



## Alton Coal Development, LLC

463 North 100 West, Suite 1

Cedar City, Utah 84720

Phone (435) 867-5311 Fax (435) 867-1192

March 30, 2019

Steve Christensen  
Coal Program Manager  
Oil, Gas & Mining  
1594 West North Temple, Suite 1210  
Salt Lake City, UT 84114-5801

**Subject: 2018 Coal Mining Annual Report; Alton Coal Development LLC, Coal Hollow Mine, C/025/0005**

Dear Mr. Haddock,

Alton Coal Development, LLC is providing the 2018 Coal Mining Annual Report for the Coal Hollow Mine. The completed report and attachments have been electronically submitted by uploading to the Divisions e-Permitting site.

No changes to the MRP associated with this report have been made. Please do not hesitate to contact me if you have any questions 435-691-1551.

Sincerely

B. Kirk Nicholes  
Resident Agent

# 2018 ANNUAL REPORT

Submit the completed document and any additional information identified to the Division by March 31, 2019.

## GENERAL INFORMATION

Company Name	Alton Coal Development, LLC	Mine Name	Coal Hollow Mine
Permit Number	C/025/0005	Permit Expiration Date	2020-11-08
Operator Name	Alton Coal Development, LLC	Phone Number	+1 (435) 867-5331
Mailing Address	463 N 100 W Suite 1	Email	knicholes@altoncoal.com
City	Cedar City		
State	Utah	Zip Code	84721

## DOGM File Location or Annual Report Location

Excess Spoil Piles	<input checked="" type="checkbox"/> Required <input type="checkbox"/> Not Required	
Refuse Piles	<input type="checkbox"/> Required <input checked="" type="checkbox"/> Not Required	
Impoundments	<input checked="" type="checkbox"/> Required <input type="checkbox"/> Not Required	
Other:		

## OPERATOR COMMENTS

Certified inspection of sediment ponds 1, 1B, 2, 4, 5 and 6 was completed on March 29, June 18, Sept. 24, and Nov. 14, 2018 with the Annual Recertification completed during the June 18th inspection. Certified inspection of the SPL excess spoil pile was completed on Mar. 29, Jun. 18, Sept. 24 and Nov. 14, 2018. For the NPL excess Northwest Temporary spoil pile, Nov. 14, 2018. Copies of the inspection reports can be found in ACD's Cedar City office and the Coal Hollow Mine office. Reports were also emailed to the Division each quarter and have been included with this Annual Report.

## REVIEWER COMMENTS

Met Requirements  Did Not meet Requirements



**Title: WILDLIFE AWARENESS PROGRAM**

**Objective:** To provide protection for the resident wildlife and minimize impacts (collisions) from vehicles and heavy equipment.

**Frequency:** Continuous and as needed for new employees throughout the life of the mine.

**Status:** Ongoing

**Reports:** Annual, log of employee awareness meetings, road kills for deer, elk, sage grouse and domestic livestock from the mine site to highway 89.

**Citation:** Chapter 3, pages 3-29

**OPERATOR COMMENTS**

Wildlife Awareness training was held on January 23, 2018 for all employees. Instruction was given by Kirk Nicholes. Attendance sheets and slides from the training presentation have been included with this submittal. There were no employee road kills for deer, elk, sage-grouse or domestic livestock from the mine site to highway 89.

**REVIEWER COMMENTS**

Met Requirements

Did Not Meet Requirements

**Title: COMPENSATORY MITIGATION**

**Objective:** Improve sage-grouse habitat in a 4:1 ratio to disturbance.

**Frequency:** Mitigation will be implemented prior to disturbance

**Status:** Ongoing

**Reports:** Provide plans for 2018 mitigation and disturbance to ensure mitigation is implemented prior to disturbance.

**Citation:** Appendix 3-8, pages 11 & 12

**OPERATOR COMMENTS**

A copy of the 2018 Sage-grouse Mitigation Cooperative Agreement has been included with this Annual Report. 2018's project brought ACD's mitigation efforts to a total of 2,700 acres as required in the current MRP.

**REVIEWER COMMENTS**

Met Requirements

Did Not Meet Requirements

**Title: RECLAMATION TIMETABLE**

**Objective:** To ensure timely reclamation

**Frequency:** Map detailing reclamation actives for the year. (Drawing 5-38 and 5-76)

**Status:** Annually updated.

**Reports:** Annual summary of work completed to date.

**Citation:** Chapter 5, page 5-83 and Chapter 3, page 33

**OPERATOR COMMENTS**

No new reclamation activities were completed in 2018. The current Drawing 5-38 in the MRP is up to date. Drawings 5-76A and 5-76B have been updated and are part of an amendment to the MRP removing Area 3 from the NPL. All three drawings are provided with this



**Title: SAGE GROUSE MONITORING**

**Objective:** To monitor sage-grouse distribution and bird numbers. Total monitoring effort (GPS transmitters and information from DWR lek counts) will be combined to provide a comprehensive analysis of sage-grouse habitat use and population movement patterns.

**Frequency:** Annual

**Status:** Ongoing

**Reports:** Comprehensive report compiled into annual report.

**Citation:** Chapter 3, Appendix 3-8, page 11

**OPERATOR COMMENTS**

Data from the monitoring activities is included in the report titled "Greater Sage-grouse Population Monitoring and Habitat Improvement, Alton-Sink Valley, Utah, November 16, 2018." Since last year, birds with transmitters had either died or lost their backpack, resulting in no data for much of the 2018 year. During the fall, crews led by Dr. Frey attempted to trap sage-grouse to resume high accuracy monitoring, however, no additional birds were trapped.

**REVIEWER COMMENTS**

Met Requirements

Did Not Meet Requirements

**Title: SUBSIDENCE MONITORING**

**Objective:** Company will conduct surface observation walkovers of each of the panels within 60days of the completion of mining. Two additional observation walkovers will be made at approximately one year intervals following the initial walkover. The Division will be notified of the results as either no effects or repairs needed.

**Frequency:** Quarterly inspections

**Status:** Started underground 4th quarter 2015

**Reports:** 60 days after completion of panel and two annually

**Citation:** Chapter 5 page 5-42 & 5-43

**OPERATOR COMMENTS**

Underground mining was suspended on June 1, 2016. Mining completed, consist of a distance of approximately 1,200' in the entry, no mining was completed within the permitted panels.

**REVIEWER COMMENTS**

Met Requirements

Did Not Meet Requirements

**Title: NOISE MONITORING TO SAGE GROUSE**

**Objective:** Observe if noise changes bird behavior

**Frequency:** One sound station at each cardinal direction at 100, 500m, and 1000m from North Lease Mine Site.

**Status:** Ongoing

**Reports:** Provide observations and data in the annual conservation and management plan.

**Citation:** Appendix 3-8, page 11



# FUTURE COMMITMENTS AND CONDITIONS

The following commitments are not required for the current annual report year, but will be required by the permittee in the future as indicated by the "status" field. These commitments are included for information only, and do not currently require action. If you feel that the commitment is no longer relevant or needs to be revised, please contact the Division.

**Title: REVIEW AND EVALUATE THE FACILITIES SPILL PLAN (APPENDIX 7-5)**

**Objective:** To ensure the accuracy of the Facilities Spill Plan and to determine if additional or more effective spill prevention and control technology that is applicable to the facility must be added.

**Frequency:** At least once every five years.

**Status:** Last review 2015, next review due 2019.

**Reports:** Completed Plan Review form submitted for incorporation into Appendix B of Appendix 7-5.

**Citation:** Chapter 7, Appendix 7-5, Section 2.2 Plan Review, page 2

**Title: DAMES LEASE ANNUAL VEGETATION SURVEY**

**Objective:** To determine if mining or mining related activities are having an impact on the wet meadow habitat

**Frequency:** Annual

**Status:** Sampled in 2015

**Reports:** Annual Summary including species composition, percent cover and plant density

**Citation:** Chapter 3, Appendix 3-8

# REPORTING OF OTHER TECHNICAL DATA

Please list other technical data or information that was not included in the form above, but is required under the approved plan, which must be periodically submitted to the Division.

Please list attachments:

**REVIEWER COMMENTS**

Met Requirements

Did Not Meet Requirements

# MAPS

Copies of mine maps, current and up-to-date, are to be provided to the Division as an attachment to this report in accordance with the requirements of R645-301-525.240. The map copies shall be made in accordance with 30 CFR 75.1200 as required by MSHA. Mine maps are not considered confidential.

Map Name	Map Number	Included		Confidential	
		Yes	No	Yes	No
Annual Mine/ Reclamation Area Map	5-38, 5-76A and 5-76B	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Mine Map	CHM SurfaceMineMap,CHM 	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**REVIEWER COMMENTS**  Met Requirements  Did Not Meet Requirements

# Annual Refresher

1-23-2018

Topic: Environmental & Wildlife Training

Instructor: Kirk Nicholes

Attendees:

~~Sam S. Barr~~

~~Sam S. Barr~~

Milo Palmer

Kendall Tait

Tim Heaton

Jim Lutting

Val Boy

Chad Spenser

~~Sam S. Barr~~

Eini Leach

~~Sam S. Barr~~

~~Sam S. Barr~~

~~Sam S. Barr~~

~~Sam S. Barr~~

Ralph E. Fisher

Sam Heaton

John R. Hunt

~~Sam S. Barr~~

LOMA 2

Dore Middle

~~Sam S. Barr~~

Kent Anderson

Scott Cook

Max Campbell

~~Sam S. Barr~~

Neil Rull

Nick Goff

~~Sam S. Barr~~

Charlie Damm

~~Sam S. Barr~~

~~Sam S. Barr~~

ANDREW CHRISTENSEN

# Alton Coal Development Environmental Awareness

2018  
Orientation



# Alton Coal Development Environmental Overview

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- Various permits govern environmental compliance for the site
    - State/Federal/Local Agencies
    - Compliance Tasks, Monitoring, & Inspections
    - Reporting & Recordkeeping
  - Beyond basic permits, we need to be proactive to continue mining at Coal Hollow Project
-

# Alton Coal Development Environmental Areas of Concern

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- Air Quality
  - Construction-Stormwater Pollution Prevention Plan
  - Spill Response
  - Wildlife Awareness
  - Cultural Resources
-

# Alton Coal Development

## Air Quality

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- Utah Approval Order (less than 10 tpy HAP's, less than 100 tpy other pollutants)
  - Project Activities Generating Fugitive Dust
    - Material Storage (Topsoil/subsoil, Coal, Overburden)
    - Material Handling, Hauling Loading or Dumping
    - Haul Roads, Roadways, or Yards
    - Clearing, Leveling, and Vegetated Reclamation Areas
    - Earth Moving, Excavation
    - Drilling, Blasting, Pushing Operations
    - Material Processing
-

# Alton Coal Development Air Quality

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## ➤ Employee responsibilities

- Insure dust control measures are being utilized when applicable (water sprays, tackifier, water truck, etc.)
  - Be aware of throughput amounts (if applicable)
  - Report excessive dust problems immediately
  - Speed limits on Haul Roads 25 mph
  - Watch for areas to improve air quality around the site
-

# Stormwater Pollution Prevention Plan (SWPPP)

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- # Erosion Control BMP's
  - # Sediment Control BMP's
  - # Non-Stormwater BMP's
  - # Emergency Procedures
  - # Good Housekeeping BMP's
-

# SWPPP

## Other BMP's

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### # Non Stormwater BMP's

- Dust Control
- Equipment Washing

### # Emergency Procedures

- Spill Prevention Plan

### # Good Housekeeping BMP's

- Trash receptacle
  - Access Road Maintenance
-

# Alton Coal Development Spill Response

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- The first person on the scene must immediately notify their Forman or Lead Man if the oil spill is outside of a secondary containment area or greater than 10 gallons inside a secondary containment area.
  - Evaluate the health hazards in the area before proceeding.
  - Evacuate the area and establish a security zone around the spill, if needed, and control access into the security zone.
  - Stop release when it is safe to do so:
    - Implement safety-related measures.
    - Mobilize fire control equipment before entering the spill area.
    - Don appropriate personal equipment, if needed
    - Remove all ignition sources from the security zone.
-

# Alton Coal Development Cleanup Material and Equipment

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## ➤ Locations:

- Fuel/Oil Containment Area
- Mine Equipment
- Fuel/Service Truck

## ➤ Contents (Large):

- Over-pack Drum
  - Pads
  - Socks
  - Boom
  - Granular Sorbent
  - Repair Putty
  - Nitrile Gloves & Goggles
-

# Alton Coal Development Cleanup Material and Equipment

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➤ Contents (Small):

- Pads
- Socks
- Nitrile Gloves

# Alton Coal Development Spill Clean-up Procedures

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- If a large spill occurred or the spill reached a waterway, call a clean-up contractor and they will provide additional equipment to clean up the spill.
  - **DO NOT** use water to clear the spill away! Water will mobilize the spill and require additional clean-up efforts.
  - Pick up free liquid that has collected in sumps or containment area with spill clean-up kits. Place free liquid that has been collected in a tank or drums for temporary storage.
-

# Alton Coal Development

## Spill Clean-up Procedures cont.

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- Clean-up liquid that has spread over a non-porous surface with absorbent material such as oil-dry or absorbent socks or booms. Collect oil-soaked cleanup materials and place them in leak-proof containers.
  - For spills on gravel or soil, absorb as much of the liquid as possible with absorbent material and then excavate the oil-contaminated gravel or soil down to visibly clean material. Place the excavated material in piles for temporary storage.
-

# Alton Coal Development Disposal Procedures

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- Liquid oil that has been collected should be recycled at an offsite facility, if possible, or disposed of at a regulated and licensed facility
  - Ship only oily soil that has been excavated to a landfill or land farm that is permitted to dispose of or treat oil-contaminated soil
  - Dispose of oil-soaked absorbent material in a landfill permitted for this type of industrial waste.
-

# Alton Coal Development Wildlife Awareness

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- Objective: Protection of resident wildlife, minimize impact to wildlife during mining.
    - Speed limits of all vehicles will be 25 mph inside the permit area.
    - No operations will be conducted that would likely jeopardize T&E species.
    - Electric power lines and other transmission facilities are designed and constructed to minimize electrocution hazards to raptors.
-

# Alton Coal Development Wildlife Awareness cont.

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- The mine site is considered habitat for:
    - Deer (mid April to mid November)
    - Elk
    - Black Bear
    - Sage grouse (throughout the year, report to Kirk)
  - Wildlife and domestic livestock mortalities from coal haul and associated vehicles from the mine site to highway 89 reported to the Environmental Specialist.
-

# Alton Coal Development Wildlife Awareness cont.



# Alton Coal Development Wildlife Awareness cont.



# Alton Coal Development Wildlife Awareness cont.



# Alton Coal Development Wildlife Awareness cont.



# Joe – Mar. 18, 2016



Davey – Jan. 25, 2016



# Cultural Resources

## Archaeology & Cultural Resources 101

What is archaeology?

The systematic study of man's past through material remains

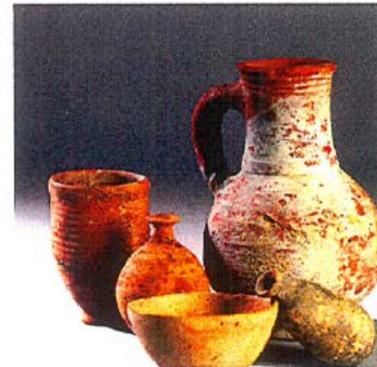
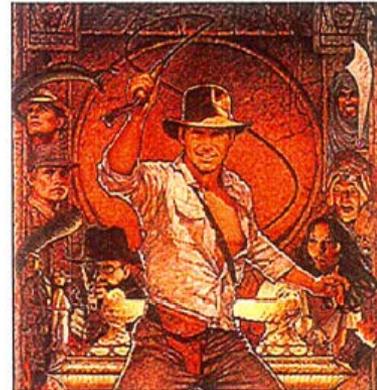
Material remains include:

Artifacts

Defined as physical evidence of an indigenous culture. Includes items such as pottery, basketry, bottles, weapons, arrowheads, tools, structures, rock art, graves, human remains etc.

Sites

Defined as a geographic locality that contains the artifacts. Sites deemed significant are then listed on the National Register of Historic Places



# Cultural Resources

## Archaeology & Cultural Resources 101

Archaeology encompasses both historic and prehistoric resources

### Historic

Defined as peoples and cultures who are known through written documents in their own or other languages.

Artifacts are historic if...

they were created, modified or used by people prior to 1960 but after European contact (anything 50+ years or older can be considered an artifact)

### Prehistoric

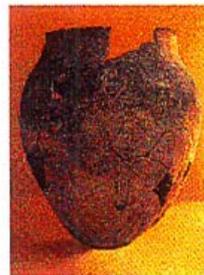
Defined as peoples and cultures who are unknown through contemporaneous written documents in any language.

Artifacts are prehistoric if...

they were created, modified or used by Native Americans prior to European contact.

# Prehistoric Cultural Resources

## Ceramics



## Projectile Points



# Prehistoric Cultural Resources

Tools



Bifaces



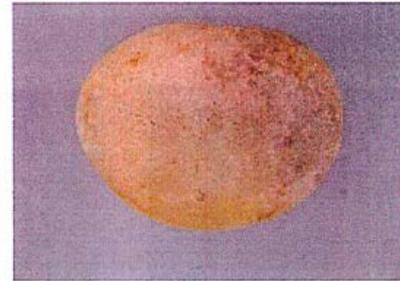
Scrapers



Drills



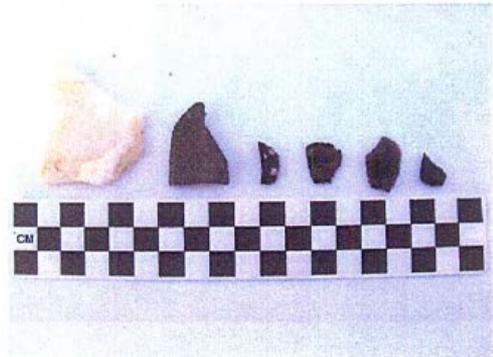
Needles & Perforators



Hammerstones

# Prehistoric Cultural Resources

Chipped Stone Debitage (debris from making tools)



# Prehistoric Cultural Resources

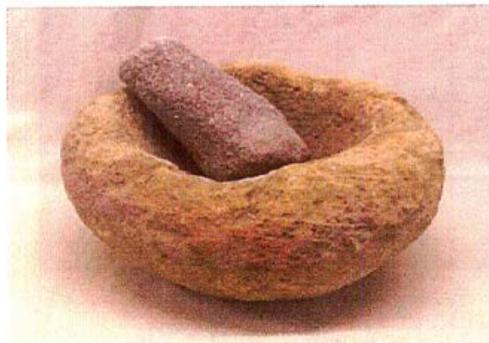
## Ground Stone



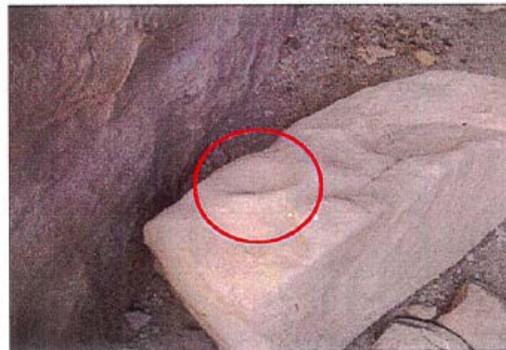
Metate



Manos



Mortar & Pestle



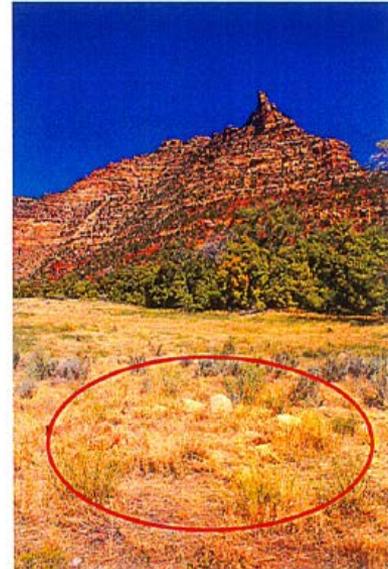
Grinding Slick

# Prehistoric Cultural Resources

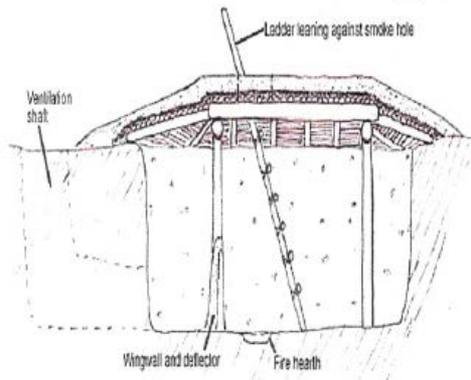
## Structures



Wikiup

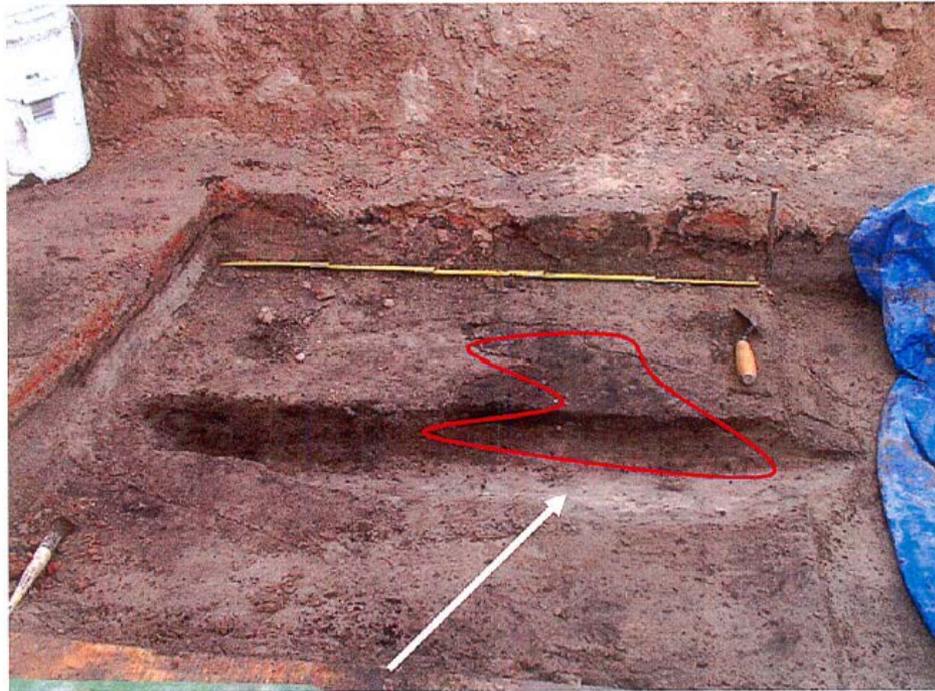


Pithouses



# Prehistoric Cultural Resources

Not all stains indicate hazardous materials...



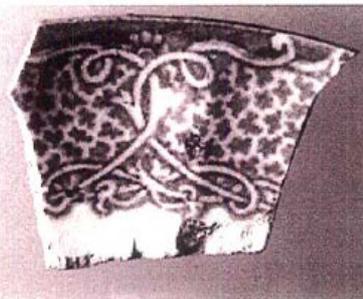
This charcoal staining is the result from prehistoric burning (e.g., cooking fire). Archaeologists use charcoal such as this for radiocarbon dating, in order to determine the date of occupation at a given site.

# Historic Cultural Resources

## Glass



## Ceramics

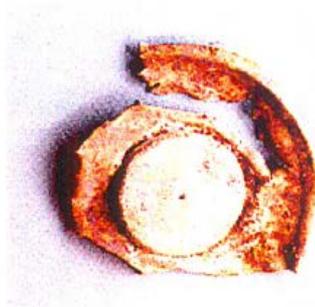


# Historic Cultural Resources

## Tin Cans



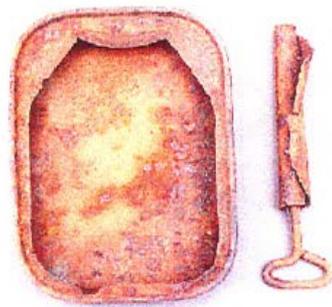
Hole-and-cap



Hole-in-cap



Hole-in-top



Key-wind



Beer cans with "church key" openings

# Historic Cultural Resources

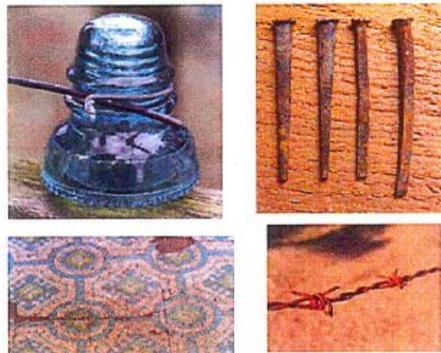
Other historic cultural resources...



Railroad rails, ties, and spikes



Farm implements and equipment



Hardware



Domestic and personal items

# What are Our Responsibilities

**If you see charcoal staining  
and/or artifacts like this...**



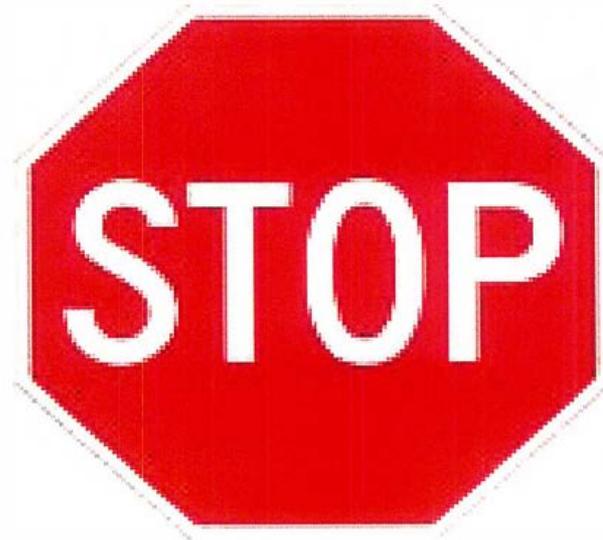
# What are Our Responsibilities

**...or this...**



# What are Our Responsibilities

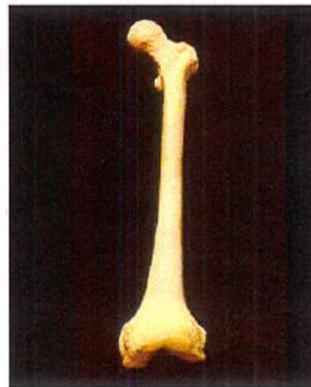
**If you see any historic or prehistoric artifacts...**



**... and notify Kirk Nicholes. He will notify the archaeologists**

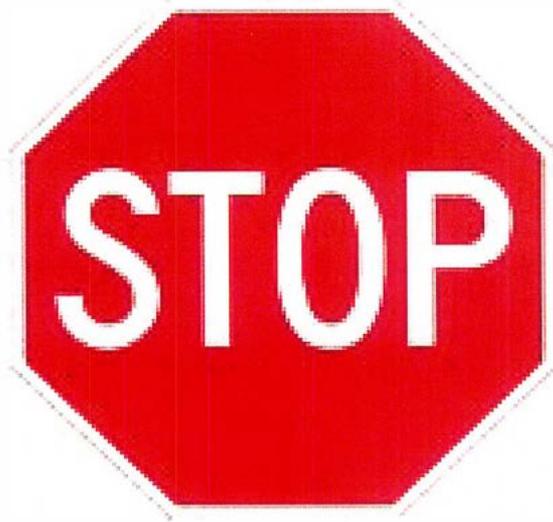
# What are Our Responsibilities

If you see human remains, or bones like this...



# What are Our Responsibilities

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**...and notify Kirk Nicholes**

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# State Law

## Cultural Resources and Human Remains are Protected by State and Federal Law

### State Laws

Utah Code, Title 9, Chapter 8, Section 307: Report of discovery on state or private lands

*Any person who discovers any archaeological resources on lands owned or controlled by the state or its subdivisions, or on privately owned lands shall promptly report the discovery to the division of state history.*

Utah Code, Title 9, Chapter 8, Section 309: Ancient human remains on non-federal lands that are not state lands

*Cease activity in the area of discovery and notify local law enforcement and landowner. Must make an effort to protect the human remains until authorities arrive. If law enforcement deems remains to be ancient, they will contact the Utah State Antiquities section. The Antiquities Section will coordinate with the landowner regarding removal of the remains.*

# Federal Laws

## Federal Laws

### National Historic Preservation Act (NHPA), Section 106

*Federal agencies must “take into account” the effects of their actions on historic properties (places included in or eligible for inclusion in the National Register); and “Accord the Advisory Council...a reasonable opportunity to comment” on their actions.*

*Determine if Section 106 compliance is required, if so, then need to identify all historic properties and archaeological sites. Must assess the effects a project will have on the historic properties and sites, and must resolve the adverse effects, including consultation with the State Historic Preservation Office and adoption of a Memorandum of Agreement, and finally, submit a formal request for the Advisory Council’s comments in the event that adverse effects are not resolved.*

### Native American Graves Protection and Repatriation Act (NAGPRA)

*Requires that federal agencies and museum that have received federal funds, repatriate Native American ancestral human remains and cultural items to tribes that can show genetic or cultural affiliation with such remains and items. NAGPRA regulates excavation of such remains and items on federal and Indian land, and provides for a minimum thirty-day hold on earthmoving activities that cause the inadvertent discovery of such remains and items.*

### Archaeological Resources Protection Act (ARPA)

*Prohibits the unauthorized excavation, removal, or damage of “archaeological resources” on federal and Indian lands. “Archaeological resource” is defined to include archaeological sites, structural remains, artifacts, bones, debris etc. Any person caught procuring or soliciting archaeological resources may be fined up to \$10,000, imprisoned up to a year, or both. If damage to the artifact or site exceeds \$500, the violator will be fined up to \$20,000 and imprisoned up to two years. Penalties and jail time increase for second offenses.*

**Failure to comply with state and federal law may result in project delays, penalties, and/or litigation**

# Alton Coal Development Environmental Responsibilities

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- # Our environmental responsibility, go beyond basic compliance
  - # Imperative that this standard is achieved, not just for current mining, but for future projects
  - # Any questions or doubt about a specific activity?  
Contact the Environmental Department
  - # If something looks questionable, it deserves a closer look!
-





# Cooperative Agreement

BETWEEN  
ALTON COAL DEVELOPMENT  
AND  
UTAH DEPARTMENT OF NATURAL RESOURCES,  
DIVISION OF WILDLIFE RESOURCES

Pursuant to Utah Code §23-22-1, this COOPERATIVE AGREEMENT is made and entered into upon the date of the last signature to this document, between the State of Utah, Department of Natural Resources, Division of Wildlife Resources (UDWR) and Alton Coal Development for completion of the *Ford Pasture Rabbit Brush Mowing (Alton Coal Mine) #4390* proposed through the Utah Partners for Conservation and Development (UPCD) Watershed Restoration Initiative (WRI).

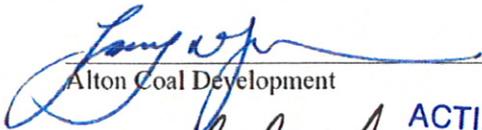
The Parties agree as follows:

1. UDWR will:
  - a. Implement the rabbit brush mowing for the completion of the *Ford Pasture Rabbit Brush Mowing (Alton Coal Mine) #4390*.
  - b. Assist with project entering of completion reports as needed.
  
2. ALTON COAL DEVELOPMENT will:
  - a. Reimburse UDWR up to \$14,040.00 for the completion of the *Ford Pasture Rabbit Brush Mowing (Alton Coal Mine) #4390*.
  - b. Will work with the project managers to submit a completion report in the WRI online database within 3 months of completion of project or by August 31, 2019.

All provisions of Attachment A and Attachment B are incorporated into and become a part of this Cooperative Agreement. If provisions of the Cooperative Agreement conflict, the order of precedence shall be (i) Attachment A; (ii) Cooperative Agreement signature page; and (iii) Attachment B.

SIGNATURES ON FOLLOWING PAGE

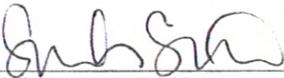
Agreed to by:

  
Alton Coal Development

9/20/2018  
Date

  
Division of Wildlife Resources/Director **ACTING DIRECTOR**

9/28/18  
Date

  
Division of Wildlife Resources/Financial Manager

9/27/2018  
Date

\_\_\_\_\_  
State of Utah/Division of Finance

\_\_\_\_\_  
Date

## ATTACHMENT A – STANDARD TERMS AND CONDITIONS

1. **INVOICING:** The Parties agree to share records with one another detailing expenditures pursuant to the Cooperative Agreement on a quarterly basis, and to reconcile all accounts no later than June 30 annually. The Cooperative Agreement number shall be listed on all invoices, freight tickets, and correspondence.
2. **LAWS AND REGULATIONS:** Each Party shall be responsible for ensuring their individual compliance with all applicable federal and state constitutions, laws, rules, codes, orders, and regulations, including applicable licensure, certification, and permitting requirements.
3. **CONFLICT OF INTEREST:** PARTNER represents that none of its officers or employees are officers or employees of UDWR or the State of Utah, unless prior written disclosure has been made to UDWR.
4. **RECORDS ADMINISTRATION:** PARTNER shall maintain all records necessary to properly account for PARTNER's performance and the payments it receives from UDWR pursuant to this Cooperative Agreement. These records shall be retained by PARTNER for at least six (6) years after final payment, or until all audits initiated within the six (6) years have been completed, whichever is later. PARTNER agrees to allow, at no additional cost, the State of Utah, federal auditors, and UDWR staff, access to all such records.
5. **TERMINATION:** This Cooperative Agreement may be terminated with cause by UDWR in advance of the specified expiration date by providing prior written notice to PARTNER. PARTNER will be given ten (10) days after written notification to correct and cease the violations, after which this Cooperative Agreement may be terminated for cause immediately. This Cooperative Agreement may also be terminated without cause (for convenience), in advance of the specified expiration date, by either party, upon sixty (60) days written termination notice being given to the other party. UDWR and PARTNER may terminate this Cooperative Agreement, in whole or in part, at any time, by mutual agreement in writing. Upon termination of the Cooperative Agreement, PARTNER shall be compensated for eligible services properly performed up to the effective date of the notice of termination. In no circumstance shall UDWR be responsible for any costs for services unsatisfactorily performed, outside of the scope of the project proposal, performed after the effective date of the notice of termination, or for costs exceeding the reimbursable total identified herein.
6. **GOVERNING LAW AND VENUE:** This Cooperative Agreement shall be governed by the laws, rules, and regulations of the State of Utah. Any action or proceeding arising from this Cooperative Agreement shall be brought in a court of competent jurisdiction in the State of Utah. Venue shall be in Salt Lake City, in the Third Judicial District Court for Salt Lake County.
7. **DEBARMENT:** PARTNER certifies that it is not presently nor has ever been debarred,

suspended, or proposed for debarment by any governmental department or agency, whether international, national, state, or local. PARTNER must notify the UDWR within thirty (30) days if debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in any contract by any governmental entity during the Cooperative Agreement term.

8. **LIABILITY:** Each Party shall be responsible for any claims, losses, suits, actions, damages, and costs of every name and description arising out of their own performance under this Cooperative Agreement. If one or more parties are found negligent, they each shall bear their proportionate share of any allocated fault or responsibility. Nothing herein shall be construed as waiving any immunity, the monetary damage limitations, or any other provision set forth in the Utah Governmental Immunity Act, Utah Code §§ 63G-7-101 through 63G-7-904.

**ATTACHMENT B – PROJECT PROPOSAL**

## Ford Pasture Rabbit Brush Mowing (Alton Coal Mine)

Project ID: 4390  
Status: Proposed  
Fiscal Year: 2019  
Submitted By: N/A  
Total Acres: 109

Project Manager: Stan Gurley  
PM Agency: Utah Division of Wildlife Resources  
PM Office: Southern Region  
Lead: Utah Division of Wildlife Resources  
WRI Region: Southern

### Description:

Improve 108 acres of sage grouse winter habitat and improve range conditions for livestock and wildlife by wet mowing rabbit brush.

### Location:

Ford Pasture is found 11 mile southeast of Glendale along the Glendale Bench Road.

## PROJECT NEED

### Need For Project:

Dense stands of rabbit brush have established and are beginning to dominate the majority of these private range lands. Removal of these stands and subsequent herbicidal treatment is required in order to restore these areas to a more diverse and desirable habitat that will benefit a wide array of wildlife species.

