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DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

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December 18, 2002

TO: Internal File
Thru: Jim Smith, Lead *JDS*
FROM: Susan M. White, Senior Reclamation Specialist/Biologist *SMW*
RE: Phase II Reclamation, PacifiCorp, Des Bee Dove Mine, C/015/017-AM01D-2

SUMMARY:

The third round for the Phase 2 Reclamation Plan amendment was received by the Division on December 13, 2002. All required information to approve this amendment has been provided.

TECHNICAL ANALYSIS

GENERAL CONTENTS

PERMIT APPLICATION FORMAT AND CONTENTS

Regulatory Reference: 30 CFR 777.11; R645-301-120.

Analysis:

Information in the Phase 2 submittal contradicts information in the Mining and Reclamation Plan (MRP). A notice stating Appendix XVI will take precedence over contradictions to Volume 2 Part 4 is provided at the beginning of Volume 2 Part 4.

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Findings:

Information provided in the proposed amendment meets the minimum requirements of the Permit Application Format and Contents section of the regulations.

MAPS AND PLANS

Regulatory Reference: 30 CFR 777.14; R645-301-140.

Analysis:

Drawing #: CS1813E, Surface Yard Area Pre/Post SMCRA Development Map shows aerial photographs from 1977, 1978, and 1999. The photographs are marked to show current, pre-SMCRA and post-SMCRA disturbance. The only post-SMCRA disturbance is the parking lot extension at the bathhouse pad. It is difficult to compare one photograph to the next and determine disturbance since the photographs were not taken from the same location but they are sufficient to determine pre and post-SMCRA disturbances.

Findings:

Information provided meets the minimum requirements of the Maps and Plans section of the regulations.

ENVIRONMENTAL RESOURCE INFORMATION

Regulatory Reference: Pub. L 95-87 Sections 507(b), 508(a), and 516(b); 30 CFR 783., et. al.

HISTORIC AND ARCHEOLOGICAL RESOURCE INFORMATION

Regulatory Reference: 30 CFR 783.12; R645-301-411.

Analysis:

An archeological and cultural survey was conducted in the area in 1980. Early cultural and historic surveys did not consider structures and facilities on the mine site during the survey. Structures that were not eligible because of age in initial surveys could have been prior to demolition. Unfortunately demolition occurred prior to re-survey.

Findings:

Information provided in the proposed amendment meets the requirements of the Historic and Archeological Resource Information section of the regulations.

FISH AND WILDLIFE RESOURCE INFORMATION

Regulatory Reference: 30 CFR 784.21; R645-301-322.

Analysis:

The Phase 1 application contains a map titled Des-Bee-Dove Mines Phase 1 Reclamation Raptor Location Map. The map shows Golden Eagle nest #952 and 937 are both within the half-mile buffer zone radius of the proposed work area. Chris Colt, DWR Biologist, surveyed these nests. Nest 952 is in direct line of site of the mine facilities and less than 1000 feet away. The following data is available for this nest:

2001- Inactive
2000- Active
1999 – N/A
1998 – N/A

Findings:

The information provided in the application meets the minimum Fish and Wildlife Resource Information requirements of the regulations.

LAND-USE RESOURCE INFORMATION

Regulatory Reference: 30 CFR 783.22; R645-301-411.

Analysis:

The postmining land use for the mine site will be the same as the premining land use and that is wildlife and livestock grazing. The East Mountain allotment of the Ferron Ranger District is approximately 21,000 acres and supplies about 2500 animal unit months of grazing. Twice a year local ranchers use the Church Mine Trail (a portion of the mine access road) to drive cattle to and from the East Mountain grazing area.

Currently, the Church Mine Trail is used to reenact the migration of white settlers to the Huntington area. Eight hundred to a thousand youth per year are involved in this trek (phone call with Montell Seely, August 8, 2002). In 1959, Montell Seely took a bulldozer, 2 tons of

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dynamite, a jackhammer and a compressor to the top of East Mountain to widen and improve the Church Mine Trail. The Permittee was requested to include this information in the MRP and unfortunately it was not.

Findings:

Information in the proposed amendment meets the minimum requirement of this section.

MAPS, PLANS, AND CROSS SECTIONS OF RESOURCE INFORMATION

Regulatory Reference: 30 CFR 783.24, 783.25; R645-301-323, -301-411, -301-521, -301-622, -301-722, -301-731.

Analysis:

Affected Area Boundary Maps

Currently, the mine area disturbed drainage leaves the disturbed area and permit area below the Tipple Valley Fill and then re-enters the permit area and the disturbed area for treatment in the sediment pond. In a letter dated August 29, 2001 to the Permittee the Division allowed the Permittee to not permit this drainage.

