

0002



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

1594 West North Temple, Suite 1210
PO Box 145801
Salt Lake City, Utah 84114-5801
(801) 538-5340 telephone
(801) 359-3940 fax
(801) 538-7223 TTY
www.nr.utah.gov

Michael O. Leavitt
Governor
Robert L. Morgan
Executive Director
Lowell P. Braxton
Division Director

February 7, 2003

Chris Hansen, Environmental Manager
Canyon Fuel Company, LLC
HC 35 Box 380
Helper, Utah 84526

OK

Re: Bond Release Amendment for Sweet's Pond, Mountain Coal Company, Gordon Creek #2, #7 & #8 Mine, C/007/016-BR02B, Outgoing File

Dear Mr. Hansen:

The above-referenced amendment, associated with the final bond release, is approved. A stamped incorporated copy is enclosed for your copy of the Mining and Reclamation Plan.

We will be contacting you about a phase III bond release inspection so this bond release process may proceed.

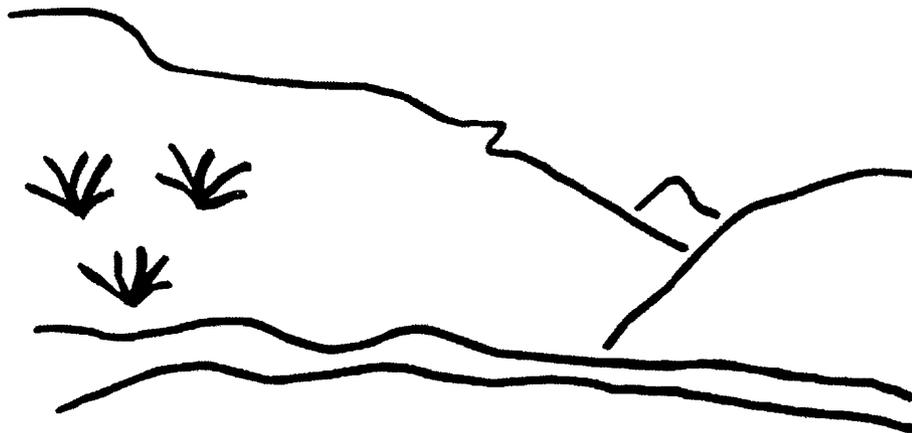
If you have any questions, please feel free to call me at (801) 538-5268.

Sincerely,

Pamela Grubaugh-Littig
Permit Supervisor

an
Enclosure
cc Mark Page, Water Rights w/o
Dave Ariotti, DEQ w/o
Derris Jones, DWR w/o
Price Field Office
O:\007016.GC2\FINAL\App02B.doc

State of Utah



Utah Oil Gas and Mining

Coal Regulatory Program

Gordon Creek 2, 7 & 8
Bond Release for Sweet's Pond
C/007/016-BR02B
Technical Analysis
February 4, 2003

TABLE OF CONTENTS

INTRODUCTION.....	3
ENVIRONMENTAL RESOURCE INFORMATION	5
VEGETATION RESOURCE INFORMATION	5
MAPS, PLANS, AND CROSS SECTIONS OF RESOURCE INFORMATION	5
Vegetation Reference Area Maps	5
RECLAMATION PLAN.....	7
POSTMINING LAND USES	7
APPROXIMATE ORIGINAL CONTOUR RESTORATION.....	7
BACKFILLING AND GRADING.....	8
General.....	8
MINE OPENINGS.....	10
ROAD SYSTEMS AND OTHER TRANSPORTATION FACILITIES	10
Reclamation	10
Retention.....	10
REVEGETATION.....	11
Revegetation: Timing.....	11
Revegetation: Standards For Success	11
MAPS, PLANS, AND CROSS SECTIONS OF RECLAMATION OPERATIONS	12
Affected Area Boundary Maps	12
Bonded Area Map	12
Reclamation Backfilling And Grading Maps	12
Final Surface Configuration Maps.....	13
Reclamation Surface And Subsurface Manmade Features Maps	13
Certification Requirements.....	13
BONDING AND INSURANCE REQUIREMENTS.....	13
Determination of Bond Amount	13

TECHNICAL ANALYSIS

TECHNICAL ANALYSIS

The Division ensures compliance with the Surface Mining Control and Reclamation Act of 1977 (SMCRA). When mines submit a Permit Application Package or an amendment to their Mining and Reclamation Plan, the Division reviews the proposal for conformance to the R645-Coal Mining Rules. This Technical Analysis is such a review. Regardless of these analyses, the permittee must comply with the minimum regulatory requirements as established by SMCRA.

