



State of Utah

GARY R. HERBERT  
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Department of  
Environmental Quality

Amanda Smith  
*Executive Director*

DIVISION OF AIR QUALITY  
Bryce C. Bird  
*Director*

DAQE-AN140470004-15

April 21, 2015

B. Kirk Nicholes  
Alton Coal Development, LLC  
463 North 100 West, Suite 1  
Cedar City, UT 84721

Dear Mr. Nicholes:

Re: Approval Order: Modification to AO DAQE-AN140470003-14 for Installation of Two  
Generators and Stacker Belt  
Project Number: N14047-0004

The attached document is the Approval Order for the above-referenced project. Future correspondence on this Approval Order should include the engineer's name as well as the DAQE number as shown on the upper right-hand corner of this letter. The project engineer for this action is Jon Black, who may be reached at (801) 536-4047.

Sincerely,

Bryce C. Bird  
Director

BCB:JB:jc

cc: Mike Owens  
Southwest Utah Public Health Department

**STATE OF UTAH**

**Department of Environmental Quality**

**Division of Air Quality**

**APPROVAL ORDER: Modification to AO DAQE-AN140470003-14 for Installation of Two Generators and Stacker Belt**

**Prepared By: Jon Black, Engineer  
Phone: (801) 536-4047  
Email: jblack@utah.gov**

**APPROVAL ORDER NUMBER**

**DAQE-AN140470004-15**

**Date: April 21, 2015**

**Alton Coal Development, LLC  
Coal Hollow Mine**

**Source Contact:**

**B. Kirk Nicholes, Environmental Specialist  
Phone: (435) 867-5331  
Email: knicholes@altoncoal.com**



**Bryce C. Bird  
Director**

## Abstract

Alton Coal Development, LLC (ACD) has requested a modification to AO DAQE-140470003-14 to add two (2) diesel generators and a stacker belt at the Coal Hollow Surface Coal Mine. ACD will use the new generators to power underground mining equipment, an underground beltline, stacker belt, and fan for underground operations. ACD will be circumventing the surface mining of coal from pits 11 through 15 and extracting coal from these pit locations through underground mining. The Coal Hollow surface coal mine is classified as a minor source. The mine is located in Kane County near the town of Alton, Utah. Kane County is an attainment area of the National Ambient Air Quality Standards (NAAQS) for all pollutants.

NSPS 40 CFR 60 Subparts A (General Provisions), Y (Standards of Performance for Coal Processing Plants) and IIII (Standards of Performance for Stationary Compression Ignition Internal Combustion Engines) regulations apply to this source. NESHAPs 40 CFR 63 Subparts A (General Provisions) and ZZZZ (Stationary Reciprocating Internal Combustion Engines) regulations apply to this source. Title V of the 1990 Clean Air Act applies to this area source.

The emission changes from surface mining changes and underground equipment power generators, in tons per year (tpy), will be as follows:  $PM_{10} = -4.98$ ,  $PM_{2.5}$  (subset of  $PM_{10}$ ) = -0.21,  $NO_x = 12.22$ ,  $SO_2 = 0.13$ ,  $CO = 23.90$ ,  $VOC = 3.91$ ,  $HAPs = 0.88$  and  $CO_{2e} = 10,995.74$ . The potential source emissions, in tpy, are as follows:  $PM_{10} = 68.68$  (fugitive & point source),  $PM_{2.5}$  (subset of  $PM_{10}$ ) = 8.29,  $NO_x = 31.31$ ,  $SO_2 = 4.11$ ,  $CO = 33.02$ ,  $VOC = 5.82$ ,  $HAPs = 0.96$  and  $CO_{2e} = 12,341.95$ .

