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File ACT/015/017
#2
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SEP 27 1990
#5

DIVISION OF
OIL, GAS & MINING

September 27, 1990

Ms. Pamela Grubaugh-Littig
Permit Supervisor
Division of Oil, Gas and Mining
355 West North Temple
3 Triad Center, Suite 350
Salt Lake City, UT 84180-1203

Re: **FIVE-YEAR PERMIT RENEWAL, DES-BEE-DOVE MINE,
ACT/015/017, FOLDER #2, EMERY COUNTY, UTAH
ABATEMENT TO CESSATION ORDER NO. C90-20-2-1**

Dear Ms. Littig:

Transmitted herewith is our remaining response to your Initial Completeness Review letter dated June 25, 1990 and our Abatement to Cessation Order No. C90-20-2-1.

Included herein are 12 each complete new binders (Volumes 2-7) to replace the original binders of the PAP. Volume 1 was previously submitted September 7, 1990. Volume 2 contains the written text material addressing Sections 3 (Operations) and 4 (Reclamation) in their entirety and hereby replaces the written contents of the original Volume 2 of the PAP. Both Volumes 1 and 2 have now been completely retyped, renumbered and referenced to the new rewritten rules as requested.

The submittal of all new binders was necessary to clean up the PAP and eliminate the use of the old awkward black binders. However, with this, it will be necessary to rearrange some of the contents (maps, etc.) to fit within the new binders.

A new Table of Contents is provided depicting the location of the PAP contents. Also, there are some revised replacement maps enclosed as part of this submittal that will need to be inserted into their proper location. Attached is a organizational listing to assist those individuals having to organize this submittal. As promised to you in our meeting on September 20, we will make ourselves available to come to your office and to the other agencies to insert and rearrange the PAP material, so everyone is working with the same updated and properly organized PAPs.

To help the reviewers in locating our response to comments from DOGM, USFS and DWR, enclosed is a copy of the agency's comments with the new page numbers and/or map reference noted to the right identifying the location of our response. There are some

responses we felt were not worthy of inclusion within the PAP, but needed further clarification. These responses are provided on a separate attachment to this letter.

The geology and hydrology volumes submitted in April 1990 should have the front cover and spine inserts removed and replaced with the newly supplied covers and spine inserts provided herein.

This should complete the initial response to the permit renewal and abatement to Cessation Order No. C90-20-2-1. Should you have any questions, please feel free to contact myself, Scott Child or Val Payne.

Sincerely,

A handwritten signature in black ink, appearing to read "D. W. Jense", with a long horizontal flourish extending to the right.

D. W. Jense
Managing Director
of Administration
Fuel Resources

DWJ:SC:bb:6543
Enclosures

cc: Scott Child
Val Payne
Guy Davis
Bart Hyita

**PAP
ORGANIZATION LISTING
FOR PERMIT RENEWAL RESPONSE
SEPTEMBER 27, 1990**

<u>Volume</u>	<u>Action Needed</u>
1	None
2	None
3 (Appendices)	Insert entire contents from old Volume 3 into new binder Volume 3 and insert stability analysis from Chen Northern into Appendix III.
4	Insert Maps 1-1, 1-2, 1-3, 1-4, 2-12, 2-13, 2-14, 2-15, 2-16, 2-17, 2-18, 3-1, 3-2, 3-3, 3-4, 3-5, 3-6, 3-7, 3-8.
5	Insert Maps 3-9, 3-10, 3-11, 4-1, 4-2, 4-3, 4-4, written text of Junction Road dated 12-19-84, certification letter dated 11-17-89, 5-1 sheets 1 thru 4, 5-1 sheets 5-8.
6	Insert Maps 5-1 sheets 9 thru 12, 5-1 sheets 13 thru 16, 5-1 sheets 17 thru 20, 5-1 sheets 21 thru 24, 5-1 sheets 25 thru 28, 5-1 sheets 29 thru 32, 5-1 sheets 33 thru 36, 5-1 sheets 37 thru 38.
7	Insert Maps 5-2, 5-3, 5-4, 5-5, 5-6, written text of pond access road, 5-7, 5-8, 5-9.

REVISED REPLACEMENT MAPS

Volume 4	Replace Maps 1-1, 1-2, 1-3, 1-4, 2-12, 2-14, 2-17, 2-18, 3-1 and 3-2 with revised maps dated 8-18-90 (maps 1-1 thru 1-4, 2-12, 2-14, 2-17B and 2-18) and revised maps 3-1 and 3-2 dated 9-18-90. Remove maps 3-3 and 3-4, they have been deleted, but leave the map packets in place.
Volume 5	Replace map 4-1 with revised map 4-1 dated 9/26/90.
Volume 8	Insert new PacifiCorp spine and front cover.
Volume 9	Add map HM-6 revised 8-19-90 and insert new PacifiCorp spine and front cover.

Utah Power and Light Company
Emery County, Utah
June 25, 1990

R-614-301-200 Soils-(HS)

The applicant must commit to fulfilling the requirements of this section for all new, previously undisturbed disturbances (i.e., soil removal, storage, redistribution, etc.).

2-170, 2-171

220. Environmental Description-(HS)

222.100 Soil Survey Map 2-16 must be revised to include the entire Des-Bee-Dove Haul Road. Additionally, soil identifications and soil boundaries must be depicted on Map 2-16 and correlate with the soil descriptions located on pages 2-130 and 2-131.

