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Utah Division of Oil, Gas, and Mining  
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**Subj: Amendment to Update the Deer Creek Mining and Reclamation Permit, Volume 11, North Rilda Canyon Portal Facilities, PacifiCorp, Deer Creek Mine, C/015/0018, Emery County, Utah.**

PacifiCorp, by and through its wholly-owned subsidiary, Interwest Mining Company, as mine manager, hereby submits an amendment to update Volume 11, North Rilda Canyon Portal Facilities. The update includes changes in the Biology Section to remove live plantings in the White Fir/Aspen seed mix. This mix includes the planting of 200 each plants per acre of White Fir, Quaking Aspen, and Blue Spruce.

Past experience has shown that success rates for planting live plant are very low. Nearly 100% mortality of the live plants planted. The process is cost prohibitive with the proven low success rates and high costs for labor and materials. Therefore, Interwest Mining is requesting that the Division allow removing the three live plant species from the White Fir/Aspen seed mix (Table 300-10) from the Rilda Canyon Portal Facility reclamation plan.

There are a few pages of the reclamation plan that are affected by this change. All pages have been included with this submittal. Refer to the strike outs on pages 27, 30, and 31 of Chapter R645-301-300: Biology.

The C1/C2 forms have been included with this submittal. If you have any questions or concerns regarding this submittal, please feel free to contact me at any time at 435-687-4712, or Dennis Oakley at 435-687-4825.

Sincerely,

Kenneth Fleck  
Manager of Geology and Environmental Affairs

Cc file

# APPLICATION FOR COAL PERMIT PROCESSING

Permit Change  New Permit  Renewal  Exploration  Bond Release  Transfer

Permittee: PacifiCorp

Mine: Deer Creek Mine

Permit Number: C/015/0018

Title: Amendment to Update the Deer Creek Mining and Reclamation Permit, Volume 11, North Rilda Canyon Portal Facilities, PacifiCorp, Deer Creek Mine, C/015/0018, Emery County, Utah.

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: \_\_\_\_\_  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.

Kenneth Fleck  
Print Name

Kenneth S. Fleck  
Sign Name, Position, Date

Manager of Environmental Affairs AUG. 29, 2018

Subscribed and sworn to before me this 29<sup>th</sup> day of August, 2018

Miranda Lofley  
Notary Public

My commission Expires: 03-26, 2022  
Attest: State of Utah } ss:  
County of Emery



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



**PacifiCorp**  
**Interwest Mining Company**  
**Deer Creek Mine**

**C/015/0018**

**Amendment Update the Deer Creek Mining and  
Reclamation Plan, Volume 11, North Rilda Canyon Portal  
Facilities, PacifiCorp, Deer Creek Mine, C/015/0018, Emery  
County, Utah.**

R645-301-300: Biology – Replace pages 26 thru 31  
Refer to strike-out text on pages 27, 30 and 31

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**R645-301-340 RECLAMATION PLAN**

The following sections contain plans for final reclamation and revegetation of the Rilda Canyon Facilities. All disturbed lands will be reclaimed as part of the post mining land use stipulations for grazing, wildlife and recreation. The plan complies with the biological protection performance standards of the State Program. The reclamation plan for the Left Fork facilities is found in Volume 2, Part 4, of the Deer Creek Mine permit.

**R645-301-341 Revegetation**

Table 300-6 discloses the timetable in which reclamation will be conducted on the North Rilda Canyon portal facilities. Much of the operations will be conducted simultaneously. The main emphasis of reclamation will work from the top of the canyon to the bottom.

Table 300-7 establishes a monitoring program that extends through the responsibility period of the bond.

**Table 300-6: Rilda Canyon Portal Facilities Reclamation Schedule: Initial Reclamation for mine facilities**

#	Project	Estimated Scheduling *											
		1	2	3	4	5	6	7	8	9	10	11	12
1	Soil Sampling	Sampling conducted.											
2	Structure Removal				■								
3	Closures - Portals & Ventilation				■								
4	Hauling, Backfilling, Compaction & Grading				■								
5	Seed Bed Preparation								■				
6	Fertilization & Mulching								■				
7	Seeding & Planting								■				
8	Sediment Control Structure Removal *											■	

\* The sediment pond will be removed at the completion of all other reclamation activities above the pond.

Notice in the table above that backfill and grading activities and seeding activities are occurring simultaneously. This will occur as work progresses down canyon. Seeding is planned for the fall season. Seeding will occur contemporaneously with backfilling and grading. Mulching, hydromulching, and tackifying will occur as successive processes. Access

with mulching equipment will be achieved by the use of the reconstructed Emery County road #306.