### Objectives:

This project will be proposed as part of the mitigation acres for the Alton Coal mine, and will be implemented in the Fall of 2018, where the focused objective is to completely remove approximately 108 acres of dense stands of rabbit brush. Herbicide will be applied to the brush as part of the mowing process. The overall objective is to completely eliminate approximately 108 acres of rabbit brush, which will allow a diverse and desirable array of native plants; thus improving habitat overall; improve overall ecosystem diversity, health, and habitat for wildlife species

### Threats / Risks:

Continued invasion and establishment of rabbit brush is a threat to sagebrush steppe and shrub steppe habitat. Unless removed, continued encroachment will result in the loss of desirable sagebrush, grass, and forb species as well as decreasing diversity and ecosystem health. As with any type of disturbance there is some risk of invasion of non-native undesirable plant species or re-establishment of rabbit brush. Proper timing and treatment selections will greatly minimize that risk; specifically, mowing and treating those areas with a herbicide.

There is a potential threat / risk of temporary displacement of wildlife species while the project is being implemented. Normal and increased wildlife use is likely to occur after implementation. There is a risk/threat to small mammals that may utilize the current stands of rabbit brush. It is anticipated that normal and increased use will return once the restoration is complete and native desirable species have returned. Overall, there will be an expected increase in vegetative diversity, and a corresponding increase in wildlife diversity

### Relation To Management Plan:

As identified in the Utah Wildlife Action Plan, Utah's shrub steppe habitat is home to 20 species that require conservation; mule deer, sage thrasher, sage sparrow, and Brewer's sparrow are listed as Tier Three species within the shrub steppe key habitat type. This project will increase and improve shrub steppe wildlife habitat within the project area.

Southwest Utah Support Area Fire Management Plan (2005) -- The project area falls within the Glendale Bench and Big Deer Fire Management Units (FMU).

Southwest Utah Regional Wildfire Protection Plan (SURWPP) (2007)

The SURWPP identified and prioritizes issues related to wildfire prevention and fuel mitigation in the Wildland Urban Interface (WUI) areas of southwestern Utah.

Utah Wildlife Conservation Strategy (2005). Of particular concern within this area are: Greater Sage Grouse (Tier 2), and mule deer (Tier 3), and shrub steppe (key habitat).

Utah Division of Wildlife Resources Statewide Management Plan for Mule Deer (2008). (Wildlife Management Unit 27 -- Paunsaugunt area is identified as a crucial summer, winter and transition range).

Color Country Adaptive Resource Management Plan for Sage Grouse (CCARM) - 2007. Strategies and Actions are to: 1) Improve age distribution of plants within sagebrush-steppe communities by 2016; 2) Identify and prioritize target areas needing improvement; 3) Coordinate among agencies and landowners to fund implementation of projects and monitoring; 4) Monitor response of sage grouse to changing habitat conditions Paunsaugunt Deer Herd Unit Management Plan (2001)

Encourages participation, as much as possible, with public and private land managers to rehabilitate and enhance important rangelands.

Memorandum of Understanding between the BLM, Natural Resource Conservation Service (NRCS), FWS, and the U.S. Forest Service (USFS) for enhancing PPH through grazing practices. National Greater Sage-Grouse Planning Strategy (2011) which provides a framework for establishing adequate regulatory mechanisms (conservation measures) in applicable BLM LUPs throughout the range of the Greater Sage-Grouse.

Both areas within this treatment provide crucial habitat for, passerines, raptors, bats, and other small mammals

**Fire / Fuels:**

N/A

**Water Quality/Quantity:**

N/A

**Compliance:**

Tordon 22k will be applied according to the label and contractor will have a valid Utah Pesticides Applicators license.

**Methods:**

The identified 108 acres will be mowed and Tordon 22k herbicide will be immediately applied to cut stems. Herbicide will be applied by a wiper attachment to the cutting head. It is anticipated that mowing and herbicide application will be conducted in the fall of 2018. Mowing will be stopped if snow depth becomes greater than 6".

**Monitoring:**

DWR range trend site may be requested. Photo points will be established. District wildlife biologist and habitat biologists will routinely check on resprouting as well as invasive weed problems.

**Partners:**

Alton Coal Mine

**Future Management:**

Future management of the project will be conducted by the landowner and DWR biologists, and decisions will be made on whether or not future subsequent treatments will be necessary to control invasive weeds or and resprouting issues that may arise.

**Domestic Livestock Benefit:**

Grazing will be improve because of increase forage and diversity of the forage. Management of grazing will be an important factor in controlling the brush in the future and a grazing management plan will be provided to the landowners and producer.

<b>BUDGET</b>	WRI/DWR	Other	Budget Total	In-Kind Total	Grand Total
	\$0.00	\$14,040.00	\$14,040.00	\$0.00	\$14,040.00

Item	Description	WRI	Other	In-Kind	Year
Contractual Services	Rabbit Brush Wet Mow 108 acres @\$130 per acre	\$0.00	\$14,040.0	\$0.00	2019

<b>FUNDING</b>	WRI/DWR	Other	Funding Total	In-Kind Total	Grand Total
	\$0.00	\$14,040.00	\$14,040.00	\$0.00	\$14,040.00

Source	Phase	Description	Amount	Other	In-Kind	Year
Alton Coal Development		When bid goes above the estimated amount the mine agrees to pay total project cost and the difference will be added to the final payment.	\$0.00	\$14,040.0	\$0.00	2019

<b>EXPENSE</b>	WRI/DWR	Other	Expense Total	In-Kind Total	Grand Total
	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00

Source	Phase	Description	Amount	Other	In-Kind	Year
Alton Coal Development		N/A	\$0.00	\$0.00	\$0.00	

**SPECIES**

Species	"N" Rank	HIG/F Rank
Mule Deer		1
Threat		Impact
Droughts		Medium
Improper Grazing – Livestock (current)		Low
Not Listed		NA
Elk		2
Threat		Impact
Improper Grazing – Livestock (historic)		Medium
Greater Sage-grouse	N3	1
Threat		Impact
Droughts		Medium
Improper Grazing – Livestock (historic)		Low
Problematic Plant Species – Native Upland		High
Domestic Livestock		N/A
Threat		Impact
Not Listed		NA

## HABITATS

### Habitat

Mountain Shrub

Threat		Impact
Improper Grazing – Livestock (historic)		Low
Problematic Plant Species – Native Upland		Low

## PROJECT COMMENTS

## COMPLETION

Start Date:

End Date:

FY Implemented:  
2019

FY Completed:

Final Methods:  
N/A

Project Narrative:  
N/A

Future Management:  
N/A

## Map Features

ID	Feature Category	Action	Treatment/Type
7323	Terrestrial Treatment Area	Herbicide application	Ground
7323	Terrestrial Treatment Area	Mowing	Other

# **Greater Sage-grouse Population Monitoring and Habitat Improvement**

## **Alton - Sink Valley, Utah**

### **Progress Report**

For

### **Alton Coal Development, LLC**



**November 16, 2018**

**Prepared by  
Steven L. Petersen, Ph.D.  
Sage-grouse Population and Habitat Consultant**

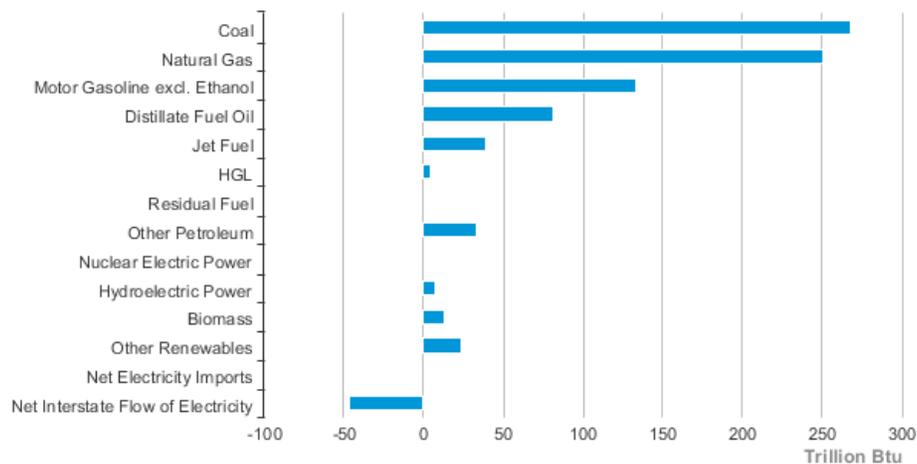
## Greater Sage-grouse Population Monitoring and Habitat Improvement Alton – Sink Valley, Utah

**Steven L. Petersen, Ph.D., Consultant**

### Introduction and Background

In the state of Utah, coal is mined to provide an important energy source for local and regional electrical power generation. In 2016, coal and natural gas combined produced 90% of Utah’s net electricity, with coal responsible for nearly 70% of that total (Figure 1, USEIA 2018). In Alton, coal is currently mined 2.7 km south of town, supporting local industry and providing employment for neighboring communities. In addition to coal, this region also provides important habitat for a diversity of plant and animals species. Of significant importance is the sagebrush habitats that sustain a sustained local population of sage-grouse (Petersen et al. 2016), hereafter referred to as sage-grouse. To ensure the long-term conservation and management of this sage-grouse population. The purpose of this report is to provide an assessment of the habitat conservation accomplishments from fall 2017 to fall 2018 within the Alton and Sink Valley region. Specifically, it will describe the status of the sage-grouse population, habitat improvements implemented in the past year (including post-disturbance habitat reclamation and pinyon-juniper tree removal), and predator control (i.e. ravens and coyotes).

**Utah Energy Consumption Estimates, 2016**



Source: Energy Information Administration, State Energy Data System

Figure 1. Estimates of energy sources used in the state of Utah. Coal is the highest, providing approximately 70% of Utah’s total energy demand.

Summary of the 2017-2018 Outcomes

The following is a report describing the significant accomplishments in sage-grouse monitoring, habitat improvements, and predator control activities accomplished during the past year. A summary of each topic described in this document includes:

1. During non-breeding months, ACD monitored sage-grouse in the Sink Valley area within important habitats that include:
  - the sagebrush field to the south of the mine
  - the bullhogged area further to the south and southwest of the mine
  - the conservation area to the east
  - the historic and new leks plus surrounding sagebrush habitats
2. Counted a maximum of 16 male birds attending the lekking areas during February 2018, which surpasses the highest count since 2001.
3. Reclaimed 279 acres of mined lands using mixes with both native and introduced plant species.
4. Mitigated 554.5 acres of mining disturbance with 2,700 acres of habitat improvements.
5. Killed 1,730 pinyon pine and Utah juniper trees in primary habitats throughout the Alton/Sink Valley area.
6. Destroyed approximately 142 ravens, 12 coyotes, and 4 red fox. All three species are known to represent threats to sage-grouse nesting success, chick survival, and adult survival.

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## **1. Sage-grouse Population Monitoring**

### **1.1 Employee Observations and Sage-grouse Population Monitoring**

All ACD employees are requested by management to report any sighting of sage-grouse within the mining region. All observations are reported to Kirk Nicholes, ACD Environmental Manager, who records the date, location and number of birds observed. ACD employee bird observations are reported when employees are fulfilling regular mining operations. They do not conduct surveys or searches for sage-grouse. Subsequently, these sightings may provide additional data on sage-grouse spatiotemporal seasonal habitat use, however, they are insufficient to adequately assess sage-grouse density and distribution within the area alone. Variability in observations may be a result of heightened awareness by employees rather than an increase in bird use activity or density.

During the 2017-18 season, mining efforts have been concentrated in the North Lease area. Collared data and surveys show that sage-grouse occurrence is much lower here than in the Sink Valley area (Frey Annual Report 2016, 2017). Similarly, the total number of birds observed by employees has also decreased compared to years when operations were being conducted in the Sink Valley area.

ACD mine employees are provided trained to identify and accurately record sage-grouse observations. K. Nicholes communicates with those who report sightings and ensures that dates, times, and coordinate locations are accurate and recorded. These results are used to demonstrate frequency of bird sightings in the area and to determine patterns of habitat use (Table 1).

Table 1. Observations of sage-grouse reported by ACD employees between March 2018 and October 2018 within the Alton/Sink Valley region and the North Lease mining area.

Obs ID	Date	Time of observation	Number of birds Observed	Location	State Plane Coordinates
1	Mar 16, 2018	8:00 am	5	Observed males strutting on the New Lek along the ridgeline (K. Nicholes)	349208.0 E 1766132.0 N
2	Mar 28, 2018	8:00 am	1	Observed 1 bird (female) on the edge of the PJ woodland near the mechanics conexes (D. Jones)	355670.3 E 1769258.9 N
3	Mar 28, 2018	3:00 pm	1	Observed 1 bird (female) on the edge of the PJ woodland near the mechanics conexes (D. Jones)	355643.1 E 1769156.7 N
4	Mar 30, 2018	8:00 am	7	6 males were strutting with 1 female observing nearby within the New Lek area (K. Nicholes)	349159.8 E 1766006.2 N
5	Apr 5, 2018	10:00 am	1	One female was located near the new cattle guard near the NPL (A. Allen)	355381.1 E 1767974.9 N
6	Jun 12, 2018	3:00 pm	7	One hen with 5-6 chicks in the well area (D. McDonald)	353597.8 E 1770180.1 N
7	Jun 13, 2018	9:15 am	3	One hen with 2 chicks found near the well area (R. Anderson)	353446.3 E 1770134.0 N
8	Jul 2, 2018	11:48 am	7	Observed 2 hens in the orchard on route to the MET station, and 1 hen, 4 chicks on the return (K. Nicholes)	353329.2 E 1770586.9 N
9	Sep 12, 2018	10:40 am	5	All 5 birds observed near the orchard (D. McDonald)	353376.8 E 1770113.5 N
10	Oct 4, 2018	12:30 pm	4	Flushed four birds during a fall trapping effort (K. Nicholes)	349507.4 E 1766969.0 N

### 1.2 Ground-based Sage-grouse Surveys

Site-wide surveys are conducted each month by Dr. S. Petersen, with the intent of locating and counting the total number of sage-grouse found within the mining region. This includes areas near the mining headquarters, the sagebrush flat, the new lek location, the bullhog region to the south, the well and conservation area (Figure 2). During breeding months, surveys are limited to non-nesting habitats to prevent hens flushing from nests or disturbing hens with chicks during the early brood-rearing period. Survey efforts in these months concentrate on lek counts and road surveys.

A survey path has been established that is roughly followed each month. This makes it possible to compare observations between months to look for increasing or decreasing sage-grouse population patterns or trends. The path courses through primary sage-grouse preferred habitats that include sagebrush (black and mountain big sagebrush), bullhogged areas, and post-mining reseedings. Each survey is conducted by slowly walking along looking for any sign of birds that includes fecal deposits, nest sites, feather piles, and flushed birds. Each time an individual bird or group of birds are observed, the coordinate position for that location is recorded (using GPS) along with the time of day.

Sage-grouse observations are recorded for the specific flush location (Figure 1). The specific areas that are searched include

- Sagebrush flat (SF)
- New lek (NL) – this breeding area is positioned along the ridge crest, located at the hilltop south of the sagebrush flat.
- South Mine Sagebrush Patch (SMSP) – this area is surrounded by PJ woodland, and supports a springtime pond, located just south of the original spoils pile.
- North Mine Sagebrush Patch (NMSP) – positioned north of the original spoils pile, this area is being invaded by young pinyon and juniper trees.
- Original Lek (OL) – until 2010, this area supported the primary lek site for Sink Valley. The birds have since shifted strutting behaviors in the NL area. The OL was mined in 2012 and is currently existing as reseeded pasture, dominated by perennial grasses, forbs, and a few naturally recruiting sagebrush seedlings.
- Wet meadow (WM) – This site supports a grass/rush/sedge community which has served historically as a site for raising chicks. This area supports a natural spring, the well, and orchard.
- East Sagebrush Patch (ESP) – this site is located east of the mine and west of the conservation area. It is dominated by black sagebrush and surrounded by PJ woodland.
- Conservation Area (CA) – located east of the mine site along the upper bench. This includes some grassland but also disked sagebrush surrounded by oak and PJ woodland.
- West Sagebrush Fields (WSF) – including all of the bullhog area located south of the new lek which connects to the sagebrush fields west of Sink Valley
- Ford’s Pasture (FP) is located 10 miles south of Sink Valley. Sage-grouse have been seen in that area during historic surveys, but no birds were detected during surveys within this area between 2017-present.
- Rabbitbrush Field (RF) – this area was treated in 2010 to reduce rabbitbrush dominance and enhance sagebrush recovery. Birds have not been seen in this area before or after treatment by ACD biologists.

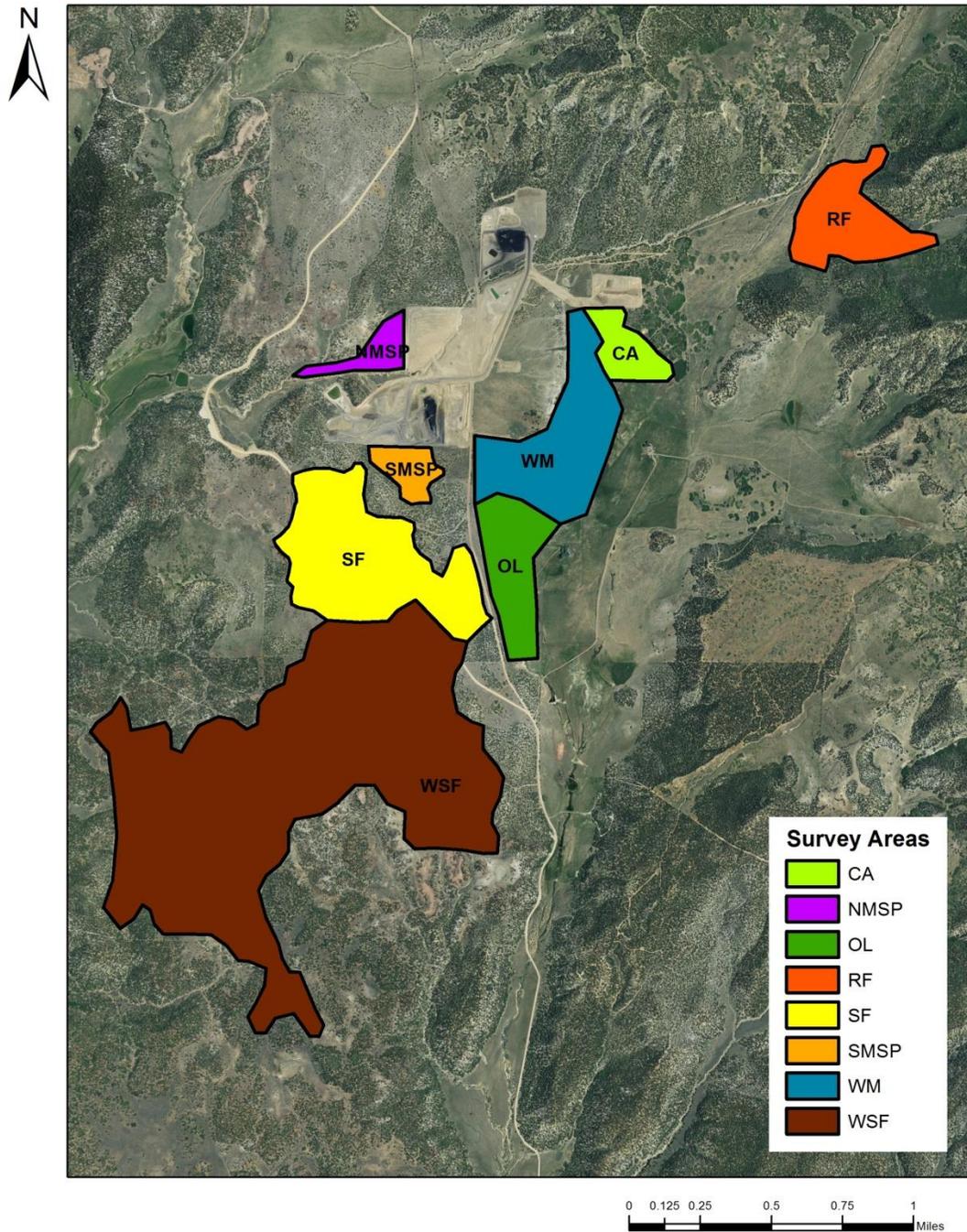


Figure 1. Location of survey areas for sage-grouse during the 2012-2018 monitoring seasons. CA = Conservation area, NMSP = North mine sagebrush patch, OL = Original lek, RL = Rabbitbrush field, SF = Sagebrush flat, SMSP = South mine sagebrush patch, WM = Wet meadow, and WSF = West sagebrush fields. Additional sites not shown above include the corridor (C) and the alfalfa fields (AF) east and south of the town Alton, respectively.

A summary of the results recorded for each monthly sage-grouse survey is provided in table 2. Historically, highest occurrence of sage-grouse has been within the sagebrush flat. However, with extensive bullhogging south of that area, birds are almost exclusively observed within these treated areas. This demonstrates the value of habitat improvement projects for this region (Frey et al. 2013).

Table 2. Observations from monthly surveys conducted by S.L. Petersen between February 2018 to December 2018.

Date	Time of observation	Number of birds	Location
Feb 10, 2018	8am-12pm	26	Flushed 1 bird at 8:15am in valley east of SF, 1 at 8:50 in the WSF-south bullhog (SB) and 24 also in the WSF bullhog area.
March 3, 2018	7am-12pm	16	Males strutting on NL at 8:40am, located along a 100m stretch across ridgeline. Males in 2 groups with 8 birds in one and 7 in the other.
April 3, 2018	7:30-12pm	0	No lekking birds observed. No extensive surveys to avoid disturbing hens. Clear sky but very cold (below freezing) and windy (+10mph)
April 23, 2018	7:30am-12pm	8	Eight males on NL at 7:45am. Active mining at the North Lease and crushing at the headquarters. Clear skies and warm morning.
May 26, 2018	7-11am	10	Flushed all birds in the WSF-SB area, in two groups of 5 at 7:27am. No active mining activity during the day.
July 7, 2018	7-12am	11	Flushed 7 birds from WSF-SB. Two birds in one group and 3 in the other at 8:28am. Flushed 1 hen with 3 chicks in the grassy portion of CA at 10:52am. Chicks were mid-size and strong fliers. No active mining and crushing, low wind speeds.
August 8, 2018	7-12am	25	Flushed 15 birds from NL in two groups (8 and 7 individuals in each at 7:45am). Flushed 5 birds at the WSF (S Bullhog) at 8:14am. Flushed 1 hen with 4 chicks from the well/orchard area at 9:53am. All 5 flew into the sagebrush treated CA.
October 13, 2018	7-11am	30	Flushed 3 birds at the SF foothills and 2 birds in the valley to the east (8:18am). Flushed 14 birds at 8:55am and another 11+ birds from the WSF-SB.
November 10, 2018	7-12pm	20	Flushed 1 bird in the WSF-SB area at 8:31. Jumped another 7 birds by the cattle guard along the county road at 9:45am and 12 birds by the sagebrush patch just south of the original spoils pile site (near the little lake).

Over the past 10 years, birds were most often observed in the sagebrush flat, however, since the WSF area was bullhogged in 2015-16, the birds have been seen almost exclusively within this area. The plant community in WSF-SB is dominated by low density (*Artemisia nova* A.

Nelson) and mountain big sagebrush (*Artemisia tridentata* Nutt. ssp. *vaseyana* (Rydb.) Beetle). There is also scattered rubber rabbitbrush (*Ericameria nauseosa*) with relatively high density Utah juniper (*Juniperus osteosperma*) and pinyon pine (*Pinus edulis*) seedlings. Figure 2 displays the location of birds where they have been flushed during monthly surveys within the non-lekking or nesting time periods (July-Feb) and Figure 3 depicts the number of birds included in each flushed flock.

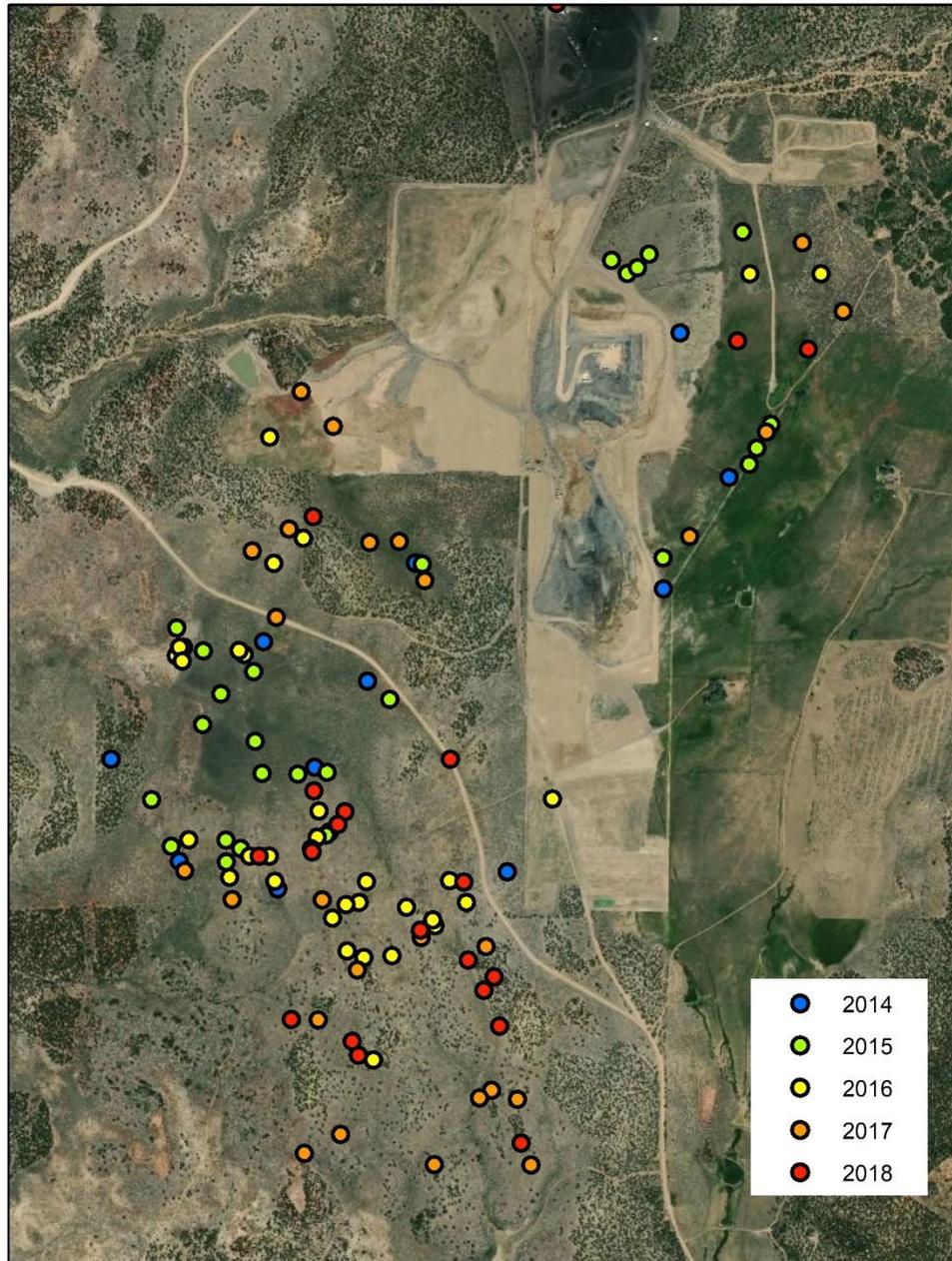


Figure 2. Distribution of sage-grouse flush locations by year. Birds were flushed during monthly surveys within non-breeding time periods (July-Feb).

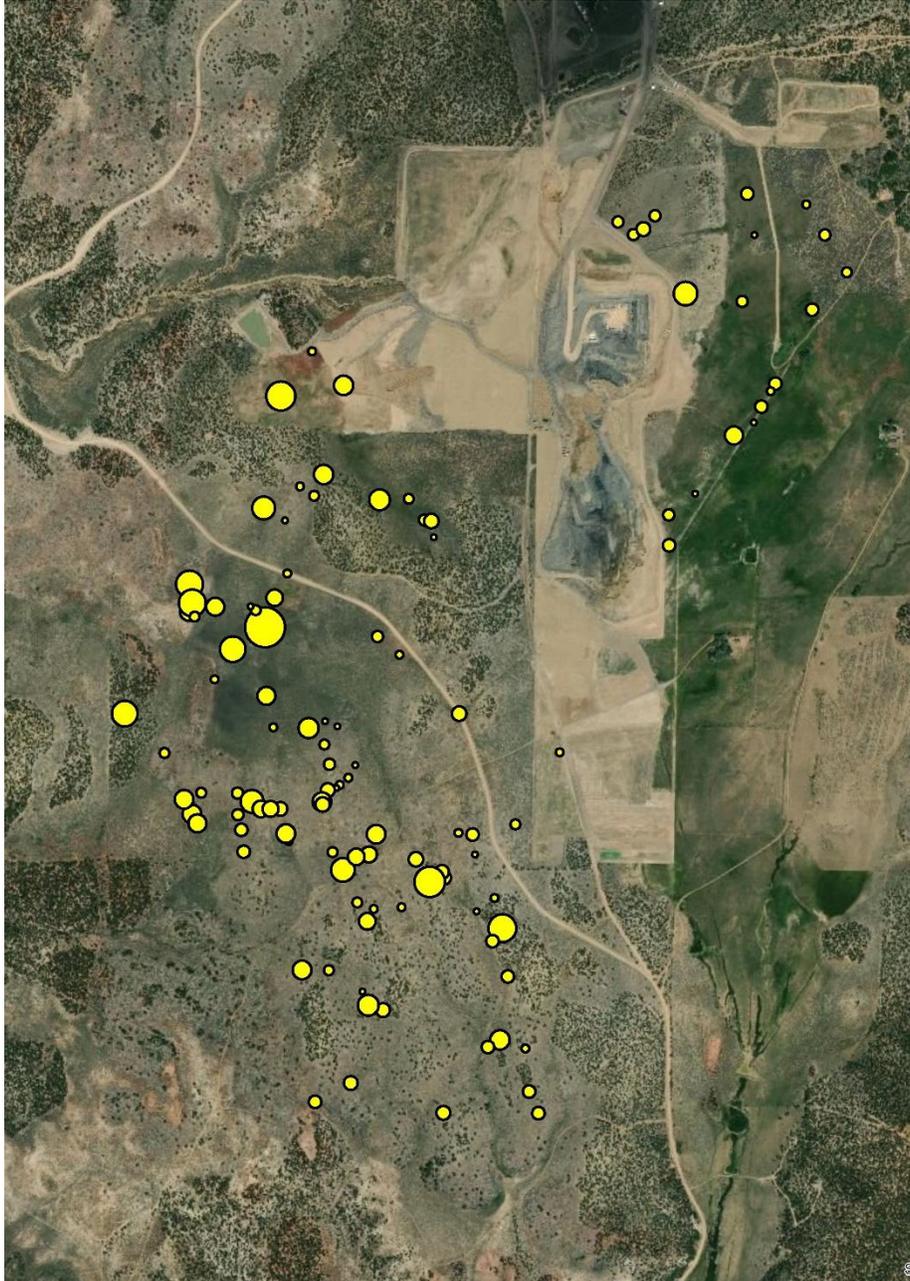


Figure 3. Flock size of birds that were flushed during monthly surveys during the 2014-18 time period.

The sagebrush flat supports a high density stand of black sagebrush with limited forbs and grasses. The well site adjacent to CA is dominated by wet meadow obligate and facultative species that includes species of sedge, rush, and a diversity of forbs (*Iris missouriensis*) and shrubs (i.e. *Rosa woodsii*). Hens often raise chicks and juvenile birds in the well area during early and late brood rearing periods. This is likely due to the rich diversity in plant species and insect food sources. CA is dominated by black and mountain big sagebrush. This area was

treated to reduce shrub density and increase the availability of sage-grouse food species that were included in the post treatment seed mix.

### 1.3 GPS Collaring and Monitoring

Sage-grouse monitoring using GPS backpack transmitters has been conducted by Dr. Frey within the Alton/Sink Valley area. These GPS transmitters were programmed to provide 4 point coordinate locations per day resulting in approximately 112 points per month for each individual bird. Since last year, birds with transmitters had either died or lost their backpack, resulting in no data for much of the 2018 year. During the fall, crews led by Dr. Frey attempted to trap sage-grouse to resume high accuracy monitoring, however, no additional birds were trapped.

### 1.4 Historic and Current Lek use in Alton/Sink Valley

During the breeding season, male sage-grouse primarily strut at NL or at several locations in WSF-SB. Over the past 6 years, counts have been relatively consistent with a maximum count of 10-16 birds, with the highest occurring in 2018 (16; Figure 4). The most accurate estimates of bird densities in this region are provided by lek counts conducted annually by wildlife biologists with the Utah Division of Wildlife Resources (UDWR) with contribution from observations made by ACD employees and consultants. In Figure 2, Observations between 1991-2016 were provided by Utah DWR, based on surveys during lekking periods (February – April). For 2017-18, observations were made by Petersen (ACD consultant) and ACD employees (Kirk N and Josh) from surveys in the lekking period. UDWR was unable to provide 2017-18 count data. Both 2005 and 2007, no males were observed at the lek. Similarly, in 2011 no males were counted at the historic lek (HL), however, it may have been that birds were displaying at NL and were not detected. Observations from 1991-2011 were of birds lekking at HL only.

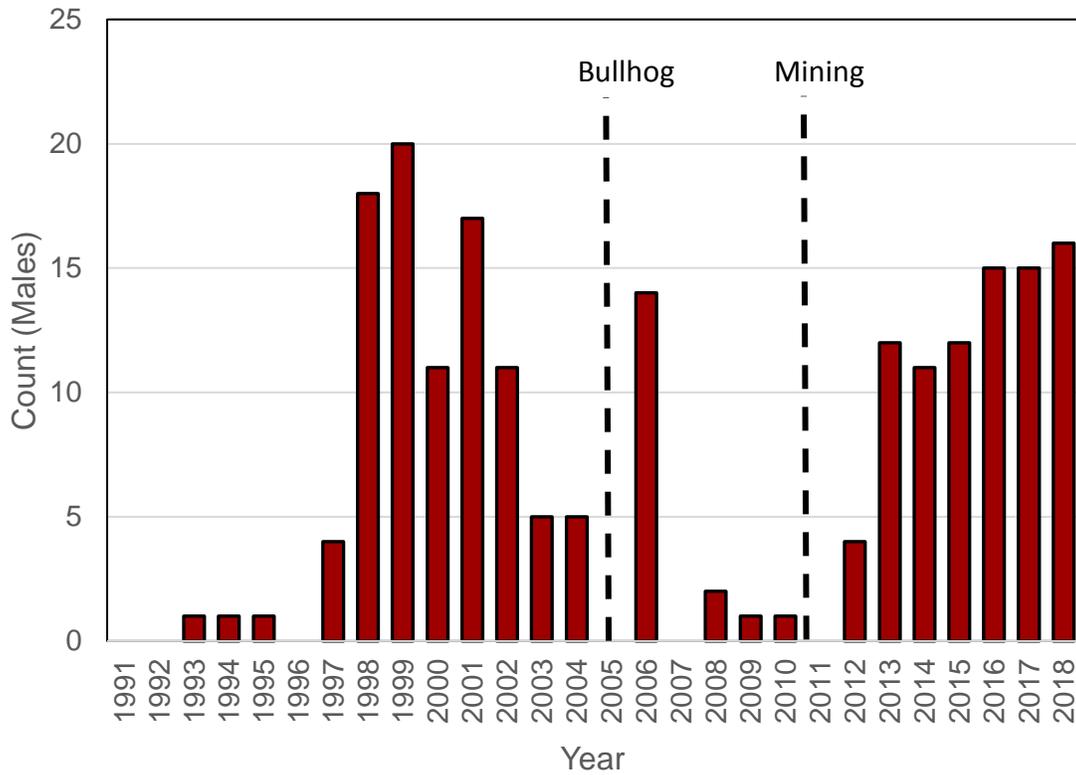


Figure 4. Male sage-grouse lek attendance at the Sink Valley lek, located south of Alton, Utah. All males were observed during morning hours strutting on the primary lek.

1.5 Noise Detection and Sound Assessment

The influence of sound (noise pollution) on sage-grouse was measured this year to determine the influence of mining activity in the North Lease area. Sound monitoring is conducted by determining maximum decibel levels using an Extech 407735 Sound Level Meter. Sound measurements were recorded at increasing distances from the mining activity at the North Lease area. In each cardinal direction, sound was recorded at the edge of the immediate mining activity, and then at 100, 500, and 1000m away. The results of all sound measurements is shown in Figure 5.