Refer to Revised Map 2-14

230. Operation Plan

231.100 General Requirements The applicant must describe the methods for characterizing, removing, storing and protection of the topsoil, subsoil, and other material removed during the construction of the sedimentation pond. Additionally, the applicant must provide volume estimates of the soil stockpile and depict the stockpile on an appropriate map or plate.

3-50

233. Topsoil Substitutes and Supplements On page 3-47 the operator refers to "test borings" of the tippel pad material for the purpose of ascertaining the extent of coal waste and boney material. Please provide the data generated by these test borings.

4-75, 4-76

On page 4-7.3 the applicant refers to estimating the volume and location of suitable substitute topsoil. Please submit this information for inclusion in the PAP.

4-75 &
See Comment #1

240. Reclamation Plan

243. Soil and Nutrients and Amendments Sampling procedures to determine the soil nutrient deficiencies within the regraded soil must be specified. The applicant must describe the constituents to be analyzed, laboratory and field sampling methodologies employed.

4-77 thru 4-85

R614-301-300 Biology-(SMW)

320. Environmental Description

321.100 Vegetation Information Please include in the Permit Application Package (PAP) a description of the salt desert shrub and Pinyon-Juniper vegetative type which is within the boundaries of the permit area. The general description of the salt desert shrub type is not representative of the permit area. The description of the Pinyon-Juniper type and associated species does not include the haul road.

2-169

322.220 Fish and Wildlife Information The PAP must include site specific wildlife and associated habitat information to include the entire permit area (haul road).

2-196, 2-197

323.400 Maps and Aerial Photographs The applicant must submit a vegetation map which includes the entire permit area (haul road, Map 2-12).

See Revised Map 2-12

330. Operation Plan

332. Operation Plan Please include a statement in the PAP of the anticipated impacts of subsidence on renewable resources.

4-144

333. The applicant must include in the PAP a description of the environmental protective measures used during coal mining and how the operation will minimize impacts to the environment throughout the life of the mine. How is this currently being done?; are these protective measures being monitored?; do these measures include the haul road?.

2-192, 2-196, 2-197

340. Reclamation Plan

341.210 Revegetation The application does not include a seed mixture for the Pinyon-Juniper vegetative type along the haul road. Please include this in the PAP.

4-57, 4-58.

342.100 Fish and Wildlife The application will include a description of the wildlife enhancement measures to be used during reclamation and postmining.

4-81, 4-89, 4-93, 4-96

350. Performance Standards

356.100 Revegetation: Standards of Success Table 10 (page 2-117) is not complete or adequate (no area measurement is listed) to evaluate the revegetation success of the reclaimed area. The tree and shrub standard of the Pinyon-Juniper reference area is not representative of the Pinyon-Juniper type along the haul road. The applicant must quantitatively measure the tree and shrub densities in the Pinyon-Juniper type adjacent to the haul road in order to evaluate the appropriate tree and shrub stocking rate for the postmining land use.

2-165
See Comment #2

357.220 Revegetation: Extended Responsibility Period The applicant should realize and state in the PAP that the extended period of responsibility will continue for not less than 10 years. The Salt Desert Shrub vegetation type is a very difficult site to stabilize and establish. It may well take more than 10 years to meet the vegetative success standard for bond release.	4-104
358.500 Protection of Fish, Wildlife and Related Environmental Values The plan will specifically address the protection of wildlife from fences, conveyors, other barriers, toxic-forming materials and other hazards.	4-153 thru 4-158
R614-301-400 Land Use-(SMW)	
410. Land Use	
411.140 Cultural and Historic Resources Information The application will contain maps which show the cultural and historic resources listed or eligible for listing in the National Register and known archeological sites (including the haul road) within the permit and adjacent areas.	2-71, 2-100, 2-104, 2-108, 2-112, 2-116, 2-119, 2-124, 2-129, 2-130
411.142 The cultural and historic resources information in the PAP must include coordination with the State Historical Preservation Officer. A letter included in the PAP will suffice as coordination.	2-132
412.100 Reclamation Plan The applicant must clearly state the proposed postmining land use. The statement will include how the postmining land use will be achieved.	4-103 thru 4-105
412.200 The applicant will include a copy of comments from the legal or equitable surface owner concerning the proposed land use.	4-104
R-614-301-500 Engineering-(JK)	
510. Introduction	
515.100 Reporting and Emergency Procedures The operator must incorporate in the permit application a description of the procedure for reporting a slide and a commitment to comply with any remedial measures required by the Division.	3-19
515.200 The operator must incorporate a description of the procedure for reporting an impoundment hazard, emergency procedures to be followed in the event of such a hazard, and remedial actions to be taken.	3-19
515.300 The operator must provide a description of procedures to be followed in the event of temporary cessation of operations.	3-19
520. Operation Plan	
521. General All general maps depicting the Cottonwood/Wilberg and Des-Bee Dove Mine permit areas must depict the new Cottonwood/Wilberg Waste Rock Storage Facilities.	See all revised maps submitted herewith
Additionally, the applicant must include a description of the disposal methods for placing underground development waste and excess spoil in the new Cottonwood/Wilberg Rock Storage Facility.	3-41
521.200 The operator must commit to providing the signs and markers described in this section.	3-18, 3-19
525.300 Subsidence The operator must commit to give public notice of the resumption of mining operations at least 6 months prior to mining.	3-1
527.100 Transportation Facilities The operator must classify each road as either a primary or ancillary road, as defined in this section.	3-41, 3-42, 3-43
528. Handling and Disposal of Coal, Overburden, Excess Spoil and Coal Mine Waste The operator must update the permit application to refer to the new Cottonwood/Wilberg Waste Rock Storage Facility.	3-41
530. Operational Design Criteria and Plans	
533. Impoundments The operator must provide engineering data and calculations to show that the sedimentation pond has a static safety factor of at least 1.5 for the normal pool with steady-state seepage and a seismic safety factor of at least 1.2.	3-68 & Appendix III
534.130 Roads The operator must provide engineering data and calculations to show that the road embankments have a static safety factor of at least 1.3.	3-68 & Appendix III
534.300 The operator needs to classify all roads as either primary or ancillary, in accordance with R614-301-527.100.	3-41, 3-42, 3-43
537. Regraded Slopes The operator must supply information regarding the backfilling and grading of the parking lot/bathhouse/warehouse area and the Deseret Portal area. Specifically, the operator must indicate where the necessary fill material for these sites will be obtained and provide volume estimates to show that the volume of available fill material will indeed be sufficient to meet the requirements.	4-118 thru 4-127
540. Reclamation Plan	
541.300 General The operator must provide the Division with a copy of a letter from the U.S. Forest Service which authorizes retention of the road for postmining uses (see R614-301-412.200).	4-103, 4-104, 4-105

