



GARY R. HERBERT  
Governor

SPENCER J. COX  
Lieutenant Governor

# State of Utah

## DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER  
Executive Director

### Division of Oil, Gas and Mining

JOHN R. BAZA  
Division Director

December 21, 2016

Kirk Nicholes, Resident Agent  
Alton Coal Development, LLC  
463 North 100 West, Suite 1  
Cedar City, Utah 84720

Subject: Revised Permit Issued, Area 1 Expansion IBC, Coal Hollow Mine, Alton Coal Development, LLC, C/025/0005, Task ID #5291

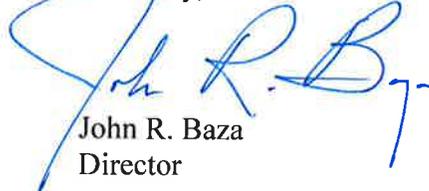
Dear Mr. Nicholes:

The Division hereby approves your above-referenced application with conditions. The Division has issued the revised permit and you are authorized to proceed with your mining plans. Enclosed are two (2) copies of the permanent program permit for the Coal Hollow mine.

Please read the permit to be sure you understand the requirements, noting the special conditions to the permit including the requirement to provide additional bond or receive bond release prior to expanding your mining operations into pits 7, 8 & 9. Then have both copies signed by the appropriate representative and return one to the Division. You must also provide clean copies of the final application within 30 days of permit issuance.

If you have any questions, please call Daron Haddock at (801)538-5325 or myself at (801)538-5334.

Sincerely,



John R. Baza  
Director

JRB/DRH/sqs

Enclosure

O:\025005.COL\PERMIT\2016 North Private Lease Expanded\FinalPermitletter.doc

**State Decision Document**

**Alton Coal Development, LLC  
North Private Lease  
Area 1 Expanded IBC  
Coal Hollow Mine  
C/025/0005**

**December 21, 2016**

**UTAH DIVISION OF OIL, GAS AND MINING  
STATE DECISION DOCUMENT AND  
TECHNICAL ANALYSIS**

Alton Coal Development, LLC  
North Private Lease Area 1 Expanded IBC  
Coal Hollow Mine  
**C/025/0005**

**CONTENTS**

- \* Administrative Overview
- \* Location Map
- \* Permitting Chronology
- \* Permit with conditions, dated December 21, 2016
- \* Technical Analysis, dated December 21, 2016
- \* AVS Recommendation, dated December 21, 2016

## **ADMINISTRATIVE OVERVIEW**

Alton Coal Development, LLC  
North Private Lease Area 1 Expanded IBC  
Coal Hollow Mine  
**C/025/0005**

Kane County, Utah

December 21, 2016

### **PROPOSAL:**

Alton Coal Development, LLC proposes to develop a parcel of privately owned land north of the Coal Hollow Project. The development is called the North Private Lease. The center of the North Private Lease is located approximately 0.8 miles south east of the town of Alton, Utah. At this time Alton Coal Development, LLC is proposing to expand the development of Area 1 of the North Private Lease as an Incidental Boundary Change. Alton Coal Development is expanding Area 1 from 51.897 acres to 69.785 acres.

### **BACKGROUND:**

The Alton coal field is located in T39S, R6W and T39S, R5W SLB&M, Kane County, Utah. The town of Kanab, which is the Kane County Seat, is located about 30 miles south of the Alton coal field. Alton Coal Development, LLC (ACD) is the company responsible for the development of a portion of the Alton coal field which is known as the Coal Hollow Mining Project. The center of the Coal Hollow Project (CHP) is located approximately 3 miles south of the town of Alton, Utah.

In 2004, ACD negotiated surface and coal leases for the private or fee areas of the Alton coal field. In 2004 ACD submitted a Lease by Application (LBA) to the Department of the Interior, Bureau of Land Management State Office, Salt Lake City, Utah for federal coal acreage contiguous to the secured private lease area. Starting in 2006, ACD submitted an application for a mine permit along with a Mining and Reclamation Plan (MRP) to the Utah Division of Oil, Gas and Mining (UDOGM). It took until November 8, 2010 to complete the permitting process when the Division issued a permit for the Coal Hollow Mine.

The Coal Hollow Project started as a surface mining operation that intended to produce approximately 2,000,000 tons of coal annually using pit mining. Midway through the project, ACD initiated Highwall mining which was used in a portion of the mine. Recently the Company has instigated underground mining, which is still being developed. Production at the mine has been much slower than anticipated.

A bond in the amount of \$12,750,000 has been posted to cover the reclamation of the site. The mine has been reclaiming the pits as they are mined out. Currently, pit 10 remains open as it is the access to the underground mine area. The Company has applied for and received phase I bond release on 113 acres of disturbance. This has allowed them to roll some of

the bond money to the Area 1 of the North Private Lease which covers the mining and reclamation of pits 1 through 6. The amount of bond required to reclaim the entire mine site including through pit 6 of area 1 of the North Private Lease has been calculated to be \$12,743,732. The Company now intends to expand the mining into pits 7, 8 and 9 in area 1. This will increase the disturbed acreage in area 1 to 69.785 acres and the total permit area to 791 acres. Additional bond will be required in order to expand. The Company has applied for an additional phase I bond release on other areas that have been backfilled and graded. The application seeks release of 21.29 acres (BRP1-9 and BRP1-10) of Phase I bond release for a bond reduction of \$2,985,984. When approved, this bond release would again allow ACD to roll over the released amount of bond to the expanded area 1 and pits 7, 8, and 9 could then be mined. A condition to this effect will be attached to the revised permit.

