

0006



State of Utah
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

Michael O. Leavitt
Governor
Kathleen Clarke
Executive Director
Lowell P. Braxton
Division Director

1594 West North Temple, Suite 1210
PO Box 145801
Salt Lake City, Utah 84114-5801
801-538-5340
801-359-3940 (Fax)
801-538-7223 (TDD)

February 7, 2000

David Miller, Resident Agent
Lodestar Energy, Inc.
White Oak Mine
HC 35 Box 370
Helper, Utah 84526

Re: Conditional Approval for Haul Road Culvert Removal, Lodestar Energy, Inc., White Oak Mine, ACT/007/001-AM99B, Outgoing File

Dear Mr. Miller:

Enclosed is a copy of the Division's review of your proposal to remove a culvert on the slope below the haul road and to revegetate the area. The proposal contains no deficiencies and is conditionally approved. Prior to final approval please submit 7 clean copies properly paginated, for insertion into the Mining and Reclamation Plan, by February 25, 2000

I've included a copy of the Submittals Format which outlines all the Division requirements for submittals. This can also be found on our Division Internet Website <http://dogm.nr.state.ut.us/>. Feel free to contact us if you if you have any questions about these requirements.

Sincerely,

A handwritten signature in cursive script, appearing to read "Pamela Grubaugh-Littig".

Pamela Grubaugh-Littig
Permit Supervisor

sm
Enclosure
cc: Pete Hess, Price Field Office
O:\007001.WO\FINALTACVRLTR.wpd

Submittals Format - Utah Coal Regulatory Program

- ☆ **General Information** - The Division is requesting that all permit applications, changes, renewal, or transfers follow the procedures and format requirements outlined in this document. The Division may return applications that do not meet format requirements according to the Utah Coal Mining Rules, (see R645-301-121.300)
- ☆ **Cover Letter** - Briefly describe the submittal content. Please include references to any action conducted by the Division that results in the permit change including, but not limited to deficiencies identified in a technical analyses, notice of violation, Division Order, etc.
- ☆ **Contents** - The application must be complete and should not rely on additional materials that will be submitted at a later date. Assemble each submitted copy as a complete unit including all maps and text . It is recommended that binders be submitted for permit changes of 50 pages or more. These binders will allow retaining a complete updated application when compiling changes during the review process. Maps should be folded and enclosed in protectors. The binders will be available to the permittee after the permitting action is finalized.
- ☆ **Change Forms** - C1/C2 forms must be included with every submittal (and the proposal assembled as separate complete copies). The notarized signature of responsible official of the applicant must also be included of the official who can attest that the submittal is true and correct to the best of their knowledge and in all respects with the laws of Utah in reference to commitments, undertakings, and obligations.
- ☆ **Number of Copies/Pagination** - submit three redline/ strikeout copies (four on Forest Service land). The redline/ strikeout will guide staff to more easily see what changes are being proposed. If the changes are minor, the applicant may submit requisite clean copies for the initial submittal. Final copies without redline strikeout, paginated correctly for insertion into the plan, must be submitted PRIOR to the permit change being approved. (A new C1/C2 form may need to be submitted at that time.) New permit submittals can provide redline strikeout changes to the initial submittal.
- ☆ **Address** - Address ALL correspondence to Utah Coal Program, you may identify individual in the attention line, but not necessary.

All mine plan submittals, including but not limited to: exploration applications, new permits, significant permit revisions, minor permit amendments, permit transfers, bond changes, bond releases, permit renewals, midterm reviews, incidental boundary changes, mail or hand deliver to:

Utah Coal Program
Utah Division of Oil, Gas & Mining
1594 West North Temple, Suite 1210
P.O. Box 145801
Salt Lake City, Utah 84114-5801

Please send only one copy directly to the Price Field Office (the PFO copy) at:

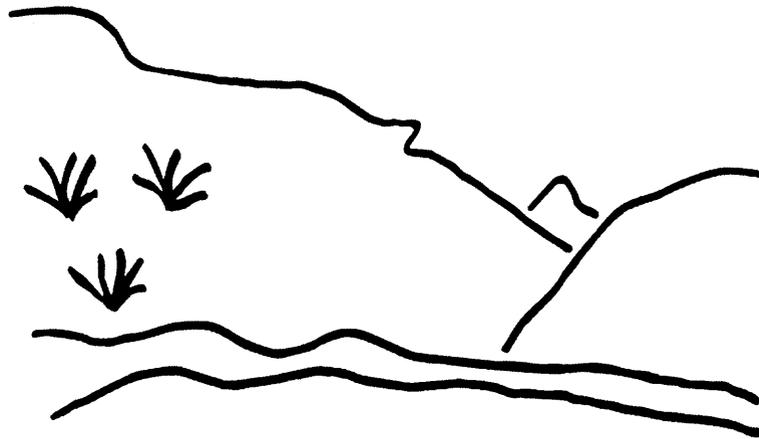
Utah Coal Program
Utah Division of Oil, Gas & Mining
Price Field Office
College of Eastern Utah
457 East 400 North
Price, Utah 84501

Contacts:

Pamela Grubaugh-Littig, (801) 538-5268
Daron Haddock, (801) 538-5325
SLC Fax, (801) 359-3940

Tiffini Moss, (801) 538-5304
Sheila Morrison, (801) 538-5289
Stephanie Dunlap, (435) 613-5636
PFO Fax, (435) 613-5828

State of Utah



Utah Oil Gas and Mining

Coal Regulatory Program

White Oak Mine
Haul Road Culvert Removal
ACT/007/001 - AM99B
Technical Analysis
February 2, 2000

INTRODUCTION	1
OPERATION PLAN	2
TOPSOIL AND SUBSOIL	2
VEGETATION	3
HYDROLOGIC INFORMATION	4
Diversions	4
Sediment Control Measures	5
INDEX	6

INTRODUCTION

INTRODUCTION

The slope in this proposal has been an ongoing problem due to erosion below and beside the half-round culvert extending down the slope that is visible from the main highway. On July 31, 1998 the Division received a proposal to plug the inlet to the culvert, thus bypassing it, and diverting the flow into a concrete-lined ditch alongside the road. This flow goes to Eccles Creek as it did before, but at a different point. The old culvert would be removed and the slope revegetated. The Division responded on September 4, 1998. On August 6, 1999 the Division received a proposal to revise the revegetation of the area. The culvert had been removed based on Division approval in a letter. On September 1, 1999 the Division sent a response to the August 6, 1999 proposal. After numerous discussions with mine and Division personnel, yet another submittal was received on January 5, 2000. This Technical Analysis (TA) is a response to the latest proposed amendment. The Recommendation is for approval of the amendment.

OPERATION PLAN

OPERATION PLAN

TOPSOIL AND SUBSOIL

Regulatory Reference: 30 CFR Sec. 817.22; R645-301-230.

Analysis:

Following removing the half-round culvert that extends down the hillside below the Belina Haul Road, the hill slope will be repaired and reclaimed. The amendment is divided into the following sections:

- Smallest Practicable Area Disturbance

Surface disturbance will be kept at a minimum to help maintain slope stability. Surface preparation will be done by hand without heavy machinery traffic.

- Planting and Seeding Methods

The depression left by half-round culvert will not be filled with replaced topsoil because of the following reasons:

1. The depression is armored with rock mixed with soil along the majority of the slope.
2. There is a lack of soil resources for repairing the eroded and damaged hill slope. No soil was salvaged during installation of the half-round culvert.
3. Replaced soil would be unstable and easily erode from the extremely steep slope.

The half-round culvert depression and adjacent area will be roughened using hand tools. However, soil and rock will be needed at the top of the slope where the outlet of C-23-24 drops into the half-round culvert. Soil and rock will be taken from the small topsoil stockpile located at the mine site.

Hydroseeding will be used to apply seed, mulch (2,000 lbs/acre), and tackifier (50 lbs/acre). Seed mixed with a small amount of mulch will be applied first, followed by a second application for the mulch and tackifier sprayed over the seed layer. The roughened surface and application of the second layer of hydromulch with tackifier will help add soil stability to the replaced topsoil and loosened soils on the remained of the slope.

Currently there is sediment deposited at the toe of the half-round culvert slope. White Oak plans on leaving this sediment in place, since removal would require additional disturbance to the area to gain access. It is doubtful that sediment removal from the toe of the slope would create any safety hazard for the hill. A portion of this sediment has been deposited from an undisturbed drainage ditch which is located west of the half-round culvert on the same sloop; this sediment deposition will likely continue.