542.800 The operator must update the estimate of reclamation costs to make certain it accounts for the reclamation of mine appurtenances that have been constructed since the last permit renewal. For example, the present reclamation cost estimate does not include the cost of removing either the large culvert below the Deseret Portal area or the culvert beneath the Cottonwood/Wilberg Junction Road.

4-100, 4-106 thru 4-112

550. Reclamation Design Criteria and Plans

553.100 Backfilling and Grading The operator must supply information regarding the backfilling and grading of the parking lot/bathhouse/warehouse area and the Deseret Portal area. Specifically, the operator must indicate where the necessary fill material for these sites will be obtained and provide volume estimates to show that the volume of available fill material will indeed be sufficient to meet the requirements.

4-118 thru 4-127

560. Performance Standards The operator must include a statement to the effect that coal mining and reclamation operations will be conducted in accordance with the approved permit and the requirements of R614-301-510 through R614-301-553.

Page 3 of Introduction

R614-301-700 Hydrology-(JE)

720. Environmental Description

722.500 Cross Sections and Maps Map 4-1 (2 of 5) does not include the entire watershed for Ditch "A". An additional map of the same scale must be included to allow for accurate determination of the Ditch "A" watershed.

See revised map 4-1 (2 of 5)

727. Alternative Water Source Information Page 4-33.3 discusses replacement or compensation of surface water rights diminished as a result of subsidence. The PAP must quantify the water rights associated with springs within and adjacent to the permit boundaries. The operator must identify any existing water rights for replacement of spring water and discuss alternate water sources.

4-151, 4-152

730. Operation Plan

731.222 Pages 4-25 and 4-26 refer to two springs and the monitoring of those springs. These springs must be identified and the appropriate map referenced. The monitoring parameters, sampling frequency, and test results must be referenced in the PAP.

4-102

731.222.2 Water Monitoring Page 4-25 states water discharged from sedimentation ponds will be monitored to insure the effluent limitations are not exceeded. The mine UPDES permit must be referenced and included in the PAP.

4-101, 4-102 & Volume 9

740. Design Criteria and Plans

741. General Requirements Map 3-8 shows a loop road with two sediment basins and another sediment basin located at the hairpin of the mine road. These areas have not been addressed in either the operation or reclamation plan. Design criteria and plans must be included in the PAP for these drainage areas.

See revised map 3-7
(Submitted 4-16-90) & Comment #3

742.110 Sediment Control Measures The reclamation sediment control plan on pages 4-5 and 4-5.1 discusses channel designs for the haul road and contour ditches for the sediment pond area. The plan does not address the necessary sediment control measures to minimize erosion and retain sediment within the disturbed area for the entire haul road, access road, and portion of the sedimentation pond area. The PAP must include all sediment control measures and siltation measures with design criteria, cross sections and maps.

See Comment #4

742.120 Sediment Control Measures The reclamation plan does not address the removal and reclamation of the 84-inch culvert running off the lower pad. The reclamation design criteria and plans must be included in the PAP.

4-5, 4-107 (Item 1-S)

742.213 Siltation Structures The current operation includes the use of silt fences on a small area located east of the sedimentation pond which drains below this pond. The design criteria and plans must be included in the PAP and documented on the appropriate maps.

See Comment #3

742.312 Diversions The unnumbered page immediately following page 4-7-C consists of a photo copy of hydrologic and riprap design calculations. The first and last column did not copy. This page must be resubmitted.

4-70

Page 4-7-A refers to flow velocity vector analysis for water level changes at the bend of the main channel diversion. The vector analysis must be included in the PAP.

4-71

Page 4-7-C refers to backwater analysis for transition flow at the upper end of the main diversion channel. The backwater analysis must be included in the PAP.

4-72

742.314 Page 4-4.11 states soil samples will be taken to determine final selection of filter material. To ensure adequate time to complete the design and the Division review, the operator must commit to a time frame for soil sampling and submittal of results and design for the Division review and inclusion into the PAP.