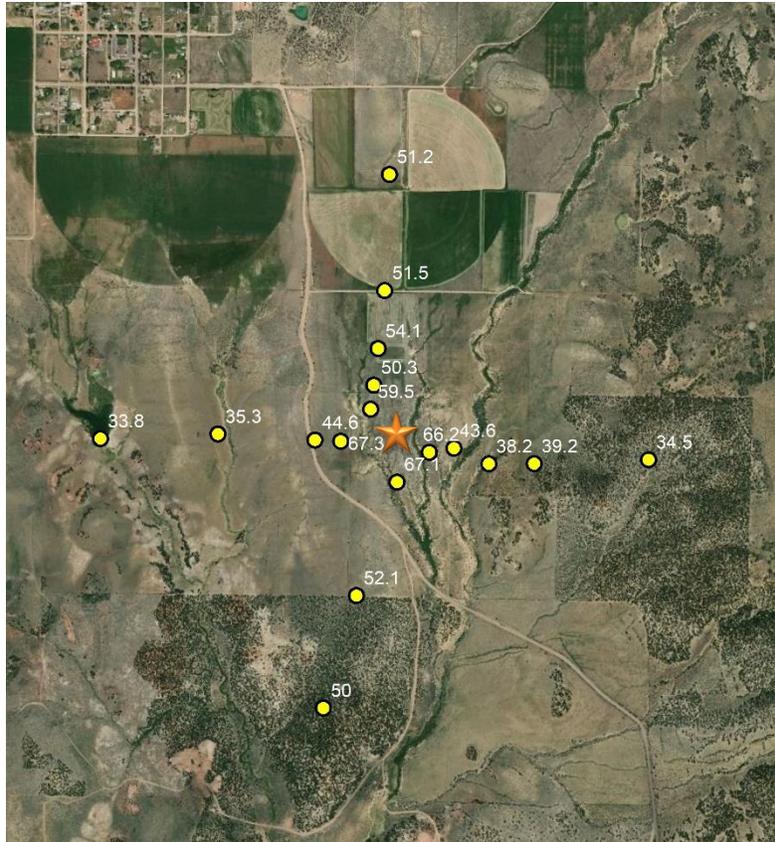


Figure 5. Sound measurements (db) in relation to the north lease mining area (orange star). Measurements were recorded at the disturbance edge, 100m, 500m, and 1000m distant.

## 2. Habitat Mitigation and Improvements

Following mining, ACD implements habitat improvement through soil preparation and seeding adapted species that stabilize soils and establish a functional plant community (Figure 6). These land improvement activities focus on planting seeds using a rangeland drill followed by covering the soil with shredded straw to protect soils and enhance seed microsite conditions (Petersen et al. 2004).

Other projects that are being implemented to improve the habitat for sage-grouse surrounding the Alton/Sink Valley area which involves mowing rabbitbrush using a combine mower in the area north of the mine (Figure 7), the area south of the mine located at the Fords Pasture area 10km south of the mine area (Figure 8). At each site, rabbitbrush will be mowed up to 6 ft. in height and then Tordon 22K herbicide will be applied in a single application to prevent regrowth or resprouting. ACD will fund Utah DWR up to \$14,040.00 to complete this habitat improvement work at the Ford Pasture area.

To date, a total of 2,700 acres have been treated by ACD (Figure 6). This includes bullhogging, chaining, and lop-and-scatter of PJ woodlands, reduction of rabbitbrush, mowing and treating willow with herbicide, and disking and reseeding sagebrush to improve sage-grouse habitat in the Conservation Area.

### 2.1 Reclamation Response

Habitat reclamation following mining is an integral part of the work being done at the post-mining locations. Reclamation activities enhance plant community conditions and wildlife habitat by stabilizing soils, reducing potential soil erosion, increasing seed establishment and plant community sustainability. These activities aid in returning ecological structure and function, and facilitating establishment of grass and shrub species important for habitat required by sagebrush obligate species (i.e. sage-grouse, sage sparrows). Dahlgren et al. (2006) found that implementing mechanical treatments can increase sage-grouse use of managed landscapes.

Following mining operations, the landscape has been recontoured to resemble pre-mining landform conditions. Topsoil is replaced and reseeded using a mix of native and introduced shrub and herbaceous species. Seed is distributed using a seed drill pulled behind a John Deer tractor (Kevin Heaton operator). From 2010 to 2018, a total of 554.5 acres of land had been mined of which 279 had been reclaimed (seeded with straw covering to protect seed from desiccation). During the same period 2,700 acres of the surrounding Sink Valley landscape had been treated for habitat improvement (i.e. bullhogging PJ woodlands, thistle weed removal, seedling-juvenile PJ tree removal).

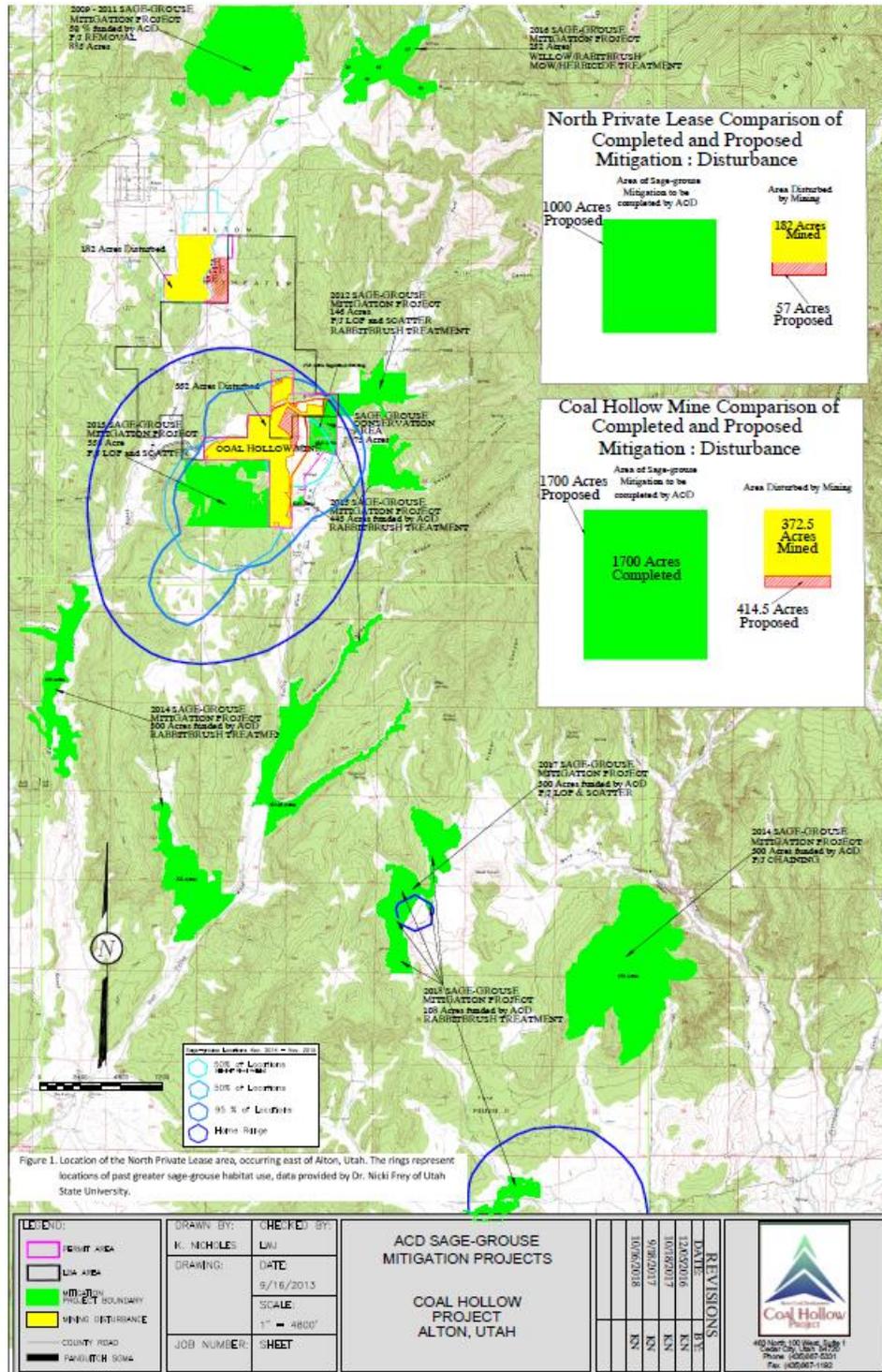


Figure 6. Total sage-grouse habitat mitigation completed through November 2018. Habitat improvements totaled 1,000 acres for the North Private Lease and 1,700 acres in the South Private Lease.

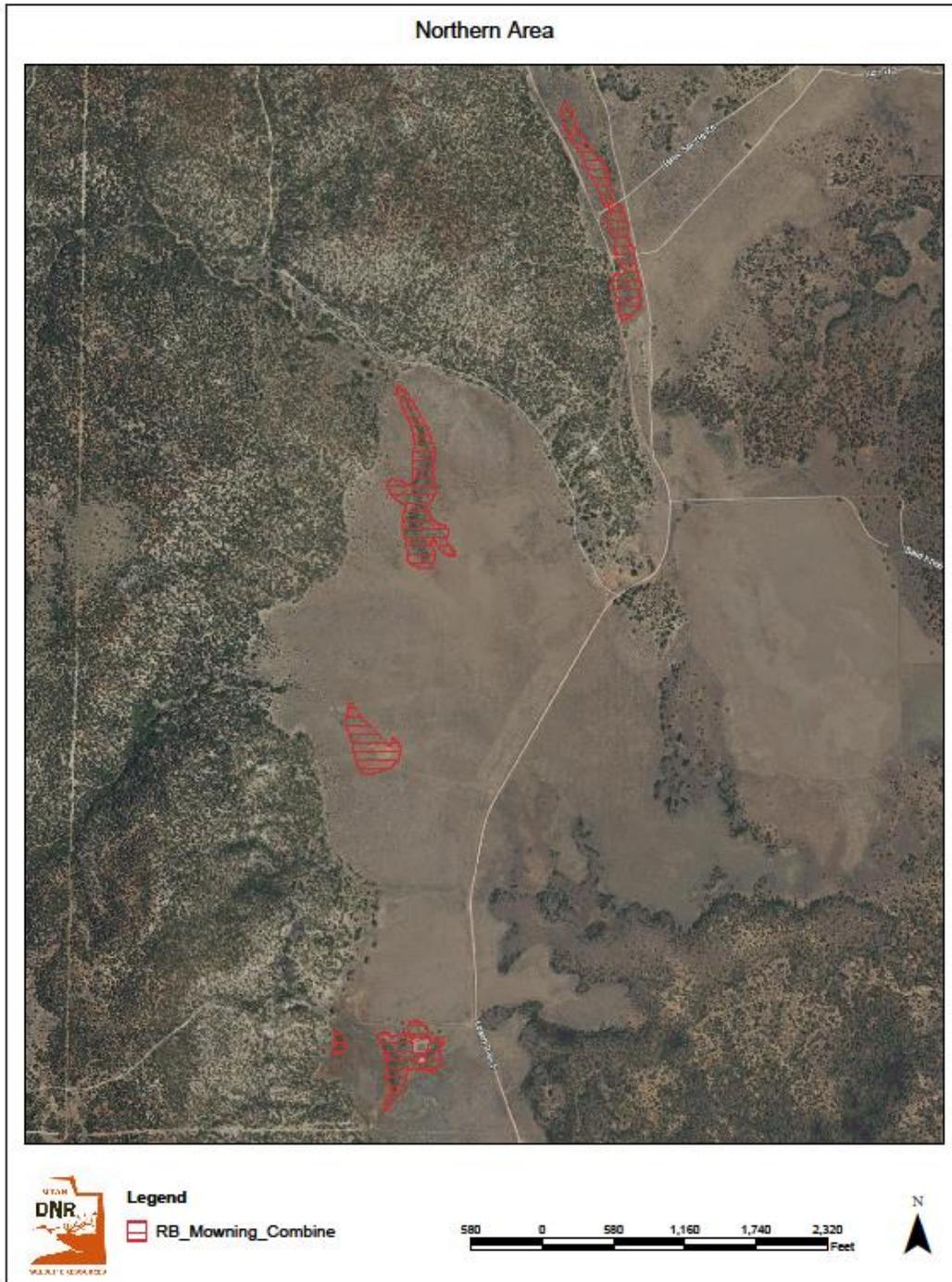


Figure 7. Rabbitbrush treatment using a combine mowing operation in the northern area.

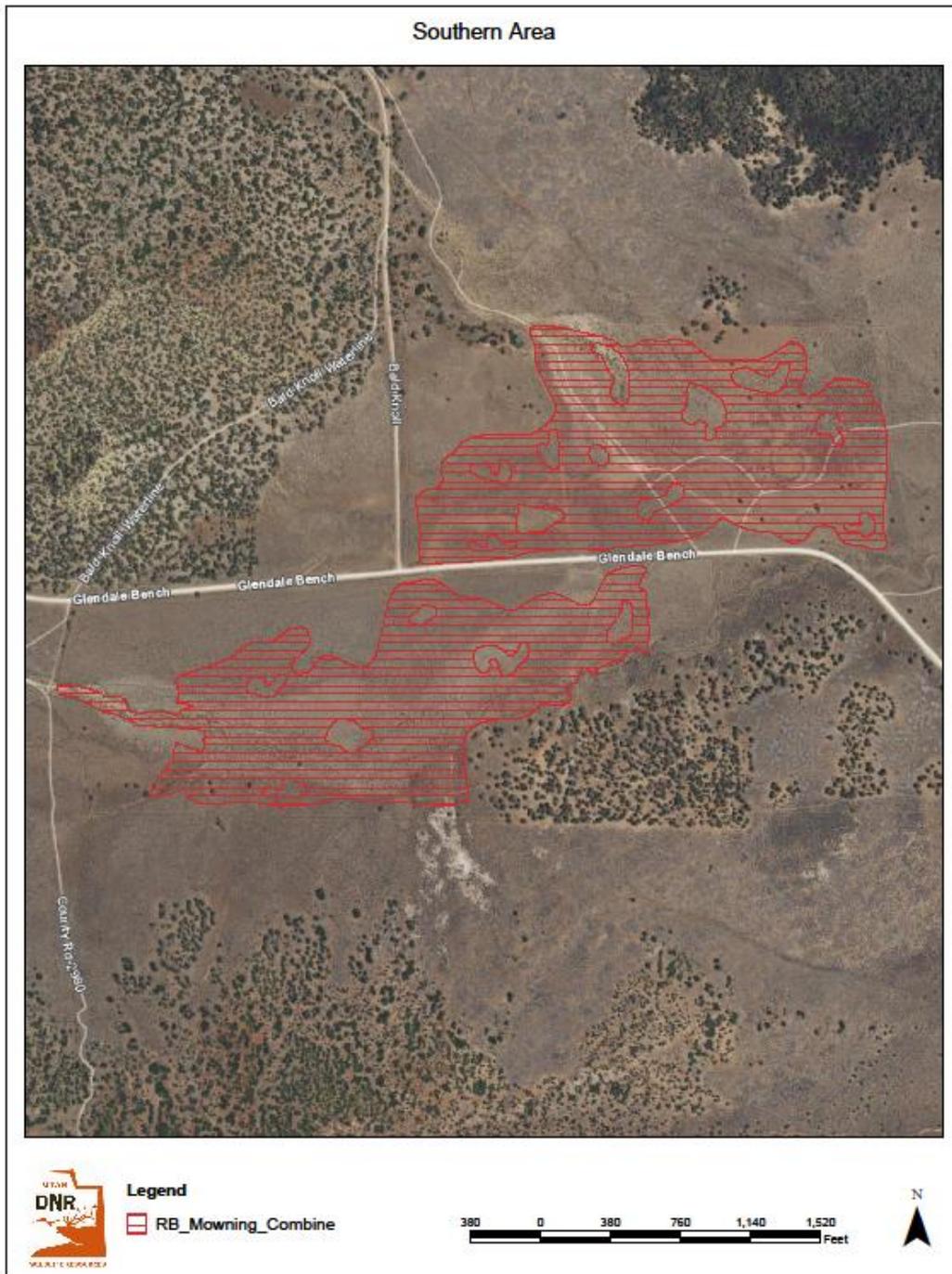


Figure 8. Proposed treatment plan designed to enhance sage-grouse habitat in the Fords Pasture region. Rabbitbrush will be mowed to open soils allowing for greater plant community diversity, including sage-grouse cover and food plant and insect species.

## 2.2 Juniper Mastication

Pinyon-juniper woodlands have continued to be controlled within the Alton/Sink Valley area removal with treatments implemented by the BLM (Kanab field office). Most bullhogging activity was concentrated in areas south of the 2016-17 bullhogging effort, reaching distances of 1-2 miles from the headquarters. The focus has been to remove phase II and phase III woodlands using primarily mastication techniques, thus connecting intact sagebrush habitats located throughout the region. Mastication not only opens habitat, but also increases food forb and insect availability, opportunity that is created during the mastication process which releases tied up resources that increase shrub, forb, and grass cover (Bybee et al. 2016).

PJ recruitment has been extensive throughout the Alton/Sink Valley area. Seedlings of both species emerge in both untreated and treated habitats, creating a potential threat to long-term habitat conditions. ACD environmental manager (Kirk Nicholes) and sage-grouse consultant (Steve Petersen) have removed seedling and juvenile pinyon and juniper trees using tree loppers. Tree sizes that are cut range in size from 2" to 7'. A total of 1,730 trees were removed in 2018, with a focus in areas that support critical sage-grouse habitat (Table 3).

Table 3. Number of trees killed throughout the Sink Valley area from February to November 2018.

Location	Feb	Mar	Apr	May	July	Aug	Oct	Nov	Total
SF	43	0	12	0	35	5	0	0	<b>95</b>
SF-North side of road	21	0	0	26	28	0	0	19	<b>94</b>
SF-East Valley	16	142	62	0	13	0	27	22	<b>282</b>
NL	74	0	0	35	16	5	11	6	<b>147</b>
NL-West Bowl	30	0	0	52	19	15	15	16	<b>147</b>
WSF-SB	110	0	105	70	93	82	64	171	<b>695</b>
HL-West	49	0	156	0	25	0	0	0	<b>230</b>
CA-Upper	1	0	0	0	1	0	0	0	<b>2</b>
CA-Lower	2	0	0	0	0	0	0	0	<b>2</b>
NMSP	0	0	0	0	0	0	0	0	<b>0</b>
SMSP	0	0	0	4	3	0	0	6	<b>13</b>
Other	4	0	0	0	0	10	19	0	<b>33</b>
<b>Total</b>	<b>350</b>	<b>142</b>	<b>335</b>	<b>187</b>	<b>233</b>	<b>107</b>	<b>136</b>	<b>240</b>	<b>1730</b>

To expand sagebrush habitat availability and in attempt to increase connectivity with the surrounding landscape, a lop-and-scatter plan has been approved for the Alton area. This project is part of the WRI mitigation effort designed to improve sage-grouse habitat.

### 3. Predator Control Activities

Sage-grouse are impacted by predators in the Alton/Sink Valley area. In 2018, the remains of one sage-grouse was found within a primary habitat, exhibiting characteristic traits of being killed by a predator (Figure 9). The bird was observed on February 10, a killed bird was found in the sagebrush flat area (370334 E 4139169 N). At this site, feathers were spread within the immediate area, located next to many roost piles.



Figure 9. Sage-grouse feathers found at a site where a bird had been killed by a predator. Feathers were found in the sage-brush flat, an area dominated by black sagebrush that has been primary habitat for sage-grouse in this area.

During 2018, avian and mesopredators were removed to increase sage-grouse nesting, brood rearing and adult survival. The primary predators removed included common ravens (*Corvus corax*) and coyotes (*Canis latrans*). Most predator control activities were conducted by USDA APHIS Wildlife Services, a federal agency that provides an integrated wildlife damage management approach to help resolve wildlife conflicts and promote human-wildlife

coexistence (APHIS 2018). ACD provides an annual funding allocation (\$7,500 for this years services) to support predator control within the Alton/Sink Valley area.

### 3.1 Raven Control

Raven control activities were coordinated by Teresa Wright, a raven control specialist with USDA Wildlife Services. Control efforts were focused on time periods when raven populations are high and during peak sage-grouse breeding periods. In 2018, raven control efforts occurred between October 1, 2017 and September 30, 2018.

The primary method used to control ravens is by dispersing hard-boiled eggs treated with DRC-1339 3-chloro-p-toluidine hydrochloride, a restricted pesticide with acute toxicity in corvids including ravens, crows, blackbirds, starlings and magpies (US EPA 2015). When consumed, DRC-1339 is readily absorbed into the circulatory system where it is metabolized in the liver forming glucuronides and mercapturides. Uric acid posits build up in the kidney and blood vessels resulting in necrosis and circulatory impairment. The cause of death is from uremic poison and congestion of the major organs (<https://ovocontrol.com/search-ovocontrol/bird-poisons/>). In most cases, the target species dies as soon as 3 hours after consuming the bait. For application in the Alton/Sink Valley area, the pesticide is injected into hard-boiled eggs rather than dispersed in granular form to reduce uptake by other susceptible species including non-target corvids, rock dove, Eurasian collared dove, ducks, geese, and pheasants.

During the treatment period, a total of 1000 hard-boiled treated eggs were distributed within the mine site and surrounding Alton area (Figure 10). Ravens cache eggs at a ratio of 1 kill for every 6 eggs distributed. Therefore the total number of ravens killed during the reporting window is 167 birds.

### 3.2 Mesopredator Control

Mesopredators that occur within the Sink Valley/Alton area include coyotes, red fox, raccoon, and skunk. Mesopredator control efforts were coordinated by Roger Nauer, USDA Wildlife Services trapper and mesopredator control specialist. To control mesopredators, Wildlife Services used foot snares, traps, and fixed-wing aircraft. Between October 2017 and September 2018, Wildlife Services harvested 12 coyotes and 4 red foxes within the mining area.

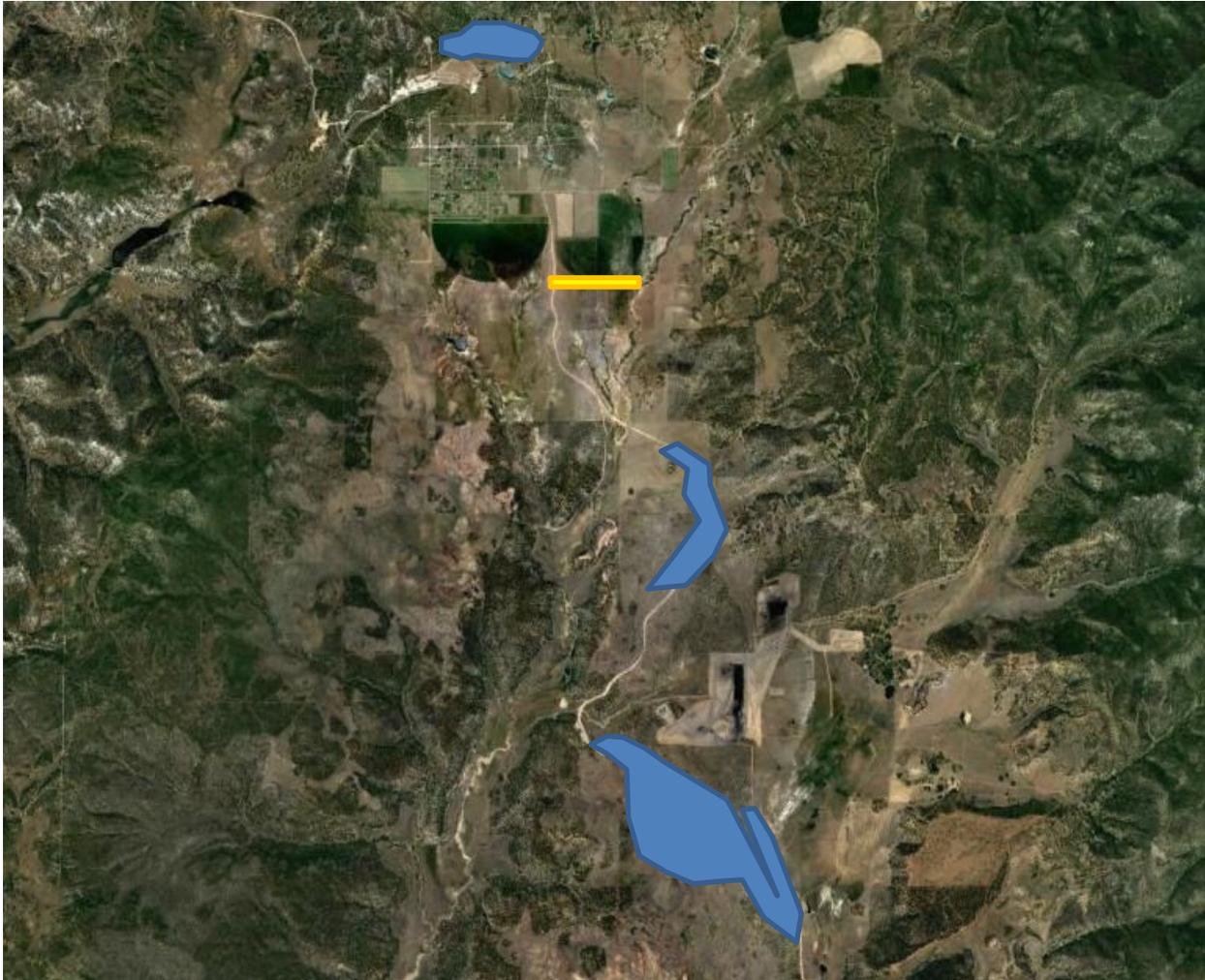


Figure 10. According to Teresa Wright, USDA Wildlife Services biologist, distributed eggs in the same general areas where eggs have been distributed over the past several years. This map portrays that area, with blue polygons indicating sites where poison eggs were distributed. This includes roadsides near critical habitat and the stock yard near Alton where birds congregate. The yellow polygon represents the location where coyote snares are set and trapped.

#### **4. Participation and Involvement with Local Working Groups**

ACD participates as members of the Color Country Adaptive Resource Management (CCARM) organization. CCARM contributes meaningful input and suggestions for improving habitat conservation efforts within the Alton/Sink Valley area. This includes recommendations for sage-grouse population and habitat conservation planning. Feedback is considered in all aspects of project planning and implementation. Maintaining this cooperation with CCARM has been instrumental in the success of this project.

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## Acknowledgements

Many thanks for the support to everyone who has helped with the efforts made to improve sage-grouse habitat and establish plant communities that increase ecological resilience. We

express our appreciation to Kirk Nicholes (ACD Environmental Scientists), Larry Johnson (ACD Project Manager), Kevin Heaton (USU Extension, habitat reclamation), Nicki Frey (SUU/USU Extension, sage-grouse collaring and monitoring), biologists from UDOGM, Teresa Wright (USDA WS, raven control), Roger Nauer (USDA WS, coyote control), biologists from the Utah DWR, and to the Color-Country Adaptive Resource Management group for project feedback and input. The collaboration from these people has been critical in the successful work accomplished in the Alton/Sink Valley area that ensures a stable and successful sage-grouse population.

# State of Utah

DEPARTMENT OF NATURAL RESOURCES

## Division of Oil, Gas & Mining

1594 West North Temple, Suite 1210, PO Box 145801, Salt Lake City, UT 84114-5801

Telephone (801) 538-5340 facsimile (801) 359 3940 TTY (801) 538-7458

www.ogm.utah.gov



### Quarterly Inspection Form - Refuse Disposal Areas

(please provide to DOGM promptly after inspection is complete)

Permit Number :	<u>C/025/0005</u>	Inspection Date :	<u>03/29/2018</u>
Mine Name :	<u>Coal Hollow Project</u>	Quarter / Year :	<u>1st / 2018</u>
Mine Operator (Permittee) :	<u>Alton Coal Development</u>	Inspector Name :	<u>Dan W. Guy</u>
MSHA ID # :	<u>42-02519</u>	Inspector Signature :	
Facility Name / Location / Address :	<u>2060 South Alton Road, Alton, UT 84710</u>		

1. Describe any changes in the geometry of the structure (as well as instrumentation, if any, used to monitor changes):  
 Most of Main Pile has been removed. Remaining material will be removed during final borrow operation. Pile is regraded, subsoiled and seeded.

2. Lift Height / Thickness Avg 4.0' Maximum 4.0' # \_\_\_\_\_ Elevation of Active Benches : 6918 , \_\_\_\_\_ , \_\_\_\_\_  
 3. Vertical Angle of Outslope(s) / Location(s) where measured 3H:1V Avg. /No. Slope / So. Slope / \_\_\_\_\_  
 4. Total storage capacity: 8,600,000 cy Remaining storage capacity 8,211,000 cy Volume placed during year : 0  
 5. Describe foundation preparation (including removal of vegetation, stumps, topsoil, and all other organic material) :  
 Topsoil and subsoil removed and stored on site.

6. Describe placement and compaction of fill materials (including an explanation of how compaction is confirmed) :  
 Dumped by truck / Pushed by dozer / Compaction primarily from large trucks / Tested with nuclear density unit.

7. Is there any evidence of fires or burning on the structure ? (If YES, specify extent, location, and abatement/extinguishment of such fires) :  
 None

8. Describe placement of under drains, protective filter systems, and final surface drainage systems (report any seepage, including location, color, flow) :  
 None

9. Describe any appearances of instability, structural weakness, or other hazardous conditions :  
 No instability noted. Most of pile has been removed.

10. Please provide any other information pertaining to the stability of the structure (attach any photos taken during the inspection)

Are there cracks or scarps in crest ?	YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>
Is there any detectable sloughing or bulging ?	YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>
Do slope erosion problems exist ?	YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>
Cracks or scarps in slope ?	YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>
Surface movements? (valley bottom, hillsides)	YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>
Erosion of Toe ?	YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>
Water impounded by structure ?	YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>
Are diversion ditches stable?	YES <input checked="" type="checkbox"/>	NO <input type="checkbox"/>
Is drainage positive ?	YES <input checked="" type="checkbox"/>	NO <input type="checkbox"/>

Could failure of structure create an impoundment (provide description) ? No

Are design standards established within the mining and reclamation plan for the disposal facility being met ?  
 Yes.

Proctor Determination : 88% minimum - 98% maximum compaction as determined by nuclear density tests on 5/13/13.

I hereby certify that: I am experienced in the construction of earth and rock fills; I am qualified and authorized in the State of Utah to inspect and certify the condition and appearance of earth and rock fills in accordance with structure; that the fill structure has been maintained in accordance with the approved design and meets or exceeds the minimum design requirements under all applicable federal, state, and local regulations; and, that inspections and inspection reports are made by myself or under my direction and include any appearances of instability, structural weakness or other hazardous conditions of the structure affecting stability.

(place P.E. certification below)

IMPOUNDMENT INSPECTION AND REPORT		
Permit Number	C/025/0005	3/29/2018
Mine Name	Coal Hollow Mine	
Company Name	Alton Coal Development, LLC	
Impoundment Identification	Impoundment Name	Pond 1
	Impoundment Number	Pond 1
	MSHA Mine ID Number	42-02519
IMPOUNDMENT INSPECTION		
Inspection Date	29-Mar-08	
Inspected By	Kirk Nicholes / Dan Guy	
Reason for Inspection (Annual, Quarterly or Other Periodic Inspections, Critical Installation, or Completion of Construction)	Quarterly Inspection.	
1. Describe any appearance of any instability, structural weakness, or any other hazardous condition. N/A - None Noted.		
Required for an impoundment which functions as a SEDIMENTATION POND.	2. Sediment storage capacity, including elevation of 60% and 100% sediment storage volumes, and estimated average elevation of existing sediment. Sediment Storage Capacity: 60 % Elevation: 6912 (1.26') 100% Elevation: 6913 (2.03')  The pond is full and discharging. The sediment marker is in place, and field observation shows the sediment level to be at, or slightly above the cleanout elevation. Some sediment buildup is evident at the inlet. The average sediment level is approximately at elevation 6912.0.	
	3. Principle and emergency spillway elevations. Principle and Emergency Spillway Elevation: 6920 feet (The outlet structure for Pond 1 serves as both the Principle and Emergency Spillways) Total volume of pond at Spillway: 3.16 Acre-Feet (Elev. 6920.00') Required runoff storage: 2.57 Acre-Feet	

4. **Field Information.** Provide current water elevation, whether pond is discharging, type and number of samples taken, monitoring/instrumentation information, inlet/outlet conditions or other related activities associated with the pond decanting, embankment erosion/repairs, monitoring information, vegetation on outlooes of embankments, etc.

The water level is at elevation 6920 and discharging. Embankments appear to be stable. The pond should be cleaned as soon as conditions allow.

5. **Field Evaluation.** Describe any changes in the geometry of the structure, average and maximum depths and elevations of impounded water, estimated sediment or slurry volume and remaining storage capacity, estimated volume of water impounded, and any other aspect of the impounding structure affecting its stability or function which has occurred during the reporting period.

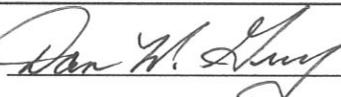
The changes noted in the structure during the 1st quarter of 2018 include an increase in the water level and the sediment is at the cleaning level.

**Certification Statement**

I hereby certify that: I am experienced in the construction of impoundments; I am qualified and authorized under the direction of a Registered Professional Engineer to inspect the condition and appearance of impoundments in accordance with the certified and approved designs for this structure; that the impoundment has been maintained in accordance with approved design and meet or exceed the minimum design requirements under all applicable federal, state and local regulations: and, that inspections and inspection reports are made by myself, or under my direction and include any appearances of instability, structural weakness or other hazardous conditions of the structure affecting stability.

**By:**

(Full Name and Title)

Signature:  Date: 3/29/18

IMPOUNDMENT INSPECTION AND REPORT		
Permit Number	C/025/0005	Report Date 03/29/2018
Mine Name	Coal Hollow Mine	
Company Name	Alton Coal Development, LLC	
Impoundment Identification	Impoundment Name	Pond 1B
	Impoundment Number	Pond 1B
	MSHA Mine ID Number	42-02519
IMPOUNDMENT INSPECTION		
Inspection Date	29-Mar-18	
Inspected By	Kirk Nicholes / Dan Guy	
Reason for Inspection (Annual, Quarterly or Other Periodic Inspections, Critical Installation, or Completion of Construction)	Quarterly Inspection.	
<p>1. Describe any appearance of any instability, structural weakness, or any other hazardous condition.</p> <p>N/A - No appearance of any instability, structural weakness or other hazardous condition was noted.</p>		
Required for an impoundment which functions as a SEDIMENTATION POND.	<p>2. Sediment storage capacity, including elevation of 60% and 100% sediment storage volumes, and estimated average elevation of existing sediment.</p> <p>Sediment Storage Capacity:  60 % Elevation: 6900.00 (6.00')  100% Elevation: 6902.08 (8.08')</p> <p>The pond contained approximately 9.0' of water at the time of the inspection. The sediment marker is in place. The pond has been cleaned and the bottom (sediment) elevation is approximately 6894.0.</p>	
	<p>3. Principle and emergency spillway elevations.</p> <p>Principle and Emergency Spillway Elevation: 6906.45 feet (The outlet structure for Pond 1B serves as both the Principle and Emergency Spillways)  Total volume of pond at Spillway: 0.894 Acre-Feet (Elev. 6906.45)  Required runoff storage: 0.50 Acre-Feet</p>	

4. **Field Information.** Provide current water elevation, whether pond is discharging, type and number of samples taken, monitoring/instrumentation information, inlet/outlet conditions or other related activities associated with the pond decanting, embankment erosion/repairs, monitoring information, vegetation on outslopes of embankments, etc.

The water level is approximately at elevation 6903. There are 2 inlets to the pond - both have been previously ripped and are operating properly. The outlet is also open and functional. The pond has been recently cleaned.

5. **Field Evaluation.** Describe any changes in the geometry of the structure, average and maximum depths and elevations of impounded water, estimated sediment or slurry volume and remaining storage capacity, estimated volume of water impounded, and any other aspect of the impounding structure affecting its stability or function which has occurred during the reporting period.

The pond has been cleaned and has been inspected and recertified on this form.

**Certification Statement**

I hereby certify that: I am experienced in the construction of impoundments; I am qualified and authorized under the direction of a Registered Professional Engineer to inspect the condition and appearance of impoundments in accordance with the certified and approved designs for this structure; that the impoundment has been maintained in accordance with approved design and meet or exceed the minimum design requirements under all applicable federal, state and local regulations: and, that inspections and inspection reports are made by myself, or under my direction and include any appearances of instability, structural weakness or other hazardous conditions of the structure affecting stability.



