



United States Department of the Interior



OFFICE OF SURFACE MINING
RECLAMATION AND ENFORCEMENT

Western Region Office
1999 Broadway, Suite 3320
Denver, CO 80202-3050

RECEIVED

DEC 26 2019

December 20, 2019

DIV OF OIL, GAS & MINING

UT-0033

Kirk Nicholes
463 North 100 West
Cedar City, Utah 84721

Dear Mr. Nicholes:

On July 29, 2019, the Department of the Interior approved a Mining Plan Modification for Federal Coal Lease UTU-081895. This mining plan action relates to Federal lands associated with the Utah Division of Oil, Gas and Mining's Decision Document for the LBA Block 1, Coal Hollow Mine, Alton Coal Development, LLC, C/025/0005, Task #5855, in Kane County, approved on March 04, 2019.

I have enclosed a thumb drive containing a copy of the mining plan decision document for this modification to the mining plan. Please read the terms and conditions of the mining plan approval document contained therein. Mining and reclamation operations must be conducted in accordance with both the Utah State permit and the enclosed Mining Plan Approval.

If you have any questions, please contact me at 303-293-5078.

Sincerely,

Nicole Caveny
Environmental Protection Specialist

Enclosure

cc: BLM State Office
Utah DOGM

MINING PLAN DECISION DOCUMENT

Alton Coal Development, LLC

Coal Hollow Mine

Federal Lease UTU-081895

Kane County, Utah



**U.S. Department of the Interior
Office of Surface Mining Reclamation and Enforcement**

Approved July 2019

**New Mining Plan Coal Hollow Mine
Federal Coal Lease UTU-081895
Fact Sheet**

1. This new mining plan will result in approximately 42.6 acres of Federal minerals to be mined from UTU-081895 to create a new mining plan approval area of Alton Coal Development, LLC's, Coal Hollow Mine, a surface and underground mine located 3 miles south of Alton, Utah.
2. Approval of this new mining plan will authorize mining of approximately 1.2 million tons of Federal coal.
3. Approval of this new mining plan will create a new mining plan approval area consisting of zero acres of Federal surface land and 46.6 acres of Federal coal.
4. The projected average annual production rate is estimated to be 600,000 to 750,000 tons per year and the maximum production rate will be no more than 2 million tons per year.
5. The permit area for Utah Permit No. C/025/0005 will remain at approximately 1,017 acres.
6. Surface disturbance within the State permit area will increase by 42 acres, from 611 acres to 653 acres.
7. The mining operation for this action will use pit and highwall mining methods.
8. The current number of employees at the mine, approximately 30, will increase to approximately 50 as a result of this action.
9. The current post-mining land uses of grazing land and wildlife habitat will not change within the permit and mining plan area.
10. The Utah Department of Oil, Gas, and Mining determined that a reclamation performance bond of \$13,000,000 in the form of a surety bond, made payable to both the State and the United States, is adequate for the State Permit and this new mining plan.
11. The proposed action will add approximately 2 years to the life of the mine.
12. On April 16, 2019, several groups filed a complaint challenging the Bureau of Land Management's (BLM) decision authorizing the competitive lease sale of the Alton tract. *Utah Physicians for a Healthy Environment et al v. U.S. Bureau of Land Management*, Case No. 2:19-cv-00256 (D. Utah). The BLM lease tract consists of approximately 2,114 acres (of which approximately 1,227 acres are federal surface and mineral estate and 887 acres are split estate) for the recovery of approximately 30.8 million tons of coal. Plaintiffs allege that BLM's FEIS failed to take a hard look at indirect and cumulative effects of non-GHG and GHG emissions. Currently, the leasing decision is in effect. BLM's Answer is due on July 12.
13. The applicant requests a decision by July 15, 2019, for mining a portion of Federal coal lease UTU-081895 to prevent potential employee layoffs.

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Memoranda



United States Department of the Interior

OFFICE OF SURFACE MINING
RECLAMATION AND ENFORCEMENT
Washington, D.C. 20240



MEMORANDUM

JUL 02 2019

To: Joseph R. Balash
Assistant Secretary
Land and Minerals Management
U.S. Department of the Interior

From: *Glenda H. Owens*
Glenda H. Owens
Deputy Director, Exercising the Authority of the Director
Office of Surface Mining Reclamation and Enforcement
U.S. Department of the Interior

Subject: Recommendation for Approval of the Proposed New Mining Plan for a Portion of Federal Lease UTU-081895 at Alton Coal Development, LLC's, Coal Hollow Mine, Located in Kane County, Utah

I recommend approval without special conditions, of this new mining plan for a portion of Federal Lease UTU-081895 at Alton Coal Development, LLC's, Coal Hollow Mine under the Mineral Leasing Act of 1920, as amended.

My recommendation to approve Coal Hollow Mine's mining plan is based on:

- (1) Alton Coal Development, LLC's complete permit application package (PAP) including the Resource Recovery and Protection Plan (R2P2);
- (2) Compliance with the National Environmental Policy Act of 1969;
- (3) Documentation assuring compliance with applicable requirements of other Federal laws, regulations, and executive orders;
- (4) Comments and recommendations or concurrence of other Federal agencies, and the public;
- (5) The Bureau of Land Management's findings and recommendations regarding the R2P2, the Federal lease requirements, and the Mineral Leasing Act; and,
- (6) Findings and recommendations of the Utah Division of Oil, Gas and Mining, regarding the PAP and the State program.

The Secretary may approve a mining plan for Federal leases under 30 U.S.C. 207(c) and 1273(c). In accordance with 30 CFR Chapter VII, Subchapter D, I find that the proposed mining plan is in compliance with all applicable laws and regulations. The decision document for the proposed mining plan action is attached.

Attachment

United States Department of the Interior



OFFICE OF SURFACE MINING
Reclamation and Enforcement
Region 7 Office
1999 Broadway, Suite 3320
Denver, CO 80202-3050



JUN 28 2019

Memorandum

To: Glenda H. Owens
Deputy Director, Exercising the Authority of Director, Office of Surface
Mining Reclamation and Enforcement
U.S. Department of the Interior

Through: Sterling Rideout *[Signature]*
Assistant Director, Program Support

From: David Berry *[Signature]*
Regional Director, Unified Regions 5, 7, 8, 9, 10 and 11

Subject: Recommendation for Approval, Without Special Conditions, of the
Proposed New Mining Plan for Mining a Portion of Federal Lease UTU-
081895 at the Alton Coal Development, LLC's Coal Hollow Mine, located
in Kane County, Utah

I. Recommendation

I recommend approval, without special conditions, of a new mining plan for a portion of Federal Lease UTU-081895 at the Coal Hollow Mine. This is a new mining plan for a surface and underground coal mine being permitted under the Federal Lands Program, the approved Utah State program, and the State-Federal cooperative agreement.

My recommendation to approve this new mining plan is based on:

- (1) Alton Coal Development, LLC's (ACD) complete permit application package (PAP) including the Resource Recovery and Protection Plan (R2P2);
- (2) Compliance with the National Environmental Policy Act of 1969;
- (3) Documentation assuring compliance with applicable requirements of other Federal laws, regulations, and executive orders;

(4) Comments and recommendations or concurrence of other Federal agencies and the public;

(5) The findings and recommendations of the Bureau of Land Management (BLM) with respect to the R2P2 and other requirements of the lease and the Mineral Leasing Act; and,

(6) The findings and recommendations of the Utah Division of Oil, Gas, and Mining (DOGGM) regarding the PAP and the State program.

If you concur with this recommendation, please sign the attached memorandum to the Assistant Secretary, Land and Minerals Management (ASLM).

II. Background

The Coal Hollow surface and underground coal mine is located three miles south from Alton in Kane County, Utah. The mine has been in operation since 2010 with mining occurring in the South Private Lease area in private and fee surface and minerals. The life of the currently-approved mining operations within the approved permit area is estimated to be two years concluding in 2020. The mining operation uses pit, highwall, and room-and-pillar mining methods. The average production rate is 600,000 to 750,000 tons per year from the Smirl seam. The maximum production rate is two million tons per year as approved by Air Permit No. DAQE-AN140470006-18. The mine currently employs approximately 30 people.

DOGGM approved the Coal Hollow Mine, Permit No. C/025/0005, Permit Amendment on March 4, 2019, to approve mining of the LBA Block 1 area. Before approval of the Permit No. C/025/0005 Permit Amendment, the State permit area consisted of approximately 1,017 privately owned surface acres which were added to the permit over the years of 2010, 2014 and 2016.

Before approval of the Permit No. C/025/0005 Permit Amendment, there were approximately 611 acres approved for disturbance in the State permit area, of which all are private.

The LBA Block 1 area is a mixture of private surface and private minerals and split estate consisting of private surface and Federal minerals. LBA Block 1 is completely within the South Private Lease, but is also within a small portion of Federal Lease UTU-081895 (see the yellow area of the permit map). The South Private Lease area was included in the State permit in 2010 and consists primarily of private surface and private minerals, excluding the northern portion of the South Private Lease where it overlaps Federal Lease UTU-081895. With respect to Federal Lease UTU-081895, the overlap occurs in the southeast area of UTU-081895. This overlap of the northern portion of the South Private Lease and the southeastern portion of UTU-081895 is where the split estate occurs.

On February 19, 2019, the BLM approved the new Federal Lease UTU-081895 which encompasses approximately 2108.71 acres of which approximately 1,236.74 acres are Federal surface and mineral estate and 871.97 acres are split estate (private surface and Federal mineral estate).

The post mining land use for the currently-approved mining plan area is grazing land and wildlife habitat.

On April 16, 2019, several groups filed a complaint challenging the Bureau of Land Management's (BLM) decision authorizing the competitive lease sale of the Alton tract. *Utah Physicians for a Healthy Environment et al v. U.S. Bureau of Land Management*, Case No. 2:19-cv-00256 (D. Utah). Plaintiffs allege that BLM's FEIS failed to take a hard look at indirect and cumulative effects of non-GHG and GHG emissions. Currently, the leasing decision is in effect. BLM's answer is due on July 12, 2019.

III. The Proposed Action

This mining plan action consists of a new mining plan for a portion of Federal Lease UTU-081895. Specifically, the mining plan proposed by ACD adds Federal minerals to the permit area which will be mined using pit and highwall mining methods. The area where the proposed surface mining and reclamation action will occur is legally described as:

UTU-081895

T. 39 S., R. 5 W., Salt Lake Baseline and Meridian (SLM)

Sec. 19, N $\frac{1}{2}$ SE $\frac{1}{4}$, SE $\frac{1}{4}$ SE $\frac{1}{4}$

Sec. 20, N $\frac{1}{2}$ SW $\frac{1}{4}$

Total number of acres:

46.6 acres

Attachment A of the mining plan approval shows the 46.6 acres consisting of the Smirl coal seam. Approval of this mining plan new mining plan will authorize mining of approximately 1.2 million tons of recoverable Federal coal. ACD is not proposing to mine the entire lease at this point in time and instead is requesting to mine from a portion of the lease named the LBA Block 1 area. The LBA Block 1 area consists of approximately 60.23 acres of which 46.6 acres are split estate (private surface and Federal minerals, within UTU-081895), and 13.63 acres are private surface and private mineral within the South Private Lease (see the yellow and red areas of the permit map).

Federal coal from the split estate of LBA Block 1 area would be mined over one and a half to two years. Receiving Secretarial authorization to mine coal within the split estate area of LBA Block 1 would extend the life-of-mine to

approximately 2022. If Secretarial authorization is not received, mining could end as soon as early 2020.

The current average production rate of 600,000 to 750,000 tons per year is anticipated to remain the same with the approval of this new mining plan. The maximum production rate of two million tons per year would not change based on the current Utah Department of Environmental Quality approved air quality permit DAQE-AN140470006-18.

The number of people employed at the mine would increase from 30 to approximately 50 employees.

State approval of Permit No. C/025/0005 includes approximately 1,017 permit acres and will not increase with the approval to mine the split estate of the LBA Block 1 area.

State approval of Permit No. C/025/0005 added approximately 42 disturbance acres to the permit, increasing the disturbance area from approximately 611 disturbance acres to 653 disturbance acres on private land.

Approval of this new Federal mining plan will add approximately zero Federal surface acres, but this action will add 46.6 acres of Federal minerals.

Approval of this new Federal mining plan will authorize removal of approximately 1.2 million tons of Federal coal.

DOGM currently has seven conditions to the permit, which can be found in the State Findings and Decision section of this mining plan decision document.

The post mining land use within the permit and mining plan area would not change from grazing land and wildlife habitat.

IV. Review Process

The DOGM reviewed the PAP under the Utah State program, the Federal Lands program (30 CFR Chapter VII, Subchapter D), and the Utah cooperative agreement (30 CFR 944). Pursuant to the Utah State program and the cooperative agreement, Utah approved the Permit No. C/025/0005 Permit Amendment on March 4, 2019.

OSMRE consulted with other Federal agencies for compliance with the requirements of applicable Federal laws. Their comments and concurrences can be found in the *Documentation of Consultation, Concurrence, and Compliance* section of this mining plan decision document.

The BLM reviewed the R2P2 for compliance with the Mineral Leasing Act of 1920, 30 U.S.C. 181 *et seq.* as amended, and 43 CFR Part 3480. In a memorandum dated April 16, 2019, the BLM determined that maximum economic recovery of the Federal coal will be achieved.

On April 19, 2019, OSMRE wrote a memorandum to the file titled: *Endangered Species Act Section 7 Determination of Effects for Coal Hollow Mine Alton Coal Tract UTU-081895, Kane County, Utah*. The letter to the file explains OSMRE's rationale for the "no effect" determinations for the following species: California Condor (*Gymnogyps californianus*), Mexican Spotted Owl (*Strix occidentalis lucida*), Southwestern Willow Flycatcher (*Empidonax traillii extimus*), and Jones Cycladenia (*Cycladenia humilis var. jonesii*). OSMRE agrees with the BLM's determination of "Not Likely to Adversely Affect" the Utah Prairie Dog (*Cynomys parvidens*) for which BLM received concurrence from the U.S. Fish and Wildlife Service (USFWS) Utah Field Office on October 6, 2017. Additionally, on April 9, 2019, OSMRE consulted with the USFWS Utah Field Office, via a phone conversation, about the Utah Prairie Dog, and it was determined that no further consultation will be required for this new mining plan action. With these findings, no further consultation with USFWS is required for this new mining plan. Additionally, the Coal Hollow Mine PAP includes commitments to develop and implement species-specific protective measures if threatened or endangered species are determined to be present in the vicinity of the mine.

There are three cultural sites located in or adjacent to the LBA Block 1 area: 42KA2060, 42KA6104, and 42KA6105. These sites have all been recorded and mitigated for in anticipation of coal mining and reclamation activities. There are no other known sites recorded within the area.

The area included in this new mining plan has not been designated unsuitable for mining according to section 522(b) of SMCRA.

The new mining plan is not on any Federal lands within the boundaries of any national forest.

Although no American Indian reservations or lands owned by Tribes are found within the project area, OSMRE and BLM initiated consultation with a number of American Indian Tribes whose traditional territories are within the project area. In March of 2012, OSMRE and BLM contacted these Tribes to determine their interest in participating as a Consulting Party and to provide each Tribe an opportunity to identify its concerns consistent with 36 CFR 800.0(c)(2). OSMRE and BLM received requests for additional information from the Hopi, Zuni, Paiute Indian Tribes of Utah, and Kaibab Band of Paiute Indians. OSMRE and BLM responded and no further requests were received including no requests to participate in the Programmatic Agreement.

OSMRE has determined that approval of this new mining plan will not have a significant impact on the quality of the human environment with implementation of the BLM lease stipulations. OSMRE has adopted the final environmental impact statement (FEIS) prepared by BLM, titled: *Alton Coal Tract Lease by Application, Final Environmental Impact Statement, DOI-BLM-UT-C040-2015-0011-EIS, July 2018*. Both the FEIS and the OSMRE Record of Decision (ROD), describe the impacts that may result from approval of this new mining plan and its alternatives. The ROD and supporting FEIS are included in this new mining plan decision document.

OSMRE was a cooperating agency and conducted an independent review of the FEIS. All of OSMRE's comments and suggestions were satisfied in the FEIS. Therefore, OSMRE is not required to recirculate the FEIS (40 CFR § 1506.3). OSMRE notified the United States Environmental Protection Agency (EPA) of its intent to adopt the FEIS. The EPA and OSMRE will release a *Federal Register* Notice announcing the adoption and ROD on July 5, 2019.

Public notification of the PAP, through the *Southern Utah News*, occurred from March 26, 2008, to April 16, 2008. An informal conference was requested and held on June 16, 2008, in the Alton City Hall. In total, 64 written comments and 20 verbal comments were received reviewed and considered during the DOGM review process.

The DOGM determined that a reclamation performance bond of \$13,000,000, in the form of a surety bond issued by Ironshore Indemnity Inc., is adequate. The bond is payable to both the State and the United States and is adequate for the State Permit and this new Federal mining plan.

A chronology of events related to the processing of both the PAP and the proposed mining plan decision is included with the attached decision document.

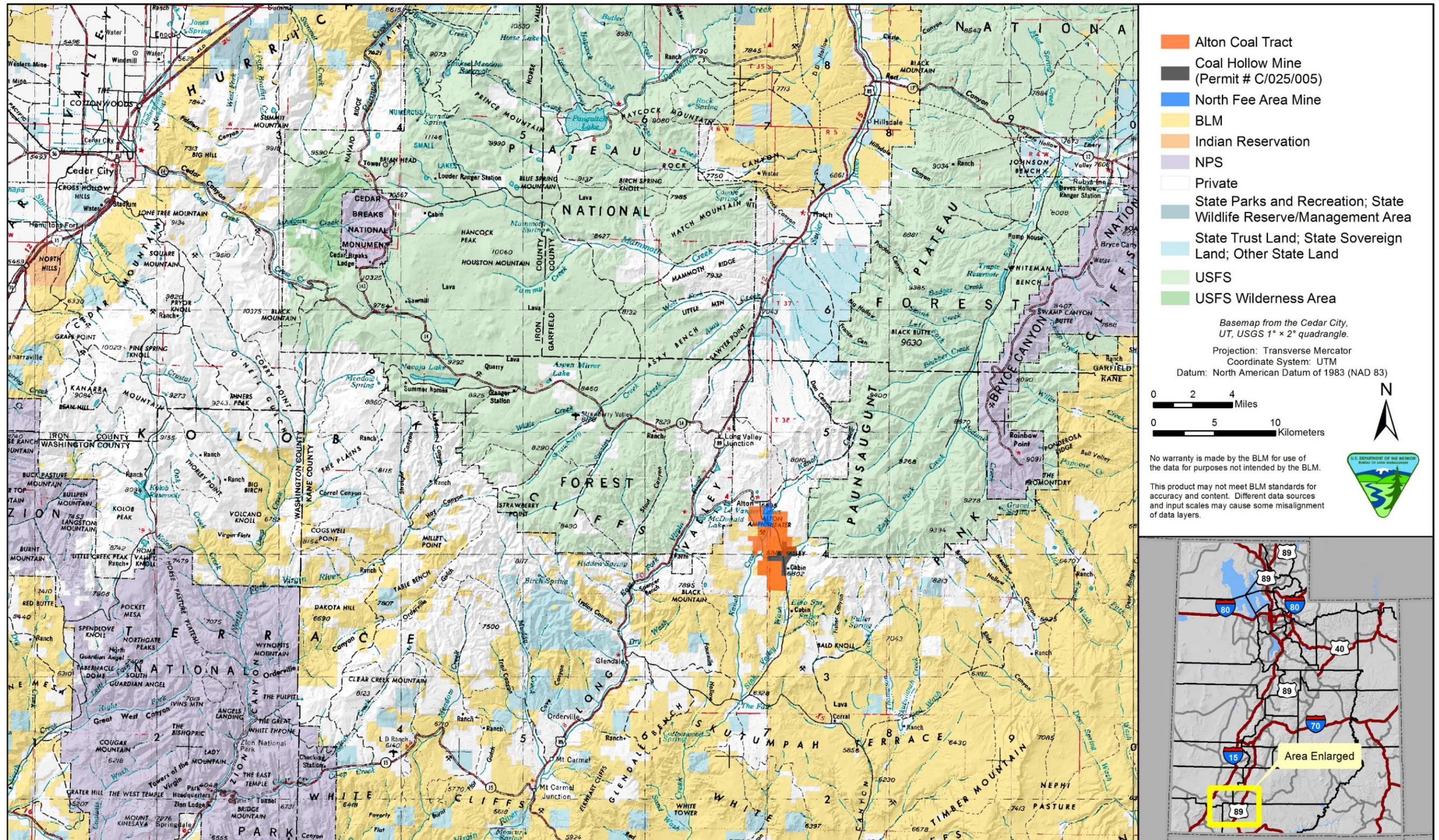
The content of OSMRE's decision record includes the following:

- The PAP submitted by ACD;
- DOGM's Decision Document for the Permit C/025/0005 LBA Block 1 Permit Amendment, provided to OSMRE under the cooperative agreement;
- The environmental analysis document titled *Alton Coal Tract Lease by Application, Final Environmental Impact Statement, DOI-BLM-UT-C040-2015-0011-EIS, July 2018*;
- The ROD prepared by OSMRE;

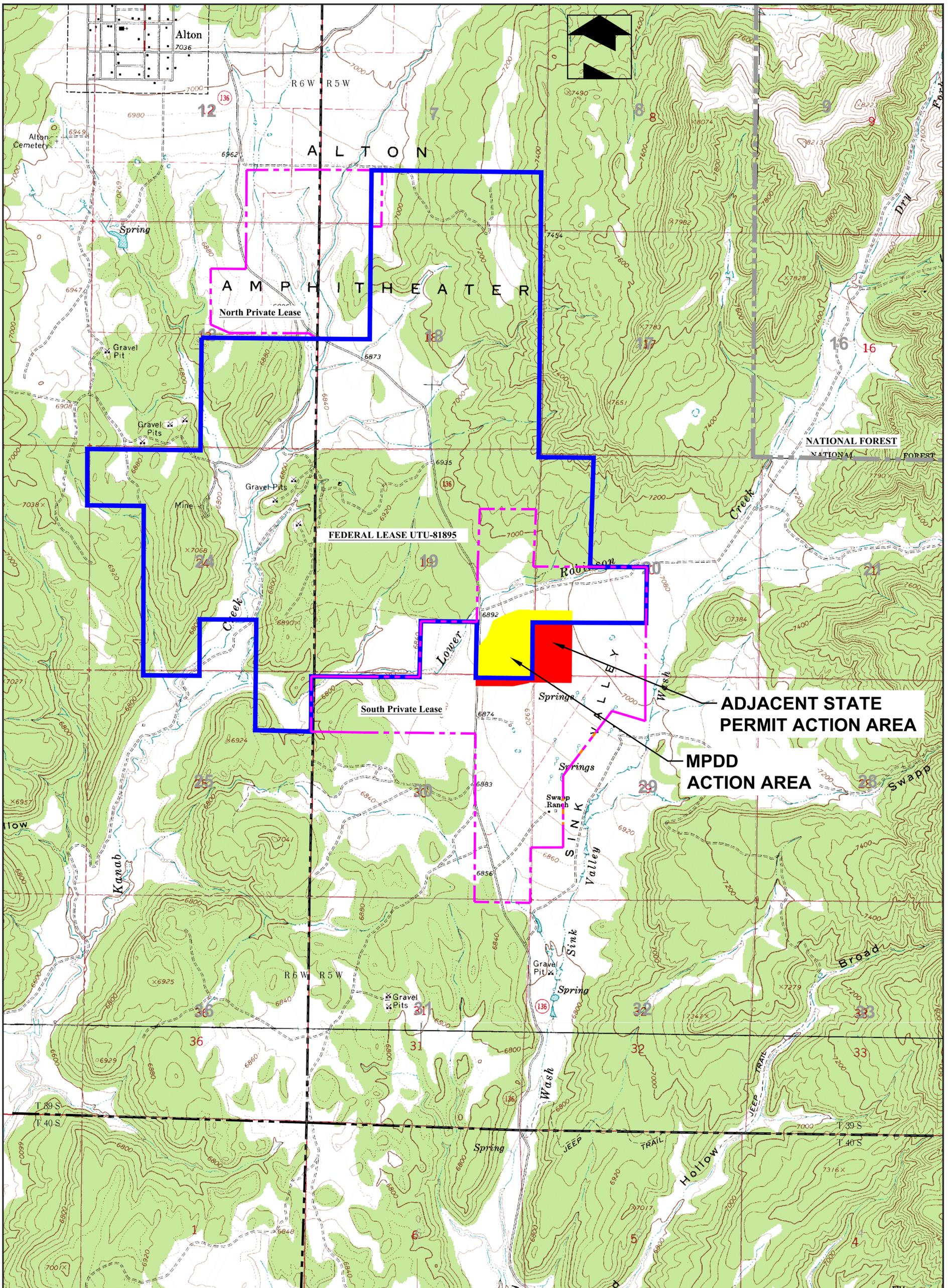
- Other documents prepared by DOGM;
- The documents mentioned in this Memorandum and their corresponding correspondence.

Attachment

Location Maps



Map 1.1. Alton Coal Tract (Proposed Action) in relation to the Town of Alton and other area landmarks.



LEGEND:

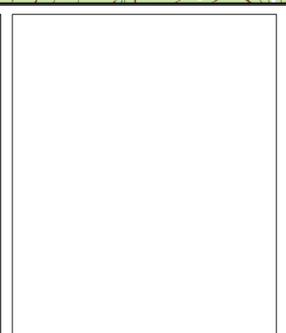
	FEDERAL LEASE BDY. UTU-81895
	STATE PERMIT BOUNDARY
	MPDD ACTION AREA
	STATE PERMIT ACTION AREA

DRAWN BY: ARC	CHECKED BY: LWJ
DRAWING:	DATE: 3/20/2019
JOB NUMBER: MPDD	SCALE: 1" = 1000'
	SHEET

REVISIONS	
DATE:	BY:

PERMIT MAP
 STATE PERMITS &
 Federal Coal Lease
 UTU-81895

**COAL HOLLOW
 PROJECT**
 ALTON, UTAH
 Federal Mine Plan
 Decision Document



463 North 100 West, Suite 1
 Cedar City, Utah 84721
 Phone (435)867-5331
 Fax (435)867-1192

Chronology Of Events

CHRONOLOGY

Coal Hollow Mine
Federal Lease UTU-081895
Mining Plan Decision Document

<u>DATE</u>	<u>EVENT</u>
November 28, 2006	The Bureau of Land Management (BLM) initiates Public Scoping for the Alton Coal Tract Environmental Impact Statement.
June 14, 2007	Alton Coal Development, LLC (ACD), submits the permit application package for the Coal Hollow Mine.
March 14, 2008	The Utah State Program to the Division of Oil, Gas and Mining (DOGM) determines that the Coal Hollow Mine PAP was administratively complete.
April 16, 2008	ACD publishes in the <i>Southern Utah News</i> the fourth consecutive weekly notice that an administratively complete Permit Application Package was filed with the DOGM.
July 28, 2014	The Utah State Historic Preservation Office signs the <i>Programmatic Agreement Between The U.S.D.I. Bureau of Land Management, Kanab Field Office; U.S.D.I. Office Of Surface Mining Reclamation And Enforcement; Utah Division Of Oil, Gas, and Mining; and Utah State Historic Preservation Officer Regarding The Alton Coal Tract Lease By Application Project.</i>
October 6, 2017	BLM receives concurrence from the US Fish and Wildlife Service (USFWS) for their determination of Not Likely to Adversely Affect Species: Utah Prairie Dog (<i>Cynomys parvidens</i>).
July 11, 2018	BLM completes the Supplementary Environmental Impact Statement for Federal Coal Lease UTU-081895.
October 15, 2018	ACD, submits the permit application package for LBA Block 1 at the Coal Hollow Mine.
October 17, 2018	The Utah State Program to the DOGM determines that the Coal Hollow Mine PAP for LBA Block 1 was administratively complete.
February 19, 2019	BLM approves the new Federal lease UTU-081895.
February 20, 2019	DOGM requests a mining plan decision document determination from the Office of Surface Mining Reclamation and Enforcement (OSMRE).
March 4, 2019	DOGM approves the PAP for incorporating LBA Block 1 into the mining and reclamation plan.
March 8, 2019	OSMRE determines that permit revision incorporating the portion of LBA Block 1 within UTU-081895 into the mining and reclamation plan constitutes a new mining plan and requires the preparation of a Mining Plan Decision Document for the Significant Permit Revision to add UTU-081895.

DATE

EVENT

April 16, 2019	Several groups file a complaint challenging the Bureau of Land Management's (BLM) decision authorizing the competitive lease sale of the Alton tract. <i>Utah Physicians for a Healthy Environment et al v. U.S. Bureau of Land Management</i> , Case No. 2:19-cv-00256 (D. Utah). Plaintiffs allege that BLM's FEIS failed to take a hard look at indirect and cumulative effects of non-GHG and GHG emissions. Currently, the leasing decision is in effect. BLM's answer is due on July 12, 2019.
April 16, 2019	OSMRE requests and receives an official threatened & endangered species list from the USFWS.
April 16, 2019	The BLM provides its findings and recommendations on the approval of the Resource Recovery and Protection Plan.
April 19, 2019	OSMRE determines no further section 7 consultation is required from the USFWS.
June 25, 2019	The OSMRE Regional Director, signs the Record of Decision.
June 28, 2019	The OSMRE Regional Director, recommends to the OSMRE Director, that the new mining plan be approved.
July 2, 2019	The OSMRE Director recommends to the Assistant Secretary, Land and Minerals Management that the new mining plan be approved.
July 29, 2019	The Assistant Secretary, Land and Minerals Management approves the new mining plan.

NEPA Compliance Documents

RECORD OF DECISION

Federal Coal Lease UTU-081895

Kane County, Utah

Office of Surface Mining Reclamation and Enforcement

June 2019

1.0 Introduction

The Office of Surface Mining Reclamation and Enforcement (OSMRE) participated as a cooperating agency on the Bureau of Land Management (BLM) Alton Coal Tract Lease by Application (LBA) Final Environmental Impact Statement (FEIS) at the Coal Hollow Mine located in Kane County, UT. The Environmental Protection Agency (EPA), National Park Service (Bryce Canyon National Park) (NPS), and Kane County also participated as a cooperating agency. The Coal Hollow Mine is owned and operated by Alton Coal Development, LLC.

OSMRE reviewed the FEIS and concluded that the environmental analysis for leasing and mining, the NEPA process completed by BLM, and FEIS documentation are adequate. BLM addressed all OSMRE comments submitted on the FEIS sufficiently to inform OSMRE's mining plan recommendations to ASLM. OSMRE therefore adopts the FEIS for the 2,114-acre lease and has prepared this Record of Decision (ROD) to inform OSMRE's future decisions regarding Permit Application Packages (PAP)s within this lease.

2.0 Background

2.1 Bureau of Land Management EIS and Leasing Approval

BLM signed a ROD in August 2018 and issued the lease to Alton Coal Development, LLC in November 2018. BLM's decision allowed the competitive lease sale of approximately 2,114 acres (approximately 40.9 million tons of in-place coal and an estimated 30.8 million tons of recoverable coal) associated with the BLM's Selected Alternative, Alternative K1 (Reduced Tract Acreage). The Selected Alternative, Alternative K1, is described in detail in Section 2.5 of the FEIS. Alternative K1 included stipulations and design features, which are provided in Appendix B of BLM's ROD.

The Alternative K1 includes the following primary components:

- The tract will encompass approximately 2,114 acres, of which approximately 1,227 acres are federal surface and mineral estate and 887 acres are split estate (private surface and federal mineral estate) (see Map A-1 in Appendix A). Private surface owners may be qualified to give consent to mine federal minerals under the private surface owner's estate according to 43 CFR 3400.0-5. The surface owner consent process has been completed for the tract.
- Recoverable portions of in-place coal reserves will be mined over approximately 16 years using surface-mining methods where the depth of overburden is approximately 200 feet, and using underground methods (development mining, auger mining, highwall mining, longwall mining, and/or room and pillar mining) where the depth of overburden exceeds approximately 200 feet.
- Some reclamation will be concurrent during mining over the estimated 16-year life of the mine. At closure, a 10-year reclamation and revegetation monitoring period for the entire disturbed area is expected to occur.

- The tract includes approximately 40.9 million tons of in-place coal, and an estimated 30.8 million tons of coal will be recoverable. The BLM estimates that in areas where coal will be mined by surface-mining methods, approximately 90% of the estimated in-place coal reserves will be recoverable. However, in those portions of the tract that must be mined by underground mining methods, approximately 50% of the in-place coal reserves will be recoverable.
- It is anticipated that approximately 1,012 acres of surface disturbance will occur on the tract under Alternative K1. Of this, 869 acres will be the result of surface-mining operations (pit disturbance). Centralized facilities associated with mining activities on the tract will occupy 36 acres. Approximately 92 acres of dispersed facilities will be needed under the Selected Alternative. Underground mining will occur on approximately 613 acres in the northeast section of the tract.
- Portions of KFO Route 116 in the tract will need to be relocated so that no surface disturbance occurs within 100 feet on either side of the outside line of the road.

Alternative K1 was selected by BLM because the tract configuration under this alternative provides for maximum economic recovery of the coal resources present in the tract while staying within the legal and policy limits applicable to the potential impacts. These legal and policy limits relate to the Clean Water Act (CWA), Greater Sage-Grouse (*Centrocercus urophasianus*), and environmental justice regarding potential aesthetic (visual and noise) and air quality impacts on the town of Alton.

Section 404 of the CWA regulates the discharge of dredged or fill material into waters of the United States, including wetlands. The BLM must also comply with Executive Order (EO) 11990 (Protection of Wetlands [May 24, 1977]), which directs federal agencies to provide leadership and act to minimize the destruction, loss, or degradation of wetlands, and to preserve and enhance the natural and beneficial values of wetlands. Of the action alternatives analyzed in the FEIS, the Alternative K1 affects less than 0.10 acre of delineated wetlands.

The BLM Kanab Field Office (KFO) resource management plan, as amended, includes a variety of required measures to protect Greater Sage-Grouse and its habitat. Species-specific limitations include a lek buffer requirement and a disturbance cap requirement. The Alternative K1 will create less surface disturbance in sage-grouse habitat than the other action alternatives and will completely avoid surface disturbance within 0.5 mile of the only lek on the tract.

The FEIS identifies the town of Alton as an environmental justice community that will experience disproportionate impacts. Though some potential for environmental justice effects may occur under Alternative K1, this alternative will result in fewer disproportionate impacts than the other action alternatives. Alternative K1 will be the least visible and audible action to the town of Alton of all action alternatives. In addition, the Selected Alternative will not result in exceedances of the Clean Air Act's National Ambient Air Quality Standards or have disproportionate air resources impacts to the town of Alton. See Table 4.12.8 of the FEIS for a comparison of environmental justice effects from all alternatives.

BLM determined that of the alternatives considered in the EIS, the selection of Alternative K1 meets the BLM's requirement to address all practicable means to avoid or minimize environmental harm and is therefore considered the environmentally preferable alternative.

2.2 Utah Division of Oil, Gas and Mining- SMCRA Permitting

The Utah Division of Oil, Gas and Mining (UT DOGM) is the regulatory authority (RA) for coal mines in Utah that occur on state and private lands. As provided for under the Surface Mining Control and Reclamation Act of 1977 (SMCRA), in 1980, OSMRE approved the State of Utah's coal Regulatory Program, authorized to issue permits to conduct coal mining and reclamation operations in Utah. UT DOGM manages its coal Regulatory Program under SMCRA and the Utah Coal Mining and Reclamation Act (1979). UT DOGM has the authority and responsibility to make decisions to approve surface and underground coal mining permits and regulate coal mining in Utah under Utah Administrative Code R645-301. UT DOGM has the authority and responsibility to:

- Make decisions to approve SMCRA mining permits
- Consult with Federal land management agencies to determine if permit revisions will adversely affect Federal resources and are consistent with that agency's land use plans, Federal laws, regulations and executive orders (EOs) for which it is responsible, and
- Regulate coal mining under regulations.

Coal leaseholders in Utah must submit a PAP to UT DOGM for proposed mining and reclamation operations. If the PAP includes Federal lands, the UT DOGM must notify OSMRE that the PAP is administratively complete and ready for OSMRE's review. UT DOGM reviews the PAP to ensure that the application complies with the permitting requirements and that the coal mining operation would meet Utah's performance standards. UT DOGM is required to work with the coal company until the permit or permit revision can be approved unless prohibited by law.

2.3 Office of Surface Mining Reclamation and Enforcement – Mining Plan Decisions

The Field Operations Branch of OSMRE's Western Region is responsible for the Federal Lands Program and the preparation of mining plan decision documents for review by the Assistant Secretary for Land and Minerals Management (ASLM). When the RA informs OSMRE of a permit application or revision occurring for leased Federal coal and/or Federal surface, OSMRE reviews the PAP to ensure it contains the necessary information to comply with the coal lease, the Mineral Leasing Act of 1920 (MLA), the National Environmental Policy Act (NEPA), and other applicable Federal laws and their attendant regulations. The ASLM must approve mining and reclamation plans on lands containing leased Federal coal. Operations cannot commence until this approval is granted. Pursuant to 30 CFR Part 746, OSMRE must determine if the permit revision requires a mining plan modification. If it does, OSMRE prepares a mining plan decision document (MPDD) for review by the ASLM. On March 8, 2018, OSMRE determined that the mine plan included in LBA Block 1 required a mining plan. Approval of LBA Block 1 will change the Coal Hollow Mine from a Non-Federal Mine to a Federal Mine and will require a federal mining plan modification since it is the

Mine's first time mining federal coal. 30 CFR § 740.4(b) and 746.13 require the OSMRE to provide a MLA MPDD recommendation for Secretarial approval. If a MPDD is deemed necessary, pursuant to 30 CFR 746, OSMRE must:

- For new mining plans, or for existing approved mining plans that are proposed to be modified, prepare and submit to the ASLM a MPDD recommending approval, disapproval, or approval with condition(s) of the proposed mining plan. OSMRE's recommendation is based, at a minimum, upon:
 1. The PAP
 2. Information prepared in compliance with the NEPA
 3. Documentation assuring compliance with the applicable requirements of Federal laws, regulations, and EOs other than the NEPA
 4. Comments and recommendations or concurrence of other Federal agencies and the public
 5. Findings and recommendations of the BLM with respect to the Resource Recovery and Protection Plan (R2P2), Federal lease requirements, and the MLA
 6. Findings and recommendations of the CDRMS with respect to the mine permit application and the Utah State Program; and
 7. The findings and recommendations of the OSMRE with respect to the additional requirements of 30 CFR Chapter VII, Subchapter D.

To assist with assuring compliance with other Federal laws, regulations, and EOs, the OSMRE also reviews, at a minimum, the following documents to make its recommendation to the ASLM:

- Information/correspondence concerning the U.S. Fish and Wildlife Service (USFWS) Section 7 consultation for threatened and endangered (T&E) species potentially affected by the proposed mining plan under the Endangered Species Act of 1973 (ESA); and
- National Historic Preservation Act of 1966 (NHPA) Section 106 consultation for the affected area.

The ASLM must review the MPDD and decide whether to approve the mining plan, and if approved, what, if any, conditions may be needed.

3.0 Purpose and Need

The purpose of the Proposed Action is established by the MLA, as amended, which requires the evaluation of Alton Coal Development, LLC's Mining Plans to continue mining and reclamation operations to develop Federal coal lands included in Federal Coal Lease UTU-081895. The OSMRE is the agency responsible for making a recommendation to the ASLM to approve, disapprove, or approve with conditions the proposed Mining Plan under 30 CFR. The ASLM will decide whether the Mining Plan is approved, disapproved, or approved with conditions.

The purpose of this action is to evaluate the environmental effects of coal mining on Federal Coal Lease UTU-081895 within the Coal Hollow Mine to inform the OSMRE in determining a

recommendation to the ASLM whether to approve, disapprove, or approve with conditions the Federal Mining Plan. ASLM approval of the Federal Mining Plan is necessary to mine the reserves.

The need for this action is to provide Alton Coal Development, LLC the opportunity to mine the Federal coal obtained under Federal Coal Lease UTU-081895 (issued by the BLM in 2018) located at the Coal Hollow Mine.

4.0 Decision

It is OSMRE's decision to adopt the BLM Alton Coal Tract Lease by Application FEIS (2018), as allowed under 40 CFR § 1506.3. Consistent with the BLM's decision, OSMRE is selecting Alternative K1, as described in the FEIS (Section 2.5), based on the agencies' consideration of: the purpose and need for the action; the issues; current policies and regulations; the analysis of alternatives contained in the SFEIS; public comments received and other information in the project record.

Future amendments comprising the remaining Federal lease acreage analyzed in the BLM 2018 EIS would require additional NEPA compliance reviews by OSMRE after the amendments are submitted to UT DOGM. Future reviews would utilize the current adoption of the BLM 2018 EIS and OSMRE would be required to determine if additional NEPA analysis is warranted based on new information or circumstances. This type of NEPA compliance review is referred to as "staging" and is a common practice among Federal agencies when a larger Proposed Action is being broken into smaller parts.

OSMRE is adopting the BLM FEIS and selecting Alternative K1 in its entirety to cover the current mine plan before the agency and to potentially be used on an as needed basis for future reviews related to the lease. Alternative K1 as analyzed in the FEIS adds 2,114 acres of which approximately 1,227 acres are federal surface and mineral estate and 887 acres are split estate (private surface and federal mineral estate) for surface and underground mining activities. Under Alternative K1, the lease to be mined contains approximately 40.9 million tons of coal and an estimated 30.8 million tons of coal will be recoverable. The lease would produce approximately 2 million tons per year and continuing mining operations by approximately 16 years.