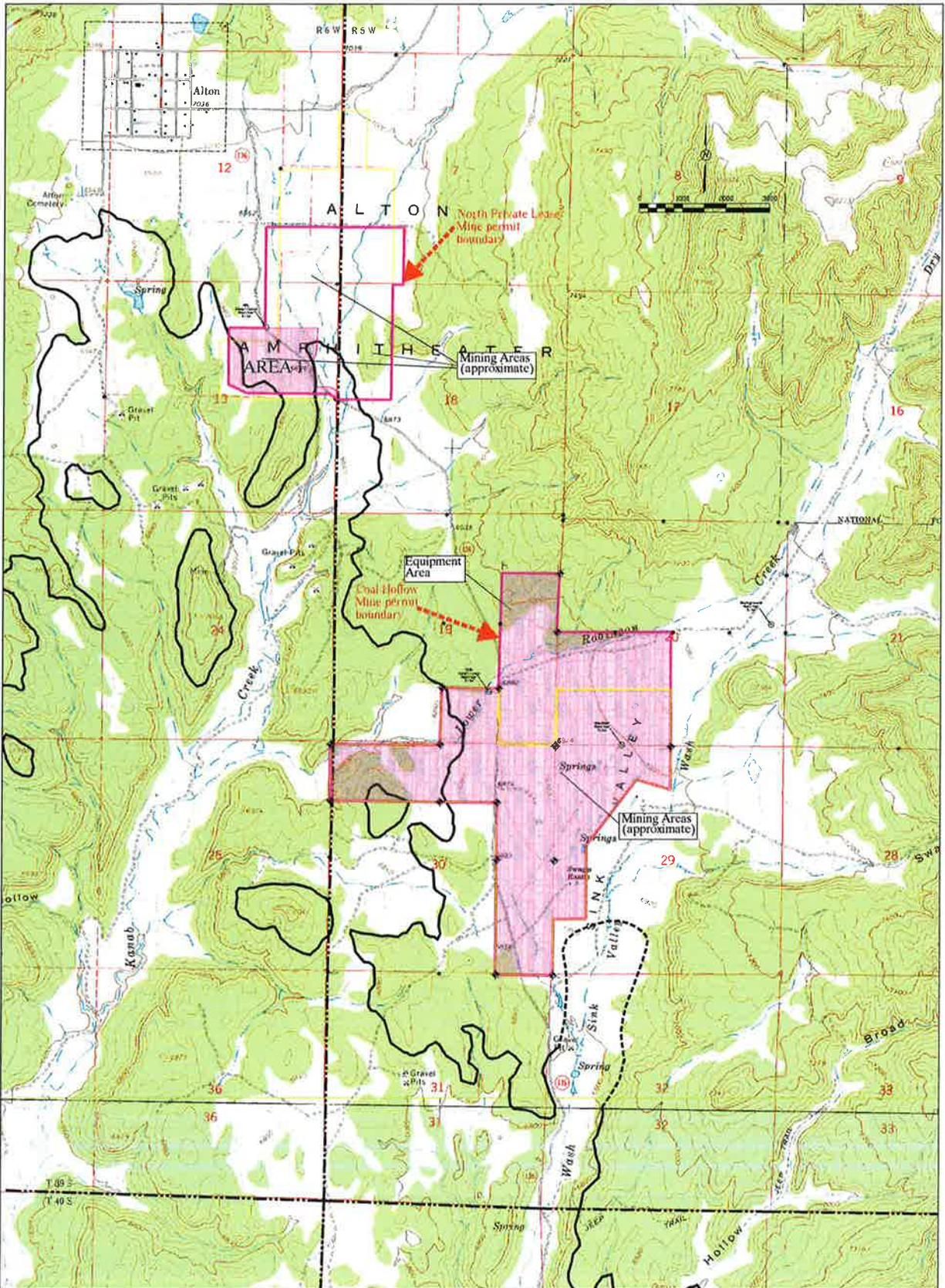
**ANALYSIS:**

The Division of Oil Gas and Mining has conducted an Administrative and Technical Analysis of the proposed mine Permit Application Package and has produced a written TA. It has been determined that the Applicant has the legal right to enter and conduct mining operations in the proposed permit area through acquired lease. The application meets the requirements of the Utah Coal Regulatory Program.

**RECOMMENDATION:**

This recommendation is based on the complete permit application package (PAP), the Technical Analysis (TA) conducted by the Division and the administrative record. Alton Coal Development, LLC has demonstrated that mining within the North Private Lease Area 1 boundary can be done in conformance with the Surface Mining Control and Reclamation Act, and the corresponding Utah Act and performance standards. The 510(c) report on the Applicant Violator System was verified for this mine on December 21, 2016 and there are no violations.

It is recommended that approval be given for mining in the expanded Area 1 boundary of the North Private Lease at the Coal Hollow Mine with the conditions summarized as Attachment A to the Permit.

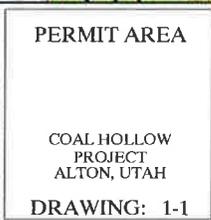


 PERMIT AREA
 PRIVATE COAL
 COAL LINE BOUNDARY
 COUNTY ROAD

DRAWN BY: N. BUTKOVICH	CHECKED BY: APC
DRAWING: 1 - 1	DATE: 8/16/04
JOB NUMBER: 1400	SCALE: 1" = 1000'
	SHEET

REVISIONS	
DATE:	BY:
8/25/08	CRM
10/18/13	KN
8/7/14	KN
8/23/16	KN
9/29/16	KN

PERMIT AREA	
COAL HOLLOW PROJECT ALTON, UTAH	
DRAWING: 1-1	



463 North 100 West, Suite 1  
Cedar City, Utah 84721  
Phone: 433-867-3331  
Fax: 433-867-1192

## **PERMITTING CHRONOLOGY**

**Alton Coal Development, LLC  
North Private Lease Area 1  
Coal Hollow Mine  
C/025/0005**

**Kane County, Utah**

**December 21, 2016**

October 4, 2016	Alton Coal Development, LLC, submits the permit application package for an Incidental Boundary Change in the North Private Lease Area 1 at the Coal Hollow Mine.
October 19, 2016	After an initial review of the application, it was rejected, because it was missing required information.
October 21, 2016	A revised permit application was resubmitted.
November 2, 2016	Upon conducting an initial review, the Division notifies ACD that the application is being accepted for review.
November 28, 2016	ACD submits supplemental information.
December 7, 2016	Division receives letter from NRCS agreeing with the prime farmland determination.
December 14, 2016	Division received additional information from ACD
December 21, 2016	TA completed.
December 21, 2016	AVS check completed with issue recommendation.
December 21, 2016	Revised Permit approved with conditions.

NON-FEDERAL

PERMIT  
C/025/0005

December 21, 2016

STATE OF UTAH  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING  
1594 West North Temple, Suite 1210  
P.O. Box 145801  
Salt Lake City, Utah 84114-5801  
(801) 538-5340

This permit, C/025/0005, is issued for the State of Utah by the Utah Division of Oil, Gas and Mining (DOG M) to:

ALTON COAL DEVELOPMENT, LLC  
463 North 100 West, Suite 1  
Cedar City, Utah 84720  
(435)867-5331

for the Coal Hollow Mine. Alton Coal Development, LLC is the lessee of the entire surface estate included within the permit area including 69.785 acres known as area 1 in the North Private Lease (the only portion of the North Private Lease being permitted with this action). A performance bond is filed with the DOGM in the amount of \$12,750,000.00, payable to the state of Utah, Division of Oil, Gas and Mining. DOGM must receive a copy of this permit signed and dated by the permittee.

**Sec. 1 STATUTES AND REGULATIONS** - This permit is issued pursuant to the Utah Coal Mining and Reclamation Act of 1979, Utah Code Annotated (UCA) 40-10-1 et seq, hereafter referred to as the Act.