OPERATION PLAN

The sediment area will be roughened with hand tools and then planted with the approved seed mix. After seeding, willow seedlings or cuttings will be planted.

Findings:

Information provided in the application is considered adequate to meet the requirements of this section of the regulations.

VEGETATION

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

Analysis:

The applicant previously gained approval to remove a culvert near the lower part of the haul road leading to the White Oak Mine and has done this work. The current proposal is a reclamation plan specifically for the culvert area. There has been erosion on the slope, and there is sediment deposited at the bottom of the slope. Previous attempts to control erosion have included installation of log check dams and erosion control matting.

The applicant proposes to leave the depression where the half-round culvert was. At the top of the slope, rocks and soil may be needed to enable revegetation, but there is a very limited amount of soil and fill available. Also, it would be difficult to stabilize soils on this very steep slope.

Soils on the slope would be roughened using hand tools followed by planting and seeding. The application includes a seed mix designed specifically for this slope, and it includes some vigorous species, some of which are rhizomatous, that should be able to stabilize the slope. The applicant has included grass seedlings in the planting mix, and willows will be planted in the small wetland area at the base of the slope. Every species is native to the area, and they meet the performance standards.

Tufted hairgrass was included in the list of grass seedling species, and this is a wetland species that should not be used on the hillside. Rather, it could be planted at the base along with the willows.

The area will be hydroseeded followed by hydraulic application of a wood fiber mulch and tackifier. An erosion control mat will not be used because the slope is not smooth enough to allow good soil contact.

The site the applicant will be trying to revegetate and stabilize is challenging, and while the Division would like to see the slope topsoiled, the limited resources available and the difficult conditions make this impractical. The material on the slope is relatively resistant to erosion, and the revegetation techniques proposed are believed to be the best available for these conditions. The Division does not expect lush growth with complete erosion control at first, but it should be possible to stabilize the slope as least as much as in adjacent areas.

OPERATION PLAN

Revised: February 2, 2000

The small wetland at the bottom of the slope has not had vegetation, and it is not known why. It is possible the soil has high salt content from salt being used on the haul road, but the applicant will be preventing this runoff from reaching the wetland. If vegetation does not establish quickly in this area, it may be necessary to take soil samples to determine the cause.

Findings:

Information provided in the proposal is adequate to meet the requirements of this section of the regulations.

HYDROLOGIC INFORMATION

Regulatory Reference: 30 CFR Sec. 773.17, 774.13, 784.14, 784.16, 784.29, 817.41, 817.42, 817.43, 817.45, 817.49, 817.56, 817.57; R645-300-140, -300-141, -300-142, -300-143, -300-144, -300-145, -300-146, -300-147, -300-147, -300-148, -301-512, -301-514, -301-521, -301-531, -301-532, -301-533, -301-536, -301-542, -301-720, -301-731, -301-732, -301-733, -301-742, -301-743, -301-750, -301-761, -301-764.

Analysis:

Diversions

The proposed plan to plug the input to C-23-24 included an analysis of the impact of adding the design flow of the culvert to the ditch, D-21. The analysis showed a freeboard of 1.1 inch in the ditch downstream of the culvert inlet. While this keeps the flow in the ditch, the slightest obstruction could cause flows to leave the ditch. The application included calculations for the riprap lined ditch below the concrete lined ditch and for a rock check dam to help control sediment. All revised calculations were checked and compared to the original plan and appear appropriate.

Comparison of the drainage areas for the two adjacent culverts shows that, although C-22 and C-23 are both 24 inches in diameter, the drainage area of C-22 is about one-fourth that of C-23. Since C-23 is being eliminated, it would be less detrimental for its runoff to flow into the remaining C-22. This would function as a "safety valve" in the event flows left the concrete lined ditch and flowed into C-22, a desirable condition.

A field trip was made on 9/3/98 to assess site conditions. Vicki Miller, the mine's Consultant accompanied this reviewer. The following conditions were noted and documented with photographs, which have been added to the mine photo file. Following each condition is the resolution made since the field visit.