This air quality AO authorizes the project with the following conditions and failure to comply with any of the conditions may constitute a violation of this order. This AO is issued to, and applies to the following:

**Name of Permittee:**

Alton Coal Development, LLC  
463 North 100 West, Suite 1  
Cedar City, UT 84721

**Permitted Location:**

Alton Coal Development, LLC-Coal Hollow  
Mine  
County Road 136  
Alton, UT

**UTM coordinates:** 371534 m Easting, 4140699 m Northing, UTM Zone 12

**SIC code:** 1221 (Bituminous Coal & Lignite Surface Mining)

### Section I: GENERAL PROVISIONS

- I.1 All definitions, terms, abbreviations, and references used in this AO conform to those used in the UAC R307 and 40 CFR. Unless noted otherwise, references cited in these AO conditions refer to those rules. [R307-101]
- I.2 The limits set forth in this AO shall not be exceeded without prior approval. [R307-401]
- I.3 Modifications to the equipment or processes approved by this AO that could affect the emissions covered by this AO must be reviewed and approved. [R307-401-1]
- I.4 All records referenced in this AO or in other applicable rules, which are required to be kept by the owner/operator, shall be made available to the Director or Director's representative upon request, and the records shall include the two-year period prior to the date of the request. Unless otherwise specified in this AO or in other applicable state and federal rules, records shall be kept for a minimum of two (2) years. [R307-401-8]
- I.5 At all times, including periods of startup, shutdown, and malfunction, owners and operators shall, to the extent practicable, maintain and operate any equipment approved under this Approval Order including associated air pollution control equipment in a manner consistent with

good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Director which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source. All maintenance performed on equipment authorized by this AO shall be recorded. [R307-401-4]

- I.6 The owner/operator shall comply with UAC R307-107. General Requirements: Breakdowns. [R307-107]
- I.7 The owner/operator shall comply with UAC R307-150 Series. Inventories, Testing and Monitoring. [R307-150]

**Section II: SPECIAL PROVISIONS**

**II.A The approved installations shall consist of the following equipment:**

- II.A.1 **Surface Coal Mine**  
Coal Hollow Mine
- II.A.2 **Product Transfer Equipment**  
Loaders, Dozers, Power Shovels, Excavators, Haul and Water Trucks, etc.
- II.A.3 **Stacker Belt**  
Maximum Equipment Rating: 1000 tph
- II.A.4 **Associated Material Processing Equipment**  
Conveyors, Stackers, Drills, etc.
- II.A.5 **Feeder Breaker**  
Maximum Equipment Rating: 1000 tph.
- II.A.6 **Secondary Crusher**  
Maximum Equipment Rating: 1000 tph
- II.A.7 **Generator #1**  
Maximum Equipment Rating: 25 hp  
Fuel type: Diesel  
Location: Water Well/Block Heater
- II.A.8 **Generator #2**  
Maximum Equipment Rating: 45 hp  
Fuel type: Diesel  
Location: Back-up Generator
- II.A.9 **Generator #3**  
Maximum Equipment Rating: 70 hp  
Fuel type: Diesel  
Location: Maintenance Area
- II.A.10 **Generator #4**  
Maximum Equipment Rating: 190 hp  
Fuel type: Diesel  
Location: Office/Load Out Area

- II.A.11        **Generator #5**  
Maximum Equipment Rating: 250 hp  
Fuel type: Diesel  
Location: Crusher Operation
- II.A.12        **Highwall Miner**  
Note: This source is a mobile source and is listed for information purposes only.
- II.A.13        **Fuel Tank #1**  
Maximum Capacity: 12,000 gallons  
Fuel type: Diesel  
  
Note: Listed for informational purposes only.
- II.A.14        **Fuel Tank #2**  
Maximum Capacity: 12,000 gallons  
Fuel type: Diesel  
  
Note: Listed for informational purposes only.
- II.A.15        **Fuel Tank #3**  
Maximum Capacity: 4,000 gallons  
Fuel type: Gasoline  
  