**Sec. 2 PERMIT AREA** - The permittee is authorized to conduct coal mining and reclamation activities on the following described lands within the permit area at the Coal Hollow mine, situated in the state of Utah, Kane County, and located:

TOWNSHIP 39 SOUTH-RANGE 05 WEST, SLB&M

Section 30: All of Section Lot #1 (NW $\frac{1}{4}$  NW $\frac{1}{4}$ ); NE $\frac{1}{4}$  NW $\frac{1}{4}$ ; N  $\frac{1}{2}$  NE $\frac{1}{4}$ ; ALSO: BEGINNING 3.50 chains West of the East Quarter corner of Said Section 30, and running South 34° 34' West 22.64 chains of the 1/16 section line; thence West 2.64 chains to the Southwest corner of NE $\frac{1}{4}$  SE $\frac{1}{4}$  of Said Section 30; thence North 40.00 chains; thence East 20.00 chains; thence South 14.69 chains; thence southwesterly to the point of beginning...containing 217.64 acres, more or less.

TOWNSHIP 39 SOUTH-RANGE 05 WEST, SLB&M

Section 29: BEGINNING at the Northwest corner of Said Section 29, and running thence South 34.69 chains; thence North 33° 22' East 35.50 chains; thence North 40° West 0.58 chains; thence North 37° 30' East 12.30 chains; thence West 22.23 chains to the point of beginning...containing 36.04 acres, more or less.

TOWNSHIP 39 SOUTH-RANGE 05 WEST, SLB&M

Section 19: SW¼ SE¼, E½ SE¼, SE¼ NE¼...containing 160.0 acres, more or less.

TOWNSHIP 39 SOUTH-RANGE 05 WEST, SLB&M

Section 20: SW¼...containing 160.00 acres, more or less.

TOWNSHIP 39 SOUTH-RANGE 05 WEST, SLB&M

Section 30: BEGINNING at a point 5.3 I chains North of the E¼ corner of Said Section 30, and running thence South 45.31 chains; thence West 20.00 chains; thence North 20.00 chains; thence East 2.64 chains; thence North 34° 34' East 22.64 chains to the 1/16 section line; thence North 33° 22' East to the point of beginning...containing 61.96 acres, more or less.

TOWNSHIP 39 SOUTH-RANGE 05 WEST, SLB&M

Section 29: BEGINNING at the Northeast Corner of the Northwest Quarter of Said Section 29, and running thence South 14.97 chains; thence West 73 degrees North, 12.41 chains; thence South 36 degrees 45 minutes West to the Quarter Section Line of Section 29; thence South 36 degrees 45 minutes West 15.61 chains; thence South 5.20 chains to the center section line of Section 29; thence South 20.0 chains; thence West 10.96 chains to the west section line of Section 29; thence North 20.0 chains to the Quarter Section Corner of Section 29; thence North 25.31 chains; thence North 33 degrees 22 minutes East 35.50 chains; thence in a Northwesterly direction 2 rods; thence North 37 degrees 30 minutes East 12.30 chains to the North Section Line of Section 29; thence East 17.77 chains to the point of beginning....containing 85.88 acres, more or less.

NORTH PRIVATE LEASE AREA 1

Beginning N 00°13'43" E a distance of 32.93' from the Quarter Corner of Section 13, T39S, R6W and Section 18, T39S, R5W; thence N 31°31'50" E a distance of 154.24'; thence N 57°23'16" W a distance of 226.20'; thence N 88°59'49" W a distance of 333.21; thence N 00°00'00" W a distance of 406.49'; thence N 14°40'41" W a distance of 203.34'; thence N 00°00'00" W a distance of 84.00'; thence N 63°22'32" E a distance of 42.57; thence N 10°23'07" E a distance of 139.17'; thence N 03°40'08" E a distance of 507.46; thence N 90°00'00" W a distance of 1209.70'; thence S 89°29'27" W a distance of 823.81; thence S 00°00'38" E a distance of 1313.93'; thence S 65°46'32" E a distance of 479.40'; thence S 89°44'30" E a distance of 1861.86'; thence S 55°10'50" E a distance of 162.02'; which is the point of beginning, having an area of 3,039,851.16 square feet, or **69.785 acres**

This legal description is for the permit area (791 acres) of the Coal Hollow Mine and included in the operation and reclamation plan on file at the Division. The permittee is authorized to conduct coal mining and reclamation operations on the foregoing described property subject to the leases and Conditional Use Permit issued by Kane County, including all conditions and all other applicable conditions, laws and regulations.

- Sec. 3 COMPLIANCE** - The permittee will comply with the terms and conditions of the permit, all applicable performance standards and requirements of the State Program.
- Sec. 4 PERMIT TERM** - This permit expires on November 8, 2020.
- Sec. 5 ASSIGNMENT OF PERMIT RIGHTS** - The permit rights may not be transferred, assigned or sold without the approval of the Director, DOGM. Transfer, assignment or sale of permit rights must be done in accordance with applicable regulations, including but not limited to 30 CFR 740.13(e) and R645-303.
- Sec. 6 RIGHT OF ENTRY** - The permittee shall allow the authorized representative of the DOGM, including but not limited to inspectors, and representatives of OSMRE, without advance notice or a search warrant, upon presentation of appropriate credentials, and without delay to:
- A. have the rights of entry provided for in 30 CFR 840.12, R645-400-110, 30 CFR 842.13 and R645-400-220; and,
  - B. be accompanied by private persons for the purpose of conducting an inspection in accordance with R645-400-100 and 30 CFR 842, when the inspection is in response to an alleged violation reported by the private person.
- Sec. 7 SCOPE OF OPERATIONS** - The permittee shall conduct coal mining and reclamation operations only on those lands specifically designated as within the permit area on the maps submitted in the mining and reclamation plan and permit application and approved for the term of the permit and which are subject to the performance bond.
- Sec. 8 ENVIRONMENTAL IMPACTS** - The permittee shall minimize any adverse impact to the environment or public health and safety through but not limited to:
- A. accelerated monitoring to determine the nature and extent of noncompliance and the results of the noncompliance;
  - B. immediate implementation of measures necessary to comply; and
  - C. warning, as soon as possible after learning of such noncompliance, any person whose health and safety is in imminent danger due to the noncompliance.

