarding discharge structures at the outlets of the undisturbed-drainage bypass culverts. The Permittee needs to include plans for structures to control discharges at the outlets of the bypass culverts in Volume 11 [JDS].

R645-301-751, Because the Rilda Canyon portal facilities are on USFS land, there can be no UPDES permit and no point source discharge at this location. The sedimentation pond is designed for total containment of the 10-year, 24-hour event; however, it is designed with both a principal and an emergency spillway. Flow from these spillways will go into undisturbed diversion ditch UD-9, which empties into Rilda Creek (Volume 11, Hydrology Appendix B, Sections 3-1 b and 3.4 g; Maps 700-1 and 700-3). The plan needs to address the possibility that discharges from the sedimentation pond would violate Utah and federal water quality laws and regulations and effluent limitations for coal mining promulgated by the U.S. Environmental Protection Agency set forth in 40 CFR Part 434 [JDS].

R645-301-731.511, The Permittee needs to specify how requirements R645-301-731.511.1 through 731.511.4 regarding discharges into an

underground mine will be met. Volume 11, Section 513 states that when MSHA approval was obtained, documentation will be in Volume 11, Engineering Appendix B. Although only the final approval from MSHA is required to satisfy the R645 Coal Mining Rules, there is no indication of what the MSHA requirements are and how the proposed plan will meet them [JDS].

R645-301-728, According to the Permittee, Map HM-9 shows 3rd Right development workings of the Hiawatha Seam to be within approximately 215 feet of the coal seam outcrop (Volume 11, Section 728, Hydrologic Balance-Groundwater, F. RUNOFF AND GRAY WATER DISPOSAL - ABANDON MINE WORKINGS). This section also discusses water migrating down dip to the east and accumulating in the workings or infiltrating into the Star Point Sandstone. HM-9 shows projected workings (to within 50 feet of the coal seam outcrop in Mill Fork Canyon) and does not identify the workings where the water accumulates. The Permittee needs to refer to a map that shows the actual workings and provide an accurate description of the location of where the water accumulates [JDS].

R645-301-728, Under Sections B. INCREASED SEDIMENT PRODUCTION TO RILDA CREEK and E. INTERFERENCE TO RILDA SPRINGS (QUALITY) in the PHC are statements that grading and paving will be sloped to the north away from the receiving stream and drain to the sediment pond. The Permittee needs to clarify this, as only a small portion of surface drainage will report to the sedimentation pond: most surface drainage will be pumped underground into abandoned workings [JDS].

R645-301-728, There is only a brief discussion of using salt on county road C#306 between Highway 31 and the portal facilities area, with no mention of impacts to Rilda Creek. Although Emery County is responsible to maintain this road, the Permittee has stated that, if necessary, they will use their own equipment to keep the road clear of ice and snow, including the use of a salt/sand mixture. The Permittee needs to determine the potential impacts and any Probable Hydrologic Consequences to Rilda Creek due to using salt on this road [USFS, JDS].

R645-301-820.113, The Permittee must identify the permit and disturbed area boundaries on Map 500-4 and Map 500-5 [WHW].

R645-301-830.140, The Permittee must include all items listed on Map 500-3 and in section R645-301-521.180 of the application in the bond calculations, including disposal costs for asphalt, and include a

narrative of what earthwork will be done at the site so that a third party could reconstruct the cost estimates [WHW].

R645-302-212.100, The Permittee must:

- Provide the December 2004 addendum to the Soil Survey Report for the 1.6 acres of undisturbed soils on the slopes within the experimental practice area;
- Provide photo No. 12 (logged by EIS in 2003/2004) of the disturbed soils in the experimental practice area as well as the analytical baseline information for site S8 of the EIS 2003/2004 survey or correlate photo No. 6 with the soil survey description of the site;
- Correctly label AMEC photos as Pits (except for trenches 1, 8, and 15) as described in the AMEC report [PWB].

R645-302-212.200, The Division recommends that the Permittee incorporate the following techniques to improve the experimental practice design:

- Apply a soil tackifier to the surface prior to rolling out the geotextile fabric;
- Cover the undisturbed slopes above the Rominger mine completely with geotextile fabric, rather than fabric strips;
- Dedicate the excess 5,900 yd³ of soil for improved reclamation of the Rominger or LeRoy Mine sites. If used at the Rominger site, then do not apply fabric markers until 2.5 ft. of subsoil has been brought to the site, i.e. the additional 2.5 ft of cover will remain at reclamation. If used at the LeRoy site, apply to the LeRoy site slopes during construction of the subsoil pile and sediment pond;
- Eliminate pocking on the steep undisturbed slopes, in favor of an anionic polyacrylamide (PAM) treatment of the soil surface to increase cohesion and infiltration of the water during revegetation without disrupting soil structure. PAM could be applied with seed, for more information, see the following web sites:

<http://kimberly.ars.usda.gov/pampage.shtml>

http://esce.ucr.edu/soilwater/spring_2001.htm

<http://www.stormwater-resources.com/Library/114BPolymer.pdf>

<http://www.hydrosources.com/clpbbs02.htm>;

- Use bareroot or containerized plant stock (pre-treated with PAM) as enhancement plantings on the re-exposed, steep slopes. Suggested stock might include *Cercocarpus ledifolius*, *Amelanchier alnifolia*, *Juniperus osteosperma*, and *Pinus edulis* [PWB].

R645-302-212.310, The Permittee must:

- Remove the limiting term “Excess” and replace with a definite commitment to replace boulders over the restored subsoil stockpile area, with a percentage boulder cover defined;
- Explain the equipment to be used in Rominger Canyon during culvert installation and removal;
- Specify the seed mix to be used on the experimental practice area within the description of the experimental practice [PWB].

R645-302-212.410, -216, The Permittee must further explain the statement that PacifiCorp has previously reclaimed buried soil horizons in place [PWB].

R645-302-214.200, The Permittee must state the equipment to be used to install and remove the culvert and to construct and remove the subsoil pile [PWB].

R645-302-217, The Division recommends that the Permittee consider adding the following techniques to improve the experimental practice monitoring information:

- Include baseline soil compaction information (lbs/sq ft) at foot intervals down to six feet or bedrock in the baseline monitoring of the undisturbed and disturbed soils in Rominger Canyon and indicate that comparison compaction information will be gathered after removal of the subsoil stockpile;
- Include investigation of the infiltration and erosion control of the PAM treated experimental practice area in the monitoring of the site, during years subsequent to reclamation;
- Include regular checks of the culvert inlet and outlet in Rominger Canyon during operational monitoring of the experimental practice [PWB].

R645-302-322, -324, Based on information provided in the application, the Division finds that there is an alluvial valley holding Rilda Creek in the bottomlands of Rilda Canyon. The extent of the alluvial valley floor is shown on Dwg. 200-1 as map unit A. These streamlaid deposits in the bottomlands have historically been the source of

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irrigation and culinary water in Emery County. The application must contain the following additional information:

- A summary list of the characteristics of the alluvium necessary to preserve the hydrologic functions;
- A quantitative description of the significance of the alluvium (spring collection system) to the community downstream;
- The likelihood of causing material damage to the quantity or quality of surface or ground waters supplying the alluvial valley floor and in particular the Emery County Water Users springs;
- A proposal for environmental monitoring during and after mining to ensure protection and preservation of the hydrologic functions of the alluvium [PWB, JDS].

Sincerely,

D. Wayne Hedberg
Permit Supervisor

an
Enclosure
cc: Price Field Office
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