Note: Listed for informational purposes only.
- II.A.16        **Underground Mining Facility**
- II.A.17        **Generator #6**  
Maximum Equipment Rating: 2220 hp  
Fuel type: Diesel  
Location: Underground Mining Portal
- II.A.18        **Generator #7**  
Maximum Equipment Rating: 190 hp  
Fuel type: Diesel  
Location: Underground Fan
- II.A.19        **Stacker Belt**  
Maximum Equipment Rating: 1,000 tph

**II.B        Requirements and Limitations**

II.B.1        **The Coal Hollow Mine shall be subject to the following:**

II.B.1.a        The owner/operator shall notify the Director in writing when the new equipment listed in Conditions II.A.16, II.A.17, II.A.18, and II.A.19 have been installed and are operational. To ensure proper credit when notifying the Director, send your correspondence to the Director, attn: Compliance Section. If the construction and/or installation have not been completed within 18 months from the date of this AO, the Director shall be notified in writing on the status of the construction and/or installation. At that time, the Director shall require documentation of the continuous construction and/or installation of the operation and may revoke the AO. [R307-415-6a]

II.B.1.b        The owner/operator shall not exceed the following production limits:

- A.        2,000,000 tons total of facility coal production per rolling 12-month period.

- B. 725,000 tons of coal processed from underground mining per rolling 12-month period.
- C. 19,145,000 tons of overburden material moved per rolling 12-month period.
- D. 373,750 tons of topsoil removed per rolling 12-month period.
- E. 7,488 hours of operation for the mine per rolling 12-month period.

[R307-401-8]

II.B.1.b.1 To determine compliance with a rolling 12-month total the owner/operator shall calculate a new 12-month total by the twentieth day of each month using data from the previous 12 months. Records of production shall be kept for all periods when the plant is in operation. The records of production shall be kept on a daily basis. Production shall be determined by scale house records, vendor receipts or other approved method determined by the Director. Hours of operation and production shall be determined by supervisor monitoring and maintaining of an operations log. [R307-401]

II.B.1.c Unless otherwise specified in this AO, visible emissions from the following emission points shall not exceed the following values:

- A. All crushers - 15% opacity
- B. All conveyor transfer points - 10% opacity
- C. All stacker/conveyor drop points - 20% opacity
- D. All diesel engines - 20% opacity
- E. All other points - 20% opacity.

[R307-401-8]

II.B.1.c.1 Unless otherwise specified in this AO, opacity observations of emissions from stationary sources shall be conducted according to 40 CFR 60, Appendix A, Method 9. [R307-201-3]

II.B.1.d All storage piles and unpaved operational areas shall be water sprayed to minimize generation of fugitive dust. Water shall be applied as dry conditions warrant or as determined necessary by the Director. [R307-401-8]

II.B.1.e Blasting may be utilized if conditions warrant. Blasting shall be limited to one (1) blast per day and 32 blasts per rolling 12-month period. Blasting shall be conducted in a manner to prevent overshooting (blasting which loosens solid rock formations outside the limits of the planned slopes) and to minimize the area to be blasted. [R307-401-8]

II.B.1.f The owner/operator shall abide by all applicable requirements of R307-205 for Fugitive Emission and Fugitive Dust sources. To be in compliance, this facility must operate in accordance with the most current version of R307-205. [R307-205]

II.B.1.g The owner/operator shall abide by a fugitive dust control plan acceptable to the Director for control of all dust sources associated with the Coal Hollow Mine. The owner/operator shall abide by the most current fugitive dust control plan approved by the Director. [R307-401-8]

II.B.2 **All Unpaved Haul Roads shall be subject to the following:**

II.B.2.a The owner/operator shall not allow visible emissions from unpaved roads used by mobile equipment to exceed 20 percent opacity. [R307-201]