- Sec. 9 DISPOSAL OF POLLUTANTS** - The permittee shall dispose of solids, sludge, filter backwash or pollutants in the course of treatment or control of waters or emissions to the air in the manner required by the approved Utah State Program which prevents violation of any applicable state or federal law.
- Sec. 10 CONDUCT OF OPERATIONS** - The permittee shall conduct its operations:
- A. in accordance with the terms of the permit to prevent significant, imminent environmental harm to the health and safety of the public; and
  - B. utilizing methods specified as conditions of the permit by DOGM in approving alternative methods of compliance with the performance standards of the Act, the approved Utah State Program.
- Sec. 11 EXISTING STRUCTURES** - As applicable, the permittee will comply with R645-301 and R645-302 for compliance, modification, or abandonment of existing structures.
- Sec. 12 RECLAMATION FEE PAYMENT** - The operator shall pay all reclamation fees required by 30 CFR part 870 for coal produced under the permit, for sale, transfer or use.
- Sec. 13 AUTHORIZED AGENT** - The permittee shall provide the names, addresses and telephone numbers of persons responsible for operations under the permit to whom notices and orders are to be delivered.
- Sec. 14 COMPLIANCE WITH OTHER LAWS** - The permittee shall comply with the provisions of the Water Pollution Control Act (33 USC 1151 et seq.) and the Clean Air Act (42 USC 7401 et seq), UCA 26-11-1 et seq, and UCA 26-13-1 et seq.
- Sec. 15 PERMIT RENEWAL** - Upon expiration, this permit may be renewed for areas within the boundaries of the existing permit in accordance with the Act, the approved Utah State Program.
- Sec. 16 CULTURAL RESOURCES** - If during the course of mining operations, previously unidentified cultural resources are discovered, the permittee shall ensure that the site(s) is not disturbed and shall notify DOGM. DOGM, after coordination with OSMRE, shall inform the permittee of necessary actions required. The permittee shall implement the mitigation measures required by DOGM within the time frame specified by DOGM.
- Sec. 17 APPEALS** - The permittee shall have the right to appeal as provided for under R645-300.

**Sec. 18 SPECIAL CONDITIONS** - There are special conditions associated with this permitting action as described in Attachment A.

The above conditions (Secs. 1-18) are also imposed upon the permittee's agents and employees. The failure or refusal of any of these persons to comply with these conditions shall be deemed a failure of the permittee to comply with the terms of this permit and the lease. The permittee shall require his agents, contractors and subcontractors involved in activities concerning this permit to include these conditions in the contracts between and among them. These conditions may be revised or amended, in writing, by the mutual consent of DOGM and the permittee at any time to adjust to changed conditions or to correct an oversight. DOGM may amend these conditions at any time without the consent of the permittee in order to make them consistent with any new federal or state statutes and any new regulations.

**THE STATE OF UTAH**

By: John R. Byrnes  
Date: 12/21/2016

I certify that I have read, understand and accept the requirements of this permit and any special conditions attached.

\_\_\_\_\_  
**Authorized Representative of the Permittee**

Date: \_\_\_\_\_

ATTACHMENT A  
SPECIAL CONDITIONS

1. Alton Coal Development, LLC (ACD) will submit water quality data for the Coal Hollow Mine in an electronic format through the Electronic Data Input web site, <http://linux3.ogm.utah.gov/cgi-bin/appx-ogm.cgi>.
2. In the event that ACD encounters large volumes of groundwater (a sustained flow of more than 1 cfs) in any pit, they will be required to notify the Division, and assess and submit plans to curtail inflows to the pit and reestablish groundwater movement.
3. When filling and reclaiming pits, porous fill material must not be left adjacent to the alluvial aquifers.
4. The Applicant will be required to monitor for selenium where water leaves the minesite, during operational and reclamation phases.
5. The Applicant will be required to evaluate discharges from the mine to determine any impacts to the designated AVF on Kanab Creek. An annual finding should be placed in the Annual Report during operation and reclamation of any adverse impacts to the channel, diminution of water quality and impacts to wildlife.
6. Adequate bonding for reclamation of pits 7, 8 and 9 in the North Lease area must be available prior to commencing mining in those pits. The current bond covers mining through the entirety of pit 6, but additional bond must be posted in order to expand disturbance into 7, 8 and 9 pits or the Phase I bond release application (Task #5306) will have been finally approved, allowing that bond to roll over to pits 7, 8 and 9.
7. Should there be missing information or remaining deficiencies in ACD's response to Task #5291 submitted December 14, 2016, additional information to address the deficiencies will be submitted within 30 days of this approval.



**State of Utah**  
 DEPARTMENT OF NATURAL RESOURCES  
 MICHAEL R. STYLER  
*Executive Director*  
 Division of Oil, Gas and Mining  
 JOHN R. BAZA  
*Division Director*

## Technical Analysis and Findings

### Utah Coal Regulatory Program

**PID:** C0250005  
**TaskID:** 5291  
**Mine Name:** COAL HOLLOW  
**Title:** AREA 1 EXPANDED

#### General Contents

##### Right of Entry

*Analysis:*

**Analysis:**  
 The application meets the requirements for Right of Entry R645-301-114.100, because Dwg 1-7 Permit boundary and Nearest Alton Town Buildings correctly portrays the extension of Area 1 into lands owned by Heaton Brothers, LLC in Section Sec 13.

The Extended Area 1 application adds 17.888 acres fee coal in the North Lease disturbed area in Section 13, T 39 S, R 6W (MRP Section 110 and Dwg 1-1). Tthe permit boundary moves approximately 450 to the East and coal extraction remains on Heaton Brothers, LLC land and Heaton Brother's coal. A small area in Section 18 is on G. Ferril and Dorothy M. Heaton land which was previously approved for access and storage.

Right of entry to the surface and coal in Section 13 is under Heaton Brothers LLC parcel 9-6-13-1 lease. Right of entry to the surface in Section 18 is under G. Ferril and Dorothy M. Heaton 9-5-18-3A lease documents, Confidential File 04172015.4877, Exhibit 6 and 12, respectively.

With the 17.888 acre extension, the total North Lease bonded area will be 69.79 acres (MRP, Section 116.102).

pburton

#### Legal Description

*Analysis:*

**Analysis:**  
 The application meets the requirements of R645-301-142 because a legal description of the expanded Area 1 is found in MRP Section 110 and expanded Area 1 (69.79 acres) is shown on Dwg 5-46 Disturbance Sequence; Dwg 5-48A Facilities and Structures Construction sequence; and Dwg 5-53 Coal Removal Sequence. A caveat is stated on Dwg 5-53 that coal extraction in Pits 8 and 9 of the Area 1 Extension will only proceed to the toe of the highwall below the geologic contact between the tropic shale and the quaternary alluvium. Bonding for the expansion of North Lease Area 1 into Pits 7-9 is bond increment number 3 (MRP, Chap 8).