**Table 300-7: Rilda Canyon Portal Facilities Reclamation Schedule; 1<sup>st</sup> thru 10<sup>th</sup> Year**

#	10 Year Revegetation & Monitoring	1 <sup>st</sup> Year	2 <sup>nd</sup> Year	3 <sup>rd</sup> Year	4 <sup>th</sup> Year	5 <sup>th</sup> Year	6 <sup>th</sup> Year	7 <sup>th</sup> Year	8 <sup>th</sup> Year	9 <sup>th</sup> Year	10 <sup>th</sup> Year
1	Plant Monitoring Disease & Pest Control *		★	★	★	★	★	★	★	★	★
2	Soil Stabilization Rills & Gullies		★	★	★	★	★	★	★	★	★
3	Contingent Seeding		★		★						
4	Revegetation Inventory for Bond Release				★				★	★	★

\* Monitoring is conducted twice per year during the spring and fall.

Description of Revegetation Operations

Tables 300-8 through 300-10 are the vegetation seedmixes to be used during interim and final reclamation. Supplemental tublings or bare root plants, as indicated in seedmix, will not be planted as part of the interim seeding. Pinyon Juniper/Mountain brush habitats are those areas that have a high exposure to sunlight. These areas are typically drier and need grass growth early on for moisture retention and soil stabilization.

<b>Table 300-8: Seed Mixture (Pinyon-Juniper/Mountain Brush)</b>		
<b>Common Name</b>	<b>Scientific Name</b>	<b>Lbs/Acre Equivalent PLS*</b>
<b>Grasses</b>		
Bluebunch Wheatgrass	<i>Agropyron spicatum</i>	2.0
Sandberg Bluegrass	<i>Poa secunda</i>	1.0
Great Basin Wild Rye	<i>Leymus cinereus</i>	2.0
Indian Ricegrass	<i>Oryzopsis hymenoides</i> var. Paloma	1.0
Western Wheatgrass	<i>Agropyron smithii</i> var. Rosanna	3.0
<b>Forbes</b>		
Blueleaf Aster	<i>Aster glaucodes</i>	0.25
Blue Flax	<i>Linum lewisii</i>	0.25
Louisiana Sage	<i>Artemisia ludoviciana</i>	0.2
Northern Sweetvetch	<i>Hedysarum boreale</i>	1.0
Palmer Penstemon	<i>Penstemon palmeri</i>	0.5
<b>Shrubs</b>		
Snowberry	<i>Symphoricarpus oreophilus</i>	0.5
Curleaf Mahogany	<i>Cercocarpus ledifolius</i>	1.0
Fourwing Saltbush	<i>Atriplex canescens</i>	2.0
Saskatoon Serviceberry	<i>Amelanchier alnifolia</i>	1.0
True Mountain Mahogany	<i>Cercocarpus montanus</i>	1.0

\* Pure Live Seed

<b>Table 300-9: Seed Mixture (Sagebrush/Grass)</b>		
<b>Common Name</b>	<b>Scientific Name</b>	<b>Lbs/Acre Equivalent FLS*</b>
<b>Grasses</b>		
Salina Wildrye	<i>Elymus salinus</i>	2.0
Needle and Thread Grass	<i>Stipa comata</i>	3.0
Sandberg Bluegrass	<i>Poa secunda</i>	2.0
Indian Ricegrass	<i>Oryzopsis hymenoides</i> var. Paloma	3.0
Western Wheatgrass	<i>Agropyron smithii</i> var. Rosanna	2.0
<b>Forbes</b>		
Blueleaf Aster	<i>Aster glaucodes</i>	0.5
Blue Flax	<i>Linum lewisii</i>	1.0
Louisiana Sage	<i>Artemisia ludoviciana</i>	0.2
Northern Sweetvetch	<i>Hedysarum boreale</i>	1.0
Palmer Penstemon	<i>Penstemon palmeri</i>	0.5
<b>Shrubs</b>		
Bitterbrush	<i>Purshia tridentate</i>	1.0
Fourwing Saltbush	<i>Atriplex canescens</i>	2.0
Snowberry	<i>Symphoricarpos oreophilus</i>	1.2