4-19

RECEIVED

Reply to: 2820

AUG 16 1990

Date: August 14, 1990

DIVISION OF
OIL, GAS & MINING

Lowell Braxton
State of Utah Natural Resources
Division of Oil, Gas and Mining
355 West North Temple
3 Triad Center, Suite 350
Salt Lake City, Utah 84180-1203

RE: Five-Year Renewal, Utah Power and Light Company, Des-Bee-Dove Mine,
ACT/015/017, Folder #2, Emery County, Utah

Dear Lowell:

We received a copy of the April 16, 1990, updated text and maps on June 25, 1990. This was the first notification we received to indicate that the 5-year renewal review was in progress. Upon our request, we also received a copy of the Division's Initial Completeness Review, dated June 25, 1990. We have reviewed these materials and have the following comments:

1. The Des-Bee-Dove Mine has been idle since 1987. The MRP should discuss Utah Power and Light Company's plans and schedule for reopening or reclaiming the mine.
2. The mine plan maps have not been updated to show the present status of the mine area. The maps need to be updated to show the extent and status of existing workings and future plans for mining.
3. The MRP does not contain adequate maps to show surface geology. The maps referenced in the hydrology and geology section in chapter 2 and the new geology and hydrology volumes show detailed structural geology of the coal beds, but the surface geology is incomplete. A geologic map needs to be completed and/or the spring maps (2-10a, 2-10b and HM-5) need to be completed and referenced in the text. The maps do not show the Castlegate Sandstone and Blackhawk Formations. This information is needed to evaluate impacts to hydrology and land stability.
4. Page 2-106, Permit Area Vegetation

Stipulations included in the Federal coal leases within the permit area require resource monitoring to locate, measure and quantify the progressive and final effects of underground mining activities on the topographic surface, underground and surface hydrology, and vegetation. The operator has established monitoring systems for measuring subsidence and the effects to area hydrology but has not established a monitoring system to determine the effects of mining and subsidence on vegetation.

The vegetative types which occur within the permit area are discussed on page 2-106 and are shown on Map 2-12. The vegetation survey was based on aerial photography taken in 1962. The operator must commit to a vegetation monitoring plan which will meet the objectives of the lease stipulations, provide up-to-date information and determine if the vegetative community areas have been altered by mining or subsidence. We feel that color infrared (CIR) aerial photography at a scale of 1:6000 at five-year intervals would provide the necessary data for mapping vegetation types and determining what impacts have occurred. Ground surveys would be acceptable as long as the necessary area of coverage could be achieved.

The vegetation monitoring data should be included in the annual report for subsidence monitoring at 5 year intervals corresponding to 5-year renewals. The baseline vegetation maps should be retained in the MRP with references to the monitoring reports.

5. Page 2-146, Land Use Information

The land use section should discuss management emphasis on National Forest System lands, as discussed in the Manti-La Sal National Forest Land and Resource Management Plan, 1986.

6. Page 3-40, Sedimentation Pond

It is discussed that the sediment pond will be cleaned at 60% of the design volume and will be buried in an area located 150 feet northwest of the pond. We realize that this is on State land and recommend that the sludge be tested for any potentially hazardous or toxic materials prior to disposal. If any hazardous or toxic materials are encountered, they should be hauled to an approved disposal facility.

3-1, 3-2

See maps 3-1 & 3-2

See new map HM-6 (Volume 9)

2-169, 2-170

2-169, 2-170

2-169, 2-170

2-221, 2-222

3-52

7. Page 4-6, Toxic or Acid Forming Materials

The second paragraph in this section states that toxic or acid forming materials will be disposed of in the same manner as asphalt and concrete. Disposal calls for burial with four feet of non-toxic materials. Special Condition No. 1 (Exhibit B) of Federal Permit UT-0015 requires that the permittee obtain permission from the Forest Service prior to disposal of toxic waste on National Forest System lands, or submit for approval an alternate site. This condition was retained as Condition No. 2 in OSM's approval for termination of the Federal permit under the approved State coal regulatory program.

4-65

The Forest Service has determined that disposal of potentially toxic or hazardous materials on National Forest System lands is not consistent with the Organic Act and the Multiple-Use Sustained Yield Act which mandates how National Forests are managed. Disposal of such materials is not permitted on National Forest System lands. The operator will be required to dispose of all toxic and hazardous materials at an approved disposal facility. The text and permit conditions must be revised accordingly.

8. Chapter 4

Item 6 on page 4-14 states that an annual interim vegetation monitoring report that summarizes the year's work will be placed in the Company's files and forwarded to DOGM. Monitoring of the success of the interim revegetation attempts will be used to revise the final reclamation revegetation plan. In order for the Forest Service and DOGM to successfully cooperate on approval of the final seed mix, the annual reports need to be concurrently reviewed. We have not typically received copies of the revegetation reports from the mine operators or DOGM. DOGM should require an extra copy of the annual report be forwarded to the Forest Service.

4-80, 4-81

The final reclamation seed mix contains several plant species not included in the test plot seed mix shown on page 4-21. The test plot seed mix contains plant species not included in the final seed mix. There should be closer correlation to show how the test plots are being used to determine the final seed mix.

4-57, 4-82

See Comment #5

We recommend revision of the final seed mix for the haul road shown on page 4-4.49. Thickspike wheatgrass is not well suited to this dry area. Intermediate wheat and Crested wheat would be better suited to site. Mat saltbush could be replaced by Wyoming sage and Sphaeralcea grossularifolia could be replaced by Sphaeralcea coccinea. Item 4 on page 4-4.50 shows a sulfur application rate of 1000 lbs/acre. An application rate of 100 lbs/acre would be more proportionate to other soil amendments. This is probably a typo. Please contact Bob Thompson at our office in Price to discuss the seed mix.