OSMRE's decision to adopt the FEIS and select Alternative K1 was made after carefully considering the contents of the FEIS, public comments, agency response to comments, and the supporting project file. The FEIS meets the standards for an adequate EIS under the Council of Environmental Quality (CEQ) regulations. OSMRE has independently evaluated the FEIS and has determined that the USFS satisfactorily addressed OSMRE's concerns, comments, and suggestions as a Cooperating Agency during the NEPA process.

4.1 Selected Alternative Compliance with Federal Laws and Executive Orders

4.1.1 National Environmental Policy Act

NEPA declares a national environmental policy and promotes consideration of environmental concerns by Federal agencies in decision making. Procedures and regulations issued by the CEQ, as authorized under NEPA, direct implementation of NEPA by Federal agencies. CEQ regulations are promulgated at 40 CFR 1500–1508, and the Department of the Interior’s (DOI)’s NEPA regulations are promulgated at 43 CFR 46 and in Department Manual 516. The OSMRE NEPA Handbook (OSMRE 1989) and the BLM NEPA Handbook (BLM 2008) also provide guidance and were considered in the preparation of the EIS.

All documentation in the project record in support of, and including the FEIS and ROD have been developed to comply with this Act, CEQ regulations at 40 CFR 1500, OSMRE policies, the OSMRE Handbook, and any requirements that evolved through the practice of NEPA, and from case law.

Finding

OSMRE finds that the decision to select Alternative K1 complies with the procedural and analytical requirements of NEPA.

4.1.2 SMCRA/State-Federal Cooperative Agreement/Mineral Leasing Act

OSMRE is a bureau within DOI charged with administration of SMCRA. SMCRA establishes a program of cooperative federalism that allows the states to enact and administer their own regulatory programs within limits established by Federal minimum standards and with prescribed oversight enforcement authority by OSMRE (30 CFR 1253). UT DOGM operates an approved state program under SMCRA and therefore has primary jurisdiction over the regulation of surface coal-mining and reclamation operations on non-Federal and non-Indian lands within the state. See 45 CFR 21560; 30 CFR 944. Under Section 1273(c) of SMCRA, a state with a permanent regulatory program approved by the DOI Secretary, such as UT DOGM, can elect to enter into a cooperative agreement for state regulation of surface coal-mining and reclamation operations on Federal lands within the state. OSMRE granted UT DOGM this authority, and UT DOGM regulates permitting and operation of surface coal mines on Federal lands within Utah under the authority of Utah Coal Mining and Reclamation Act (1979).

Finding

OSMRE finds that the decision to select Alternative K1 is consistent with SMCRA, the State-Federal Cooperative Agreement, and the MLA.

4.1.3 Endangered Species Act

OSMRE completed the Section 7 consultation process under the Endangered Species Act utilizing the previous consultation completed by BLM for the EIS on October 6, 2017 as well as completing an independent evaluation using the USFWS Information Planning and Consultation (IPAC) list. In OSMRE’s IPAC inquiry, OSMRE evaluated the potential impacts to the California Condor (*Gymnogyps californianus*), Mexican Spotted Owl (*Strix occidentalis lucida*), Southwestern Willow

Flycatcher (*Empidonax traillii extimus*), Jones Cycladenia (*Cycladenia humilis var. jonesii*) and came to a determination of no effect due to the lack of suitable habitat in the project area. OSMRE concurs with BLM's previous consultation findings to not likely jeopardize the Utah Prairie Dog, pursuant to Section 7 of the ESA of 1973, as amended (16 U.S.C. §§ 1531 et seq.) and its implementing regulations. On April 9, 2019, OSMRE consulted with the USFWS Utah Field Office, via a phone conversation, about the Utah Prairie Dog, and it was determined that no further consultation will be required for this new mining plan action.

Finding

OSMRE finds that the decision to select Alternative K1 is consistent with the Endangered Species Act. OSMRE completed an analysis under the Endangered Species Act and found one new threatened and endangered species, the Ute ladies'-tresses and made a determination of no effect.

4.1.4 Clean Air Act

This Clean Air Act (CAA) required States to develop plans to implement, maintain, and enforce primary and secondary ambient air quality standards for any criteria air pollutants, and called Federal agencies to prevent deterioration of air quality. The agencies analyze the effects on air quality as a result of this project which showed that this project would be in compliance with the National Ambient Air Quality Standards. Under Alternative K1, the maximum impacts inside of Bryce Canyon National Park from a potential mine plume would be less than the VISCREEN acceptance criteria for both color change (Delta E) and contrast (FEIS Section 4.3.3.9).

Finding

OSMRE finds that the decision to select Alternative K1 is consistent with the Clean Air Act.

4.1.5 Clean Water Act

This Act requires State and Federal agencies to control and abate water pollution. This project was designed to comply with this Act through the BLM stipulations (BLM ROD Appendix B, through the inclusion of stipulations for surface and ground water, water depletions, baseline data, and monitoring and compliance with all state and local laws).

Finding

OSMRE finds that the decision to select Alternative K1 is consistent with the Clean Water Act.

4.1.6 National Historic Preservation Act

Section 106 of the NHPA and its implementing regulations under 36 CFR 800 require all Federal agencies to consider effects of Federal actions on cultural resources eligible for or listed in the National Register of Historic Places. Traditional cultural properties are also protected under Section 106 of the NHPA.

The BLM and OSMRE, in consultation with the Utah SHPO, developed a programmatic agreement (Appendix N of the FEIS) pursuant to 36 CFR 800.14 that would provide for a comprehensive consideration of possible effects to historic properties. The BLM, in consultation with SHPO, developed a plan to involve the public and identified potential consulting parties. Potentially

interested consulting parties were contacted by a letter dated March 6, 2012, and were invited to participate in the development of the agreement. Meetings with consulting parties were held on March 22, 2012; May 16, 2012; October 4, 2012; December 13, 2012; and February 21, 2013 to discuss details of the programmatic agreement.

Finding

OSMRE finds that the decision to select Alternative K1 is consistent with the National Historic Preservation Act.

4.1.7 Executive Order 13175 – Government-to-Government Consultation with Tribes

EO 13175 requires Federal agencies to consult with American Indian tribal representatives and traditionalists on a government-to-government basis. The following affected tribes were contacted during the scoping period that occurred during preparation of the EIS: Cedar Band of Paiutes, Hopi Tribe, Indian Peak Band of Paiutes, Kaibab-Paiute Tribe, Kanosh Band of Paiutes, Koosharem Band of Paiutes, Navajo Nation, Ute Mountain Ute, Paiute Tribes of Utah, Pueblo of Zuni, San Juan Southern Paiute, and Shivwits Band of Paiutes. They requested copies of the cultural resources survey reports and indicated that they will continue formal consultation if any prehistoric cultural resources would be adversely affected by mining on the tract. As part of the government-to-government consultation process, the BLM also conducted a field visit with the Kaibab Band of Paiute Indians. Additionally, tribes were invited to participate as consulting parties in development of the Programmatic Agreement by letter dated March 6, 2012, though none elected to participate (FEIS Section 5.2.2.2). OSMRE has sent notification letters to Tribes of the Notice to Adopt the FEIS.

Finding

OSMRE finds that the decision to select Alternative K1 was made in consideration of and consistent with EO 13175.

4.1.8 Executive Order 12898 Environmental Justice

EO 12898 requires Federal agencies to identify and address, as appropriate, disproportionately high and adverse human health or environmental effects on minority and low-income populations when implementing their respective programs, including American Indian programs. OSMRE's analysis of environmental justice follows the CEQ's guidance on environmental justice and the EPA's guidance on environmental justice. The population around the project area was reviewed (FEIS Section 4.13.3.6) and for this project several communities and census tracts were identified as environmental justice populations. There would be adverse impacts to environmental justice populations for aesthetic resources, air resources and climate change, cultural resources, fire management, hazardous materials, socioeconomics, recreation, land use and grazing, transportation, water resources, and wildlife and threatened and endangered species (FEIS Table 4.12.8).

Finding

OSMRE finds that the decision to select Alternative K1 was made in consideration of and consistent with EO 12898.

4.1.9 Executive Orders 11990 and 11988

The management of wetlands and floodplains are subject to EOs 11990 and 11988, respectively. The purpose of the EOs are to avoid to the extent possible the long and short-term adverse impacts associated with the destruction or modification of wetlands and floodplains and to avoid direct or indirect effects of new construction in wetlands wherever there is a practical alternative. This order requires the OSMRE to take action to minimize destruction, loss, or degradation of wetlands, and to preserve and enhance the natural and beneficial values of wetlands. Alternative K1 would impact 11 acres of riparian area and 9 acres of floodplains/alluvial valley floor (FEIS Section 4.16.6.3). As part of UT DOGM's PAP approval there is a stipulation requiring Alton Coal Development, LLC to obtain a 404 permit from the U.S. Army Corps of Engineers before any coal mining or reclamation activities can occur in the riparian areas.

Finding

OSMRE finds that the decision to select Alternative K1 was made in consideration of and consistent with EO 11990 and 11988.

4.1.10 Executive Order 13045

Direction regarding protection of children is recognized in "Protection of Children from Environmental Health Risks and Safety Risks", April 21, 1997. Children are seldom present at coal mining facilities. On such occasions, the coal mining companies have taken and will continue to take precautions for the safety of children by using a number of means, including fencing and limitations on access to certain areas (FEIS, Section 4.12.5.5).

Finding

OSMRE finds that the decision to select Alternative K1 was made in consideration of and consistent with EO 13045.

4.1.11 Executive Order 13783

EO 13783 provides direction regarding promoting energy independence and economic growth. A protocol to estimate what is referenced as the "social cost of carbon" (SCC) associated with GHG emissions was developed by a federal Interagency Working Group (IWG), to assist agencies in addressing Executive Order (EO) 12866, which requires federal agencies to assess the cost and the benefits of proposed regulations as part of their regulatory impact analyses during rulemakings. This Order, EO 13783, disbanded the IWG on the SCC and its technical supporting documents for the SCC analysis. This order rescinded the 2013 President's Climate Action Plan, the 2014 Climate Action Plan Strategy to Reduce Methane Emissions, and the CEQ's Final Guidance on Consideration of Greenhouse Gases (GHG)'s and the Effects of Climate Change in NEPA Reviews.

Finding

OSMRE finds that the decision to select Alternative K1 was made in consideration of and consistent with EO 13783. OSMRE's decision does not rely on the SCC protocol and technical documents nor any of the rescinded reports and is therefore consistent with EO 13783. The CO₂ emissions for the Proposed Action or Alternative C would be 58,984 tons (53,510 metric tons). This total includes all on-site emissions, as well as off-site emissions from employee travel, haul truck traffic, cars and light

duty trucks, and heavy duty diesel vehicles. This represents approximately 0.0002% of the 2014 global emissions. CO₂ emissions from Alternative K1 would be equal to or less than those reported for the Proposed Action and Alternative C. Section 4.3.4.5 of the FEIS includes a more detailed discussion.

A protocol to estimate what is referenced as the SCC associated with GHG emissions was developed by a federal IWG, to assist agencies in addressing Executive Order (EO) 12866, which requires federal agencies to assess the cost and the benefits of proposed regulations as part of their regulatory impact analyses. The SCC is an estimate of the economic damages associated with an increase in carbon dioxide emissions and is intended to be used as part of a cost-benefit analysis for proposed rules. As explained in the Executive Summary of the 2010 SCC Technical Support Document “the purpose of the [SCC] estimates...is to allow agencies to incorporate the social benefits of reducing carbon dioxide (CO₂) emissions into cost-benefit analyses of regulatory actions that have small, or ‘marginal,’ impacts on cumulative global emissions.” Technical Support Document: Social Cost of Carbon for Regulatory Impact Analysis Under Executive Order 12866 February 2010 (withdrawn by EO13783). While the SCC protocol was created to meet the requirements for regulatory impact analyses during rulemakings, there have been requests by public commenters or project applicants to expand the use of SCC estimates to project-level NEPA analyses.

The decision was made not to expand the use of the SCC protocol for the BLM 2018 Alton Coal Tract Lease by Application FEIS for a number of reasons. Most notably, this action is not a rulemaking for which the SCC protocol was originally developed. Second, on March 28, 2017, the President issued Executive Order 13783 which, among other actions, withdrew the Technical Support Documents upon which the protocol was based and disbanded the earlier IWG on Social Cost of GHGs. The Order further directed agencies to ensure that estimates of the social cost of greenhouse gases used in regulatory analyses “are based on the best available science and economics” and are consistent with the guidance contained in OMB Circular A-4, “including with respect to the consideration of domestic versus international impacts and the consideration of appropriate discount rates” (E.O. 13783, Section 5(c)). In compliance with OMB Circular A-4, interim protocols have been developed for use in the rulemaking context. However, the Circular does not apply to project decisions, so there is no Executive Order requirement to apply the SCC protocol to project decisions.

Further, the NEPA does not require a cost-benefit analysis (40 C.F.R. § 1502.23), although NEPA does require consideration of “effects” that include “economic” and “social” effects. 40 C.F.R. 1508.8(b). Without a complete monetary cost-benefit analysis, which would include the social benefits of the proposed action to society as a whole and other potential positive benefits, inclusion solely of an SCC cost analysis would be unbalanced, potentially inaccurate, and not useful in facilitating an authorized officer’s decision. Any increased economic activity, in terms of revenue, employment, labor income, total value added, and output, that is expected to occur with the proposed action is simply an economic impact, rather than an economic benefit, inasmuch as such impacts might be viewed by another person as negative or undesirable impacts due to potential increase in local population, competition for jobs, and concerns that changes in population will change the

quality of the local community. Economic impact is distinct from “economic benefit” as defined in economic theory and methodology, and the socioeconomic impact analysis required under NEPA is distinct from cost-benefit analysis, which is not required.

Finally, the SCC, protocol does not measure the actual incremental impacts of a project on the environment and does not include all damages or benefits from carbon emissions. The SCC protocol estimates economic damages associated with an increase in carbon dioxide emissions - typically expressed as a one metric ton increase in a single year - and includes, but is not limited to, potential changes in net agricultural productivity, human health, and property damages from increased flood risk over hundreds of years. The estimate is developed by aggregating results “across models, over time, across regions and impact categories, and across 150,000 scenarios” (Rose et al. 2014). The dollar cost figure arrived at based on the SCC calculation represents the value of damages avoided if, ultimately, there is no increase in carbon emissions. But the dollar cost figure is generated in a range and provides little benefit in assisting the authorized officer’s decision for project level analyses. For example, in a recent environmental impact statement, OSMRE estimated that the selected alternative had a cumulative SCC ranging from approximately \$4.2 billion to \$22.1 billion depending on dollar value and the discount rate used. The cumulative SCC for the no action alternative ranged from \$2.0 billion to \$10.7 billion. Given the uncertainties associated with assigning a specific and accurate SCC resulting from 16 additional years of operation under the mining plan, and that the SCC protocol and similar models were developed to estimate impacts of regulations over long time frames, this EA quantifies direct and indirect GHG emissions and evaluates these emissions in the context of U.S. and State/County GHG emission inventories as discussed in Section 4.3 of the EIS.

To summarize, this EIS does not undertake an analysis of SCC because 1) it is not engaged in a rulemaking for which the protocol was originally developed; 2) the IWG, technical supporting documents, and associated guidance have been withdrawn; 3) NEPA does not require cost-benefit analysis ; and 4) the full social benefits of coal-fired energy production have not been monetized, and quantifying only the costs of GHG emissions but not the benefits would yield information that is both potentially inaccurate and not useful.

4.2 Other Alternatives Considered and Environmentally Preferred Alternative

4.2.1 Alternative A: No Action

Under Alternative A, the Alton Coal Tract would not be offered for competitive lease sale, and the federal coal included in the tract would not be mined. Mining on private land adjacent to the tract (i.e., the Coal Hollow Mine and North Fee Area Mine) would continue. The Coal Hollow Mine consists of approximately 635 acres of land and approximately 5 million short tons of recoverable coal leased from private surface and mineral owners. The North Fee Area Mine is on private lands adjacent to the proposed tract to the north, which ACD began mining in February 2016. The North Fee Area Mine is expected to disturb approximately 378 acres over the life of the mine.

4.2.2 Alternative B: Proposed Action

Under the Proposed Action, the Alton Coal Tract would be offered for lease at a sealed-bid, competitive lease sale, subject to lease stipulations developed for the tract. Recoverable portions of

in-place coal reserves would be mined over approximately 25 years using 1) surface-mining methods where the depth of overburden would be less than approximately 200 feet, and 2) underground methods (development mining, auger mining, highwall mining, longwall mining, and/or room and pillar mining; see Appendix D of the FEIS) where the depth of overburden would exceed approximately 200 feet. Approximately 2 million tons of coal per year would be mined once topsoil stockpiling and initial overburden removal have occurred. Some reclamation would be concurrent with mining over the course of the estimated 25-year life of the mine. At closure, a potential 10-year reclamation and revegetation monitoring period for the entire disturbed area would be anticipated.

The BLM independently evaluated the coal resources in the tract under this alternative. The BLM estimates that the tract under the Proposed Action consists of approximately 59.6 million tons of in-place coal and that an estimated 44.9 million tons of coal could be recoverable from the tract. BLM estimates that in areas where coal would be mined by surface-mining methods, approximately 90% of the estimated in-place coal reserves could be recoverable. However, in those portions of the tract that must be mined by underground mining methods, approximately 50% of the in-place coal reserves could be recoverable. These percentage recovery estimates are based on assumptions about the depth to which the use of surface-mining methods is feasible and the extent of the areas of the tract without coal.

Section 2.3 of the FEIS (Alternative B: Proposed Action) includes a detailed discussion of Alternative B and its proposed mining methods.

4.2.3 Alternative C: Reduced Tract Acreage and Seasonal Restrictions

Under Alternative C, the Alton Coal Tract would be modified to remove 403 acres to exclude mining activities. Further, certain mining activities in the south portion of the tract would be subject to seasonal restrictions to reduce impacts to the local Greater Sage-Grouse population. Under Alternative C, the modified tract would be offered for a competitive lease sale, subject to lease stipulations developed for the tract. Recoverable portions of in-place coal reserves would be mined over approximately 21 years using surface-mining methods where the depth of overburden is approximately 200 feet or less, and using underground methods (development mining, longwall mining, and/or room and pillar mining) where the depth of overburden exceeds approximately 200 feet. Approximately 2 million tons of coal per year would be mined once topsoil stockpiling and initial overburden removal have occurred. Some reclamation would be concurrent with mining over the course of the estimated 21-year life of the mine. At closure, a potential 10-year reclamation and revegetation monitoring period for the entire disturbed area would be anticipated.

The BLM independently evaluated the coal resources included in the tract under this alternative. The BLM estimates that under Alternative C, the tract includes approximately 52.1 million tons of in-place coal and that an estimated 39.2 million tons of coal could be recoverable from the tract. The BLM estimates that in areas where coal would be mined by surface-mining methods, approximately 90% of the estimated in-place coal reserves could be recoverable. However, in those portions of the tract that must be mined by underground mining methods, approximately 50% of the in-place coal reserves could be recoverable. These percentage recovery estimates are based on assumptions

regarding the depth to which the use of surface-mining methods is feasible and the extent of the areas of the tract without coal.

Section 2.4 of the FEIS (Alternative C: Reduced Tract Acreage and Seasonal Restrictions) includes a detailed discussion of Alternative C.

4.3 Alternatives Considered but Eliminated

An alternative may be considered during the environmental analysis process, but not analyzed in detail. The agency must identify those alternatives and briefly explain why they were eliminated from detailed analysis (40 CFR 1502.14). An alternative may be eliminated from detailed study if:

- It is ineffective (does not respond to the purpose and need for the proposed action);
- It is technically or economically infeasible (considering whether implementation of the alternative is likely, given past and current practice and technology);
- It is inconsistent with the basic policy objectives for the management of the area;
- Its implementation is remote or speculative;
- It is substantially similar in design to an alternative that is analyzed; or
- It would result in substantially similar impacts to an alternative that is analyzed.

A wide range of additional Alternatives were considered by OSMRE but not carried forward for detailed analysis in the FEIS. The following Alternatives were not analyzed in the FEIS (Section 2.7) because they either did not meet the purpose and need of the Project or were not considered technically feasible or economically feasible or cost-effective:

- Alternative D: Alton Coal Development's Original Lease By Application Submittal
- Alternative E: No Surface Mining
- Alternative F: Postpone Leasing Decision Until Completion Of The Kanab Field Office Resource Management Plan Revision
- Alternative G: Postpone Leasing Decision Until More Environmentally Friendly Coal Mining Practices Are Available
- Alternative H: Construct A Coal-Fired Power Plant Next To The Tract
- Alternative I: Promote The Development Of Alternative Sources Of Energy, Natural Gas, And Energy Conservation
- Alternative J: Coal Transportation Alternatives
- Alternative K2: Tract Modifications To Address Concerns Related To Greater Sage-Grouse And Big Game
- Alternative L: Tract Modifications To Address Concerns Related To Kanab Creek, Possible Alluvial Valley Floors, And Other Water Features
- Alternative M: Maximize Flexibility Of Mining Operations
- Alternative N: Nitrogen Dioxide Emissions Control Measures
- Alternative O: Restrict Mining Operations To Daylight Hours
- Alternative P: Update The KFO RMP Unsuitability Determinations Based On The Analysis In The DEIS And Reconfigure The Tract To Exclude These Areas
- Alternative Q: Air Quality Protection Alternative
- Alternative R: Restrict Coal Truck Traffic After Sunset And Before Sunrise

- Alternative S: Reconfigure The Tract To Exclude Cultural Resources Sites Eligible For The National Register Of Historic Places
- Alternative T: Seasonal Timing Restrictions And Varying Buffer-Size Restrictions For The Tract
- Alternative U: Alternative Locations
- Alternative V: Lease All Known Recoverable Coal Resources

Certain components of the federal action would be independent of the elements of any alternative. In the EIS, these were considered options, any one of which could be chosen in combination with any alternative and would not necessitate changes in the alternative, or vice versa. Those options that were considered but not carried forward for detailed analysis are listed below (FEIS Section 2.7).

- Kanab Field Office Route 116 Relocation Options
- Other Roads In The Tract
- Power Generation Options

4.4 Basis of Decision

Based on the information contained in the FEIS, the results of tribal consultation, consultations under the ESA and NHPA, and the additional considerations listed in this ROD, OSMRE has selected Alternative K1, subject to the mitigation and monitoring requirements of the BLM lease stipulations, because it achieves the project goals consistent with all applicable regulatory requirements, while minimizing potential impacts. As set forth in Section 4 of this ROD, OSMRE has determined that all applicable statutory and regulatory requirements necessary for approval of the project components addressed in the ROD have been satisfied.

Direct, indirect, and cumulative impacts are described fully by alternative in Chapter 4 of the FEIS. Effects are summarized in 2.8.1 of the FEIS. The Selected Alternative provides the best balance among the key issues and other concerns identified during the BLM public involvement process (Section 5, Public Involvement).

5.0 Public Involvement

Council on Environmental Quality regulations implementing NEPA require that federal agencies provide meaningful opportunities for the public and stakeholders to provide input and to identify their concerns during an EIS process. Federal laws such as the ESA, the CWA, and the NHPA mandate public involvement and consultation with agencies or federally recognized tribal governments. This section discusses the specific consultation and coordination efforts undertaken by the BLM and OSMRE throughout the entire process of developing the FEIS. A detailed discussion of the consultation and coordination efforts is included in Chapter 5 of the FEIS. The following entities were cooperating agencies for the EIS process pursuant to NEPA: EPA, NPS (Bryce Canyon National Park), and Kane County. BLM also created working groups for: noise modeling, socioeconomics and environmental justice, water resources, air resources, night sky impact assessment, and greater sage-grouse mitigation planning. The findings of the working groups are presented in the body of the FEIS and Appendices E, L, and K.

5.1 National Historic Preservation Act Section 106 Consultation and Government-to-Government Consultation

The BLM and OSMRE, in consultation with the Utah SHPO, developed a programmatic agreement (Appendix N of the FEIS) pursuant to 36 CFR 800.14 that would provide for a comprehensive consideration of possible effects to historic properties. The BLM, in consultation with SHPO, developed a plan to involve the public and identified potential consulting parties. Potentially interested consulting parties were contacted by a letter dated March 6, 2012, and were invited to participate in the development of the agreement. Meetings with consulting parties were held on March 22, 2012; May 16, 2012; October 4, 2012; December 13, 2012; and February 21, 2013 to discuss details of the programmatic agreement.

The programmatic agreement developed for the Alton Coal Tract LBA

- requires ongoing consultation with Indian tribes;
- defines the area of potential effects and provides processes for identification of historic properties;
- details reporting requirements and report review periods for historic property inventories and mitigation reports;
- specifies that a historic property treatment plan be developed that addresses adverse effects to historic properties and that provides measures to avoid, minimize, or mitigate those effects; and
- provides for ongoing involvement of consulting parties.

In August 2005, the BLM sent tribal consultation letters to eight tribes that were determined to have cultural ties to the area affected by the proposed lease. Of those eight tribes, the Hopi, Zuni, and Paiute Indian Tribe of Utah responded in writing. They requested copies of the cultural resources survey reports and indicated that they will continue formal consultation if any prehistoric cultural resources are adversely affected by mining on the tract. As part of the government-to-government consultation process, the BLM also conducted a field visit with the Kaibab Band of Paiute Indians. Additionally, all eight tribes were invited to participate as consulting parties in development of the programmatic agreement by letter dated March 6, 2012, though none elected to participate.

A detailed discussion of NHPA Section 106 consultation and government-to-government consultation is included in Section 5.2.2 of the FEIS (Section 106 and Government-to-government Consultations). Consultations with Native American Tribes are being conducted by OSMRE in accordance with DOI policy. Tribes will be notified of the adoption once it is published in the Federal Register.

5.2 Endangered Species Act Section 7 Consultation

Section 7 of the ESA requires federal agencies to ensure that their actions do not jeopardize the continued existence of threatened or endangered species or result in the destruction of their designated critical habitat. It also requires consultation with the USFWS in making that determination.

The BLM initiated consultation with the USFWS by informal email correspondence and teleconference meetings. The BLM obtained from the Utah Ecological Services Field Office of the USFWS a list of endangered or threatened species (or species proposed for listing) that may occur on the tract or that may be affected by mining on the tract. The BLM received a letter from the USFWS on October 6, 2017, concurring with the BLM's determination that the Selected Alternative was not likely to adversely affect threatened or endangered species and that a biological assessment was not needed.

As part of its consideration of impacts of the proposed Project on threatened and endangered species, OSMRE completed the Section 7 consultation process under the Endangered Species Act utilizing the previous consultation completed by BLM for the EIS on October 6, 2017 as well as completing an independent evaluation using the USFWS Information Planning and Consultation (IPAC) list. In OSMRE's IPAC inquiry, OSMRE evaluated the potential impacts to the California Condor, Mexican Spotted Owl, Southwestern Willow Flycatcher, and Jones Cycladenia and came to a determination of no effect due to the lack of suitable habitat in the project area. OSMRE concurs with BLM's previous consultation findings to not likely jeopardize the Utah Prairie Dog, pursuant to Section 7 of the ESA of 1973, as amended (16 U.S.C. §§ 1531 et seq.) and its implementing regulations.

5.3 EIS Public Outreach

The public scoping process was initiated on November 28, 2006, when the BLM published a notice of intent (NOI) to prepare an EIS to offer the Alton Coal Tract for competitive leasing. Five public scoping meetings were held at various locations and dates. By the end of the 90-day public scoping period, 7,788 responses were received. The bulk of these (7,352) were form letters received by email. The remainder were unique emails (167); email form letters with additional text (178); and letters received by mail, facsimile, or at scoping meetings (91).

The EPA and the BLM each published a notice of availability (NOA) for the DEIS in the *Federal Register* on Friday, November 4, 2011 (*Federal Register* 76:68501–68502). Five public meetings on the DEIS, including the public hearing on the maximum economic recovery and fair market value associated with the proposed lease sale, were held at various locations and dates. During the 85-day comment period, the KFO received 154,194 comment submittals on the DEIS. The bulk of these (144,146) were form letters (seven types). The BLM received a total of 933 unique (nonform) submittals and 9,115 form letters that had additional unique text.

The BLM's original intent was that an FEIS would be prepared following the public comment and response period on the DEIS, in which all responses to comments on the DEIS would be published in table format. However, because of the nature of comments received on the DEIS, the BLM made the decision to issue a detailed SDEIS (which included a 90-day public comment period) followed by an FEIS. As a result, the BLM has addressed the substantive comments received on the DEIS in the text, content, and analyses presented in the SDEIS and has provided a summary of responses to comments on the DEIS and more formal responses to comments on the SDEIS in Appendix C of the FEIS.

The EPA published an NOA for the FEIS on July 20, 2018, which began a 30-day availability period. BLM received two comment letters during the availability period, one from the EPA and one from several environmental organizations. BLM evaluated and considered both comment letters including the exhibits submitted from the environmental organizations. BLM determined that neither submission raised any significant new circumstances or information relevant to the environmental effects that have bearing on the proposed action or its impacts. BLM decided to hold a competitive lease sale for the federal coal in the tract as described under the Selected Alternative (Alternative K1) and issue a ROD.

5.4 Notice of Adoption

OSMRE was a cooperating agency and conducted an independent review of the FEIS. All of OSMRE's comments and suggestions were satisfied in the FEIS. Therefore, OSMRE is not required to recirculate the FEIS (40 CFR § 1506.3). OSMRE notified EPA of its intent to Adopt and EPA released a Federal Register Notice. On April 16, 2019, the Utah Physicians for a Healthy Environment, Sierra Club, Natural Resources Defense Council, National Parks Conservation Association, Grand Canyon Trust, and WildEarth Guardians filed a Complaint for Declaratory and Injunctive Relief in the U.S. District Court for the District of Utah against the BLM; however, the lease is in effect and it is appropriate for OSMRE to adopt the FEIS.

6.0 Approval

In consideration of the information presented above, OSMRE approves the ROD adopting the BLM Alton Coal Tract Lease by Application FEIS and selects Alternative K1 as the Preferred Alternative as described in the FEIS (Section 2.5). The BLM included lease stipulations which were outlined by in Appendix B of BLM's ROD to minimize environmental impacts. This action can be implemented following approval of the mining plan modification by the ASLM.

For more information about this project, contact Gretchen Pinkham by phone 303-293-5088 or email at gpinkham@osmre.gov.

Approved By:



David Berry, Regional Director, Regions 5, 7, 8, 9, 10 and 11
Office of Surface Mining Reclamation and Enforcement

Date:

6/25/19

EXECUTIVE SUMMARY

ES.1 EXECUTIVE SUMMARY

ES.1.1 Background

In November 2004, a lease by application (LBA) was filed by Alton Coal Development, LLC (ACD) to mine federal coal, using primarily surface-mining methods, near the town of Alton, Utah (Case Number UTU 081895). This application was filed under the regulations at 43 Code of Federal Regulations (CFR) 3425, Leasing on Application. This original application included nearly 2,683 surface acres and approximately 38 million tons of recoverable coal. The Bureau of Land Management (BLM) reconfigured the tract to include approximately 898 additional acres. Acreage added to the tract during tract reconfiguration was based on the identification of additional recoverable coal reserves not included in the original LBA and on additional surface acreage deemed necessary for mine operations and some additional recoverable reserves. The Alton Coal Tract LBA (hereafter the Alton Coal Tract or tract), as reconfigured, contains approximately 3,581 surface acres and approximately 44.9 million tons of recoverable coal reserves.

To process an LBA, the BLM must establish the fair market value of the coal in the tract by evaluating many factors, including the quantity and quality of the coal reserves. Any subsequent mining plan must achieve maximum economic recovery of the tract's coal resources in the context of applicable laws, regulations, and lease stipulations. In addition, before the BLM can issue a decision to offer a tract for lease, the BLM must fulfill the requirements of the National Environmental Policy Act (NEPA) by evaluating the potential environmental impacts of leasing and recovering the federal coal. If the tract is leased, the successful lessee would also have to obtain a permit from the Utah Division of Oil, Gas, and Mining (DOG M). The DOGM permitting process is described in the following paragraphs.

On November 28, 2006, a notice of intent (NOI) to prepare an EIS for the Alton Coal Tract was published in the *Federal Register* (71:68834–64435). This was followed on November 4, 2011, with a notice of availability (NOA) for the *Alton Coal Tract Lease by Application DRAFT Environmental Impact Statement* (DEIS) (*Federal Register* 76:68501–68502). Based on comments received on the DEIS, the BLM decided to prepare a supplemental DEIS (SDEIS) for public review prior to preparing and distributing a final EIS (FEIS). On June 18, 2015, an NOA for the *Alton Coal Tract Lease by Application Supplemental Draft Environmental Impact Statement* (the SDEIS) was published in the *Federal Register* (80:34931–34932). For a summary of comments received on the DEIS, see Section 5.1.2.1. Substantive comments received on the DEIS resulted in changes presented in the SDEIS. A summary of responses to substantive comments on the DEIS and formal responses to substantive comments received on the SDEIS are provided in Appendix C of the FEIS.

This EIS has been prepared to evaluate the potential direct, indirect, and cumulative environmental impacts of leasing and recovering the federal coal included in the tract, based on ACD's preliminary plan and reasonable alternatives. The BLM will use the analysis in this EIS to decide whether to a) hold a competitive, sealed-bid lease sale for the tract; b) hold a competitive, sealed-bid lease sale for a modified tract; or c) reject the lease application and not offer the tract for sale at this time. However, the final BLM-accepted mine plans could be different from the conceptual mine plan analyzed in the EIS. The impacts of mining the coal are considered in this EIS because mining the coal is a logical consequence of issuing a lease. A record of decision (ROD) will be issued, and if the decision is to offer the tract for lease, a sale will be held. If a lease sale is held, the bidding at the sale would be open to any qualified bidder; it would not be limited to the applicant. A lease would be issued to the highest bidder at the sale, provided that the high bid meets or exceeds the fair market value of the coal, as determined by BLM's economic evaluation and if the U.S. Department of Justice (DOJ) determines that there would be no antitrust violations.

In return for receiving a lease, the successful lessee must pay the federal government a bonus equal to the amount it bids at the time the lease sale is held (the bonus can be paid in five yearly installments), make annual rental payments to the federal government, and make royalty payments to the federal government when the coal is sold. Federal bonus, rental, and royalty payments are nearly equally divided with the state in which the lease is located. A federal coal lease grants the lessee the exclusive right to seek a mining permit for, and to mine coal on, the leased tract. The lessee is subject to the terms of the lease, the mining permit, and applicable state and federal laws. Before a new leased tract can be mined, the lessee must have their detailed plans approved (in the permit application package) to conduct mining and reclamation operations.

Coal production in the United States fell by 187 million short tons (16%) between 2008 and 2014 because declining natural gas prices made coal less competitive as a fuel for electricity generation (Energy Information Administration [EIA] 2015). If the Clean Power Plan¹ is rescinded, United States annual coal production is expected to increase through 2020 to more than 800 million short tons as a projected rise in natural gas prices improves the competitiveness of existing coal generating units, and would increase further through 2040 to approximately 850 million short tons (EIA 2017a). However, coal's share of total annual electricity generation is expected to fall from 33% in 2015 to 26% in 2040, even under a no-Clean Power Plan scenario (EIA 2016a). Under a no-Clean Power Plan scenario, natural gas-fired generation is expected to decline between 2016 and 2020 in response to growth in wind and solar capacity (EIA 2016a). However, after 2020, natural gas's share of total generation is expected to increase steadily, overtaking coal before 2030 and accounting for 34% of total generation in 2040 (EIA 2016a). In Utah, approximately 76% of electrical energy is generated from coal (Vanden Berg 2016). Although most (approximately 90%) coal consumption in the United States is in the electric power sector, coal is also used (approximately 10% of total demand) in the industrial sector. In the industrial sector, coal is used in the manufacture or production of cement, paper, chemicals, food, primary metals, and coal-based synthetic fuels (coal-to-liquids). It is also used in the industrial sector as a direct source of heat, as a feed stock, as boiler fuel for the production of process steam and electricity, and in the production of coke, which is used as an energy source and as a raw material in steel production. Additionally, coal exports are expected to increase gradually between 2015 and 2040 (EIA 2015).

According to the Utah Geological Survey, coal production in Utah decreased from 24.3 million short tons to 17.0 million short tons (30%) between 2008 and 2013 because of reserve depletion and difficult mining conditions (Boden et al. 2015); however, coal production increased by 10.5% between 2013 and 2014, to 17.9 million short tons (Boden et al. 2015). Fuel switching or closure at United States coal-fired power plants outside of Utah is, however, keeping demand for Utah coal near historic lows. Utah coal production in 2015 decreased to 14.5 million short tons and decreased to 13.7 million short tons in 2016 (Utah Geological Survey 2017a). Utah coal mines are facing steady reserve depletion and difficult mining conditions. Demand for Utah coal has also sharply decreased the past few years as power plants have switched from coal-fired to natural gas-fired generation. The City of Los Angeles has stated that it will no longer purchase power from the Intermountain Power Plant (IPP) after its current power purchase agreement expires in 2027, unless the IPP converts to natural gas or implements carbon capture and storage technology. Thus, demand for Utah coal could drop significantly after 2027 (Boden et al. 2015). However, IPP recently announced plans to convert to natural gas by 2025 because of the expiration of its coal-fired power purchase agreement with the City of Los Angeles (O'Donoghue 2017). Utah's long-term (50 years and beyond) coal future is also shifting because currently accessible coal reserves are being depleted in the Book Cliffs and Wasatch Plateau coal fields. This makes it necessary for the coal industry

¹ The Clean Power Plan is a policy that was proposed by the EPA in 2014 to address human-caused climate change. The EPA issued a final rule in 2015 requiring states to meet specific reduction goals for carbon dioxide emissions from electrical power generation by 2030 (Federal Register 80:64661–65120). President Trump signed an executive order on March 28, 2017, mandating the EPA to review the Clean Power Plan and to initiate proceedings to suspend, revise, or rescind the plan, if appropriate (White House 2017).

to look to other Utah coal fields to meet future demands for coal. Further, most Utah mining companies have leased coal reserves for approximately 10 to 15 years of production; however, they are having difficulty adding new leases to extend their reserves. As a result, Utah coal production is outpacing tonnage leased (Vanden Berg et al. 2012).

All coal reserves in the Alton Coal Tract are federally owned, though surface ownership is mixed. Under Alternative B (the Proposed Action; discussed in greater detail in Chapter 2), approximately 2,280 surface acres of the tract are in federal (BLM) ownership and 1,296 surface acres are in private ownership (eight different private surface owners). Private surface owners may be qualified to give consent to mine federal minerals under the private surface owner's estate² according to 43 CFR 3400.0-5. Surface ownership under Alternative A (No Action Alternative), Alternative C, and Alternative K1 is also discussed in greater detail in Chapter 2. If this EIS process results in a competitive lease sale for the tract, a final determination of private surface-owner qualification and private surface-owner consultation would take place prior to leasing. All surface owners have been notified of the Proposed Action. Further, both hardcopy and electronic versions of this EIS have been distributed to surface owners.

ES.1.2 Purpose and Need for Action

The purpose of the federal action is to respond to an LBA for federal coal reserves on up to 3,581 acres of BLM-administered and private surface in Kane County, Utah, near the town of Alton. The need for the federal action is established by the BLM's responsibilities under the Federal Land Policy and Management Act (FLPMA) and the Mineral Leasing Act (MLA), as amended by the Federal Coal Leasing Act Amendments of 1976. Private development of federal coal reserves is integral to the BLM coal leasing program under authority of the FLPMA and MLA. The MLA requires that all public lands not specifically closed to leasing be open to lease for the exploration and development of mineral resources. Further, a primary goal of the Energy Policy Act of 2005 is to add energy supplies from diverse sources, including domestic oil, gas, and coal, as well as hydropower and nuclear power.

ES.1.3 Public Involvement

ES.1.3.1 Public Scoping

The public scoping process was initiated on November 28, 2006, when the BLM published an NOI to prepare an EIS to offer the tract for competitive leasing. Five public scoping meetings followed. Each meeting was conducted in an open house format with BLM and ACD personnel present to answer questions and provide information. Other resources available at the public scoping meetings included informational display boards; one video explaining the conceptual mining and reclamation sequence; one video explaining a potential transportation route, including truck details; and comment forms on which to submit comments at the meetings. Informational display boards and comment forms are available in the *Alton Coal Tract LBA EIS Public Scoping Report* (SWCA Environmental Consultants [SWCA] 2007a), which was prepared following completion of the scoping process. Copies of the videos are available at the BLM Kanab Field Office (BLM-KFO). The 90-day scoping period closed on February 26, 2007.

² Under the regulations under 43 CFR 3400.0-5(gg)(1), (2), and (3) qualified surface owner means the natural person or persons (or corporation, the majority stock of which is held by a person or persons otherwise meeting the requirements of this section) who: 1) hold legal or equitable title to the surface of split estate lands; 2) have their principal place of residence on the land, or personally conduct farming or ranching operations upon a farm or ranch unit to be affected by surface-mining operations; or receive directly a significant portion of their income, if any, from such farming and ranching operations; and 3) have met the above conditions for a period of at least three years, except for persons who gave written consent less than three years after they met the above requirements. In computing the three-year period the authorized officer shall include periods during which title was owned by a relative of such person by blood or marriage if, during such periods, the relative would have met the requirements of this section. A qualified private surface owner is legally qualified to give consent to mine federal minerals under the private surface owner's estate.

ES.1.3.2 Comment Process on the Draft Environmental Impact Statement and Supplemental Draft Environmental Impact Statement

The comment process on the DEIS was initiated on November 4, 2011, when the BLM published an NOA of the Alton Coal Tract LBA EIS. Five public meetings, including one public hearing, followed. Each meeting was conducted in an open house format, with BLM personnel present to answer questions and provide information. Other resources available at the public meetings included informational display boards, hard copies of the DEIS, and compact disc copies of the DEIS. The Fair Market Value Hearing was conducted to comply with the BLM's coal leasing regulations at 43 CFR 3425.1. The Fair Market Value Hearing was part of the Cedar City public meeting. The public comment period on the DEIS was scheduled for 60 days. However, the public requested an extension of the public comment period. Ultimately, the 85-day public comment period on the DEIS closed on January 27, 2012.