**By:**

(Full Name and Title)

Signature: Dan W. Guy Date: 3/29/18

IMPOUNDMENT INSPECTION AND REPORT		
Permit Number	C/025/0005	3/29/2018
Mine Name	Coal Hollow Mine	
Company Name	Alton Coal Development, LLC	
Impoundment Identification	Impoundment Name	Pond 2
	Impoundment Number	Pond 2
	MSHA Mine ID Number	42-02519
IMPOUNDMENT INSPECTION		
Inspection Date	29-Mar-18	
Inspected By	Kirk Nicholes / Dan Guy	
Reason for Inspection (Annual, Quarterly or Other Periodic Inspections, Critical Installation, or Completion of Construction)	Quarterly Inspection.	
<p>1. Describe any appearance of any instability, structural weakness, or any other hazardous condition.</p> <p>N/A - No appearance of any instability, structural weakness or other hazardous condition was noted.</p>		
Required for an impoundment which functions as a SEDIMENTATION POND.	<p>2. Sediment storage capacity, including elevation of 60% and 100% sediment storage volumes, and estimated average elevation of existing sediment.</p> <p>Sediment Storage Capacity:  60 % Elevation: 6892.1 (3.10')  100% Elevation: 6893.5 (4.50')</p> <p>The pond contained approximately 1.5' of water at the time of the inspection. The sediment marker is in place, and field observation shows the sediment level to be well below the cleanout elevation. The approximate sediment elevation is 6889.0.</p>	
	<p>3. Principle and emergency spillway elevations.</p> <p>Principle and Emergency Spillway Elevation: 6900 feet (The outlet structure for Pond 2 serves as both the Principle and Emergency Spillways)  Total volume of pond at Spillway: 2.675 Acre-Feet (Elev. 6901.09')  Required runoff storage: 1.71 Acre-Feet</p>	

4. **Field Information.** Provide current water elevation, whether pond is discharging, type and number of samples taken, monitoring/instrumentation information, inlet/outlet conditions or other related activities associated with the pond decanting, embankment erosion/repairs, monitoring information, vegetation on out slopes of embankments, etc.

The water level is approximately at elevation 6890.5. The single pond inlet is rip-rapped.

5. **Field Evaluation.** Describe any changes in the geometry of the structure, average and maximum depths and elevations of impounded water, estimated sediment or slurry volume and remaining storage capacity, estimated volume of water impounded, and any other aspect of the impounding structure affecting its stability or function which has occurred during the reporting period.

The only noted change to the pond noted since the last inspection was that the pond now contained a small amount of water.

**Certification Statement**

I hereby certify that: I am experienced in the construction of impoundments; I am qualified and authorized under the direction of a Registered Professional Engineer to inspect the condition and appearance of impoundments in accordance with the certified and approved designs for this structure; that the impoundment has been maintained in accordance with approved design and meet or exceed the minimum design requirements under all applicable federal, state and local regulations: and, that inspections and inspection reports are made by myself, or under my direction and include any appearances of instability, structural weakness or other hazardous conditions of the structure affecting stability.

**By:**

(Full Name and Title)

Signature: *Don M. Long* Date: 3/29/18

IMPOUNDMENT INSPECTION AND REPORT		
Permit Number	C/025/0005	3/29/2018
Mine Name	Coal Hollow Mine	
Company Name	Alton Coal Development, LLC	
Impoundment Identification	Impoundment Name	Pond 3
	Impoundment Number	Pond 3
	MSHA Mine ID Number	42-02519
IMPOUNDMENT INSPECTION		
Inspection Date	29-Mar-18	
Inspected By	Kirk Nicholes / Dan Guy	
Reason for Inspection (Annual, Quarterly or Other Periodic Inspections, Critical Installation, or Completion of Construction)	Quarterly Inspection.	
<p>1. Describe any appearance of any instability, structural weakness, or any other hazardous condition.</p> <p>None Noted.</p>		
Required for an impoundment which functions as a SEDIMENTATION POND.	<p>2. Sediment storage capacity, including elevation of 60% and 100% sediment storage volumes, and estimated average elevation of existing sediment.</p> <p>Sediment Storage Capacity:  60 % Elevation: 6805.0 (4.0')  100% Elevation: 6807.0 (6.0')</p> <p>The pond contained approximately 5.0' of water at the time of the inspection. The sediment marker is in place, and field observation shows the average sediment level to be below the cleanout elevation. The approximate average sediment elevation is 6803.</p>	
	<p>3. Principle and emergency spillway elevations.</p> <p>Principle and Emergency Spillway Elevation: 6811 feet (The outlet structure for Pond 3 serves as both the Principle and Emergency Spillways)</p> <p>Total volume of pond at Spillway: 12.60 Acre-Feet (Elev. 6811.00')</p> <p>Required runoff storage: 6.30 Acre-Feet</p> <p>Decant Elevation: 6808.0</p>	

4. **Field Information.** Provide current water elevation, whether pond is discharging, type and number of samples taken, monitoring/instrumentation information, inlet/outlet conditions or other related activities associated with the pond decanting, embankment erosion/repairs, monitoring information, vegetation on outlopes of embankments, etc.

The average water level is approximately at elevation 6808.0.

5. **Field Evaluation.** Describe any changes in the geometry of the structure, average and maximum depths and elevations of impounded water, estimated sediment or slurry volume and remaining storage capacity, estimated volume of water impounded, and any other aspect of the impounding structure affecting its stability or function which has occurred during the reporting period.

The only noted change since the last inspection was an increase in the overall water level. The pond and the dam appear to be stable and are operating properly.

**Certification Statement**

I hereby certify that: I am experienced in the construction of impoundments; I am qualified and authorized under the direction of a Registered Professional Engineer to inspect the condition and appearance of impoundments in accordance with the certified and approved designs for this structure; that the impoundment has been maintained in accordance with approved design and meet or exceed the minimum design requirements under all applicable federal, state and local regulations: and, that inspections and inspection reports are made by myself, or under my direction and include any appearances of instability, structural weakness or other hazardous conditions of the structure affecting stability.

**By:**

(Full Name and Title)

Signature: *Dan W. Long* Date: 3/29/18

<b>IMPOUNDMENT INSPECTION AND REPORT</b>			
<b>Permit Number</b>	C/025/0005	<b>Report Date</b>	03/29/2018
<b>Mine Name</b>	Coal Hollow Mine		
<b>Company Name</b>	Alton Coal Development, LLC		
<b>Impoundment Identification</b>	<b>Impoundment Name</b>	Pond 4	
	<b>Impoundment Number</b>	Pond 4	
	<b>MSHA Mine ID Number</b>	42-02519	
<b>IMPOUNDMENT INSPECTION</b>			
<b>Inspection Date</b>	29-Mar-18		
<b>Inspected By</b>	Kirk Nicholes / Dan Guy		
<b>Reason for Inspection</b> (Annual, Quarterly or Other Periodic Inspections, Critical Installation, or Completion of Construction)	Quarterly Inspection.		
<p>1. Describe any appearance of any instability, structural weakness, or any other hazardous condition.</p> <p>No instability of the embankment or hazardous condition was noted during the inspection.</p>			
Required for an impoundment which functions as a SEDIMENTATION POND.	<p>2. Sediment storage capacity, including elevation of 60% and 100% sediment storage volumes, and estimated average elevation of existing sediment.</p> <p>Sediment Storage Capacity:  60 % Elevation: 6829.0 (7.0')  100% Elevation: 6830.0 (8.0')</p> <p>The pond contained approximately 1.5' of water in the upper cell and only a puddle of water in the lower cell. The sediment marker is in place, and field observation shows the sediment level to be well below the cleanout elevation. The bottom of pond and approximate sediment elevation is 6827.2.</p>		
	<p>3. Principle and emergency spillway elevations.</p> <p>Principle and Emergency Spillway Elevation: 6834 feet (The outlet structure for Pond 4 serves as both the Principle and Emergency Spillways)</p> <p>Total volume of pond at Spillway: 5.50 Acre-Feet (Elev. 6834.00')</p> <p>Required runoff storage: 3.80 Acre-Feet</p>		

4. **Field Information.** Provide current water elevation, whether pond is discharging, type and number of samples taken, monitoring/instrumentation information, inlet/outlet conditions or other related activities associated with the pond decanting, embankment erosion/repairs, monitoring information, vegetation on outlopes of embankments, etc.

The average water elevation is approximately 6828.5. The open-channel spillway is in place and ripped. No discharge.

5. **Field Evaluation.** Describe any changes in the geometry of the structure, average and maximum depths and elevations of impounded water, estimated sediment or slurry volume and remaining storage capacity, estimated volume of water impounded, and any other aspect of the impounding structure affecting its stability or function which has occurred during the reporting period.

The only change noted since the last inspection is a slight increase in the water level in the upper cell and a small amount of water in the lower cell.

**Certification Statement**

I hereby certify that: I am experienced in the construction of impoundments; I am qualified and authorized under the direction of a Registered Professional Engineer to inspect the condition and appearance of impoundments in accordance with the certified and approved designs for this structure; that the impoundment has been maintained in accordance with approved design and meet or exceed the minimum design requirements under all applicable federal, state and local regulations: and, that inspections and inspection reports are made by myself, or under my direction and include any appearances of instability, structural weakness or other hazardous conditions of the structure affecting stability.

**By: Dan W. Guy, P.E.**

(Full Name and Title)

Signature: *Dan W. Guy* Date: 3/29/18

<b>IMPOUNDMENT INSPECTION AND REPORT</b>			
<b>Permit Number</b>	C/025/0005	<b>03/29/2018</b>	
<b>Mine Name</b>	Coal Hollow Mine		
<b>Company Name</b>	Alton Coal Development, LLC		
<b>Impoundment Identification</b>	<b>Impoundment Name</b>	Pond 5	
	<b>Impoundment Number</b>	Pond 5	
	<b>MSHA Mine ID Number</b>	42-02519	
<b>IMPOUNDMENT INSPECTION</b>			
<b>Inspection Date</b>	29-Mar-18		
<b>Inspected By</b>	Kirk Nicholes / Dan Guy		
<b>Reason for Inspection</b> (Annual, Quarterly or Other Periodic Inspections, Critical Installation, or Completion of Construction)	Quarterly Inspection.		
<p>1. Describe any appearance of any instability, structural weakness, or any other hazardous condition.</p> <p>No instability of the embankment or hazardous condition was noted during the inspection.</p>			
Required for an impoundment which functions as a SEDIMENTATION POND.	<p>2. Sediment storage capacity, including elevation of 60% and 100% sediment storage volumes, and estimated average elevation of existing sediment.</p> <p>Sediment Storage Capacity:  60 % Elevation: 6843.0 (3.00')  100% Elevation: 6844.0 (4.00')</p> <p>The pond had approximately 2.5' of water at the time of inspection . The sediment marker has been reset, and field observation shows the sediment level to be well below the cleanout elevation. The bottom of pond and approximate sediment elevation is 6841.0.</p>		
	<p>3. Principle and emergency spillway elevations.</p> <p>Principle Spillway Elevation: 6848 feet  Emergency Spillway Elevation: 6849 feet  Total volume of pond at Spillway: 1.43 Acre-Feet (Elev. 6848.00')  Required runoff storage: 1.28 Acre-Feet</p>		

4. **Field Information.** Provide current water elevation, whether pond is discharging, type and number of samples taken, monitoring/instrumentation information, inlet/outlet conditions or other related activities associated with the pond decanting, embankment erosion/repairs, monitoring information, vegetation on outlopes of embankments, etc.

The water level is approximately at elevation 6843.5. The sediment marker has been reset.

5. **Field Evaluation.** Describe any changes in the geometry of the structure, average and maximum depths and elevations of impounded water, estimated sediment or slurry volume and remaining storage capacity, estimated volume of water impounded, and any other aspect of the impounding structure affecting its stability or function which has occurred during the reporting period.

There were no noted changes to the pond since the last inspection.

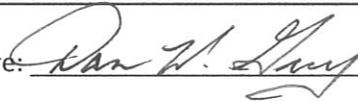
**Certification Statement**

I hereby certify that: I am experienced in the construction of impoundments; I am qualified and authorized under the direction of a Registered Professional Engineer to inspect the condition and appearance of impoundments in accordance with the certified and approved designs for this structure; that the impoundment has been maintained in accordance with approved design and meet or exceed the minimum design requirements under all applicable federal, state and local regulations: and, that inspections and inspection reports are made by myself, or under my direction and include any appearances of instability, structural weakness or other hazardous conditions of the structure affecting stability.

**By:**

(Full Name and Title)

Signature:



Date:

3/29/18

<b>IMPOUNDMENT INSPECTION AND REPORT</b>			
<b>Permit Number</b>	C/025/0005	<b>Report Date</b>	03/29/2018
<b>Mine Name</b>	Coal Hollow Mine		
<b>Company Name</b>	Alton Coal Development, LLC		
<b>Impoundment Identification</b>	<b>Impoundment Name</b>	Pond 6	
	<b>Impoundment Number</b>	Pond 6	
	<b>MSHA Mine ID Number</b>	42-02519	
<b>IMPOUNDMENT INSPECTION</b>			
<b>Inspection Date</b>	29-Mar-18		
<b>Inspected By</b>	Kirk Nicholes / Dan Guy		
<b>Reason for Inspection</b> (Annual, Quarterly or Other Periodic Inspections, Critical Installation, or Completion of Construction)	Quarterly Inspection.		
<p>1. Describe any appearance of any instability, structural weakness, or any other hazardous condition.</p> <p>No instability of the embankment or hazardous condition was noted during the inspection.</p>			
Required for an impoundment which functions as a SEDIMENTATION POND.	<p>2. Sediment storage capacity, including elevation of 60% and 100% sediment storage volumes, and estimated average elevation of existing sediment.</p> <p>Sediment Storage Capacity:  60 % Elevation: 6860.0 (5.00')  100% Elevation: 6861.0 (6.00')</p> <p>The pond was dry at the time of inspection . The sediment marker is in place, and field observation shows the sediment level to be well below the cleanout elevation. The bottom of pond and approximate sediment elevation is 6855.0.</p>		
	<p>3. Principle and emergency spillway elevations.</p> <p>Principle Spillway Elevation: 6866 feet  Emergency Spillway Elevation: 6867 feet  Total volume of pond at Spillway: 3.36 Acre-Feet (Elev. 6866.00')  Required runoff storage: 1.43 Acre-Feet</p>		

4. **Field Information.** Provide current water elevation, whether pond is discharging, type and number of samples taken, monitoring/instrumentation information, inlet/outlet conditions or other related activities associated with the pond decanting, embankment erosion/repairs, monitoring information, vegetation on outlopes of embankments, etc.

The pond was dry at the time of inspection.

5. **Field Evaluation.** Describe any changes in the geometry of the structure, average and maximum depths and elevations of impounded water, estimated sediment or slurry volume and remaining storage capacity, estimated volume of water impounded, and any other aspect of the impounding structure affecting its stability or function which has occurred during the reporting period.

There have been no changes since the last inspection.

**Certification Statement**

I hereby certify that: I am experienced in the construction of impoundments; I am qualified and authorized under the direction of a Registered Professional Engineer to inspect the condition and appearance of impoundments in accordance with the certified and approved designs for this structure; that the impoundment has been maintained in accordance with approved design and meet or exceed the minimum design requirements under all applicable federal, state and local regulations: and, that inspections and inspection reports are made by myself, or under my direction and include any appearances of instability, structural weakness or other hazardous conditions of the structure affecting stability.

**By:**

(Full Name and Title)

Signature: *Don W. Long* Date: 3/29/18

IMPOUNDMENT INSPECTION AND REPORT			
Permit Number	C/025/0005	Report Date 03/29/2018	
Mine Name	Coal Hollow Mine		
Company Name	Alton Coal Development, LLC		
Impoundment Identification	Impoundment Name	Pond 7	
	Impoundment Number	Pond 7	
	MSHA Mine ID Number	42-02519	
IMPOUNDMENT INSPECTION			
Inspection Date	29-Mar-18		
Inspected By	Kirk Nicholes / Dan Guy		
Reason for Inspection (Annual, Quarterly or Other Periodic Inspections, Critical Installation, or Completion of Construction)	Quarterly Inspection.		
<p>1. Describe any appearance of any instability, structural weakness, or any other hazardous condition.</p> <p>No instability of the embankment or hazardous condition was noted during the inspection.</p>			
Required for an impoundment which functions as a SEDIMENTATION POND.	<p>2. Sediment storage capacity, including elevation of 60% and 100% sediment storage volumes, and estimated average elevation of existing sediment.</p> <p>Sediment Storage Capacity:  60 % Elevation: 6843.79 (4.79')  100% Elevation: 6844.91 (5.91')</p> <p>There was an average of approximately 1' of water in the pond at the time of inspection. The sediment marker is in place, and field observation shows the sediment level to be well below the cleanout elevation. The bottom of pond and approximate sediment elevation is 6839.0.</p>		
	<p>3. Principle and emergency spillway elevations.</p> <p>Principle Spillway Elevation: 6848.00  Emergency Spillway Elevation: 6849.00  Total volume of pond at principle spillway: 12.97 Acre-Feet (Elev. 6848.00)  Required runoff storage: 7.11 Acre-Feet</p>		

4. **Field Information.** Provide current water elevation, whether pond is discharging, type and number of samples taken, monitoring/instrumentation information, inlet/outlet conditions or other related activities associated with the pond decanting, embankment erosion/repairs, monitoring information, vegetation on outlopes of embankments, etc.

The pond contained approximately 1.0' of water at the time of inspection. Average water elevation is approximately 6839.5.

5. **Field Evaluation.** Describe any changes in the geometry of the structure, average and maximum depths and elevations of impounded water, estimated sediment or slurry volume and remaining storage capacity, estimated volume of water impounded, and any other aspect of the impounding structure affecting its stability or function which has occurred during the reporting period.

The only change noted since the last inspection is a slight increase in the water level.

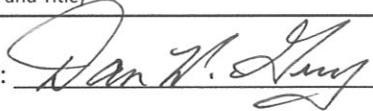
**Certification Statement**

I hereby certify that: I am experienced in the construction of impoundments; I am qualified and authorized under the direction of a Registered Professional Engineer to inspect the condition and appearance of impoundments in accordance with the certified and approved designs for this structure; that the impoundment has been maintained in accordance with approved design and meet or exceed the minimum design requirements under all applicable federal, state and local regulations: and, that inspections and inspection reports are made by myself, or under my direction and include any appearances of instability, structural weakness or other hazardous conditions of the structure affecting stability.

**By:**

(Full Name and Title)

Signature:



Date:

3/29/18

**State of Utah**  
**DEPARTMENT OF NATURAL RESOURCES**  
**Division of Oil, Gas & Mining**

1594 West North Temple, Suite 1210, PO Box 145801, Salt Lake City, UT 84114-5801  
 Telephone (801) 538-5340 facsimile (801) 359 3940 TTY (801) 538-7458  
 www.ogm.utah.gov



**Quarterly Inspection Form - Refuse Disposal Areas**

(please provide to DOGM promptly after inspection is complete)

Permit Number : C/025/0005 Inspection Date : 06/18/2018  
 Mine Name : Coal Hollow Project Quarter / Year : 2nd / 2018  
 Mine Operator (Permittee) : Alton Coal Development Inspector Name : Dan W. Guy  
 MSHA ID # : 42-02519 Inspector Signature : *Dan W. Guy*  
 Facility Name / Location / Address : 2060 South Alton Road, Alton, UT 84710

1. Describe any changes in the geometry of the structure (as well as instrumentation, if any, used to monitor changes):  
 Most of Main Pile has been removed. Remaining material will be removed during final borrow operation. Pile is regraded, subsoiled and seeded.

2. Lift Height / Thickness Avg 4.0' Maximum 4.0' # \_\_\_\_\_ Elevation of Active Benches : 6918 , \_\_\_\_\_ , \_\_\_\_\_  
 3. Vertical Angle of Outslope(s) / Location(s) where measured 3H:1V Avg. / No. Slope / So. Slope / \_\_\_\_\_  
 4. Total storage capacity: 8,600,000 cy Remaining storage capacity 8,211,000 cy Volume placed during year : 0

5. Describe foundation preparation (including removal of vegetation, stumps, topsoil, and all other organic material) :  
 Topsoil and subsoil removed and stored on site.

6. Describe placement and compaction of fill materials (including an explanation of how compaction is confirmed) :  
 Dumped by truck / Pushed by dozer / Compaction primarily from large trucks / Tested with nuclear density unit.

7. Is there any evidence of fires or burning on the structure ? (If YES, specify extent, location, and abatement/extinguishment of such fires) :  
 None

8. Describe placement of under drains, protective filter systems, and final surface drainage systems (report any seepage, including location, color, flow) :  
 None

9. Describe any appearances of instability, structural weakness, or other hazardous conditions :  
 No instability noted. Most of pile has been removed.

10. Please provide any other information pertaining to the stability of the structure (attach any photos taken during the inspection)

Are there cracks or scarps in crest ? YES  NO   
 Is there any detectable sloughing or bulging ? YES  NO   
 Do slope erosion problems exist ? YES  NO   
 Cracks or scarps in slope ? YES  NO   
 Surface movements? (valley bottom, hillsides) YES  NO   
 Erosion of Toe ? YES  NO   
 Water impounded by structure ? YES  NO   
 Are diversion ditches stable? YES  NO   
 Is drainage positive ? YES  NO   
 Could failure of structure create an impoundment (provide description) ? No

Are design standards established within the mining and reclamation plan for the disposal facility being met ?  
 Yes.

Proctor Determination : 88% minimum - 98% maximum compaction as determined by nuclear density tests on 5/13/13.

I hereby certify that: I am experienced in the construction of earth and rock fills; I am qualified and authorized in the State of Utah to inspect and certify the condition and appearance of earth and rock fills in accordance with structure; that the fill structure has been maintained in accordance with the approved design and meets or exceeds the minimum design requirements under all applicable federal, state, and local regulations; and, that inspections and inspection reports are made by myself or under my direction and include any appearances of instability, structural weakness or other hazardous conditions of the structure affecting stability.

(place P.E. certification below)

IMPOUNDMENT INSPECTION AND REPORT		
Permit Number	C/025/0005	6/18/2018
Mine Name	Coal Hollow Mine	
Company Name	Alton Coal Development, LLC	
Impoundment Identification	Impoundment Name	Pond 1
	Impoundment Number	Pond 1
	MSHA Mine ID Number	42-02519
IMPOUNDMENT INSPECTION		
Inspection Date	18-Jun-08	
Inspected By	Kirk Nicholes / Dan Guy / Andrew Christensen	
Reason for Inspection (Annual, Quarterly or Other Periodic Inspections, Critical Installation, or Completion of Construction)	Annual Inspection.	
1. Describe any appearance of any instability, structural weakness, or any other hazardous condition. N/A - None Noted.		
Required for an impoundment which functions as a SEDIMENTATION POND.	2. Sediment storage capacity, including elevation of 60% and 100% sediment storage volumes, and estimated average elevation of existing sediment. Sediment Storage Capacity: 60 % Elevation: 6912 (1.26') 100% Elevation: 6913 (2.03')  The pond has been cleaned. It contained approximately 6.0' of water at the time of the inspection. The sediment marker has not been reset yet; however, the field observation shows the sediment level to be well below the cleanout level. The pond bottom and sediment level is approximately at elevation 6911.0.	
	3. Principle and emergency spillway elevations. Principle and Emergency Spillway Elevation: 6920 feet (The outlet structure for Pond 1 serves as both the Principle and Emergency Spillways) Total volume of pond at Spillway: 3.16 Acre-Feet (Elev. 6920.00') Required runoff storage: 2.57 Acre-Feet	

4. **Field Information.** Provide current water elevation, whether pond is discharging, type and number of samples taken, monitoring/instrumentation information, inlet/outlet conditions or other related activities associated with the pond decanting, embankment erosion/repairs, monitoring information, vegetation on outlooes of embankments, etc.

The water level is at elevation 6917. Embankments appear to be stable. The pond has been cleaned and appears to be functioning properly. Material cleaned from the pond is temporarily stored around the outer embankments and will be removed as it dries. There was no inflow, and the pond was not discharging at the time of the inspection.

5. **Field Evaluation.** Describe any changes in the geometry of the structure, average and maximum depths and elevations of impounded water, estimated sediment or slurry volume and remaining storage capacity, estimated volume of water impounded, and any other aspect of the impounding structure affecting its stability or function which has occurred during the reporting period.

The main change noted in the structure during the 2nd quarter of 2018 was that the pond has been cleaned, as required. The water level was also down from the previous inspection. Since this is the annual inspection, this certification will also serve as the post-cleaning recertification.

**Certification Statement**

I hereby certify that: I am experienced in the construction of impoundments; I am qualified and authorized under the direction of a Registered Professional Engineer to inspect the condition and appearance of impoundments in accordance with the certified and approved designs for this structure; that the impoundment has been maintained in accordance with approved design and meet or exceed the minimum design requirements under all applicable federal, state and local regulations; and, that inspections and inspection reports are made by myself, or under my direction and include any appearances of instability, structural weakness or other hazardous conditions of the structure affecting stability.



**By:**

Dan W. Guy, P.E.

Signature: Dan W. Guy

Date: 6/18/18

<b>IMPOUNDMENT INSPECTION AND REPORT</b>			
<b>Permit Number</b>	C/025/0005	<b>Report Date</b>	06/18/2018
<b>Mine Name</b>	Coal Hollow Mine		
<b>Company Name</b>	Alton Coal Development, LLC		
<b>Impoundment Identification</b>	<b>Impoundment Name</b>	Pond 1B	
	<b>Impoundment Number</b>	Pond 1B	
	<b>MSHA Mine ID Number</b>	42-02519	
<b>IMPOUNDMENT INSPECTION</b>			
<b>Inspection Date</b>	18-Jun-18		
<b>Inspected By</b>	Kirk Nicholes / Dan Guy / Andrew Christensen		
<b>Reason for Inspection</b> (Annual, Quarterly or Other Periodic Inspections, Critical Installation, or Completion of Construction)	Annual Inspection.		
<p>1. Describe any appearance of any instability, structural weakness, or any other hazardous condition.</p> <p>N/A - No appearance of any instability, structural weakness or other hazardous condition was noted.</p>			
Required for an impoundment which functions as a SEDIMENTATION POND.	<p>2. Sediment storage capacity, including elevation of 60% and 100% sediment storage volumes, and estimated average elevation of existing sediment.</p> <p>Sediment Storage Capacity:  60 % Elevation: 6900.00 (6.00')  100% Elevation: 6902.08 (8.08')</p> <p>The pond contained approximately 6.0' of water at the time of the inspection. The sediment marker is in place. The sediment elevation is approximately 6894.3.</p>		
	<p>3. Principle and emergency spillway elevations.</p> <p>Principle and Emergency Spillway Elevation: 6906.45 feet (The outlet structure for Pond 1B serves as both the Principle and Emergency Spillways)</p> <p>Total volume of pond at Spillway: 0.894 Acre-Feet (Elev. 6906.45)</p> <p>Required runoff storage: 0.50 Acre-Feet</p>		

4. **Field Information.** Provide current water elevation, whether pond is discharging, type and number of samples taken, monitoring/instrumentation information, inlet/outlet conditions or other related activities associated with the pond decanting, embankment erosion/repairs, monitoring information, vegetation on out slopes of embankments, etc.

The water level is approximately at elevation 6900.3. There are 2 inlets to the pond - both have been previously rip-rapped and are operating properly. There is a small delta of sediment accumulation below the northwest inlet. The outlet is also open and functional. There was no inflow and no discharge at the time of the inspection.

5. **Field Evaluation.** Describe any changes in the geometry of the structure, average and maximum depths and elevations of impounded water, estimated sediment or slurry volume and remaining storage capacity, estimated volume of water impounded, and any other aspect of the impounding structure affecting its stability or function which has occurred during the reporting period.

The changes noted since the last inspection include a decrease in the water level, and a slight increase in the sediment level. The pond appears to be stable and operating properly.

**Certification Statement**



I hereby certify that: I am experienced in the construction of impoundments; I am qualified and authorized under the direction of a Registered Professional Engineer to inspect the condition and appearance of impoundments in accordance with the certified and approved designs for this structure; that the impoundment has been maintained in accordance with approved design and meet or exceed the minimum design requirements under all applicable federal, state and local regulations: and, that inspections and inspection reports are made by myself, or under my direction and include any appearances of instability, structural weakness or other hazardous conditions of the structure affecting stability.

**By:**

Dan W. Guy, P.E.

Signature: Dan W. Guy

Date: 6/18/18

IMPOUNDMENT INSPECTION AND REPORT		
Permit Number	C/025/0005	6/18/2018
Mine Name	Coal Hollow Mine	
Company Name	Alton Coal Development, LLC	
Impoundment Identification	Impoundment Name	Pond 2
	Impoundment Number	Pond 2
	MSHA Mine ID Number	42-02519
IMPOUNDMENT INSPECTION		
Inspection Date	18-Jun-18	
Inspected By	Kirk Nicholes / Dan Guy / Andrew Christensen	
Reason for Inspection (Annual, Quarterly or Other Periodic Inspections, Critical Installation, or Completion of Construction)	Annual Inspection.	
<p>1. Describe any appearance of any instability, structural weakness, or any other hazardous condition.</p> <p>N/A - No appearance of any instability, structural weakness or other hazardous condition was noted.</p>		
Required for an impoundment which functions as a SEDIMENTATION POND.	<p>2. Sediment storage capacity, including elevation of 60% and 100% sediment storage volumes, and estimated average elevation of existing sediment.</p> <p>Sediment Storage Capacity:  60 % Elevation: 6892.1 (3.10')  100% Elevation: 6893.5 (4.50')</p> <p>The pond contained approximately 0.5' of water at the time of the inspection. The sediment marker is in place, and field observation shows the sediment level to be well below the cleanout elevation. The approximate sediment elevation is 6889.0.</p>	
	<p>3. Principle and emergency spillway elevations.</p> <p>Principle and Emergency Spillway Elevation: 6900 feet (The outlet structure for Pond 2 serves as both the Principle and Emergency Spillways)  Total volume of pond at Spillway: 2.675 Acre-Feet (Elev. 6901.09')  Required runoff storage: 1.71 Acre-Feet</p>	

4. **Field Information.** Provide current water elevation, whether pond is discharging, type and number of samples taken, monitoring/instrumentation information, inlet/outlet conditions or other related activities associated with the pond decanting, embankment erosion/repairs, monitoring information, vegetation on outslopes of embankments, etc.

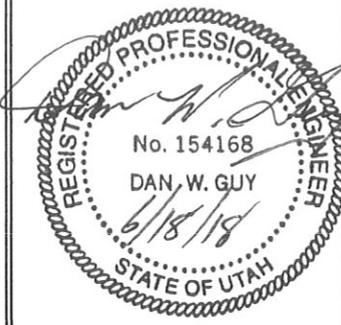
The water level is approximately at elevation 6889.5. The single pond inlet is rip-rapped. There was no inflow and no discharge at the time of the inspection.

5. **Field Evaluation.** Describe any changes in the geometry of the structure, average and maximum depths and elevations of impounded water, estimated sediment or slurry volume and remaining storage capacity, estimated volume of water impounded, and any other aspect of the impounding structure affecting its stability or function which has occurred during the reporting period.

The only noted change to the pond noted since the last inspection was that the pond now contained less water. The pond appears to be stable and operating properly.

**Certification Statement**

I hereby certify that: I am experienced in the construction of impoundments; I am qualified and authorized under the direction of a Registered Professional Engineer to inspect the condition and appearance of impoundments in accordance with the certified and approved designs for this structure; that the impoundment has been maintained in accordance with approved design and meet or exceed the minimum design requirements under all applicable federal, state and local regulations: and, that inspections and inspection reports are made by myself, or under my direction and include any appearances of instability, structural weakness or other hazardous conditions of the structure affecting stability.



**By:**

Dan W. Guy, P.E.

Signature: Dan W. Guy

Date: 6/18/18

IMPOUNDMENT INSPECTION AND REPORT		
Permit Number	C/025/0005	6/18/2018
Mine Name	Coal Hollow Mine	
Company Name	Alton Coal Development, LLC	
Impoundment Identification	Impoundment Name	Pond 3
	Impoundment Number	Pond 3
	MSHA Mine ID Number	42-02519
IMPOUNDMENT INSPECTION		
Inspection Date	18-Jun-18	
Inspected By	Kirk Nicholes / Dan Guy / Andrew Christensen	
Reason for Inspection (Annual, Quarterly or Other Periodic Inspections, Critical Installation, or Completion of Construction)	Annual Inspection.	
1. Describe any appearance of any instability, structural weakness, or any other hazardous condition. None Noted.		
Required for an impoundment which functions as a SEDIMENTATION POND.	2. Sediment storage capacity, including elevation of 60% and 100% sediment storage volumes, and estimated average elevation of existing sediment. Sediment Storage Capacity: 60 % Elevation: 6805.0 (4.0') 100% Elevation: 6807.0 (6.0')  The pond was nearly dry at the time of the inspection, with only small puddles of water in the upper area. The sediment marker is in place, and field observation shows the average sediment level to be below the cleanout elevation. The approximate average sediment elevation is 6804.5.	
	3. Principle and emergency spillway elevations. Principle and Emergency Spillway Elevation: 6811 feet (The outlet structure for Pond 3 serves as both the Principle and Emergency Spillways) Total volume of pond at Spillway: 12.60 Acre-Feet (Elev. 6811.00') Required runoff storage: 6.30 Acre-Feet Decant Elevation: 6808.0	

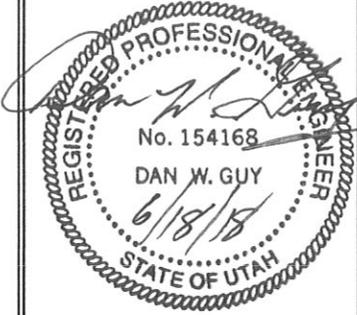
4. **Field Information.** Provide current water elevation, whether pond is discharging, type and number of samples taken, monitoring/instrumentation information, inlet/outlet conditions or other related activities associated with the pond decanting, embankment erosion/repairs, monitoring information, vegetation on outlopes of embankments, etc.

Cleaning of the pond sediment has been started in both the upper and lower portions, and will be completed as the pond continues to dry. There were only small puddles of water in the upper area at the time of the inspection. The inlet, spillway and decant are all open and operational. There was no inflow and no discharge at the time of the inspection.

5. **Field Evaluation.** Describe any changes in the geometry of the structure, average and maximum depths and elevations of impounded water, estimated sediment or slurry volume and remaining storage capacity, estimated volume of water impounded, and any other aspect of the impounding structure affecting its stability or function which has occurred during the reporting period.

The noted changes since the last inspection include a decrease in the water level, and the pond is now in the early stages of cleaning. The pond and the dam appear to be stable and are operating properly.

**Certification Statement**



I hereby certify that: I am experienced in the construction of impoundments; I am qualified and authorized under the direction of a Registered Professional Engineer to inspect the condition and appearance of impoundments in accordance with the certified and approved designs for this structure; that the impoundment has been maintained in accordance with approved design and meet or exceed the minimum design requirements under all applicable federal, state and local regulations: and, that inspections and inspection reports are made by myself, or under my direction and include any appearances of instability, structural weakness or other hazardous conditions of the structure affecting stability.

**By:**

Dan W. Guy, P.E.

Signature:

A handwritten signature in black ink that reads "Dan W. Guy".

Date:

6/18/18

IMPOUNDMENT INSPECTION AND REPORT			
Permit Number	C/025/0005	Report Date 06/18/2018	
Mine Name	Coal Hollow Mine		
Company Name	Alton Coal Development, LLC		
Impoundment Identification	Impoundment Name	Pond 4	
	Impoundment Number	Pond 4	
	MSHA Mine ID Number	42-02519	
IMPOUNDMENT INSPECTION			
Inspection Date	18-Jun-18		
Inspected By	Kirk Nicholes / Dan Guy / Andrew Christensen		
Reason for Inspection (Annual, Quarterly or Other Periodic Inspections, Critical Installation, or Completion of Construction)	Annual Inspection.		
<p>1. Describe any appearance of any instability, structural weakness, or any other hazardous condition.</p> <p>No instability of the embankment or hazardous condition was noted during the inspection.</p>			
Required for an impoundment which functions as a SEDIMENTATION POND.	<p>2. Sediment storage capacity, including elevation of 60% and 100% sediment storage volumes, and estimated average elevation of existing sediment.</p> <p>Sediment Storage Capacity:  60 % Elevation: 6829.0 (7.0')  100% Elevation: 6830.0 (8.0')</p> <p>The pond contained approximately 1.0' of water in the upper cell and the lower cell was dry. The sediment marker is in place, and field observation shows the sediment level to be well below the cleanout elevation. The bottom of pond and approximate sediment elevation is 6827.2.</p>		
	<p>3. Principle and emergency spillway elevations.</p> <p>Principle and Emergency Spillway Elevation: 6834 feet (The outlet structure for Pond 4 serves as both the Principle and Emergency Spillways)</p> <p>Total volume of pond at Spillway: 5.50 Acre-Feet (Elev. 6834.00')</p> <p>Required runoff storage: 3.80 Acre-Feet</p>		

4. **Field Information.** Provide current water elevation, whether pond is discharging, type and number of samples taken, monitoring/instrumentation information, inlet/outlet conditions or other related activities associated with the pond decanting, embankment erosion/repairs, monitoring information, vegetation on outlopes of embankments, etc.