The 1989 test plots involve a seed rate of 50.5 lbs/acre. This is an excessively heavy seed rate which could result in competition between plants in excess of what the area can sustain. We feel that the seed rate needs to be evaluated in the test plot monitoring to determine what seed rate is the most successful. This should be addressed in the annual reports.

9. Page 4-33.3, Mitigation of Subsidence Damage Effects

Escarpment failures and subsidence of perennial streams should be discussed. If the mine plan has been designed to prevent such effects as required by lease stipulations, or if no perennial streams will be undermined, this should be stated in this section.

We have requested that the BLM review the mine plan and advise us as to whether or not the mine plan could result in unstable conditions or escarpment failures (see the attached letter). If the BLM or DOGM determine that unstable conditions or escarpment failures could be induced by mining, an environmental analysis will be needed to access impacts. Federal Lease Stipulations require specific Forest Service approval to permit these conditions.

4-151, 4-152

Replacement of water is discussed in the second paragraph. The operator states: "In the event that surface waters above the Des-Bee-Dove Mines are diminished as a result of operations..., applicant will, at its sole option, either (1) replace the surface water so diminished, or (2) compensate the affected surface owner by purchasing such owner's land and water rights for the pre-subsidence fair market value." On National Forest System lands option 2 is not acceptable. Option 1 must be implemented and the method of water replacement is subject to approval by the Forest Service, and not at the company's sole option. This needs to be revised to provide a commitment for replacement of water, in accordance with lease stipulations.

10. Page 4-35 Raptor Nests Mitigation Plan

In the second paragraph, it is stated that only nest site number 56 will be potentially impacted by planned mining. It is also stated that if the nest is impacted, the USFWS will be contacted and the operator will repair or replace the nest.

4-154 thru 4-158

Why and how the nest is likely to be impacted must be discussed. The plan and lease stipulations do not allow for mining which will induce escarpment failures. If the nest is likely to be impacted by escarpment failure, the mine plan needs to be altered to prevent this from happening. If subsidence or some other activity are likely to cause the impact, without escarpment failure, measures to protect the nest or prevent the eagles from occupying the nest need to be proposed. The necessary protection or mitigation measures must be approved by the Fish and Wildlife Service, Forest Service, and Division of Wildlife Resources before the activity which is likely to cause the impact can take place.

Map 2-17, Raptor Nesting Location and Habitat Map, was submitted with the revised materials. The Land Use Map already included in the MRP is also labeled as Map 2-17. Either the two maps should be combined or the new map should be relabeled.

See maps 2-17A & 2-17B

11. Page 4-4, Cottonwood/Wilberg/Des-Bee-Dove Haul Road

A review of the road reclamation drawings and calculations shows that there may be some problems with the balance of earthwork volumes. The method used to calculate the volume of material to be excavated at the culverts has resulted in an error of approximately one-third. The calculated volumes are one-third larger than the actual volumes which will result in less material actually available for burying road surface materials in the fill slopes and achieving approximate original contour. This needs to be re-evaluated and the reclamation plan revised to provide for the necessary 4 foot of cover and available material to return the disturbed area to approximate original contour.

See Comment #6

The riprap sizing method used provides maximum size and gradation which is greater than the normal depth of flow. What this means is that the riprap will be disproportionately large for the size of the drainages, will allow erosion to occur under the large boulders, and result in an abnormal looking landscape. Other proven methods which would provide more proportionate riprap size and adequate erosion protection should be used.



State of Utah
 DEPARTMENT OF NATURAL RESOURCES
 DIVISION OF WILDLIFE RESOURCES

Norman H. Baugher
 Governor
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 Executive Director
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Southeastern Region
 455 West Railroad Avenue
 P.O. Box 84501-2829
 Salt Lake City, Utah 84180

RECEIVED
 AUG 17 1990

DIVISION OF
 OIL, GAS & MINING

August 3, 1990

Dr. Dianne R. Nielson, Director
 Utah Division of Oil, Gas & Mining
 355 West North Temple
 3 Triad Center, Suite 350
 Salt Lake City, Utah 84180

Dear Dianne,

The Division has reviewed the five-year permit renewal for Utah Power and Light's Des-Bee-Dove mines. The mine area encompasses deer habitat characterized as high priority summer range and critical value winter range. Both critical and high priority valued elk winter range are also found at the mine area. The Fish and Wildlife Resources Information should more accurately rank the wildlife habitat area; specifically, page 2-134 (Wildlife Habitats, paragraph 1) and page 2-140 (Game Species; Mule Deer and Elk).

2-192, 2-198

It is well known that raptors utilize the Des-Bee-Dove area for breeding. Although the plan incorporates a procedure for raptor nest mitigation (4-35), precautions can also be taken to minimize the potential for impacts to the birds during their crucial breeding period (February 15 to May 1). Major construction activities, surface disturbances, and mining should be avoided within a 0.5 mile radius of active nest sites to allow the raptors to lay eggs and raise young.