The public comment period on the SDEIS began on June 12, 2015. Five public meetings followed. Each meeting was conducted in an open house format, with BLM personnel present to answer questions and provide information. Other resources available at the public meetings included informational display boards, hard copies of the SDEIS, and compact disc copies of the SDEIS. The original public comment period on the SDEIS was intended for 60 days. After receiving several requests, the BLM extended the comment period for an additional 30 days, ending on September 10, 2015.

ES.1.3.3 Summary of Issues

Issues and concerns raised during the public scoping process can be divided into three categories: 1) those to be addressed through implementation and documentation of certain elements of the NEPA process; 2) those to be addressed through analysis of direct, indirect, and cumulative impacts; and 3) those to be addressed through the formulation of alternatives.

The public and agencies provided substantive comments on the DEIS. Per the BLM NEPA Handbook (BLM 2008a) definition, *substantive* comments do one or more of the following:

- Question, with reasonable basis, the accuracy of information in the EIS
- Question, with reasonable basis, the adequacy of, methodology for, or assumptions used for the environmental analysis
- Present new information relevant to the analysis
- Present reasonable alternatives other than those analyzed in the EIS
- Cause changes or revisions in one or more of the alternatives

Substantive comments on the DEIS were addressed in the SDEIS. A summary of responses to comments on the DEIS are published, along with formal responses to comments on the SDEIS, in Appendix C of the FEIS. The substantive issues and concerns are outlined below.

ES.1.3.3.1 LEASING TIMELINE

When is the appropriate time to begin the analysis of the EIS and consideration of leasing? Is it following submission of a detailed mining plan, or following a commitment to mine and sell coal?

ES.1.3.3.2 PREVIOUS DECISIONS AND LEGISLATION AND NEED FOR AN ENVIRONMENTAL IMPACT STATEMENT

Previous studies of coal mining at Alton have been completed. Why is additional environmental analysis required? How would the proposed lease meet the suitability requirements of Surface Mining Control and Reclamation Act (SMCRA) of 1977?

ES.1.3.3.3 BUREAU OF LAND MANAGEMENT'S ROLE AND POLICIES REGARDING PUBLIC LAND USE

What is BLM's responsibility to protect the public lands, while providing for their use and sustainability?

ES.1.3.3.4 SCOPE

Is coal mining on private lands and public (BLM) lands a connected action under NEPA, which would require an analysis in a single EIS?

ES.1.3.3.5 PURPOSE AND NEED

What are the public purposes and needs for this action and how will they affect the eventual decision to offer the tract for leasing or not? How will energy demand affect BLM's decision to lease the tract?

ES.1.3.3.6 ALTERNATIVES

What reasonable alternatives to the applicant's proposal to lease and mine federal coal reserves in the tract should BLM consider?

ES.1.3.3.7 AFFECTED ENVIRONMENT AND IMPACTS ANALYSIS

What would be the effects of the coal mine on the natural and cultural environment in and near the tract and on the human values connected to those resources and their uses?

ES.1.3.3.8 DATA AND EXPERTISE FOR IMPACTS ANALYSIS

What data and scientific literature must be collected and analyzed to ensure an adequate analysis of the effects of the Proposed Action and alternatives?

ES.1.3.3.9 COOPERATING AND CONSULTING AGENCIES

What role will BLM's partners play in the EIS analysis of the Proposed Action and the alternatives?

ES.1.3.3.10 PUBLIC INVOLVEMENT

What opportunities for public involvement should BLM provide to ensure disclosure of information and informed decision making?

ES.1.3.3.11 NATIONAL ENVIRONMENTAL POLICY ACT DECISIONS

What role will local residents play in the decision-making process? How will impacts to Bryce Canyon National Park affect the Alton LBA tract leasing decision?

ES.1.3.3.12 AESTHETIC RESOURCES

What effect would noise created by coal mining and coal truck traffic have on the relative noise levels existing in the area, including the town of Alton, adjacent public lands, and nearby parks and monuments? What effect would the coal mining operation, coal truck traffic, and dust and smoke caused by mining have on the local landscape (scenic quality) and surrounding viewshed? How would lighting for nighttime mining operations affect the darkness of the night sky from key nighttime-sky viewing points such as Bryce Canyon National Park?

ES.1.3.3.13 AIR RESOURCES

How would the development and operation (e.g., construction, heavy equipment use, and transportation of coal) of the coal mine affect local and regional air quality? What effect would deposition of dust and other pollutants produced by mining have on water, wildlife, vegetation, recreation uses, and structures in and adjacent to the mining operations? What contribution would emissions produced from the mining operation, transportation of coal, and ultimate use of the coal add to the cumulative effect of carbon emissions on global warming?

ES.1.3.3.14 CULTURAL RESOURCES

What impact would coal mining and transporting coal have on prehistoric and historic cultural resources in the tract and along transportation routes? How would coal mining and transporting coal impact existing and eligible National Register sites and traditional cultural properties?

ES.1.3.3.15 FIRE MANAGEMENT

What impact would coal mining, including truck traffic to transport coal, have on air quality; and how would those changes in air quality affect BLM's ability to conduct prescribed burning in wildland-urban interface areas to reduce threats of wildfire? What impact would revegetation required for tract reclamation have on wildland fire frequency and severity?

ES.1.3.3.16 GEOLOGY AND MINERALS

How would coal mining on the tract affect geologic and mineral resources present there? What geologic hazards exist on and near the tract and how would they be affected by mining operations and vice versa? What is the potential for underground coal fires and what are the environmental consequences of an underground fire?

ES.1.3.3.17 HAZARDOUS MATERIALS

What impact would generation, temporary storage, and disposal of hazardous materials (such as those regulated under the Comprehensive Environmental Response, Compensation, and Liability Act, the Superfund Amendments and Reauthorization Act, the Resource Conservation and Recovery Act, and the Toxic Substances Control Act) have on people and the environment?

ES.1.3.3.18 LAND USE AND ACCESS

What impact would development and operation of a coal mine have on local private property values and future development potential of those lands? What effect would coal truck traffic have on private property values along transportation routes (e.g., KFO Route 116 and U.S. [Highway 89](#) [US-89])? What impact would development and operation of a coal mine have on the town of Alton (e.g., air quality, aesthetics, water quality, and public health and safety)? How would public lands be used and managed following reclamation of the coal mine?

ES.1.3.3.19 LIVESTOCK GRAZING

How would coal development, mining, and reclamation affect grazing and pasturelands around Alton (e.g., removal of vegetation and restricted access to grazing land for ranchers), and how would that affect short-term and long-term livestock grazing and production? How would road dust and exhaust from passing coal truck traffic affect vegetation growth and palatability of the vegetation for livestock forage?

ES.1.3.3.20 PALEONTOLOGY

How would surface disturbance (e.g., surface mining, road construction, and facilities construction) created by coal mining impact fossils in the tract?

ES.1.3.3.21 PUBLIC HEALTH AND SAFETY

How would coal truck traffic through towns along potential transportation routes affect public safety in those towns and along the travel routes? What risk of injury and adverse health effects would the mine workers and local public face as a result of mine development? (Public Health and Safety issues are addressed in the socioeconomics section of Chapter 4.)

ES.1.3.3.22 SPECIAL DESIGNATIONS

How would coal mining impact the air quality, viewshed, and nighttime sky of Bryce Canyon National Park? How would coal mining impact the resources (air quality, viewsheds, recreation, etc.) of other nearby parks and monuments, including the Grand Staircase-Escalante National Monument; Arches, Canyonlands, and Zion national parks; Kodachrome State Park; and Red Canyon and other public lands? How would the noise and presence of coal truck traffic affect the visitor experience at these parks, monuments, and public lands? (Issues related to special designations are addressed in the aesthetic resources, air resources, and recreation sections of Chapter 4.)

ES.1.3.3.23 SPECIAL STATUS SPECIES

How would development and operation of a coal mine impact special status species and their habitat, including Greater Sage-Grouse (*Centrocercus urophasianus*), Utah prairie dog (*Cynomys parvidens*), Burrowing Owl (*Athene cunicularia*), Bald Eagle (*Haliaeetus leucocephalus*), Golden Eagle (*Aquila chrysaetos*), pygmy rabbit (*Brachylagus idahoensis*), Northern Goshawk (*Accipiter gentilis*), Ferruginous Hawk (*Buteo regalis*), Bonneville cutthroat trout (*Oncorhynchus clarkii utah*), and Utah Physa (*Physella utahensis*)? What effect would noise from coal truck traffic have on special status species? How would wildlife mortality from vehicle collisions affect wildlife populations? (Special status species issues are addressed in the special status species section of Chapter 4.)

ES.1.3.3.24 SOCIOECONOMICS

What opportunities for employment would development and operation of the coal mine create? How would development and operation of a coal mine affect local businesses and tourism? How would development and operation of a coal mine affect tax revenues to Kane and Garfield counties? What, if any, additional county services (ambulance, firefighting, sheriff, etc.) would be required to support the mine? What effect would coal truck traffic have on tourism and local businesses along potential transportation routes? What are the economic benefits of development and operation of a coal mine? How would development of the tract contribute to the supply of coal available for use in the region?

ES.1.3.3.25 SOILS

What impact would development and operation of a coal mine (including final reclamation) have on productivity of soils, including biological soil crusts? How would coal mining affect farmland productivity? What impact would development and operation of a coal mine have on soil stability and rates of erosion? What effect would road and coal dust and exhaust from mine-related traffic have on soil productivity in proximity to roads in the tract and along potential transportation routes?

ES.1.3.3.26 VEGETATION

How would coal development, mining, and reclamation affect vegetation communities in the tract? What effect would coal mining, including truck traffic to transport coal, have on the introduction and spread of exotic vegetation? What effect would road and coal dust and exhaust from mine-related traffic have on the health and growth of vegetation adjacent to roads in the tract and along potential transportation routes?

ES.1.3.3.27 WATER RESOURCES

What effect would development and operation of a coal mine have on surface-water and groundwater quality and quantity? How would mining operations impact riparian areas and wetlands? How would coal mining affect the possible existence of an alluvial valley floor (AVF) near the town of Alton? How would road and coal dust and vehicle exhaust, resulting from operation of coal trucks, impact the quality of water bodies adjacent to transportation routes?

ES.1.3.3.28 WILDLIFE

What effect would development and operation of a coal mine, including reclamation and coal truck traffic, have on wildlife and wildlife habitat, including nocturnal wildlife?

ES.1.3.3.29 ALTERNATIVES

This section summarizes the comments provided in the public scoping process and comment process on the DEIS that specifically refer to or specifically indicate the need for the development of alternatives to the Proposed Action. Issues summarized above were also considered in the alternatives development process along with past, present, and reasonably foreseeable future actions.

Chapter 2 provides a complete description of the alternatives analyzed in detail and those alternatives considered but eliminated from detailed analysis. A brief rationale for the dismissal of alternatives is provided there.

Decision to Lease

- Should the BLM delay offering the tract for lease until less-impacting extractive processes are developed?
- The BLM should consider leasing all known recoverable coal resources rather than just the tract in question for which an LBA was received.
- Based on the analyses in the DEIS, the BLM should update their coal unsuitability determinations in the KFO RMP, as amended, and reconfigure the tract to match these updated determinations.

Mining Methods and Coal Production

- What are practical alternatives to surface mining in the tract?

Energy Conservation and Alternative Sources of Energy

- The BLM should consider foregoing the coal lease and instead promote energy conservation and the development of alternative forms of energy such as solar, wind, and natural gas.

Air Quality

- How would operations be designed and controlled to prevent the release of unsafe levels of nitrogen dioxide?
- How would operations be designed and controlled to ensure no violations of National Ambient Air Quality Standards (NAAQS)?

Special Designations

- Coal mining should be designed, and modified if needed, to reduce impacts to Bryce Canyon National Park.
- Is it feasible and reasonable to consider alternative locations for leasing rather than the LBA tract currently under consideration?

Transportation

- What methods of coal transportation (e.g., slurry, rail, and truck) should be considered to reduce impacts to the environment, nearby communities, and public safety?
- Construction of a power plant next to the mine should be considered as a way to eliminate impacts from coal truck traffic.
- Restrictions on coal truck traffic before sunrise and after sunset should be considered to improve public safety and reduce transportation-related impacts to wildlife.

Cultural Resources

- The BLM should consider an alternative tract configuration that excludes all cultural resources sites eligible for the National Register of Historic Places.

Wildlife and Special Status Species

- The BLM should consider an alternative that places seasonal timing restrictions on the entire tract.

ES.1.4 Alternatives

Four alternatives are analyzed in detail in this EIS: Alternative A (No Action), Alternative B (the Proposed Action), Alternative C (Reduced Tract Acreage and Seasonal Restrictions), and Alternative K1 (Reduced Tract Acreage).

Department of Interior regulations (43 CFR 46.425) suggest that departmental agencies should identify preferred alternatives in draft EISs but do not require them to do so. The BLM did not identify a preferred alternative or preferred alternatives in the Alton Coal Tract LBA DEIS published in November 2011, because no such preference existed at that time. A preferred alternative was also not identified in the SDEIS. In the FEIS, the BLM identifies Alternative K1 as its preferred alternative. In developing the FEIS, the BLM has conducted extensive consultation and coordination activities with its cooperating agencies and other agencies with special expertise (see Section 1.3 and Chapter 5). The BLM has also expanded the range of alternatives analyzed in detail, with the inclusion of Alternative K1 for detailed analysis.

ES.1.4.1 Alternative A: No Action

Under the No Action Alternative, ACD's application to lease the coal included in the Alton Coal Tract under the Proposed Action, Alternative C, or Alternative K1 would not be approved, the LBA tract would not be offered for competitive lease sale, and the coal included in the LBA tract would not be mined.

Rejection of the application would not affect existing mining activities on private land adjacent to the tract (i.e., the Coal Hollow Mine). The Coal Hollow Mine consists of approximately 635 acres of land and approximately 5 million short tons of recoverable coal leased from private surface and mineral owners. Average annual coal production is anticipated to be approximately 2 million tons, and mining activities are expected to employ approximately 160 persons during full production (100 at the tract and 60 for coal trucking operations); initial operations and startup would employ much less (approximately 16 employees). Rejection of the application would also not affect an anticipated permit application from ACD to mine fee coal on private lands adjacent to the tract to the north.

To compare the economic and environmental consequences of mining these lands versus not mining them, this EIS was prepared under the assumption that the tract would not be mined in the near future if the No Action Alternative is selected. Under the No Action Alternative, the public lands within the tract would continue to be managed in accordance with the *Kanab Field Office Record of Decision and Approved Resource Management Plan (KFO RMP), as amended* (BLM 2008b). The area would be managed for livestock grazing, recreation (primarily hunting and off-highway vehicle [OHV] use), and wildlife habitat. Vegetation treatments (wildlife habitat treatments, watershed treatments, livestock rangeland treatments, wildland fire use, fuels treatments, and stewardship contracting) would occur in support of the BLM's Healthy Lands Initiative. Private lands within the tract would continue to be used for livestock grazing, farming, and dispersed recreation (especially hunting).

ES.1.4.2 Alternative B: Proposed Action

Under the Proposed Action, recoverable portions of in-place coal reserves would be mined over approximately 25 years using 1) surface-mining methods where the depth of overburden would be less than approximately 200 feet, and 2) underground methods (development mining, auger mining, highwall mining, longwall mining, and/or room and pillar mining) where the depth of overburden would exceed approximately 200 feet. The choice of mining method, however, can vary from the 200-foot overburden threshold depending on the coal thickness, overburden type, overburden (highwall) stability, underground mining techniques available, operating and capital costs, and coal market economics. (The analysis considers surface disturbance for surface mining up to approximately 200 feet of overburden removal.) Approximately 2 million tons of coal per year would be mined once topsoil stockpiling and initial overburden removal have occurred. Reclamation would be concurrent with mining over the course of the estimated 25-year life of the mine and would be followed by a minimum 10-year reclamation and revegetation monitoring period.

BLM independently evaluated the coal resources in the tract. BLM estimates that the tract under the Proposed Action consists of approximately 59.6 million tons of in-place coal and that an estimated 44.9 million tons of coal would be recoverable from the tract. BLM estimates that in areas where coal would be mined by surface-mining methods, approximately 90% of the estimated in-place coal reserves could be recoverable. However, in those portions of the tract that must be mined by underground mining methods, approximately 50% of the in-place coal reserves could be recoverable. These percentage recovery estimates are based on assumptions about the depth to which the use of surface mining methods is feasible and the extent of the no-coal zone.

Details on mining methods, facilities, reclamation, and operations can be found in Chapter 2 of the EIS.

ES.1.4.3 *Alternative C: Reduced Tract Acreage and Seasonal Restrictions*

Under Alternative C, the Alton Coal Tract would be modified to exclude the northwest portion (Block NW) of the tract near the town of Alton. Further, certain mining activities in the southern portion of the tract (Block S) would be subject to seasonal restrictions to reduce impacts to the local Greater Sage-Grouse population. Under Alternative C, the modified tract would be offered for lease at a sealed-bid, competitive lease sale, subject to lease stipulations developed for the tract.

Consistent with the purpose and need for the federal action, the intent of Alternative C is to resolve, in part or in full, the following: issues related to the local sage-grouse population, noise, and visual impacts to the town of Alton, and issues related to conflicting land uses (agriculture versus surface mining). Alternative C may also reduce impacts to other resources such as springs and surface waters, wildlife, soils, public health and safety, paleontological resources, cultural resources, and vegetation.

Under Alternative C, the tract would be modified to exclude Block NW. The modified tract would encompass approximately 3,173 acres, of which approximately 2,280 acres are federal surface and mineral estate and 893 acres are split estate; private surface estate and federal mineral estate. As under the Proposed Action, not all surface estates, private or federal, have coal reserves underlying them.

Under Alternative C, recoverable portions of in-place coal reserves would be mined over approximately 21 years using surface-mining methods where the depth of overburden is approximately 200 feet or less, and using underground methods (development mining, auger mining, highwall mining, longwall mining, and/or room and pillar mining) where the depth of overburden exceeds approximately 200 feet. The choice of mining method, however, can vary from the 200-foot overburden threshold depending on the coal thickness, overburden type, overburden (highwall) stability, underground mining techniques available, operating and capital costs, and coal market economics. Approximately 2 million tons of coal per year would be mined once topsoil stockpiling and initial overburden removal have occurred. Reclamation would be concurrent with mining over the course of the estimated 21-year life of the mine and would be followed by a potential 10-year reclamation and revegetation monitoring period. Although reclamation would be concurrent with mining, due to seasonal timing restrictions required under Alternative C for Block S of the tract, the length of time between initiation of the mining process and concurrently occurring reclamation activities would be extended for some pits.

BLM estimates that the tract configuration under Alternative C includes approximately 52.1 million tons of in-place coal and that an estimated 38.1 million tons of coal would be recoverable from the tract. Percentage coal recovery estimates for surface versus underground mining are the same under Alternative C as they are under the Proposed Action.

Details on mining methods, facilities, reclamation, and operations can be found in Chapter 2 of the EIS.

ES.1.4.4 *Alternative K1: Reduced Tract Acreage (BLM's Preferred Alternative)*

In the DEIS, the BLM eliminated Alternative K1 from detailed analysis. However, based on public comments on the DEIS, the BLM decided to consider Alternative K1 in detail in the SDEIS and this FEIS. Under Alternative K1, the Alton Coal Tract would be modified to exclude Block NW and Block S. Under this alternative, the modified tract would be offered for lease at a sealed-bid, competitive lease sale, subject to lease stipulations developed for the tract.

Consistent with the purpose and need for the federal action, the intent of Alternative K1 is to resolve, in part or in full, the following: issues related to the local Greater Sage-Grouse population; noise and visual impacts to the town of Alton; and issues related to conflicting land uses (agriculture versus surface mining). Alternative K1 may also reduce impacts to other resources such as springs and surface waters, wildlife, soils, public health and safety, paleontological resources, cultural resources, vegetation, and air quality.

Under Alternative K1, recoverable portions of in-place coal reserves would be mined over approximately 16 years using surface-mining methods where the depth of overburden is approximately 200 feet, and using underground methods (development mining, auger mining, highwall mining, longwall mining, and/or room and pillar mining) where the depth of overburden exceeds approximately 200 feet. The choice of mining method, however, can vary from the 200-foot overburden threshold depending on the coal thickness, overburden type, overburden (highwall) stability, underground mining techniques available, operating and capital costs, and coal market economics. Approximately 2 million tons of coal per year would be mined once topsoil stockpiling and initial overburden removal have occurred. Reclamation would be concurrent with mining over the course of the estimated 16-year life of the mine and would be followed by a potential 10-year reclamation and revegetation monitoring period.

BLM estimates that the tract configuration under Alternative K1 includes approximately 40.9 million tons of in-place coal and that an estimated 30 million tons of coal would be recoverable from the tract. Percentage coal recovery estimates for surface versus underground mining are the same under Alternative K1 as they are under the Proposed Action.

ES.1.4.5 Reasonably Foreseeable Coal Loadout Location and Transportation Route

Future foreseeable transportation of mined coal reserves from the tract to market would be dictated by existing roads and market conditions at the time of sale of mined coal. The applicant (ACD) is currently planning on moving mined coal from the tract to market via development of a rail loadout at Iron Springs, approximately 11 miles west of Cedar City, Utah. To access this loadout, coal transportation would occur via KFO Route 116 continuing north through the town of Alton, north on US-89, west on State Road 20 (SR-20), and finally south on Interstate 15 exiting at exit number 59 in Cedar City. For analysis in this EIS, the construction and use of the rail loadout at Iron Springs would be the reasonably foreseeable loadout location associated with the tract, and the approximately 110-mile route would be the reasonably foreseeable transportation route linking the tract and the loadout. Map 2.6 shows the rail loadout location and the transportation route.

If the BLM decides to hold a competitive lease sale and a lease is issued to ACD, it is reasonably foreseeable that they would use this rail loadout and transportation route, as conditions dictate, to transport and market the federal coal reserves in the tract. A successful bidder other than ACD may identify a different loadout location, transportation route, or both, to move mined coal from the tract to market. Given that BLM cannot predict the plans of a successful bidder other than ACD, the following would be speculative: attempting to guess at loadout location (or locations), transportation route (or routes), or both, that may be used by a successful bidder other than ACD. Therefore this EIS gives no consideration to other potential loadout locations and transportation routes.

Though transportation of mined coal reserves would not be regulated under the leasing action, all coal haul trucks used for transporting mined coal reserves from the tract would be operated as per federal and Utah Department of Transportation (UDOT) requirements. For analysis of all actions alternatives in this EIS, it is anticipated that in addition to the operation of permitted and regulated haulage from the tract to a reasonably foreseeable rail loadout, the use of best available control measures to minimize and/or

eliminate fugitive coal dust along the transportation route would be installed on all coal haul vehicles. Operation of the rail loadout facility would be regulated by DOGM (under their coal regulatory program). In addition to various federal, state, and local regulatory requirements for its operation, it is also anticipated that best available control measures for fugitive coal dust would be implemented at the associated loadout facility.

ES.1.4.6 Permits, Approvals, Regulatory Compliance, Mitigation, and Monitoring

There are certain permits, approvals, and regulatory compliance, mitigation, and monitoring measures that would be required under the action alternatives. These are related to 1) compliance with existing local, state, and federal rules and regulations with respect to surface coal mining and 2) special requirements (i.e., design features) developed for the tract. See Table 1.5.1 in Chapter 1 and Table 2.6.1 in Chapter 2 for a summary of permits, approvals, and regulatory compliance requirements for the successful bidder.

ES.1.4.7 Alternatives Eliminated from Detailed Analysis

Aside from the Proposed Action, Alternative C, and Alternative K1, 19 alternatives were considered during the course of alternatives development and following publication of the DEIS. Each of these was eliminated from detailed analysis in the EIS. Chapter 2, Section 2.7.1 provides descriptions of these alternatives along with the rationale for eliminating each of them from detailed analysis.

In addition to the alternatives eliminated, certain components of the federal action would be independent of the elements of any alternative. In the EIS, these were considered options, any one of which could be chosen in combination with any alternative and would not necessitate changes in the alternative, or vice versa. Those options that were considered but not carried forward for detailed analysis are described in Chapter 2, Section 2.7.2 of the EIS.

ES.1.5 Affected Environment

ES.1.5.1 General Setting

The tract is in Kane County, Utah, approximately 0.10 mile south of the town of Alton and 2.9 miles east of US-89. The tract occurs at approximately 6,900 feet above sea level in the semiarid foothills of the Colorado Plateau Semidesert Province (Woods et al. 2001a) of south-central Utah. The tract is in the Alton Amphitheater between the Paunsaugunt Plateau to the northeast, Long Valley (Virgin River) to the west, and approximately 5.0 miles north and northwest of the Grand Staircase-Escalante National Monument. Mean annual precipitation in the town of Alton was approximately 16.7 inches from 1915 to 2016, and mean annual maximum temperature for this same time period was 60.0°F ([Western Regional Climate Center 2016a](#)). The Colorado Plateau province receives most of its precipitation in the form of snow during the winter months; summers are generally hot and dry with a mid- to late-summer monsoon period when frequent thunderstorms occur ([Western Regional Climate Center 2006](#)). The tract is characterized by a series of low-rising hills and benches cut by the north-south-running Kanab Creek and by long diagonal washes that flow from the surrounding mountain ranges. Vegetation in the tract is typical of the [Colorado Plateau](#) and includes large open areas of bunchgrass, perennial grasses, and sagebrush interspersed with dense stands of juniper (*Juniperus spp.*) and pinyon pine (*Pinus edulis*). Tall fir trees are apparent on the more rugged mountains to the northwest of the tract. Generally, the vegetation cover is continuous across most of the tract, broken by two-track dirt roads and fence lines.

Under the Proposed Action, the tract includes approximately 3,581 acres of land. All coal resources within the tract are federally (BLM) owned and managed. Approximately 2,280 surface acres of the tract are under BLM management, and the remaining 1,296 surface acres are under private ownership. Under Alternative C and Alternative K1, the tract includes approximately 3,173 acres and 2,114 acres of land, respectively. As under the Proposed Action, all coal resources under these tract configurations are federally (BLM) owned and managed. Surface ownership under Alternative C and Alternative K1 is split between the BLM (2,280 acres under Alternative C and 1,235 acres under Alternative K1) and private owners (893 acres under Alternative C and 880 acres under Alternative K1). Coal reserves are known to occur beneath approximately 1,750, 1,454, and 869 acres of the tract under the Proposed Action, Alternative C, and Alternative K1, respectively.

The entirety of the reasonably foreseeable coal haul transportation route also occurs in southern Utah, more specifically in Kane, Garfield, and Iron counties near Alton, Hatch, Panguitch, and Cedar City. The total length of the route is approximately 115 miles. Existing vehicle traffic consists of local residents; tourists to Bryce Canyon National Park, Dixie National Forest, and BLM-administered lands; and commercial truck traffic. Transportation infrastructure associated with the tract and the coal haul transportation route includes numerous unimproved, dirt roads, KFO Route 116, US-89, SR-20, Interstate 15, and SR-56. The Union Pacific Railroad 21-mile branch to the Salt Lake City-Los Angeles line is west of Cedar City, Utah, and is the nearest railroad facility to the tract.

ES.1.6 Environmental Consequences

Table 2.8.1 in Chapter 2 of this EIS summarizes the potential impacts to each element of the environment under each alternative. Detailed descriptions of the impacts are provided in Chapter 4, along with a discussion of potential mitigation measures, residual impacts, short-term uses versus long-term productivity, and irretrievable and irreversible commitments of resources that would result from implementation of the alternatives. Cumulative impacts to resource values and uses of the tract that would result from implementation of the alternatives are also discussed in Chapter 4. A summary describing the general conclusions of the effects analysis is presented below.

ES.1.6.1 Aesthetic Resources

Increased ambient noise levels, short-term modifications to visual resources, and perceptible increase in nighttime skyglow would occur from the implementation of the action alternatives. The town of Alton would experience the greatest increases in ambient noise levels from the mining activities in Block NW under Alternative B. An initial lumens cap of 3.15 million lumens would be applied to all action alternatives to limit nighttime skyglow effects. Full cut-off shielding would also be required under all action alternatives for fixed position lighting at centralized facilities.

ES.1.6.2 Air Resources

Under the action alternatives, emissions of criteria air pollutants (PM_{10} , $PM_{2.5}$, nitrogen oxides, volatile organic compounds, carbon monoxide, and sulfur dioxide) and hazardous air pollutants (benzene, toluene, xylenes, formaldehyde, acetaldehyde, and acrolein) would occur as a result of mining and transporting coal. Based on the near-field modeling results, all air pollutant concentrations resulting from emissions would be within NAAQS under the Proposed Action and Alternative K1 for the 200-foot overburden removal scenario. Air pollutant concentrations resulting from emissions under Alternative C would also be within NAAQS for all pollutants except PM_{10} (24-hour standard), which would be violated under the 200-foot overburden removal scenario.

Air quality impacts in the far-field (for criteria pollutants as well as visibility) would be within regulatory limits for the three action alternatives. Nitrogen and sulfur deposition would likewise be below threshold values.

ES.1.6.3 Cultural Resources

Archaeological sites eligible for the National Register would be adversely impacted from the implementation of the action alternatives due to surface-disturbing activities associated with mining operations. Underground mining may impact unidentified archaeological sites. Native American traditionally cultural properties would be subject to adverse effects for the life of the mine under the action alternatives. The Panguitch Historic District and Utah Heritage Highway 89/Mormon Pioneer Heritage Area (US-89) would be subject to adverse effects for the life of the mine under the action alternatives. Sites that are not directly impacted by surface mining or facilities construction would be subject to a greater degree of threat for vandalism, looting, or unintentional destruction due to an increased human presence in the area.

ES.1.6.4 Fire Management

Under the action alternatives, vegetation would be removed during mining and construction activities. The revegetation of the disturbed areas would lead to reduced Fire Regime Condition Class ratings. Increased movement to and from the tract by construction equipment and coal haul trucks would increase the risk of fuel leakage and/or sparking that could lead to wildfires in the tract and adjacent transportation corridors. Construction of centralized and dispersed facilities could lead to an increased risk of human-caused wildfires from construction activities in undisturbed vegetation on and adjacent to the tract

ES.1.6.5 Geology and Minerals

The action alternatives would result in long-term adverse effects to topography, physiography, and stratigraphy. Removal of coal by underground mining methods would cause subsidence on portions of the tract overlying the area of coal removal. There would be a slight fault hazard from underground mining, and a risk to structures occurring on landslide deposits. Impacts to coal resources would occur from the production of recoverable coal over the life of the mine. Oil and gas resources would be unavailable for extraction for the life of the mine.

Because most of the burnt shale deposits in the tract have been or would be mined by the time a decision is made by the BLM on this EIS, direct impacts to burnt shale resources are unlikely. However, if mining operations expose burnt shale in the tract, they would likely be lost as economically recoverable resources because they would be mixed with other overburden during reclamation. If segregated from other overburden sufficiently, they may remain usable.

Salable pediment gravels in the tract would be directly impacted under the Proposed Action due to mixing with other overburden following surface mining.

It is not known how common septarian nodules are in the tract, or if they are present in sufficient density to be economically viable for development. However, any nodules present at or near the surface in areas that would be surface mined would be at risk of burial during reclamation, and therefore may be less accessible for development. The nodules would not be removed and would therefore still be available as a resource, but their development would likely be less economically viable and their concentration in any area would likely be reduced.

ES.1.6.6 Hazardous Materials

Movement to and from the tract by service vehicles and coal haul trucks has the potential to increase the risk of fuel leakage or solid waste spills in the tract and adjacent transportation corridors. Accidental or inadvertent leakages from storage tanks would also be possible. Spills would have adverse effects on soil, water, vegetation, and wildlife resources. Potential impacts would be mitigated through standard operating procedures and through the creation of other plans and policies that relate to hazardous materials disposal, transport, and emergency response.

ES.1.6.7 Land Use and Access

Under the action alternatives, lands within the tract would be unavailable for grazing and recreation access during mining activities (life of mine). Agriculture, tourism, and recreation activities would also be prohibited or restricted during the life of the mine.

ES.1.6.8 Livestock Grazing

The action alternatives would result in the temporary loss of forage as a result of restricted access, spread of noxious weeds, and/or decreased palatability from construction dust and the temporary loss of water sources and range improvements, such as fences and cattle guards. In addition, the action alternatives would result in a loss of animal unit months within allotments over the life of the mine and reclamation period. Impacts to livestock could occur from mortality from vehicle collisions.

ES.1.6.9 Paleontology

The coal extraction process would result in the permanent removal of fossils from the Dakota Formation and from the Tropic Shale in the tract, resulting in a long-term decrease in the productivity of paleontological resources in the area. It is anticipated that a large number of significant fossils would be destroyed or removed from context, particularly in the Tropic Shale.

ES.1.6.10 Recreation

The action alternatives would have some adverse effects to recreation resources. Lands available for dispersed recreation would be lost from mining over the life of the mine. Some designated OHV routes would be temporarily removed over the life of the mine. In addition, there would be some indirect adverse effects from displacement of recreational users onto adjacent public lands, which would affect recreational experiences of users on those lands.

ES.1.6.11 Socioeconomics

Implementation of the action alternatives would result in an increase to the number of jobs, income, and additional taxes, fee, and payments. There would be an adverse impact to recreation, and adverse impacts to sense of community, social well-being, and tourism-related businesses. There would be impacts to population, housing, public health, safety, and environmental justice populations. The environmental justice impacts would result from noise and visual impacts to the town of Alton from mining activities under all action alternatives. Environmental justice impacts to the town of Alton would also occur from potential exceedances of the NAAQS for PM₁₀ under Alternative C.

ES.1.6.12 Soils

Implementation of the action alternatives would result in disturbance of soil resources through large-scale removal, stockpiling, and replacement of soils during mining. The disturbance (impact) caused by removing and replacing soils would be long term. Most of the impacts (caused by facilities, some roads, etc.) would be long-term impacts, persisting for the life of the mine.

ES.1.6.13 Transportation

The action alternatives would result in an increase in commuter traffic and coal truck traffic through Cedar City, Hatch, and Panguitch. However, levels of service are not expected to change under any of the action alternatives.

ES.1.6.14 Vegetation

Vegetation would be removed for surface mining, construction, and road relocation under the action alternatives. Lands would be susceptible to weed invasion. All disturbed acres would be reclaimed and revegetated after the life of the mine.

ES.1.6.15 Water Resources

Robinson Creek would be relocated, potentially affecting stream function, the associated riparian corridor, and water quality.

The action alternatives would result in the diversion of runoff to retention ponds, and an associated loss of surface water from evaporation and infiltration would occur. There would be small sediment loads into streams from dispersed facilities and road relocation. The loss of instream dilution could increase concentrations of total dissolved solids over the state water quality standard of 1,200 milligrams per liter. Reduced instream flows could result in less water available for irrigation downstream. There would be a small risk of surface-water contamination from accidental spills on 13.8 miles of stream that are within 100 feet of the reasonably foreseeable coal haul transportation route. There would also be a small increase in fine particles in streams associated with deposition of fugitive dust and coal dust.

Groundwater would be affected by the action alternatives through the use of groundwater for dust suppression, the removal of groundwater as moisture contained in coal, and the evaporation of groundwater exposed in pits.

There would be a direct removal and loss of function of wetlands and impacts to riparian areas due to surface mining and construction of dispersed facilities. Impact to wetlands and riparian areas would include the loss of habitat, loss of water filtration, and destabilization of streambanks.

Because probable AVFs occur only within the tract's no coal zone there would be no direct impacts to these water-related features from pits. Both floodplains and AVFs would be adversely affected by the construction of dispersed facilities. Approximately 60,565 linear feet of ephemeral and intermittent drainages are within the surface-mining areas of the coal zone associated with this alternative. Approximately 17,102 linear feet of perennial (including 96 linear feet of Kanab Creek), intermittent, and ephemeral drainages are within the underground mining area. Floodplain functions that could be lost include some degree of flood storage and attenuation, groundwater recharge, and erosion prevention. Although ground disturbance would occur in probable AVFs, the essential hydrologic functions of these areas would not be impacted and the physical capability of the land to be irrigated would not be changed.

ES.1.6.16 Wildlife: General

Direct and indirect impacts from the action alternatives would include habitat fragmentation, alteration, loss, and displacement due to surface disturbance, noise, ground vibration, night lighting, and increased risk of vehicle mortality associated with coal haul trucks. Potential mule deer habitat disturbance under the action alternatives would include up to approximately 29 acres of crucial summer habitat and approximately 920.1–1,803.3 acres of substantial value summer habitat. Potential elk habitat disturbance under the action alternatives would include approximately 920.1–1,807.5 acres of substantial value summer habitat and up to approximately 24.8 acres of year-long substantial value habitat. Raptors, migratory birds, and amphibians are also expected to experience potential habitat loss under the action alternatives.

ES.1.6.17 Wildlife: Special Status Species

Direct and indirect impacts common to all action alternatives would be the same as those described above for general wildlife. Special status species that are expected to experience habitat disturbance under the action alternatives include Utah prairie-dog, pygmy rabbit, kit fox (*Vulpes macrotis*), certain bat species, certain raptor species, certain migratory bird species, certain amphibian species, Bonneville cutthroat trout, and Greater Sage-Grouse. The action alternatives would disturb approximately 1,012–1,992 acres of occupied Greater Sage-Grouse habitat. Vegetation treatments and other actions described in the *Alton Coal Tract LBA Greater Sage-Grouse Mitigation Plan* (Appendix E) are designed to mitigate impacts to Greater Sage-Grouse habitat and would be applied to all action alternatives as design features. Vegetation treatments would be required to outpace surface disturbance caused by mining activities at an acreage ratio of 4 to 1.

ES.1.6.18 Potential Mitigation Measures

Potential mitigation measures are also proposed for individual resources in Chapter 4 of the EIS. Residual impacts that would persist following implementation of mitigation measures are also addressed for each resource in Chapter 4. The proposed mitigation measures that are applied as lease stipulations will be decided during the preparation of the ROD.

ES.1.7 Consultation and Coordination

Initial involvement with respect to BLM's receipt and review of ACD's LBA and details on the public notification, public scoping process, and the cooperating agencies are described above. Chapter 5, Consultation and Coordination, provides further detail on consultation and coordination for the proposed tract and preparation of this EIS.

ES.1.8 Next Steps

The FEIS is not a decision document. Rather, it is a document that will inform the BLM's final decision on whether to hold a competitive lease sale for the tract and, in the event that the BLM decides to offer the tract for competitive leasing, what lease stipulations would be attached to the lease. The EIS is being released to inform the public and interested parties of the potential impacts associated with implementing one of the action alternatives.

After a 30-day waiting period, a ROD will be prepared and signed. The ROD, which will be signed by the authorized officer, will document the decisions made regarding the Proposed Action and alternatives. The BLM decision will apply only to public lands.

Consultations,
Concurrence, &
Compliance



United States Department of the Interior



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APR 16 2019

In Reply Refer To:
3480 (UT-923)
UTU-81895

Memorandum

To: David Berry, Regional Director
Western Region, Office of Surface Mining Reclamation and Enforcement

From: Kent Hoffman
Deputy State Director, Lands and Minerals 

Subject: Resource Recovery and Protection Plan (R2P2), Federal Coal Lease UTU-81895,
Alton Coal Lease, Alton Mine, Alton Coal Development Company

As part of the Permit Application Package to add a new Federal coal lease UTU-81895 to the existing Alton Coal Mine Permit, the Bureau of Land Management (BLM) has reviewed the Alton R2P2 submitted on December 3, 2018. The R2P2 is required by the Mineral Leasing Act of 1920 as amended, to assure conservation of the federal coal resource, meet maximum economic recovery (MER), and to diligently develop the Federal coal lease. This memorandum documents the BLM's findings for the R2P2. BLM acknowledges that there are additional lease stipulations that the lessee must adhere to as part of mining Federal coal on this lease.

Alton has or will submit mining and reclamation plans (R2P2 being part of the submission) to the Utah Division of Oil, Gas and mining to add the Alton coal lease to its existing permit. The R2P2 is a life of mine document and includes the mining of the entire Federal coal lease UTU-81895. The lease will be produced using a multitude of mining methods including, surface, high wall (surface) and underground. Access to the lease will be from private lands currently in their permit. The following are finds by the BLM:

1. There is sufficient geological data which provide sufficient detail for mining planning.
2. The R2P2 provides for limiting the surface mining to 150 feet of overburden which meets the requirement of the Federal coal lease stipulations.

3. Provides for high wall mining to be conducted for reserves that cannot be mined by more traditional surface mining methods due to overburden limitations. This will be accomplished prior to moving to a new pit.
4. Provide for underground mining the deeper reserves.
5. Provides for meeting the requirement for MER using standard industry operating practices.