At this time only conditional approval of Area 1 Extended may be authorized, because, in accordance with R645-301-820.113 and R645-301-112.800, the bonding for Area 1 Extended is contingent upon approval of Task 5306 (BRP1-9 and BRP1-10 in the South Lease, also referred to as 2016 4Q bond release 16\_2 on Stage of Reclamation /Release Application spreadsheet (Chap 8).

pburton

## Environmental Resource Information

### General

#### Analysis:

The amendment meets State of Utah R645-301-300 requirements for a description of the vegetative, fish, and wildlife resources of the permit area and adjacent areas and R645-301-341 requirements for a revegetation plan.

The amendment is for an extension to Area 1 in the North Private Lease. The extension allows mining of most of Pits, 7, 8, and 9 while avoiding impacts to delineated wetlands.

The approved MRP includes all required information pursuant to R645-301-300 for the North Private Lease. The only exception is related to the disturbance and reclamation related to wetlands. Since wetlands are under the jurisdiction of the Army Corp of Engineers (CoE), the Division will not approve the disturbance or reclamation plan of said wetlands without the required permits from CoE.

The Sage-grouse mitigation plan requires compensatory mitigation to occur at a 4:1 ratio. Mitigation must be completed prior to disturbance. This amendment increases the disturbed area to roughly 70 acres, therefore mitigation of 280 acres is required. ACD has completed this mitigation requirement and has funded projects to improve nearby habitat for 591.79 acres. (344 acres were transferred from the Coal Hollow Lease and 247.79 acres associated with WRI 3876, Upper Kanab Creek Project).

lreinhart

### Permit Area

#### Analysis:

The amendment meets the State of Utah R645 engineering requirements for the Permit Area.

The amendment meets the requirements of R645-301-521.140 due updating all the relevant information within the mine plan that details the expanded Permit Area. The amendment included updates to all North Private Lease drawings of the proposed Permit Area to include an additional 17.86 acres. The proposed additional acres brings the total disturbance within Area 1 of the North Private lease to 69.8 acres. The Permittee is proposing the increase in Permit area size to include the addition of Pits 7 through 9 to follow the sequence mining of Area 1. The pits are currently part of Area 2, which is decreased to 97.84 acres from the original 115.7 acres. The reasoning behind the Permittee contemplating this addition to Area 1 is due to an extended time review of the Area 2 USACE regarding the wetlands. Adding Pits 7 through 9 to Area 1 would result in more continuous mining operations at the North Private Lease while still stopping mining operations outside of any USACE jurisdiction areas. The Permittee contends that the current approved MRP would result in a temporary cessation at the North Private Lease until the Permittee is approved for their Individual 404 Permit required prior to mining in Area 2. See the Division's Hydrologist review regarding the groundwater interactions with Kanab Creek.

cparker

## Soils Resource Information

#### Analysis:

##### Analysis:

The information provided meets the requirements of R645-301-220, Soil Environmental Description. The Order II Soil Survey of the North Lease is found in Volume 11. The survey was completed by Robert Long Associates in 2014.

Soil data point locations are identified on Soil Map 1.

Prime farmland correspondence with the NRCS is found in Appendix A.

Soil profile descriptions are in Appendix B.

Soil Laboratory Analyses are found in Appendix C and are summarized in Tables C-1a, b, & c.

The list of parameters analyzed is shown in Table 3 and included density and total metals (SW 846 method) for some samples. Soil samples were analyzed by Intermountain Laboratory-Sheridan, WY. Soil profile photographs are in Appendix D. Piezometers were installed at several aquic soil profile locations (Table 2) and the seasonal groundwater fluctuation is described in the NPL geo-hydrology report.

#### AREA 1

Area 1 Extended is in the SW quarter of the North Lease. Soils are in the Order Vertisol, characterized by 30% or more clay with cracks that open and close periodically (Keys to Soil Taxonomy, 8th Edition, 1999.) Sideshow Family soils that are derived from shale (Soil Map 3) predominate. Sideshow family map units A1, A2 and A3 are differentiated by slope. Map Units A2 and A3 form the hilly land (sloping 4- 18%) on the West. As one moves East across Area 1, to Map Unit A1, slopes become gentle (lesser slopes of 0-4%), refer to Soils Map 2, Vol. 11.

Sideshow family soils are silty clays and clay in texture. They are represented by soil data locations 12AS013, 12AS014, 12AS017, and 12AS032. A soil inclusion in the Sideshow map unit is the Teromote soil (clay loam) represented by data location 12AS016. Teremote is the deepest soil within the Sideshow Map Units A1-A3. The smallest unit in Area 1 is Boxcanyon family soil, map unit F (clay loam represented by soil data location 13AS07) near ASCA #1. These clay soils have limiting characteristics that must be recognized in the reclamation plan.

Clay concentrations in the Area 1 surface soils are about 32 - 67%, with correspondingly high saturation percentages. These non-carbonate clay soils are not sodic. The main cation is calcium in the form of gypsum. At sample location 12AS032 (Pond 6 area), the smectic clay shrink-swell characteristics were noted as slickensides. At this location the SAR values range between 7.56 - 10.3 from 25 inches to 56 inches. This is considered only fair quality on the Division's suitability table. (Sample location 12AS032 was evaluated for density and total metals, as well.)

The Order II Soil Survey describes the vegetation in Area 1 map units as black sagebrush, wheatgrasses, and galleta grass, with Wyoming big sagebrush dominating on Teromote soil (10 - 35% of the area). Pinyon and juniper have recently been removed from Area 1 soils.

#### AREA 1 EXTENDED

Moving eastward from Area 1, one encounters map unit A1, A2 and A3 soils represented by sample locations 12AS013, 12AS014, and 12AS015. Further east gullied land in map unit K contains carbonatic clay soils (>40% CaCO<sub>3</sub>) and slightly coarser soils (BBB family 15% to 70% slopes, represented by sample site 13SO1). In the NE corner of Area 1 Extended is Map unit G (AAA soils with 0-5% slopes, above proposed Pit 9 North Lease). Map unit G is represented by Soil sample locations 12SO19 and 12AS019A (located just north of Area 1 Extended). Map Unit G is depositional soil or alluvium (Soil Map 3, Vol. 11). Map unit G contains more than 50% prime farmland soils (Table 10, Vol. 11) and it was included in the NRCS prime farmland resource map at this location (Soil Map 8, Vol. 11). However, map unit G is not irrigated at this location and so was not considered prime farmland by Long Resource Consultants (Map 9, Vol. 11).

The Order II Soil Survey describes the vegetation in Extended Area 1 map units as rabbitbrush, wheatgrasses, smooth brome, woodâ€™s rose, alfalfa and scattered Utah juniper.