4-155

Des-Bee-Dove is located in a steep, rocky, dry canyon. During mine operation, the access roads through the mine area and to the portals are used by mine personnel as well as for biannual cattle drives accessing East Mountain. Page 4-27 states that the present road system will be left upon closure of the mine to provide greater public use of the area. Due to the steep, dry terrain as well as the wildlife value of the area, the Division recommends closure of all the mine access roads to vehicular traffic and revegetation of the roads including the East Mountain access trail. The roads and trails should also be closed to cattle use for 2 years following seeding to allow the successful establishment of vegetation. After that time it is recommended that the access roads be used only for cattle drives by horseback. Installation of a gate would help control public use of the area.

4-103 thru 4-105

All disturbed areas at the mine site should be revegetated upon completion of mining activities; included here are the sediment pond and sediment disposal area referred to on 4-26, paragraph 1.

4-102

If hand broadcasting of any of the disturbed areas is utilized and the seed not covered, the amount of seed in the revegetation prescriptions should be doubled. Broadcast seed can be covered by dragging with a chain or similar method.

CLARIFYING COMMENTS

1. On page 4-75 we have committed to supplying DOGM with volume estimates and location of suitable substitute topsoil prior to final reclamation.
2. This work is currently being conducted and data will be submitted when received.
3. These areas utilize alternative sediment control measures for road runoff. They are small detention basins or silt fences installed solely to control and treat road runoff and are not designed to contain any given storm event.
4. This same item was made as condition #1 to the original permit issued in 1985. Enclosed is past correspondence addressing this issue. The design criteria was stated by DOGM and we complied with their recommendation in our response. See attached correspondence.
5. As stated on pages 4-57, 4-58 and 4-82, final seed mixes for both the mine site and haul road may be revised to incorporate results of the test plots. All test plots were established in 1989; therefore, the applicant feels revisions at this time are premature. The test plots, seed rates (50.5 lbs/acre) and sulfur application (1000 lbs/acre) were installed according to DOGM specifications. This was not a typo. These parameters will also be evaluated and modified as necessary.
6. The Des-Bee-Dove haul road reclamation plan includes calculations of earthwork volumes required to remove the existing culverts and establish drainage channels. The quantities to be moved were used to determine the cost at the reclamation effort as well as to determine if sufficient material is available to accomplish the goals of burying the road surface material and returning the area to the approximate original contours. The method used to calculate the earthwork volumes was the average end area method, which is the most commonly used method for road design. This method does over-estimate the quantity of material in some cases, especially where the end area is zero at one end of the section.

In Section F, page 4-124, Des-Bee-Dove to Cottonwood/Wilberg haul road, subsection 1, calculations were made of the amount of material to be excavated to remove the culverts which are not to be replaced by drainage channels. This quantity was used to determine the cost of this task. This material was not included in the plan for covering road surface material or for regrading the slopes to return the area to the approximate original contour. Because the volume was over-estimated and therefore the calculated cost was higher than actual, the reclamation bond value is sufficient.

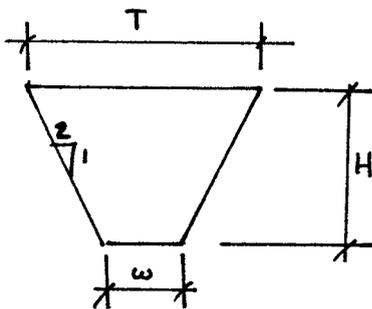
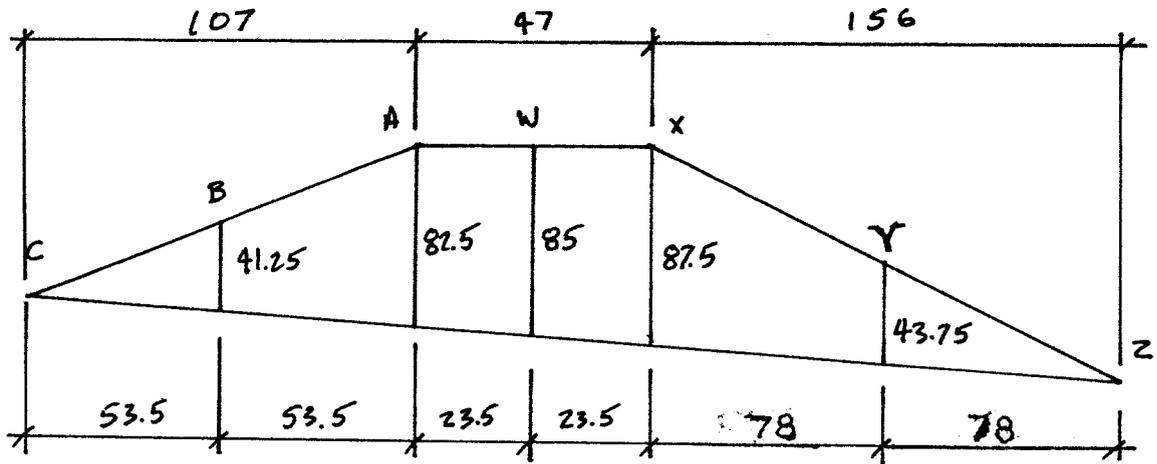
In subsection 2 of Section F, page 4-125, the volume of material to be removed in order to establish the new drainage channels was calculated. Here again, because the method used over-calculated the volume, the cost associated with this task is estimated at a rate above the actual and the bond amount is still sufficient. The other concern is if there is enough soil material to cover the road surface material and to return the area to the approximate original contour.