The BLM finds the submitted R2P2 in compliance with the Mineral Leasing Act of 1920 as amended, the lease terms and conditions requiring the R2P2, the regulations at 43 CFR 3482.1, and will achieve MER of the Federal coal. Therefore, the BLM recommends that the Secretary approve the R2P2 as part of the Federal Mine Plan

If you have any questions, please contact Mr. Stan Perkes of this office at 801-539-4036.

cc:

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1595 West North Temple, Suite 1210
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Salt Lake City, UT 84111-5801

Kanab Field Office

Color Country District Manger

**PROGRAMMATIC AGREEMENT
BETWEEN THE
U.S.D.I. BUREAU OF LAND MANAGEMENT, KANAB FIELD OFFICE;
U.S.D.I. OFFICE OF SURFACE MINING RECLAMATION AND ENFORCEMENT;
UTAH DIVISION OF OIL, GAS, AND MINING;
AND UTAH STATE HISTORIC PRESERVATION OFFICER
REGARDING
THE ALTON COAL TRACT LEASE BY APPLICATION PROJECT**

WHEREAS, the Bureau of Land Management, Kanab Field Office (BLM KFO) has received a Lease by Application (LBA) filed by Alton Coal Development, LLC to mine federal coal using primarily surface-mining methods near the town of Alton, Utah (hereafter "Project"); and

WHEREAS, the Bureau of Land Management is a federal land management agency responsible for receiving and processing applications for leasing of solid leasable minerals pursuant to 42 CFR 3425, Leasing on Application, and for establishing multiple uses of federal lands in providing for present and future generations as authorized by the Federal Land Policy and Management Act (FLPMA) of 1976 (43 USC 1701 et seq.); and

WHEREAS, BLM KFO has determined that issuing a lease to mine federal coal is an undertaking as defined in 36 CFR 800.16(y); and

WHEREAS, the Federal Office of Surface Mining Reclamation and Enforcement (OSM) is responsible for preparing and submitting a mining plan recommendation package upon issuance of a lease by BLM KFO to the Assistant Secretary of the Department of the Interior, Land and Minerals Management pursuant to the Surface Mining Control and Reclamation Act (SMCRA) of 1977 (30 USC 1201 et seq.); and

WHEREAS, OSM has determined that submission of a Federal Mine Plan package to the Assistant Secretary of the Department of the Interior, Land and Minerals Management is an undertaking as defined in 36 CFR 800.16(y); and

WHEREAS, the Department of the Army, U. S. Army Corps of Engineers has designated BLM to act on their behalf (Attachment A) for this Project as the lead Federal agency pursuant to 36 CFR 800.2(a)(2); and

WHEREAS, BLM KFO will be the lead Federal agency and shall coordinate overall actions required under this Agreement as specified herein until a lease to mine federal coal is issued after which OSM will be the lead Federal agency and shall coordinate overall actions required under this Agreement; and

WHEREAS, The Utah Division of Oil , Gas and Mining (UDOGM) is responsible for permitting of coal mining in the State of Utah under an approved program issued by the Office of Surface Mining Reclamation and Enforcement pursuant to Surface Mining Control and Reclamation Act of 1977 (30 USC 1201 et seq.) and is a consulting party to this agreement; and

WHEREAS, UDOGM, as an agency in the State of Utah that has a responsibility to comply with Utah Code Annotated §9-8-404, intends to employ this Agreement to address the applicable requirements for

actions resulting from this Agreement and has therefore been invited to be an Invited Signatory to this Agreement pursuant to 36 CFR 800.2(c)(3); and

WHEREAS, the Advisory Council on Historic Preservation (ACHP) has elected to not participate in the consultation process for this Project under 36 CFR 800.2(b) (1); and

WHEREAS, Federal agencies consult with the Utah State Historic Preservation Officer (SHPO) to ensure that historic properties are taken into consideration at all levels of project planning and development for undertakings that may affect historic properties pursuant to 36 CFR 800.2(c)(1); and

WHEREAS, BLM KFO and OSM, in consultation with the SHPO, have agreed to develop a Programmatic Agreement (hereafter "Agreement") for this complex project pursuant to 36 CFR 800.14(b) because the effect on historic properties cannot be fully determined prior to approval, and because the phased approach adopted by this agreement is a departure from the consultation process detailed in 36 CFR 800.1 et seq.; and

WHEREAS, BLM KFO and OSM are responsible for government-to-government consultation with federally recognized Indian Tribes for this undertaking and are the lead Federal agencies for all Native American consultation and coordination, and has formally invited the Indian Tribes and Native American organizations listed in Attachment B to participate in consultation, and continue to be consulted regarding the potential effects of the Project on historic properties pursuant to 36 CFR 800.2(c)(2); and

WHEREAS, the Office of the Governor, Public Lands Policy Coordination Office, Kane County, and the City of Panguitch have participated in consultation and have been invited to be Concurring Parties to this Agreement pursuant to 36 CFR 800.2(c)(3); and

WHEREAS, the Alton Coal Development, LLC has participated in consultation and has been invited to be a Concurring Party to this Agreement pursuant to 36 CFR 800.2(c)(4); and

WHEREAS, BLM KFO and OSM have formally invited those parties listed in Attachment C to participate in consultation for the Project pursuant to 36 CFR 800.2(c)(5); and

WHEREAS, the National Park Service, Bryce Canyon National Park has participated in consultation and has been invited to be a Concurring Party to this Agreement; and

WHEREAS, the Utah Statewide Archaeological Society (USAS) has participated in consultation and has been invited to be a Concurring Party to this Agreement; and

WHEREAS, Ms. Bobbi Bryant of Panguitch and Mr. Bruce McMahan of Panguitch have participated in consultation and have been invited to be Concurring Parties to this Agreement; and

WHEREAS, unless defined differently in this Agreement, all terms are used in accordance with 36 CFR 800.16; and

NOW, THEREFORE, the Consulting Parties agree that the Project shall be administered in accordance with the following stipulations:

STIPULATIONS

The BLM KFO and OSM will ensure that the following measures will be carried out:

1. The successful lessee (hereafter “lessee”) will fund all cultural resources work required under this Agreement, including: conducting Class I and III inventories, Reconnaissance Level Surveys, preparation of draft and final reports, preparation of Historic Properties Treatment Plans, analysis, monitoring, curation, and other mitigation. The lessee may use a cultural resource consultant (CRC), consistent with Stipulation 4 below, to complete the requirements listed in this stipulation.
2. BLM KFO and OSM will continue to consult with appropriate Indian Tribes regarding historic properties of religious and cultural significance in accordance with the National Historic Preservation Act (NHPA).
3. BLM KFO and OSM will ensure that all work undertaken to satisfy the terms of this Agreement meets the Secretary of the Interior’s Standards and Guidelines for Archaeological and Historic Preservation (48 FR 44716-77442, September 23, 1983) (hereafter “Secretary’s Standards”) and takes into consideration the ACHP’s Recommended Approach for Consultation on Recovery of Significant Information from Archaeological Sites, May 1999, Section 106 Guidance (at: <http://www.achp.gov/archguide/>), and Guidelines for Evaluating and Documenting Traditional Cultural Properties, *National Register Bulletin 38*, 1989, as incorporated by reference herein.
4. BLM KFO and OSM will ensure that all cultural resources fieldwork and reporting performed to satisfy this Agreement is carried out by or under the direct supervision of a person or persons meeting, at a minimum, the applicable professional qualifications standards set forth in the Secretary’s Standards. BLM KFO will also ensure that the terms of this agreement are carried out in accordance with any existing BLM guidelines for cultural resources (prehistoric or historic).
5. Identification of historic properties.
 - a. *Area of Potential Effects (APE)*. The APE for the Project will include the entire lease area and a buffer extending one-mile from the external boundaries of the lease area; the proposed haul route along US Highway 89, Utah Highway 20, Interstate Highway 15, and Utah Highway 56 and a buffer extending 500 feet on each side of the haul route highway centerlines; the Panguitch Historic District; the town of Alton, Utah; and the town of Hatch, Utah. The APE is depicted in Attachment D.
 - b. *Class I Cultural Resources Inventory*. A Class I Cultural Resources Inventory will be prepared that summarizes known cultural resources; including prehistoric and historic archaeological sites, traditional cultural properties, and historic architectural properties, inside the Project APE. Class I inventory data will minimally include archaeological and site files maintained by BLM KFO and by the Utah Division of State History, General Land Office maps, current United States Geological Survey maps, the National Register of Historic Places, and published historical documents concerning this area. The Class I cultural resources inventory report will include summaries of existing research on the effects of noise and vibration to historic properties.

- c. *Class III Cultural Resources Inventory.* A Class III Cultural Resources Inventory will be conducted in all portions of the APE where Project activities will result in new ground disturbance. Portions of the APE where Project activities will result in new ground disturbance will not be subject to Class III re-inventory if the area has been inventoried at Class III standards within ten years prior to the execution of this Agreement. Class III inventory will be conducted where necessary inside the APE by archaeologists walking 15-meter wide, parallel transects. All prehistoric and historic period archaeological sites identified will be recorded on site forms consistent with BLM standards.
- d. *Reconnaissance Level Survey.* A Reconnaissance Level Survey (RLS) to document and evaluate historic buildings will be conducted for all portions of the APE that have not been subject to survey for historic buildings within ten years prior to the execution of this Agreement. All necessary RLS will meet the Utah State Historic Preservation Office RLS Standard Operating Procedures in effect at the time of the survey.

6. Reporting

- a. Upon completion of Class III inventory, a Class III Cultural Resources Inventory Report will be prepared by the Lessee's Cultural Resource Consultant (CRC). This report will describe the cultural resources inventory effort as a whole, describe the inventory methods used, provide the results of both Class I and Class III inventories, and make recommendations for the National Register of Historic Places (NRHP) eligibility of all historic localities discovered or revisited.
- b. Upon completion of all RLS, a RLS Report will be prepared by the CRC. This report summarizes the results of the survey and will meet the reporting requirements detailed by the Utah State Historic Preservation Office RLS Standard Operating Procedures in effect at the time of the survey.
- c. Draft Class III Cultural Resources Inventory Reports and draft RLS Reports will be submitted to BLM KFO and OSM by the CRC. BLM KFO and OSM will have thirty calendar days to provide comments.
- d. BLM KFO and OSM will provide Tribes and Consulting Parties with an opportunity to review and comment on Class III Cultural Resources Inventory Reports and RLS Reports prior to agency submission to SHPO. Tribes and Consulting Parties will have thirty calendar days to provide comments to BLM KFO and OSM.
- e. Final Class III Cultural Resources Inventory Reports and RLS Reports that consider comments made by BLM KFO and OSM will be submitted by the CRC to BLM KFO and OSM to support agency decisions regarding National Register of Historic Places eligibility determinations.
- f. Upon completion of Phase I (testing) as prescribed by the Historic Properties Treatment Plan (HPTP), a Phase I Results report will be prepared. This report will describe the cultural resources test excavation effort as a whole, describe the testing methods used, provide the results of appropriate artifact analysis, and make revised recommendations

for the National Register of Historic Places (NRHP) eligibility of all historic localities tested.

- g. Draft Phase I Results reports will be submitted by the CRC to BLM KFO and OSM for distribution to Consulting Parties. Consulting Parties will have 30 calendar days from receipt of the draft Phase I Results report to provide comments to BLM KFO and OSM.
- h. Final Phase I Results reports that consider comments made by BLM KFO and OSM will be submitted by the CRC to BLM KFO and OSM to support agency decisions regarding National Register of Historic Places eligibility determinations and the need for Phase II work as prescribed by the HPTP.
- i. Upon completion of Phase II (data recovery) as prescribed by the HPTP, a Phase II Results report will be prepared by the CRC. This report will describe the cultural resources data recovery effort as a whole, describe the methods used, and provide the results of appropriate artifact analysis at all historic localities treated.
- j. Draft Phase II Results reports will be submitted by the CRC to BLM KFO and OSM for distribution to Consulting Parties. Consulting Parties will have 30 calendar days from receipt of the draft Phase II Results reports to provide comments to BLM KFO and OSM.
- k. Final Phase II Results reports that consider comments made by BLM KFO and OSM will be submitted by the CRC to BLM KFO and OSM.
- l. All cultural resources reports prepared for the Project will meet or exceed the Secretary's Standards.

7. National Register of Historic Places Eligibility Determinations

- a. BLM KFO and OSM are responsible for all National Register of Historic Places (NRHP) eligibility determinations.
- b. BLM KFO and OSM will evaluate the historic significance of sites within the APE pursuant to 36 CFR 800.4(c).
- c. BLM KFO and OSM will consult with SHPO regarding their NRHP eligibility determinations for sites within the APE pursuant to 36 CFR 800.4(c).

8. Historic Properties Treatment Plan

- a. Prior to commencement of mining activities, a Historic Properties Treatment Plan (HPTP) will be developed by the Lessee's Cultural Resource Consultant (CRC) and implemented that addresses the adverse effects of the Project to historic properties; including prehistoric and historic archaeological sites, historic architecture, and Traditional Cultural Properties (TCPs). The HPTP will identify the nature of the effects to which each historic property will be subjected and the proposed treatment to avoid, minimize, or mitigate adverse effects. If data recovery excavation is proposed as a mitigation measure, the HPTP may not be implemented until required state and federal

excavation permits have been issued by BLM and/or the Utah Public Lands Policy Coordination Office.

- b. Mitigation of adverse effects to prehistoric or historic archaeological historic properties will be conducted in phases. Phase I mitigation will include archaeological testing of NRHP eligible and unevaluated sites to determine the potential for each site to provide necessary information to address relevant local and regional research issues. Phase II mitigation will involve data recovery excavation at those sites identified during Phase I mitigation to contain data relevant to local and regional research issues and will occur at those sites selected for data recovery excavation prior to inclusion of the area surrounding a site in a Project Mine Plan submitted to OSM.
- c. A Native American Graves Protection and Repatriation Act (NAGPRA) Plan of Action will be developed by the CRC and included as part of the HPTP pursuant to 43 CFR 10.3
- d. Monitoring and inadvertent discoveries plans will be developed by the CRC and included as part of the HPTP. The HPTP will identify those areas that will be monitored. Cultural resources discovered during Project activities will be treated in accordance with the inadvertent discoveries plan.
- e. Consulting Parties will be invited to send representatives to a meeting with BLM KFO and OSM prior to submission of an initial draft HPTP. The purpose of this meeting will be to discuss historic property treatment options and to solicit comments from Consulting Parties regarding proposed treatment options.
- f. A draft HPTP will be submitted to BLM KFO and OSM for distribution to Consulting Parties. Consulting Parties will have 30 calendar days from receipt of the draft HPTP to provide comments to BLM KFO and OSM.
- g. A final HPTP that takes into consideration comments made by Consulting Parties will be submitted by the CRC to BLM KFO and OSM for distribution to Consulting Parties. Consulting Parties will have 14 calendar days from receipt of the final HPTP to provide comments to the BLM KFO and OSM. If a Consulting Party does not submit comments within 14 calendar days of receipt of the final HPTP, BLM KFO and OSM may assume that they have no objection to the adequacy of the plan.
- h. The final HPTP, revised as necessary, will be submitted by the BLM to SHPO for comment. SHPO will have 30 calendar days from receipt to provide comments to BLM KFO and OSM. If SHPO does not submit comments within 30 calendar days of receipt, BLM KFO and OSM may assume that SHPO has no objection to the adequacy of the plan.

9. Project Authorization

- a. OSM and BLM KFO may allow the lessee to seek authorization to proceed from UDOGM to begin operations in those portions of the lease area permitted by UDOGM that do not contain historic properties or TCPs subject to any provisions that may be contained in the HPTP.

- b. OSM and BLM KFO may allow the Lessee to seek authorization to proceed from UDOGM to begin construction in those portions of the APE that do contain historic properties once the agreed-upon fieldwork and treatment as specified in the HPTP is completed and approved by OSM and BLM KFO, a UDOGM mining permit is approved, and a Federal Mine Plan is approved. OSM and BLM KFO will have 7 days from receipt of adequate documentation that fieldwork and treatment is complete to comment. Complete results of the treatment effort will be submitted in a report to OSM and BLM KFO within 1 year of completion of field work. OSM and BLM KFO will have 90 days from receipt of this report to review and comment.
- c. Authorization for treatment and/or construction will only occur subsequent to the Lessee having been issued a Special Use Authorization and specific notices-to-proceed, along with any other necessary federal or state authorization.

10. Human remains.

- a. *Discovery Notification.* If human remains, or potential human remains, associated or unassociated funerary objects, or objects of cultural patrimony are discovered, work within 100 feet of the discovery will stop immediately. Verbal notification of the discovery will be made immediately to local law enforcement authorities, the appropriate land management agency official, and the Antiquities Section of the Utah Division of State History.
- b. *Assessment of Remains.* Human remains discovered on federally managed land will be treated consistent with all requirements of NAGPRA and its implementing regulations at 43 CFR 10. Human remains discovered on land administered by the State, School and Institutional Trust Lands Administration, or privately owned land will be treated consistent with all requirements of applicable Utah State Laws regarding the treatment of human remains including, Utah Code Annotated (UCA) 76-9-704, UCA 9-8-302, UCA 9-8-309, and UCA 9-9-401 et seq.
- c. *Resumption of Work.* Work in the immediate vicinity of the human remains may not resume until after the disposition of the human remains is determined. Permission to proceed will come from the OSM, after appropriate consultation with SHPO and appropriate Tribal representatives.

11. Review Meeting

- a. OSM and BLM KFO will invite Tribes and Consulting Parties to a meeting to review the implementation of this agreement every five years in concordance with DOGM's mining permit renewal schedule and will continue throughout the life of the Project or termination of this Agreement. Participants will be provided with an update on project schedule, status, and any ongoing relevant cultural resources monitoring or mitigation activities, discovery situations, or outstanding tasks to be completed under this Agreement or the HPTP.

12. Protection of confidential information.

- a. OSM and BLM KFO shall ensure that all confidential information, as defined in Section 9 of the ARPA, Section 304 of the NHPA, and Section 63-2-304(26) of the Government Records Access Management Act (GRAMA) and provisions in SMCRA is managed in such a way that historic properties, archaeological resources, traditional cultural values, and sacred objects are not compromised, to the fullest extent available under law.
- b. Each Consulting Party to this Agreement shall safeguard information about the nature and location of archaeological, historic, and traditional cultural properties, pursuant to Section 9 of the ARPA, Section 304 of the NHPA, and Section 63-2-304(26) of the GRAMA and SMCRA.

13. Dispute resolution.

- a. Should any Signatory or Concurring Party to this Agreement object, in writing, at any time to any actions proposed or the manner in which the terms of this Agreement are implemented, the OSM and BLM KFO shall consult with the objecting party to resolve the concern within 45 days. If the OSM and BLM KFO determine that the concern cannot be resolved, the OSM and BLM KFO shall:
 - i. Forward all documentation relevant to the dispute, including the OSM and BLM KFO's proposed resolution to the ACHP. The ACHP may provide the OSM and BLM KFO with its advice on the resolution of the concern within 30 days of receiving adequate documentation. Prior to reaching a final decision on the dispute, the OSM and BLM KFO shall prepare a written response that takes into account any timely advice or comments regarding the dispute from the ACHP or Consulting Parties to this Agreement, and provide them with a copy of this written response. The OSM and BLM KFO will then proceed according to its final decision.
 - ii. The OSM and BLM KFO's responsibility to carry out all other actions subject to the terms of this Agreement that are not subject of the dispute will remain unchanged.

14. Amendments.

- a. Any Consulting Party to this Agreement may request that it be amended, whereupon the Signatories of this Agreement will consult to consider such amendment. An amendment will become effective upon written agreement by all Signatories of this Agreement.

15. Termination.

- a. Any Signatory to this Agreement may terminate it by providing 30-calendar day notice, in writing, to the other Signatories, provided that the Signatories will consult during the period prior to termination to seek agreement on amendments or other actions that will avoid termination. In the event of termination, the OSM, BLM KFO and other Signatories will comply with 36 CFR 800.1 et seq. with regard to individual actions covered by this Agreement.

16. Term.

- a. This Agreement shall be effective when all Signatories have signed and will remain in effect for 20 years.
- b. The term of this Agreement may be extended by written agreement by all Signatories.

Execution of this Agreement by the Signatories and implementation of its terms evidence that the OSM and BLM KFO have taken into account the effects of this Project on Historic Properties and afforded the ACHP an opportunity to comment.

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SIGNATORIES

Bureau of Land Management, Kanab Field Office

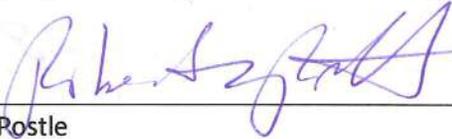


Harry Barber
Field Office Manager

6/24/13

Date

Office of Surface Mining Reclamation and Enforcement



Robert Postle
Division Chief, Program Support Division, OSM Western Region

7/8/13

Date

Utah State Historic Preservation Officer



P. Bradford Westwood
State Historic Preservation Officer

7/28/14

Date

INVITED SIGNATORIES

Utah Division of Oil, Gas, and Mining



John Baza
Director

9/5/13

Date

CONCURRING PARTIES

Office of the Governor, Public Lands Policy Coordination Office



Kathleen Clarke
Director

7/22/2013

Date

Garfield County



Leeland Pollock
Commissioner

1-28-14

Date

Kane County



Jim Matson
Commissioner

2-7-14

Date

City of Panguitch

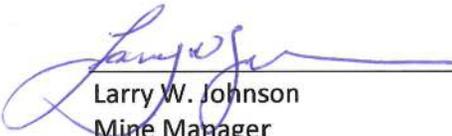


Eric Houston
Mayor

12/20/2013

Date

Alton Coal Development, LLC



Larry W. Johnson
Mine Manager

12/18/2013

Date

Ms. Bobbi Bryant

Bobbi Bryant

Date

Mr. Bruce McMahan

Bruce McMahan

Date

National Park Service, Bryce Canyon National Park

Sue G. Masica

9/17/14

Sue Masica

Date

Regional Director, Intermountain Region, National Park Service

Utah Statewide Archaeological Society (USAS)

Jeff Roberts

Date

President, Utah Statewide Archaeological Society, Central Utah Chapter

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ATTACHMENT A: DEPARTMENT OF THE ARMY, U. S. ARMY CORPS OF ENGINEERS LETTER



REPLY TO
ATTENTION OF

DEPARTMENT OF THE ARMY
U.S. ARMY ENGINEER DISTRICT, SACRAMENTO
CORPS OF ENGINEERS
1325 J STREET
SACRAMENTO CA 95814-2922

March 16, 2012

Regulatory Division SPK-2011-01248

Mr. Harry Barber, Field Office Manager
Bureau of Land Management,
Color Country District - Kanab Field Office
669 South Hwy 89A
Kanab, Utah 84741

Dear Mr. Barber:

This letter concerns the designation of lead Federal agency for the proposed Alton Coal Tract Lease by Application (3021 (UT-040)) project. The proposed Alton Coal Tract is located on or near Kanab and Lower Robinson Creeks, in part of Sections 7, 18, 19, 20, 30, and 31, Township 39 South, Range 5 West, and part of Sections 12, 13, 24, and 25, Township 39 South, Range 6 West, Salt Lake Meridian, approximate Latitude 37.4076 North, Longitude 112.4656 West, south of Alton, Kane County, Utah.

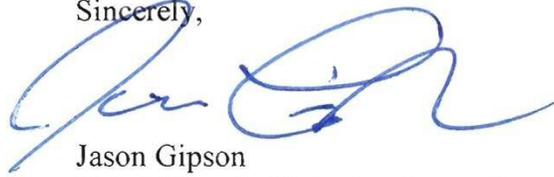
In response to your March 6, 2012 invitation to participate as a consulting party under Section 106 of the National Historic Preservation Act, and the possible future applicant request for Department of the Army (DA) authorization, for unavoidable discharges of dredged or fill material into waters of the United States at Alton Coal Tract, we hereby designate Bureau of Land Management (BLM) as the lead Federal agency to act on our behalf for purposes of compliance with the Section 7 of the Endangered Species Act (ESA) and Section 106 of the National Historic Preservation Act (NHPA).

When you initiate consultation under Section 7 of the ESA or Section 106 of the NHPA, please include a statement indicating that the Corps of Engineers has designated BLM as the lead Federal agency for Alton Coal Tract, along with a copy of this letter.

Please refer to identification number SPK-2011-01248 in any correspondence concerning this project. If you have any questions, please contact Karen Clementsen at 196 E Tabernacle St, Suite 30, St George, UT 84770-3474, email Karen.L.Clementsen@usace.army.mil, or telephone 435-986-1961. For more information regarding our program, please visit our website at www.spk.usace.army.mil/regulatory.html.

We appreciate your feedback. At your earliest convenience, please tell us how we are doing by completing the customer service survey on our website under Customer Service Survey.

Sincerely,

A handwritten signature in blue ink, appearing to read "Jason Gipson", with a stylized flourish at the end.

Jason Gipson
Chief, Nevada-Utah Regulatory Branch
Sacramento District

ATTACHMENT B: TRIBAL CONSULTATION SUMMARY

Although no American Indian reservations or lands owned in fee by Tribes are found within the Project APE, BLM KFO and OSM have initiated consultation with a number of American Indian Tribes whose traditional territories are within the Project area. BLM KFO and OSM have contacted those American Indian Tribes listed below to determine their interest in participating in this project as a Consulting Party and to provide each Tribe an opportunity to identify its concerns consistent with 36 CFR 800.0(c)(2).

Native American Tribe	Contact Person	Contact Method	Date of Contact
Cedar Band of Paiutes	Lora Tom, Chairwoman	Letter	March 6, 2012
Hopi Tribe*	Wayne Taylor, Chairman	Letter	March 6, 2012
Indian Peaks Band of Paiutes	Anthonia Tom, Chairwoman	Letter	March 6, 2012
Kaibab Band of Paiute Indians*	Manual Savala, Chairman	Letters	January 3, 2012 January 30, 2012 March 6, 2012
Kaibab Band of Paiute Indians	Manual Savala, Chairman	Council Meeting	February 16, 2012
Kanosh Band of Paiutes	Phil Pikyavit, Chairman	Letter	March 6, 2012
Koosharem Band of Paiutes	Elliot Yazzie, Chairman	Letter	March 6, 2012
Moapa Band of Paiutes	William Anderson, Chairman	Letter	March 6, 2012
Navajo Nation*	Joe Shirley, President	Letter	March 6, 2012
Navajo Nation – Bodaway/Gap Chapter	Billy Arizona	Letter	March 6, 2012
Navajo Nation – Cameron Chapter	Teddie Bedonie	Letter	March 6, 2012
Navajo Nation – Coalmine Canyon Chapter	Kenneth Nez	Letter	March 6, 2012
Navajo Nation – Kaibeto Chapter	Phillip J. Brown	Letter	March 6, 2012
Navajo Nation – Lechee Chapter	Irene Nez – Whitekiller	Letter	March 6, 2012
Navajo Nation – Navajo Mountain Chapter	Leo Manheimer	Letter	March 6, 2012
Navajo Nation – Olijato Chapter	James Black	Letter	March 6, 2012
Navajo Nation – Tuba City Chapter	Max D. Goldtooth, Sr.	Letter	March 6, 2012
Paiute Indian Tribe of Utah*	Jeanine Borchardt, Chairwoman	Letter	March 6, 2012

Native American Tribe	Contact Person	Contact Method	Date of Contact
Pueblo of Zuni	Arden P. Quetawki, Governor	Letter	March 6, 2012
Shivwits Band of Paiutes	Charlotte Lomeli, Chairwoman	Letter	March 6, 2012
Ute Tribe	Betsy Chapoose	Letter	March 6, 2012

(*) Indicates the Cultural Resource Director, Cultural Preservation Office, Historic Preservation Department or Environmental Director was also mailed a separate Consulting Parties Invitation Letter.

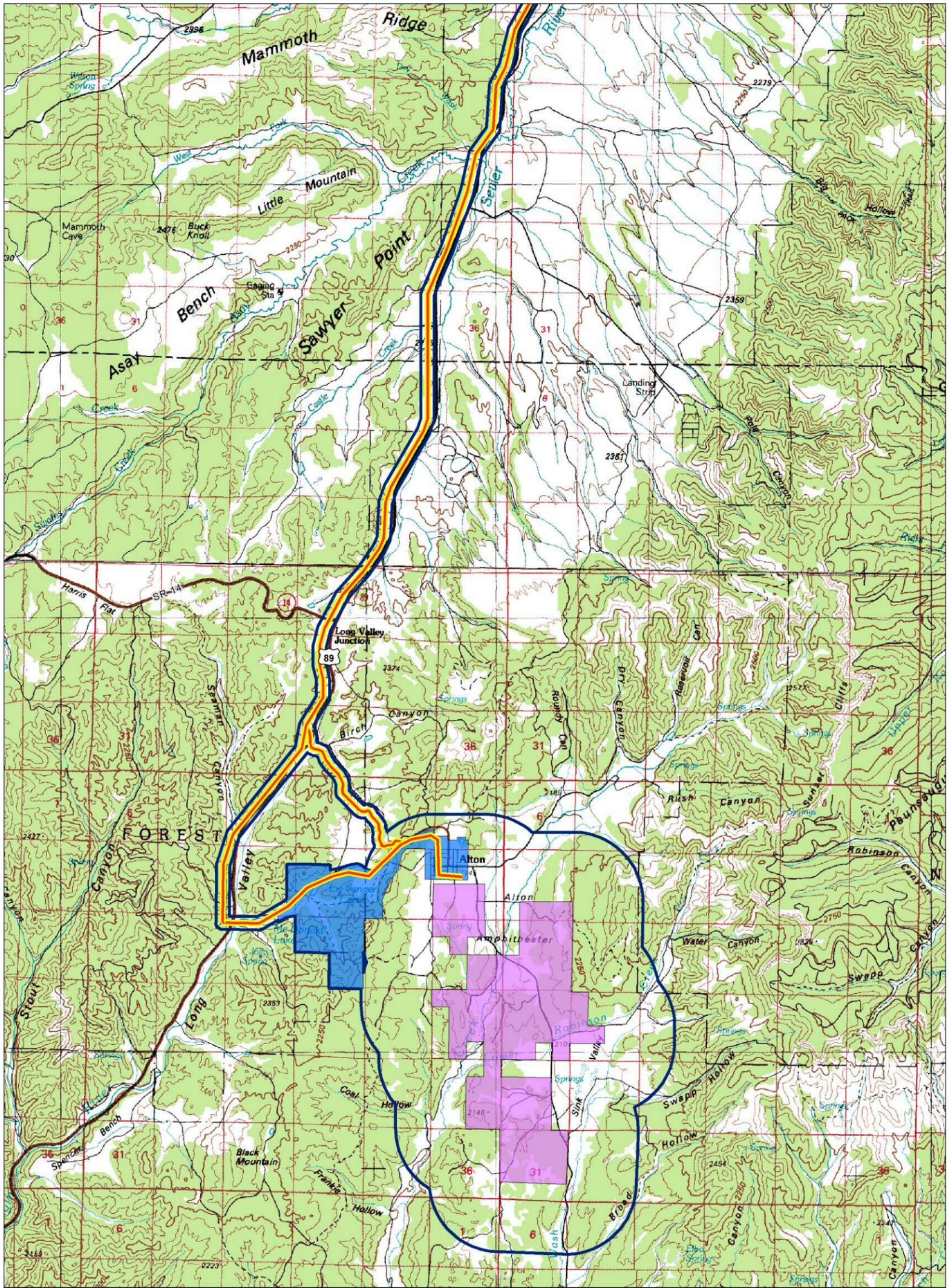
ATTACHMENT C: CONSULTING PARTIES SUMMARY

BLM KFO and OSM, in consultation with USHPO have identified a number of potentially interested parties and has invited each to participate as a Consulting Party for the Project consistent with 36 CFR 800.2(c)(3) et seq. BLM KFO and OSM have contacted those parties listed below to determine their interest in participating in this project as a Consulting Party.

Potentially Interested Party	Contact Person	Contact Method	Date of Contact
Alton Coal Development, LLC	Larry W. Johnson	Letter	March 6, 2012
Bryce Canyon National Park	Jeff Bradybaugh, Superintendent	Letter	March 6, 2012
Bryce Canyon National Park- Historic Architect	Kim Hyatt	Letter	March 6, 2012
Cedar City	Ron Chandler, City Manager	Letter	March 6, 2012
Cowboy Collectables by CZR	Randy and Becky Yard	Letter	March 6, 2012
Garfield County Commission	Leland Pollock, Commissioner	Letter	March 6, 2012
Hatch	Kevin Eldridge	Letter	March 6, 2012
Intermountain Regional Office National Park Service	Lysa Wegman-French	Letter	March 6, 2012
Iron County Commission	Dale Brinkerhoff, Commissioner	Letter	March 6, 2012
Kane County Commission	Jim Matson	Letter	March 6, 2012
Church of Jesus Christ of Latter-Day Saints, History Department	Ben Pykles	Letter	March 6, 2012
Mormon Pioneer National Heratige Area	Monte Bona, Director	Letter	March 6, 2012
National Trails Intermountain Region National Park Service	Michael Elliot	Letter	March 6, 2012
National Trust for Historic Preservation	Rebecca Schwendler	Letter	March 6, 2012
OCTA- Oregon-California Trails Association National	Glenn Harrison, President	Letter	March 6, 2012
Old Spanish Trail Association	Dennis Ditmanson, Association Manager	Letter	March 6, 2012
Panguitch	Allen Hendrie, City Manager	Letter	March 6, 2012
Panguitch Anglers Inn	Dan and Judy Stoner	Letter	March 6, 2012
Public Lands Policy Coordination Office	David Yoder, Archaeologist	Letter	March 6, 2012

Potentially Interested Party	Contact Person	Contact Method	Date of Contact
Sierra Club	National Office	Letter	March 6, 2012
Sierra Club- Utah Chapter	Mark Clemens, Chapter Manager	Letter	March 6, 2012
Southern Utah Wilderness Alliance	Stephen Bloch, Conservation Director/Attorney	Letter	March 6, 2012
United States Environmental Protection Agency	Larry Svoboda	Letter	March 6, 2012
UPAC- Utah Professional Archaeological Council	James R. Allison, President	Letter	March 6, 2012
URARA- Utah Rock Art Research Association	Troy Scotter	Letter	March 6, 2012
US Army Corps of Engineers	Karen Clementsen	Letter	March 6, 2012
USAS- Utah State Archaeological Society	Jeff Roberts, President	Letter	March 6, 2012
Concerned Citizen	Al Matheson	Letter	March 6, 2012
Concerned Citizen	Bobbi Bryant	Letter	March 6, 2012
Concerned Citizen	Boyd Smith	Letter	March 6, 2012
Concerned Citizen	Bruce & Lue McMahan	Letter	March 6, 2012
Concerned Citizen	Carla Tuke	Letter	March 6, 2012
Concerned Citizen	Claren Heaton	Letter	March 6, 2012
Concerned Citizen	Dakota Jones	Letter	March 6, 2012
Concerned Citizen	Dee Barden	Letter	March 6, 2012
Concerned Citizen	Harriet Priska	Letter	March 6, 2012
Concerned Citizen	Jake Schoppe	Letter	March 6, 2012
Concerned Citizen	John Veranth	Letter	March 6, 2012
Concerned Citizen	Pat Henrie	Letter	March 6, 2012
Concerned Citizen	Rand Padgett	Letter	March 6, 2012
Concerned Citizen	Rebecca Gregg	Letter	March 6, 2012
Concerned Citizen	T. Michael Smith	Letter	March 6, 2012
Concerned Citizen	Tara Kelly	Letter	March 6, 2012
Concerned Citizen	Tracy Armstrong	Letter	March 6, 2012
Concerned Citizen	Vince Solvate	Letter	March 6, 2012

ATTACHMENT D: AREA OF POTENTIAL EFFECTS (APE) MAP



- Area of Potential Effects
- Lease Area
- Haul Route
- Alton, Utah

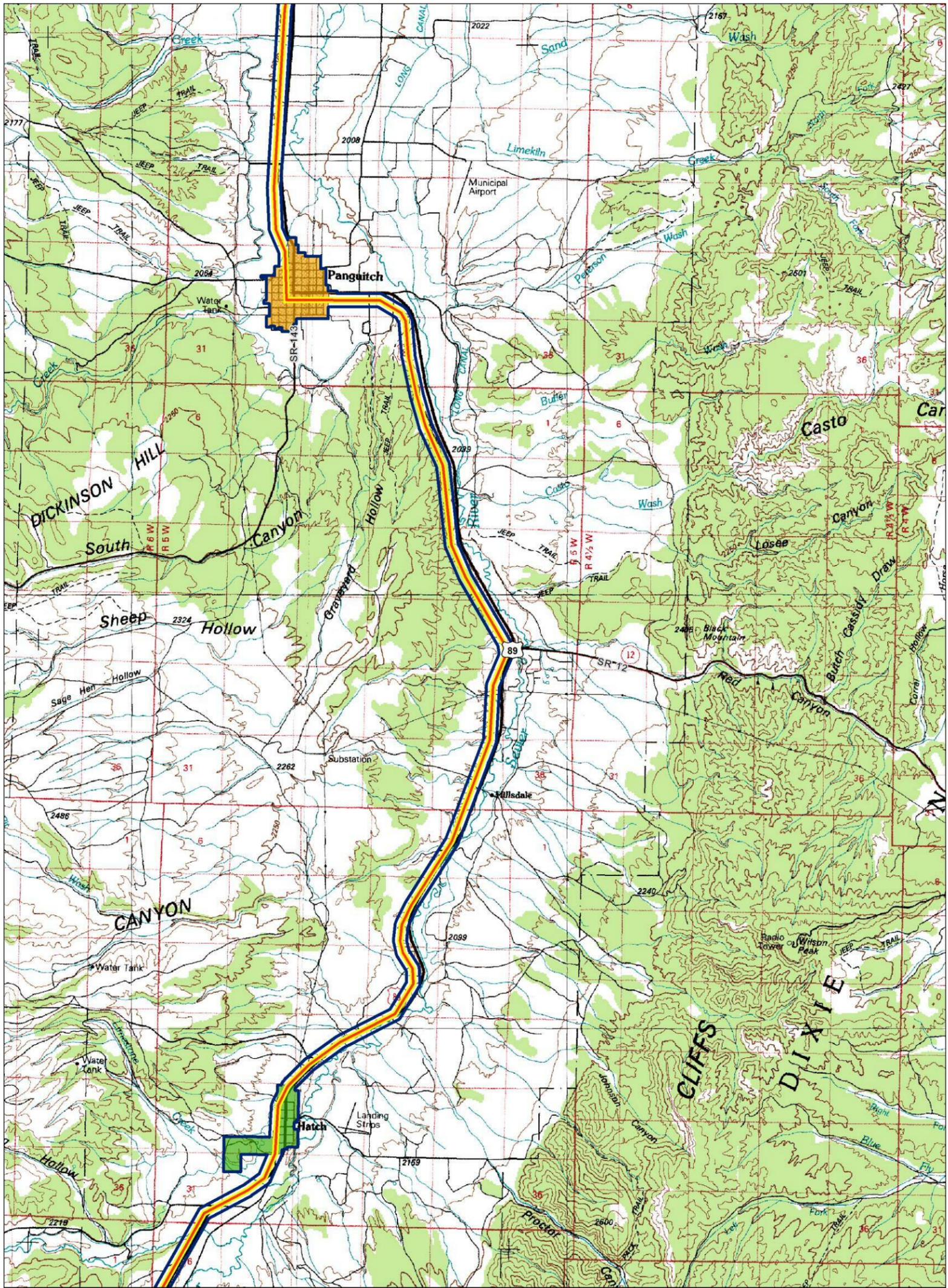


Basemap taken from the following Utah 30 x 60' USGS topographic quadrangles:
 Panguitch
 Kanab
 Projection: Transverse Mercator
 Coordinate System: UTM
 Datum: North American Datum of 1983 (NAD 83)

No warranty is made by the BLM for use of the data for purposes not intended by the BLM.
 This product may not meet BLM standards for accuracy and content. Different data sources and input scales may cause some misalignment of data layers.



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- Area of Potential Effects
- Haul Route
- Panguitch Historic District
- Hatch, Utah



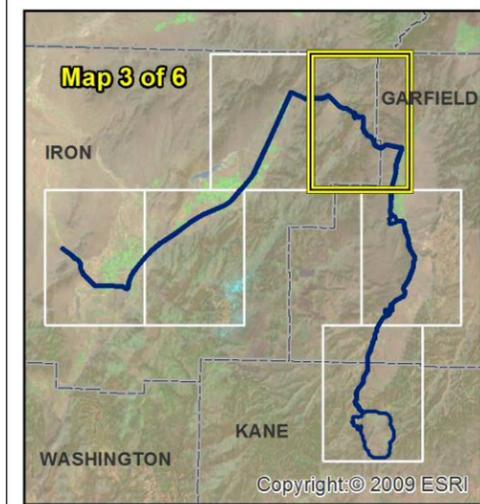
Basemap taken from the following Utah 30 x 60' USGS topographic quadrangles: Panguitch

Projection: Transverse Mercator
 Coordinate System: UTM
 Datum: North American Datum of 1983 (NAD 83)

No warranty is made by the BLM for use of the data for purposes not intended by the BLM.
 This product may not meet BLM standards for accuracy and content. Different data sources and input scales may cause some misalignment of data layers.