\* Pure Live Seed

<b>Table 300-10: Seed Mixture (White Fir/Aspen)</b>		
<b>Common Name</b>	<b>Scientific Name</b>	<b>Lbs/Acre Equivalent PLS*</b>
<b>Grasses</b>		
Bluebunch Wheatgrass	<i>Agropyron spicatum</i>	1.0
Indian Ricegrass	<i>Oryzopisi hymenoides</i> var. Paloma	2.0
Western Wheatgrass	<i>Agropyron smithii</i> var. Rosanna	3.0
Kentucky Bluegrass	<i>Poa pretenses</i>	1.0
Mountain Brome	<i>Bromus marginatus</i>	2.0
Slender Wheatgrass	<i>Elymus trachycaulus</i> ssp. <i>trachycaulus</i>	2.0
<b>Forbs</b>		
Louisiana Sage	<i>Artemisia ludoviciana</i>	0.2
Northern Sweetvetch	<i>Hedysarum boreale</i>	1.0
Pacific Aster	<i>Aster chilensis</i>	0.2
Rocky Mountain Penstemon	<i>Penstemon strictus</i>	1.0
Silky Lupine	<i>Lupinus sericeus</i>	1.0
<b>Shrubs</b>		
Snowberry	<i>Symphoricarpos oreophilus</i>	1.0
Saskatoon Serviceberry	<i>Amelanchier alnifolia</i>	0.5
Skunkbush Sumac	<i>Rhus trilobata</i>	0.5
<b>Trees</b>		
White Fir	<i>Abies concolor</i>	200/acre
Quaking Aspen	<i>Populus tremuloides</i>	200/acre
Blue Spruce	<i>Picea pungens</i>	200/acre

\* Pure Live Seed

Though several reference areas were designated and sampled, (see Volume 11 Appendix Volume - Biology: Appendix A), the disturbed area will only impact four vegetation communities. As indicated in the vegetation map, of this appendix, the sagebrush/grass seed mix will be used in the upper part of the disturbance. The topsoil storage area will be seeded with the White Fir/Aspen seedmix (Table 300-10) for interim and final vegetation. Disturbances to the White Fir/Aspen Community, near the Rilda Canyon stream, will be seeded with the White Fir/Aspen seedmix. All other areas will be seeded with the Pinyon-Juniper/Mountain Brush seedmix. Within the disturbed area is a small community of Douglas Fir/White Fir, approximately 0.25 acres. Because of the small size, this area will be seeded with the Pinyon-Juniper/Mountain Brush seedmix. This seedmix will be used for both the previously undisturbed (AMR/AML) and previously disturbed Pinyon Juniper (AML) areas.

No Riparian vegetation areas will be disturbed.

Seeding Techniques

Seeding will take place as contemporaneously as practical following soil placement and contouring/pocking of the area being reclaimed. Certified noxious weed free alfalfa hay will be incorporated into the soil following contouring at a rate of 2000 lbs/acre. The mulch will be applied using a tub grinder or similar blower. Pocking techniques will mix the alfalfa hay into the upper portion of the soil.

The seed mixture will be broadcast using a "hurricane spreader" or applied using a hydroseeder. If the seed mixture is hydroseeded, a small amount of wood fiber mulch will be added to mark the area of coverage during application.

After the seed is applied, the entire area will be hydromulched with a wood fiber or other acceptable mulch and applied at a rate of at least 1500 lbs./acre for cover and protection. A tackifier (plantago or other similar tackifier) will be added to the mulch and applied at a rate recommended by the manufacturer. Tackifier may only be used on slopes greater than 2:1. Mulch and tackifier will be applied simultaneously.

~~As indicated in Table 300-10, supplemental tublings or bare root plants will be planted after final reclamation. Tublings or bare root plants will be planted at the stated numbers per acre.~~

Measures to determine success of revegetation are those included in R645-301-350 of the Utah Coal Rules and as detailed later in this section.

***R645-301-342 Fish and Wildlife***

To minimize impact of the stream area and to make the operator aware of the presents of the stream, "Buffer Zone" signs will be placed along the stream side of the disturbed area.

To limit the impact on wildlife, the facility disturbance is located below the stream crossing at the forks of Rilda Canyon. Wildlife can continue to use the area for access from one fork to the other. In addition, material haulage to the existing Rilda Canyon fan in the Left Fork will be discontinued. Materials will be hauled underground via the facility's portal.

Measures taken during reclamation and liability period to reduce impact to environment and wildlife:

1. Rock piles will be formed to create habitat for small mammals.
2. Supplemental container planting to enhance the reseeded areas.
3. Supplemental container planting will be arranged in groupings or clusters to promote wildlife cover.