For reclamation, the road surface materials consisting of 10,284 cubic yards of asphalt and 16,102 cubic yards of base coarse are to be placed on the existing road grade between station 123+50 to station 141+00. The previous plan was to use 107,515 cubic yards from the channel excavation at station 146+00 to cover this road surface material. Upon recalculation the correct volume from the excavation at station 146+00 is 83,918 yards, the remaining 23,597 cubic yards of cover material will come from the excavation at station 156+50. The correct volume of material from station 156+50 excavation is 29,571 cubic yards. Therefore, there is sufficient material in the two excavations at station 146+00 and 156+50 to cover the road surface materials.

The certified road design summary sheet (plate 5-1, sheet 5 of 38) itemizes the quantity of excess excavation and borrow required to construct the road. The final amounts are 54,529 cubic yards of borrow and zero excavation, along with the 41,746 tons of base coarse and 25,364 tons of asphaltic concrete. Because of the net gain of material to construct the road the fact that none of the natural soil was disposed of at the site, it is obvious that sufficient soil material exists on the road grade to return the area to the approximate original contour.

The riprap sizing method determines a required size of riprap to ensure stability of the lining for the given flow rate and velocity. The maximum particle size indicates the upper limit at the gradation of the lining material. In actuality, very few of the particles in the lining will be as large as the maximum size represented. The gradation specification requires that approximately one-half of the particles, determined by weight, are smaller than one-half the maximum dimension given and 20 percent are smaller than one-fourth the maximum. This gradation generates a matrix of soil and rocks - such that the larger rocks create roughness to dissipate some of the energy and anchor the smaller particles in place. Some of the smaller particles may be dislodged and removed initially but the overall lining material will be stable and will be comparable to the natural streams in the area.

EARTH WORK CALCULATION - DBD HAULER 40 RECLAMATION



SECTION	H	T	w	Area ft ²
C	0	20	20'	0
B	41.25	185	"	4228
A	82.5	360	"	15263
W	85.0	360	"	16150
X	87.5	370	"	17063
Y	43.75	195	"	4703
Z	0	20	"	0

Average End Area Method

$$\begin{aligned}
 \text{Volume} &= \left(\frac{A_c + A_A}{2} \right) 107 + \left(\frac{A_A + A_X}{2} \right) 47 + \left(\frac{A_X + A_Z}{2} \right) 156 \\
 &= \left(\frac{0 + 15263}{2} \right) 107 + \left(\frac{15263 + 17063}{2} \right) 47 + \left(\frac{17063 + 0}{2} \right) 156 \\
 &= 2,907,145 \text{ ft}^3 = 107,672 \text{ cyds}
 \end{aligned}$$

PRISMOIDAL FORMULA

$$\begin{aligned}
 \text{Volume} &= \frac{1}{6} (A_c + 4A_B + A_A) 107 + \frac{1}{6} (A_A + 4A_W + A_X) 47 + \frac{1}{6} (A_X + 4A_Y + A_Z) 156 \\
 &= \frac{1}{6} (0 + 4(4228) + 15263) 107 + \frac{1}{6} (15263 + 4(16150) + 17063) 47 \\
 &\quad + \frac{1}{6} (17063 + 4(4703) + 0) 156 \\
 &= 2,265,791 \text{ ft}^3 = 83,918 \text{ cyds}
 \end{aligned}$$



STATE OF UTAH
NATURAL RESOURCES
Oil, Gas & Mining

Norman H. Bangerter, Governor
Dee C. Hansen, Executive Director
Dianne R. Nielson, Ph.D., Division Director

355 W. North Temple • 3 Triad Center • Suite 350 • Salt Lake City, UT 84180-1203 • 801-538-5340

November 27, 1985

RECEIVED

DEC 03 1985

MINING AND
EXPLORATION

Mr. Chris Shingleton
Utah Power & Light Company
P. O. Box 899
Salt Lake City, Utah 84110

Dear Mr. Shingleton:

RE: Response to Office of Surface Mining Condition #1,
Des-Bee-Dove Mines, ACT/015/017, 8/85, #2, Emery County,
Utah

Division Hydrologist Jim Fricke has reviewed the November 21, 1985 plans for removal of the Deseret sediment pond. The following items must be addressed before approval can be granted.

1. The revised contour furrow spacing must be reduced from 25 feet to 15 feet to contain the 10-year, 24-hour event.
2. The installation of small earth check dams in the furrows must be implemented at 20 to 30 feet intervals.

Thank you for your cooperation in this matter. Please contact me or Jim Fricke should you have any questions.

Sincerely,

A handwritten signature in cursive script, appearing to read 'John J. Whitehead'.

John J. Whitehead
Permit Supervisor/
Reclamation Hydrologist

JRF/btb

cc: Allen Klien
Jim Fricke
Bart Kale

0473R-5

LARRY GUYMON (EMC)



1407 West North Temple
 P.O. Box 899
 Salt Lake City, Utah 84110

RECEIVED
 APR 25 1986

DIVISION OF
 OIL, GAS & MINING

April 25, 1986

Mr. Lowell P. Braxton
 Administrator, Mineral Resource Development
 and Reclamation Program
 State of Utah
 Department of Natural Resources
 Division of Oil, Gas & Mining
 355 West North Temple
 3 Triad Center, Suite 350
 Salt Lake City, Utah 84180-1203

Re: Response to DOGM Letter Dated December 30, 1985
 Des-Bee-Dove Mine Permit, ACT/015/017, 8/85;
 UT-0015, 4/85; OSM Condition #1

Dear Mr. Braxton:

Submitted are 14 copies of revised material addressing the items mentioned in letters from John Whitehead of your staff and OSM concerning the final reclamation plans for removal of the Des-Bee-Dove sedimentation pond. The revised material includes changing the contour furrow spacing from 25 to 15 feet, with small earthen check dams to be implemented at 20 to 30 foot intervals as requested by your staff.