Productivity information for the North Lease is found in Chapter 4 Section 412.120 and in Appendix 4-8 and Table 43 in Vol. 12. Productivity information in Table 43 is for sample locations shown on Vegetation Map 2 (vol 12). At sample location, V-19 (pastureland), within Area 1, the productivity was estimated to fall between 500 lbs/acre - 1,100 lbs/acre. At sample location V-17 (representative for Area 1 Extended map unit G pastureland) productivity is between 700 and 1,100 lbs/ac. These measurements are in agreement with the data generated by the NRCS for the upland clay loam ecosite. (Vic Parslow. 2015. NRCS Provisional Data for the Kane County Survey. Richfield, Utah.)

pburton

### Prime Farmland

#### Analysis:

#### Analysis:

The application meets the requirements of R645-302-313.100, because the Division consulted with the State Soil Scientist, Mike Domeier regarding the NRCS prime farmland map (Map 8) and the more intensive Order II Soil Survey prime farmland map (Map 9). Both are found in Volume 11 of the MRP. In correspondence dated 12/7/2017, Mr. Domeier conveyed NRCS

concurrency with the prime farmland designation described in the Order II Soil Survey, Map 9, Vol. 11 of the Coal Hollow Mining and Reclamation Plan. The soil survey indicates that no prime farmland soils are present in the extended Area 1 permit area and the application provides a statement upon which that conclusion was reached.

The prime farmland status of these soils is presented in Table 11, Volume 11. Map units A1, A2, and A3 are farmlands of statewide importance. Map Units F and G are prime farmland soils when irrigated. Area 1 and Extended Area 1 soils are not irrigated. Extended Area 1 includes gullied land in the NE corner above Pit 8 and 9.

pburton

## Probable Hydrologic Consequences Determination

### Analysis:

The amendment meets the State of Utah R645 requirements for Probably Hydrologic Consequences.

The Probable Hydrologic Consequences relating to the Area 1 Extension have been adequately updated. The mining will progress through Pits 7 & 9 staying within Tropic shale overburden. This contact between Tropic shale and Qal is shown in Figure 6. Since the Tropic shale overburden does not hold or release appreciable amounts of groundwater, little to no groundwater should be expected to enter the Area 1 Extension pits or operations will continue as they have in Pits 1-6.

kstorrar

## Operation Plan

### Mining Operations and Facilities

#### Analysis:

The amendment meets all the State of Utah R645 requirements for Mining Operations and Facilities.

The amendment meets the requirements of R645-301-523, -526, and 528 by including updated descriptions and drawings of the mining operations regarding the mining operations through Area 1, Pits 1 through 9. The current MRP details the method of coal mining, engineering techniques, anticipated annual and total production of coal by tonnage, and major equipment to be used for all aspects of those operations proposed to be conducted during the life.

The amendment contemplates the addition of Pits 7 through 9 be added to Area 1 within the North Private Lease. Chapter 5 section 521 was updated to detail that Pits 1 through 6 were the initial permit Area 1 and added descriptive narrative regarding the mining of Pits 5 through 9. Chapter 5 section 521 also details that during mining of the northern portion of Pit 5 and southern portion of Pit 6 the Permittee will initiate the first Phase I bond release for the North Private Lease to follow the contemporaneous operation and reclamation plans described in Chapter 5. The release of the initial Pits in the North Private lease allows for the incremental bond to be applied to Pits 7 through 9.

The operational pit development of Pit 9 will be limited at the northern extent by Pond T1, which is also located at the geologic contact between the Tropic Shale and Quaternary Alluvium in Pits 8 and 9. Drawing 5-57 has an added note detailing that the crest of Pits 8 and 9 of Area 1 will no extend beyond Pond T1 or into alluvium, shown in red on the drawing. The groundwater has historically be located solely within the Alluvium and mining operations thus far in the North Private lease have been dry and are completely contained within the Tropic shale. See the Division's Hydrologist's review regarding groundwater and Alluvium interface. Chapter 5 page 5-15 of the MRP states that no alluvium will be mined within the North Private lease until the hydrologic analysis of Areas 2 and 3 is approved.

The Permittee added additional clarification narrative regarding mining operations of Areas 2 and 3 that was not reviewed at the time of this amendment and is not considered part of the approved MRP.

cparker

## Coal Recovery

### Analysis:

The amendment meets the State of Utah R645 requirements for Coal Recovery.

The amendment meets the requirements of R645-301-522 due to a discussion of the measures to be used to maximize the use and conservation of the coal resources. No changes were made to the narrative of Chapter 5 Section 522 but Drawings 5-52, 5-53, and 5-57 were updated to reflect the expanded boundary of Permit Area 1. Drawing 5-57 has an added note detailing that the crest of Pits 8 and 9 of Area 1 will no extend beyond Pond T1 or into alluvium, shown in red on the drawing.

cparker

## Topsoil and Subsoil

### Analysis:

The Area 1 extended application meets the requirements of R645-301-230, because the plan indicates that prior to developing the 17.89 acres of Area 1 Extended (Pit 7 through 9), topsoil and subsoil will be salvaged and stockpiled and protected or livehauled. The plan will be conditionally approved pending receipt of revisions to Dwg 2-4 and 5-47 to provide clear, concise and current information on those maps. (i.e. Previous topsoil handling information and spoil, subsoil and topsoil storage locations will be removed from the maps, as discussed during a conference call on 12/13/2016 with ACD staff. The current and proposed stockpile locations will be shown on Dwg 2-4, along with estimated salvage volumes for Area 1 Extended and currently stockpiled volumes. In addition to the above simplification, Dwg 5-47 will show the access road to pond 5.)

The proposed stockpiles are sized to hold the entire volume of extension soils if necessary: 41,000 CY topsoil and 82,000 CY subsoil could be situated above regraded Pit 4. These stockpiles will remain until final reclamation of the last pits in the North Lease (R645-301-231.100). However, Dwg 2-4 states that the topsoil salvaged from Area 1 extended will be returned to Heaton Brothers LLC surface per Section 8.10 of the Heaton Brothers LLC lease (Confidential Folder 04172015.4877, Exhibit 6, Sec. 8.10). Stockpiles will be protected as described in Section 234.200 and Section 244.100. Dwg 2-4 notation also states that topsoil and subsoil recovery from Area 1 Extended will take place incrementally to allow live haul.

Drawing 2-3\* provides the average topsoil salvage depth for the soil map units to be encountered in Area 1 Extended: A1 (14 in.), A2 (13 in), A3 (14 in), F (19 in), G (11 in) and K (12 in). The MRP Section 232.100 table of estimated topsoil and subsoil salvage recovery was updated for the North Lease using the 2014 Order II soil survey and the 2016 Appendix 2-5 Area 1 survey. Table 232.100 estimates an average 13 inches of topsoil recovery in map units A1, A2, and A3 and 33 inches of subsoil recovery, except for the minor soil component (1.21 acres) of map unit F where 19 inches of topsoil will be recovered. Dwg 2-4 indicates an average of 13 inches of topsoil will be recovered incrementally as mining progresses.