1. The inlet to culvert C-22-24 is partially plugged with rocks and debris and needs cleaning. The triangular area adjacent to the culvert inlet, between the road and cliff, contributes sediment to runoff and the area needs to be riprapped. Resolution: The culvert inlet has been cleaned and the triangular area has been riprapped.
2. The concrete lined ditch is in immediate need of repair all along the road, and especially below the inlet to the culvert to be removed, to prevent further deterioration. Resolution: The concrete lining of ditch D-21 below culvert C-22 has been repaired. The proposal, page 3, commits to continued repair of the remaining ditch during the year 2000.

OPERATION PLAN

3. The entire ditch, from Eccles Creek up to the mine site, needs maintenance to clean up and remove rock and debris which has accumulated along and in the ditch. Resolution: The ditch has been cleaned below culvert C-22, however, ditch clean out needs to be finished above the culvert and there is a commitment to do that during the year 2000.

The existing depression from the removed culvert will be left in place and not filled in. Adjacent areas will not be "pulled in" or smoothed. The depression left by the culvert and adjacent areas will be roughened using hand tools. Some soil and rock will be added at the top of the depression. Hydro seeding and mulching will take place on top of the roughened area. The detailed methods, including seed types and application rates, have been reviewed and approved in the Soils and Vegetation Technical Analysis'. It appears revegetation success is likely.

Installation of a rock check dam at the bottom of ditch D-21 is important to remove sediment from the runoff water before it enters Eccles Creek. It's location is appropriate and the design with a designated outfall is good. There is riprap at the outfall to prevent erosion in the ditch below the dam. Clean out and maintenance of the ditch and sediment behind the dam is necessary and is included in the plan. The plan shows the use of "gravel-sized (1 - 6") rock..... blended with 6 - 18" rock", within the dam and in the channel below the dam. These should be adequate to retain flows behind the dam. The plan shows a commitment for straw bales to "be anchored into the channel above the check dam". This should further help sediment control.

Sediment Control Measures

The proposed design shows showed a freeboard of 1.1 inch in the ditch downstream of the culvert inlet. The regulations require road drainage ditches to "be designed to prevent uncontrolled drainage over the road surface and embankment". While this is the case, the slightest obstruction could cause flows to leave the ditch. The situation below the point where the culvert inlet would be plugged has the road sloping up from the ditch and a cliff on the other side of the ditch. Thus, if flows were to exceed design, there would be minimal impact. It's crucial that this length of the ditch be maintained to be free of debris which could obstruct the ditch.

The ditch and the area between the road and cliff have been cleaned out. In addition, page 3 of the proposal commits to increased efforts to clean culvert inlets and area between the cliff face and edge of the road. Commitments are also made to riprap the area between the cliff face and edge of the road. These efforts should be adequate to keep flows off the road.

Findings:

The proposed plan meets minimum regulatory requirements.

RECOMMENDATION:

The amendment can be approved in its present form.

INDEX

INDEX

30 CFR

773.17	4
774.13	4
784.14	4
784.16	4
784.24	3
784.29	4
817.150	3
817.151	3
817.22	2
817.41	4
817.42	4
817.43	4
817.45	4
817.49	4
817.56	4
817.57	4

R645

-300-140	4
-300-141	4
-300-142	4
-300-143	4
-300-144	4
-300-145	4
-300-146	4
-300-147	4
-300-148	4
-301-230	2
-301-512	4
-301-514	4
-301-521	3, 4
-301-527	3
-301-531	4
-301-532	4
-301-533	4
-301-534	3
-301-536	4
-301-542	4
-301-720	4
-301-731	4
-301-732	3, 4
-301-733	4
-301-742	4
-301-743	4

INDEX

-301-750	4
-301-761	4
-301-764	4
30 CFR	
701.5	5, 11, 18
773.17	12
774.13	12
783	3
783.12	3
783.18	3
783.19	4
783.21	4
783.22	4
783.24	6
783.25	6
784.11	8
784.12	8
784.13	16
784.14	5, 12, 16, 18, 25
784.15	16, 17
784.16	12, 16
784.17	8, 16
784.18	9, 16
784.19	11, 16
784.2	8
784.20	9, 16
784.200	16
784.21	4, 10, 16
784.22	5, 16
784.23	14, 16, 21
784.24	11, 16, 18
784.25	11, 16
784.26	9, 16
784.29	12, 18
784.30	13
785	22
785.13	22
785.14	22
785.15	17, 22
785.16	5, 16, 17, 23
785.18	19, 20
785.19	4
785.20	24
785.21	23
800	21
817.100	19