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- Area of Potential Effects
- Haul Route



Basemap taken from the following Utah 30 x 60' USGS topographic quadrangles:
 Panguitch
 Beaver

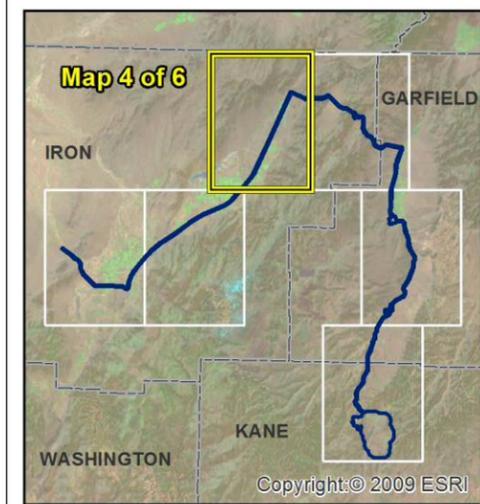
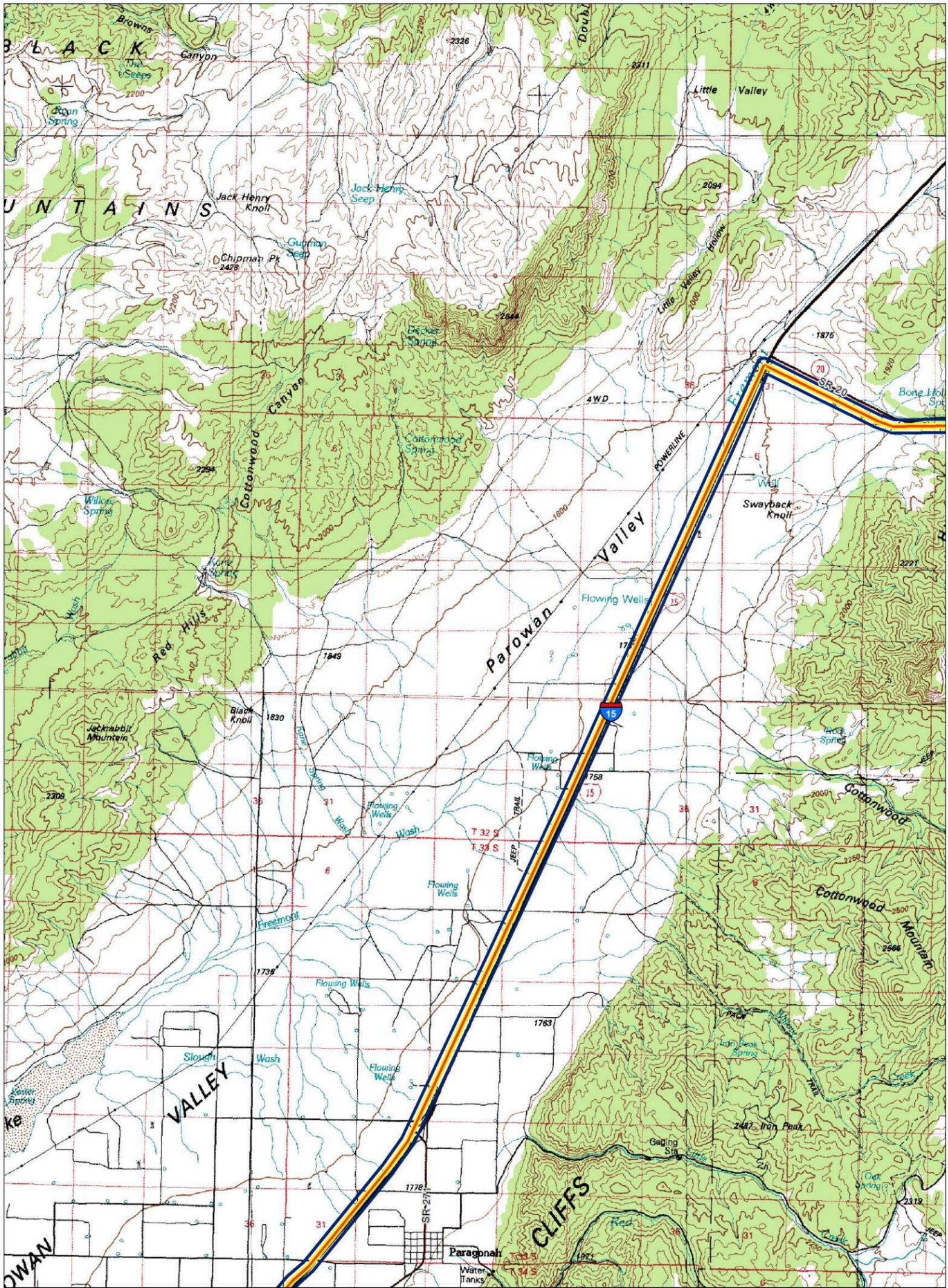
Projection: Transverse Mercator
 Coordinate System: UTM
 Datum: North American Datum of 1983 (NAD 83)

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- Area of Potential Effects
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Basemap taken from the following Utah 30 x 60' USGS topographic quadrangles:
 Panguitch
 Beaver

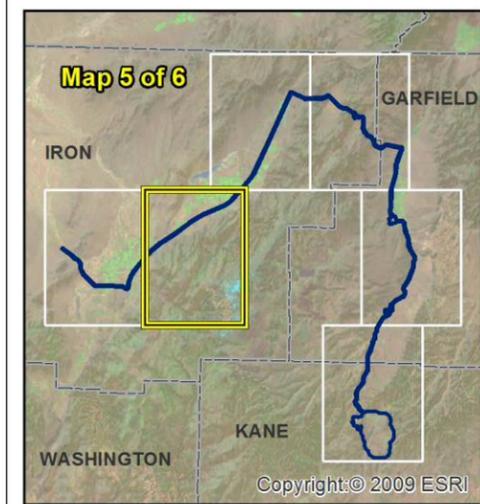
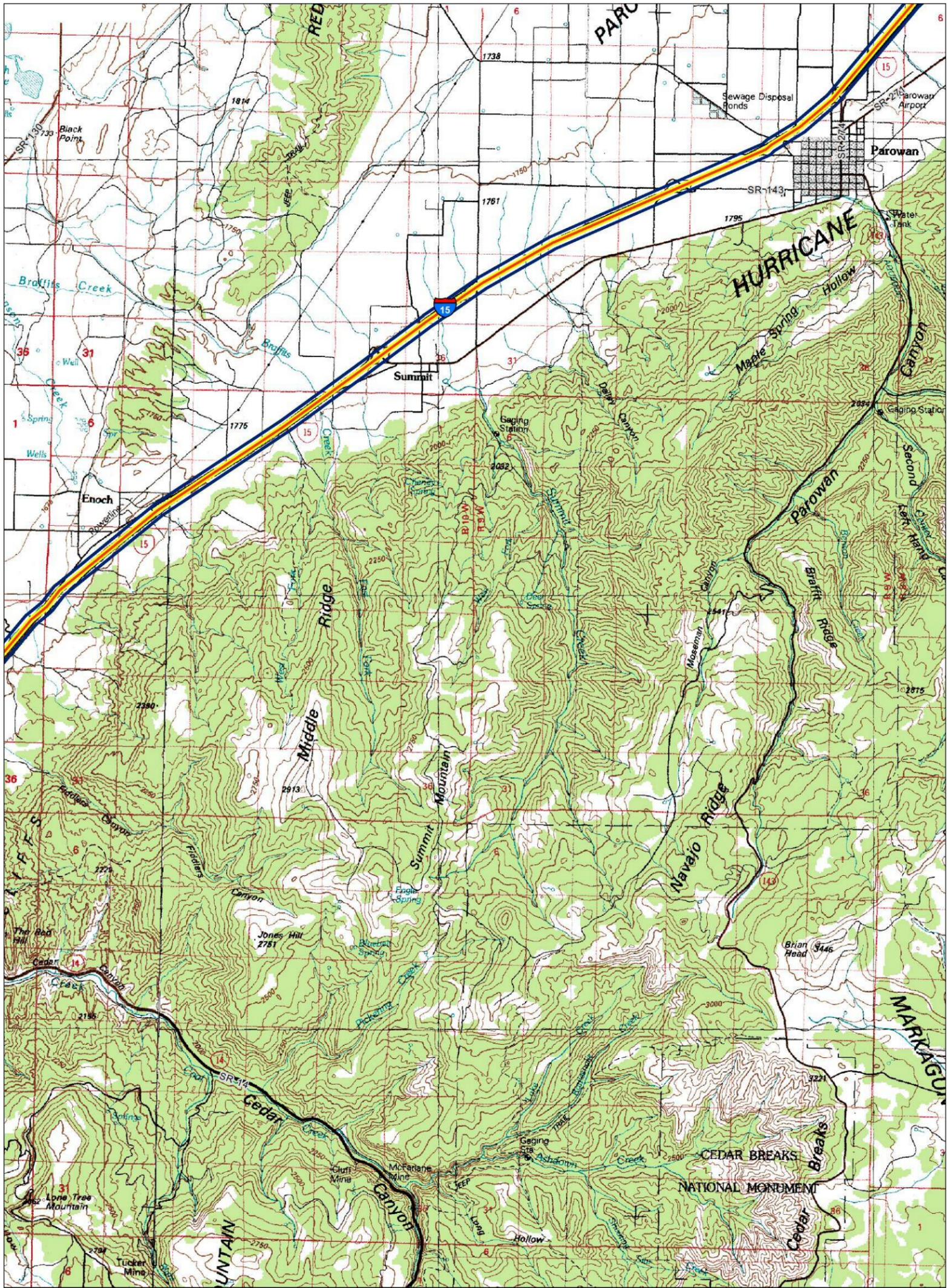
Projection: Transverse Mercator
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- Area of Potential Effects
- Haul Route



Basemap taken from the following Utah 30 x 60' USGS topographic quadrangles:
 Panguitch
 Cedar City

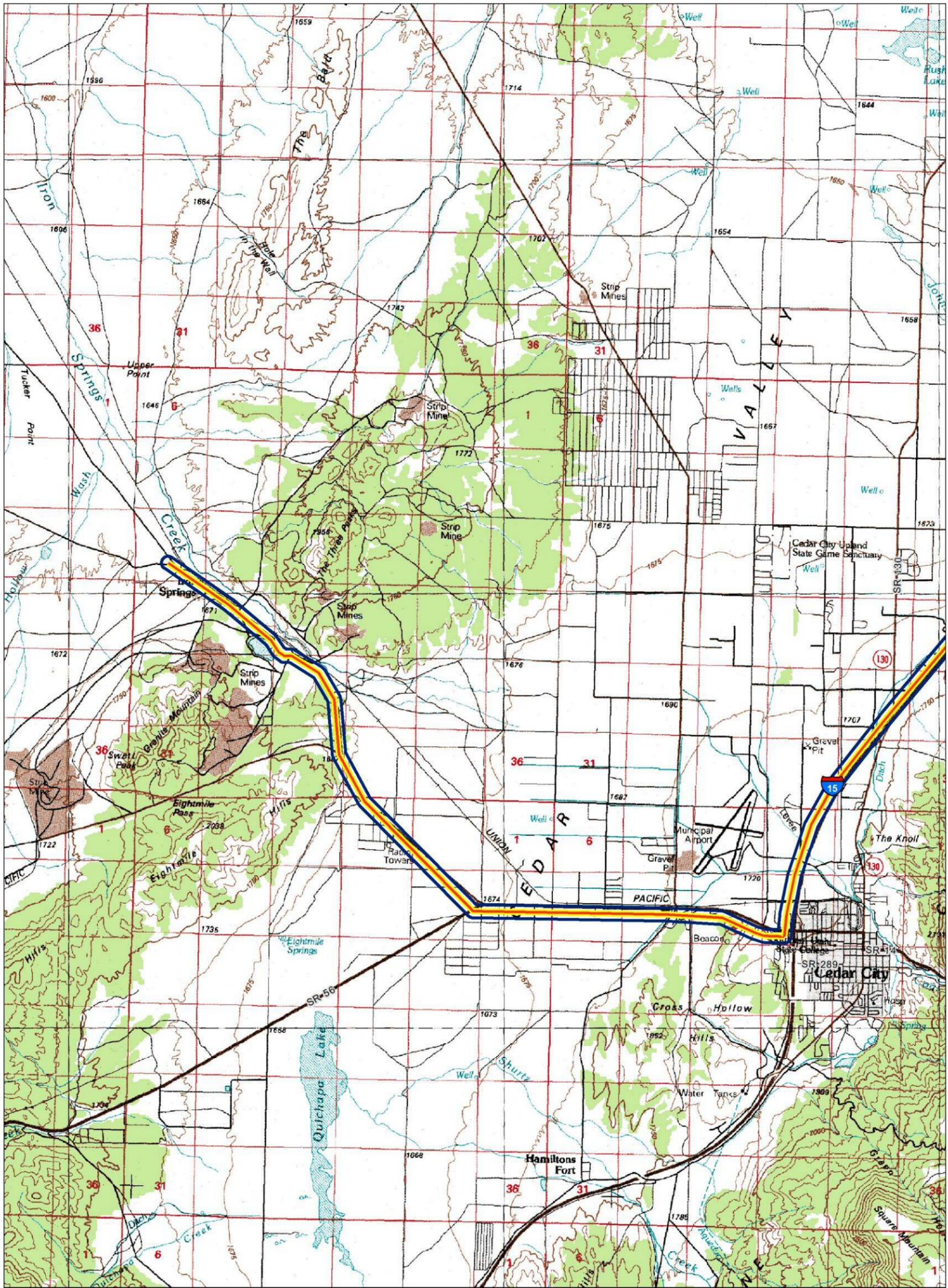
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- Area of Potential Effects
- Haul Route



Basemap taken from the following Utah 30 x 60' USGS topographic quadrangles:
Cedar City

Projection: Transverse Mercator
Coordinate System: UTM
Datum: North American Datum of 1983 (NAD 83)

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Nate Thomas, Deputy Preservation Officer BLM-Utah
James Holland, Geologist, Kanab Field Office
2/27/19

My review of the existing cultural resource information concludes that a total of 19 cultural resource investigations, including Class III surveys and mitigation activities have taken place at the Coal Hollow Area. Some of these Class III surveys and mitigation activities occurred within the expansion project that we have been discussing today. The following is a summary of my findings and a conclusion that no further identification, evaluation or treatment of historic properties is necessary at this location.

Class III Surveys and Eligible Cultural Resources Identified within the Expansion Project:

U05-MQ-1567p. This survey resulted in the identification and documentation of seven new eligible prehistoric sites (42KA6104, -6105, -6106, -6108, -6109 & 42KA6126) within the current Coal Hollow Mine area, and updating the recording on five eligible previously recorded prehistoric sites (42KA1313, 42KA2041, -2042, -2043, -2044, & 42KA2068). One additional new eligible prehistoric site (42KA6110) was documented immediately adjacent to the mine (Stavish 2006). The two eligible sites identified within the expansion project were **42KA6104 and 42KA6105**.

U08-MQ-0539. In 2008, a Class III survey was conducted to cover a portion of the current Coal Hollow Mine project area. One eligible previously recorded prehistoric site (42KA2060/42KA6505) was present within the expansion project and an updated recording was completed (Stavish 2008a).

Mitigation of adverse effects for Eligible Cultural Resources within the Expansion Project:

Mitigation of adverse effects has been carried out on 11 of the sites within the current Coal Hollow Mine project area through development of several archaeological treatment plans. The first eight sites (42KA2042, 42KA2044, 42KA2068, **42KA6104, -6105**, -6106, 6107 & 42KA6108) were mitigated in 2010 under two separate treatment plans developed by MOAC (Stavish 2007b & Stavish 2008b) and reported on in 2010 (Stavish 2010). This was followed by mitigation work on two sites (**42KA2060/42KA6505** & 42KA6093) in 2010 under a treatment plan developed by SWCA (Clark & Creer 2010) and reported on in 2011 (Clark 2011).

Conclusion

Multiple Class III Surveys have completely covered the proposed expansion area. Through these surveys, three historic properties were identified (42KA6104, 42KA6105, and 42KA2060/42KA6505). The adverse effects through mine expansion activities were mitigated and reported in 2010 and 2011. No other additional historic properties exist within the expansion area. Therefore, all procedures regarding the identification, evaluation, treatment and reporting for this expansion project have already occurred. No additional work is needed.



United States Department of the Interior

OFFICE OF SURFACE MINING
Reclamation and Enforcement
Western Region Office
1999 Broadway, Suite 3320
Denver, CO 80202-3050



CO-0038

MEMORANDUM

DATE: April 19, 2019

TO: Coal Hollow Mine Mining Plan File

FROM: Nicole Caveny, Environmental Protection Specialist 

RE: Endangered Species Act Section 7 Determination of Effects for Coal Hollow Mine Alton Coal Tract UTU-081895, Kane County, Utah

The Office of Surface Mining Reclamation and Enforcement (OSMRE) Western Region analyzed Surface Mining Control and Reclamation Act (SMCRA) action effects on threatened and endangered species, and their critical habitat for the Coal Hollow Mine Mining Plan Decision Document (MPDD). One of OSMRE's tasks in preparing the MPDD is to ensure agency compliance with the Endangered Species Act (ESA).

In November 2004, a lease by application (LBA) was filed by Alton Coal Development (ACD) to mine Federal coal, using primarily surface-mining methods, near the town of Alton, Utah. The Bureau of Land Management (BLM) granted ACD rights to mine the Alton Coal Tract UTU-081895 on February 19, 2019. Due to the fact that the lease encompasses a large area, ACD applied to the State of Utah Division of Gas and Mining to mine a small area named the LBA Block 1. LAB Block 1 consists of approximately 60.23 acres, of which 46.6 acres are split estate (private surface and Federal minerals, within UTU-081895), and 13.63 acres of private surface and private mineral. The 42.6 acres of the 2,108.71 acre lease UTU-081895 are located in T. 39 S., R. 5 W., Salt Lake Baseline and Meridian, section 19, N1/2SE1/4, SE1/4SE1/4, section 20, N1/2SW1/4. LBA Block 1 was incorporated into ACD's state permit (C/025/0005) on March 4, 2019. However, no coal mining is allowed to occur until the Assistant Secretary for Land and Minerals Management (ASLM) approves the action. The OSMRE is tasked with creating a MPDD, recommending approval, approval with conditions, or disapproval to the ASLM regarding coal mining where the land and/or minerals are Federally owned.

Consultation History

As a cooperating agency OSMRE took part in the preparation of the Bureau of Land Management's (BLM) Supplemental Environmental Impact Statement (SEIS) titled: *Alton Coal Tract Lease by Application Final Environmental Impact Statement, July 2018, DOI-BLM-UT-C040-2015-0011-EIS*. The SEIS performed an analysis on threatened and endangered species in

June of 2007. The results of BLM's findings for mining to occur within the entire 2,108.71 acres of UTU-081895 are included in attachment 1 of this document.

On October 5, 2017 the BLM Kanab Field Office consulted with the U.S. Fish and Wildlife Service (USFWS), Utah Field Office on the Utah prairie dog (*Cynomys parvidens*). On October 6, 2017, BLM received concurrence from the USFWS that mining activities from lease UTU-081895 is not likely to jeopardize the continued existence of the Utah prairie dog (attachment 2).

OSMRE's Species-Specific Analysis

On April 16, 2019, OSMRE queried the USFWS's Information, Planning, and Conservation (IPaC). The IPaC search yielded the following threatened species: Utah Prairie Dog, Mexican Spotted Owl (*Strix occidentalis lucida*), and Jones Cycladenia (*Cycladenia humilis var. jonesii*). Endangered species on the list included the Southwestern Willow Flycatcher (*Empidonax traillii extimus*). Experimental Population, Non-Essential species included the California condor (*Gymnogyps californianus*).

Description of UTU-081895

At roughly 6,900 feet above sea level, lease UTU-081895 consists of semiarid foothills within the Colorado Plateau Semidesert Province of south-central Utah. Lease UTU-081895 is also within a large depression named the Alton Amphitheater between the Paunsaugunt Plateau to the northeast, Long Valley (Virgin River) to the west, and approximately five miles north by northwest of the Grand Staircase-Escalante National Monument. Mean annual precipitation in the area is about 17 inches. The annual average temperature is about 46°F, with an annual average high of 61°F and an annual average low of 31°F (U.S. climate data 2019). Most of this precipitation is from snow during the winter months. Little precipitation occurs over summer months, during the mid- to late-summer timeframe thunderstorms can occur causing monsoons. Lease UTU-081895 topography consists of low-rising hills and benches made by the Knab Creek and by long diagonal washes that flow from the surrounding mountain ranges. Vegetation in Lease UTU-081895 is characterized by large open areas of bunchgrass, perennial grasses, and sagebrush with patches of dense stands of juniper and pinyon pine. To the northwest of the lease are Ponderosa pine (*Pinus ponderosa*), Gambel oak (*Quercus gambelii*) and various fir trees on the higher elevations of the mountains. Aside from two-track roads and fence lines, the vegetation cover is consistent across the lease.

Species-Specific Information and Analysis

Utah prairie dog (*Cynomys parvidens*)

Species Description

One of three species of white-tailed prairie dogs in the United States, the Utah prairie dog is typically found in arid grasslands (SSU 2009). However, they can also make their homes in desert rangelands, sagebrush steppes and edges of Ponderosa pine stands (SSU 2009). The Utah prairie dog will also thrive in certain agricultural fields and tolerate urban areas (SSU 2019).

Highly social, Utah prairie dogs live in large colonies or "towns" consisting of prairie dog families or "clans" that can span many acres. Mainly eating grasses however, preferring alfalfa, the Utah prairie dogs will also eat insects and other plants depending on what is available over the seasons (SSU 2009). This species is very susceptible to the sylvatic plague (*Yersinia pestis*) a bacterium, introduced in 1899, that will decrease colony sizes and in severe cases cause colonies to collapse (SSU 2019).

Analysis

The BLM Kanab Field Office analyzed potential impact to the Utah prairie dog from mining coal at the Coal Hollow Mine. Utah prairie dog habitat spans roughly 47 miles next to coal haul transport routes including the following roads: US 89, I-15, SR-20 and SR-56. While there is a 350 foot buffer between Utah prairie dog habitat and the roads, representing about 673 acres, it is estimated that 7.2 percent of the population live within that buffer. The majority of traffic on the roads consists of cars, trailers, trucks, commercial trucks, and tractor/trailer transports. Coal hauling trucks represent a four percent increase of average daily traffic on US-89 and a two percent increase on SR-56. The BLM concluded that traffic increase related to coal activities are minor and effects to the Utah prairie dog due to coal haulage traffic including noise and collisions causing injury or death would be negligible and very difficult to distinguish from the daily road traffic. As mentioned above, the BLM consulted with the USFWS and received concurrence that coal related activities are not likely to jeopardize the continued existence of the Utah prairie dog.

On April 9, 2019, OSMRE held a phone conversation with the USFWS Utah Field Office to determine whether or not further consultation was required. OSMRE explained that conditions at the mine are not changing with the action of mining the LBA Block 1 and that the analysis the BLM conducted would not change. OSMRE reviewed the October 5, 2017, consultation with the USFWS. OSMRE also explained that, per Air Permit DAQE-AN140470006-18, the Coal Hollow Mine cannot exceed removal of 2 million tons of coal a year, a number that has not changed with this action. Since the mine cannot physically remove more coal, the traffic analysis BLM conducted remains relevant for this action. It was concluded that due to the fact mining conditions will not change, no further consultation is currently required.

Mexican Spotted Owl (*Strix occidentalis lucida*)

Species Description

These owls require areas with a water source, either in old-growth forests with a high tree density of uneven aged trees with at least 40 percent canopy cover, or the caves and ledges of cliffs and narrow canyons with mixed conifer communities (USFWS 2018a). The owls forage for small mammals, birds, bats, reptiles and arthropods in many different forest conditions, cliff faces, canyon bottoms, riparian areas and canyon rims (USFWS 2018a). Nesting conditions are more specific and require trees that are at least 12 inches in diameter at the basal area with uneven aged tree stands, multi-storied canopy with moderate to high canopy closure, snags, and fallen trees on the forest floor (USFWS 2018a). Paired owls defend a nesting territory from March through August (USFWS 2018a). In early May, one to three eggs hatch and the owlets fledge at four to five weeks (USFWS 2018a). However, the young are still cared for by the parents (USFWS 2018a). If a clutch fails, renesting may occur (USFWS 2018a). Mexican spotted owls are sporadic breeders and may not nest every year (USFWS 2018a). Juvenile owls

are wide spread using many different habitats from high elevation forests to riparian areas surrounded by desert grasslands (USFWS 2018a).

Analysis

Two potential habitats for the Mexican spotted owl have been considered at the Alton Coal Tract. After further review, the habitat received poor ratings and is currently not considered suitable habitat for the owl. More information about this can be found in Appendix J of the *Alton Coal Tract Lease by Application Final Environmental Impact Statement*. Additionally, required habitat and known apparent distributional information indicate that it is not likely that the proposed mining activities will impact the Mexican spotted owl. Therefore it is very unlikely this species exists on the tract.

Jones Cycladenia (*Cycladenia humilis* var. *jonesii*)

Species Description

A long-lived herbaceous perennial forb requiring elevations ranging from 4,300 to 6,000 feet in arid desert scrub and juniper plant communities, in gypsiferous soils of the Chinle, Cutler, and Summerville formations requiring 6 to 9 inches of annual precipitation (Tilly et al. 2010). A white waxy coating covers its hairless stems and its leaves are somewhat succulent, bright-green and rounded (Reeves 2010). Between the months of mid-April and early June, pink to purple woolly-haired flowers, shaped like trumpets, bloom (Reeves 2010). The fruits are brown and when dry opens only on one side to release its seeds (Reeves 2010). The Jones cycladenia does not produce many seeds; it primarily spreads by shoots from its rhizomes (Reeves 2010).

Analysis

The Alton Coal lease tract is above 6,000 feet and does not contain gypsiferous soils of the Chinle, Cutler, and Summerville formations. Therefore, this species should not occur on the tract.

Southwestern Willow Flycatcher (*Empidonax traillii extimus*)

Species Description

The Southwestern willow flycatcher breeds by mid-May (USFWS 2014). It builds small open cup nests, most about 6.5 to 23 feet above ground in a fork or on a horizontal branch of a medium-sized bush or small tree with dense vegetation (cottonwood/willow, boxelder, buttonbush, and tamarisk) above and around the nest (USFWS 2014). Eggs are laid in late May and early June (average clutch size is 2 to 5 eggs) and fledging occurs in early to mid-July (USFWS 2014). If nests fail the birds will likely try a second time (USFWS 2014). In August or September, the southwestern willow flycatcher migrates to Mexico, Central America, and possibly northern South America to winter (USFWS 2014). Habitat patches must be at least 0.25 acres in size and at least 30 feet wide (USFWS, 2014). Dense riparian habitat is also required for insect foraging (USFWS 2014). The Southwestern willow flycatcher hunts insects while flying, by snatching from leaves, and from the ground when the opportunity presents itself (USFWS 2014).

Analysis

Three riparian areas located on the Alton Coal Tract were surveyed to determine if the proper plant species, plant height and cover exist. The areas did not contain the diversity, size and coverage of plant species that the flycatchers would need for habitation. More information about this can be found in Appendix J of the *Alton Coal Tract Lease by Application Final Environmental Impact Statement*. Additionally, thick willow riparian habitats are not common in the project area and Southwestern willow flycatchers have not been observed in the project area. Therefore it is very unlikely this species exists on the tract.

California Condor (*Gymnogyps californianus*)

Species Description

As North America's largest land bird, the California condor once used habitat across most of North America (USFWS 2018b). Currently the condor is typically found in southern California, Southern Utah and Northern Arizona (USFWS 2018b). Large tracts of remote land areas are required for all life events (Cornell University 2017). Roost sites need to be where the condor can easily launch into flight and can include large trees, snags, rocky outcrops and cliffs (USFWS 2018b). The condor is a carrion eater preferring large mammals such as deer, whales, seals and cattle (USFWS 2018b). These birds eat in hierarchal groups (USFWS 2018b). A meal could consist of three to four pounds of carrion without the need to eat again for many days (USFWS 2018b). California condors are a long lived bird, reaching mating maturity at 5 to 7 years (USFWS 2018b). Nest sites can vary from scrubby chaparral to forested mountains up to roughly 6,000 feet in elevation (Cornell University 2017). Nests are generally on the bare ground typically located in caves of the face of steep cliffs, but if a tree has a large enough cavity, it could be a potential nesting site (USFWS 2018b). Gravel, leaves, bark and bones may be used as nesting materials (Cornell University 2017). Incubation takes roughly 56 days (USFWS 2018b). If an egg is lost, renesting will occur if early enough in the season (USFWS 2018b). Chicks can fly at six months of age; however the parents will continue to raise their young for one to two year (USFWS 2018b). Condors will fly many miles for food which may not be near the nesting site (USFWS 2018b). Reintroduction of this species is occurring in California, Arizona, and Utah (Cornell University 2017) .

Analysis

The condor population in Kane County, Utah is designated as an experimental, non-essential with no critical habitat. Additionally, it is estimated that this species is not likely to occur in Alton Lease Coal Tract or coal haul transportation route.

Determinations of Effect

Based on the above information, OSMRE has determined that the surface effects of coal mining operations associated with Coal Hollow Mine, regulated under SMCRA, will have the following effects:

Utah prairie dog – the Coal Hollow Mine is “**not likely to adversely affect**” this listed species due to the low increase of coal mining related traffic near a known colony along US 89, I-15, SR-20 and SR-56. The USFWS concurred with this determination on October 6, 2017, and on

April 9, 2019, agreed with OSMRE that no further consultation is required due to the non-changing circumstances.

Mexican spotted owl - the Coal Hollow Mine would have “**no effect**” on this listed species due to the lack of suitable habitat and lack of evidence of its existence in the Alton Coal Tract.

Jones cycladenia - the Coal Hollow Mine would have “**no effect**” on this listed species due to the lack of suitable habitat and lack of evidence of its existence in Alton Coal Tract.

Southwestern willow flycatcher - the Coal Hollow Mine would have “**no effect**” on this listed species due to the lack of suitable habitat and lack of evidence of its existence in the Alton Coal Tract.

California condor - the Coal Hollow Mine would have “**no effect**” on this listed species due to the lack of suitable habitat and lack of evidence of its existence in Alton Coal Lease Tract.

Attachments:

SEIS Appendix J

FWS concurrence of effects to Utah prairie dog

Reference:

- Cornell University. 2017. California Condor. The Cornell Lab of Ornithology. Available at https://www.allaboutbirds.org/guide/California_Condor/id# (accessed April 10, 2019).
- Reeves, Kelly. 2010. Species fact sheet Apocynaceae (Dogbane family) Jones cycladenia (*Cycladenia humilis* var. *jonesii*). Southern Colorado Plateau Network Inventory and Monitory Program. Available at <https://www.nps.gov/articles/jones-cycladenia.htm> (accessed April 12, 2019).
- Southern Utah University. 2019. The Utah Prairie Dog. Available at <https://www.suu.edu/updog/prairie-dog.html>. (accessed April 12, 2019).
- Tilley, D., St. John, L. and D. Ogle. 2010. Plant guide for Jones' waxy dogbane (*Cycladenia humilis* var. *jonesii*). USDA-Natural Resources Conservation Service, Idaho Plant Materials Center. Aberdeen, ID. Available at https://plants.usda.gov/plantguide/pdf/pg_cyhuj.pdf (accessed April 9, 2019)
- U.S. climate data. 2019. Climate Alton – Utah. Available at <https://www.usclimatedata.com/climate/alton/Utah/united-states/usut0004> (accessed April 10, 2019).
- U.S. Fish and Wildlife Service. 2018a. Mexican Spotted Owl (*Strix occidentalis lucida*). Available at <https://ecos.fws.gov/ecp0/profile/speciesProfile.action?spcode=B074#lifeHistory> (accessed April 9, 2019).
- U.S. Fish and Wildlife Service. 2018b. California Condor Recovery Program. Available at <https://www.fws.gov/cno/es/CalCondor/Condor.cfm> (accessed April 10, 2019)
- U.S. Fish and Wildlife Service. 2014. Southwestern Willow Flycatcher (*Empidonax traillii extimus*). Nevada Fish and Wildlife Office Pacific Southwest Regaion. Available at https://www.fws.gov/Nevada/protected_species/birds/species/swwf.html (accessed April 11, 2019).



United States Department of the Interior



BUREAU OF LAND MANAGEMENT
Color Country District - Kanab Field Office
669 S. Highway 89 A
Kanab, UT 84741
435-644-1200

IN REPLY REFER TO: 6840, UTU081894
LLUTC004000

October 5, 2017

U.S. Fish & Wildlife Service, Utah Field Office
2369 West Orton Circle, Suite 50
West Valley City, UT 84119

Mr. Larry Crist:



TAFIS # 18-I-0017

Concur No Effect
Species:

Concur Not Likely to Adversely Affect
Species: UFD

No Comment

Paul D. Alato
for U.S. FWS Utah Field Supervisor

Date 10-6-17

The BLM initiated consultation with the USFWS on the Alton Coal Lease by Application (LBA) Environmental Impact Statement (EIS) in 2007 as the scoping period began. Consultation and coordination has been ongoing throughout the NEPA process by email correspondence and meetings (both in person and teleconference). The USFWS has reviewed and provided comments on the administrative reviews of the Draft EIS, Supplemental DEIS (SDEIS), and the Final EIS (FEIS) as well as during the public comment periods for the DEIS and SDEIS. The BLM is now ready to release the FEIS and conclude the consultation process.

In the U. S. Fish and Wildlife Service Biological Opinion for the Bureau of Land Management (BLM) Kanab Field Office Resource Management Plan (KRMP) dated September 29, 2008, a Not Likely to jeopardize the continued existence of the Utah prairie dog (*Cynomys parvidens*/UTPD) was assigned in regard to the KRMP. This determination was given because:

1. The applicant committed resource protection measures will be incorporated into site specific projects designed under the BLM Resource Management Plan.
2. All site specific projects designed under the proposed BLM Resource Management Plan would be subject to consultation requirements under Section 7 of the Endangered Species Act.

The BLM has analyzed the potential for impacts to the UTPD in regards to the Alton Coal Lease by Application with the Alton Coal Tract Lease by Application Environmental Impact Statement (EIS). The project is located in the Paunsaugunt recovery area for the UTPD. No colonies (occupied, unoccupied, historical nor inactive) of UTPDs occur within the application project boundary. However, the proposed transportation route runs adjacent to habitat within the recovery area.

There is limited information on road-related impacts to UTPD and other small mammals within the recovery area. Impacts associated with increased vehicle traffic likely include greater loss of individuals from vehicle collisions and from increased predator abundance along roadways, a likely result of increased traffic-related roadkills. It is not known if traffic noise interferes with predator warning calls or with other communication

in UTPD colonies. Analysis completed for the EIS indicates that UTPD habitat occurs adjacent to 47 miles (43%) of the reasonably foreseeable coal haul transportation route (UDWR GIS data updated May 2007) in Kane, Garfield and Iron Counties. Existing roads included in the reasonably foreseeable coal haul transportation route that are within or near known UTPD populations include portions of US 89 through Hatch and Panguitch, I-15 from the junction of SR-20, and SR-56 through Cedar City. The U.S. Fish and Wildlife Service has established a 350-foot buffer as the range within which normal behavior of individual UTPDs may be disrupted by noise or human presence. Known UTPD colonies occur within 350 feet of the reasonably foreseeable coal haul transportation route on 673 acres. These colonies are estimated to contain approximately 433 UTPDs (336 within the West Desert Recovery Unit and 97 within the Paunsaugunt Recovery Unit). This represents 7.2% of the total known UTPD population in the West Desert Recovery Unit and 3.9% of the total known UTPD population in the Paunsaugunt Recovery Unit (Crowther 2013). The 433 UTPDs within 350 feet of the reasonably foreseeable coal haul transportation route represent 3.4% of the total known UTPDs in the State of Utah.

Normally these transportation routes experience high volumes of traffic with spiked increases during the spring, summer and fall tourist seasons. Traffic includes all manner of vehicles, including cars, trailers, trucks and all manner of tractor/ trailer transports. The additional coal haul truck traffic along the reasonably foreseeable coal haul transportation route on US-89 through Hatch and Panguitch under the action alternatives would represent an approximately 4% increase in average daily traffic. The additional coal haul truck traffic along the reasonably foreseeable coal haul transportation route on SR-56 through Cedar City under the action alternatives would represent an approximately 2% increase in average daily traffic. The potential for impacts to UTPD are likely negligible with such a limited increase in traffic. Accounting for UTPD mortality caused by potential mine-related traffic along the existing roads within the reasonably foreseeable coal haul transportation route would be near impossible to distinguish from other traffic on these roads.

With this letter, the BLM Kanab Field Office is requesting concurrence (NLAA) from the U.S. Fish and Wildlife Services with regard to the UTPD for the Alton Coal Tract Lease by Application EIS.

Sincerely,



for Harry Barber
Kanab Field Office Manager

**J.1. Alton Coal Tract LBA EIS Report of Reconnaissance Surveys:
Vegetation And Special Status Species, Wildlife And Special Status
Species, Sandloving Penstemon, Wet Meadows**

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ATTACHMENTS

Attachment 1: Relevé Plot Data

Attachment 2: Vegetation Associations and Species List

PRELIMINARY THREATENED AND ENDANGERED AND SENSITIVE SPECIES ANALYSIS

On June 7, 2007, personnel from the Bureau of Land Management (BLM) Kanab Field Office met with personnel from SWCA Environmental Consultants (SWCA's) Salt Lake City office about the Alton Coal Tract LBA EIS. At this meeting, the BLM requested that SWCA compile a list of threatened and endangered and sensitive (TES) plant and animal species that may be subject to impacts associated with the potential development of the Alton Coal Tract.

SWCA conducted a three-step process to determine which species may be impacted:

Step 1. Development of a comprehensive species list, including all potentially present species in the affected counties. SWCA personnel compiled a comprehensive list of all potentially impacted TES plant and animal species from the sources listed below. For plants, the comprehensive list was limited to Kane County because ground-disturbing activities would be limited to this county and impacts would be expected to be limited to this area. Impacts to plants would not occur along the proposed transportation corridor. For animals, the comprehensive list comprised Kane, Garfield, and Iron counties. Though new ground disturbance would not be expected in Garfield and Iron counties, the comprehensive list pulls from these counties because impacts may occur from truck collisions with animals.

- **TES Plant Species**
 - Utah Department of Natural Resources, Conservation Data Center (CDC)
 - Inventory of Sensitive Species and Ecosystems in Utah, Endemic and Rare Plants of Utah: An Overview of Their Distribution and Status
 - Kanab Field Office RMP/EIS Final Analysis of the Management Situation (12/2005)
 - Utah Rare Plant Guide (http://www.utahrareplants.org/rpg_species.html; accessed 6/20/2007)
- **TES Animal Species**
 - Utah Department of Natural Resources, CDC
 - Utah State Listed Species by County (compiled using known species occurrences and species observations from the Utah Natural Heritage Program's Biodiversity Tracking and Conservation System [BIOTICS])
 - County Lists of Utah's Federally Listed Threatened (T), Endangered (E), and Candidate (C) Species
 - Kanab Field Office RMP/EIS Final Analysis of the Management Situation (12/2005)

Step 2. Reduction of the comprehensive species list based on the probability of occurrence as determined through the analysis of SWReGAP data, elevation within the potentially affected area, and known distribution according to the CDC database.

- **TES Plant Species**

SWCA researched each species on the comprehensive list to determine the probability of occurrence in the Alton Coal Tract LBA. Key factors in determining probability of occurrence were vegetation type (SWReGAP), elevation, and known distribution according to the CDC database. Species were sorted into three groups:

1. Known distribution shown on CDC or SWReGAP; recommend survey/further investigation
2. Known distribution provided by CDC did not overlap with the tract, but habitat type may occur in the tract; recommend survey/further investigation
3. Not likely to occur; do not recommend survey

Additional information on each plant's bloom period (where readily available) was also obtained to provide detail relevant to surveying.

- **TES Animal Species**

SWCA researched each species on the comprehensive list to determine the probability of occurrence in the Alton Coal Tract LBA and along the reasonably foreseeable transportation route and one alternate transportation route. Key factors in determining probability of occurrence were vegetation type (SWReGAP) and known distribution according to the CDC database. Species were sorted into three groups:

1. Habitat shown on CDC; recommend survey/further investigation
2. Not shown on CDC but habitat may occur; recommend survey/further investigation
3. Not likely to occur, do not recommend survey

Additional information on the survey period for each animal was also obtained.

Step 3. Further reduction of the comprehensive species list based on spatial analysis (GIS) modeling coupled with SWReGAP and CDC analyses.

- **TES Plant Species**

SWCA used a GIS model to determine specific locations of potential occurrences of TES plant species in the Alton Coal Tract LBA. The GIS model included elevation, vegetation type, and species listed in groups 1 and 2 from Step 2.

- **TES Animal Species**

SWCA used a GIS model to determine specific locations of potential occurrences of TES animal species in the Alton Coal Tract LBA. The GIS model included habitat type and the listed species in groups 1 and 2 from Step 2.

SWCA used the same model to determine specific locations of potential occurrences of TES animal species along the reasonably foreseeable transportation route and one alternate route. The GIS model included habitat type and the listed species in groups 1, 2, and 3 from Step 2. The model was limited to a 200-foot buffer zone on either side of the roads making up the reasonably foreseeable transportation route and alternate route. Potential occurrences of TES animals for each transportation segment were provided in a memorandum to the BLM.

At the conclusion of the three-step analysis process, SWCA presented to BLM a list of species for which surveys were recommended, which BLM further refined based on personnel knowledge of the resources in the tract. The final list of recommendations was as follows:

Plants

- Paria breadroot
- Sandloving penstemon
- Ruth's sphaeromeria
- Charleston Mountain violet
- Slender (meager) camissonia
- Jones Cycladenia

Animals

- Bald Eagle
- Yellow-Billed Cuckoo
- Mexican Spotted Owl
- Southwestern Willow Flycatcher
- Three-Toed Woodpecker
- Townsend's Big-Eared Bat
- Western Toad
- Black Swift
- Kit Fox

- Utah Prairie Dog
- Allen's Big-Eared Bat
- Arizona Toad
- Big Free-Tailed Bat
- Burrowing Owl
- Ferruginous Hawk
- Fringed Myotis
- Greater Sage-Grouse
- Lewis's Woodpecker
- Long-Billed Curlew
- Northern Goshawk
- Spotted Bat
- Pygmy Rabbit
- Short-Eared Owl
- **Surveys recommended for proposed and alternate transportation routes:**
 - Pygmy Rabbit
 - Utah Prairie Dog
 - Kit Fox
 - Greater Sage Grouse

This list was then further refined through the reconnaissance surveys discussed below.

RECONNAISSANCE SURVEYS AND POTENTIAL SPECIES OCCURRENCE DETERMINATIONS

During fall 2007 and spring 2008, three reconnaissance-level surveys were conducted on the Alton Coal Tract. These surveys were conducted to

- characterize vegetation communities on the tract,
- determine presence/absence of certain wildlife and plant species on the tract, and
- make a preliminary determination of the presence of wet meadow wetlands on the tract.