- II.B.2.b Visible emission determinations for fugitive dust emissions from haul-road traffic and mobile equipment in operational areas shall use procedures similar to Method 9. The normal requirement for observations to be made at 15-second intervals over a six-minute period, however, shall not apply. Visible emissions shall be measured at the densest point of the plume but at a point not less than 1/2 vehicle length behind the vehicle and not less than 1/2 the height of the vehicle. [R307-201]
- II.B.2.c All unpaved roads that are used by mobile equipment, that are located within the pit footprint, shall be water sprayed to control fugitive dust. If annual production of coal exceeds 1.5 million tons per rolling 12-month period, water sprays will continue to be used on short-term roads (same location for less than one month) within the pit footprint while chemical suppressant treatments shall be used on in-pit roads that will remain in place for more than one month, including in-pit ramps.
- All unpaved roads that are outside of the pit footprint shall be water sprayed and/or chemically treated to control fugitive dust. The application of water or chemical treatment shall be used except when the ambient temperature is below freezing (32 degrees). Chemical treatment shall be applied two (2) times, or more if necessary, per rolling 12-month period and watering shall be initiated daily dependent upon observed fugitive dust generation. [R307-401-8]
- II.B.2.d Records of water/chemical treatment application shall be kept for all periods when the plant is in operation. The records shall include the following items:
- A. Date and time treatments were made
  - B. Number of treatments made and quantity of water applied
  - C. Rainfall amount received, if any
  - D. Records of temperature, if the temperature is below freezing.
- [R307-401-8]
- II.B.2.e Each coal haul road shall not exceed 7975 feet in length and each overburden haul road shall not exceed 2500 feet in length. The vehicle speed on the haul roads shall be posted, at minimum, on-site at the beginning of each haul road so that it is clearly visible from the haul road. [R307-401-8]
- II.B.3 **The Diesel fired Generators on-site shall be subject to the following:**
- II.B.3.a The owner/operator shall limit the operation of the stationary diesel generator engines to the following:
- A. Generators #1 (Water Well/Block Heaters) and #2 (Back-up) shall operate 5,112 hours each per rolling 12-month period.
  - B. Generators #3 (Maintenance) and #5 (Crusher) shall operate 7,488 hours each per rolling 12-month period.
  - C. Generators #4 (Office/Loadout), #6 (Underground Mining), and #7 (Underground Fan) shall operate 8,760 hours per rolling 12-month period.
- [R307-401-8]