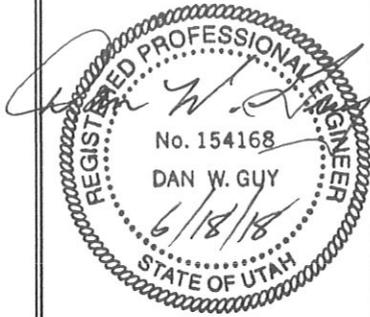
The average water elevation is approximately 6828.2. The open-channel spillway is in place and rip-rapped. No discharge.

5. **Field Evaluation.** Describe any changes in the geometry of the structure, average and maximum depths and elevations of impounded water, estimated sediment or slurry volume and remaining storage capacity, estimated volume of water impounded, and any other aspect of the impounding structure affecting its stability or function which has occurred during the reporting period.

The only change noted since the last inspection is a slight decrease in the water level in the upper cell and the lower cell was dry. The pond appears to be stable and operating properly. There was no inflow and no discharge at the time of the inspection.

**Certification Statement**

I hereby certify that: I am experienced in the construction of impoundments; I am qualified and authorized under the direction of a Registered Professional Engineer to inspect the condition and appearance of impoundments in accordance with the certified and approved designs for this structure; that the impoundment has been maintained in accordance with approved design and meet or exceed the minimum design requirements under all applicable federal, state and local regulations: and, that inspections and inspection reports are made by myself, or under my direction and include any appearances of instability, structural weakness or other hazardous conditions of the structure affecting stability.



**By:**

Dan W. Guy, P.E.

Signature: Dan W. Guy

Date: 6/18/18

<b>IMPOUNDMENT INSPECTION AND REPORT</b>			
<b>Permit Number</b>	C/025/0005	<b>06/18/2018</b>	
<b>Mine Name</b>	Coal Hollow Mine		
<b>Company Name</b>	Alton Coal Development, LLC		
<b>Impoundment Identification</b>	<b>Impoundment Name</b>	Pond 5	
	<b>Impoundment Number</b>	Pond 5	
	<b>MSHA Mine ID Number</b>	42-02519	
<b>IMPOUNDMENT INSPECTION</b>			
<b>Inspection Date</b>	<b>18-Jun-18</b>		
<b>Inspected By</b>	Kirk Nicholes / Dan Guy / Andrew Christensen		
<b>Reason for Inspection</b> (Annual, Quarterly or Other Periodic Inspections, Critical Installation, or Completion of Construction)	Annual Inspection.		
<p>1. Describe any appearance of any instability, structural weakness, or any other hazardous condition.</p> <p>No instability of the embankment or hazardous condition was noted during the inspection.</p>			
Required for an impoundment which functions as a SEDIMENTATION POND.	<p>2. Sediment storage capacity, including elevation of 60% and 100% sediment storage volumes, and estimated average elevation of existing sediment.</p> <p>Sediment Storage Capacity:  60 % Elevation: 6843.0 (3.00')  100% Elevation: 6844.0 (4.00')</p> <p>The pond had approximately 1.0' of water at the time of inspection . The sediment marker is in place, and field observation shows the sediment level to be well below the cleanout elevation. The bottom of pond and approximate sediment elevation is 6841.0.</p>		
	<p>3. Principle and emergency spillway elevations.</p> <p>Principle Spillway Elevation: 6848 feet  Emergency Spillway Elevation: 6849 feet  Total volume of pond at Spillway: 1.43 Acre-Feet (Elev. 6848.00')  Required runoff storage: 1.28 Acre-Feet</p>		

4. **Field Information.** Provide current water elevation, whether pond is discharging, type and number of samples taken, monitoring/instrumentation information, inlet/outlet conditions or other related activities associated with the pond decanting, embankment erosion/repairs, monitoring information, vegetation on outlopes of embankments, etc.

The water level is approximately at elevation 6842.0. The inlets and outlet are open and appear to be operating properly. No inflow or discharge at the time of the inspection.

5. **Field Evaluation.** Describe any changes in the geometry of the structure, average and maximum depths and elevations of impounded water, estimated sediment or slurry volume and remaining storage capacity, estimated volume of water impounded, and any other aspect of the impounding structure affecting its stability or function which has occurred during the reporting period.

The only noted change to the pond since the last inspection is a decrease in the water level. The pond and embankment appear to be stable.

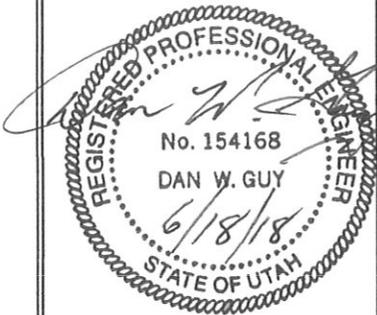
**Certification Statement**

I hereby certify that: I am experienced in the construction of impoundments; I am qualified and authorized under the direction of a Registered Professional Engineer to inspect the condition and appearance of impoundments in accordance with the certified and approved designs for this structure; that the impoundment has been maintained in accordance with approved design and meet or exceed the minimum design requirements under all applicable federal, state and local regulations: and, that inspections and inspection reports are made by myself, or under my direction and include any appearances of instability, structural weakness or other hazardous conditions of the structure affecting stability.

**By:**

Dan W. Guy, P.E.

Signature: *Dan W. Guy* Date: 6/18/18



<b>IMPOUNDMENT INSPECTION AND REPORT</b>			
<b>Permit Number</b>	C/025/0005	<b>Report Date</b>	06/18/2018
<b>Mine Name</b>	Coal Hollow Mine		
<b>Company Name</b>	Alton Coal Development, LLC		
<b>Impoundment Identification</b>	<b>Impoundment Name</b>	Pond 6	
	<b>Impoundment Number</b>	Pond 6	
	<b>MSHA Mine ID Number</b>	42-02519	
<b>IMPOUNDMENT INSPECTION</b>			
<b>Inspection Date</b>	18-Jun-18		
<b>Inspected By</b>	Kirk Nicholes / Dan Guy / Andrew Christensen		
<b>Reason for Inspection</b> (Annual, Quarterly or Other Periodic Inspections, Critical Installation, or Completion of Construction)	Annual Inspection.		
<p>1. Describe any appearance of any instability, structural weakness, or any other hazardous condition.</p> <p>No instability of the embankment or hazardous condition was noted during the inspection.</p>			
Required for an impoundment which functions as a SEDIMENTATION POND.	<p>2. Sediment storage capacity, including elevation of 60% and 100% sediment storage volumes, and estimated average elevation of existing sediment.</p> <p>Sediment Storage Capacity:  60 % Elevation: 6860.0 (5.00')  100% Elevation: 6861.0 (6.00')</p> <p>The pond was dry at the time of inspection . The sediment marker is in place, and field observation shows the sediment level to be well below the cleanout elevation. The bottom of pond and approximate sediment elevation is 6855.0.</p>		
	<p>3. Principle and emergency spillway elevations.</p> <p>Principle Spillway Elevation: 6866 feet  Emergency Spillway Elevation: 6867 feet  Total volume of pond at Spillway: 3.36 Acre-Feet (Elev. 6866.00')  Required runoff storage: 1.43 Acre-Feet</p>		

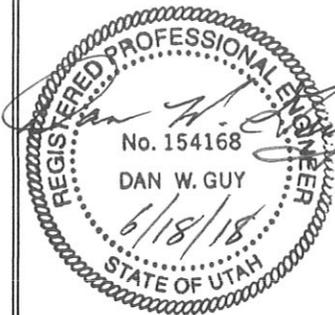
4. **Field Information.** Provide current water elevation, whether pond is discharging, type and number of samples taken, monitoring/instrumentation information, inlet/outlet conditions or other related activities associated with the pond decanting, embankment erosion/repairs, monitoring information, vegetation on outlopes of embankments, etc.

The pond was dry at the time of inspection. The inlets and outlet are open and functional. No inflow or discharge at the time of the inspection.

5. **Field Evaluation.** Describe any changes in the geometry of the structure, average and maximum depths and elevations of impounded water, estimated sediment or slurry volume and remaining storage capacity, estimated volume of water impounded, and any other aspect of the impounding structure affecting its stability or function which has occurred during the reporting period.

There have been no changes since the last inspection. The pond and embankment appear to be stable and operating properly.

**Certification Statement**



I hereby certify that: I am experienced in the construction of impoundments; I am qualified and authorized under the direction of a Registered Professional Engineer to inspect the condition and appearance of impoundments in accordance with the certified and approved designs for this structure; that the impoundment has been maintained in accordance with approved design and meet or exceed the minimum design requirements under all applicable federal, state and local regulations: and, that inspections and inspection reports are made by myself, or under my direction and include any appearances of instability, structural weakness or other hazardous conditions of the structure affecting stability.

**By:**

Dan W. Guy, P.E.

Signature: Dan W. Guy Date: 6/18/18

<b>IMPOUNDMENT INSPECTION AND REPORT</b>			
<b>Permit Number</b>	C/025/0005	<b>Report Date</b>	06/18/2018
<b>Mine Name</b>	Coal Hollow Mine		
<b>Company Name</b>	Alton Coal Development, LLC		
<b>Impoundment Identification</b>	<b>Impoundment Name</b>	Pond 7	
	<b>Impoundment Number</b>	Pond 7	
	<b>MSHA Mine ID Number</b>	42-02519	
<b>IMPOUNDMENT INSPECTION</b>			
<b>Inspection Date</b>	18-Jun-18		
<b>Inspected By</b>	Kirk Nicholes / Dan Guy / Andrew Christensen		
<b>Reason for Inspection</b> (Annual, Quarterly or Other Periodic Inspections, Critical Installation, or Completion of Construction)	Annual Inspection.		
<p>1. Describe any appearance of any instability, structural weakness, or any other hazardous condition.</p> <p>No instability of the embankment or hazardous condition was noted during the inspection.</p>			
Required for an impoundment which functions as a SEDIMENTATION POND.	<p>2. Sediment storage capacity, including elevation of 60% and 100% sediment storage volumes, and estimated average elevation of existing sediment.</p> <p>Sediment Storage Capacity:  60 % Elevation: 6843.79 (4.79')  100% Elevation: 6844.91 (5.91')</p> <p>There was an average of approximately 2' of water in the pond at the time of inspection. The sediment marker is in place, and field observation shows the sediment level to be well below the cleanout elevation. The bottom of pond and approximate sediment elevation is 6839.0.</p>		
	<p>3. Principle and emergency spillway elevations.</p> <p>Principle Spillway Elevation: 6848.00  Emergency Spillway Elevation: 6849.00  Total volume of pond at principle spillway: 12.97 Acre-Feet (Elev. 6848.00)  Required runoff storage: 7.11 Acre-Feet</p>		

4. **Field Information.** Provide current water elevation, whether pond is discharging, type and number of samples taken, monitoring/instrumentation information, inlet/outlet conditions or other related activities associated with the pond decanting, embankment erosion/repairs, monitoring information, vegetation on outlopes of embankments, etc.

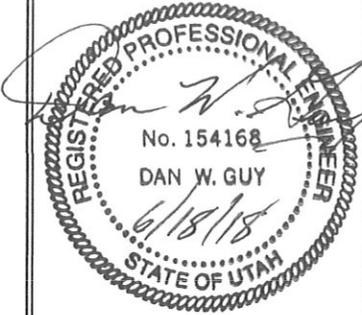
The pond contained approximately 2.0' of water at the time of inspection. Average water elevation is approximately 6841.0. Inlet and outlet structures appear to be open and functioning properly. There was no inflow and no discharge at the time of the inspection.

5. **Field Evaluation.** Describe any changes in the geometry of the structure, average and maximum depths and elevations of impounded water, estimated sediment or slurry volume and remaining storage capacity, estimated volume of water impounded, and any other aspect of the impounding structure affecting its stability or function which has occurred during the reporting period.

The only change noted since the last inspection is a slight increase in the water level. The pond appears to be stable and operating properly.

**Certification Statement**

I hereby certify that: I am experienced in the construction of impoundments; I am qualified and authorized under the direction of a Registered Professional Engineer to inspect the condition and appearance of impoundments in accordance with the certified and approved designs for this structure; that the impoundment has been maintained in accordance with approved design and meet or exceed the minimum design requirements under all applicable federal, state and local regulations: and, that inspections and inspection reports are made by myself, or under my direction and include any appearances of instability, structural weakness or other hazardous conditions of the structure affecting stability.



**By:**

Dan W. Guy, P.E.

Signature: *Dan W. Guy* Date: 6/18/18

IMPOUNDMENT INSPECTION AND REPORT		
Permit Number	C/025/0005	9/24/2018
Mine Name	Coal Hollow Mine	
Company Name	Alton Coal Development, LLC	
Impoundment Identification	Impoundment Name	Pond 1
	Impoundment Number	Pond 1
	MSHA Mine ID Number	42-02519
IMPOUNDMENT INSPECTION		
Inspection Date	24-Sep-08	
Inspected By	Kirk Nicholes / Dan Guy	
Reason for Inspection (Annual, Quarterly or Other Periodic Inspections, Critical Installation, or Completion of Construction)	Quarterly Inspection.	
1. Describe any appearance of any instability, structural weakness, or any other hazardous condition. N/A - None Noted.		
Required for an impoundment which functions as a SEDIMENTATION POND.	2. Sediment storage capacity, including elevation of 60% and 100% sediment storage volumes, and estimated average elevation of existing sediment. Sediment Storage Capacity: 60 % Elevation: 6912 (1.26') 100% Elevation: 6913 (2.03')  The pond has been mostly cleaned. It contained approximately 3.0' of water at the time of the inspection. The sediment marker has not been reset yet; however, the field observation shows the sediment level to be well below the cleanout level. The pond bottom and sediment level is approximately at elevation 6911.0.	
	3. Principle and emergency spillway elevations. Principle and Emergency Spillway Elevation: 6920 feet (The outlet structure for Pond 1 serves as both the Principle and Emergency Spillways) Total volume of pond at Spillway: 3.16 Acre-Feet (Elev. 6920.00') Required runoff storage: 2.57 Acre-Feet	

4. **Field Information.** Provide current water elevation, whether pond is discharging, type and number of samples taken, monitoring/instrumentation information, inlet/outlet conditions or other related activities associated with the pond decanting, embankment erosion/repairs, monitoring information, vegetation on outlooses of embankments, etc.

The water level is approximately at elevation 6914. Embankments appear to be stable. The pond has been mostly cleaned and appears to be functioning properly. The pond inlet has been temporarily moved to the northeast to facilitate cleaning. There is also a sediment delta remaining at this location. There was a minor inflow at the time of the inspection.

5. **Field Evaluation.** Describe any changes in the geometry of the structure, average and maximum depths and elevations of impounded water, estimated sediment or slurry volume and remaining storage capacity, estimated volume of water impounded, and any other aspect of the impounding structure affecting its stability or function which has occurred during the reporting period.

The main changes noted in the structure during the 3rd quarter of 2018 was that the pond contained less water, and the inlet has been moved temporarily to facilitate additional cleaning. There was no discharge.

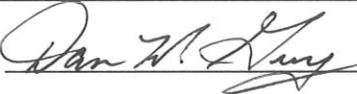
**Certification Statement**

I hereby certify that: I am experienced in the construction of impoundments; I am qualified and authorized under the direction of a Registered Professional Engineer to inspect the condition and appearance of impoundments in accordance with the certified and approved designs for this structure; that the impoundment has been maintained in accordance with approved design and meet or exceed the minimum design requirements under all applicable federal, state and local regulations: and, that inspections and inspection reports are made by myself, or under my direction and include any appearances of instability, structural weakness or other hazardous conditions of the structure affecting stability.

**By:**

Dan W. Guy, P.E.

Signature:



Date:

9/24/18

IMPOUNDMENT INSPECTION AND REPORT			
Permit Number	C/025/0005	Report Date	09/24/2018
Mine Name	Coal Hollow Mine		
Company Name	Alton Coal Development, LLC		
Impoundment Identification	Impoundment Name	Pond 1B	
	Impoundment Number	Pond 1B	
	MSHA Mine ID Number	42-02519	
IMPOUNDMENT INSPECTION			
Inspection Date	24-Sep-18		
Inspected By	Kirk Nicholes / Dan Guy		
Reason for Inspection (Annual, Quarterly or Other Periodic Inspections, Critical Installation, or Completion of Construction)	Quarterly Inspection.		
<p>1. Describe any appearance of any instability, structural weakness, or any other hazardous condition.</p> <p>N/A - No appearance of any instability, structural weakness or other hazardous condition was noted.</p>			
Required for an impoundment which functions as a SEDIMENTATION POND.	<p>2. Sediment storage capacity, including elevation of 60% and 100% sediment storage volumes, and estimated average elevation of existing sediment.</p> <p>Sediment Storage Capacity:  60 % Elevation: 6900.00 (6.00')  100% Elevation: 6902.08 (8.08')</p> <p>The pond contained approximately 8.5' of water at the time of the inspection. The sediment marker is in place. The sediment elevation is approximately 6894.5.</p>		
	<p>3. Principle and emergency spillway elevations.</p> <p>Principle and Emergency Spillway Elevation: 6906.45 feet (The outlet structure for Pond 1B serves as both the Principle and Emergency Spillways)</p> <p>Total volume of pond at Spillway: 0.894 Acre-Feet (Elev. 6906.45)</p> <p>Required runoff storage: 0.50 Acre-Feet</p>		

4. **Field Information.** Provide current water elevation, whether pond is discharging, type and number of samples taken, monitoring/instrumentation information, inlet/outlet conditions or other related activities associated with the pond decanting, embankment erosion/repairs, monitoring information, vegetation on outslopes of embankments, etc.

The water level is approximately at elevation 6903. There are 2 inlets to the pond - both have been previously ripped and are operating properly. There is a small delta of sediment accumulation below the northwest inlet. The outlet is also open and functional. There was no inflow and no discharge at the time of the inspection.

5. **Field Evaluation.** Describe any changes in the geometry of the structure, average and maximum depths and elevations of impounded water, estimated sediment or slurry volume and remaining storage capacity, estimated volume of water impounded, and any other aspect of the impounding structure affecting its stability or function which has occurred during the reporting period.

The changes noted since the last inspection include an increase in the water level, and a slight increase in the sediment level. The pond appears to be stable and operating properly. There was no discharge.

<b>Certification Statement</b>	I hereby certify that: I am experienced in the construction of impoundments; I am qualified and authorized under the direction of a Registered Professional Engineer to inspect the condition and appearance of impoundments in accordance with the certified and approved designs for this structure; that the impoundment has been maintained in accordance with approved design and meet or exceed the minimum design requirements under all applicable federal, state and local regulations: and, that inspections and inspection reports are made by myself, or under my direction and include any appearances of instability, structural weakness or other hazardous conditions of the structure affecting stability.
	<b>By:</b>
	Dan W. Guy, P.E.
	Signature: <u></u> Date: <u>9/24/18</u>

IMPOUNDMENT INSPECTION AND REPORT		
Permit Number	C/025/0005	9/24/2018
Mine Name	Coal Hollow Mine	
Company Name	Alton Coal Development, LLC	
Impoundment Identification	Impoundment Name	Pond 2
	Impoundment Number	Pond 2
	MSHA Mine ID Number	42-02519
IMPOUNDMENT INSPECTION		
Inspection Date	24-Sep-18	
Inspected By	Kirk Nicholes / Dan Guy	
Reason for Inspection (Annual, Quarterly or Other Periodic Inspections, Critical Installation, or Completion of Construction)	Quarterly Inspection.	
1. Describe any appearance of any instability, structural weakness, or any other hazardous condition. N/A - No appearance of any instability, structural weakness or other hazardous condition was noted.		
Required for an impoundment which functions as a SEDIMENTATION POND.	2. Sediment storage capacity, including elevation of 60% and 100% sediment storage volumes, and estimated average elevation of existing sediment. Sediment Storage Capacity: 60 % Elevation: 6892.1 (3.10') 100% Elevation: 6893.5 (4.50')  The pond contained approximately 2.0' of water at the time of the inspection. The sediment marker is in place, and field observation shows the sediment level to be well below the cleanout elevation. The approximate sediment elevation is 6889.2.	
	3. Principle and emergency spillway elevations. Principle and Emergency Spillway Elevation: 6900 feet (The outlet structure for Pond 2 serves as both the Principle and Emergency Spillways) Total volume of pond at Spillway: 2.675 Acre-Feet (Elev. 6901.09') Required runoff storage: 1.71 Acre-Feet	

4. **Field Information.** Provide current water elevation, whether pond is discharging, type and number of samples taken, monitoring/instrumentation information, inlet/outlet conditions or other related activities associated with the pond decanting, embankment erosion/repairs, monitoring information, vegetation on outslopes of embankments, etc.

The water level is approximately at elevation 6891. The single pond inlet is rip-rapped. There was no inflow and no discharge at the time of the inspection.

5. **Field Evaluation.** Describe any changes in the geometry of the structure, average and maximum depths and elevations of impounded water, estimated sediment or slurry volume and remaining storage capacity, estimated volume of water impounded, and any other aspect of the impounding structure affecting its stability or function which has occurred during the reporting period.

The only noted changes to the pond noted since the last inspection are an increase in the water level and a slight increase in the sediment level. The pond appears to be stable and operating properly.

**Certification Statement**

I hereby certify that: I am experienced in the construction of impoundments; I am qualified and authorized under the direction of a Registered Professional Engineer to inspect the condition and appearance of impoundments in accordance with the certified and approved designs for this structure; that the impoundment has been maintained in accordance with approved design and meet or exceed the minimum design requirements under all applicable federal, state and local regulations: and, that inspections and inspection reports are made by myself, or under my direction and include any appearances of instability, structural weakness or other hazardous conditions of the structure affecting stability.

**By:**

Dan W. Guy, P.E.

Signature: Dan W. Guy Date: 9/24/18

IMPOUNDMENT INSPECTION AND REPORT		
Permit Number	C/025/0005	9/24/2018
Mine Name	Coal Hollow Mine	
Company Name	Alton Coal Development, LLC	
Impoundment Identification	Impoundment Name	Pond 3
	Impoundment Number	Pond 3
	MSHA Mine ID Number	42-02519
IMPOUNDMENT INSPECTION		
Inspection Date	24-Sep-18	
Inspected By	Kirk Nicholes / Dan Guy	
Reason for Inspection (Annual, Quarterly or Other Periodic Inspections, Critical Installation, or Completion of Construction)	Quarterly Inspection.	
1. Describe any appearance of any instability, structural weakness, or any other hazardous condition.		
None Noted.		
Required for an impoundment which functions as a SEDIMENTATION POND.	2. Sediment storage capacity, including elevation of 60% and 100% sediment storage volumes, and estimated average elevation of existing sediment.	
	<p>Sediment Storage Capacity:  60 % Elevation: 6805.0 (4.0')  100% Elevation: 6807.0 (6.0')</p> <p>The pond contained an average of approximately 2.5' of water at the time of the inspection. The sediment marker is in place, and field observation shows the average sediment level to be below the cleanout elevation. The approximate average sediment elevation is 6804.6.</p>	
	3. Principle and emergency spillway elevations.	
	Principle and Emergency Spillway Elevation: 6811 feet (The outlet structure for Pond 3 serves as both the Principle and Emergency Spillways) Total volume of pond at Spillway: 12.60 Acre-Feet (Elev. 6811.00') Required runoff storage: 6.30 Acre-Feet Decant Elevation: 6808.0	

4. **Field Information.** Provide current water elevation, whether pond is discharging, type and number of samples taken, monitoring/instrumentation information, inlet/outlet conditions or other related activities associated with the pond decanting, embankment erosion/repairs, monitoring information, vegetation on outlopes of embankments, etc.

The water level is approximately at elevation 6807. The inlet, spillway and decant are all open and operational. There was no inflow and no discharge at the time of the inspection.

5. **Field Evaluation.** Describe any changes in the geometry of the structure, average and maximum depths and elevations of impounded water, estimated sediment or slurry volume and remaining storage capacity, estimated volume of water impounded, and any other aspect of the impounding structure affecting its stability or function which has occurred during the reporting period.

The noted changes since the last inspection include an increase in the water level, and a slight increase in the overall sediment level. The pond and the dam appear to be stable and are operating properly. It should be noted that additional rip-rap has been added to the ditches carrying runoff from the spoil pile area to the pond.

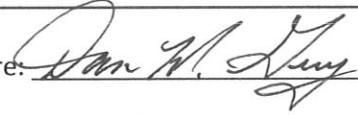
**Certification Statement**

I hereby certify that: I am experienced in the construction of impoundments; I am qualified and authorized under the direction of a Registered Professional Engineer to inspect the condition and appearance of impoundments in accordance with the certified and approved designs for this structure; that the impoundment has been maintained in accordance with approved design and meet or exceed the minimum design requirements under all applicable federal, state and local regulations: and, that inspections and inspection reports are made by myself, or under my direction and include any appearances of instability, structural weakness or other hazardous conditions of the structure affecting stability.

**By:**

Dan W. Guy, P.E.

Signature:



Date:

9/24/18

IMPOUNDMENT INSPECTION AND REPORT			
Permit Number	C/025/0005	Report Date	09/24/2018
Mine Name	Coal Hollow Mine		
Company Name	Alton Coal Development, LLC		
Impoundment Identification	Impoundment Name	Pond 4	
	Impoundment Number	Pond 4	
	MSHA Mine ID Number	42-02519	
IMPOUNDMENT INSPECTION			
Inspection Date	24-Sep-18		
Inspected By	Kirk Nicholes / Dan Guy		
Reason for Inspection (Annual, Quarterly or Other Periodic Inspections, Critical Installation, or Completion of Construction)	Quarterly Inspection.		
<p>1. Describe any appearance of any instability, structural weakness, or any other hazardous condition.</p> <p>No instability of the embankment or hazardous condition was noted during the inspection.</p>			
Required for an impoundment which functions as a SEDIMENTATION POND.	<p>2. Sediment storage capacity, including elevation of 60% and 100% sediment storage volumes, and estimated average elevation of existing sediment.</p> <p>Sediment Storage Capacity:  60 % Elevation: 6829.0 (7.0')  100% Elevation: 6830.0 (8.0')</p> <p>The pond contained less than 1.0' of water in the upper cell and the lower cell was dry. The sediment marker is in place, and field observation shows the sediment level to be well below the cleanout elevation. The bottom of pond and approximate sediment elevation is 6827.2.</p>		
	<p>3. Principle and emergency spillway elevations.</p> <p>Principle and Emergency Spillway Elevation: 6834 feet (The outlet structure for Pond 4 serves as both the Principle and Emergency Spillways)  Total volume of pond at Spillway: 5.50 Acre-Feet (Elev. 6834.00')  Required runoff storage: 3.80 Acre-Feet</p>		

4. **Field Information.** Provide current water elevation, whether pond is discharging, type and number of samples taken, monitoring/instrumentation information, inlet/outlet conditions or other related activities associated with the pond decanting, embankment erosion/repairs, monitoring information, vegetation on outlopes of embankments, etc.

The average water elevation is approximately 6828. The open-channel spillway is in place and rip-rapped. No discharge.

5. **Field Evaluation.** Describe any changes in the geometry of the structure, average and maximum depths and elevations of impounded water, estimated sediment or slurry volume and remaining storage capacity, estimated volume of water impounded, and any other aspect of the impounding structure affecting its stability or function which has occurred during the reporting period.

The only change noted since the last inspection is a slight decrease in the water level in the upper cell and the lower cell was dry. The pond appears to be stable and operating properly. There was no inflow and no discharge at the time of the inspection.

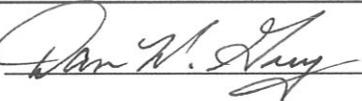
**Certification Statement**

I hereby certify that: I am experienced in the construction of impoundments; I am qualified and authorized under the direction of a Registered Professional Engineer to inspect the condition and appearance of impoundments in accordance with the certified and approved designs for this structure; that the impoundment has been maintained in accordance with approved design and meet or exceed the minimum design requirements under all applicable federal, state and local regulations: and, that inspections and inspection reports are made by myself, or under my direction and include any appearances of instability, structural weakness or other hazardous conditions of the structure affecting stability.

**By:**

Dan W. Guy, P.E.

Signature:



Date:

9/24/18

IMPOUNDMENT INSPECTION AND REPORT			
Permit Number	C/025/0005	09/24/2018	
Mine Name	Coal Hollow Mine		
Company Name	Alton Coal Development, LLC		
Impoundment Identification	Impoundment Name	Pond 5	
	Impoundment Number	Pond 5	
	MSHA Mine ID Number	42-02519	
IMPOUNDMENT INSPECTION			
Inspection Date	24-Sep-18		
Inspected By	Kirk Nicholes / Dan Guy		
Reason for Inspection (Annual, Quarterly or Other Periodic Inspections, Critical Installation, or Completion of Construction)	Quarterly Inspection.		
<p>1. Describe any appearance of any instability, structural weakness, or any other hazardous condition.</p> <p>No instability of the embankment or hazardous condition was noted during the inspection.</p>			
Required for an impoundment which functions as a SEDIMENTATION POND.	<p>2. Sediment storage capacity, including elevation of 60% and 100% sediment storage volumes, and estimated average elevation of existing sediment.</p> <p>Sediment Storage Capacity:  60 % Elevation: 6843.0 (3.00')  100% Elevation: 6844.0 (4.00')</p> <p>The pond had approximately 1.0' of water at the time of inspection . The sediment marker is in place, and field observation shows the sediment level to be well below the cleanout elevation. The bottom of pond and approximate sediment elevation is 6841.1.</p>		
	<p>3. Principle and emergency spillway elevations.</p> <p>Principle Spillway Elevation: 6848 feet  Emergency Spillway Elevation: 6849 feet  Total volume of pond at Spillway: 1.43 Acre-Feet (Elev. 6848.00')  Required runoff storage: 1.28 Acre-Feet</p>		

4. **Field Information.** Provide current water elevation, whether pond is discharging, type and number of samples taken, monitoring/instrumentation information, inlet/outlet conditions or other related activities associated with the pond decanting, embankment erosion/repairs, monitoring information, vegetation on outlopes of embankments, etc.

The water level is approximately at elevation 6842. The inlets and outlet are open and appear to be operating properly. No inflow or discharge at the time of the inspection.

5. **Field Evaluation.** Describe any changes in the geometry of the structure, average and maximum depths and elevations of impounded water, estimated sediment or slurry volume and remaining storage capacity, estimated volume of water impounded, and any other aspect of the impounding structure affecting its stability or function which has occurred during the reporting period.

No changes were noted to the pond since the last inspection. The pond and embankment appear to be stable.

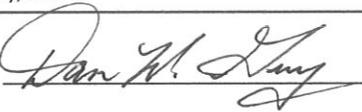
**Certification Statement**

I hereby certify that: I am experienced in the construction of impoundments; I am qualified and authorized under the direction of a Registered Professional Engineer to inspect the condition and appearance of impoundments in accordance with the certified and approved designs for this structure; that the impoundment has been maintained in accordance with approved design and meet or exceed the minimum design requirements under all applicable federal, state and local regulations: and, that inspections and inspection reports are made by myself, or under my direction and include any appearances of instability, structural weakness or other hazardous conditions of the structure affecting stability.

**By:**

Dan W. Guy, P.E.

Signature:



Date:

9/24/18

IMPOUNDMENT INSPECTION AND REPORT		
Permit Number	C/025/0005	9/24/2018
Mine Name	Coal Hollow Mine	
Company Name	Alton Coal Development, LLC	
Impoundment Identification	Impoundment Name	Pond 6
	Impoundment Number	Pond 6
	MSHA Mine ID Number	42-02519
IMPOUNDMENT INSPECTION		
Inspection Date	24-Sep-18	
Inspected By	Kirk Nicholes / Dan Guy	
Reason for Inspection (Annual, Quarterly or Other Periodic Inspections, Critical Installation, or Completion of Construction)	Quarterly Inspection.	
<p>1. Describe any appearance of any instability, structural weakness, or any other hazardous condition.</p> <p>No instability of the embankment or hazardous condition was noted during the inspection.</p>		
Required for an impoundment which functions as a SEDIMENTATION POND.	<p>2. Sediment storage capacity, including elevation of 60% and 100% sediment storage volumes, and estimated average elevation of existing sediment.</p> <p>Sediment Storage Capacity:  60 % Elevation: 6860.0 (5.00')  100% Elevation: 6861.0 (6.00')</p> <p>The pond was mostly dry at the time of inspection, with only one small puddle of water on the west end. The sediment marker is in place, and field observation shows the sediment level to be well below the cleanout elevation. The bottom of pond and approximate sediment elevation is 6855.1.</p>	
	<p>3. Principle and emergency spillway elevations.</p> <p>Principle Spillway Elevation: 6866 feet  Emergency Spillway Elevation: 6867 feet  Total volume of pond at Spillway: 3.36 Acre-Feet (Elev. 6866.00')  Required runoff storage: 1.43 Acre-Feet</p>	

4. **Field Information.** Provide current water elevation, whether pond is discharging, type and number of samples taken, monitoring/instrumentation information, inlet/outlet conditions or other related activities associated with the pond decanting, embankment erosion/repairs, monitoring information, vegetation on outlopes of embankments, etc.

The pond was mostly dry at the time of inspection. The inlets and outlet are open and functional. No inflow or discharge at the time of the inspection.

5. **Field Evaluation.** Describe any changes in the geometry of the structure, average and maximum depths and elevations of impounded water, estimated sediment or slurry volume and remaining storage capacity, estimated volume of water impounded, and any other aspect of the impounding structure affecting its stability or function which has occurred during the reporting period.

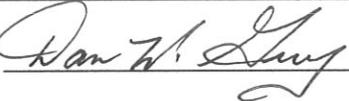
The only change noted since the last inspection is that there is a small puddle of water in the west end of the pond. The pond and embankment appear to be stable and operating properly.

**Certification Statement**

I hereby certify that: I am experienced in the construction of impoundments; I am qualified and authorized under the direction of a Registered Professional Engineer to inspect the condition and appearance of impoundments in accordance with the certified and approved designs for this structure; that the impoundment has been maintained in accordance with approved design and meet or exceed the minimum design requirements under all applicable federal, state and local regulations; and, that inspections and inspection reports are made by myself, or under my direction and include any appearances of instability, structural weakness or other hazardous conditions of the structure affecting stability.

**By:**

Dan W. Guy, P.E.

Signature:  Date: 9/24/18

IMPOUNDMENT INSPECTION AND REPORT		
Permit Number	C/025/0005	9/24/2018
Mine Name	Coal Hollow Mine	
Company Name	Alton Coal Development, LLC	
Impoundment Identification	Impoundment Name	Pond 7
	Impoundment Number	Pond 7
	MSHA Mine ID Number	42-02519
IMPOUNDMENT INSPECTION		
Inspection Date	24-Sep-18	
Inspected By	Kirk Nicholes / Dan Guy	
Reason for Inspection (Annual, Quarterly or Other Periodic Inspections, Critical Installation, or Completion of Construction)	Quarterly Inspection.	
<p>1. Describe any appearance of any instability, structural weakness, or any other hazardous condition.</p> <p>No instability of the embankment or hazardous condition was noted during the inspection.</p>		
Required for an impoundment which functions as a SEDIMENTATION POND.	<p>2. Sediment storage capacity, including elevation of 60% and 100% sediment storage volumes, and estimated average elevation of existing sediment.</p> <p>Sediment Storage Capacity:  60 % Elevation: 6843.79 (4.79')  100% Elevation: 6844.91 (5.91')</p> <p>There was approximately 6' of water in the pond at the time of inspection. The sediment marker is in place, and field observation shows the sediment level to be well below the cleanout elevation. The bottom of pond and approximate sediment elevation is 6839.3.</p>	
	<p>3. Principle and emergency spillway elevations.</p> <p>Principle Spillway Elevation: 6848.00  Emergency Spillway Elevation: 6849.00  Total volume of pond at principle spillway: 12.97 Acre-Feet (Elev. 6848.00)  Required runoff storage: 7.11 Acre-Feet</p>	

4. **Field Information.** Provide current water elevation, whether pond is discharging, type and number of samples taken, monitoring/instrumentation information, inlet/outlet conditions or other related activities associated with the pond decanting, embankment erosion/repairs, monitoring information, vegetation on outlopes of embankments, etc.

The pond contained approximately 6.0' of water at the time of inspection. Average water elevation is approximately 6845. Inlet and outlet structures appear to be open and functioning properly. There was no inflow and no discharge at the time of the inspection.

5. **Field Evaluation.** Describe any changes in the geometry of the structure, average and maximum depths and elevations of impounded water, estimated sediment or slurry volume and remaining storage capacity, estimated volume of water impounded, and any other aspect of the impounding structure affecting its stability or function which has occurred during the reporting period.

The only changes noted since the last inspection are an increase in the water level and a slight increase in the sediment level. The pond appears to be stable and operating properly.

**Certification Statement**

I hereby certify that: I am experienced in the construction of impoundments; I am qualified and authorized under the direction of a Registered Professional Engineer to inspect the condition and appearance of impoundments in accordance with the certified and approved designs for this structure; that the impoundment has been maintained in accordance with approved design and meet or exceed the minimum design requirements under all applicable federal, state and local regulations: and, that inspections and inspection reports are made by myself, or under my direction and include any appearances of instability, structural weakness or other hazardous conditions of the structure affecting stability.