Readers of this document must be aware that the regulatory requirements are included by reference. A complete and current copy of these regulations and a copy of the Technical Analysis and Findings Review Guide can be found at <http://ogm.utah.gov/coal>

This Technical Analysis (TA) is written as part of the permit review process. It documents the Findings that the Division has made to date regarding the application for a permit and is the basis for permitting decisions with regard to the application. The TA is broken down into logical section headings, which comprise the necessary components of an application. Each section is analyzed and specific findings are then provided which indicate whether or not the application is in compliance with the requirements.

Often the first technical review of an application finds that the application contains some deficiencies. The deficiencies are discussed in the body of the TA and are identified by a regulatory reference, which describes the minimum requirements. In this Technical Analysis we have summarized the deficiencies at the beginning of the document to aid in responding to them. Once all of the deficiencies have been adequately addressed, the TA will be considered final for the permitting action.

It may be that not every topic or regulatory requirement is discussed in this version of the TA. Generally only those sections are analyzed that pertain to a particular permitting action. TA's may have been completed previously and the revised information has not altered the original findings. Those sections that are not discussed in this document are generally considered to be in compliance.

Page 2
C/007/016-BR02B
February 4, 2003

TECHNICAL ANALYSIS

INTRODUCTION

INTRODUCTION

On October 23, 2002, the Division received the final bond release application for Sweet's Pond. The Sweet's Pond is located in the mouth of Sweet's Canyon in Gordon Creek and is approximately 0.73 acres in size. The area is on private land and the landowner has requested that the pond be left for the post mining land use. The Sweet's Pond was used to obtain water for use at the Gordon Creek mines as early as 1969. No other mining activities occurred at the site.

Both the Division and the Permittee want to have final bond release at the site granted because the area is isolated from the main mine site and will not be reclaimed. Instead of reclaiming the pond, the landowner has requested that the pond remain as part of the post mining land use.

Page 4
C/007/016-BR02B
February 4, 2003

INTRODUCTION

ENVIRONMENTAL RESOURCES INFORMATION

ENVIRONMENTAL RESOURCE INFORMATION

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

VEGETATION RESOURCE INFORMATION

Regulatory Reference: 30 CFR 783.19; R645-301-320.

Analysis:

The Sweets Pond area was used as a water truck filling area for the #2 mine as early as 1969. Surface disturbance included a small road to the North fork of Gordon creek approximately 100' in length. In early 1983, the Sweets Pond was constructed to provide water to the #7 mine and alleviate possible impacts to the stream.

Findings:

The information provided in the vegetation assessment and MRP is adequate to meet the requirements of this section of the regulations.

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.

Vegetation Reference Area Maps

The vegetation types and associated reference areas for the Sweets Pond are included on plate 9-1 of the MRP. The Sweets Pond is situated adjacent to mixed coniferous forest adjoining riparian and mountain grassland vegetative types. Section 3.5.5.5 page 3-58 of the MRP states that the Oak Shrubland Reference Area of the No. 2 mine will be used as the vegetative standard for success for the Sweets Pond area.

Findings:

The information provided in the MRP is adequate to meet the requirements of this section of the regulations.

Page 6

C/007/016-BR02B

February 4, 2003

ENVIRONMENTAL RESOURCE INFORMATION

RECLAMATION PLAN

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 Sweet's Canyon Pond area is an isolated area of the Gordon Creek No. 2/7/8 mine. The area consists of a small pond located on 0.73 acres. The pond will be used as a fishpond, wildlife area and as a water source. The Division has approved that use.

The landowner, Agnes K. Peirce, requested that the pond be left in place as part of the postmining land use. See letter dated September 28, 1994 in the bond release package for landowner's request.

Findings:

The information provided in the bond release application meets the minimum requirements for the postmining land use section of the regulations.

APPROXIMATE ORIGINAL CONTOUR RESTORATION

Regulatory Reference: 30 CFR Sec. 784.15, 785.16, 817.102, 817.107, 817.133; R645-301-234, -301-412, -301-413, -301-512, -301-531, -301-533, -301-553, -301-536, -301-542, -301-731, -301-732, -301-733, -301-764.

Analysis:

The general requirements for achievement of approximate original contour are couched in the backfilling and grading regulations. To clarify the issue the Division developed Technical Directive 002. That directive will be used and referenced for the AOC discussion.

The Permittee is required to achieve AOC with a few exception one of which is the approval of an alternative postmining land use. The Division could proceed in either direction since the site meets both criteria. The Division will address the AOC issue on the basis that the Permittee has achieved AOC.

The term AOC does not mean that the reclaimed area has been restored to the original contours. Rather AOC means that the site blends into the surrounding area and complement the natural drainages.