Findings:

The information provided in the application meets the minimum Maps, Plans, and Cross Sections of Resource Information requirements of the regulations.

OPERATION PLAN

AIR POLLUTION CONTROL PLAN

Regulatory Reference: 30 CFR 784.26, 817.95; R645-301-244.

Analysis:

State air quality regulations at R307-205-5 Mining Activities requires mining activities to control fugitive dust by watering, paving, restricting speed, restricting travel, or by other methods. The applicant states that they will meet the requirements of the Clean Air Act. The permit states that dust will be controlled by reducing the rate of vehicle travel to 10 mph and watering on an as needed basis.

Findings:

The information provided in the application meets the minimum Air Pollution Control Plan requirements of the regulations.

VEGETATION

Regulatory Reference: R645-301-330, -301-331, -301-332.

Analysis:

Fill slopes were vegetated with an interim seed mixture in 1981 through 1988. Given the arid climate, the vegetative cover on most of these fill sites was very good after 13 to 20 years of plant establishment. Slopes on these fills are considered very steep and are comparable to the fill slopes to be reestablished in reclamation. The active rooting zone of the fill material should be suitable as a growth medium in reclamation.

Findings:

Information provided in the application meets the minimum requirements of this section.

RECLAMATION PLAN

POSTMINING LAND USES

Regulatory Reference: 30 CFR Sec. 784.15, 784.200, 785.16, 817.133; R645-301-412, -301-413, -301-414, -302-270, -302-271, -302-272, -302-273, -302-274, -302-275.

Analysis:

The landowner for Phase 1 of the reclamation is PacifiCorp, the Permittee. Because the landowner and applicant are the same no requirements for landowner concurrence is required. The landowner for Phase 2 is PacifiCorp and Forest Service. The Forest Service is involved in the reclamation plan and the Division has received verbal concurrence and will follow-up and request written approval of the reclamation.

A cattle trail will be established from the county road to access the grazing allotments on East Mountain. The trail will follow the reclaimed haul road to the pre-law waterline and then back to the reclaimed mine access road.

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Findings:

The information provided meets the minimum regulatory requirements of this section.

PROTECTION OF FISH, WILDLIFE, AND RELATED ENVIRONMENTAL VALUES

Regulatory Reference: 30 CFR Sec. 817.97; R645-301-333, -301-342, -301-358.

Analysis:

Golden eagle nest #952 is within the half-mile buffer zone suggested by the U. S. Fish and Wildlife Service (USFWS). Restricted dates are January 1 to August 31, although these dates vary according to region. The Permittee has not proposed a start date for the work at the mine. If the project is started inside the restricted dates, after on site activities have been idled then the Division will consult with the USFWS and DWR to insure compliance with the Bald Eagle Protection Act. If the eagles are nesting then construction can begin but a biologist will need to monitor the nest. If the eagles appear to be disrupted because of the construction activity then all reclamation work will need to stop until the young have fledged. Abandonment of a nest with eggs or chicks is a violation of the Migratory Bird Treaty Act and the Utah Coal Mining Rules.

Findings:

The information provided in the application meets the minimum Protection of Fish and Wildlife and Related Environmental Resource requirements of the regulations.

REVEGETATION

Regulatory Reference: 30 CFR Sec. 785.18, 817.111, 817.113, 817.114, 817.116; R645-301-244, -301-353, -301-354, -301-355, -301-356, -302-280, -302-281, -302-282, -302-283, -302-284.

Analysis:

General requirements

A total of 22 acres will be seeded in Phase 2 reclamation. Sheet No 300-1, Proposed Reseeded Area, shows the area to be seeded. Dates of seeding will need to be shown on the as built.

The greatest revegetation concern at this site is stabilizing the very steep slopes, which are commonly 2h:1v and up to 1¼h:1v. The application states that these very steep slopes will be treated with roughening, seeding and mulching. During Phase I these very steep slopes were not effectively mulched and roughened. The Division is particularly concerned with the area identified on Drawing #200-1 labeled Proposed Excavated Substitute Soil near SS5. This area, although affected by coal mining has not been disturbed. Soil excavation will leave this area at a 1¼ h:1v slope. The Division proposed as an alternative borrow area the southern post-law portion of the bath house pad and requested the Permittee not to disturb this area. The Permittee instead has stated that this area will only be disturbed as a last resort.