Also, included within this submittal is an updated Map #4-2 of the pond area showing in detail the permit boundary line in this area inclusive of the junction road right-of-way. This should clarify OSM's concern within their letter to DOGM dated December 13, 1985. In this same letter, OSM has asked that a discussion be provided on mitigation for damages as results of a larger storm event. We feel that we have already addressed this concern in the final reclamation section of the MRP; Volume 2, page 4-21, item #5 under maintenance and monitoring.

The submitted materials transmitted herein are numbered and marked for easy insertion into the MRP.

	<u>Remove</u>	<u>Insert</u>
<u>Volume 2</u>	Pages 4-5-A & 4-5-B	4-25-86 Revised Pages 4-5-A & 4-5-B
<u>Volume 5</u>	Map 4-2 (3 of 5)	4-25-86 Revised Map 4-2 (3 of 5)

Mr. Lowell P. Braxton
April 25, 1986
Page 2

We apologize for the delay in our response and appreciate your staff's help in addressing these items.

Hopefully this submittal will meet the requirements of OSM Condition #1. If any further information is needed, please contact this office.

Sincerely,



C. E. Shingleton
Director of Permitting,
Compliance & Services.
Mining and Exploration

CES:SMC:bb:5275
Enclosures

cc: Val Payne (w/encl.-2 sets)



STATE OF UTAH
NATURAL RESOURCES
Oil, Gas & Mining

Norman H. Bangerter, Governor
Dee C. Hansen, Executive Director
Dianne R. Nielson, Ph.D., Division Director

355 W. North Temple • 3 Triad Center • Suite 350 • Salt Lake City, UT 84180-1203 • 801-538-5340

August 8, 1986

Mr. Allen D. Klein, Administrator
Office of Surface Mining
Brooks Towers
1020 15th Street
Denver, Colorado 80202

RECEIVED

AUG 12 1986

MINING AND
EXPLORATION

Dear Mr. Klein: *AK*

Re: Condition #1, Utah Power and Light Company, Des-Bee-Dove Mine, ACT/015/017, Folder #2, Emery County, Utah

The Division has completed its review of Utah Power and Light Company's (UP&L) latest response to condition #1 of the Des-Bee-Dove Mine. The concerns regarding this matter noted in your previous correspondence have **been adequately addressed.**

The second paragraph of your December 13, 1985 letter expressed that the contour furrows proposed for reclamation of the pond site were off the permit area. Plate 4-2, revised April 25, 1986, indicates the furrows proposed are on the permit area which includes the Des-Bee-Dove/Wilberg junction road. As discussed with Rick Holbrook and Rick Lawton of your staff, the legal description of the permit area in Section 2 of Permit UT-0015, 4/85 appears to have omitted portions of the Des-Bee-Dove/Wilberg junction road. The road was properly noticed per UMC 786.11 and is noted as part of the permit area on the map (see figure 3) in the Decision Document.

Would you please issue a corrected permit to completely rectify this situation.

page 2
Allen D. Klein
ACT/015/017
August 8, 1986

As requested in your letter of November 29, 1985, the Division requests your concurrence that Utah Power and Light Company has adequately addressed condition #1 of the Des-Bee-Dove permit at your earliest convenience.

Best regards,



Dianne R. Nielson,
Director

JJW:djh
cc: Chris Shingleton, UP&L
John Whitehead
0844R/21-22



United States Department of the Interior
OFFICE OF SURFACE MINING
Reclamation and Enforcement
BROOKS TOWERS
1020 15TH STREET
DENVER, COLORADO 80202

NOV 13 1986.

Mr. C. E. Shingleton
Director of Property Management
Mining Division
Utah Power & Light Company
1407 West North Temple
P.O. Box 899
Salt Lake City, Utah 84110

RECEIVED

NOV 13 1986

MINING AND
EXPLORATION

Dear Mr. Shingleton:

In the course of reviewing the response to permit condition 1 for the Des-Bee-Dove mine, the Office of Surface Mining Reclamation and Enforcement, Western Field Operations (OSMRE) discovered a discrepancy in the legal description of the permit area of Federal permit UT-0015, 6/85 (4/85). After reviewing the permit application package, the public notices, and the decision document for the permit, we have determined that the legal description in the permit was incorrect. The legal description has been corrected by adding portions of the SE 1/4 SE 1/4, Section 26, Township 17 South, Range 7 East, SLBM, and a copy of the corrected permit is enclosed.

Additionally, this is to inform you that OSMRE concurs with Utah Division of Oil, Gas and Mining that condition 1 of the permit has been satisfactorily addressed.

If you have any questions, please contact Richard Holbrook at (303) 844-2896.

Sincerely,

Mel Shilling
Melvin L. Shilling, Chief
Division of Federal Programs
Western Field Operations

Enclosure

cc: R. Hagen, OSMRE - Albuquerque
D. Nielson, Utah DOGM
J. Moffitt, BLM - Utah State Office
G. Nodine, BLM - Moab District
R. Christensen, Manti-LaSal National Forest

cc: VAL PAYNE
LARRY BRYMAN