Subsoil salvage will be monitored for pH and soils with values greater than 8.8 will not be salvaged (Sec. 231.100 and Sec 232.200). The soil survey further recommends that soils of pH 8.5 or greater are not utilized as topsoil (Table 14, Vol 11). The MRP states that an environmental technician will monitor the soil salvage in consultation with a certified professional soil scientist (p. 2-34). As discussed during a conference call on 12/13/2016, the possible methods of monitoring are 1) Using replacement depth stakes over a known area for live haul. 2) Counting truck loads hauled to a stockpile or livehaul. 3) Recording depth of salvage by area salvaged.

With each bond release application, the Permittee will complete the volume tracking table on p. 2-35 of the MRP, as discussed during a conference call with ACD staff on 12/13/2016.

\*In Section 232.600 of the MRP, Dwg 2-3 is compared with Dwg 10 in Vol 11 for information on soil salvage depth. The Permittee has clarified that these two maps are of the same scale (1 in = 500 ft) when Map 10 is printed as 11 x 17 inches and when Dwg 2-3 is printed as 24 X 36 inches.

pburton

## Hydrologic Sediment Control Measures

### Analysis:

#### 1st Round Analysis:

The amendment does not meet the State of Utah R645 requirements for Sediment Control Measures.

Drainage from disturbed areas within Area 1 Extension must report to Pond T1-A or other sediment control measures before exiting the permit area. Large areas of disturbed watershed T-DA-2 in Drawing 5-65A appear to report to the ephemeral wash up-channel of Pond T-1. The ephemeral wash in this location is only supposed to carry undisturbed runoff from watershed T-UA-1. The mixing of disturbed runoff from T-DA-2 with the undisturbed runoff from T-UA-1 within this segment

of channel will cause an offsite impact when it exits the permit area through culvert UC-T1-01. Therefore, the ephemeral wash within the disturbed watershed T-DA-2 on Drawing 5-65A must have sediment control along the east and west edges at the top of the embankment.

Sediment control measures are needed at both the up and down-gradient outslope embankments of temporary Pond T1-A. The pond is sitting within the ephemeral wash on top of the undisturbed culvert UC-T1-01. During construction of the pond embankments and during operations sediment must be prevented from raveling or washing into the ephemeral channel. Without proper sediment control measures in place any sediment introduced to the channel will be carried offsite by runoff from T-UA-1 causing an offsite impact.

**1st Round Deficiencies:**

The amendment does not meet the State of Utah R645 requirements for Sediment Control Measures. The following deficiencies must be addressed prior to final approval:

R645-301-742.110: The ephemeral wash within the disturbed watershed T-DA-2 on Drawing 5-65A must have sediment control along the east and west edges at the top of the embankment.

Sediment control measures are needed at both the up and down-gradient outslope embankments of temporary Pond T1-A.

**2nd Round Analysis:**

The amendment meets the State of Utah R645 requirements for Sediment Control Measures.

An adequate plan has been developed for Area 1 Extension to handle runoff from disturbed areas. All disturbed area runoff will report to a sediment pond or will be treated by using the BTCA prior to entering undisturbed drainages or flowing off site.

kstorrar

## Hydrologic Ponds Impoundments Banks Dams

*Analysis:*

**1st Round Analysis:**

The amendment does not meet the State of Utah R645 requirements for Sedimentation Ponds.

The description of Pond T1-A must be updated. It appears the narratives provided on page 7-73 and 7-84 refer to the original design of the structure. The new design has engineered embankments on both the up and down-channel ends, it has a culvert bypassing runoff from undisturbed watershed T-UA-1, and it will capture a much smaller area of disturbed area runoff.

**1st Round Deficiencies:**

The amendment does not meet the State of Utah R645 requirements for Sedimentation Ponds.

The narratives of Pond T1-A on pages 7-73 and 7-84 must be updated to reflect the new design of the pond.

**2nd Round Analysis:**

The amendment meets the State of Utah R645 requirements for Sedimentation Ponds.

The amendment provides an accurate narrative of the temporary pond T1A. The pond will capture 14.4 acres of runoff from 'Area 1 Extended'. The captured runoff will then be pumped up to Pond 6 where it will be allowed to discharge through Outfall 006.

kstorrar

## Support Facilities and Utility Installations

*Analysis:*

The amendment meets the State of Utah R645 requirements for Support Facilities and Utility Installations.

The amendment meets the requirements of R645-301-521.180 and -526 the require the description, plans, and drawing for each support facility to be constructed, used, or maintained within the proposed permit area. The amendment introduces the new drainage control structures to control disturbed run off for the new expanded permit Area 1, 69.8 Acres. The new

drainage controls are considered temporary in nature as they are only required for the Mining of Pits 6 through southern portion of 9. The new sediment control measure include Ditch DD T1-01 and DD T1-02 that report to Pond T1 for the disturbed runoff and installation of undisturbed Culvert UC-T1-01 to carry undisturbed runoff through the existing arroyo, under Pond T1 to Kanab creek. Pond T1 will remain in place until the completed construction of Pond 7 within Area 2.

The amendment includes the required engineered drawings for the new drainage control features. Drawing 5-48A was updated to show said sediment controls and includes narrative on the drawing regarding how controls will be progressively mine through as Pit 9 develops northward. The amendment includes the addition of Appendix 5-12A to detail the hydrologic calculations utilized to size temporary sediment Pond T1a of the North Private Lease. The engineering review did not include a detailed calculation analysis of the pond sizing, see the Division's hydrologist review in the Technical Analysis report for meeting required R645-301 sizing requirements. Drawing 5-65, 5-65A, and 5-66A were updated within the amendment to show the new plan view locations of the two new ditches and pond. Drawing 5-73 was updated to show the design cross sections and parameters of the two new ditches. Drawing 5-71A was added to show the design cross section and stage/storage capacity of the new pond T-1A.

cparker

## Maps Affected Area

### Analysis:

The amendment meets the State of Utah R645-301-521.100 requirements for Affected Area Maps.

The amendment meets the requirements of R645-301-521.100 through-521.130 by updating all the relevant drawings for the North Private Lease to shown the extended Area 1. The amendment added several new drawings, Drawings 5-48A, 5-65A, 5-66A, and 5-71A, to show the new temporary support facilities associated with mining Pits 7 through 9.

cparker

## Maps Facilities

### Analysis:

The amendment meets the State of Utah R645 requirements Mining Facilities Maps.