The pond is similar in size and shape to other ponds found in the area. The length and grade of the slopes in the area is similar to those of the surrounding area. The Division uses those factors to determine if the area blends into the surroundings.

The main concerns with slope length and grade are will vegetation be able to be established and will erosion be controlled. Since the Permittee has achieved the vegetation and erosion requirement, the slope appears to blend into the surrounding area.

The Division is also concerned that the area blends into the natural drainages. Most of the area is a pond that is designed to handle inflow and outflow. The pond has been functioning for many years. Therefore, the area appears to complement the natural drainages.

Other factors that are used involve spoil piles and highwalls. Neither of those two exists on the site.

Based on the information the Division finds that the area meets the general requirements for achieving AOC.

Findings:

The information in the bond release package meets the minimum requirements for the AOC section of the regulations.

BACKFILLING AND GRADING

Regulatory Reference: 30 CFR Sec. 785.15, 817.102, 817.107; R645-301-234, -301-537, -301-552, -301-553, -302-230, -302-231, -302-232, -302-233.

Analysis:

General

The general requirements for backfilling and grading are listed in R645-301-553. Before bond release can be granted, the Permittee must demonstrate that the backfilling and grading requirements have been met or that there is an approved alternative postmining land use. The Division can deal with the backfilling and grading requirements in one of two ways. The first is to make a finding about whether or not the site has been properly backfilled and graded the second is to exempt the site because it will be used for an alternative postmining land use. The

RECLAMATION PLAN

Division will address the backfilling and grading requirements on the basis that the site meet the backfilling and grading requirements.

The Sweet's Canyon Pond area consist of 0.78 acres most of which is occupied by the pond. The area was permitted by the Division and has met the performance standards.

The general backfilling and grading requirements are as follows:

- The site achieves AOC. This issue was discussed in the AOC section of this memo and the Division found that the site does meet those requirements.
- Eliminate all highwalls; spoil piles, and depression except those provided for in R645-301-552.100. No highwalls, spoil piles exist on site. R645-301-553.100 deals mostly with small depressions created for the retention of moisture of vegetation. However, R645-301-552.200 deals with permanent impoundments that have been approved for the postmining land use. Sweet's Canyon Pond is a permanent impoundment that has been approved for a postmining land use.
- Achieve a postmining slope that does not exceed either the angle of repose and achieve a safety factor of 1.3 or greater. The above water slopes have an angle of 26 degrees, which is approximately a 2H: 1V slope. The Division considers slopes with angle of 2H: 1H or less to achieve a safety factor of 1.3 or greater and be gentler than the angle of repose. The below water slopes have steeper angles but the pond was designed and approved by the Division. A requirement for the pond is that the slopes have a safety factor of 1.3. Therefore, the area has met the minimum safety factor requirements.
- The site meets the vegetation and erosion requirements. Therefore, the erosion and water pollution requirements have been achieved.
- The area does support the postmining land use.
- No spoil or waste materials are on site, so those regulations are not relevant.
- No refuse piles are on site, so those regulations are not relevant.
- No coal processing waste is on site so those regulations are not relevant.
- No exposed coal seams or acid- and toxic-forming materials, or combustible materials are on site, so those regulations are not relevant.
- No cut-and-fill terraces are on site, so those regulations are not relevant.
- No highwalls are on site, so those regulations are not relevant.

The Permittee has met the minimum requirements for backfilling and grading.

Findings:

The information provided in the bond release package meets the minimum requirements of the regulations.

MINE OPENINGS

Regulatory Reference: 30 CFR Sec. 817.13, 817.14, 817.15; R645-301-513, -301-529, -301-551, -301-631, -301-748, -301-765, -301-748.

Analysis:

No mine openings are located in or near the Sweet's Canyon Pond.

Findings:

The information in the bond release application meets the minimum requirements of the regulations.

ROAD SYSTEMS AND OTHER TRANSPORTATION FACILITIES

Regulatory Reference: 30 CFR Sec. 701.5, 784.24, 817.150, 817.151; R645-100-200, -301-513, -301-521, -301-527, -301-534, -301-537, -301-732.

Analysis:

Reclamation

There are no roads in the Sweet's Pond Canyon Area. There are areas where vehicle travel. This is similar to areas within a mine pad where vehicles can travel but the area has not been designed as a road.

Retention

The areas where vehicle traffic could occur have been left on site. Those areas include access routes to the pump house and a rock-covered area that could be used to access the pond. The Division does not consider those areas roads because they were not engineered. Rather those access areas are similar to jeep trails. However, those access areas do meet the general requirements for roads because:

- The areas are located on stable surfaces so no foreseeable damage to public or private property could occur.
- The areas do not have acid or toxic forming materials.
- As stated in the backfilling and grading section, the slopes are stable.
- The vehicle traffic will occur in the area as part of the postmining land use.
- Erosion and air pollution will be minimized. The site has achieved the required vegetation cover.