Surveys were conducted November 16–18, 2007; May 27–30, 2008; and July 2, 2008. The methods, results, and conclusions of these field inventories are reported below by survey date in ascending chronological order.

RECONNAISSANCE SURVEY NOVEMBER 16–18, 2007

From November 16 to 18, 2007, three personnel from SWCA's Salt Lake City Office and one personnel from Mt. Nebo Consulting (surveyors listed in Attachment 1) conducted a reconnaissance-level survey of lands within the Alton Coal Tract LBA. The purpose of the survey was to 1) provide data for use in alternatives development for the Alton Coal Tract LBA EIS; 2) provide data for Chapters 3 and 4 of the Alton Coal Tract LBA EIS; and 3) narrow the list of species for which species-specific surveys may need to be completed in support of the Alton Coal Tract LBA EIS and provide documentation of this and target areas for species specific surveys during the appropriate survey period.

WILDLIFE SURVEY NOVEMBER 16–18, 2007

METHODS

Mexican Spotted Owl (MSO)

Using the 1997 and 2000 MSO habitat models (Spotskey and Willey 1997, 2000) two areas near the tract were identified as potentially suitable nesting habitat (Figure 1). These areas were assessed by recording the presence-absence of the five primary constituent elements (PCEs) identified in the MSO Recovery Plan (USFWS 1995) and other parameters on a standardized field form, to verify their suitability as MSO nesting habitat.

Southwestern Willow Flycatcher and Western Yellow-billed Cuckoo

Three riparian areas were identified through SWReGAP as potentially suitable habitat for southwestern willow flycatchers (SWFL) and yellow-billed cuckoos (YBCU). These riparian areas were labeled as Riparian A, Riparian B, and Riparian C (see Figure 1). These three stretches were walked and assessed to verify their suitability as potential stopover and nesting habitat.

The surveyors focused on finding areas containing tamarisk and other species such as Fremont cottonwood (*Populus fremontii*) and black willow (*Salix gooddingii*), which have the proper structure to be potentially suitable for use by nesting willow flycatchers. For the purposes of the study, potentially suitable habitat was defined as dense, woody, riparian vegetation greater than 3.0 m (9.8 feet) in height with greater than 75% canopy cover.

Pygmy Rabbit

Pygmy rabbits were listed as a potentially occurring species within the tract. Potentially suitable habitat was assessed during other wildlife and general vegetation surveys. According to *Surveying for Pygmy Rabbits* (Ulmschneider et al. 2004):

The site characteristics of areas inhabited by pygmy rabbits in Utah vary considerably. Burrow habitat in southern, low elevation sites is often limited to the bottom of gentle drainages supporting Wyoming sagebrush amid a black sage, shadscale, and gray molly community of minimal height (28 cm). Understory condition is variable: many sites have grasses and forbs in excellent condition, but some of the most numerous pygmy rabbit populations discovered are in chronically grazed areas (sheep and cattle) being targeted for rehabilitation.

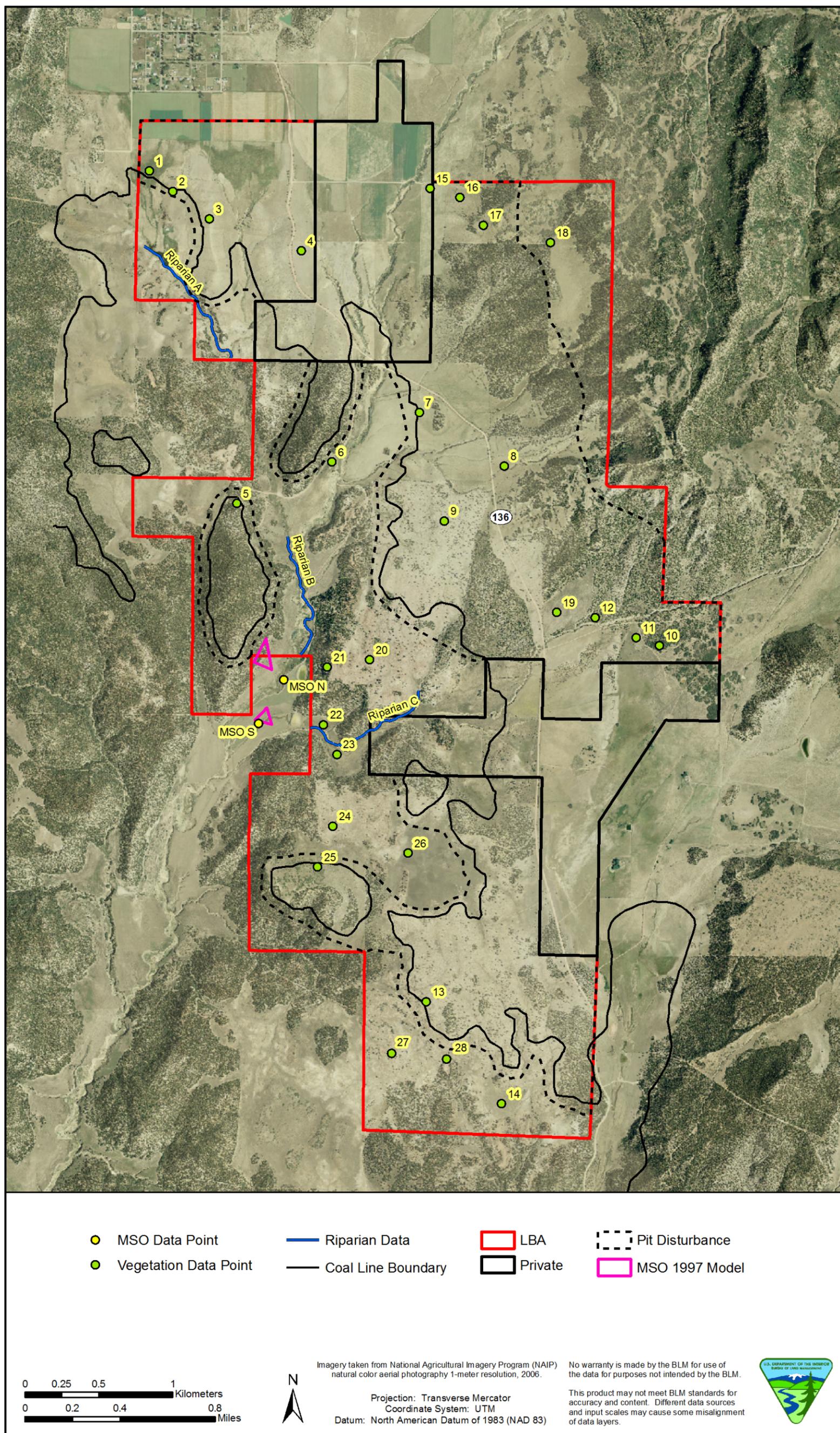


Figure 1. Alton Coal Tract wildlife and vegetation survey map.

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Therefore, areas of large dense sagebrush were of particular concern, and the fact that certain areas are grazed did not affect how the area was assessed as to the possibility of the presence of pygmy rabbits.

RESULTS AND DISCUSSION

Mexican Spotted Owl (MSO)

The two potentially suitable MSO habitat units, A-North and A-South (see Figure 1), were evaluated by recording and ranking the presence-absence of the five PCEs identified in the MSO Recovery Plan (USFWS 2004). Both A-North and A-South received poor ratings and therefore are no longer considered potentially suitable habitat for MSO. It is therefore very unlikely that any MSO occur anywhere near the tract.

Southwestern Willow Flycatcher (SWFL) and Western Yellow-billed Cuckoo (YBCU)

The three riparian areas were walked and evaluated (see Figure 1). Riparian Area A did not contain any tamarisk, willow, or cottonwood trees. Riparian Area B had only sparse cottonwood trees along with relatively common Russian olive trees. Riparian Area C had only one cottonwood tree along the entire stretch. Therefore, all three areas Riparian A, B, and C were found to be of no nesting or stopover value to SWFL or YBCU.

Pygmy Rabbit

During the vegetation surveys two different areas were found to be potentially suitable pygmy rabbit habitat (see Figure 1). These areas had relatively large patches of large sagebrush. Potential pygmy rabbit pellets were found and collected. It is possible that these pellets are young or small cottontails.

Table 1. Summary of SWFL, YBCU and MSO Potential to Occur in the LBA

Common Name (Scientific Name)	Status	Habitat Type	Potential On Tract	Field Surveys Recommended? EIS Analysis?
Mexican Spotted Owl (<i>Strix occidentalis lucida</i>)	T	This species uses cliff, canyon, riparian, conifer forest, and mixed forest habitats.	No Potential Habitat. Based on fall habitat surveys.	No Field Surveys. No EIS Analysis.
Southwestern Willow Flycatcher (<i>Empidonax traillii extimus</i>)	E	This species uses riparian, forested wetland, shrubland, and mixed woodland habitats.	No Potential Habitat. Based on fall habitat surveys.	No additional Field Surveys. No EIS Analysis.
Western Yellow-billed Cuckoo (<i>Coccyzus americanus occidentalis</i>)	C	This species uses riparian, forested wetland, scrub-shrub wetland, shrubland, and mixed woodland habitats.	No Potential Habitat. Based on fall habitat surveys.	No additional Field Surveys. No EIS Analysis.
Pygmy Rabbit (<i>Brachylagus idahoensis</i>)	SPC	This species uses big sagebrush and shrubland habitats.	Two Potential habitat areas	Additional Field Surveys Recommended. EIS Analysis: Yes.

Other Species

Other special status wildlife species with potential to occur in the tract are listed in Table 2.

Table 2. Other Special Status Wildlife Species with Potential to Occur in the LBA

Common Name (<i>Scientific Name</i>)	Status	Habitat Type	Potential On Tract	Field Surveys Recommended? EIS Analysis?
Bald Eagle (<i>Haliaeetus leucocephalus</i>)	Delisted 2008	This species uses riparian, riverine, forested wetland, coniferous forest, mixed forest, and woodland habitats.	Potential wintering habitat is present but no known nests	Raptor surveys completed in 2007 and again before project implementation. EIS Analysis: Yes
Allen's Big-eared Bat (<i>Idionycteris Phyllotis</i>)	SPC	This species uses cliff, canyon, and riparian habitats.	Potential habitat surrounding the tract but not within it.	No Field Surveys. EIS Analysis of Indirect Effects.
Arizona Toad (<i>Bufo microscaphus</i>)	SPC	This species uses open water, riparian, shrubland, desert, and woodland habitats.	Potential Habitat is present	No Field Surveys. EIS Analysis: Yes
Big Free-tailed Bat (<i>Nyctinomops macrotis</i>)	SPC	This species uses cliff, canyon, and riparian habitats.	Potential habitat surrounding the tract but not within it.	No Field Surveys. EIS Analysis of Indirect Effects.
Burrowing Owl (<i>Athene cunicularia</i>)	SPC	This species uses grassland, shrubland, and desert habitats.	Likely to occur on the tract	Field surveys should occur where the ground will be disturbed. EIS Analysis: Yes
Ferruginous Hawk (<i>Buteo regalis</i>)	SPC	This species uses riparian, cliff, desert, grassland, sagebrush, and shrubland habitats.	Likely to occur on or near the tract. Raptor nest surveys are needed	Raptor surveys completed in 2007 and again before project implementation. EIS Analysis: Yes
Fringed Myotis (<i>Myotis thysanodes</i>)	SPC	This species uses cliff, canyon, and riparian habitats.	Potential habitat surrounding the Tract but not within it.	No Field Surveys. EIS Analysis of Indirect Effects.
Greater Sage-grouse (<i>Centrocercus urophasianus</i>)	SPC	This species uses grassland, sagebrush, shrubland, and riparian habitats.	Individuals and a lek present on the Tract.	Field Surveys: Yes EIS Analysis: Yes
Lewis's Woodpecker (<i>Melanerpes lewis</i>)	SPC	This species uses coniferous forest, woodland, and shrubland habitats.	The CDC shows primary breeding habitat in and adjacent to the tract.	No Field Surveys. EIS Analysis: Yes
Long-billed Curlew (<i>Numenius americanus</i>)	SPC	This species uses grassland, wetland, riparian, and shrubland habitats.	Potential habitat	No Field Surveys. EIS Analysis: Yes
Northern Goshawk (<i>Accipiter gentilis</i>)	CS	This species uses coniferous forest, mixed forest, woodland, and riparian habitats.	Potential habitat surrounding the Tract but not within it.	No Field Surveys. EIS Analysis: Yes
Spotted Bat (<i>Euderma maculatum</i>)	SPC	This species uses cliff, canyon, and riparian habitats.	Potential habitat surrounding the Tract but not within it.	No Field Surveys. EIS Analysis of Indirect Effects.

Table 2. Other Special Status Wildlife Species with Potential to Occur in the LBA

Common Name (<i>Scientific Name</i>)	Status	Habitat Type	Potential On Tract	Field Surveys Recommended? EIS Analysis?
Three-toed Woodpecker (<i>Picoides tridactylus</i>)	SPC	This species uses coniferous forest, mixed forest, woodland, shrubland, and riparian habitats.	Potential habitat surrounding the Tract but not within it.	No Field Surveys. EIS Analysis of Indirect Effects.
Townsend's Big-eared Bat (<i>Corynorhinus townsendii</i>)	SPC	This species uses cliff, canyon, forested, woodland, and riparian habitats.	Potential habitat surrounding the Tract but not within it.	No Field Surveys. EIS Analysis of Indirect Effects.
Western Toad (<i>Bufo boreas</i>)	SPC	This species uses open water, springs, wet meadows, riparian, coniferous forest, and woodland habitats.	Potential habitat	No Field Surveys. EIS Analysis of Indirect Effects.
Black Swift (<i>Cypseloides niger</i>)	SPC	This species uses waterfall, cliff, riparian, coniferous forest, mixed forest, and woodland habitats.	No Potential Habitat. Based on fall habitat surveys.	No Field Surveys. No EIS Analysis.
Kit Fox (<i>Vulpes macrotis</i>)	SPC	This species uses grassland, desert, shrubland, and savanna habitats.	Potential habitat, but not shown on CDC distribution map	No Field Surveys. EIS Analysis: Yes
Short-eared Owl (<i>Asio flammeus</i>)	SPC	This species uses sagebrush, grassland, shrubland, and savanna habitat.	Potential habitat, but not shown on CDC distribution map	No Field Surveys. EIS Analysis: Yes
Utah Prairie Dog (<i>Cynomys parvidens</i>)	Fed-T	This species inhabits open, grassy habitats and swales within sagebrush communities (Crocker-Bedford and Spillett 1981). It requires well-drained, deep soils suitable for burrowing, and moist herbage, particularly during drought.	Potential habitat not present on the tract. Populations known to occur along the coal haul transportation route adjacent to SR-20 and have high potential to occur along the coal haul transportation route adjacent to Highways 56 and 89.	Field Surveys: Yes EIS Analysis: Yes

SUMMARY OF WILDLIFE SPECIES ELIMINATED FROM DETAILED ANALYSIS

Based on the data gathered by the original preliminary analysis and supplemented by the results of the reconnaissance surveys, the following wildlife and special status species were eliminated from detailed analysis:

Table 3. Wildlife and Special Status Animal Species Eliminated from Detailed Analysis

Common Name (<i>Scientific Name</i>)	Status	Reason Eliminated
Bonytail (<i>Gila elegans</i>)	Fed-E	No potential habitat in tract or coal haul transportation route
Bonneville Cutthroat trout (<i>Oncorhynchus clarkia Utah</i>)	CS	No potential habitat in tract or coal haul transportation route

Table 3. Wildlife and Special Status Animal Species Eliminated from Detailed Analysis

Common Name (<i>Scientific Name</i>)	Status	Reason Eliminated
Colorado pikeminnow (<i>Ptychocheilus lucius</i>)	Fed-E	No potential habitat in tract or coal haul transportation route
Desert Sucker (<i>Catostomus clarkia</i>)	SPC	No potential habitat in tract or coal haul transportation route
Humpback chub (<i>Gila cypha</i>)	Fed-E	No potential habitat in tract or coal haul transportation route
Razorback sucker (<i>Xyrauchen texanus</i>)	Fed-E	No potential habitat in tract or coal haul transportation route
Southwestern willow flycatcher (<i>Empidonax traillii extimus</i>)	Fed-E	Not likely to occur in tract or coal haul transportation route
Kanab ambersnail (<i>Oxyloma kanabense</i>)	Fed-E	Not likely to occur in tract or coal haul transportation route
Leatherside Chub (<i>Gila copei</i>)	SPC	No potential habitat in tract or coal haul transportation route
Mexican spotted owl (<i>Strix occidentalis</i>)	Fed-T	Not likely to occur in tract or coal haul transportation route
California Condor (<i>Gymnogyps californianus</i>)	Fed-Experimental	Not likely to occur in tract or coal haul transportation route
Coral pink sand dunes tiger beetle (<i>Cicindela limbata albissima</i>)	Fed-C	Not likely to occur in tract or coal haul transportation route
Western yellow-billed cuckoo (<i>Coccyzus americanus occidentalis</i>)	Fed-C	No potential habitat in tract or coal haul transportation route
Desert bighorn sheep (<i>Ovis canadensis nelsoni</i>)	UDWR	Not likely to occur in tract or coal haul transportation route
Dark kangaroo mouse (<i>Microdipodops megacephalus</i>)	SPC	Not likely to occur in tract or coal haul transportation route
American white pelican (<i>Pelecanus erythrorhynchos</i>)	SPC	No potential habitat in tract or coal haul transportation route
Common chuckwalla (<i>Sauromalus ater</i>)	SPC	Not likely to occur in tract or coal haul transportation route
Utah physa (<i>Physella utahensis</i>)	SPC	Not likely to occur in tract or coal haul transportation route
Virgin Spinedace (<i>Lepidomeda mollispinis</i>)	CS	No potential habitat in tract or coal haul transportation route

VEGETATION COMMUNITIES/HABITAT CLASSIFICATION SURVEY NOVEMBER 16–18, 2007

The tract was surveyed over a three-day period (November 16–18, 2007), with the main areas of focus being those planned for known surface-disturbing activities.

METHODS

SWCA and Mt. Nebo Scientific ecologists surveyed and collected data on dominant species cover in the various vegetation communities within the tract (see Attachment 1, Relevé Plot Data). Vegetation community classification surveys were conducted by recording plant species present and their general percentage cover within an approximate 10 meter radius of the data point. Data points were recorded in areas that typified the overall vegetation community (Figure 2).

The percentage cover for each species was classified as rare (< 5% cover), few (5%–25% cover), moderate (26%–50% cover), or common (> 50% cover). As many data collection points as possible were established in each area of the tract to increase the reliability (for characterization of the affected environment and the analysis of impacts and for photo interpretation) of the data collected. Twenty-six vegetation data points were surveyed during fall 2007 field reconnaissance (see Attachment 1, Relevé Plot Data). Vegetation communities were ground-truthed and delineated on the aerial photograph while recording the data points with a handheld GPS unit as well as driving and walking through the tract.

The information collected was used to delineate the various vegetation communities within the tract. Vegetation data points were plotted on an aerial photo of the area and used to interpret patterns of vegetation cover, which were outlined and digitized onto a map using GIS. The results of the vegetation community delineation are shown in Figure 2.

For consistency, vegetation communities as identified by Mt. Nebo Scientific for other areas in the vicinity of the tract were used with minor modifications. These are sagebrush/grassland, meadows, perennial/annual grasses, pinyon-juniper/sagebrush, mountain brush, rabbitbrush, pinyon-juniper/mountain brush, and pinyon-juniper woodland (see Attachment 2, Vegetation Associations and Species List).

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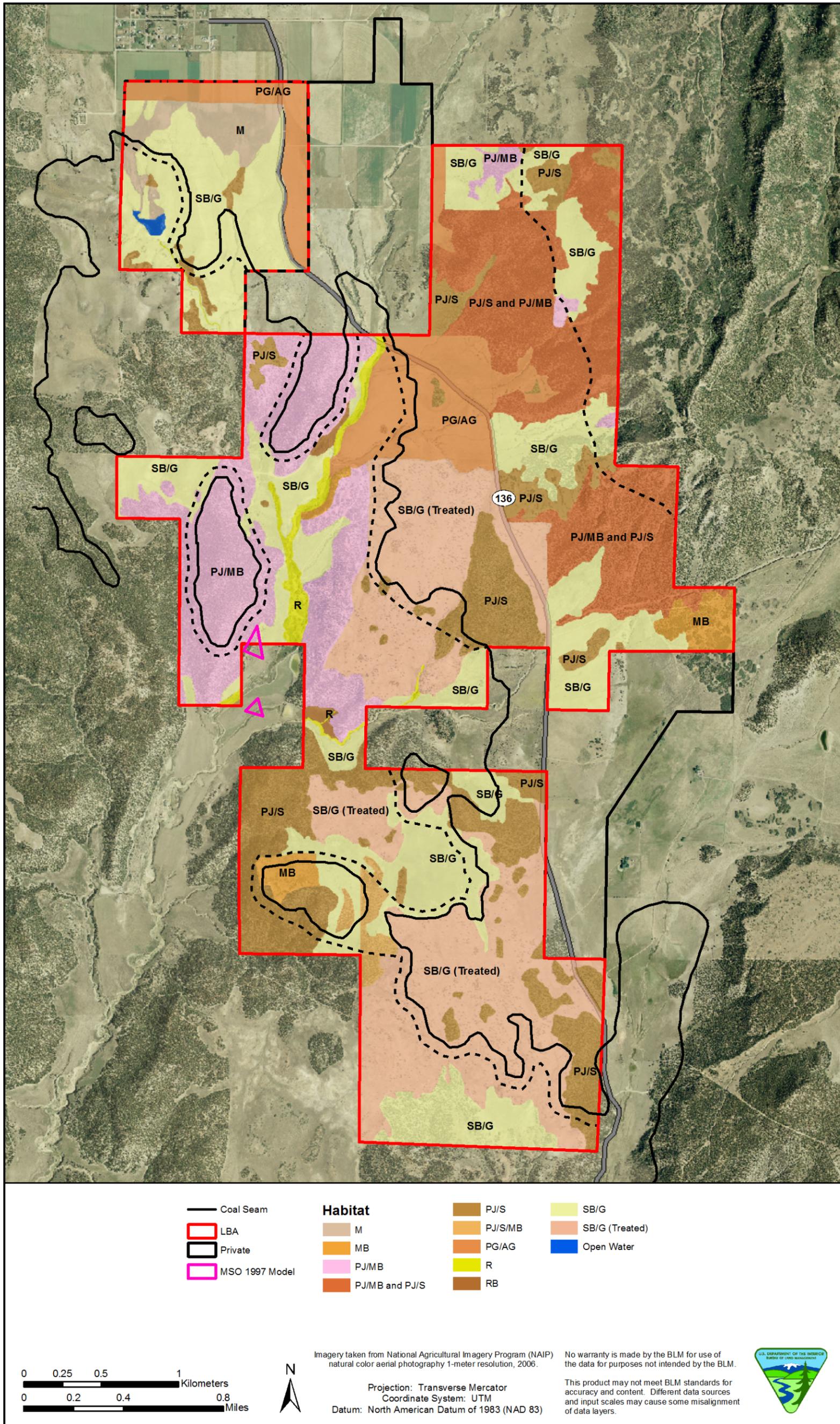


Figure 2. Alton Coal Tract vegetation (habitat) community map.

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RESULTS

Reconnaissance survey data coupled with aerial photo interpretation showed approximately 1,440 acres of pinyon-juniper habitat (including pinyon-juniper/sage and pinyon-juniper/mountain brush vegetation types), 275 acres of perennial/annual grasses, 10 acres of rabbitbrush habitat, 915 acres of sagebrush/grassland habitat, 755 acres of sagebrush/grassland (treated) habitat, 65 acres of meadow habitat, and 60 acres of mountain brush habitat. See Figure 2 for vegetation community delineation results. Table 4 lists the acreages of each of these habitats within the tract.

Table 4. Vegetation Communities and Approximate Acreages with the Alton Coal Tract

	Pinyon-juniper*	Sagebrush/grassland	Sagebrush/Grassland (Treated)**	Perennial/Annual Grasses	Meadow	Mountain Brush	Rabbit-brush
Acres	1,440	915	755	275	65	60	10
% of Total (3,581)	40	25.5	21	7.6	1.8	1.7	0.3

* Pinyon-juniper habitat classification includes pinyon-juniper/sagebrush and pinyon-juniper/mountain brush vegetation communities.

** Sagebrush/Grassland (treated) habitat classification includes areas if sagebrush and grassland vegetation communities where pinyon and juniper trees have been cut or chained and the body of the tree chipped.

SPECIAL STATUS PLANT SPECIES POTENTIAL OCCURRENCE DETERMINATION

Potential for special status plant species identified during the preliminary threatened and endangered and sensitive species analysis was determined using the vegetation communities as delineated during the fall 2007 field reconnaissance visit. Using the known habitat preferences of these species, SWCA was able to determine areas of possible occurrence for these species within the tract.

Based on the *County Lists of Utah's Threatened, Endangered, and Candidate Species* (UDWR 2007), sensitive species lists as published in the BLM Kanab Field Office Draft Resource Management Plan (BLM 2007), the *Utah Rare Plant Guide* (UNPS 2007), and GIS analysis using SWReGAP vegetation data and elevation, the following special status or rare plant species may occur in the Alton Coal Tract LBA: Paria breadroot (*Pediomelum parianse*), sandloving penstemon (*Penstemon ammophilus*), Ruth's sphaeromeria (*Sphaeromeria ruthiae*), Charleston Mountain violet (*Viola charlestonensis*), slender camissonia (*Camissonia exilis*), and Jones cycladenia (*Cycladenia humilis* var. *jonesii*). The habitat requirements for each of these species are outlined in Table 5 (UNPS 2007).

Table 5. Habitat Requirements of Certain Special Status or Rare Vegetation Species With Possible Occurrence in the LBA

Species	Elevation Range	Flowering Season	Vegetation Associations	Soils and Geology Associations	Status	Additional surveys recommended?
Paria breadroot (<i>Pediomelum parianse</i>)	5,600 to 8,000 feet	June through July	Ponderosa pine and pinyon-juniper	Calcareous or sandy soils on Wasatch limestone	Utah Rare Plant (UNPS 2007)	No
Sandloving penstemon (<i>Penstemon ammophilus</i>)	5,900 to 7,200 feet	Late May through June	Ponderosa pine or mixed shrub communities	Blow sand derived from Navajo sandstone	BLM Sensitive Species	Yes
Ruth's sphaeromeria (<i>Sphaeromeria ruthiae</i>)	4,400 to 6,600 feet	September	Ponderosa pine, Douglas fir, oak, mountain mahogany, bigtooth maple, box elder, and sandstone crevice communities	Navajo and Kayenta sandstone, on cliffs and boulders	Utah Rare Plant (UNPS 2007)	No
Charleston Mountain violet (<i>Viola charlestonensis</i>)	6,500 to 9,500 feet	May through June	Ponderosa pine communities, limestone hills, slopes, and dry washes	Claron and Carmel Limestone	Utah Rare Plant (UNPS 2007)	No
Slender camissonia (<i>Camissonia exilis</i>)	5,000 to 6,900 feet	Late April to May	Sagebrush, galleta, and pinyon-juniper communities	Gypsiferous strata of Moenkopi, Entrada, Carmel, and other fine-textured substrates (Welsh et al. 2003)	BLM Sensitive Species	No

Table 5. Habitat Requirements of Certain Special Status or Rare Vegetation Species With Possible Occurrence in the LBA

Species	Elevation Range	Flowering Season	Vegetation Associations	Soils and Geology Associations	Status	Additional surveys recommended?
Jones cycladenia (<i>Cycladenia humilis</i> var. <i>jonesii</i>)	4,400 to 6,000 feet	Mid-May to June	Eriogonum-Ephedra cool desert shrub and juniper communities	Gypsiferous saline soils on Chinle, Cutler, and Summerville formations	Federally listed as threatened	No

To precisely determine areas of suitable habitat for these species within the Alton Coal Tract, data on surface geology (UGS 1999) and elevation were used in combination with vegetation community data as delineated through survey work. The main types of surface geology in the area are Tropic Shale (Kt) and Dakota formation (Kd), both of which are a mix of shale and sandstone. Other types of surface geology in the tract are Alluvium (Qa) and Mass Movement Deposits (Qms). Alluvium areas are mostly sand and other loose materials deposited in stream beds and washes, and Mass Movement Deposits include rock fall, talus, and colluvium (UGS 1999). Since there are no areas of limestone in the tract, Charleston Mountain violet and Paria breadroot are not likely to occur in the tract. There are also no Chinle, Cutler, or Summerville formations, which excludes Jones' Cycladenia. Finally, the lack of Navajo and Kayenta sandstone, and Moenkopi, Entrada, and Carmel formations excludes Ruth's sphaeromeria and slender camissonia from occurring in the tract. No surveys are recommended for these five species in the 2008 field season.

Possible areas of occurrence for the remaining species, sandloving penstemon, are shown in Figure 3. These potential habitat areas were identified by referencing surface geology information (UGS 1999) and vegetation covers as delineated using data acquired during the fall 2007 field surveys. Based on habitat requirements listed by the Utah Rare Plant Guide (UNPS 2007), sandloving penstemon has a relatively high likelihood of occurrence in Qa surface geology coupled with mountain brush, sagebrush/grass, or rabbitbrush ecology. Sandloving penstemon may also occur, although with lower likelihood, in Qa or Qms surface geology coupled with sagebrush/grassland (treated) or pinyon-juniper/mountain brush communities. Estimated areas of potential habitat for this species are shown in Table 6 and Figure 3.

Table 6. Acres of Potential Occurrence of Special Status or Rare Plant Species in the LBA (see also Figure 3)

	Acres of Higher Likelihood Potential Occurrence	Acres of Lower Likelihood Potential Occurrence
Sandloving penstemon	625.09	443.26

Surveys for sandloving penstemon are recommended in identified potential habitat during their flowering period (May and June) in the 2008 field season. Recommended areas of focus include locations where potential habitats overlap with proposed impact areas, although surrounding areas may also be surveyed as necessary.

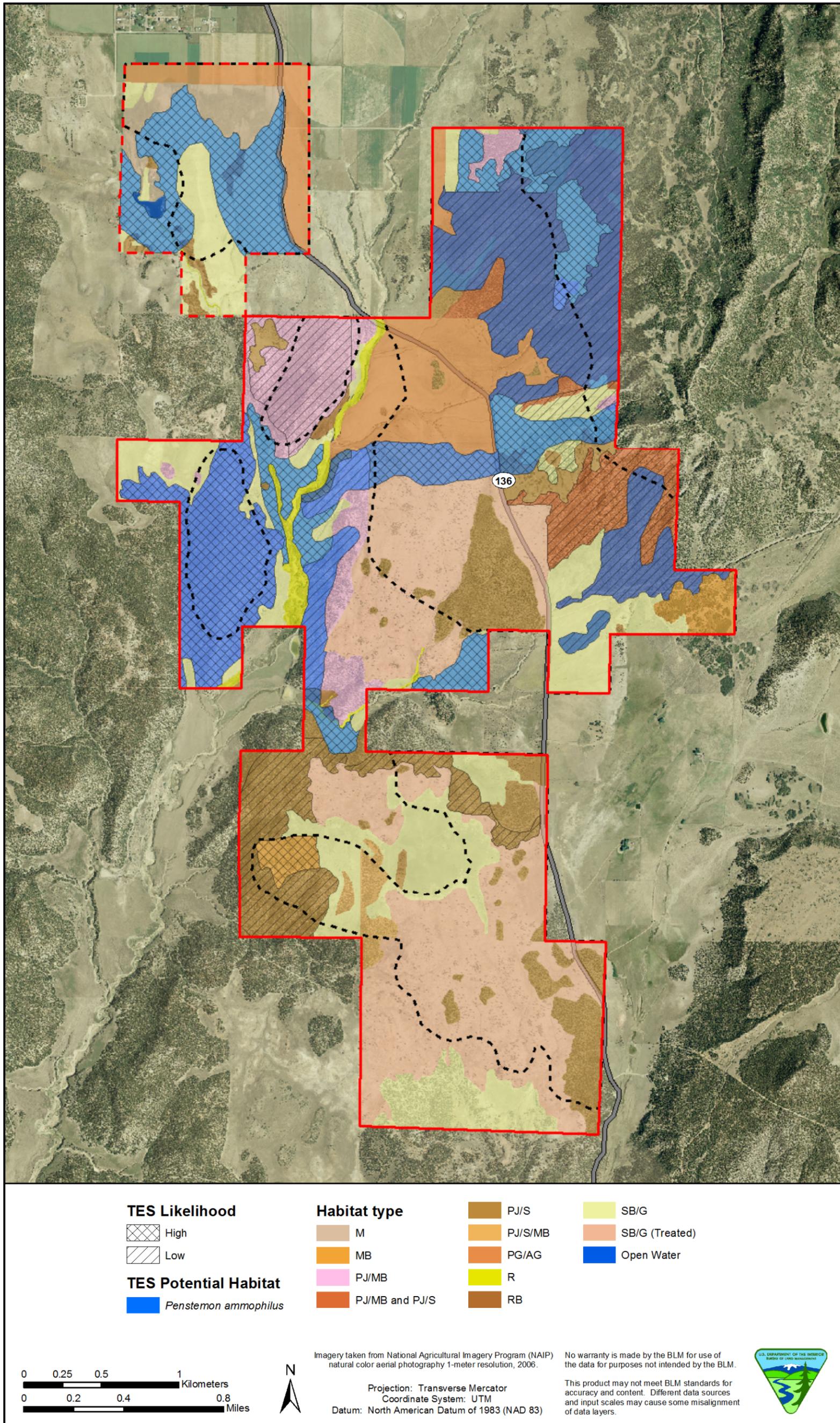


Figure 3. Alton Coal Tract threatened, endangered, and sensitive plant species habitat.

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RARE PLANT SPECIES SURVEY: *PENSTEMON AMMOPHILUS* MAY 27–30, 2008

Based on the recommendation from the habitat classification surveys and special status plant species potential occurrence determinations, a field survey was conducted to further assess the potential for sandloving penstemon to be present in the Alton Coal Tract.

METHODS

Prior to the field survey, known locations of sandloving penstemon were reviewed at the herbarium at Brigham Young University, Provo, Utah. All specimen locations were plotted on a field map. Notes about habitats, associated plant communities, elevation, phenology, geology, soil types, and other applicable information were written in a field notebook. Based on the voucher specimens for this plant species, the most appropriate days believed to successfully locate sandloving penstemon in a field survey were chosen for the survey period.

Prior to surveying the Alton Coal Tract, several known locations of the plant were visited to review the specific habitats, identify the current phenology of the species and also to re-create a visual or “target” image for the surveyor. Once these locations, habitats, and live plants were visited, the survey then focused on the areas within the Alton Coal Tract.

The field survey for sandloving penstemon was conducted from May 27 to May 30, 2008 by Mt. Nebo Scientific, Inc. Figure 4 identifies the survey area for the sandloving penstemon. These areas were accessed using a 4WD vehicle and an ATV on the roads and trails, then by walking the areas not accessible by the vehicles. Binoculars and spotting scopes were also used to assist in the search for suitable habitat for the plants.

RESULTS AND DISCUSSION

Although relatively close in proximity to known populations of the sandloving penstemon, this plant species was not found in the tract shown in Figure 4, nor was the precise habitat of which this plant is currently thought to be limited to, found in the tract. Based on the research and subsequent field survey for the sandloving penstemon, it is believed that there is a very low probability that the species occurs in the tract.

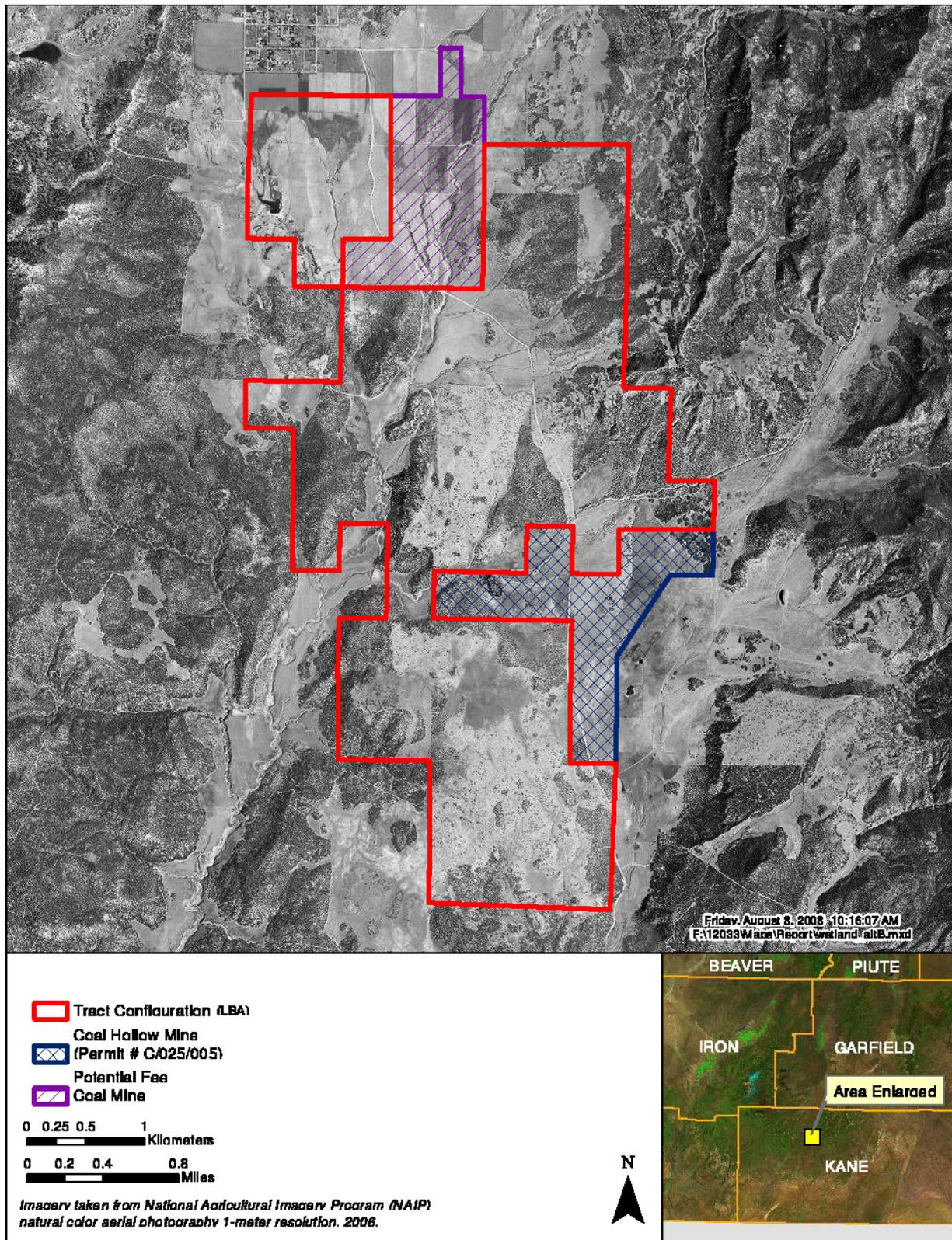


Figure 4. Survey area for sandloving penstemon.

WET MEADOWS OF THE ALTON COAL TRACT: A PRELIMINARY ASSESSMENT JULY 2, 2008

The scope of this study was to provide a preliminary assessment of some specific wet meadows currently used as pasture lands near the northern most boundary of the tract. The scope of the study was to provide a preliminary description of the pastures/meadows from a vegetation aspect with implications regarding their potential for being considered for future wetland studies. Soils and hydrology, two additional components required for wetland determinations, are only cursorily addressed in this study.

The study area was visited in November 2007, June 2008, and July 2008. On July 2, 2008, quantitative and qualitative data were recorded in the wet meadows near the northern boundary of the tract, just south of the Town of Alton, Utah (Figure 5).

METHODS

SAMPLING DESIGN AND TRANSECT/QUADRAT PLACEMENT

Transect lines for vegetation sampling were placed randomly within the boundaries of the meadow areas (see Figure 5). The transect placement technique was employed with the goal to adequately sample the meadows with a representative number of samples for each area. Once transects were established, quadrat locations for sampling were chosen using random numbers from the transect lines with the objective to record data without preconceived bias.

COVER, FREQUENCY AND COMPOSITION

Cover estimates were made using ocular methods with meter square quadrats. Species composition, cover by species, and relative frequencies were also assessed from the quadrats. Additional information was recorded on the raw data sheets notes such as: slope, exposure, grazing use, disturbance and/or other appropriate notes. Plant nomenclature follows Welsh et al. (2003).

RESULTS AND DISCUSSION

The sample areas were comprised of two wet meadows. They were sampled and have been reported separately and were called the "East Pasture" and "West Pasture" (see Figure 5).

WET MEADOWS: EAST PASTURE

The dominant plant species present in the sample quadrats in the East Pasture were wiregrass (*Juncus arcticus*), small-wing sedge (*Carex microptera*), and Missouri iris (*Iris missouriensis*). All species present in the sample quadrats along with their cover and frequency values are shown in Table 7. The total living cover for the East Pasture was estimated at 80.75% (Table 8). The living understory cover composition was comprised of 85.48% grasses (or grass-like species) and 14.52% forbs (see Table 8). No woody species were present in the sample quadrats.