The amendment meets the requirements of R645-301-521.120 through-521.125 which require maps to clearly show surface and subsurface facilities. Drawings 5-48A and 5-65A show the two new disturbed drainage ditches, Pond T1, a pump and four inch poly pipeline from pond T1 to Pond 6, and undisturbed drainage culvert under Pond T1 UC-T1-01

cparker

## Maps Mine Workings

### Analysis:

The amendment meets the State of Utah R645-301-521.140 requirements for Mine Workings Maps.

The amendment meets the requirements of R645-301-521.140 which requires maps that clearly show all mine plans. Drawing 5-53 shows the coal extraction sequencing to include the expanded Area 1 to encompass Pits 7 through 9. Drawing 5-57 has an added note detailing that the crest of Pits 8 and 9 of Area 1 will no extend beyond Pond T1 or into alluvium, shown in red on the drawing.

cparker

## Reclamation Plan

### General Requirements

#### Analysis:

The amendment meets the State of Utah R645 requirements for Reclamation Activities.

The requirements of R645-301-540 are met within the amendment with narrative in Chapter 5 page 5-88 detailing the final reclamation of the North Private Lease with mining complete in Areas 1 through 3 and a reclamation scenario in the event

mining operations cease after Area 1. The Permittee provided a figure to the Division showing that no delinted wetlands are within the Permit Area 1 expansion, see Coal Files Email 11/8/2016 From Andrew Christensen RE:USACE Delineation.

cparker

### **Approximate Original Contour Restoration**

*Analysis:*

The amendment meets the State of Utah R645 requirements for Approximate Original Contour Restoration.

The amendment meets the R645-301-512.200, -553.110 through -553.150, and -302-270 as the mined does not require a variance from approximate original contour (AOC). AOC as defined by R645-301-553.100 through -553.150 is achieved when the final grade closely resembles the general surface configuration of the land prior to mining activities and provides a subsurface foundation for vegetative cover capable of stabilizing the surface from erosion.

The amendment meets the R645-301-512.200 and -553.110 as there is no change in the MRP and all grading will be place back to approximate original contours. Within the amendment as narrative was added in Chapter 5 pages 5-88 and 5-98 detailing the final reclamation of the North Private Lease with mining complete in Areas 1 through 3 and a reclamation scenario in the event mining operations cease after Area 1 to be returned to AOC.

cparker

### **Backfill and Grading General**

*Analysis:*

The amendment meets the State of Utah R645 requirements for Backfill and Grading.

The amendment meets the general requirements of R645-301-553 by detailing a general backfill and grading plan that details how disturbed areas will be backfilled and graded to achieve the approximate original contour, eliminate all highwalls, spoil piles, and depressions, and achieve a postmining slope that does not exceed either the angle of repose or such lesser slope as is necessary to achieve a long term static safety factor of 1.3 and to prevent slides, minimize erosion and water pollution both on and off the site, and support the approved postmining land use.

The requirements of R645-301-553 are met within the amendment as narrative was added in Chapter 5 pages 5-88 and 5-98 detailing the final reclamation of the North Private Lease with mining complete in Areas 1 through 3 and a reclamation scenario in the event mining operations cease after Area to be returned to AOC.

cparker

### **Topsoil and Subsoil**

*Analysis:*

Analysis:

There has been no change to the reclamation plan.

pburton

### **Contemporaneous Reclamation General**

*Analysis:*

The amendment meets the State of Utah R645 requirements for Contemporaneous Reclamation.

The requirements of R645-301-553 of backfill and grading are met within the amendment as the Permittee updated the relevant sections within Chapter 5 detailing the contemporaneous reclamation, bond releases, and mining progress for the Pits within the expanded Area 1. The Permittee added additional clarification narrative regarding mining operations of Areas 2 and 3 that was not reviewed at the time of this amendment and is not considered part of the approved MRP

cparker

### **Maps Bonded Area**

*Analysis:*

The amendment meets the State of Utah R645 requirements for Bonded Area.

The requirements of R645-301-800 are met within the amendment as the bonded area map was updated in Drawing 5-77.

cparker

### **Maps Reclamation Backfilling and Grading**

*Analysis:*

The amendment meets the State of Utah R645 requirements for Reclamation Backfilling and Grading Maps.

The requirements of R645-301-542 are met within the amendment as to the existing MRP plan of backfilling and grading areas or volumes on Drawing 5-76A were updated.

cparker

### **Maps Reclamation Facilities**

*Analysis:*

The amendment meets the State of Utah R645 requirements for Reclamation Facilities Maps

The requirements of R645-301-542 are met within the amendment as there is no change to the existing MRP plan of facilities that will remain post mining operations as shown on Drawings 5-74, 5-74A and 5-76B.

cparker

### **Maps Reclamation Final Surface Configuration**

*Analysis:*

The amendment meets the State of Utah R645 requirements for Final Surface Configuration Maps.

The requirements of R645-301-542 are met within the amendment as there is no change to the existing MRP plan of the estimated final surface configuration back to AOC as shown in Drawing 5-74A. Drawings 5-74B and 5-74C were not contemplated within this review as the information depicted within these drawings is relevant to Areas 2 and 3.

cparker

### **Bonding Determination of Amount**

*Analysis:*

The amendment meets the State of Utah R645 requirements for Determination of Bond Amount.

The amendment meets the requirements of R645-301-830.140 as the Permittee submitted detailed bond information in regards to the amendment. The minimum required reclamation bond to be posted by the Permittee is \$12,743,732 for mining operations within Pits 1 through 6 of the North Private lease, Pit B-1 in the South Private Lease, and underground operations in Pit 10. The Permittee currently maintains a post bond amount of \$12,750,000 and is therefore adequately bonded.

cparker



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Applicant/Violator System

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**Evaluation on Permit Number: C0250005 SEQ:3**  
**0 Violations**

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**Permit Evaluation**

Permit Number	C0250005 SEQ:3
Permitee Name	247248 Alton Coal Development LLC
Date of Request	12/21/2016 11:32:24 AM
Requestor	suzanne.steab

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There were no violations retrieved by the system

**Evaluation OFT**

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Entities: 8

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- 250908 Sleepy Hollow Mineral Investors LLC - ()
- 064574 Thomas T Ungurean - (Manager)
- 107810 Charles C Ungurean - (Manager)
- 250907 SH Coal Investment LLC - (Subsidiary Company)
- 064574 Thomas T Ungurean - (Corporate Officer)
- 107810 Charles C Ungurean - (Corporate Officer)
- 247248 Alton Coal Development LLC - (Subsidiary Company)
- 036531 Robert C Nead Jr - (Manager)
- 247290 James J Wayland - (Manager)
- 251418 Larry W. Johnson - (Manager)

**Narrative**

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