- II.B.3.a.1 To determine compliance with a rolling 12-month total, the owner/operator shall calculate a new 12-month total by the twentieth day of each month using data from the previous 12 months. To determine the total generator hours of operation for the surface mine, the owner/operator shall sum the operating hours of each engine. Hours of operation shall be determined by supervisor monitoring and maintaining of an operations log. [R307-401]
- II.B.3.b The owner/operator shall abide by all applicable provisions of 40 CFR 60, NSPS Subpart A (General Provisions), 40 CFR 60.1 to 60.18 and Subpart IIII (Standards of Performance for Stationary Compression Ignition Internal Combustion Engines), 40 CFR 60.4200 to 60.4219 for all stationary diesel engines on site as specified in 40 CFR 60.4200(a). [40 CFR 60 Subpart IIII]
- II.B.3.c The owner/operator shall abide by all applicable provisions of 40 CFR 63 Subpart A (General Provisions), 40 CFR 63.1 to 63.16 and 40 CFR 63 Subpart ZZZZ (National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines), 40 CFR 63.6580 to 63.6675 for all stationary diesel engines on site as specified in 40 CFR 63.6585. [40 CFR 63 Subpart ZZZZ]
- II.B.4 **On-Site Fuel Limitations**
- II.B.4.a The owner/operator shall use #1, #2 or a combination of #1 and #2 diesel fuel in the on-site equipment. [R307-401-8]
- II.B.4.b The sulfur content of any fuel oil or diesel burned in the on-site equipment shall not exceed 15 ppm by weight. [R307-401-8]
- II.B.4.c The sulfur content shall be determined by ASTM Method D2880-71, D4294-89, or approved equivalent. Certification of fuel sulfur content shall be by test reports from the fuel oil or diesel fuel marketer. [R307-401]
- II.B.5 **Ambient Monitoring Requirements**
- II.B.5.a The owner/operator shall operate an ambient monitoring network as described in this AO document. The monitoring plan will be periodically reviewed by the DAQ and revised if necessary. [R307-401]
- II.B.5.b The air monitoring installation and set-up shall be completed within 90 days of the final permit issuance date. The owner/operator shall complete the calibration and equipment testing within 30 days of the final set-up and installation date. [R307-401]
- II.B.5.c The owner/operator shall operate and maintain two (2) air monitoring sites in the vicinity of the Coal Hollow mine and facilities. The first air monitor shall be sited in a location impacted by the modeled highest concentration of emissions. This site is along the western portion of the mine's northern property line and is defined below. The second air monitor shall be sited outside of the property boundary near the southeastern corner of the property and is defined below. The exact locations of the monitoring sites shall be approved by the DAQ and meet all of the siting requirements established by the DAQ. [R307-401-8]
- II.B.5.d The owner/operator shall utilize air monitoring and quality assurance procedures which are equal to or exceed the requirements described in the EPA Quality Assurance Manual including revisions 40 CFR Parts 53 and 58. [R307-401]
- II.B.5.e The air monitoring shall track the long-term impacts of emissions from the facility. Should monitoring data indicate that project emissions are producing ambient air quality impacts that could produce an exceedance of the National Ambient Air Quality Standards, additional air monitoring or analyses will be required. If this situation occurs, an additional data assessment plan shall be developed that is mutually acceptable to both UDAQ and ACD. [R307-401]

II.B.5.f ACD shall monitor the following parameters at the sites and frequencies described below:

Site Name	UTM Coordinates	Parameter	Frequency
Northern Boundary	Zone 12 N 4,139,594.2 E 373,175.2	PM <sub>10</sub>	Every 6th Day
Southeastern Corner	Zone 12 N 4,140,903.8 E 373,113.4	PM <sub>10</sub>	Every 6th Day

Note: PM<sub>10</sub> is defined as particulate matter less than 10 microns.

[R307-401-1]

II.B.5.g Any ambient air monitoring changes proposed by ACD must be approved, in writing, by the Director or Director's representative. [R307-401]

II.B.5.h The owner/operator shall submit quarterly data reports within 45 days after the end of the calendar quarter and an annual data report within 90 days after the end of the calendar year. [R307-401]

II.B.5.i The quarterly report shall consist of a narrative data summary and a submittal of all data points in EPA-AIRS record format. The data shall be submitted in compact disc (CD) format. The narrative data summary shall include:

- A. A topographic map of appropriate scale with UTM coordinates and a true north arrow showing the air monitoring site locations in relation to the mine and facilities and the general area;
- B. A hard copy of the individual data points;
- C. The quarterly and monthly means for PM<sub>10</sub> and wind speed;
- D. The first and second highest 24-hour concentrations for PM<sub>10</sub>;
- E. The quarterly and monthly wind roses;
- F. A summary of the data collection efficiency;
- G. A summary of the reasons for missing data;
- H. A precision and accuracy (audit) summary;
- I. A summary of any ambient air standard exceedances; and
- J. Calibration information.

[R307-401]

II.B.5.j The annual data report shall consist of a narrative data summary containing:

- A. A topographic map of appropriate scale with UTM coordinates and a true north arrow showing the air monitoring site locations in relation to the mine and facilities and the general area;
- B. A pollution trend analysis;

- C. The annual means for PM<sub>10</sub> and wind speed;
- D. The first and second highest 24-hour concentrations for PM<sub>10</sub>;
- E. The annual wind rose;
- F. An annual summary of data collection efficiency;
- G. An annual summary of precision and accuracy (audit) data;
- H. An annual summary of any ambient standard exceedance; and
- I. Recommendations for future monitoring.