INDEX

817.102	17
817.107	17
817.11	14
817.111	20
817.113	20
817.114	20
817.116	20
817.121	9
817.122	9
817.13	17
817.131	20
817.132	20
817.133	16, 17
817.14	17
817.15	17
817.150	11, 18
817.151	11, 18
817.180	13
817.181	13
817.200	4
817.22	10, 17
817.41	12, 18
817.42	12, 18
817.43	12, 18
817.45	12, 18
817.49	12, 18
817.56	12, 18
817.57	12, 18
817.59	9
817.61	14
817.62	14
817.64	14
817.66	14
817.67	14
817.68	14
817.71	11
817.72	11
817.73	11
817.74	11
817.81	11
817.83	11
817.84	11
817.87	11
817.89	11
817.95	9, 20
817.97	10, 16

INDEX

817.99	10
819	24
822	23
823	5, 23
824	22
827	23
828	24
R645	
-100-200	5, 11, 18
-300-140	12
-300-141	12
-300-142	12
-300-143	12
-300-144	12
-300-145	12
-300-146	12
-300-147	12
-300-148	12
-301-210	11
-301-211	11
-301-212	11
-301-220	4
-301-221	5, 23
-301-230	10
-301-231	8, 16
-301-233	16
-301-234	17
-301-240	17
-301-244	9, 20
-301-270	17
-301-271	17
-301-320	4
-301-322	4, 10, 16
-301-323	6, 16, 21
-301-331	16
-301-333	10, 16
-301-341	16
-301-342	10, 16
-301-352	19
-301-353	20
-301-354	20
-301-355	20
-301-356	20
-301-358	10, 16
-301-411	3, 4, 6, 8, 16
-301-412	11, 16, 17

INDEX

-301-413	16, 17
-301-414	16
-301-422	16
-301-512	11, 12, 14, 16-18, 21
-301-513	11, 16-18
-301-514	11, 12, 18
-301-515	10, 18, 20
-301-521	3, 6, 9, 11, 12, 14, 16, 18, 21
-301-522	9, 16
-301-524	14
-301-525	9, 16
-301-526	8, 9, 11, 13, 16
-301-527	11, 16, 18
-301-528	8, 11, 16
-301-529	16, 17
-301-531	12, 16, 17
-301-532	12, 18
-301-533	12, 16-18
-301-534	11, 16, 18
-301-535	11
-301-536	11, 12, 16, 17
-301-537	16-18
-301-541	20
-301-542	11, 12, 14, 16-18, 21
-301-551	17
-301-552	17
-301-553	11, 17, 19
-301-622	6
-301-623	5, 16
-301-624	16
-301-625	16
-301-626	16
-301-631	16, 17
-301-632	14, 16, 21
-301-720	12
-301-721	3
-301-722	6
-301-723	16, 18
-301-724	3, 5, 9, 16, 18
-301-725	16, 18
-301-726	16, 18
-301-728	16, 18
-301-729	16, 18
-301-730	25
-301-731	6, 12, 14, 16-18, 21
-301-732	11, 12, 16-18

INDEX

-301-733	12, 16-18
-301-742	12, 18
-301-743	12, 18
-301-745	11
-301-746	11, 16
-301-747	11
-301-748	17
-301-750	12, 18
-301-751	18
-301-760	18
-301-761	12, 18
-301-764	12, 16, 17
-301-765	17
-301-800	21
-301-830	16
-302	22
-302-210	22
-302-211	22
-302-212	22
-302-213	22
-302-214	22
-302-215	22
-302-216	22
-302-217	22
-302-218	22
-302-220	22
-302-230	17, 22
-302-231	17
-302-232	17
-302-233	17
-302-240	24
-302-254	24
-302-260	23
-302-270	5, 16
-302-271	16
-302-272	16
-302-273	16
-302-274	16
-302-275	16
-302-280	19, 20
-302-281	19, 20
-302-282	19, 20
-302-283	19, 20
-302-284	19, 20
-302-300	23
-302-320	4

INDEX

-302-323	14
-302-324	23