**By:**

Dan W. Guy, P.E.

Signature:



Date:

9/24/18

**State of Utah**  
**DEPARTMENT OF NATURAL RESOURCES**  
**Division of Oil, Gas & Mining**

1594 West North Temple, Suite 1210, PO Box 145801, Salt Lake City, UT 84114-5801  
 Telephone (801) 538-5340 facsimile (801) 359 3940 TTY (801) 538-7458  
[www.ogm.utah.gov](http://www.ogm.utah.gov)



**Quarterly Inspection Form - Refuse Disposal Areas**  
 (please provide to DOGM promptly after inspection is complete)

Permit Number : C/025/0005 Inspection Date : 09/24/2018  
 Mine Name : Coal Hollow Project Quarter / Year : 3rd / 2018  
 Mine Operator (Permittee) : Alton Coal Development Inspector Name : Dan W. Guy  
 MSHA ID # : 42-02519 Inspector Signature : *Dan W. Guy*  
 Facility Name / Location / Address : 2060 South Alton Road, Alton, UT 84710

1. Describe any changes in the geometry of the structure (as well as instrumentation, if any, used to monitor changes):  
 Most of Main Pile has been removed. Remaining material will be removed during final borrow operation. Pile is regraded, subsoiled and seeded.

2. Lift Height / Thickness Avg 4.0' Maximum 4.0' # \_\_\_\_\_ Elevation of Active Benches : 6918 , \_\_\_\_\_ , \_\_\_\_\_  
 3. Vertical Angle of Outslope(s) / Location(s) where measured 3H:1V Avg. / No. Slope / So. Slope / \_\_\_\_\_  
 4. Total storage capacity: 8,600,000 cy Remaining storage capacity 8,211,000 cy Volume placed during year : 0  
 5. Describe foundation preparation (including removal of vegetation, stumps, topsoil, and all other organic material) :  
 Topsoil and subsoil removed and stored on site.

6. Describe placement and compaction of fill materials (including an explanation of how compaction is confirmed) :  
 Dumped by truck / Pushed by dozer / Compaction primarily from large trucks / Tested with nuclear density unit.

7. Is there any evidence of fires or burning on the structure ? (If YES, specify extent, location, and abatement/extinguishment of such fires) :  
 None

8. Describe placement of under drains, protective filter systems, and final surface drainage systems (report any seepage, including location, color, flow) :  
 None

9. Describe any appearances of instability, structural weakness, or other hazardous conditions :  
 No instability noted. Most of pile has been removed.

10. Please provide any other information pertaining to the stability of the structure (attach any photos taken during the inspection)

Are there cracks or scarps in crest ?	YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>
Is there any detectable sloughing or bulging ?	YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>
Do slope erosion problems exist ?	YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>
Cracks or scarps in slope ?	YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>
Surface movements? (valley bottom, hillsides)	YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>
Erosion of Toe ?	YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>
Water impounded by structure ?	YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>
Are diversion ditches stable?	YES <input checked="" type="checkbox"/>	NO <input type="checkbox"/>
Is drainage positive ?	YES <input checked="" type="checkbox"/>	NO <input type="checkbox"/>

Could failure of structure create an impoundment (provide description) ? No

Are design standards established within the mining and reclamation plan for the disposal facility being met ?  
 Yes.

Proctor Determination : 88% minimum - 98% maximum compaction as determined by nuclear density tests on 5/13/13.

I hereby certify that: I am experienced in the construction of earth and rock fills; I am qualified and authorized in the State of Utah to inspect and certify the condition and appearance of earth and rock fills in accordance with structure; that the fill structure has been maintained in accordance with the approved design and meets or exceeds the minimum design requirements under all applicable federal, state, and local regulations; and, that inspections and inspection reports are made by myself or under my direction and include any appearances of instability, structural weakness or other hazardous conditions of the structure affecting stability.

(place P.E. certification below)

**State of Utah**  
**DEPARTMENT OF NATURAL RESOURCES**  
**Division of Oil, Gas & Mining**

1594 West North Temple, Suite 1210, PO Box 145801, Salt Lake City, UT 84114-5801  
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[www.ogm.utah.gov](http://www.ogm.utah.gov)



**Quarterly Inspection Form - Refuse Disposal Areas**

(please provide to DOGM promptly after inspection is complete)

Permit Number :	<u>C/025/0005</u>	Inspection Date :	<u>11/14/2018</u>
Mine Name :	<u>Coal Hollow Project</u>	Quarter / Year :	<u>4th / 2018</u>
Mine Operator (Permittee) :	<u>Alton Coal Development</u>	Inspector Name :	<u>Dan W. Guy</u>
MSHA ID # :	<u>42-02519</u>	Inspector Signature :	
Facility Name / Location / Address :	<u>2060 South Alton Road, Alton, UT 84710</u>		

1. Describe any changes in the geometry of the structure (as well as instrumentation, if any, used to monitor changes):  
 Most of Main Pile has been removed. Remaining material will be removed during final borrow operation. Pile is regraded, subsoiled and seeded.

2. Lift Height / Thickness Avg 4.0' Maximum 4.0' # \_\_\_\_\_ Elevation of Active Benches : 6918 , \_\_\_\_\_ , \_\_\_\_\_

3. Vertical Angle of Outslope(s) / Location(s) where measured 3H:1V Avg. / No. Slope / So. Slope / \_\_\_\_\_

4. Total storage capacity: 8,600,000 cy Remaining storage capacity 8,211,000 cy Volume placed during year : 0

5. Describe foundation preparation (including removal of vegetation, stumps, topsoil, and all other organic material) :  
 Topsoil and subsoil removed and stored on site.

6. Describe placement and compaction of fill materials (including an explanation of how compaction is confirmed) :  
 Dumped by truck / Pushed by dozer / Compaction primarily from large trucks / Tested with nuclear density unit.

7. Is there any evidence of fires or burning on the structure ? (If YES, specify extent, location, and abatement/extinguishment of such fires) :  
 None

8. Describe placement of under drains, protective filter systems, and final surface drainage systems (report any seepage, including location, color, flow) :  
 None

9. Describe any appearances of instability, structural weakness, or other hazardous conditions :  
 No instability noted. Most of pile has been removed.

10. Please provide any other information pertaining to the stability of the structure (attach any photos taken during the inspection)

Are there cracks or scarps in crest ?	YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>
Is there any detectable sloughing or bulging ?	YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>
Do slope erosion problems exist ?	YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>
Cracks or scarps in slope ?	YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>
Surface movements? (valley bottom, hillsides)	YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>
Erosion of Toe ?	YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>
Water impounded by structure ?	YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>
Are diversion ditches stable?	YES <input checked="" type="checkbox"/>	NO <input type="checkbox"/>
Is drainage positive ?	YES <input checked="" type="checkbox"/>	NO <input type="checkbox"/>
Could failure of structure create an impoundment (provide description) ?	<u>No</u>	

Are design standards established within the mining and reclamation plan for the disposal facility being met ?  
 Yes.

Proctor Determination : 88% minimum - 98% maximum compaction as determined by nuclear density tests on 5/13/13.

I hereby certify that: I am experienced in the construction of earth and rock fills; I am qualified and authorized in the State of Utah to inspect and certify the condition and appearance of earth and rock fills in accordance with structure; that the fill structure has been maintained in accordance with the approved design and meets or exceeds the minimum design requirements under all applicable federal, state, and local regulations; and, that inspections and inspection reports are made by myself or under my direction and include any appearances of instability, structural weakness or other hazardous conditions of the structure affecting stability.

(place P.E. certification below)

**State of Utah**  
**DEPARTMENT OF NATURAL RESOURCES**  
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 www.ogm.utah.gov



**Quarterly Inspection Form - Refuse Disposal Areas**  
 (please provide to DOGM promptly after inspection is complete)

Permit Number : C/025/0005 Inspection Date : 11/14/18  
 Mine Name : Northwest Temporary Spoil Pile Quarter / Year : 4th / 2018  
 Mine Operator (Permittee) : Coal Hollow Project - Alton Coal Inspector Name : Dan W. Guy  
 MSHA ID # : 42-02519 Inspector Signature : *Dan W. Guy*  
 Facility Name / Location / Address : 2060 South Alton Road, Alton, UT 84710

1. Describe any changes in the geometry of the structure (as well as instrumentation, if any, used to monitor changes):  
 Initial inspection for this temporary pile.

2. Lift Height / Thickness Avg 4.0' Maximum 4.0' # \_\_\_\_\_ Elevation of Active Benches : 6920 , \_\_\_\_\_ , \_\_\_\_\_  
 3. Vertical Angle of Outslope(s) / Location(s) where measured N/A / Not Graded / \_\_\_\_\_ / \_\_\_\_\_  
 4. Total storage capacity: 215,000 cy Remaining storage capacity 213,000 cy Volume placed during year : 2000 cy

5. Describe foundation preparation (including removal of vegetation, stumps, topsoil, and all other organic material) :  
 Vegetation removed. Topsoil and subsoil removed and stored on site.

6. Describe placement and compaction of fill materials (including an explanation of how compaction is confirmed) :  
 Dumped by truck. Will be graded and pushed by dozer. Compaction will be primarily from large trucks.

7. Is there any evidence of fires or burning on the structure ? (If YES, specify extent, location, and abatement/extinguishment of such fires) :  
 None

8. Describe placement of under drains, protective filter systems, and final surface drainage systems (report any seepage, including location, color, flow) :  
 None

9. Describe any appearances of instability, structural weakness, or other hazardous conditions :  
 No instability noted. Pile has just been started.

10. Please provide any other information pertaining to the stability of the structure (attach any photos taken during the inspection)

Are there cracks or scarps in crest ? YES  NO   
 Is there any detectable sloughing or bulging ? YES  NO   
 Do slope erosion problems exist ? YES  NO   
 Cracks or scarps in slope ? YES  NO   
 Surface movements? (valley bottom, hillsides) YES  NO   
 Erosion of Toe ? YES  NO   
 Water impounded by structure ? YES  NO   
 Are diversion ditches stable? YES  NO   
 Is drainage positive ? YES  NO   
 Could failure of structure create an impoundment (provide description) ? No

Are design standards established within the mining and reclamation plan for the disposal facility being met ?  
 Yes. Pile just started per approved plan.

Proctor Determination : \_\_\_\_\_

I hereby certify that: I am experienced in the construction of earth and rock fills; I am qualified and authorized in the State of Utah to inspect and certify the condition and appearance of earth and rock fills in accordance with structure; that the fill structure has been maintained in accordance with the approved design and meets or exceeds the minimum design requirements under all applicable federal, state, and local regulations; and, that inspections and inspection reports are made by myself or under my direction and include any appearances of instability, structural weakness or other hazardous conditions of the structure affecting stability.

(place P.E. certification below)

IMPOUNDMENT INSPECTION AND REPORT		
Permit Number	C/025/0005	11/14/2018
Mine Name	Coal Hollow Mine	
Company Name	Alton Coal Development, LLC	
Impoundment Identification	Impoundment Name	Pond 1
	Impoundment Number	Pond 1
	MSHA Mine ID Number	42-02519
IMPOUNDMENT INSPECTION		
Inspection Date	14-Nov-18	
Inspected By	Kirk Nicholes / Dan Guy	
Reason for Inspection (Annual, Quarterly or Other Periodic Inspections, Critical Installation, or Completion of Construction)	Quarterly Inspection.	
1. Describe any appearance of any instability, structural weakness, or any other hazardous condition. N/A - None Noted.		
Required for an impoundment which functions as a SEDIMENTATION POND.	<p>2. Sediment storage capacity, including elevation of 60% and 100% sediment storage volumes, and estimated average elevation of existing sediment.</p> <p>Sediment Storage Capacity: 60 % Elevation: 6912 (1.26') 100% Elevation: 6913 (2.03')</p> <p>The pond contained approximately 7.0' of water at the time of the inspection. The sediment marker has been reset, and field observation shows the sediment level to be well below the cleanout level. The pond bottom and sediment level is approximately at elevation 6911.0.</p>	
	<p>3. Principle and emergency spillway elevations.</p> <p>Principle and Emergency Spillway Elevation: 6920 feet (The outlet structure for Pond 1 serves as both the Principle and Emergency Spillways) Total volume of pond at Spillway: 3.16 Acre-Feet (Elev. 6920.00') Required runoff storage: 2.57 Acre-Feet</p>	

4. **Field Information.** Provide current water elevation, whether pond is discharging, type and number of samples taken, monitoring/instrumentation information, inlet/outlet conditions or other related activities associated with the pond decanting, embankment erosion/repairs, monitoring information, vegetation on outslopes of embankments, etc.

The water level is approximately at elevation 6902.5. There are 2 inlets to the pond - both have been previously rip-rapped and are operating properly. There is a delta of sediment accumulation below the northwest inlet. The outlet is also open and functional. There was no inflow and no discharge at the time of the inspection.

5. **Field Evaluation.** Describe any changes in the geometry of the structure, average and maximum depths and elevations of impounded water, estimated sediment or slurry volume and remaining storage capacity, estimated volume of water impounded, and any other aspect of the impounding structure affecting its stability or function which has occurred during the reporting period.

The changes noted since the last inspection include a slight decrease in the water level, and a slight increase in the sediment level. The pond appears to be stable and operating properly. There was no discharge.

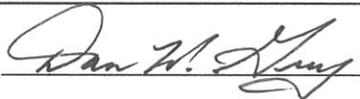
**Certification Statement**

I hereby certify that: I am experienced in the construction of impoundments; I am qualified and authorized under the direction of a Registered Professional Engineer to inspect the condition and appearance of impoundments in accordance with the certified and approved designs for this structure; that the impoundment has been maintained in accordance with approved design and meet or exceed the minimum design requirements under all applicable federal, state and local regulations: and, that inspections and inspection reports are made by myself, or under my direction and include any appearances of instability, structural weakness or other hazardous conditions of the structure affecting stability.

**By:**

Dan W. Guy, P.E.

Signature:



Date:

11/14/18

<b>IMPOUNDMENT INSPECTION AND REPORT</b>			
<b>Permit Number</b>	C/025/0005	<b>Report Date</b>	11/14/2018
<b>Mine Name</b>	Coal Hollow Mine		
<b>Company Name</b>	Alton Coal Development, LLC		
<b>Impoundment Identification</b>	<b>Impoundment Name</b>	Pond 1B	
	<b>Impoundment Number</b>	Pond 1B	
	<b>MSHA Mine ID Number</b>	42-02519	
<b>IMPOUNDMENT INSPECTION</b>			
<b>Inspection Date</b>	14-Nov-18		
<b>Inspected By</b>	Kirk Nicholes / Dan Guy		
<b>Reason for Inspection</b> (Annual, Quarterly or Other Periodic Inspections, Critical Installation, or Completion of Construction)	Quarterly Inspection.		
<p>1. Describe any appearance of any instability, structural weakness, or any other hazardous condition.</p> <p>N/A - No appearance of any instability, structural weakness or other hazardous condition was noted.</p>			
Required for an impoundment which functions as a SEDIMENTATION POND.	<p>2. Sediment storage capacity, including elevation of 60% and 100% sediment storage volumes, and estimated average elevation of existing sediment.</p> <p>Sediment Storage Capacity:  60 % Elevation: 6900.00 (6.00')  100% Elevation: 6902.08 (8.08')</p> <p>The pond contained approximately 8.0' of water at the time of the inspection. The sediment marker is in place. The sediment elevation is approximately 6894.7.</p>		
	<p>3. Principle and emergency spillway elevations.</p> <p>Principle and Emergency Spillway Elevation: 6906.45 feet (The outlet structure for Pond 1B serves as both the Principle and Emergency Spillways)</p> <p>Total volume of pond at Spillway: 0.894 Acre-Feet (Elev. 6906.45)</p> <p>Required runoff storage: 0.50 Acre-Feet</p>		

4. **Field Information.** Provide current water elevation, whether pond is discharging, type and number of samples taken, monitoring/instrumentation information, inlet/outlet conditions or other related activities associated with the pond decanting, embankment erosion/repairs, monitoring information, vegetation on out slopes of embankments, etc.

The water level is approximately at elevation 6902.5. There are 2 inlets to the pond - both have been previously rip-rapped and are operating properly. There is a delta of sediment accumulation below the northwest inlet. The outlet is also open and functional. There was no inflow and no discharge at the time of the inspection.

5. **Field Evaluation.** Describe any changes in the geometry of the structure, average and maximum depths and elevations of impounded water, estimated sediment or slurry volume and remaining storage capacity, estimated volume of water impounded, and any other aspect of the impounding structure affecting its stability or function which has occurred during the reporting period.

The changes noted since the last inspection include a slight decrease in the water level, and a slight increase in the sediment level. The pond appears to be stable and operating properly. There was no discharge.

**Certification Statement**

I hereby certify that: I am experienced in the construction of impoundments; I am qualified and authorized under the direction of a Registered Professional Engineer to inspect the condition and appearance of impoundments in accordance with the certified and approved designs for this structure; that the impoundment has been maintained in accordance with approved design and meet or exceed the minimum design requirements under all applicable federal, state and local regulations: and, that inspections and inspection reports are made by myself, or under my direction and include any appearances of instability, structural weakness or other hazardous conditions of the structure affecting stability.

**By:**

Dan W. Guy, P.E.

Signature: 

Date: 11/14/18

<b>IMPOUNDMENT INSPECTION AND REPORT</b>		
<b>Permit Number</b>	C/025/0005	11/14/2018
<b>Mine Name</b>	Coal Hollow Mine	
<b>Company Name</b>	Alton Coal Development, LLC	
<b>Impoundment Identification</b>	<b>Impoundment Name</b>	Pond 2
	<b>Impoundment Number</b>	Pond 2
	<b>MSHA Mine ID Number</b>	42-02519
<b>IMPOUNDMENT INSPECTION</b>		
<b>Inspection Date</b>	14-Nov-18	
<b>Inspected By</b>	Kirk Nicholes / Dan Guy	
<b>Reason for Inspection</b> (Annual, Quarterly or Other Periodic Inspections, Critical Installation, or Completion of Construction)	Quarterly Inspection.	
<p>1. Describe any appearance of any instability, structural weakness, or any other hazardous condition.</p> <p>N/A - No appearance of any instability, structural weakness or other hazardous condition was noted.</p>		
Required for an impoundment which functions as a SEDIMENTATION POND.	<p>2. Sediment storage capacity, including elevation of 60% and 100% sediment storage volumes, and estimated average elevation of existing sediment.</p> <p>Sediment Storage Capacity:  60 % Elevation: 6892.1 (3.10')  100% Elevation: 6893.5 (4.50')</p> <p>The pond contained approximately 7.0' of water at the time of the inspection. The sediment marker is in place, and field observation shows the sediment level to be well below the cleanout elevation. The approximate sediment elevation is 6889.4.</p>	
	<p>3. Principle and emergency spillway elevations.</p> <p>Principle and Emergency Spillway Elevation: 6900 feet (The outlet structure for Pond 2 serves as both the Principle and Emergency Spillways)  Total volume of pond at Spillway: 2.675 Acre-Feet (Elev. 6901.09')  Required runoff storage: 1.71 Acre-Feet</p>	

4. **Field Information.** Provide current water elevation, whether pond is discharging, type and number of samples taken, monitoring/instrumentation information, inlet/outlet conditions or other related activities associated with the pond decanting, embankment erosion/repairs, monitoring information, vegetation on outslopes of embankments, etc.

The water level is approximately at elevation 6897. The single pond inlet is rip-rapped. There was no inflow and no discharge at the time of the inspection. The pond was partially frozen.

5. **Field Evaluation.** Describe any changes in the geometry of the structure, average and maximum depths and elevations of impounded water, estimated sediment or slurry volume and remaining storage capacity, estimated volume of water impounded, and any other aspect of the impounding structure affecting its stability or function which has occurred during the reporting period.

The only noted changes to the pond noted since the last inspection are an increase in the water level and a slight increase in the sediment level. The pond appears to be stable and operating properly.

**Certification Statement**

I hereby certify that: I am experienced in the construction of impoundments; I am qualified and authorized under the direction of a Registered Professional Engineer to inspect the condition and appearance of impoundments in accordance with the certified and approved designs for this structure; that the impoundment has been maintained in accordance with approved design and meet or exceed the minimum design requirements under all applicable federal, state and local regulations; and, that inspections and inspection reports are made by myself, or under my direction and include any appearances of instability, structural weakness or other hazardous conditions of the structure affecting stability.

**By:**

Dan W. Guy, P.E.

Signature: *Dan W. Guy* Date: 11/14/18

<b>IMPOUNDMENT INSPECTION AND REPORT</b>		
<b>Permit Number</b>	C/025/0005	<b>11/14/2018</b>
<b>Mine Name</b>	Coal Hollow Mine	
<b>Company Name</b>	Alton Coal Development, LLC	
<b>Impoundment Identification</b>	<b>Impoundment Name</b>	Pond 3
	<b>Impoundment Number</b>	Pond 3
	<b>MSHA Mine ID Number</b>	42-02519
<b>IMPOUNDMENT INSPECTION</b>		
<b>Inspection Date</b>	<b>14-Nov-18</b>	
<b>Inspected By</b>	Kirk Nicholes / Dan Guy	
<b>Reason for Inspection</b> (Annual, Quarterly or Other Periodic Inspections, Critical Installation, or Completion of Construction)	Quarterly Inspection.	
<p>1. Describe any appearance of any instability, structural weakness, or any other hazardous condition.</p> <p>None Noted.</p>		
<p>Required for an impoundment which functions as a SEDIMENTATION POND.</p>	<p>2. Sediment storage capacity, including elevation of 60% and 100% sediment storage volumes, and estimated average elevation of existing sediment.</p> <p>Sediment Storage Capacity:  60 % Elevation: 6805.0 (4.0')  100% Elevation: 6807.0 (6.0')</p> <p>The pond contained an average of approximately 4.0' of water at the time of the inspection. The sediment marker is in place, and field observation shows the average sediment level to be below the cleanout elevation. The approximate average sediment elevation is 6804.6.</p>	
	<p>3. Principle and emergency spillway elevations.</p> <p>Principle and Emergency Spillway Elevation: 6811 feet (The outlet structure for Pond 3 serves as both the Principle and Emergency Spillways)</p> <p>Total volume of pond at Spillway: 12.60 Acre-Feet (Elev. 6811.00')</p> <p>Required runoff storage: 6.30 Acre-Feet</p> <p>Decant Elevation: 6808.0</p>	

4. **Field Information.** Provide current water elevation, whether pond is discharging, type and number of samples taken, monitoring/instrumentation information, inlet/outlet conditions or other related activities associated with the pond decanting, embankment erosion/repairs, monitoring information, vegetation on outlopes of embankments, etc.

The water level is approximately at elevation 6808.5. The inlet, spillway and decant are all open and operational. There was no inflow and the pond was being decanted at the time of the inspection. The pond surface was mostly frozen.

5. **Field Evaluation.** Describe any changes in the geometry of the structure, average and maximum depths and elevations of impounded water, estimated sediment or slurry volume and remaining storage capacity, estimated volume of water impounded, and any other aspect of the impounding structure affecting its stability or function which has occurred during the reporting period.

The only noted change since the last inspection was an increase in the water level. The pond and the dam appear to be stable and are operating properly.

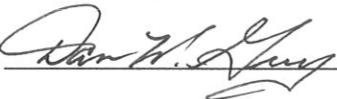
**Certification Statement**

I hereby certify that: I am experienced in the construction of impoundments; I am qualified and authorized under the direction of a Registered Professional Engineer to inspect the condition and appearance of impoundments in accordance with the certified and approved designs for this structure; that the impoundment has been maintained in accordance with approved design and meet or exceed the minimum design requirements under all applicable federal, state and local regulations: and, that inspections and inspection reports are made by myself, or under my direction and include any appearances of instability, structural weakness or other hazardous conditions of the structure affecting stability.

**By:**

Dan W. Guy, P.E.

Signature:



Date:

11/14/18

<b>IMPOUNDMENT INSPECTION AND REPORT</b>			
<b>Permit Number</b>	C/025/0005	<b>Report Date</b>	11/14/2018
<b>Mine Name</b>	Coal Hollow Mine		
<b>Company Name</b>	Alton Coal Development, LLC		
<b>Impoundment Identification</b>	<b>Impoundment Name</b>	Pond 4	
	<b>Impoundment Number</b>	Pond 4	
	<b>MSHA Mine ID Number</b>	42-02519	
<b>IMPOUNDMENT INSPECTION</b>			
<b>Inspection Date</b>	14-Nov-18		
<b>Inspected By</b>	Kirk Nicholes / Dan Guy		
<b>Reason for Inspection</b> (Annual, Quarterly or Other Periodic Inspections, Critical Installation, or Completion of Construction)	Quarterly Inspection.		
<p>1. Describe any appearance of any instability, structural weakness, or any other hazardous condition.</p> <p>No instability of the embankment or hazardous condition was noted during the inspection.</p>			
Required for an impoundment which functions as a SEDIMENTATION POND.	<p>2. Sediment storage capacity, including elevation of 60% and 100% sediment storage volumes, and estimated average elevation of existing sediment.</p> <p>Sediment Storage Capacity:            60 % Elevation: 6829.0 (7.0')            100% Elevation: 6830.0 (8.0')</p> <p>The pond contained approximately 1.0' of water in the upper cell and the lower cell was dry. The sediment marker is in place, and field observation shows the sediment level to be well below the cleanout elevation. The bottom of pond and approximate sediment elevation is 6827.2.</p>		
	<p>3. Principle and emergency spillway elevations.</p> <p>Principle and Emergency Spillway Elevation: 6834 feet (The outlet structure for Pond 4 serves as both the Principle and Emergency Spillways)</p> <p>Total volume of pond at Spillway: 5.50 Acre-Feet (Elev. 6834.00')</p> <p>Required runoff storage: 3.80 Acre-Feet</p>		

4. **Field Information.** Provide current water elevation, whether pond is discharging, type and number of samples taken, monitoring/instrumentation information, inlet/outlet conditions or other related activities associated with the pond decanting, embankment erosion/repairs, monitoring information, vegetation on outlopes of embankments, etc.

The average water elevation is approximately 6828. The open-channel spillway is in place and rip-rapped. There was no discharge. The small amount of water in the pond was frozen.

5. **Field Evaluation.** Describe any changes in the geometry of the structure, average and maximum depths and elevations of impounded water, estimated sediment or slurry volume and remaining storage capacity, estimated volume of water impounded, and any other aspect of the impounding structure affecting its stability or function which has occurred during the reporting period.

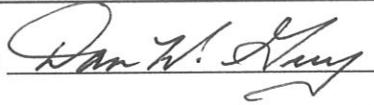
The only change noted since the last inspection is a slight increase in the water level in the upper cell. The pond appears to be stable and operating properly. There was no inflow and no discharge at the time of the inspection.

**Certification Statement**

I hereby certify that: I am experienced in the construction of impoundments; I am qualified and authorized under the direction of a Registered Professional Engineer to inspect the condition and appearance of impoundments in accordance with the certified and approved designs for this structure; that the impoundment has been maintained in accordance with approved design and meet or exceed the minimum design requirements under all applicable federal, state and local regulations: and, that inspections and inspection reports are made by myself, or under my direction and include any appearances of instability, structural weakness or other hazardous conditions of the structure affecting stability.

**By:**

Dan W. Guy, P.E.

Signature:  Date: 11/14/18

<b>IMPOUNDMENT INSPECTION AND REPORT</b>			
<b>Permit Number</b>	C/025/0005	<b>11/14/2018</b>	
<b>Mine Name</b>	Coal Hollow Mine		
<b>Company Name</b>	Alton Coal Development, LLC		
<b>Impoundment Identification</b>	<b>Impoundment Name</b>	Pond 5	
	<b>Impoundment Number</b>	Pond 5	
	<b>MSHA Mine ID Number</b>	42-02519	
<b>IMPOUNDMENT INSPECTION</b>			
<b>Inspection Date</b>	<b>14-Nov-18</b>		
<b>Inspected By</b>	Kirk Nicholes / Dan Guy		
<b>Reason for Inspection</b> (Annual, Quarterly or Other Periodic Inspections, Critical Installation, or Completion of Construction)	Quarterly Inspection.		
<p>1. Describe any appearance of any instability, structural weakness, or any other hazardous condition.</p> <p>No instability of the embankment or hazardous condition was noted during the inspection.</p>			
Required for an impoundment which functions as a SEDIMENTATION POND.	<p>2. Sediment storage capacity, including elevation of 60% and 100% sediment storage volumes, and estimated average elevation of existing sediment.</p> <p>Sediment Storage Capacity:  60 % Elevation: 6843.0 (3.00')  100% Elevation: 6844.0 (4.00')</p> <p>The pond had approximately 1.5' of water at the time of inspection . The sediment marker is in place, and field observation shows the sediment level to be well below the cleanout elevation. The bottom of pond and approximate sediment elevation is 6841.2.</p>		
	<p>3. Principle and emergency spillway elevations.</p> <p>Principle Spillway Elevation: 6848 feet  Emergency Spillway Elevation: 6849 feet  Total volume of pond at Spillway: 1.43 Acre-Feet (Elev. 6848.00')  Required runoff storage: 1.28 Acre-Feet</p>		

4. **Field Information.** Provide current water elevation, whether pond is discharging, type and number of samples taken, monitoring/instrumentation information, inlet/outlet conditions or other related activities associated with the pond decanting, embankment erosion/repairs, monitoring information, vegetation on outlopes of embankments, etc.

The water level is approximately at elevation 6842.5. The inlets and outlet are open and appear to be operating properly. No inflow or discharge at the time of the inspection. The pond was partially frozen.

5. **Field Evaluation.** Describe any changes in the geometry of the structure, average and maximum depths and elevations of impounded water, estimated sediment or slurry volume and remaining storage capacity, estimated volume of water impounded, and any other aspect of the impounding structure affecting its stability or function which has occurred during the reporting period.

The only changes were noted to the pond since the last inspection include a slight increase in the water level and sediment elevation. The pond and embankment appear to be stable.

**Certification Statement**

I hereby certify that: I am experienced in the construction of impoundments; I am qualified and authorized under the direction of a Registered Professional Engineer to inspect the condition and appearance of impoundments in accordance with the certified and approved designs for this structure; that the impoundment has been maintained in accordance with approved design and meet or exceed the minimum design requirements under all applicable federal, state and local regulations: and, that inspections and inspection reports are made by myself, or under my direction and include any appearances of instability, structural weakness or other hazardous conditions of the structure affecting stability.

**By:**

Dan W. Guy, P.E.

Signature:



Date:

11/14/18

IMPOUNDMENT INSPECTION AND REPORT		
Permit Number	C/025/0005	11/14/2018
Mine Name	Coal Hollow Mine	
Company Name	Alton Coal Development, LLC	
Impoundment Identification	Impoundment Name	Pond 6
	Impoundment Number	Pond 6
	MSHA Mine ID Number	42-02519
IMPOUNDMENT INSPECTION		
Inspection Date	14-Nov-18	
Inspected By	Kirk Nicholes / Dan Guy	
Reason for Inspection (Annual, Quarterly or Other Periodic Inspections, Critical Installation, or Completion of Construction)	Quarterly Inspection.	
<p>1. Describe any appearance of any instability, structural weakness, or any other hazardous condition.</p> <p>No instability of the embankment or hazardous condition was noted during the inspection.</p>		
Required for an impoundment which functions as a SEDIMENTATION POND.	<p>2. Sediment storage capacity, including elevation of 60% and 100% sediment storage volumes, and estimated average elevation of existing sediment.</p> <p>Sediment Storage Capacity:  60 % Elevation: 6860.0 (5.00')  100% Elevation: 6861.0 (6.00')</p> <p>The pond was mostly dry at the time of inspection, with only some small puddles of water on the west end. The sediment marker is in place, and field observation shows the sediment level to be well below the cleanout elevation. The bottom of pond and approximate sediment elevation is 6855.1.</p>	
	<p>3. Principle and emergency spillway elevations.</p> <p>Principle Spillway Elevation: 6866 feet  Emergency Spillway Elevation: 6867 feet  Total volume of pond at Spillway: 3.36 Acre-Feet (Elev. 6866.00')  Required runoff storage: 1.43 Acre-Feet</p>	

4. **Field Information.** Provide current water elevation, whether pond is discharging, type and number of samples taken, monitoring/instrumentation information, inlet/outlet conditions or other related activities associated with the pond decanting, embankment erosion/repairs, monitoring information, vegetation on outlopes of embankments, etc.

The pond was mostly dry at the time of inspection. The inlets and outlet are open and functional; however, the outlet oil skimmer on the principle spillway is tipped. This is scheduled to be repaired. No inflow or discharge at the time of the inspection.

5. **Field Evaluation.** Describe any changes in the geometry of the structure, average and maximum depths and elevations of impounded water, estimated sediment or slurry volume and remaining storage capacity, estimated volume of water impounded, and any other aspect of the impounding structure affecting its stability or function which has occurred during the reporting period.

The only changes noted since the last inspection is that there is a very slight increase in the amount of water in the west end of the pond, and the tipped oil skimmer as noted above. The pond and embankment appear to be stable and operating properly.

**Certification Statement**

I hereby certify that: I am experienced in the construction of impoundments; I am qualified and authorized under the direction of a Registered Professional Engineer to inspect the condition and appearance of impoundments in accordance with the certified and approved designs for this structure; that the impoundment has been maintained in accordance with approved design and meet or exceed the minimum design requirements under all applicable federal, state and local regulations: and, that inspections and inspection reports are made by myself, or under my direction and include any appearances of instability, structural weakness or other hazardous conditions of the structure affecting stability.

**By:**

Dan W. Guy, P.E.

Signature: *Dan W. Guy* Date: 11/14/18

<b>IMPOUNDMENT INSPECTION AND REPORT</b>			
<b>Permit Number</b>	C/025/0005	<b>11/14/2018</b>	
<b>Mine Name</b>	Coal Hollow Mine		
<b>Company Name</b>	Alton Coal Development, LLC		
<b>Impoundment Identification</b>	<b>Impoundment Name</b>	Pond 7	
	<b>Impoundment Number</b>	Pond 7	
	<b>MSHA Mine ID Number</b>	42-02519	
<b>IMPOUNDMENT INSPECTION</b>			
<b>Inspection Date</b>	<b>14-Nov-18</b>		
<b>Inspected By</b>	Kirk Nicholes / Dan Guy		
<b>Reason for Inspection</b> (Annual, Quarterly or Other Periodic Inspections, Critical Installation, or Completion of Construction)		Quarterly Inspection.	
<p>1. Describe any appearance of any instability, structural weakness, or any other hazardous condition.</p> <p>No instability of the embankment or hazardous condition was noted during the inspection.</p>			
Required for an impoundment which functions as a SEDIMENTATION POND.	<p>2. Sediment storage capacity, including elevation of 60% and 100% sediment storage volumes, and estimated average elevation of existing sediment.</p> <p>Sediment Storage Capacity:  60 % Elevation: 6843.79 (4.79')  100% Elevation: 6844.91 (5.91')</p> <p>There was approximately 5' of water in the pond at the time of inspection. The sediment marker is in place, and field observation shows the sediment level to be well below the cleanout elevation. The bottom of pond and approximate sediment elevation is 6839.4.</p>		
	<p>3. Principle and emergency spillway elevations.</p> <p>Principle Spillway Elevation: 6848.00  Emergency Spillway Elevation: 6849.00  Total volume of pond at principle spillway: 12.97 Acre-Feet (Elev. 6848.00)  Required runoff storage: 7.11 Acre-Feet</p>		

4. **Field Information.** Provide current water elevation, whether pond is discharging, type and number of samples taken, monitoring/instrumentation information, inlet/outlet conditions or other related activities associated with the pond decanting, embankment erosion/repairs, monitoring information, vegetation on outlopes of embankments, etc.

The average water elevation is approximately 6845. Inlet structures appear to be open and functioning properly. The oil skimmer has become disconnected from the principle spillway, and the scheduled repairs include replacement of the principle spillway and skimmer with cmp. The spillways are still operational. There was an approximately 150 gpm inflow and the pond was discharging at the time of the inspection. Samples have been taken as required.

5. **Field Evaluation.** Describe any changes in the geometry of the structure, average and maximum depths and elevations of impounded water, estimated sediment or slurry volume and remaining storage capacity, estimated volume of water impounded, and any other aspect of the impounding structure affecting its stability or function which has occurred during the reporting period.

The changes noted since the last inspection are a decrease in the water level and the issue with the oil skimmer as noted above. The pond appears stable and repairs are scheduled.