The Division is very concerned about the steep cut slopes to be left in reclamation. The Permittee was asked numerous times to identify these cuts and describe how they will be reclaimed. The Permittee's responses have been technically inadequate. The Permittee has stated that they will take full responsibility in meeting all performance standards for bond release. Given this commitment the Division should, under no circumstances, change or reduce any revegetation success standards. Vegetation sampling for final bond release must be done on a fully random selection criteria (not stratified random) so all areas on the ground, even if near vertical have an equal chance of being sampled. Vegetation consultants should be equipped with proper safety equipment, such as rock climbing gear, prior to sampling.

The seed mixture (section R645-301-353.120) was designed to establish and provide some erosion control on these slopes. Annual reports detailing prevalent species established from interim seeding were reviewed for species seed mix selection. All species in the mixture are native and most are native to this specific area. Unfortunately, Salina wildrye, the dominant grass, is not commercially available for reclamation. The application rate is 61 seeds /ft². This rate is consistent with recommendations for the Utah area. Aggressive species were used because of the concern with soil stabilization. Diversity of the native area is low. Transplants will be used to aid in the visual attributes of the area during vegetation establishment. These transplants will also be important to add to the species diversity.

Seed will be broadcast using a hurricane spreader or applied using a hydroseeder contemporaneously as possible after roughening. The seed will be raked to cover the seed if using a hand spreader. Generally raking is not necessary unless the soil has crusted. Crusted soil should be raked even if hydroseeding. Covering the seed with hydromulch does not substitute for soil seed coverage.

All noxious weeds will be eradicated either chemically or physically if they become established on site (Maintenance and Monitoring (R645-301-357.320 thru R645-301-357.332)). The Weed Web at: <http://extension.usu.edu/coop/ag/crops/weedweb/index.htm> is an excellent resource for current noxious weed lists and control methods.

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Timing

The application commits to seeding immediately after the soil is roughened. The exact season is unknown but likely will be through out the year. Early spring and late fall is the normal time for seeding in this area. A summer seeding maybe successful since this area is subject to summer rains. Several seeding attempts maybe necessary for successful germination and establishment. The Operator should be aware that only under limit conditions is reseeding allowed that does not restart the bond liability period.

Mulching and Other Soil Stabilizing Practices

One ton per acre weed free alfalfa hay will be incorporated into the soil during roughening. (Generally noxious weed free alfalfa hay is specified. Weed free hay will be difficult to find.) This will provide a slight organic component to the soil and may reduce crusting for seed germination. All areas will be hydromulched with tackifier and applied at the rate of 1500 lbs./acre. Care must be taken to not leave the seed in the hydromulcher for longer than 30 minutes.

Rocks, shrub and tree debris, and other organic on site materials should also be used as a top covering for the seeded surface.

Standards for Success

Vegetation success of the reclaimed Des Bee Dove mine area will be compared to the pinyon-juniper reference area established in 1980. Success will be judged on production, shrub density and cover of the reclaimed site as compared to the reference area. The Operator commits to tree and shrub numbers similar to the reference areas life forms.

Findings:

Information provided meets the minimum Revegetation requirement of the regulations.

STABILIZATION OF SURFACE AREAS

Regulatory Reference: 30 CFR Sec. 817.95; R645-301-244.

Analysis:

Slopes will be graded to 1¼ h:1v to 2h:1v. Extreme surface roughening will be used on all slopes (R645-301-350 Performance Standards, page 5). This is discussed as a deficiency in the Revegetation section. The roughening process can occur during topsoil placement or while incorporating organic materials (i.e. hay). Proper roughening is very important for the site

stabilization and revegetation. Roughening is described in the technique sheets in the Division's reclamation manual, The Practical Guide to Reclamation in Utah, found at: ftp://dogm.nr.state.ut.us/PUB/MINES/Coal_Related/RecMan/Reclamation_Manual.PDF . The technique sheets are also useful to give to equipment operators to illustrate the degree of roughness required. Large boulders will be used as riprap.

One ton per acre of certified weed free alfalfa hay will be incorporated into the soil when pocking. A soil tackifier will be applied according to manufacturers specifications. Fifteen hundred lbs/acre of wood fiber mulch and tackifier will be spread on the soil surface for cover and protection.

The area will be monitored annually for rills and gullies. The Permittee commits to filling and seeding any rills and gullies. The Permittee should expect some rills and gullies during the initial site establishment period that may be as long as 5 to 10 years in this arid area.

Findings:

The information provided in the application meets the minimum Stabilization of Surface Areas requirements of the regulations.

RECOMMENDATIONS

Approve the application for reclamation of phase 2 of the Des Bee Dove site.