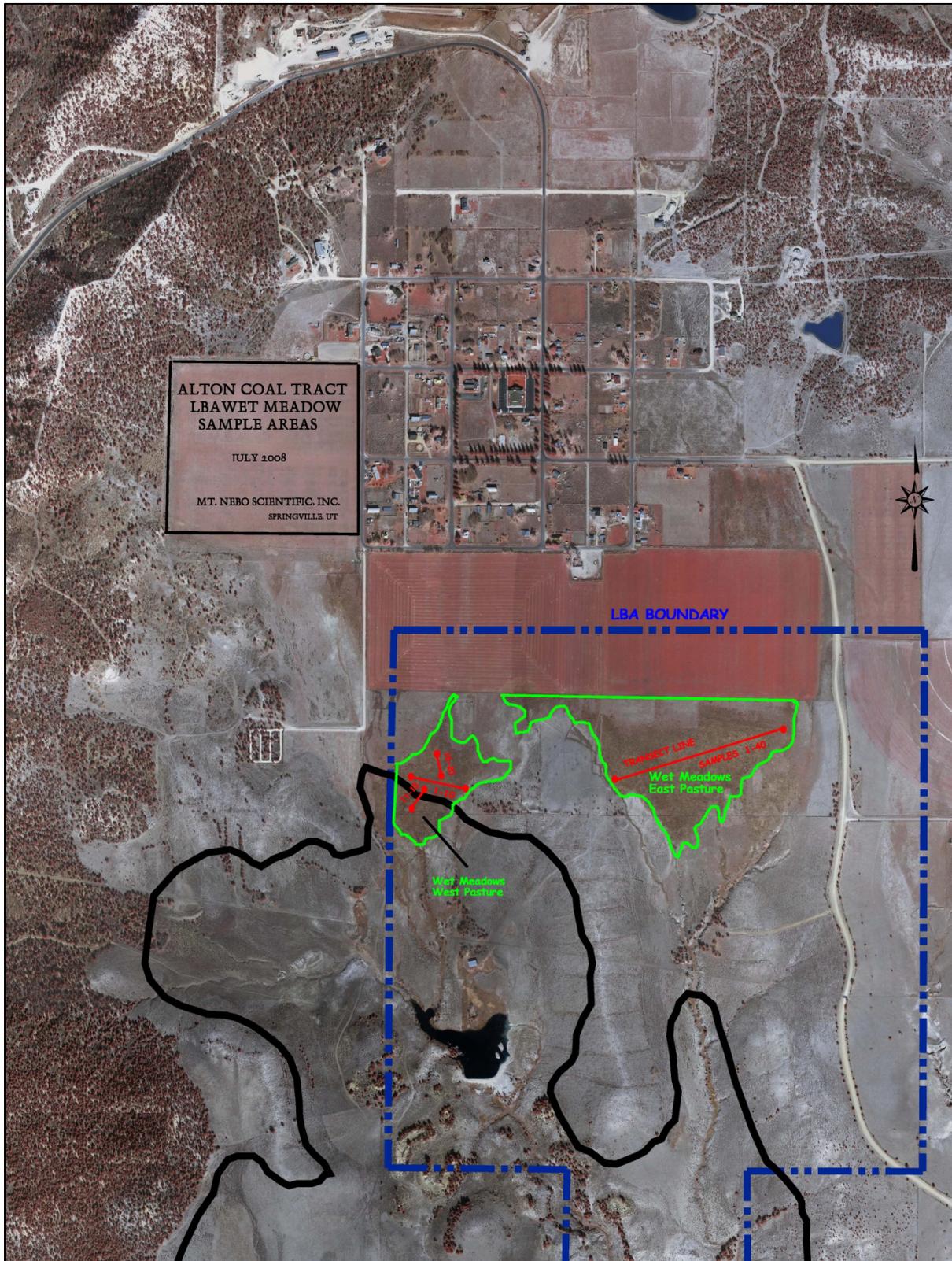


Figure 5. Wetland meadow sample areas.

Table 7. East Pasture Wet Meadow at the Alton Coal Tract. Total Cover, Standard Deviation and Frequency by Species (2008)

	Mean Percentage	Standard Deviation	Percentage Frequency
Trees and Shrubs			
Forbs			
<i>Chenopodium</i> sp.	0.13	0.78	2.50
<i>Erigeron</i> sp.	3.38	8.47	20.00
<i>Iris missouriensis</i>	7.13	11.88	32.50
<i>Melilotus officinalis</i>	0.25	1.56	2.50
<i>Plantago major</i>	0.25	1.09	5.00
Grasses			
<i>Bromus inermis</i>	3.13	6.39	22.50
<i>Carex microptera</i>	18.50	19.50	60.00
<i>Juncus arcticus</i>	47.50	26.76	90.00

Table 8. East Pasture Wet Meadow at the Alton Coal Tract. Total Cover, Standard Deviation and Sample Size (2008)

	Mean Percentage	Standard Deviation	Percentage Frequency
A. Total Cover			
Total Living Cover	80.75	10.34	40
Litter	16.20	9.33	40
Bareground	2.03	2.40	40
Rock	1.03	0.16	40
B. % Composition			
Shrubs	0.00	0.00	40
Forbs	14.52	18.08	40
Grasses	85.48	18.08	40

WET MEADOWS: WEST PASTURE

The dominant plant species for the West Pasture was primarily wiregrass (Table 9). Total living cover in this meadow was 78.00% (Table 10). The living cover was comprised almost exclusively of grass or grass-like species, which made up nearly 97% of the living cover by composition (see Table 10). Like the East Pasture, no woody species were present in the sample quadrats.

Table 9. West Pasture Wet Meadow at the Alton Coal Tract LBA. Total Cover, Standard Deviation and Frequency by Species (2008)

	Mean Percentage	Standard Deviation	Percentage Frequency
Trees and Shrubs			
Forbs			
<i>Cirsium</i> sp.	0.75	1.79	15.00
<i>Erigeron</i> sp.	0.85	1.80	20.00

Table 9. West Pasture Wet Meadow at the Alton Coal Tract LBA. Total Cover, Standard Deviation and Frequency by Species (2008)

	Mean Percentage	Standard Deviation	Percentage Frequency
<i>Melilotus officinalis</i>	0.75	2.38	10.00
Grasses			
<i>Bromus inermis</i>	6.40	9.53	50.00
<i>Elymus elymoides</i>	0.25	1.09	5.00
<i>Juncus arcticus</i>	67.50	14.45	100.00
<i>Poa pratensis</i>	1.50	4.77	10.00

Table 10. West Pasture Wet Meadow at the Alton Coal Tract. Total Cover, Standard Deviation and Sample Size (2008)

	Mean Percentage	Standard Deviation	Percentage Frequency
A. Total Cover			
Total Living Cover	78.00	7.65	20
Litter	15.85	9.60	20
Bareground	5.10	6.63	20
Rock	1.05	0.22	20
B. % Composition			
Shrubs	0.00	0.00	20
Forbs	3.01	4.83	20
Grasses	96.99	4.83	20

DISCUSSION

HYDROPHYTIC VEGETATION

As mentioned, the scope of this report was to provide vegetation information regarding the wet meadows near the northern boundary of the Alton Coal Tract. Quantitative data from sampling the plant communities of the wet meadows can provide insight as to whether these areas may have the potential to be delineated as jurisdictional wetlands and if additional studies should be conducted in the future to make this determination. The U.S. Army Corps of Engineers (COE), the regulatory agency responsible for jurisdiction of wetlands under Section 404 of the Clean Water Act (33 USC 1344), has recently provided a manual that provides technical guidance and procedures for identifying and delineating wetlands in the arid west region, of which the Alton Coal Tract is part (COE 2006).

The COE manual mentioned above has a section regarding hydrophytic vegetation indicators for wetland delineations. This section describes two procedures that may be used to indicate the presence of hydrophytic vegetation, which is one step in determining if a given area would be considered wetland or jurisdictional wetland by definition. Both hydrophytic vegetation indicator procedures use quantitative data for their determinations. The first test is called the Dominance Test.

The Dominance Test is the basic hydrophytic vegetation indicator and “should be applied in every wetland determination in the arid west”. This test is described by suggesting that the vegetation in a given

community is “hydrophytic” if more that 50% of the dominant plant species across all strata are rated as follows:

1. OBL [Obligate Wetland: occurs almost always (estimated probability 99%) under natural condition in wetlands]
2. FACW [Facultative Wetland: usually occurs in wetlands (estimated probability 67%– 99%), but occasionally found in non-wetlands]
3. FAC [Facultative Wetland: Equally likely to occur in wetland or non-wetland (estimated probability 34%–66%)]

When the data from the East Pasture and West Pasture wet meadows were put through the Dominance Test, **both pastures would be considered to support hydrophytic vegetation** by the COE methods.

The second COE hydrophytic vegetation indicator procedure is called the Prevalence Test. This test can be employed on the vegetation in a community if it fails the Dominance Test described above, but meets those requirements for hydric soils and wetland hydrology in the wetland delineation process. The Prevalence Test considers all species in a plant community; however, the indicator categories assigned to the species (OBL, FACW, FAC, etc.) places a “weighted” value on them by using cover values of individual species. In other words, if a given plant species has more cover and is assigned OBL, FACW or FAC it is more likely that the community will be determined to be hydrophytic.

When the quantitative data of the East Pasture and West Pasture wet meadows are computed through the Prevalence Test, **both pastures would be considered as supporting hydrophytic vegetation.**

HYDRIC SOILS

As mentioned previously, the focus of this study was to be on vegetation analyses and *not* on soils or hydrology, two other important aspects for studies when delineating wetlands using COE protocols. Nonetheless, a few holes were dug in the pastures and the soils were examined for redox characteristics. These soil characteristics were present in the limited amount of sample holes observed. These holes were dug at random locations, but the sample number was not enough to be considered an adequate number of samples to determine if the meadows were dominated by hydric soils to be determined as jurisdictional by the COE.

WETLAND HYDROLOGY

This discipline is another crucial consideration necessary for wetland determinations and has not been studied in enough detail to make the determination in the scope of this report. However, when aerial photographs were examined (i.e., Figure 5) and when field observations were considered, it appears that the water supporting wet meadows in the East Pasture and West Pasture is a result of runoff irrigation from the fields directly north and adjacent to the pastures—not the result of water being supplied by natural means such as springs or seeps in the immediate area.

CONCLUSIONS

The quantitative data and the test procedures that determine the presence of hydrophytic vegetation suggests that the wet meadows of the East Pasture and West Pasture are that of wetlands—whether or not they are jurisdictional through the COE has not yet been determined. cursory thoughts about soils and hydrology also suggest these areas could be considered wetlands. However, because the hydrologic regime may be artificially induced by present and historical irrigation practices, more study is probably warranted if a determination is to be made if the areas would be considered jurisdictional through the COE.

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Attachment 1: Relevé Plot Data

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Relevé Plot Data Date	Relevé ID	Plant Community	Surveyors	General Notes
11/17/2007	Veg 1	Wiregrass	PDC and AAM	Pasture, grazed, irrigation runoff area
11/17/2007	Veg 2	Black sagebrush/ grass	PDC and AAM	Could have been seeded because lots of AGCR, may not be as "natural" as other ARNO communities. Small scattered JUOS.
11/17/2007	Veg 3	Black sagebrush/ grass	PDC and AAM	Close to native condition as compared to veg 2.
11/17/2007	Veg 4	Pastureland	PDC and AAM	Previously was a sagebrush/grass community. Presently pasture, unirrigated and fenced.
11/17/2007	Veg 5	Pinyon/ juniper	PDC, AAM, BG, and TS	
11/17/2007	Veg 6	Rabbitbrush	PDC and AAM	Heavily grazed, previously s/g community
11/17/2007	Veg 7	Dry pastureland	PDC and AAM	Converted from s/g, scattered PJ, very heavily grazed. Fairly recently worked by tractor.
11/17/2007	Veg 8	Sagebrush/ grass	PDC and AAM	PJ cleared but not ARNO. Other side of road was cleared of ARNO.
11/17/2007	Veg 9	S/G, scattered PJ	PDC and AAM	Chipped PJ. To eh. (?) sage grouse habitat.
11/17/2007	Veg 10	Oakbrush	PDC and AAM	Area adjacent to PJ removed with track hoe and grapple claw to increase sage grouse habitat. Piles of PJ.
11/17/2007	Ref 11	S/G sagebrush	PDC and AAM	
11/18/2007	Veg 12	PJ	PDC and AAM	Lots of bare ground
11/18/2007	Veg 13	Sagebrush/ grass	PDC and AAM	Lots of bare ground covered with chipped PJ, weeds, and a fair amount oak, used to be mostly PJ with sage but much of the PJ has been cleared.
11/17/2007	Veg A (15)	Pastureland	TS and BTG	Grazed grasses also part of cover. Grazed.
11/17/2007	Veg B (16)	Sagebrush/ grass	TS and BTG	Grazed grasses have moderate cover.
11/17/2007	Veg C (17)	Sage/ Gambel Oak/ Grass	TS and BTG	Grazed grasses have abundant cover. PJ near edge of plot.
11/17/2007	Veg D (18)	Black sagebrush/ grass	TS and BTG	Grasses have abundant cover. Less grazed than A, B, C.
11/17/2007	Veg E (19)	Black sagebrush/ grass	TS and BTG	PJ in surrounding area.
11/18/2007	Veg F (20)	S/G chipped	PDC and BTG	Previously this area was mostly PJ. Currently it is progressing toward a S/G community. Chipped to increase sage grouse habitat.
11/18/2007	Veg G (21)	P-J	PDC and BTG	Some soil pavement present (0.5"). Sparse understory. No forbs or grasses noted here.
11/18/2007	Veg H (22)	Rabbitbrush	PDC and BTG	
11/18/2007	Veg I (23)	ARNO / CHNA	PDC and BTG	ARNO and CHNA areas interspersed. Few forb species.
11/18/2007	Veg J (24)	S/G chipped	PDC and BTG	
11/18/2007	Veg K (25)	Gambel oak	PDC and BTG	Relatively small area with lots of ARNO.
11/18/2007	Veg L (26)	S/G (ARNO)	PDC and BTG	Very homogenous.

Alton Coal Tract LBA EIS Report of Reconnaissance Surveys: Vegetation and Special Status Species, Wildlife and Special Status Species, Sandloving Penstemon, Wet Meadows

Relevé Plot Data	Relevé ID	Plant Community	Surveyors	<i>Achillea millefolium</i> ACMI	<i>Agropyrum cristatum</i> AGCR	<i>Artemisia nova</i> ARNO	<i>Artemisia tridentata</i> ARTR
11/17/2007	Veg 1	Wiregrass	PDC and AAM				
11/17/2007	Veg 2	Black sagebrush/ grass	PDC and AAM			common	
11/17/2007	Veg 3	Black sagebrush/ grass	PDC and AAM			common	
11/17/2007	Veg 4	Pastureland	PDC and AAM		common	few	
11/17/2007	Veg 5	Pinyon/ juniper	PDC, AAM, BG, and TS			moderate	
11/17/2007	Veg 6	Rabbitbrush	PDC and AAM			rare	few
11/17/2007	Veg 7	Dry pastureland	PDC and AAM		moderate	few	
11/17/2007	Veg 8	Sagebrush/ grass	PDC and AAM		moderate	common	moderate
11/17/2007	Veg 9	S/G, scattered PJ	PDC and AAM		moderate	common	
11/17/2007	Veg 10	Oakbrush	PDC and AAM				moderate
11/17/2007	Ref 11	S/G sagebrush	PDC and AAM				
11/18/2007	Veg 12	PJ	PDC and AAM			moderate	
11/18/2007	Veg 13	Sagebrush/ grass	PDC and AAM			moderate	
11/17/2007	Veg A (15)	Pastureland	TS and BTG			few	
11/17/2007	Veg B (16)	Sagebrush/ grass	TS and BTG			few	
11/17/2007	Veg C (17)	Sage/ Gambel Oak/ Grass	TS and BTG			moderate	
11/17/2007	Veg D (18)	Black sagebrush/ grass	TS and BTG			common	
11/17/2007	Veg E (19)	Black sagebrush/ grass	TS and BTG			common	
11/18/2007	Veg F (20)	S/G chipped	PDC and BTG		few	moderate	moderate
11/18/2007	Veg G (21)	P-J	PDC and BTG			moderate	few
11/18/2007	Veg H (22)	Rabbitbrush	PDC and BTG				moderate
11/18/2007	Veg I (23)	ARNO / CHNA	PDC and BTG			common	
11/18/2007	Veg J (24)	S/G chipped	PDC and BTG	moderate		few	few
11/18/2007	Veg K (25)	Gambel oak	PDC and BTG		common	common	
11/18/2007	Veg L (26)	S/G (ARNO)	PDC and BTG			common	few

Alton Coal Tract LBA EIS Report of Reconnaissance Surveys: Vegetation and Special Status Species, Wildlife and Special Status Species, Sandloving Penstemon, Wet Meadows

Relevé Plot Data	Relevé ID	Plant Community	Surveyors	<i>Artemisia tridentata</i> var. <i>vaseyana</i> ATRVA	Aster or composite sp. ASTER	<i>Astragalus</i> sp. ASTRAGALUS	<i>Atriplex canescens</i> ATCA
11/17/2007	Veg 1	Wiregrass	PDC and AAM				
11/17/2007	Veg 2	Black sagebrush/ grass	PDC and AAM				
11/17/2007	Veg 3	Black sagebrush/ grass	PDC and AAM				
11/17/2007	Veg 4	Pastureland	PDC and AAM				
11/17/2007	Veg 5	Pinyon/ juniper	PDC, AAM, BG, and TS				
11/17/2007	Veg 6	Rabbitbrush	PDC and AAM				rare
11/17/2007	Veg 7	Dry pastureland	PDC and AAM				
11/17/2007	Veg 8	Sagebrush/ grass	PDC and AAM				
11/17/2007	Veg 9	S/G, scattered PJ	PDC and AAM				
11/17/2007	Veg 10	Oakbrush	PDC and AAM				
11/17/2007	Ref 11	S/G sagebrush	PDC and AAM				
11/18/2007	Veg 12	PJ	PDC and AAM				
11/18/2007	Veg 13	Sagebrush/ grass	PDC and AAM		few	few	
11/17/2007	Veg A (15)	Pastureland	TS and BTG				
11/17/2007	Veg B (16)	Sagebrush/ grass	TS and BTG				
11/17/2007	Veg C (17)	Sage/ Gambel Oak/ Grass	TS and BTG				
11/17/2007	Veg D (18)	Black sagebrush/ grass	TS and BTG				
11/17/2007	Veg E (19)	Black sagebrush/ grass	TS and BTG				
11/18/2007	Veg F (20)	S/G chipped	PDC and BTG				
11/18/2007	Veg G (21)	P-J	PDC and BTG				
11/18/2007	Veg H (22)	Rabbitbrush	PDC and BTG				
11/18/2007	Veg I (23)	ARNO / CHNA	PDC and BTG				
11/18/2007	Veg J (24)	S/G chipped	PDC and BTG				
11/18/2007	Veg K (25)	Gambel oak	PDC and BTG	moderate			
11/18/2007	Veg L (26)	S/G (ARNO)	PDC and BTG				

Alton Coal Tract LBA EIS Report of Reconnaissance Surveys: Vegetation and Special Status Species, Wildlife and Special Status Species, Sandloving Penstemon, Wet Meadows

Relevé Plot Data Date	Relevé ID	Plant Community	Surveyors	<i>Bromus carinatus</i> BRCA	<i>Bromus inermis</i> BRIN	<i>Bromus tectorum</i> BRTE	<i>Carex sp.</i> CAREX	<i>Cercocarpus montanus</i> CEMO
11/17/2007	Veg 1	Wiregrass	PDC and AAM					
11/17/2007	Veg 2	Black sagebrush/ grass	PDC and AAM					
11/17/2007	Veg 3	Black sagebrush/ grass	PDC and AAM	common				
11/17/2007	Veg 4	Pastureland	PDC and AAM		few			
11/17/2007	Veg 5	Pinyon/ juniper	PDC, AAM, BG, and TS					common
11/17/2007	Veg 6	Rabbitbrush	PDC and AAM				few	
11/17/2007	Veg 7	Dry pastureland	PDC and AAM	few				
11/17/2007	Veg 8	Sagebrush/ grass	PDC and AAM	moderate				few
11/17/2007	Veg 9	S/G, scattered PJ	PDC and AAM					
11/17/2007	Veg 10	Oakbrush	PDC and AAM					
11/17/2007	Ref 11	S/G sagebrush	PDC and AAM			common		
11/18/2007	Veg 12	PJ	PDC and AAM					
11/18/2007	Veg 13	Sagebrush/ grass	PDC and AAM			few		
11/17/2007	Veg A (15)	Pastureland	TS and BTG					
11/17/2007	Veg B (16)	Sagebrush/ grass	TS and BTG					
11/17/2007	Veg C (17)	Sage/ Gambel Oak/ Grass	TS and BTG					
11/17/2007	Veg D (18)	Black sagebrush/ grass	TS and BTG					
11/17/2007	Veg E (19)	Black sagebrush/ grass	TS and BTG					
11/18/2007	Veg F (20)	S/G chipped	PDC and BTG	few		few		
11/18/2007	Veg G (21)	P-J	PDC and BTG					
11/18/2007	Veg H (22)	Rabbitbrush	PDC and BTG					
11/18/2007	Veg I (23)	ARNO / CHNA	PDC and BTG					
11/18/2007	Veg J (24)	S/G chipped	PDC and BTG					
11/18/2007	Veg K (25)	Gambel oak	PDC and BTG		moderate			few
11/18/2007	Veg L (26)	S/G (ARNO)	PDC and BTG			few		

Alton Coal Tract LBA EIS Report of Reconnaissance Surveys: Vegetation and Special Status Species, Wildlife and Special Status Species, Sandloving Penstemon, Wet Meadows

Relevé Plot Data Date	Relevé ID	Plant Community	Surveyors	<i>Cirsium</i> sp. CIRSIIUM	<i>Cirsium arvense</i> CIAR	<i>Chrysothamnus nauseosus</i> CHNA	<i>Dactylis glomerata</i> DAGL	<i>Echinocereus</i> sp. ECHINOCACTUS
11/17/2007	Veg 1	Wiregrass	PDC and AAM		rare			
11/17/2007	Veg 2	Black sagebrush/ grass	PDC and AAM					
11/17/2007	Veg 3	Black sagebrush/ grass	PDC and AAM			few		
11/17/2007	Veg 4	Pastureland	PDC and AAM	few			few	
11/17/2007	Veg 5	Pinyon/ juniper	PDC, AAM, BG, and TS					rare
11/17/2007	Veg 6	Rabbitbrush	PDC and AAM			common		
11/17/2007	Veg 7	Dry pastureland	PDC and AAM	few		few		
11/17/2007	Veg 8	Sagebrush/ grass	PDC and AAM					
11/17/2007	Veg 9	S/G, scattered PJ	PDC and AAM					
11/17/2007	Veg 10	Oakbrush	PDC and AAM					
11/17/2007	Ref 11	S/G sagebrush	PDC and AAM	rare		few		
11/18/2007	Veg 12	PJ	PDC and AAM					
11/18/2007	Veg 13	Sagebrush/ grass	PDC and AAM	moderate				
11/17/2007	Veg A (15)	Pastureland	TS and BTG			moderate		
11/17/2007	Veg B (16)	Sagebrush/ grass	TS and BTG			few		
11/17/2007	Veg C (17)	Sage/ Gambel Oak/ Grass	TS and BTG			few		
11/17/2007	Veg D (18)	Black sagebrush/ grass	TS and BTG					
11/17/2007	Veg E (19)	Black sagebrush/ grass	TS and BTG					
11/18/2007	Veg F (20)	S/G chipped	PDC and BTG	few		few		
11/18/2007	Veg G (21)	P-J	PDC and BTG					
11/18/2007	Veg H (22)	Rabbitbrush	PDC and BTG			common		
11/18/2007	Veg I (23)	ARNO / CHNA	PDC and BTG			common		
11/18/2007	Veg J (24)	S/G chipped	PDC and BTG	moderate				
11/18/2007	Veg K (25)	Gambel oak	PDC and BTG			moderate		
11/18/2007	Veg L (26)	S/G (ARNO)	PDC and BTG					

Alton Coal Tract LBA EIS Report of Reconnaissance Surveys: Vegetation and Special Status Species, Wildlife and Special Status Species, Sandloving Penstemon, Wet Meadows

Relevé Plot Data Date	Relevé ID	Plant Community	Surveyors	<i>Elymus hispidus</i> ELHI	<i>Elymus smithii</i> ELSM	<i>Elymus trachycaulus</i> ELTR	<i>Elytrigia juncea</i> ELJU	?
								ERCO
11/17/2007	Veg 1	Wiregrass	PDC and AAM					
11/17/2007	Veg 2	Black sagebrush/ grass	PDC and AAM					
11/17/2007	Veg 3	Black sagebrush/ grass	PDC and AAM					
11/17/2007	Veg 4	Pastureland	PDC and AAM	moderate			moderate	
11/17/2007	Veg 5	Pinyon/ juniper	PDC, AAM, BG, and TS					
11/17/2007	Veg 6	Rabbitbrush	PDC and AAM			common		
11/17/2007	Veg 7	Dry pastureland	PDC and AAM			moderate	few	
11/17/2007	Veg 8	Sagebrush/ grass	PDC and AAM		moderate			
11/17/2007	Veg 9	S/G, scattered PJ	PDC and AAM			few	moderate	few
11/17/2007	Veg 10	Oakbrush	PDC and AAM					
11/17/2007	Ref 11	S/G sagebrush	PDC and AAM			common		
11/18/2007	Veg 12	PJ	PDC and AAM			few		
11/18/2007	Veg 13	Sagebrush/ grass	PDC and AAM					
11/17/2007	Veg A (15)	Pastureland	TS and BTG					
11/17/2007	Veg B (16)	Sagebrush/ grass	TS and BTG					
11/17/2007	Veg C (17)	Sage/ Gambel Oak/ Grass	TS and BTG					
11/17/2007	Veg D (18)	Black sagebrush/ grass	TS and BTG					
11/17/2007	Veg E (19)	Black sagebrush/ grass	TS and BTG					
11/18/2007	Veg F (20)	S/G chipped	PDC and BTG			few		
11/18/2007	Veg G (21)	P-J	PDC and BTG					
11/18/2007	Veg H (22)	Rabbitbrush	PDC and BTG					
11/18/2007	Veg I (23)	ARNO / CHNA	PDC and BTG			few		
11/18/2007	Veg J (24)	S/G chipped	PDC and BTG			few		
11/18/2007	Veg K (25)	Gambel oak	PDC and BTG					
11/18/2007	Veg L (26)	S/G (ARNO)	PDC and BTG					

Alton Coal Tract LBA EIS Report of Reconnaissance Surveys: Vegetation and Special Status Species, Wildlife and Special Status Species, Sandloving Penstemon, Wet Meadows

Relevé Plot Data Date	Relevé ID	Plant Community	Surveyors	<i>Erigeron</i> sp. ERIGERON	<i>Eriogonum</i> sp. ERIOGONUM	<i>Festuca</i> sp. FESTUCA	<i>Grindelia squarrosa</i> GRSQ	<i>Gutierrezia sarothrae</i> GUSA
11/17/2007	Veg 1	Wiregrass	PDC and AAM					
11/17/2007	Veg 2	Black sagebrush/ grass	PDC and AAM					few
11/17/2007	Veg 3	Black sagebrush/ grass	PDC and AAM					few
11/17/2007	Veg 4	Pastureland	PDC and AAM					rare
11/17/2007	Veg 5	Pinyon/ juniper	PDC, AAM, BG, and TS	few	rare	few		
11/17/2007	Veg 6	Rabbitbrush	PDC and AAM					
11/17/2007	Veg 7	Dry pastureland	PDC and AAM				rare	few
11/17/2007	Veg 8	Sagebrush/ grass	PDC and AAM					
11/17/2007	Veg 9	S/G, scattered PJ	PDC and AAM					few
11/17/2007	Veg 10	Oakbrush	PDC and AAM					
11/17/2007	Ref 11	S/G sagebrush	PDC and AAM					few
11/18/2007	Veg 12	PJ	PDC and AAM					few
11/18/2007	Veg 13	Sagebrush/ grass	PDC and AAM					
11/17/2007	Veg A (15)	Pastureland	TS and BTG					
11/17/2007	Veg B (16)	Sagebrush/ grass	TS and BTG					
11/17/2007	Veg C (17)	Sage/ Gambel Oak/ Grass	TS and BTG					
11/17/2007	Veg D (18)	Black sagebrush/ grass	TS and BTG					
11/17/2007	Veg E (19)	Black sagebrush/ grass	TS and BTG					
11/18/2007	Veg F (20)	S/G chipped	PDC and BTG					
11/18/2007	Veg G (21)	P-J	PDC and BTG					
11/18/2007	Veg H (22)	Rabbitbrush	PDC and BTG					
11/18/2007	Veg I (23)	ARNO / CHNA	PDC and BTG	few				
11/18/2007	Veg J (24)	S/G chipped	PDC and BTG					
11/18/2007	Veg K (25)	Gambel oak	PDC and BTG					
11/18/2007	Veg L (26)	S/G (ARNO)	PDC and BTG					

Alton Coal Tract LBA EIS Report of Reconnaissance Surveys: Vegetation and Special Status Species, Wildlife and Special Status Species, Sandloving Penstemon, Wet Meadows

Relevé Plot Data Date	Relevé ID	Plant Community	Surveyors	<i>Hordeum jubatum</i> HOJU	<i>Juncus arcticus</i> JUAR	<i>Juniperus osteosperma</i> JUOS	<i>Juniperus scopulorum</i> JUSC
11/17/2007	Veg 1	Wiregrass	PDC and AAM	moderate	common		
11/17/2007	Veg 2	Black sagebrush/ grass	PDC and AAM			few	
11/17/2007	Veg 3	Black sagebrush/ grass	PDC and AAM			few	
11/17/2007	Veg 4	Pastureland	PDC and AAM			rare	
11/17/2007	Veg 5	Pinyon/ juniper	PDC, AAM, BG, and TS			common	
11/17/2007	Veg 6	Rabbitbrush	PDC and AAM		moderate	few	
11/17/2007	Veg 7	Dry pastureland	PDC and AAM				
11/17/2007	Veg 8	Sagebrush/ grass	PDC and AAM			few	
11/17/2007	Veg 9	S/G, scattered PJ	PDC and AAM			few	
11/17/2007	Veg 10	Oakbrush	PDC and AAM			few	moderate
11/17/2007	Ref 11	S/G sagebrush	PDC and AAM		moderate		
11/18/2007	Veg 12	PJ	PDC and AAM			common	rare
11/18/2007	Veg 13	Sagebrush/ grass	PDC and AAM	few		few	
11/17/2007	Veg A (15)	Pastureland	TS and BTG				
11/17/2007	Veg B (16)	Sagebrush/ grass	TS and BTG				
11/17/2007	Veg C (17)	Sage/ Gambel Oak/ Grass	TS and BTG				
11/17/2007	Veg D (18)	Black sagebrush/ grass	TS and BTG			few	
11/17/2007	Veg E (19)	Black sagebrush/ grass	TS and BTG			few	
11/18/2007	Veg F (20)	S/G chipped	PDC and BTG			few	
11/18/2007	Veg G (21)	P-J	PDC and BTG			common	
11/18/2007	Veg H (22)	Rabbitbrush	PDC and BTG				
11/18/2007	Veg I (23)	ARNO / CHNA	PDC and BTG				
11/18/2007	Veg J (24)	S/G chipped	PDC and BTG			few	
11/18/2007	Veg K (25)	Gambel oak	PDC and BTG			few	
11/18/2007	Veg L (26)	S/G (ARNO)	PDC and BTG	few			

Alton Coal Tract LBA EIS Report of Reconnaissance Surveys: Vegetation and Special Status Species, Wildlife and Special Status Species, Sandloving Penstemon, Wet Meadows

Relevé Plot Data Date	Relevé ID	Plant Community	Surveyors	Mustard sp.	Opuntia sp.	Penstemon palmeri	Peraphyllum ramosissimum
				MUSTARD	OPUNTIA	PEPA	PERA
11/17/2007	Veg 1	Wiregrass	PDC and AAM				
11/17/2007	Veg 2	Black sagebrush/ grass	PDC and AAM				
11/17/2007	Veg 3	Black sagebrush/ grass	PDC and AAM				
11/17/2007	Veg 4	Pastureland	PDC and AAM				
11/17/2007	Veg 5	Pinyon/ juniper	PDC, AAM, BG, and TS		moderate		rare
11/17/2007	Veg 6	Rabbitbrush	PDC and AAM			rare	
11/17/2007	Veg 7	Dry pastureland	PDC and AAM				
11/17/2007	Veg 8	Sagebrush/ grass	PDC and AAM				
11/17/2007	Veg 9	S/G, scattered PJ	PDC and AAM				
11/17/2007	Veg 10	Oakbrush	PDC and AAM				
11/17/2007	Ref 11	S/G sagebrush	PDC and AAM				
11/18/2007	Veg 12	PJ	PDC and AAM	rare	rare		rare
11/18/2007	Veg 13	Sagebrush/ grass	PDC and AAM			few	
11/17/2007	Veg A (15)	Pastureland	TS and BTG				
11/17/2007	Veg B (16)	Sagebrush/ grass	TS and BTG				
11/17/2007	Veg C (17)	Sage/ Gambel Oak/ Grass	TS and BTG				
11/17/2007	Veg D (18)	Black sagebrush/ grass	TS and BTG				
11/17/2007	Veg E (19)	Black sagebrush/ grass	TS and BTG				
11/18/2007	Veg F (20)	S/G chipped	PDC and BTG				
11/18/2007	Veg G (21)	P-J	PDC and BTG				
11/18/2007	Veg H (22)	Rabbitbrush	PDC and BTG				
11/18/2007	Veg I (23)	ARNO / CHNA	PDC and BTG				
11/18/2007	Veg J (24)	S/G chipped	PDC and BTG				
11/18/2007	Veg K (25)	Gambel oak	PDC and BTG		few		
11/18/2007	Veg L (26)	S/G (ARNO)	PDC and BTG				

Alton Coal Tract LBA EIS Report of Reconnaissance Surveys: Vegetation and Special Status Species, Wildlife and Special Status Species, Sandloving Penstemon, Wet Meadows

Relevé Plot Data Date	Relevé ID	Plant Community	Surveyors	<i>Sanguisorba minor</i> SAMI	<i>Sissymbrium sp.</i> SISSYMBRIUM	<i>Sissymbrium altissimum</i> SIAL	<i>Stipa hymenoides</i> STHY
11/17/2007	Veg 1	Wiregrass	PDC and AAM				
11/17/2007	Veg 2	Black sagebrush/ grass	PDC and AAM				
11/17/2007	Veg 3	Black sagebrush/ grass	PDC and AAM				
11/17/2007	Veg 4	Pastureland	PDC and AAM				few
11/17/2007	Veg 5	Pinyon/ juniper	PDC, AAM, BG, and TS				
11/17/2007	Veg 6	Rabbitbrush	PDC and AAM				
11/17/2007	Veg 7	Dry pastureland	PDC and AAM				
11/17/2007	Veg 8	Sagebrush/ grass	PDC and AAM				
11/17/2007	Veg 9	S/G, scattered PJ	PDC and AAM				
11/17/2007	Veg 10	Oakbrush	PDC and AAM				
11/17/2007	Ref 11	S/G sagebrush	PDC and AAM				
11/18/2007	Veg 12	PJ	PDC and AAM				
11/18/2007	Veg 13	Sagebrush/ grass	PDC and AAM		moderate		
11/17/2007	Veg A (15)	Pastureland	TS and BTG				
11/17/2007	Veg B (16)	Sagebrush/ grass	TS and BTG				
11/17/2007	Veg C (17)	Sage/ Gambel Oak/ Grass	TS and BTG				
11/17/2007	Veg D (18)	Black sagebrush/ grass	TS and BTG				
11/17/2007	Veg E (19)	Black sagebrush/ grass	TS and BTG				
11/18/2007	Veg F (20)	S/G chipped	PDC and BTG			few	
11/18/2007	Veg G (21)	P-J	PDC and BTG				
11/18/2007	Veg H (22)	Rabbitbrush	PDC and BTG				
11/18/2007	Veg I (23)	ARNO / CHNA	PDC and BTG				
11/18/2007	Veg J (24)	S/G chipped	PDC and BTG	few			
11/18/2007	Veg K (25)	Gambel oak	PDC and BTG				
11/18/2007	Veg L (26)	S/G (ARNO)	PDC and BTG				

Alton Coal Tract LBA EIS Report of Reconnaissance Surveys: Vegetation and Special Status Species, Wildlife and Special Status Species, Sandloving Penstemon, Wet Meadows

Relevé Plot Data	Relevé ID	Plant Community	Surveyors	<i>Symphoricarpus oreophilus</i>	<i>Trifolium</i> sp.	<i>Triglochin maritima</i>	<i>Verbascum thapsis</i>	<i>Yucca</i> sp.
Date				SYOR	TRIFOLIUM	TRMA	VETH	YUCCA
11/17/2007	Veg 1	Wiregrass	PDC and AAM			few		
11/17/2007	Veg 2	Black sagebrush/ grass	PDC and AAM					
11/17/2007	Veg 3	Black sagebrush/ grass	PDC and AAM					
11/17/2007	Veg 4	Pastureland	PDC and AAM					
11/17/2007	Veg 5	Pinyon/ juniper	PDC, AAM, BG, and TS	few				rare
11/17/2007	Veg 6	Rabbitbrush	PDC and AAM					
11/17/2007	Veg 7	Dry pastureland	PDC and AAM		rare			
11/17/2007	Veg 8	Sagebrush/ grass	PDC and AAM					
11/17/2007	Veg 9	S/G, scattered PJ	PDC and AAM					
11/17/2007	Veg 10	Oakbrush	PDC and AAM	moderate				
11/17/2007	Ref 11	S/G sagebrush	PDC and AAM					
11/18/2007	Veg 12	PJ	PDC and AAM	few				
11/18/2007	Veg 13	Sagebrush/ grass	PDC and AAM					
11/17/2007	Veg A (15)	Pastureland	TS and BTG					
11/17/2007	Veg B (16)	Sagebrush/ grass	TS and BTG					
11/17/2007	Veg C (17)	Sage/ Gambel Oak/ Grass	TS and BTG					
11/17/2007	Veg D (18)	Black sagebrush/ grass	TS and BTG					
11/17/2007	Veg E (19)	Black sagebrush/ grass	TS and BTG					
11/18/2007	Veg F (20)	S/G chipped	PDC and BTG					
11/18/2007	Veg G (21)	P-J	PDC and BTG					
11/18/2007	Veg H (22)	Rabbitbrush	PDC and BTG					
11/18/2007	Veg I (23)	ARNO / CHNA	PDC and BTG					
11/18/2007	Veg J (24)	S/G chipped	PDC and BTG				rare	
11/18/2007	Veg K (25)	Gambel oak	PDC and BTG	few				
11/18/2007	Veg L (26)	S/G (ARNO)	PDC and BTG					

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Attachment 2. Vegetation Associations and Species List

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VEGETATION SURVEY PROTOCOLS FOR ALTON COAL TRACT LBA

Habitat schemes as set by Mt. Nebo Scientific 2007

Sagebrush/Grass
<i>Artemisia tridentata</i> var. <i>tridentata</i> - big sagebrush
<i>Artemisia nova</i> - Black sagebrush
<i>Koeleria micrantha</i> - Junegrass
<i>Poa secunda</i> - Sandberg's bluegrass
<i>Chrysothamnus depressus</i> - longflower rabbitbrush
<i>Gutierrezia sarothrae</i> - Broom snakeweed
<i>Eriogonum racemosum</i> - redroot buckwheat
<i>Gillia aggregata</i>
<i>Linum perenne</i> - Flax
<i>Bouteloua gracilis</i> - Sideoats grama
<i>Bromus tectorum</i> - Cheatgrass
<i>Elymus smithii</i> - Western wheatgrass
<i>Elymus trachycaulus</i> - Slender wheatgrass
<i>Hordeum jubatum</i> - Foxtail barley
<i>Poa pratensis</i> - Kentucky bluegrass
<i>Stipa hymenoides</i> - Indian ricegrass

Meadows (Wet and dry)
<i>Carex</i> sp.-Sedges
<i>Juncus arcticus</i> - wiregrass
<i>Gutierrezia sarothrae</i> - Broom snakeweed
<i>Achillea millefolium</i> - yarrow
<i>Aster ascendens</i> - Pacific aster
<i>Artemisia nova</i> - Black sagebrush
<i>Eriogonum racemosum</i> - redroot buckwheat
<i>Linum lewisii</i> - Flax
<i>Potentilla anserina</i>
<i>Bouteloua gracilis</i> - Sideoats grama
<i>Elymus elymoides</i> - Squirreltail
<i>Elymus smithii</i> - Western wheatgrass
<i>Hordeum jubatum</i> - Foxtail barley
<i>Koeleria micrantha</i> - Junegrass
<i>Muhlenbergia asperifolia</i> - Scratchgrass
<i>Poa pratensis</i> - Kentucky bluegrass

Perennial/Annual Grasses
No quantitative vegetation surveys

Pinyon-Juniper/Sagebrush
<i>Artemisia nova</i> - Black sagebrush
<i>Juniperus osteosperma</i> - Utah juniper
<i>Artemisia tridentata</i> var. <i>tridentata</i> - big sagebrush
<i>Phlox austromontana</i> - Desert phlox
<i>Pinus edulis</i> - Pinyon pine
<i>Amelanchier utahensis</i> - Utah serviceberry
<i>Gutierrezia sarothrae</i> - Broom snakeweed

Mountain Brush
<i>Quercus gambelii</i> - Gambel oak
<i>Cercocarpus montanus</i> - Alderleaf mountain mahogany
<i>Peraphyllum ramosissimum</i> - Squaw-apple
<i>Amelanchier utahensis</i> - Utah serviceberry
<i>Elymus smithii</i> - Western wheatgrass
<i>Symphoricarpos oreophilus</i> - snowberry
<i>Agropyron cristatum</i> - Crested wheatgrass

Pinyon-Juniper/Mountain Brush Transition between pinyon-juniper and mountain brush
<i>Quercus gambelii</i> - Gambel oak
<i>Juniperus osteosperma</i> - Utah juniper
<i>Amelanchier utahensis</i> - Utah serviceberry
<i>Pinus edulis</i> - Pinyon pine

Pinyon-Juniper Woodland
<i>Juniperus osteosperma</i> - Utah juniper
<i>Pinus edulis</i> - Pinyon pine
<i>Phlox austromontana</i> - Desert phlox

Mining Plan Approval Documents

UNITED STATES
DEPARTMENT OF THE INTERIOR

This mining plan approval document is issued by the United States of America to:

Alton Coal Development, LLC
463 North 100 West
Cedar City, Utah 84721

for a new mining plan for a portion of Federal lease UTU-081895 at the Coal Hollow Mine. This mining plan approval is the first for the Coal Hollow Mine. The approval is subject to the following conditions. Alton Coal Development, LLC is hereinafter referred to as the operator.