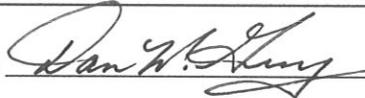
**Certification Statement**

I hereby certify that: I am experienced in the construction of impoundments; I am qualified and authorized under the direction of a Registered Professional Engineer to inspect the condition and appearance of impoundments in accordance with the certified and approved designs for this structure; that the impoundment has been maintained in accordance with approved design and meet or exceed the minimum design requirements under all applicable federal, state and local regulations: and, that inspections and inspection reports are made by myself, or under my direction and include any appearances of instability, structural weakness or other hazardous conditions of the structure affecting stability.

**By:**

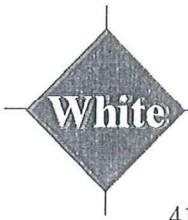
Dan W. Guy, P.E.

Signature:



Date:

11/14/18



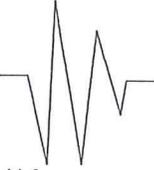
Industrial Seismology, Inc.

1206 Schifferdecker • P.O. Box 1256

Joplin, MO 64802-1256

417-624-0164 ♦ 800-641-4538 ♦ Fax: 417-624-9416

www.whiteseis.com



## CALIBRATION CERTIFICATION

I certify that all seismic and acoustic components of this instrument were calibrated on a shake table at the listed input level and frequencies. The results are within the International Society of Explosives Engineers (ISEE) Performance Specifications for Blasting Seismographs.

Model: MSII-2G 1/2 M

Serial No.: 3763

Transducer No.: 3763

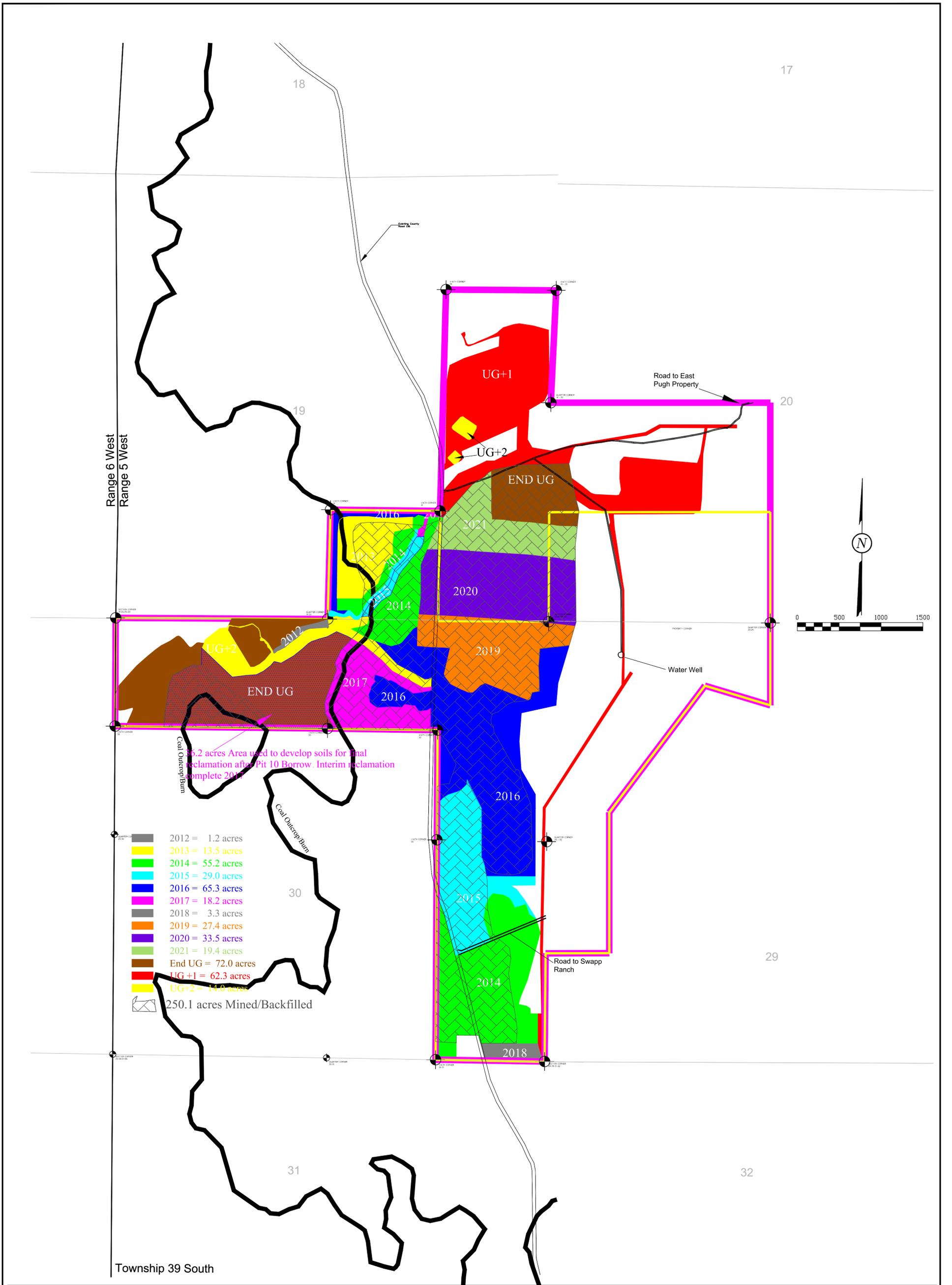
Microphone No.: 3763

### Seismograph Response

Input Level	2 Hertz	3 Hertz	10 Hertz	30 Hertz
1.00 ips Vertical	<u>0.91</u>	<u>0.98</u>	<u>1.00</u>	<u>1.00</u>
1.00 ips Radial	<u>0.94</u>	<u>0.98</u>	<u>1.00</u>	<u>1.00</u>
1.00 ips Transverse	<u>0.92</u>	<u>0.98</u>	<u>1.00</u>	<u>1.00</u>
1.40 Mb Acoustic	<u>1.12</u>	<u>1.28</u>	<u>1.40</u>	<u>1.40</u>

Date: Oct 12, 2016

Signed: 



- 2012 = 1.2 acres
- 2013 = 13.5 acres
- 2014 = 55.2 acres
- 2015 = 29.0 acres
- 2016 = 65.3 acres
- 2017 = 18.2 acres
- 2018 = 3.3 acres
- 2019 = 27.4 acres
- 2020 = 33.5 acres
- 2021 = 19.4 acres
- End UG = 72.0 acres
- UG+1 = 62.3 acres
- UG+2 = 14.0 acres
- 250.1 acres Mined/Backfilled

**LEGEND:**

- PERMIT BOUNDARY
- PRIVATE COAL OWNERSHIP
- SECTION LINE
- FOUND SECTION CORNER
- FOUND PROPERTY CORNER
- POSTMINING ROADS

**DRAWN BY:**  
K. NICHOLAS

**DRAWING:**  
5-38

**JOB NUMBER:**  
1400

**CHECKED BY:**  
LWJ

**DATE:**  
12/18/2014

**SCALE:**  
1" = 500'

**SHEET**

REVISIONS	
DATE:	BY:
03/05/14	KN
04/11/16	KN
07/29/16	KN
08/01/16	KN
03/31/17	KN
03/22/18	KN
8/9/18	AC

**RECLAMATION SEQUENCE**

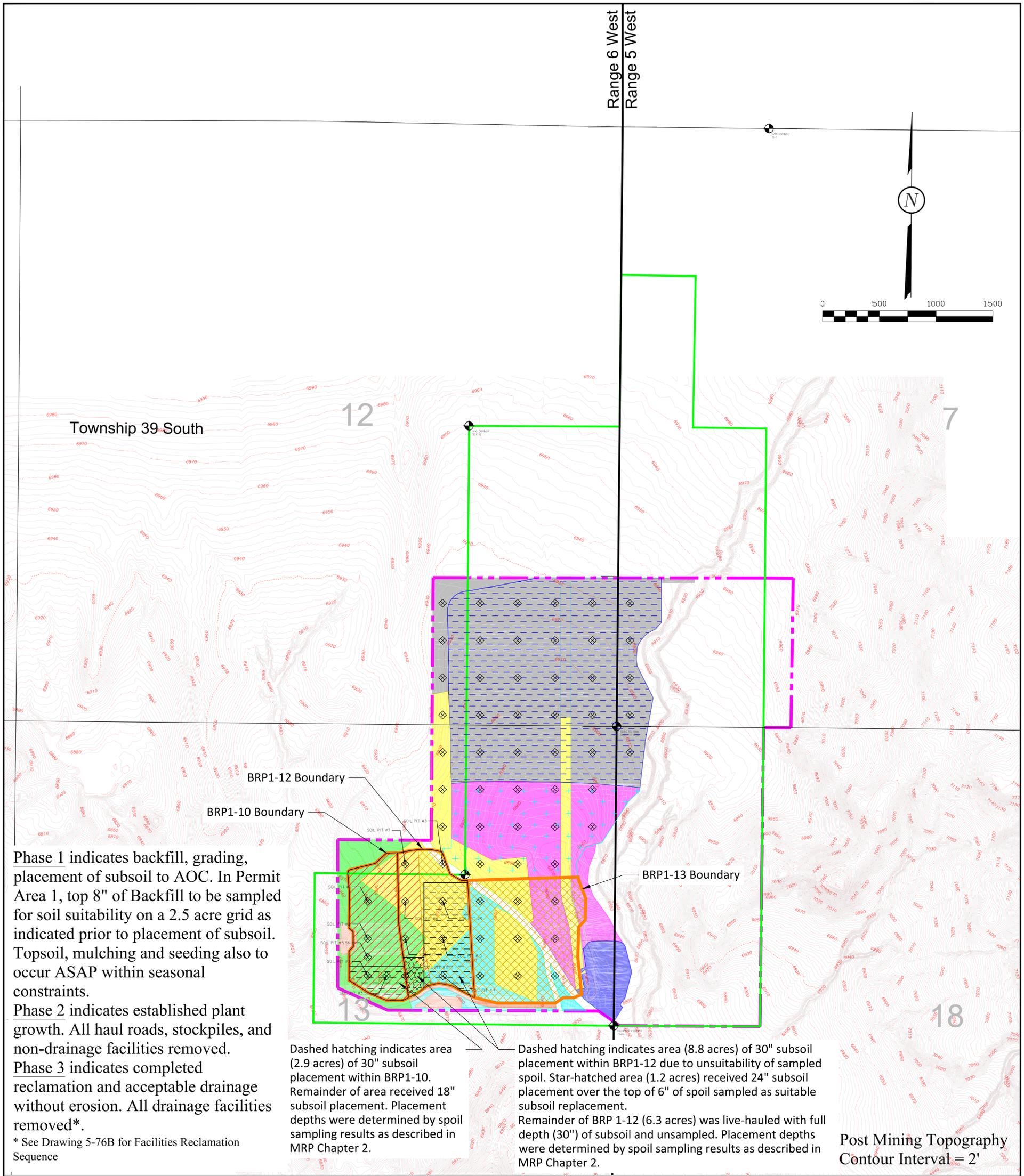
**COAL HOLLOW PROJECT  
ALTON, UTAH**

**DRAWING: 5-38**



Alton Coal Development  
**Coal Hollow Project**

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



**Phase 1** indicates backfill, grading, placement of subsoil to AOC. In Permit Area 1, top 8" of Backfill to be sampled for soil suitability on a 2.5 acre grid as indicated prior to placement of subsoil. Topsoil, mulching and seeding also to occur ASAP within seasonal constraints.

**Phase 2** indicates established plant growth. All haul roads, stockpiles, and non-drainage facilities removed.

**Phase 3** indicates completed reclamation and acceptable drainage without erosion. All drainage facilities removed\*.

\* See Drawing 5-76B for Facilities Reclamation Sequence

Dashed hatching indicates area (2.9 acres) of 30" subsoil placement within BRP1-10. Remainder of area received 18" subsoil placement. Placement depths were determined by spoil sampling results as described in MRP Chapter 2.

Dashed hatching indicates area (8.8 acres) of 30" subsoil placement within BRP1-12 due to unsuitability of sampled spoil. Star-hatched area (1.2 acres) received 24" subsoil placement over the top of 6" of spoil sampled as suitable subsoil replacement. Remainder of BRP 1-12 (6.3 acres) was live-hauled with full depth (30") of subsoil and unsampled. Placement depths were determined by spoil sampling results as described in MRP Chapter 2.

Post Mining Topography Contour Interval = 2'

**Phase 1 Reclamation:**

- 2016 Reclaim = 17.9 Acres
- 2017 Reclaim = 34.7 Acres
- 2018 Reclaim = 0.0 Acres
- 2019 Reclaim = 26.8 Acres
- 2020 Reclaim = 71.9 Acres
- 2021 Reclaim = 0.0 Acres
- 2022 Reclaim = 0.0 Acres
- 2023 Reclaim = 0.0 Acres
- 2024 Reclaim = 0.0 Acres

Total Ph. 1 Reclamation = 151.3 Acres

**Phase 2/Surface Mulch & Seeding:**

- 2016 Seeding = 18.4 Acres
- 2017 Seeding = 11.9 Acres
- 2018 Seeding = 0.0 Acres
- 2019 Seeding = 30.0 Acres
- 2020 Seeding = 75.6 Acres
- 2021 Seeding = 33.6 Acres
- 2022 Seeding = 2.9 Acres
- 2023 Seeding = 5.5 Acres
- 2024 Seeding = 0.0 Acres
- Unseeded Road = 3.9 Acres

Total Ph. 2 Reclamation = 181.8 Acres

**Phase 3** Reclamation to be completed and released within the 10 year timeframe from Phase 1.

**LEGEND:**

- PERMIT BOUNDARY
- PRIVATE COAL OWNERSHIP
- SECTION LINE
- FOUND SECTION CORNER
- FOUND PROPERTY CORNER
- BACKFILL SAMPLE PIT

DRAWN BY:

A. CHRISTENSEN

DRAWING:

5-76A

JOB NUMBER:

0001

CHECKED BY:

DWG

DATE:

4/16/15

SCALE:

1" = 400'

SHEET

**REVISIONS**

DATE:	BY:
2/2/17	AC
3/31/17	AC
5/4/17	AC
8/2/17	AC
4/6/18	AC
6/19/18	AC
3/29/19	AC

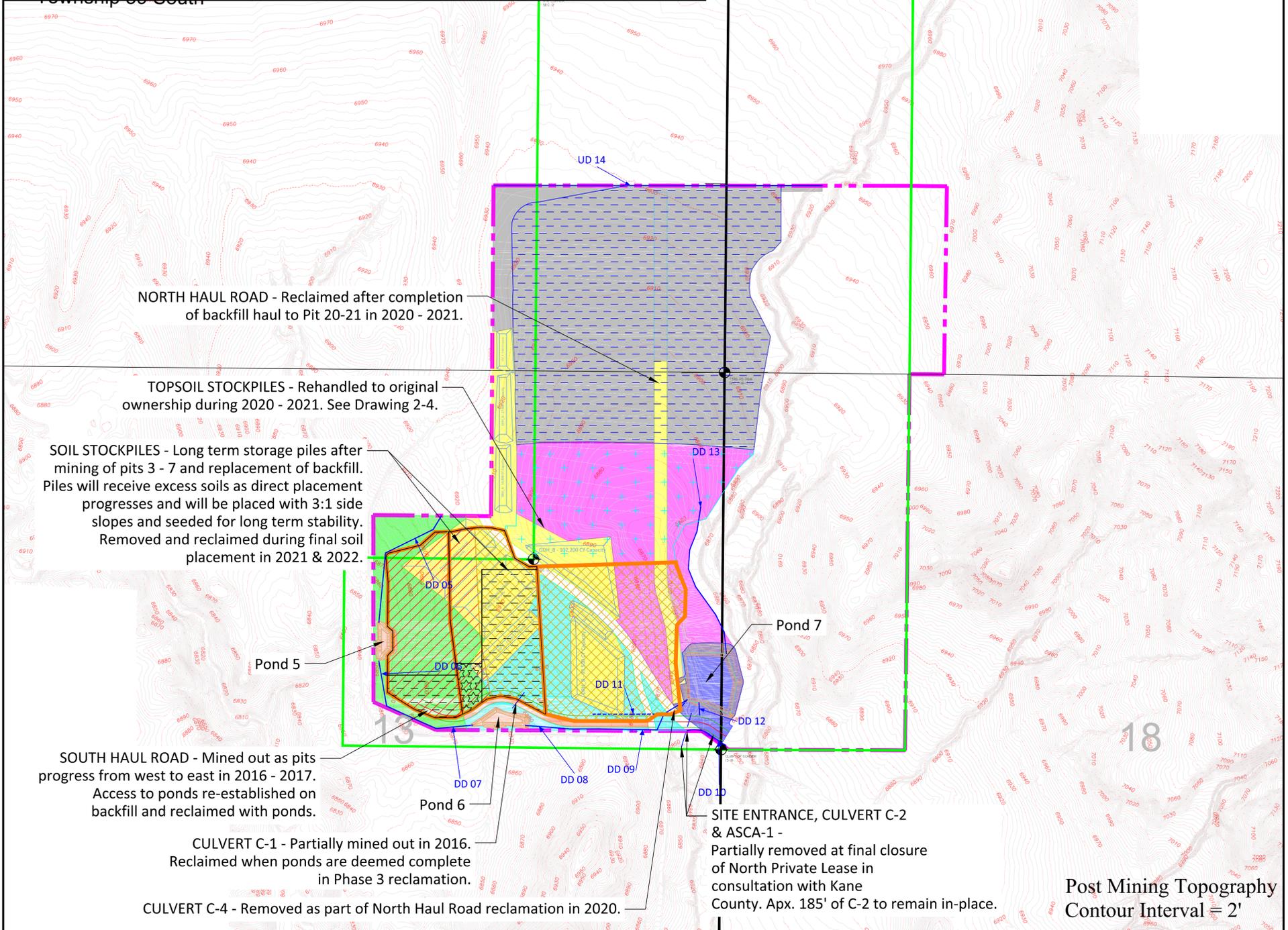
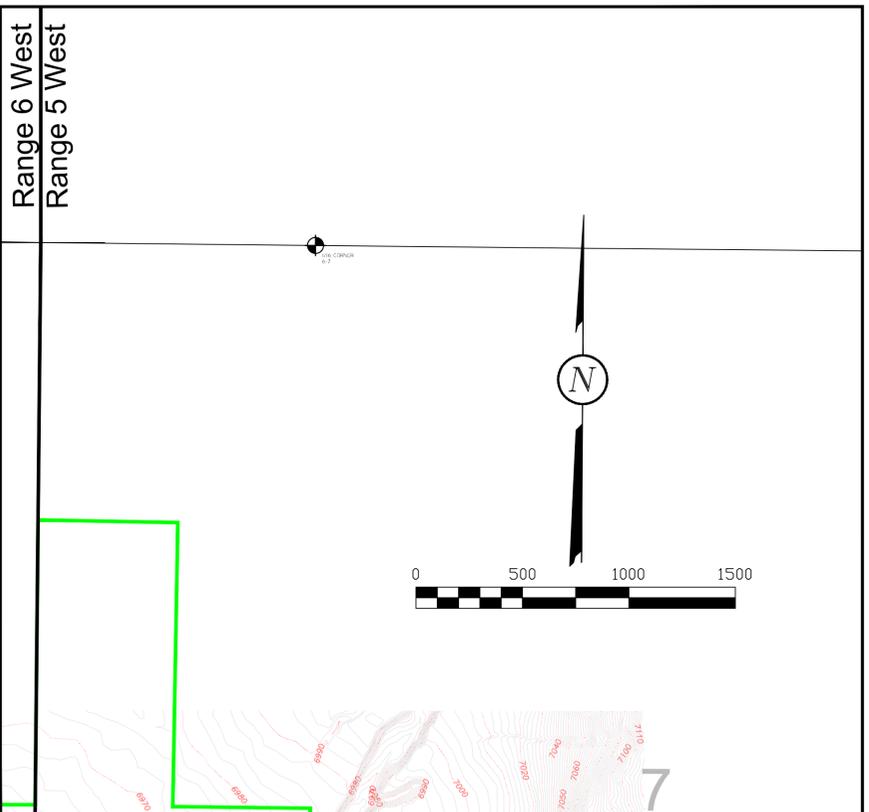
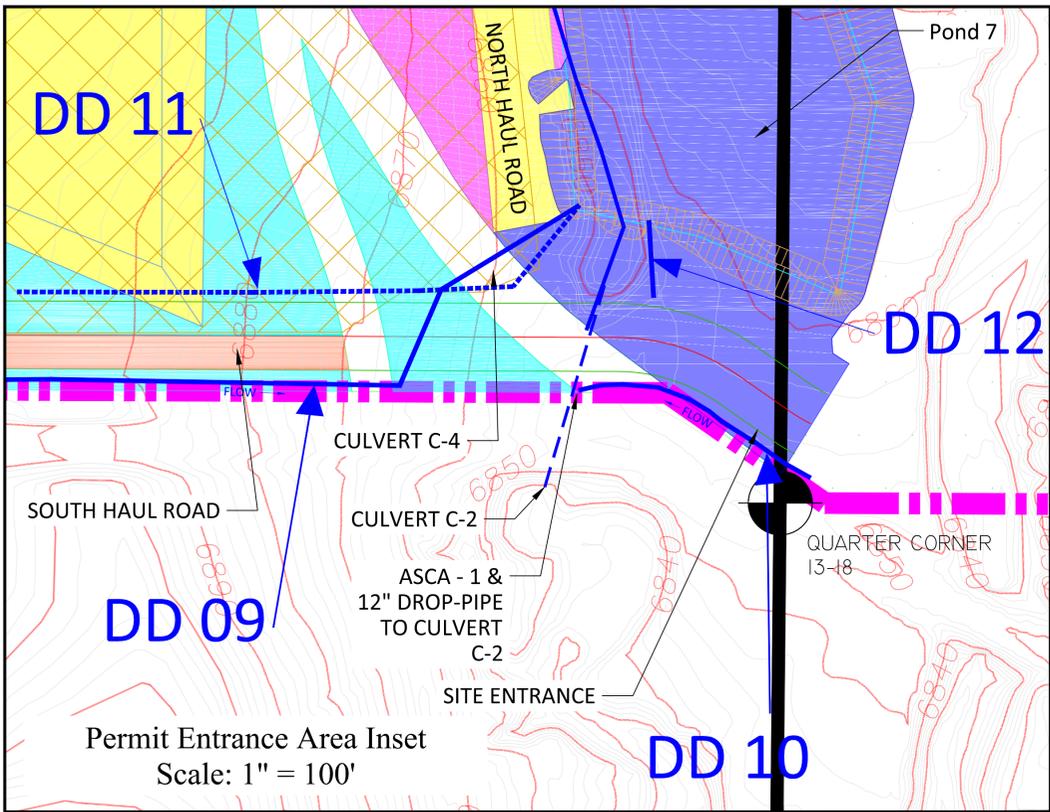
**EARTHWORKS RECLAMATION SEQUENCE**

NORTH COAL HOLLOW PROJECT  
ALTON, UTAH

DRAWING: 5-76A



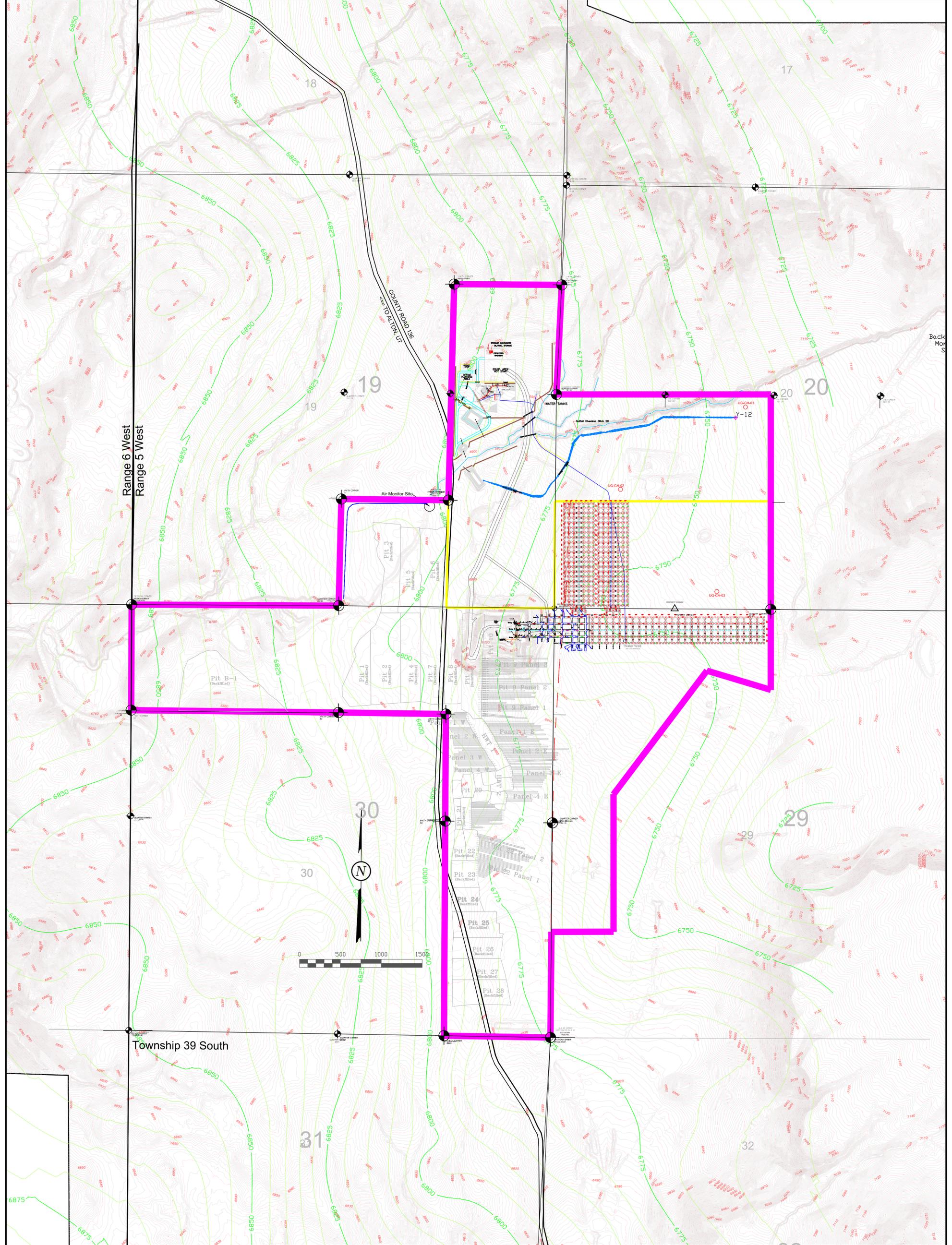
463 North 100 West, Suite 1  
Cedar City, Utah 84721  
Phone (435)867-5331  
Fax (435)867-1192



Phase 1 Reclamation:		Phase 2/Surface Mulch & Seeding:	
	2016 Reclaim = 17.9 Acres		2016 Seeding = 18.4 Acres
	2017 Reclaim = 34.7 Acres		2017 Seeding = 11.9 Acres
	2018 Reclaim = 0.0 Acres		2018 Seeding = 0.0 Acres
	2019 Reclaim = 26.8 Acres		2019 Seeding = 30.0 Acres
	2020 Reclaim = 71.9 Acres		2020 Seeding = 75.6 Acres
	2021 Reclaim = 0.0 Acres		2021 Seeding = 33.6 Acres
	2022 Reclaim = 0.0 Acres		2022 Seeding = 2.9 Acres
	2023 Reclaim = 0.0 Acres		2023 Seeding = 5.5 Acres
	2024 Reclaim = 0.0 Acres		2024 Seeding = 0.0 Acres
			Unseeded Road = 3.9 Acres
<b>Total Ph. 1 Reclamation = 151.3 Acres</b>		<b>Total Ph. 2 Reclamation = 181.8 Acres</b>	

Phase 3 Reclamation to be completed and released within the 10 year timeframe from Phase 1. **Ponds, culverts and ditches (except Area 1 extension)** to be assessed and reclaimed as Phase 3 nears completion. Area 1-A structures will be removed as mining advances.

<b>LEGEND:</b> PERMIT BOUNDARY PRIVATE COAL OWNERSHIP SECTION LINE FOUND SECTION CORNER FOUND PROPERTY CORNER	DRAWN BY: A. CHRISTENSEN	CHECKED BY: DWG	<b>REVISIONS</b>		<b>FACILITIES RECLAMATION SEQUENCE</b>  NORTH COAL HOLLOW PROJECT ALTON, UTAH  <b>DRAWING: 5-76B</b>		
	DRAWING: 5-76B	DATE: 10/12/15	DATE: 10/3/16 3/31/16 5/4/17 4/6/18 6/19/18 3/29/19	BY: AC AC AC AC AC AC			



**LEGEND:**

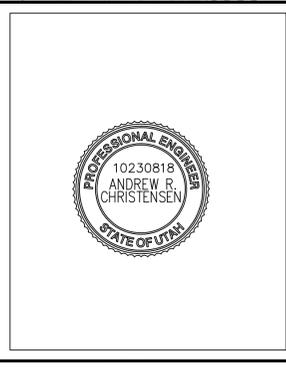
	PERMIT BOUNDARY
	PRIVATE COAL OWNERSHIP
	TOP OF COAL CONTOUR
	SURFACE CONTOUR
	SECTION LINE
	FOUND SECTION CORNER
	FOUND PROPERTY CORNER

DRAWN BY:	CHECKED BY:
ARC	DWG
DRAWING:	DATE:
1 of 2	7/21/2015
	SCALE:
	1" = 500'
JOB NUMBER:	SHEET

REVISIONS	
DATE:	BY:
4/19/16	AC
1/1/17	AC
7/31/17	AC
10/17/17-no change	AC
6/25/18-no change	AC
10/31/18-no change	AC

**MINE MAP**  
**Coal Hollow Mine**  
 MSHA ID - 42-02519

**COAL HOLLOW PROJECT**  
 2060 S. ALTON ROAD  
 ALTON, UTAH  
**DRAWING: 1 of 2**



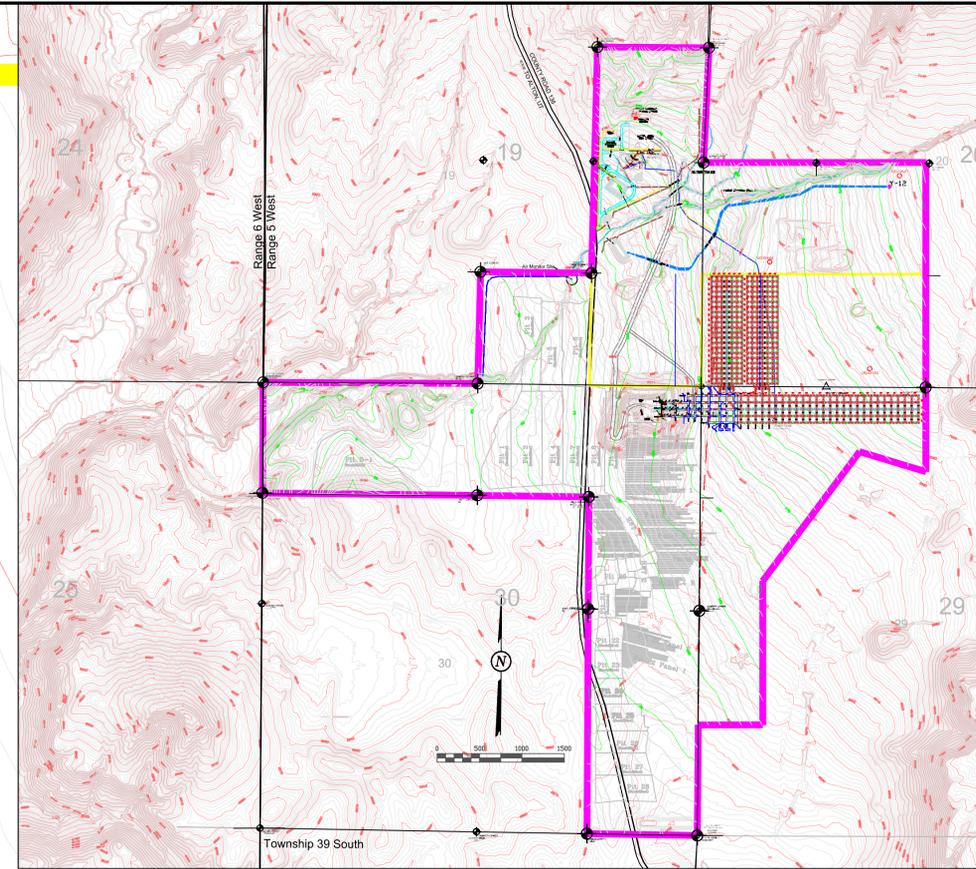
Alton Coal Development  
**Coal Hollow Project**

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



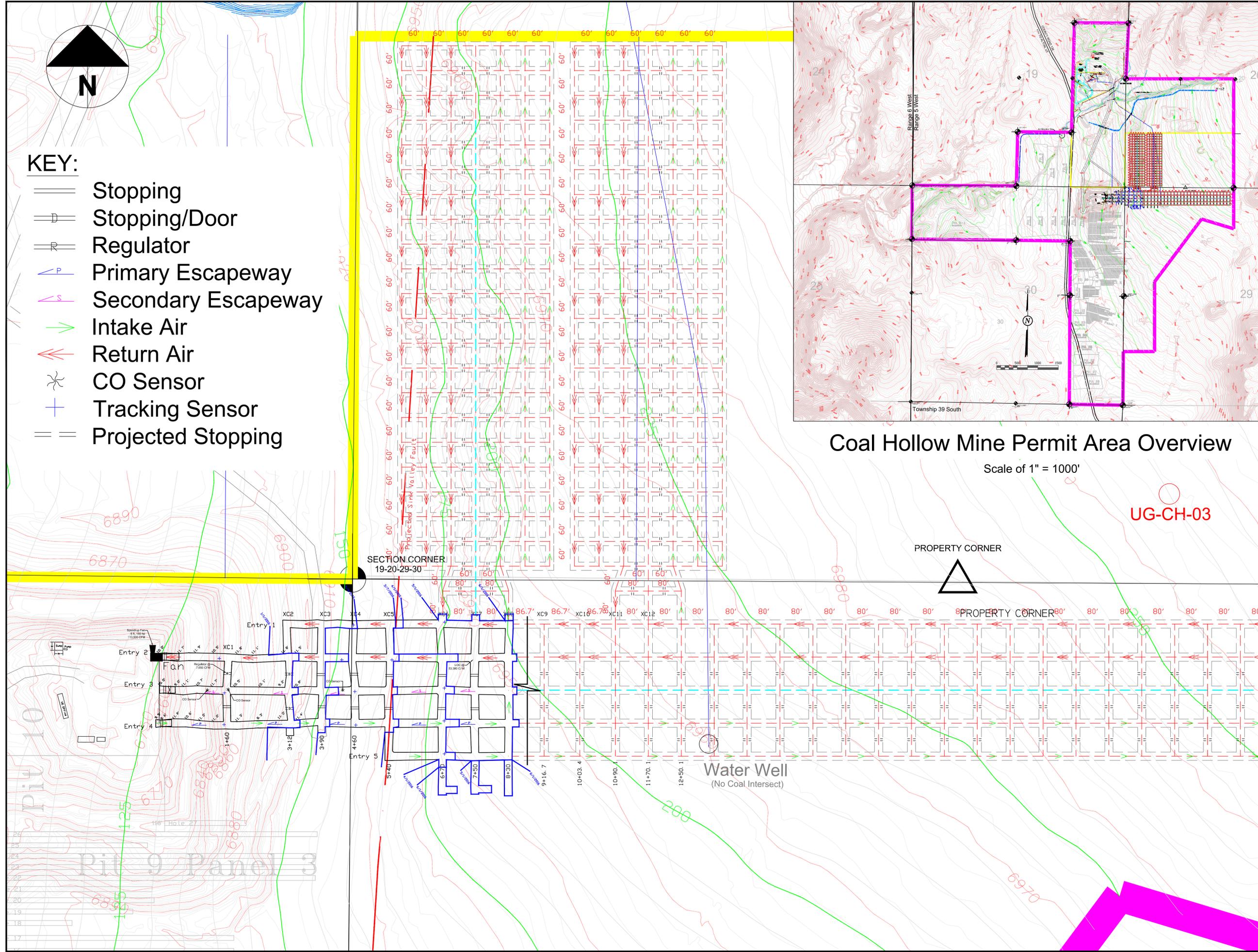
**KEY:**

- Stopping
- Stopping/Door
- Regulator
- Primary Escapeway
- Secondary Escapeway
- Intake Air
- Return Air
- CO Sensor
- Tracking Sensor
- Projected Stopping



**Coal Hollow Mine Permit Area Overview**

Scale of 1" = 1000'



UG-CH-03

PROPERTY CORNER



PROPERTY CORNER

Water Well  
(No Coal Intersect)