RECLAMATION PLAN

- The surfaces are on stable ground.
- No culverts will be left on site.

Findings:

The information in the bond release application meets the minimum 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:

Revegetation: Timing

The disturbed areas associated with the Sweets Pond were seeded at the time the construction of the pond was complete, (approximately 1983). No additional seeding has occurred since that time. Therefore, the seeded areas have been revegetated for approximately 20 years well in excess of the 10 year liability period. The success of revegetation has been evaluated over two consecutive years, (1996 and 1997), and again in 2000. Sampling parameters for the Sweets Pond site and associated reference area included cover and composition, woody species density, sample adequacy and statistical comparisons and diversity.

Revegetation: Standards For Success

Section 3.5.5.5 page 3-58 of the MRP states that "Vegetation success will be achieved when ground cover and density are not less than 90% of the approved success standard when tested at a 90% confidence interval. The total living cover for the Sweets Pond area was 54.50 % (Table 1-A) comprised of 69% grasses, 26% shrubs and 5% forbs (Table 1-B). Woody species density was 1,067 plants per acre (Table 1-C). Table 1-D includes three diversity indices, the average number of species per Meter Square was 3.1, the total diversity was 5.686 and the total number of species per quadrat was 12.

The total living cover for the reference area was 40.83% (Table 3-A) comprised of 73% grasses, 25% shrubs and 2% forbs (Table 3-B). Woody species density was 1,568 individuals per acre (Table 3-C). Table 3-D includes three diversity indices for the reference area; the average number of species per Meter Square was 2.2. Total diversity was 3.982 and the total number of species per quadrat was 11. Although the Sweets Pond and the reference area have dissimilar environments it probably seemed logical at the time to use the same reference area as the remaining 98% of the disturbed areas. The statistical analyses and qualitative assessments

comparing the two areas indicates that they are very similar with respect to cover, composition, woody species density and diversity.

Findings:

The information provided in the vegetation assessment and MRP is adequate to meet the requirements of this section of the regulations.

MAPS, PLANS, AND CROSS SECTIONS OF RECLAMATION OPERATIONS

Regulatory Reference: 30 CFR Sec. 784.23; R645-301-323, -301-512, -301-521, -301-542, -301-632, -301-731.

Analysis:

Affected Area Boundary Maps

The affected area is the area where mining and reclamation activities are scheduled to take place over the life of the mine. The affected area can include areas where mining is anticipated and additional permits will be sought.

The Gordon Creek 2/7/8 complex is in reclamation. The Permittee is in the process of applying for Phase I bond release on all of the permit area with the exception of the Sweet's Canyon Pond area.

At the Sweet's Canyon Pond area, the permit area is the same as the disturbed area boundaries, which is the same as the affected area. The disturbed area is show on Plate 3-1A.

Bonded Area Map

The bonded area is usually the area where surface disturbance has occurred. In the Sweet's Canyon Pond area the permit area and disturbed area boundaries are the same. The bonded area consists of the entire disturbed area. That area is shown on Plate 3-1A.

Reclamation Backfilling And Grading Maps

The Sweet's Canyon Pond area was not reclaimed by backfilling and grading. The area will be left intact as an alternative postmining land use. The configuration of the existing site is shown on Plate 3-1A sheet 1 and 2. Those maps were used in the analysis of the backfilling and grading requirements and in the AOC requirements.

RECLAMATION PLAN

The Sweet's Canyon Pond and the associated structures are shown on Plate 3-1A sheet 1. The structures that will be left include a pump house as well as the pond, the inlet pipe and discharge structure.

Final Surface Configuration Maps

The final surface configuration is shown on Plate 3-1A sheet 1 and the cross-sections are shown on Plate 3-1A sheet 2.

Reclamation Surface And Subsurface Manmade Features Maps

The man made surface and subsurface features are shown on Plate 3-1A. The man made features include the pond and associated structure.

Certification Requirements.

Dan Guy, who is a registered professional engineer, certified map 3-1A sheet 1 and 2. The maps meet the minimum certification requirements of the Division.

BONDING AND INSURANCE REQUIREMENTS

Regulatory Reference: 30 CFR Sec. 800; R645-301-800, et seq.

Analysis:

Determination of Bond Amount

The Permittee is not seeking any bond reduction in association with Phase III bond release at the Sweet's Canyon Pond. Therefore, no bond calculations will be done in connection with the Sweet's Canyon Pond Phase III bond release.

Findings:

The information in the bond release package meets the minimum requirements of the regulations.