[R307-401]

II.B.5.k The DAQ may audit, or may require ACD to contract with an independent firm to audit, the air monitoring network, the laboratory performing associated analyses, and any data handling procedures at unspecified times. On the basis of the audits and subsequent reports, the DAQ may recommend or require changes in the air monitoring system and associated activities in order to improve precision, accuracy, and data completeness. [R307-401]

### **Section III: APPLICABLE FEDERAL REQUIREMENTS**

In addition to the requirements of this AO, all applicable provisions of the following federal programs have been found to apply to this installation. This AO in no way releases the owner or operator from any liability for compliance with all other applicable federal, state, and local regulations including UAC R307.

NSPS (Part 60), A: General Provisions

NSPS (Part 60), Y: Standards of Performance for Coal Preparation and Processing Plants

NSPS (Part 60), III: Standards of Performance for Stationary Compression Ignition Internal Combustion Engines

MACT (Part 63), ZZZZ: National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines

Title V (Part 70) Area Source

### **PERMIT HISTORY**

This AO is based on the following documents:

Replaces	DAQE-AN140470003-14 dated March 10, 2014
Is Derived From	Notice of Intent Document dated November 17, 2014
Incorporates	Additional Information dated December 18, 2014
Is Derived From	Additional Information dated January 14, 2015

### **ADMINISTRATIVE CODING**

The following information is for UDAQ internal classification use only:

Kane County

CDS SM

NSR, Title V (Part 70) Area Source, Synthetic minor, Attainment Area, NSPS (Part 60), MACT (Part 63)

ACRONYMS

The following lists commonly used acronyms and associated translations as they apply to this document:

40 CFR	Title 40 of the Code of Federal Regulations
AO	Approval Order
BACT	Best Available Control Technology
CAA	Clean Air Act
CAAA	Clean Air Act Amendments
CDS	Classification Data System (used by EPA to classify sources by size/type)
CEM	Continuous emissions monitor
CEMS	Continuous emissions monitoring system
CFR	Code of Federal Regulations
CMS	Continuous monitoring system
CO	Carbon monoxide
CO <sub>2</sub>	Carbon Dioxide
CO <sub>2</sub> e	Carbon Dioxide Equivalent - 40 CFR Part 98, Subpart A, Table A-1
COM	Continuous opacity monitor
DAQ	Division of Air Quality (typically interchangeable with UDAQ)
DAQE	This is a document tracking code for internal UDAQ use
EPA	Environmental Protection Agency
FDCP	Fugitive dust control plan
GHG	Greenhouse Gas(es) - 40 CFR 52.21 (b)(49)(i)
GWP	Global Warming Potential - 40 CFR Part 86.1818-12(a)
HAP or HAPs	Hazardous air pollutant(s)
ITA	Intent to Approve
LB/HR	Pounds per hour
MACT	Maximum Achievable Control Technology
MMBTU	Million British Thermal Units
NAA	Nonattainment Area
NAAQS	National Ambient Air Quality Standards
NESHAP	National Emission Standards for Hazardous Air Pollutants
NOI	Notice of Intent
NO <sub>x</sub>	Oxides of nitrogen
NSPS	New Source Performance Standard
NSR	New Source Review
PM <sub>10</sub>	Particulate matter less than 10 microns in size
PM <sub>2.5</sub>	Particulate matter less than 2.5 microns in size
PSD	Prevention of Significant Deterioration
PTE	Potential to Emit
R307	Rules Series 307
R307-401	Rules Series 307 - Section 401
SO <sub>2</sub>	Sulfur dioxide
Title IV	Title IV of the Clean Air Act
Title V	Title V of the Clean Air Act
TPY	Tons per year
UAC	Utah Administrative Code
UDAQ	Utah Division of Air Quality (typically interchangeable with DAQ)
VOC	Volatile organic compounds