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

**MINE MAP**  
**Burton #1 Mine**  
MSHA ID - 42-02639

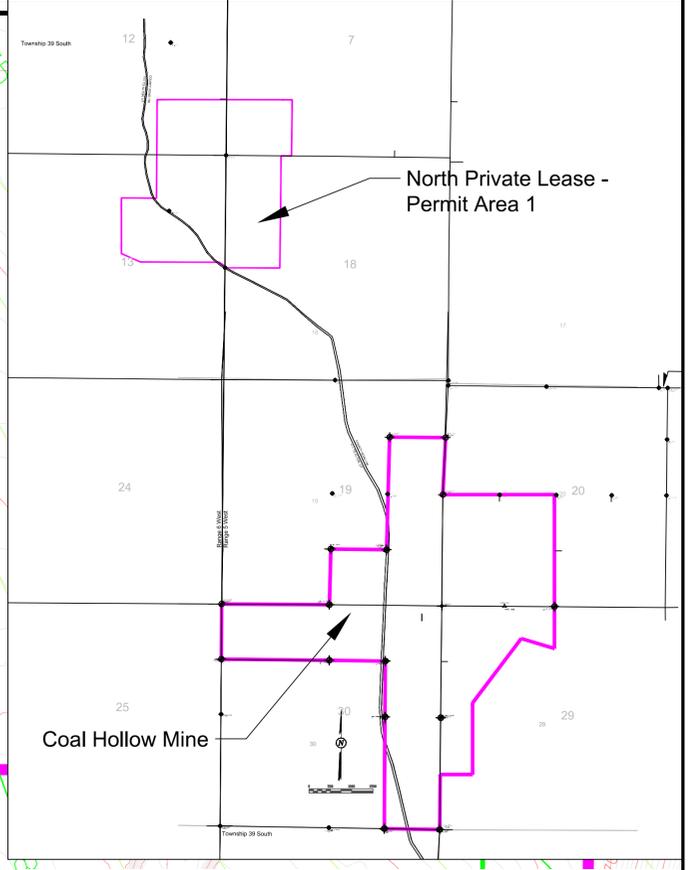
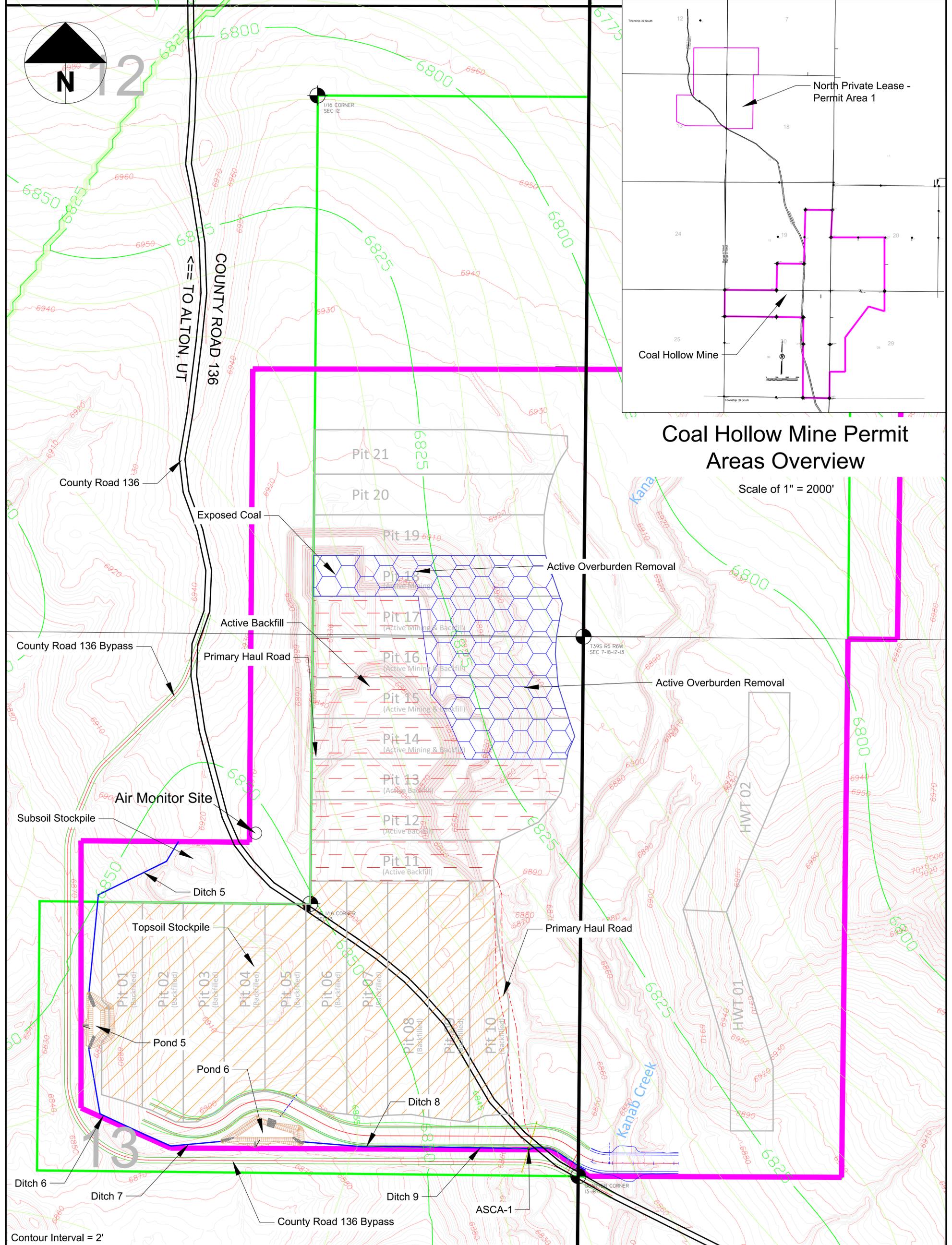
**COAL HOLLOW PROJECT**  
2060 S. ALTON ROAD  
ALTON, UTAH  
**DRAWING: 1 of 1**

REVISIONS	
DATE:	BY:
4/27/2016	AC
6/24/2016	AC
9/30/16-no change	AC
1/31/17-no change	AC
7/31/17-no change	AC
10/17/17-no change	AC
11/22/17-IDLE	AC

DRAWN BY:		CHECKED BY:	
ARC	DWG	DWG	DWG
1	1		
DRAWING: 1 of 1		DATE: 7/21/2015	
JOB NUMBER: SHEET		SCALE: 1" = 100'	

**LEGEND:**

- PERMIT BOUNDARY
- PRIVATE COAL OWNERSHIP
- OB THICKNESS
- CONTOUR
- SURFACE CONTOUR
- SECTION LINE
- FOUND SECTION CORNER
- FOUND PROPERTY CORNER



**Coal Hollow Mine Permit Areas Overview**

Scale of 1" = 2000'

Contour Interval = 2'

**LEGEND:**

- PERMIT BOUNDARY
- PRIVATE COAL OWNERSHIP
- TOP OF COAL CONTOUR
- SURFACE CONTOUR
- SECTION LINE
- FOUND SECTION CORNER
- FOUND PROPERTY CORNER

DRAWN BY:	CHECKED BY:
ARC	DWG
DRAWING:	DATE:
2 of 2	4/19/2016
	SCALE:
	1" = 200'
JOB NUMBER:	SHEET

REVISIONS	
DATE:	BY:
9/30/16	AC
3/31/17	AC
7/31/17	AC
10/17/17	AC
2/28/18	AC
6/25/18	AC
10/31/18	AC

**MINE MAP**  
**Coal Hollow Mine**  
**North Private Lease**  
 MSHA ID - 42-02519

**COAL HOLLOW PROJECT**  
 2060 S. ALTON ROAD  
 ALTON, UTAH  
**DRAWING: 2 of 2**



Alton Coal Development  
**Coal Hollow**  
 PROJECT

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



# PETERSEN HYDROLOGIC

26 March 2019

Mr. Kirk Nicholes  
Environmental Specialist  
Alton Coal Development, LLC  
463 North 100 West, Suite 1  
Cedar City, Utah 84721

Kirk,

At your request, I have performed an evaluation of Coal Hollow Mine water discharges during 2018 as specified in Stipulation #5 of the approved Coal Hollow Mine Mining and Reclamation Plan. The stipulation states that the applicant will be required to evaluate discharges from the mine to determine impacts to the designated alluvial valley floor (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.

During August, October, and November of 2018 there were UPDES discharges of water from the Coal Hollow Mine (Table 1). Discharges occurred from Pond 1B and Pond 3 in the south mine area, and from Pond 7 in the North Private Lease area.

### ***Drought conditions during 2018***

It is noted here that severe to extreme drought conditions prevailed in the region during 2018. This is reflected in a plot of the Palmer Hydrologic Drought Index (PHDI) data for 2018 for Utah Region 4 (Figure 1). The PHDI is a monthly value generated by the National Climatic Data Center using a variety of hydrologic parameters that indicates wet and dry spells. The PHDI is calculated from several hydrologic parameters including precipitation, temperature, evapotranspiration, soil water recharge, soil water loss, and runoff. Consequently, it is a useful tool for evaluating the relationship between climate and groundwater and surface-water discharge data. It is noteworthy that the PHDI values measured during September of 2018 indicate the second deepest drought conditions ever measured in the region during the 124-year period of record for the PHDI (1895-2018).

In response to the extreme drought conditions the region experienced, discharge rates measured in streams during 2018 were low. On 14 June 2018 the discharge measured on Kanab Creek at monitoring site SW-1A, which is located about 0.5 miles upstream of the North Private Lease boundary, was only 11.9 gpm. The discharge measured on Kanab Creek that same day at monitoring site SW-3, which is located about 0.5 miles below the North Private Lease boundary was 9.6 gpm. The flow measured on Kanab Creek on the same day at monitoring site SW-2, which is located about 2 miles further downstream (below the confluence with Lower Robinson Creek) was 11.5 gpm. It was noted that at some times during the summer and fall months of 2018 there was little or no flow in Kanab Creek in the area.

### ***Kanab Creek Stream Enhancements***

It is noted that during 2017 and 2018 a stream restoration project was carried out on behalf of Alton Coal Development, LLC on an impaired reach of Kanab Creek within the designated AVF. Previous to the commencement of the project, the stream channel was in poor condition. Widespread stream channel and stream bank erosion was ongoing and there was a general lack of riparian vegetation along the impaired stream segment. The project was performed under the authorization of the U.S. Army Corps of Engineers in consultation with Utah State regulatory agencies and the private land owner. The purposes of the enhancement project included 1) reducing the loss of surrounding farm lands due to the stream bank erosion, 2) creating a more stable stream channel and flood plain by reducing stream gradients and emplacing erosion control materials, and 3) enhancing riparian vegetation and wildlife habitat along the enhanced reach of the stream.

### **UPDES Discharges During 2018**

Discharge rates and water quality parameters measured for the UPDES discharges from the Coal Hollow Mine during 2018 are summarized in Table 1. These discharges were intermittent and included discharges of storm waters and groundwaters.

UPDES discharges from the North Private Lease area during 2018 occurred only from Pond 7. The Pond 7 discharges occurred during the months of October and November and averaged about 50 gpm (Table 1). The Pond 7 discharges occurred primarily in response to dewatering activities in the North Private Lease area and also to storm-water runoff events. The dewatering activities included the pumping of natural, uncontaminated groundwaters from the alluvial aquifer. The pumped groundwaters were routed to Pond 7 and subsequently discharged to the receiving waters.

The discharge rate and water quality data for the Pond 7 discharge is shown in Table 1. Discharge from Pond 7 initially occurred during the five-day period from 21-25 August 2018. During this period the discharge rate ranged from 4.3 to 103 gpm and averaged 53.5 gpm. Discharge from Pond 7 also occurred during the period from 2 October 2018 through 30 November 2018. During this period the discharge rate ranged from 21 to 50 gpm and averaged about 50 gpm.

As shown on Table 1, oil and grease was not present in the discharge. Total iron concentrations averaged 0.35 mg/L. Total suspended solids concentrations averaged 24 mg/L. Total dissolved solids concentrations in the Pond 7 discharge water averaged 1,477 mg/L. The pH of the Pond 7 discharge water averaged 8.3.

UPDES discharges from the south mine area during 2018 occurred from Pond 1B and from Pond 3. Discharge from these two ponds flows to Lower Robinson Creek. Lower Robinson Creek flows into Kanab Creek west of the mine permit area within the designated AVF. Discharge from Pond 1B occurred during the four-day period from 21-24 August 2018 at a rate of 19 gpm (Table 1). No oil and grease was present in the discharge water. The total iron concentration was 1.13 mg/L and the total suspended solids concentration was 55 mg/L. The total dissolved solids concentration was 1,350 mg/L and the field pH was 6.84. Discharge from Pond 3 occurred from 29 October 2018 through 15 November 2018. No oil and grease was present in the Pond 3 discharge water and the total iron concentration was <0.5 mg/L. Total suspended solids concentrations ranged from 12 to 15 mg/L. The total dissolved solids concentrations measured in the Pond 3 discharge water ranged from 976 mg/L to 1,040 mg/L, averaging 1,008 mg/L. The measured field pH ranged from 8.6 to 8.7.

### **Potential Impacts to Stream Channel**

The Lower Robinson Creek and Kanab Creek stream channels in the designated AVF area were traversed and inspected on several occasions during 2018, including an end-of-year inspection on 12 December 2018. There were no indications during these surveys that the UPDES discharge waters from the Coal Hollow Mine had caused adverse impacts to either the Lower Robinson Creek or Kanab Creek stream channels in the designated AVF.

This finding is not unanticipated, as much larger discharges of water occur periodically in both Kanab Creek and Lower Robinson Creek. Discharge rates measured in both

drainages have exceeded several thousand gpm, which exceeds the 2018 UPDES discharges by many times.

As noted above, a large scale stream enhancement project was conducted on the Kanab Creek Stream channel in the designated AVF area during 2017 and 2018. This project should have a positive impact on the AVF by protecting existing farm lands from loss to stream erosion and also by improving the condition of the Kanab Creek stream channel and flood plain, increasing erosional stability, and generally improving to the riparian ecosystem/habitat along the creek.

### **Potential Water Quality Diminution**

It should be noted that the surface water in Lower Robinson Creek does not contribute to the essential hydrologic function of the designated AVF in Kanab Creek. Lower Robinson Creek is incised within its channel in the AVF area and the water in the stream is not used for irrigation or sub-irrigation activities at the site. There are no irrigation diversions on Lower Robinson Creek in the AVF area. The lowermost irrigation diversions on Kanab Creek regionally (which is the source of irrigation water for the designated AVF) is located above the confluence of Lower Robinson Creek and thus the AVF was not influenced by the Coal Hollow Mine south area UPDES discharge water. The overall quality of the Coal Hollow Mine discharges to Lower Robinson Creek during 2018, as reflected by the flow weighted average total dissolved solids (TDS) concentrations of the discharge waters, was less than 1,200 mg/L (noting that the total dissolved solids concentration during the brief August 2018 discharge from Pond 1B was 1,350 mg/L).

The water quality characteristics of the UPDES discharges from the North Private Lease area during 2018 are described above. It is noted that while the overall quality of the Pond 7 discharge water was comparable to or better than that in many other streams in the Coal Hollow Mine area (see data on file in the Division's Coal Water Quality Database for monitoring sites April Creek, Priscilla Creek, SW-6, SW-9, SW-11, SW-15, and SW-101), the average total dissolved solids concentrations of the Pond 7 discharge water exceeded that of the Kanab Creek receiving water. However, because only meager flows (and occasionally no flows) were present in Kanab Creek during the extreme drought conditions, the addition of the discharge water from the Coal Hollow Mine to the Kanab Creek drainage is be considered as an overall benefit to the stream course and its

associated ecosystems - providing water to vegetation communities, wildlife, and livestock.

**Potential Impacts to Wildlife**

There are no indications that any impacts to wildlife within the designated AVF occurred as a result of the discharge of waters from the Coal Hollow Mine during 2018. The stream restoration project on Kanab Creek within the designated AVF described above should improve wildlife habitat within the riparian ecosystem along Kanab Creek.

Based on these considerations, it is our finding that there were no appreciable impacts to the designated AVF on Kanab Creek resulting from the intermittent discharge of water from the Coal Hollow Mine during 2018.

Please feel free to contact me should you have any questions in this regard.

Sincerely,



Erik C. Petersen, P.G.  
Principal Hydrogeologist  
Utah PG #5373615-2250



**Table 1 UPDES water quality and quantity for 2018.**

Pond	Date	Flow (gpm)	O&G vis. (Yes/No)	O&G (mg/L)	Fe(t) (mg/L)	TSS (mg/L)	TDS (mg/L)	pH	Lab pH
Pond 1	No Discharge during 2018								
Pond 1B	8/21/2018	19							
Pond 1B	8/22/2018	19	No	<5	1.13	55	1350	6.84	7.8
Pond 1B	8/23/2018	19							
Pond 1B	8/24/2018	19							
Average			No	<5	1.13	55	1350	6.84	7.8
Pond 2	No Discharge during 2018								
Pond 3	10/29/2018	2.5	No	<5	0.4	12	976	8.6	8.1
Pond 3	10/30/2018	50							
Pond 3	10/31/2018	50							
Pond 3	11/1/2018	50							
Pond 3	11/2/2018	50							
Pond 3	11/3/2018	50							
Pond 3	11/4/2018	50							
Pond 3	11/5/2018	50							
Pond 3	11/6/2018	50							
Pond 3	11/7/2018	50	No	<5	0.07	15	1040	8.7	8.4
Pond 3	11/8/2018	50							
Pond 3	11/9/2018	50							
Pond 3	11/10/2018	50							
Pond 3	11/11/2018	50							
Pond 3	11/12/2018	50							
Pond 3	11/13/2018	50							
Pond 3	11/14/2018	50							
Pond 3	11/15/2018	50							
Average			No	<5	0.24	13.5	1008	8.65	8.25
Pond 4	No Discharge during 2018								
Pond 5	No Discharge during 2018								
Pond 6	No Discharge during 2018								
Pond 7	8/21/2018	4.3							
Pond 7	8/22/2018	103	No	<5	0.71	42	1400	8.05	8.2
Pond 7	8/23/2018	62							
Pond 7	8/24/2018	62							
Pond 7	8/25/2015	36							
Pond 7	10/2/2018	21							
Pond 7	10/3/2018	50							
Pond 7	10/4/2018	50							
Pond 7	10/5/2018	50							
Pond 7	10/6/2018	50							
Pond 7	10/7/2018	50							
Pond 7	10/8/2018	50							
Pond 7	10/9/2018	50							
Pond 7	10/10/2018	50	No	<5	0.13	17	1590	8.05	7.9
Pond 7	10/11/2018	50							

Pond	Date	Flow (gpm)	O&G vis. (Yes/No)	O&G (mg/L)	Fe(t) (mg/L)	TSS (mg/L)	TDS (mg/L)	pH	Lab pH
Pond 7	10/12/2018	50							
Pond 7	10/13/2018	50							
Pond 7	10/14/2018	50							
Pond 7	10/15/2018	50							
Pond 7	10/16/2018	50							
Pond 7	10/17/2018	50							
Pond 7	10/18/2018	50							
Pond 7	10/19/2018	50							
Pond 7	10/20/2018	50							
Pond 7	10/21/2018	50							
Pond 7	10/22/2018	50							
Pond 7	10/23/2018	50							
Pond 7	10/24/2018	50							
Pond 7	10/25/2018	50							
Pond 7	10/26/2018	50							
Pond 7	10/27/2018	50							
Pond 7	10/28/2018	50							
Pond 7	10/29/2018	50							
Pond 7	10/30/2018	50							
Pond 7	10/31/2018	50							
Pond 7	11/1/2018	50							
Pond 7	11/2/2018	50							
Pond 7	11/3/2018	50							
Pond 7	11/4/2018	50							
Pond 7	11/5/2018	50							
Pond 7	11/6/2018	50							
Pond 7	11/7/2018	50	No	<5	0.21	12	1440	8.7	8.0
Pond 7	11/8/2018	50							
Pond 7	11/9/2018	50							
Pond 7	11/10/2018	50							
Pond 7	11/11/2018	50							
Pond 7	11/12/2018	50							
Pond 7	11/13/2018	50							
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Pond 7	11/24/2018	50							
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Pond 7	11/26/2018	50							
Pond 7	11/27/2018	50							
Pond 7	11/28/2018	50							
Pond 7	11/29/2018	50							
Pond 7	11/30/2018	23							
Average			No	<5	0.35	24	1477	8.3	8.0

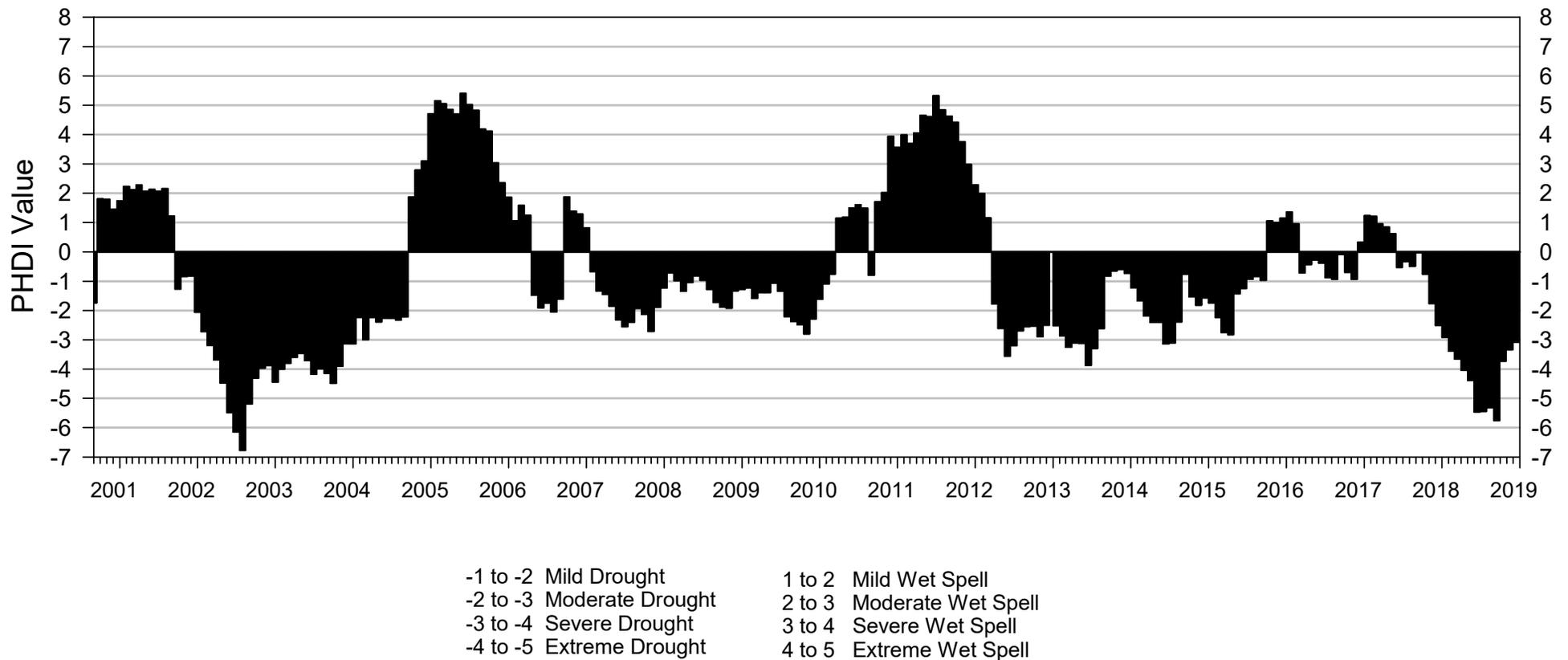


Figure 1 Plot of Palmer Hydrologic Drought Index for Utah Region 4.



United States  
Department of  
Agriculture

March 12, 2018

Marketing and  
Regulatory  
Programs

Alton Coal Development Company  
Attn: Kirk Nicholes  
463 North 100 West  
Cedar City, UT 84721

Animal and  
Plant Health  
Inspection  
Service

SUBJECT: 2018 Predator Management agreement

Wildlife  
Services

Dear Kirk,

1860 W. Alexander  
St., #A  
P. O. Box 26976  
Salt Lake City, Utah  
84119

Enclosed are 2 copies of the 2018 Predator Management agreement to assist Alton Coal Development Company in protecting the native Sage Grouse population in the Alton Coal area. Also enclosed is an invoice for the agreement amount.

Please sign the agreement(s) and return to Wildlife Services at the following address:

USDA APHIS Wildlife Services

Attn: Diana Dilsaver

P. O. Box 26976

Salt Lake City, UT 84126

Sincerely,

Chad Heuser  
State Director

Enclosure(s)



United States Department of Agriculture  
Animal and Plant Health Inspection Service

*Safeguarding American Agriculture*

**COOPERATIVE SERVICE FIELD AGREEMENT**  
between  
Alton Coal Development Company (Cooperator)  
and  
**UNITED STATES DEPARTMENT OF AGRICULTURE**  
**ANIMAL AND PLANT HEALTH INSPECTION SERVICE**  
**WILDLIFE SERVICES**

**ARTICLE 1**

The purpose of this agreement is to cooperate in a wildlife damage management project as described below.  
To provide protection for nesting sage grouse by managing damage caused by common ravens, red fox, raccoons, skunks and coyotes.

**ARTICLE 2**

Under the Act of March 2, 1931, as amended (7 USC 426), and the Act of December 22, 1987 (7 USC 426c), the Secretary of Agriculture may conduct a program of wildlife services with respect to injurious animal species and take any action the Secretary considers necessary in conducting the program. Additionally, the Secretary of Agriculture, except for urban rodent control, is authorized to conduct activities to control nuisance mammals and birds and those mammal and bird species that are reservoirs for zoonotic diseases. In carrying out a program of wildlife services involving injurious and/or nuisance animal species or involving mammal and bird species that are reservoirs for zoonotic diseases, the Secretary is authorized to cooperate with States, local jurisdictions, individuals, public and private agencies, organizations, and institutions.

APHIS-WS and the Cooperator agree:

**ARTICLE 3**

1. APHIS-WS will provide the requested wildlife damage management service;
2. The Cooperator will provide, at time of service, a certified or cashier's check, personal check or money order payable to USDA, APHIS in the amount of \$ 7500.00 for: Salaries, benefits, supplies, equipment and vehicle expense...not to exceed 160hrs
3. The monies received by APHIS-WS will be used for the purpose stated above.
4. The performance of WDM actions by APHIS-WS under this Agreement is contingent upon a determination by APHIS-WS that such actions are in compliance with the National Environmental Policy Act, Endangered Species Act, and any other applicable environmental statutes. APHIS-WS will not make a final decision to conduct requested WDM actions until it has made the determination of such compliance.
5. Nothing in this Agreement shall prevent any other individual or organization from entering into separate Agreements with APHIS-WS for the purpose of controlling wildlife damage.
6. That APHIS-WS has advised the Cooperator that other private sector service providers may be available to provide wildlife management services and notwithstanding these other options, Cooperator requests that APHIS-WS provide wildlife management services as stated under the terms of this Agreement.

**ARTICLE 4**

This Agreement is contingent upon the passage by Congress of an appropriation from which expenditures may be legally met and shall not obligate the requisitioning agency upon failure of Congress to so appropriate. This Agreement also may be reduced or terminated if Congress only provides the Agency funds for a finite period under a Continuing Resolution.

**ARTICLE 5**

Pursuant to Section 22, Title 41, United States Code, no member of or delegate to Congress shall be admitted to any share or part of this Agreement or to any benefit to arise there from.

**ARTICLE 6**

APHIS assumes no liability for any actions or activities conducted under this agreement except to the extent the recourse or remedies are provided by Congress under the Federal Tort Claims Act (28 USC 1346(b), 2401(b), 2671-2680).

All WDM activities will be conducted in accordance with applicable Federal, State, and local laws and regulations.

This agreement is not a procurement contract (31 U.S.C. 6303), nor is it considered a grant (31 U.S.C. 6304). In this agreement, APHIS provides goods or services on a cost recovery basis to nonfederal recipients.

This Agreement shall become effective April 21, 20 18, and shall continue through April 20, 20 19 not to exceed one year. This agreement may be amended or terminated at any time by mutual agreement of the parties in writing. Further, in the event the Cooperator does not, for any reason, deposit necessary funds, APHIS-WS is relieved of the obligation to provide services under this Agreement.

**Cooperator Name, Address, and Phone Number**

Alton Coal Development Company  
Contact: Kirk Nicholes Environ. Specialist  
463 N 100 W Cedar City, UT 84721

435-867-5331 / 435-691-1551

**Phone Number**

**Fax Number**

**Cooperator's Tax ID No. or Social Security No.**  
**(As required by Debt Collection Improvement Act of 1996)**

  
Cooperator's Signature

3/16/2018  
Date

\_\_\_\_\_  
WS Representative Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
State Director's Signature

\_\_\_\_\_  
Date

**COOPERATIVE SERVICE FIELD AGREEMENT**

between  
Alton Coal Development Company (Cooperator)

and  
**UNITED STATES DEPARTMENT OF AGRICULTURE  
ANIMAL AND PLANT HEALTH INSPECTION SERVICE  
WILDLIFE SERVICES**

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To provide protection for nesting sage grouse by managing damage caused by common ravens, red fox, raccoons, skunks and coyotes.

**ARTICLE 2**

Under the Act of March 2, 1931, as amended (7 USC 426), and the Act of December 22, 1987 (7 USC 426c), the Secretary of Agriculture may conduct a program of wildlife services with respect to injurious animal species and take any action the Secretary considers necessary in conducting the program. Additionally, the Secretary of Agriculture, except for urban rodent control, is authorized to conduct activities to control nuisance mammals and birds and those mammal and bird species that are reservoirs for zoonotic diseases. In carrying out a program of wildlife services involving injurious and/or nuisance animal species or involving mammal and bird species that are reservoirs for zoonotic diseases, the Secretary is authorized to cooperate with States, local jurisdictions, individuals, public and private agencies, organizations, and institutions.

APHIS-WS and the Cooperator agree:

**ARTICLE 3**

1. APHIS-WS will provide the requested wildlife damage management service;
2. The Cooperator will provide, at time of service, a certified or cashier's check, personal check or money order payable to USDA, APHIS in the amount of \$ 7500.00 for: Salaries, benefits, supplies, equipment and vehicle expense...not to exceed 160hrs
3. The monies received by APHIS-WS will be used for the purpose stated above.
4. The performance of WDM actions by APHIS-WS under this Agreement is contingent upon a determination by APHIS-WS that such actions are in compliance with the National Environmental Policy Act, Endangered Species Act, and any other applicable environmental statutes. APHIS-WS will not make a final decision to conduct requested WDM actions until it has made the determination of such compliance.
5. Nothing in this Agreement shall prevent any other individual or organization from entering into separate Agreements with APHIS-WS for the purpose of controlling wildlife damage.
6. That APHIS-WS has advised the Cooperator that other private sector service providers may be available to provide wildlife management services and notwithstanding these other options, Cooperator requests that APHIS-WS provide wildlife management services as stated under the terms of this Agreement.

*initial*

**ARTICLE 4**

This Agreement is contingent upon the passage by Congress of an appropriation from which expenditures may be legally met and shall not obligate the requisitioning agency upon failure of Congress to so appropriate. This Agreement also may be reduced or terminated if Congress only provides the Agency funds for a finite period under a Continuing Resolution.

**ARTICLE 5**

Pursuant to Section 22, Title 41, United States Code, no member of or delegate to Congress shall be admitted to any share or part of this Agreement or to any benefit to arise there from.

**ARTICLE 6**

APHIS assumes no liability for any actions or activities conducted under this agreement except to the extent the recourse or remedies are provided by Congress under the Federal Tort Claims Act (28 USC 1346(b), 2401(b), 2671-2680).

All WDM activities will be conducted in accordance with applicable Federal, State, and local laws and regulations.

This agreement is not a procurement contract (31 U.S.C. 6303), nor is it considered a grant (31 U.S.C. 6304). In this agreement, APHIS provides goods or services on a cost recovery basis to nonfederal recipients.

This Agreement shall become effective April 21, 20 18, and shall continue through April 20, 20 19 not to exceed one year. This agreement may be amended or terminated at any time by mutual agreement of the parties in writing. Further, in the event the Cooperator does not, for any reason, deposit necessary funds, APHIS-WS is relieved of the obligation to provide services under this Agreement.

**Cooperator Name, Address, and Phone Number**

Alton Coal Development Company  
Contact: Kirk Nicholes Environ. Specialist  
463 N 100 W Cedar City, UT 84721

435-867-5331 / 435-691-1551

**Phone Number**

**Fax Number**

**Cooperator's Tax ID No. or Social Security No.  
(As required by Debt Collection Improvement Act of 1996)**

*[Signature]*  
\_\_\_\_\_  
Cooperator's Signature

3/16/2018  
\_\_\_\_\_  
Date

\_\_\_\_\_  
WS Representative Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
State Director's Signature

\_\_\_\_\_  
Date



United States  
Department of  
Agriculture

Animal and  
Plant Health  
Inspection  
Service

Wildlife  
Services

P.O. Box 26976  
Salt Lake City, UT 84126

801-975-3315

## BILL FOR COLLECTION

COOPERATOR
Alton Coal Development Company 463 N. 100 W. Cedar City, UT 84721
Attn: Kirk Nicholes
Telephone: 435-867-5331

Bill Number	OTCS 7349-18003
Customer Vendor Number	3283125
Agreement No.	18-7349-9003-FA
Billing Date	3/12/2018
<b>Payment Due</b>	<b>4/11/2018</b>

Dates of Service  
4/21/18 - 4/20/19

DESCRIPTION	AMOUNT
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Predator Control Program - Sage Grouse Protection Protect nesting sage group populations around current and future mitigation sites. Includes Salary & Benefits, Supplies, and Vehicle	\$7,500.00
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<b>TOTAL DUE:</b>	<b>\$7,500.00</b>
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BILLING DOCUMENT SUMMARY							
WBS: AP.RA.OTCS.WS.WR49	<table style="width: 100%; border-collapse: collapse;"> <tr> <th colspan="2" style="text-align: left; padding: 2px;">BILLING DOCUMENT NUMBER AND PAYMENT AMT:</th> </tr> <tr> <td style="padding: 2px;">8XWSWR4949REIMBURCOTCSWSWR49</td> <td style="text-align: right; padding: 2px;">\$7,500.00</td> </tr> <tr> <td colspan="2" style="text-align: center; padding: 2px;">For internal use only</td> </tr> </table>	BILLING DOCUMENT NUMBER AND PAYMENT AMT:		8XWSWR4949REIMBURCOTCSWSWR49	\$7,500.00	For internal use only	
BILLING DOCUMENT NUMBER AND PAYMENT AMT:							
8XWSWR4949REIMBURCOTCSWSWR49	\$7,500.00						
For internal use only							
<b>Total</b>							
<b>\$7,500.00</b>							

NEW INFORMATION ABOUT HOW TO PAY	
<p>Please remit <b>USDA, APHIS</b> payment within <b>PO Box 26976</b> 30 days to <b>Salt Lake City, UT 84126</b></p> <p style="background-color: yellow;"><b>INCLUDE A COPY OF THIS BILL WITH YOUR CHECK</b></p> <p>Make checks payable to: <b>USDA-APHIS</b> Please write your Bill Number on your check.</p>	<p>In accordance with the Debt Collection Improvement Act of 1996, invoices issued by USDA-APHIS are due and payable within 30 days. Payments not received by the due date are subject to late payment charges assessed at the rate established by the Dept. of Treasury (31 USC 3717).</p> <p style="text-align: center; font-weight: bold; font-size: 1.2em;">PLEASE INCLUDE A COPY OF THIS BILL WITH YOUR PAYMENT.</p>
For questions concerning this bill, please contact: Chad Heuser (801) 975-3315	

Cooperator Copy     
  Remittance Copy     
  State Office Copy/Fax ART

## Statement of Purpose

The purpose of this agreement is to provide assistance to Alton Coal Development Company in the form of a predator control program to protect native sage grouse populations. This assistance may be in the form of educational information, non-lethal methods, and direct control. When direct control is necessary, the most effective and safe tools and techniques available will be utilized.

The specific goal is to conduct a predator control program in an effort to protect nesting sage grouse populations in the immediate area of the proposed mine site, and in areas outlined as future mitigation sites. The focus will be to minimize common raven, red fox, raccoon, skunk, and coyote depredation occurring during the sage grouse nesting season not to exceed 160 hours during the agreement period. The cost includes employee salary and benefits, vehicle, and control method costs.

### Summary of Agreement Expenses

Description	Amount
Salaries & Benefits	\$4,896.00
Vehicles	\$1,375.00
Supplies & Materials, Equipment	\$1,229.00
TOTAL	\$7,500.00