1. Statutes and Regulations: This mining plan approval is issued pursuant to Federal lease UTU-081895; the Mineral Leasing Act of 1920, as amended (30 U.S.C. 181 et seq.); and in the case of acquired lands, the Mineral Leasing Act for Acquired Lands of 1947, as amended (30 U.S.C. 351 et seq.). This mining plan approval is subject to all applicable laws and regulations of the Secretary of the Interior which are now or hereafter in force; and all such laws and regulations are made part hereof. The operator shall comply with the provisions of the Federal Water Pollution and Control Act (33 U.S.C. 1251 et seq.), the Clean Air Act (42 U.S.C. 7401 et seq.), and other applicable Federal laws.

2. This document approves the new mining plan for a portion of Federal lease UTU-081895 at the Coal Hollow Mine and authorizes coal development or mining operations on the Federal lease within the area of mining approval. This authorization approves mining Federal coal for the first time at the Coal Hollow Mine in the following Federal coal lands:

UTU-081895

T. 39 S., R. 5 W., Salt Lake Baseline and Meridian (SLM)
Sec. 19, N1/2SE1/4, SE1/4SE1/4
Sec. 20, N1/2SW1/4

These lands in Federal lease UTU-081895 encompass approximately 42.6 acres and are found on the United States Geological Service 7.5 minute Quadrangle map of Alton Quadrangle, as shown in the map appended hereto as Attachment A.

3. The operator shall conduct coal development or mining operations only as described in the complete permit application package, and approved by the Utah Division of Oil, Gas and Mining, except as otherwise directed in the conditions of this mining plan approval.
4. The operator shall comply with the terms and conditions of the lease, this mining plan approval, and the requirements of Utah Permit No. C/025/0005 issued under the Utah State program, approved pursuant to the Surface Mining Control and Reclamation Act of 1977 (30 U.S.C. 1201 et seq.).

5. This mining plan approval shall be binding on any person conducting coal development or mining operations under the approved mining plan and shall remain in effect until superseded, canceled, or withdrawn.
6. If, during mining operations, unidentified prehistoric resources are discovered, the operator shall ensure that the resources are not disturbed and shall notify the Utah Division of Oil, Gas and Mining and the Office of Surface Mining Reclamation and Enforcement. The operator shall take such actions as are required by the Utah Division of Oil, Gas and Mining in coordination with the Office of Surface Mining Reclamation and Enforcement.
7. The Secretary retains jurisdiction to modify or cancel this approval, as required, on the basis of further consultation with the U.S. Fish and Wildlife Service pursuant to section 7 of the Endangered Species Act, as amended, 16 U.S.C. 1531 et seq.

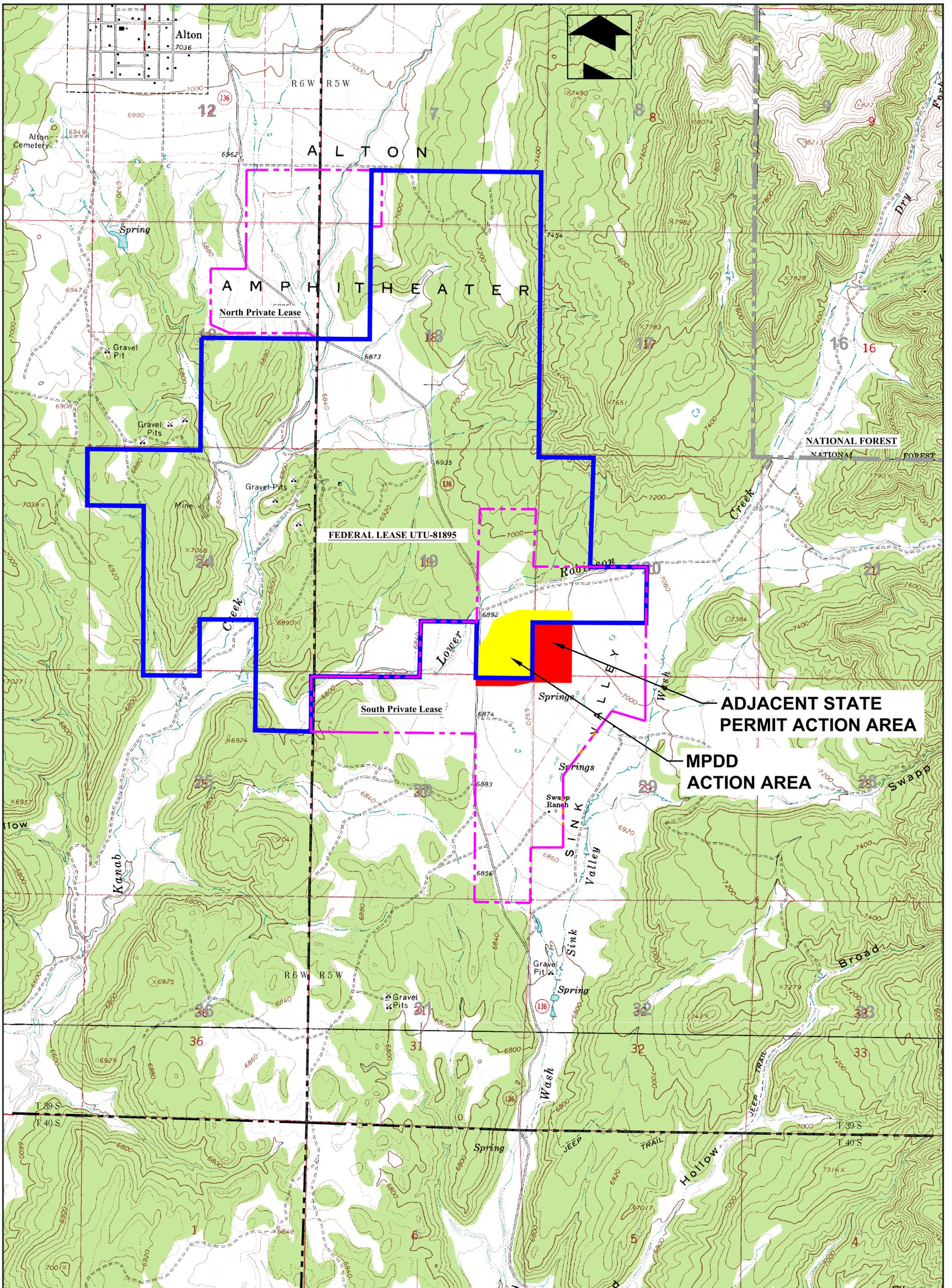


Joseph R. Balash
Assistant Secretary
Land and Minerals Management
U.S. Department of the Interior

7/29/19

Date

Attachment



LEGEND:

	FEDERAL LEASE BDY. UTU-81895
	STATE PERMIT BOUNDARY
	MPDD ACTION AREA
	STATE PERMIT ACTION AREA

DRAWN BY: ARC	CHECKED BY: LWJ
DRAWING:	DATE: 3/20/2019
JOB NUMBER: MPDD	SCALE: 1" = 1000'
	SHEET

REVISIONS	
DATE:	BY:

PERMIT MAP
STATE PERMITS & Federal Coal Lease UTU-81895

COAL HOLLOW PROJECT
ALTON, UTAH
Federal Mine Plan Decision Document

ATTACHMENT
A



463 North 100 West, Suite 1
Cedar City, Utah 84721
Phone (435)867-5331
Fax (435)867-1192

State Permit Findings



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

March 4, 2019

Nicole Caveny, Utah Federal Lands Coordinator
Office of Surface Mining Reclamation and Enforcement
Western Region
1999 Broadway, Suite 3320
Denver, Colorado 80202

Subject: Decision Document, LBA Block 1, Coal Hollow Mine, Alton Coal Development, LLC, C/025/0005, Task #5855

Dear Ms. Caveny:

The Division has completed our Decision Document for the LBA Block 1 area at the Coal Hollow Mine. Two copies of the entire package are enclosed as per your request. The package consists of the Decision Document, the Revised Permit with conditions, our Technical Analysis, a Location Map and the 510c clearance. The Division believes that the application is complete and accurate and is ready for federal mine approval.

This completes our portion of the process and we are forwarding this for your use in completing the Secretarial approval portion of the mine plan approval. Your prompt review and processing is requested.

Please call me at (801) 538-5350 if there is any other information that you require.

Sincerely,

Steve Christensen
Permit Supervisor

SKC/sqs
O:\025005.COL\WG5855 LBA\MPMD.DOC

State Decision Document

**Alton Coal Development, LLC
LBA Block 1
Coal Hollow Mine
C/025/0005**

March 4, 2019

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

Alton Coal Development, LLC
LBA Block 1
Coal Hollow Mine
C/025/0005

CONTENTS

- * Administrative Overview
- * Location Map
- * Permitting Chronology
- * Permit with conditions, dated March 4, 2019
- * Technical Analysis, dated March 4, 2019
- * AVS Recommendation, dated February 28, 2019

ADMINISTRATIVE OVERVIEW

Alton Coal Development, LLC
LBA Block 1
Coal Hollow Mine
C/025/0005
Kane County, Utah

March 4, 2019

PROPOSAL:

Alton Coal Development, LLC proposes to expand the Coal Hollow Mine in Kane County to include the first LBA federal coal block known as Federal Block 1 or LBA Block 1.

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 portion of the North Private Lease (area 10) was approved for mining on February 2, 2016. This allowed the mine to continue operations on areas not affecting wetlands. Area 1 was later expanded on December 21, 2016 to allow additional mining through pit #9 in the North Lease.

Alton Coal Development, LLC submitted an application to expand the Coal Hollow Mine in Kane County to include the first LBA federal coal block known as Federal Block 1 or LBA Block 1. The Division approved the amendment on March 4, 2019. Approval of the federal coal block will change the Coal Hollow Mine from a Non-Federal Mine to a Federal Mine and will require a federal mine plan modification.

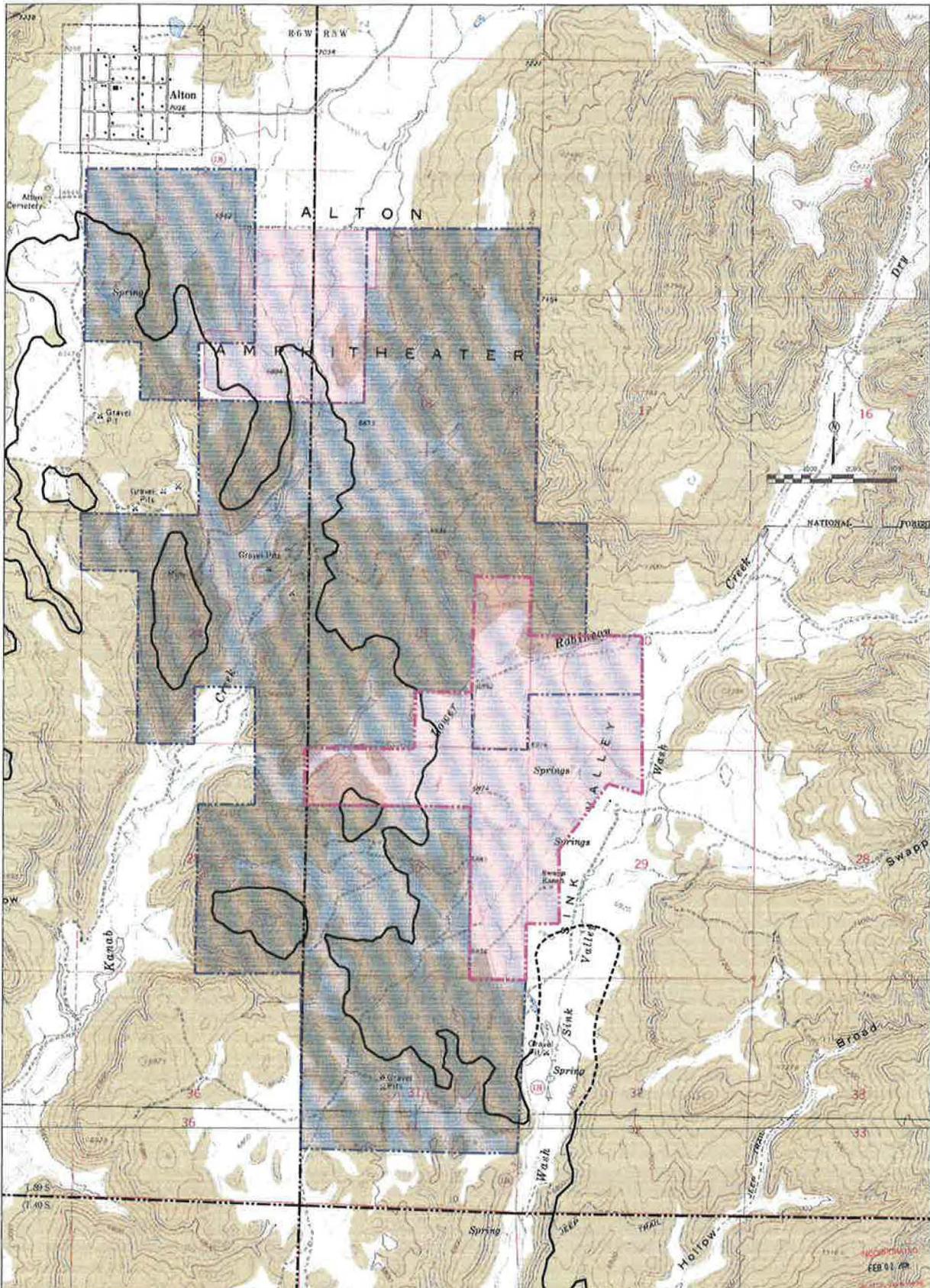
ANALYSIS:

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 LBA 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 February 28, 2019 and there are no violations.

It is recommended that approval be given for mining in the expanded boundary of the LBA federal coal block at the Coal Hollow Mine with the conditions summarized as Attachment A to the Permit.

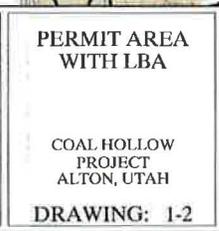


LEGEND:	
	PROPOSED LBA BOUNDARY
	PERMIT AREA
	COAL LINE BOUNDARY
	COUNTY ROAD

DRAWN BY: N. BUTKOVICH	CHECKED BY: DWG
DRAWING: 1-2	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

PERMIT AREA WITH LBA	
COAL HOLLOW PROJECT ALTON, UTAH	
DRAWING: 1-2	



463 North 100 West, Suite 1
Cedar City, Utah 84721
Phone (435) 867-3534
Fax (435) 867-1192

PERMITTING CHRONOLOGY

Alton Coal Development, LLC
LBA Block 1
Coal Hollow Mine
C/025/0005
Kane County, Utah

March 4, 2019

October 15, 2018	Alton Coal Development, LLC, submits the permit application package for LBA Block 1 at the Coal Hollow Mine.
November 20, 2018	The Division finds deficiency in the application notifies ACD to resubmit the application.
December 17, 2018	ACD submits a revised application.
January 24, 2019	The Division finds deficiency in the application notifies ACD to resubmit the application.
January 30, 2019	ACD submits a revised application.
February 28, 2019	AVS check completed with issue recommendation.
March 4, 2019	TA completed.
March 4, 2019	Revised Permit approved with conditions.

FEDERAL

PERMIT

June 21, 2017
Revised March 4, 2019

C/025/0005

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 (DOGGM) 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 encompassing 1017.153 acres. A performance bond is filed with the DOGM in the amount of \$13,000,000, payable to the state of Utah, Division of Oil, Gas and Mining and the United States Department of Interior, Office of Surface Mining Reclamation and Enforcement is filed with the Division. 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

The following described lands located in Kane County, Utah within Sec. 12 &13, T39S, R6W and within Sec. 7 &18, T39S, R5W:

Beginning S 58 degrees 16' 29" W a distance of 1,920.87 ' from Section Corner 7-18-12-13, T39S, R5R6W; thence N 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 S54°58'33" E a distance of 226.53'; thence S 89°45'07" E a distance of 1235.50'; thence N 00°41'09" E a distance of 1322.97'; thence N 00°41'09" E a distance of 1322.97'; thence S 89°30'20" E a distance of 241.42'; thence N 00°51'49" E a distance of 1323.52'; thence N 89°22'59" W a distance of 249.30'; thence N 89°56'02" W a distance of 2923.34'; thence S 00°24'59" W a distance of 2326.09'; which is the point of beginning, having an area of 12,877,780.47 square feet, or **295.633 acres**

This legal description is for the permit area (1017 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.

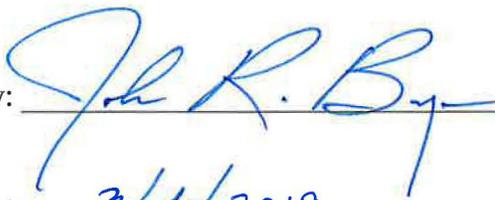
- Sec. 9 DISPOSAL OF POLLUTANTS** - The permittee shall dispose of solids, sludge, filter backwash or pollutants in the course of treatment or control of waters or emissions to the air in the manner required by the approved Utah State Program which prevents violation of any applicable state or federal 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: 
Date: 3/4/2019

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. The Applicant will be required to monitor for selenium where water leaves the minesite, during operational and reclamation phases.
4. 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.
5. Prior to conducting coal mining and reclamation operations within areas 2 & 3 of the North Private Lease, Alton Coal Development will obtain the necessary 404 permit from the U. S. Army Corp. of Engineers.
6. As part of the incremental bonding scenario, prior to mining beyond pit #12 of the North Private Lease, Alton Coal Development will post additional performance bond or will reduce their reclamation liability by acquiring additional bond release.
7. Alton Coal Development, LLC must receive federal mine approval from the Secretary of the Interior and concurrence from the Office of Surface Mining. Mining is not authorized in the LBA Block 1 Area until the Mine Plan has been signed by the Assistant Secretary of the Interior.



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

Technical Analysis and Findings

Utah Coal Regulatory Program

March 4, 2019

PID: C0250005
TaskID: 5855
Mine Name: COAL HOLLOW
Title: LBA BLOCK 1

Summary

The application provides mining plans for a block of federal coal that is located within the SW1/4 NW1/4 of Section 20 (Dwg 1-3). The **South Lease** disturbed area boundary will increase from 372.5 acres (Chap 1, p. 18) to 414.5 acres. The federal block is designated 2019 mining on Plate 5-2. Overburden will be removed as shown on Dwg 5-16. Under the proposed mining scenario, the underground mining facilities in Pit 10 would be eliminated and Pits F7 and F8 will become the access for UG mining.

pburton

General Contents

Right of Entry

Analysis:

The application meets the State of Utah R645 requirements for Right of Entry, because Chapter 1, p. 15 references federal coal lease UTU-81895, signed February 14, 2019 that provides underground right of entry. The lease is included in Appendix 1-2.

The surface Right of Entry document is the Pugh Lease item 8.04 found in Appendix 1-2 (Confidential 10152009.doc).

pburton

Permit Term

Analysis:

The application meets the State of Utah R645 requirements for Permit Term, because the termination date for the South Lease is contingent upon completion of UG Mining authorized by federal lease UTU -81895. The lease was issued February 14, 2019 for a period of twenty years which could extend the life of mine until 2039. The North Lease completion date is expected to be 2023. Dwg 5-38 and Dwg 5-76A provide anticipated completion dates for mining areas within the South and North Leases, respectively.

pburton

Permit Application Format and Contents

Analysis:

The amendment meets the State of Utah R645 requirements for Permit Application Format and Contents.

Previously this amendment did not satisfy R645-301-121.100 and R645-301-121.200 because information was missing

or features incorrectly labeled within Drawings 5-9, 5-17, and 5-22. Permittee has corrected the minor typographical and arithmetic errors present in these Drawings and now meet the requirements for Permit Application Format and Contents.

jeatchel

Environmental Resource Information

Historic and Archeological Resource Information

Analysis:

The amendment meets the State of Utah R645-301-411 requirements for historic and archeological information. There are three cultural sites located in or adjacent to the LBA Block 1 project area: 42KA2060, 42KA6104, and 42KA6105. These sites have all been recorded and mitigated for in anticipation of coal mining and reclamation activities. There are no other known sites that have been in the area. Deficiencies regarding the consultation process with the Bureau of Land Management were raised in a previous task (#5833) associated with this proposal. Following consultation with the Office of Surface Mining Reclamation and Enforcement (email correspondence from Feb. 25, 2019) it is determined that the permitting process may move forward using the July 14, 2008 SHPO concurrence as evidence to satisfy the requirements of R645-301-411. The 2008 clearance applies to this amendment due to the fact that it involves land previously approved for coal mining and reclamation activities and has, in fact, already been partially disturbed. Future amendments, however, that are for activities outside the currently established permit area, would be subject to BLM consultation and approval prior to the initiation of mining.

tmiller

Climatological Resource Information

Analysis:

The amendment meets the State of Utah R645 requirements for Climatological Resources.

The climatological resources of the area have been adequately classified and quantified for the mining area. These data have been continually updated through subsequent amendments to the MRP through the years keeping climate data up-to-date.

kstorror

Geologic Resource Information

Analysis:

Geologic Resource information was provided in the original Coal Hollow permit application and was incorporated into the Mining and Reclamation Plan on October 15, 2009. Information for the South Lease area was adequately characterized and has not changed as a result of this amendment. LBA Block 1 is entirely located within the existing permit boundary of the South Lease area.

dhaddock

Hydro Baseline Information

Analysis:

The amendment meets the State of Utah R645 requirements for Baseline Information.

The amendment proposes to mine federal coal within the current permit area of the Coal Hollow mine. Surface water and groundwater resources within and adjacent to the permit area have been seasonally monitored for baseline and operational parameters since the issuance of the permit.

kstorror

Probable Hydrologic Consequences Determination

Analysis:

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

The amendment proposes to mine the federal coal sitting north of Pit 10 in the south lease. Drawings 5-9 and 5-10 show the coal extraction area and the location and orientation of the pits to mine the coal. The PHC is updated to state the pits will be located entirely to the west of the north-south trending Tropic shale ridge running through the permit area and open-pit mining will not disturb the aquifer resting to the east of the ridge. If future amendments on open pit extents propose to mine through this ridge the PHC shall be updated to address any impacts to the hydrologic balance that will occur. Including potentially reduced flows at springs resting along the southern end of the ridge near the Dame's property.

kstorrar

Hydro GroundWater Monitoring Plan

Analysis:

The amendment meets the State of Utah R645 requirements for Groundwater Monitoring.

The amendment proposes to mine federal coal within the current permit area of the Coal Hollow mine. Groundwater resources within and adjacent to the permit area have been seasonally monitored for baseline and operational parameters since the issuance of the permit.

kstorrar

Hydro SurfaceWater Monitoring Plan

Analysis:

The amendment meets the State of Utah R645 requirements for Surface Water Monitoring.

The amendment proposes to mine federal coal within the current permit area of the Coal Hollow mine. Surface water resources within and adjacent to the permit area have been seasonally monitored for baseline and operational parameters since the issuance of the permit.

kstorrar

Maps Subsurface Water Resources

Analysis:

The amendment meets the State of Utah R645 requirements for Subsurface Water Resource Maps.

The amendment updates Drawings 7-15 and 7-15B within the MRP to show the cross-sectional and plan view extent of mining activities in the LBA Block 1. Open pit mining will resume adjacent to the Tropic Shale ridge in the south lease. It is well known a large alluvial aquifer rests to the east of the Tropic Shale ridge. The mining operations at the Coal Hollow mine have taken significant precautions in the past to not mine through the aquitard shale ridge barrier and leave the alluvial aquifer undisturbed.

The updated Drawing 7-15B shows the cross-sectional lateral extent of the open pit setbacks and the location of the highwall miner auger holes in relation to the Tropic Shale ridge and alluvial deposits to the east. The groundwater table in the alluvial deposits are shown cross-sections A-A' through F-F'. These cross-sections extend north to span the proposed open pits within the LBA Block 1. Drawing 7-15 shows a plan view profile of the pit locations, highwall auger hole extents and the boundary of the 'Excavated Area Disturbance' shown on Plate 5-17 in the amendment. The update includes the aerial orthoimage and the Sink Valley Fault line.

kstorrar

Maps Surface Water Resource

Analysis:

The amendment meets the State of Utah R645 requirements for Surface Water Resources Maps.

The amendment proposes to mine federal coal within the current permit area of the Coal Hollow mine. Surface water resources within and adjacent to the permit area were identified during the initial issuance of the permit.

kstorrar

Operation Plan

Coal Recovery

Analysis:

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

The amendment satisfies the minimum requirements of R645-301-522 because narrative on pages 5-27 through 5-30 provides the most current coal recovery volumes in both the South Leases as well as the North Private Lease. The narrative indicates how much coal within the lease is recoverable, and breaks out the tonnages according to which recovery method will be employed, either by Surface, Underground or Highwall mining. Recent to this amendment is a table that further clarifies how much coal tonnage is included in the Federal coal reserves within the permit boundary.

There are 5,664,100 tons of Federal coal reserves within the South Lease permit boundary; this amendment is presently seeking to recover 1,135,200 tons via surface mining methods. The remaining 4,329,800 tons of coal within the Federal coal reserves will be pursued at a later date. The narrative further clarifies that surface mining methods will recover 95%, underground mining methods will recover 45%, and highwall mining methods will recover 35% of the planned tons within the South Lease. A coal extraction overview is depicted on Drawing 5-9, which offers an illustration of all recoverable coal within South Lease permit boundaries.

jeatchel

Fish and Wildlife Protection and Enhancement Plan

Analysis:

The amendment meets the State of Utah R645-301-333 requirements for historic and archeological information. Deficiencies regarding the consultation process with the Bureau of Land Management were raised in a previous task (#5833) associated with this proposal. Following consultation with the Office of Surface Mining Reclamation and Enforcement (email correspondence from Feb. 25, 2019) it is determined that the permitting process may move forward. An updated threatened and endangered species list was obtained from the USFWS (IPaC 2/27/19) and it showed no new threatened or endangered species in the project area that hadn't already been consulted upon during previous permitting of the area.

The threatened or endangered species that have been identified as being potentially in the area, as of Feb. 2019, are the Utah prairie dog, the Mexican spotted owl, the Southwestern willow flycatcher, and the Jones cycladenia. The California condor also appears on the species list, however the population in Kane County, Utah is designated as an experimental, non-essential population with no critical habitat near the project area. There is no known habitat for Utah prairie dog and the species is not known to occur in or near the project area. The required habitat and known apparent distributional information indicate that it is not likely that the proposed mining activities will impact the Mexican spotted owl. The Southwestern willow flycatcher has the potential to have occurred in or near the project area but they are typically observed in thick willow riparian habitats that are not common in the project area. Though it was determined that it would be highly unlikely to impact this species from mining activities, surveys and habitat assessments were still made in consultation with USFWS in 2015. Due to the lack of high-quality habitat and the fact that no individuals were observed in the surveys, it was further reinforced that mining activities in the proposed project area would not affect the Southwestern willow flycatcher. It has also been determined that the project area does not contain the geology and soil types necessary to support a population of Jones cycladenia so no affects to this species are anticipated.

The primary wildlife concern with the Coal Hollow project has been the potential impact to the greater sage grouse, a wildlife species of concern in the state of Utah. Throughout the life of the mine, Alton Coal Development has performed compensatory mitigation including sage grouse habitat improvement in and around the mine site. As of the most recent sage grouse annual progress report, the company has completed 2,700 acres of habitat improvement to mitigate 554.5 acres of disturbance, a nearly 5:1 ratio. In addition to this compensatory mitigation, the company has also engaged in predator control, employee training programs, and other efforts to avoid, minimize, and mitigate the impact to the greater sage grouse.

tmiller

Topsoil and Subsoil

Analysis:

The application meets the requirements of R645-301-232, topsoil and subsoil removal, because soil recovery depths are reported on Dwg 2-1 Soil Survey map and because soil salvage monitoring commitments are described on pages 5-2 and 5-3 of Appendix 2-1.

Dwg 2-2 Topsoil Handling map provides a lot of information relating to the progress of final reclamation; the locations of substitute topsoil and subsoil; the current and future locations and volumes of stockpiled topsoil and subsoil; topsoil and subsoil accounting tables for the South Lease; and the outline of the LBA Blk 1 salvage area. **The entire LBA Blk 1 area (80 acres)** will have subsoil salvaged. Half the area (42 acres) is new disturbance, and so, will also have topsoil salvaged. The new disturbance area is faintly differentiated within the outline of LBA 1 disturbance. It is shown as area that will be live-hauled topsoil, but does not require topsoil for final reclamation. (That status will change with disturbance, of course.)

The Topsoil Accounting Table on Dwg 2-2 states that there currently is 96,681 CY of topsoil stored in stockpiles. The table also states that 215,586 CY of topsoil is required for final reclamation of the remaining South Lease disturbed areas, including the LBA Blk 1. The difference between the stockpiled and required is 118,905 CY. Topsoil to be salvaged from the **42 acre New Disturbance** and the 10 acres of R1 & RS soils in the LBA Blk 1 will contribute 59,111 CY (personal communication with K. Nicholes 2.21.2019). That is an average topsoil salvage of 8.4 inches. Thus after LBA Blk 1 topsoil salvage, the topsoil deficit will be reduced to 49,495 CY. The Dwg 2-1 Topsoil Accounting Table provides some other sources of topsoil: the topsoil cultivation area and the undisturbed borrow area could together contribute 71,480 CY of topsoil substitute.

The subsoil Accounting Table on Dwg 2-2 states that there currently is 120,760 CY of subsoil stored in stockpiles. The table also states that 878,550 CY of subsoil is required for final reclamation of the remaining South Lease disturbed areas, including the LBA Blk 1. The difference is 757,790 CY. Subsoil salvage from the **80 acre LBA Blk 1** is estimated to yield 573,635 CY. An average subsoil salvage depth of 4.4 feet (53 inches) is required to achieve this estimated subsoil volume. With the addition of LBA Blk 1 subsoil, the deficit of subsoil is reduced to 184,155 CY for the South Lease. Dwg 2-1 Subsoil Accounting Table provides some other sources of subsoil: the 23 acre former spoils pile and the 21 acre undisturbed borrow area together will contribute 290,000 CY. The quality of the borrow area and spoil area subsoil is detailed in Appendix 2-4. The potential for the borrow area subsoil for use in final reclamation is not assured. Its limitations are detailed in the tables of Appendix 2-4. The Permittee has committed to further investigate this potential source of substitute subsoil (Appendix 2-4, p.7).

Dwg 2-1 Soil Survey map shows that soil map units 1, 6, 9, 10 and 11 will be salvaged during the LBA Blk 1 mining. Table 4-2 in Appendix 2-1 provides the original weighted average soil salvage from each map unit. These weighted average salvage depths are referred to in the soil handling plan shown on Dwg 2-1 and in MRP Section 232.100. These original weighted average soil depths were calculated to ensure that the final reclamation of the entire 325.9 acre mined area would have an overall average of fair quality (Appendix 2-1, p. 4-1). The Division is concerned that the soil salvage depths cannot be relied upon to result in an overall fair to good quality of salvaged soil for this LBA Block 1 amendment, because the weighted average equation has changed. i.e. The total salvage area is 80 acres rather than 325.9 acres stated in Table 4-5. Thus, the proportion of map unit 1 in overall salvage has changed from 7% (or 23.6 acres out of 325.9 from Tables 4-3.1 and 4-5) to 30% of the 80 acre LBA Blk 1 (Division's estimate). Thus, Map unit 1 now represents a greater proportion of the soils to be salvaged. The same is true for all the map units to be salvaged. All these map units have characteristics that limit the extent of salvage of good to fair soil.

Appendix 2-1, Table 5-1 provides the average depths to limiting soil features (or poor quality soil) for each map unit, as follows: map unit 1 = 33 inches; map unit 6 = 18 inches; map unit 9 = 36 inches; map unit 10 = 19 inches; map unit 11 = 24 inches. The table is preceded by the statement that "the combined depth of topsoil and subsoil varies...depending on physiographic setting and soil texture." The Division previously encouraged further field reconnaissance of the map units in the LBA Block 1 to provide more certainty of the average salvage depth, but the Permittee has strenuously objected to collecting further survey data from LBA Block 1 (cover letters dated 12/18/2018 and 1/30/2019). That being the case, the Division must rely upon the Permittee's monitoring commitments for soil salvage and handling to ensure the quality of the replaced soil. The South Lease soil handling commitments are stated in Appendix 2-1 and Chapter 2, and they are re-stated below.

- Appendix 2-1, p. 4-1. Salvage depths may include some poor quality materials when the weighted average of mixed soil is still within the fair range (referring to the Division's 2008 Guidelines for Topsoil & Overburden specifications).
- Appendix 2-1, p. 4-2. Actual topsoil and subsoil salvage depths will be closely monitored by Alton Coal Development staff in consultation with a certified professional soil scientist to ensure that unsuitable materials are not incorporated into the topsoil and subsoil stockpiles or placed directly into the reclamation soil profile

(again referring to the Division's Guidelines).

- Appendix 2-1, p. 5-2. The salvage plan will achieve a 90% weighted average of good or fair quality soil on the final graded surface (referring to the Division's 2008 Guidelines for Topsoil & Overburden).
- Appendix 2-1, p. 5-2. Materials similar to that characterized by core hole 7 [tropic shale overburden] should not be used as substitute subsoil with in the 48 inch reclamation soil profile.
- Appendix 2-1, p. 5-3. ACD will conduct a monitoring program in the field during mining operations to ensure that only materials with good or fair suitability are placed in the upper four feet of the reclamation soil profile (referring to the specifications in the Division's Guidelines).
- MRP Section 232.500. Areas in the North or South Lease that exhibit surface accumulation of salts after being placed will be tested for elevated SAR ratio, this information will be reported with the topsoil sampling.
- MRP Section 232.300, Surface 8 inches of the reclaimed surface will be sampled and tested for fertility of the available phosphorus, soluble potassium, and nitrate-nitrogen content. One sample will be collected from every 2 – 5 acres based on soil type and variability.

MRP Section 232.100 states that the average depths of recovery will be used as a guide and monitored in the field using soil pedestals.

The Dwg 2-2 topsoil and subsoil accounting tables estimates that the soils handling plan will add 20,691 CY of topsoil and 131,948 CY of subsoil to Topsoil Pile #2 and Subsoil Stockpile #1, respectively.

pburton

Hydrologic Ground Water Monitoring

Analysis:

The amendment meets the State of Utah R645 requirements for Groundwater Monitoring.

The amendment proposes to develop open pits extending north of Pit 10. All groundwater resources have been accounted for within the current permitted area of the south lease. Open pit mining rests to the west of the Tropic shale ridge as shown on Drawings 5-15 and 5-15B. There will be no groundwater resources encountered within the proposed open pits and highwall mining areas. The current groundwater monitoring plan adequately monitors quantity and quality of groundwater resources within and adjacent to the permit area.

kstorror

Hydro Surface Water Monitoring

Analysis:

The amendment meets the State of Utah R645 requirements for Surface Water Monitoring.

The current water monitoring plan includes surface monitoring sites above, within and below the mining activity. There are currently four water monitoring sits along Lower Robinson creek spaced above, within, and below the permit area. The extent of the disturbance stops before the ephemeral wash of Lower Robinson creek. There are no other surface water resources within the bounds of the proposed disturbed boundary so no addition surface water monitoring sites are necessary.

kstorror

Hydrologic Diversion General

Analysis:

The amendment meets the State of Utah R645 requirements for Diversions.

The amendment includes an update to Appendix 5-2 Hydrology and Runoff Control for the south lease of the Coal Hollow mine. A few of the diversions in the south lease will be modified to accommodate mining development extending north of Pit 10 into the federal coal. The calculations for curve numbers, diversions, and culverts have been updated. Ditch 4 will be extended to the north and east to capture all runoff north of mining operations and convey it to Sediment Pond 3. Ditch 1 will be extended to the north to capture and convey all undisturbed runoff east of the disturbed area past the site and down Sink Valley wash.

The amendment discusses two new culverts will be installed along Ditch 4 shown on Drawing 5-3A on page 3 of Appendix 5-2. These culverts will allow runoff in Ditch 4 to be conveyed past the haul road and down to Pond 3.

kstorrar

Hydrologic Discharge Structures

Analysis:

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

The amendment proposes to remove Sediment Pond 2 and instead convey the runoff to Sediment Pond 3. Diversion Ditch 4 will be extend to the east running along the southern boundary of Lower Robinson Creek to capture this additional runoff. Table 3 in Appendix 5-2 provides a narrative and calculations showing Sediment Pond 3 is adequately sized to contain and treat runoff reporting to the pond from watershed 3. Sediment pond is sized to accommodate this additional runoff for the required 10 year 24 hour rain event.

kstorrar

Reclamation Plan

General Requirements

Analysis:

The applicant has met the requirements of R645-301-800 General.

The Coal Hollow Mine is presently designated as a Non-Federal Mine. A Non-Federal Mine permit for C/025/0005 was issued on June 21, 2017 with an expiration date of November 8, 2020. Alton Coal Development, LLC also has in place a Non-Federal Reclamation Agreement for the Coal Hollow Mine C/025/0005. Approval of this application will revise the Non-Federal status of the mine to a Federal mine (Federal Coal). This action will require a revised permit to include Federal mine designation. Alton Coal Development, LLC will also be required to complete a new Federal Reclamation Agreement. The Federal Reclamation Agreement will assign the State of Utah, Division of Oil, Gas and Mining (Division) as well as the U.S. Department of the Interior, Office of Surface Mining and Reclamation and Enforcement (OSM) as Obligees of the reclamation bond.

ssteab

Topsoil and Subsoil

Analysis:

The application meets the requirements for R645-301-240, soil reclamation plan, because Drawing 2-2 Soils Handling Plan shows the stockpiling of topsoil and subsoil from approximately 10 acres around the northern edge of Pit 10 and the live haul of the remaining topsoil and subsoil to the final graded surface of Pit 10 and progressive mining pits northward.

Drawing 5-38 shows the proposed reclamation timing. Pits F7 and F8 will remain to provide underground mining access. Together pits F7 and F8 will occupy 28.3 acres. However the West side of these pits will be graded and reclaimed. The portion of pits F7 and F8 to remain for UG mining is represented on Dwg 5-38 as an area of approximately 16 acres.

pburton

Hydrological Information Reclamation Plan

Analysis:

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

The natural surface drainage pattern will be re-established following the proposed mining activities. The proposed open pit surface disturbance will mine through a relatively flat area sloping very gently to the west. Drawing 5-37 shows the open pits will be backfilled and the natural topography will be re-established to be a gentle westward dipping surface following the completion of mining activities.

kstorrar

Bonding Determination of Amount

Analysis:

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

The amendment satisfies the minimum requirements of R645-301-830 because Permittee has included cost estimates and cost model data to account for the additional surface disturbance in the South Lease associated with this application. The latest mine plan now proposes to mine surface pits 10-B and F-01 through F-08 in the Federal coal lease just north of the current Pit 10. In the process, Pit 10 will be filled in with the overburden from the pits as mining progresses north. Once pits F-01 through F-06 have been mined out and backfilled, Pits F-07 and F-08 will remain open to accommodate development of underground mining. The additional surface disturbance associated with essentially shifting the Pit 10 void north to Pits F-07 and F-08 equals 42 acres and is addressed in the bond posting and release plans included in this submittal. The maximum reclamation liability is addressed for both the South Lease and the North Private Lease, and the 10% Phase 1 incremental bonding figures are also preserved for all pits. Previously the posted bond amount was \$12,750,000 and was considered adequate for the full life of both permit areas. As a result of the increased surface disturbance associated with additional mining in the South Lease the posted bond has been increased to \$13,000,000. The increased bond coverage will be needed because at the end of 2019 the cumulative bond liability increases to \$12,961,883.

jeatchel



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

February 28, 2019

To: Internal File

From: Steve Christensen, Coal Program Manager *gkc 2/28/19*

Subject: 510 (c) Recommendation for Alton Coal Development, LLC, Coal Hollow Mine, C/025/0005, Task #5855

As of writing of this memo, there are no NOV's or CO's which are not corrected or in the process of being corrected for the Coal Hollow Mine. There are no finalized civil penalties, which are outstanding and overdue in the name of Alton Coal Development, LLC. Alton Coal Development, LLC does not have a demonstrated pattern of willful violations, nor have they been subject to any bond forfeitures for any operation in the state of Utah.

Attached is a recommendation from the OSM Applicant Violator System for the Coal Hollow Mine that states there are no outstanding violations.

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Application Evaluation

There were no violations retrieved by the system

Application Number: C0250005 SEQ:5
 Applicant Name: 247248 Alton Coal Development LLC
 Date of Request: 2/28/2019 9:37:49 AM
 Requestor: suzanne.steab

CAUTION: The Applicant/Violator System (AVS) is an informational database. Permit eligibility determinations are made by the regulatory authority with jurisdiction over the permit application not by the AVS. Results which display outstanding violations may not include critical information about settlements or other conditions that affect permit eligibility. Consult the AVS Office at 800-643-9748 for verification of information prior to making decisions on these results.

Violation Type	Violation Number	Violation Entities	Permit Number	Permitted State	Violation Status	Violation Date
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Evaluation OFT

Entities: 8

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