

Alton Coal Development Coal Hollow Surface Mine Process Description

The Coal Hollow Mine will be a surface coal mining operation. The coal sizing portion of the plant will be similar to a sand and gravel operation, with crushing/sizing and stockpiling of material. The coal mining will occur in sequential pits, with backfilling and reclamation immediately following coal removal from each pit.

Coal will be transported by truck to the on-site processing area for sorting and crushing, then routed via conveyors to the stockpile. A dozer will push the coal from the stockpile into the loadout conveyor for transport. The requested equipment includes one feeder breaker, one secondary crusher, one stacker belt, two diesel powered generators, and miscellaneous mobile equipment.

Permanent coal haul roads run primarily down the center of the project area, with variable coal haul and overburden haul roads to be located in the pit mining areas. The variable haul roads will change approximately every three weeks as the sequential pit mining progresses.

Sources of emissions from the site include emissions from the topsoil removal, overburden and coal excavation, coal sizing/crushing process, haul traffic, wind erosion and fuel combustion.

Pre-Production Process

Before the facility can proceed to full production operations, a number of steps will occur:

1. The clearing of topsoil from the facilities area (north end of property) and the northern initial mining region. The facilities area topsoil and topsoil from the initial northern and western mining pits would be pushed to a top/sub soil pile (with a scraper or grader) near the facilities area. During this same phase, subsoil will also be recovered from the same areas through a similar process.
2. Removal of overburden from Pit 1 will occur and establishment of an overburden stockpile. Once coal has been reached in Pit 1, it will be removed and then trucked to the facilities area where it would be processed, then piled to be delivered offsite. This pit is along the boundary of the coal seam and will be dug first to set the west boundary of subsequent pits. Coal processing in the facility area would be ongoing at variable rates but never exceeding the maximum rate of 1,000 tons per hour.
3. Begin work on Pit 2 while coal is being removed from Pit 1. This process would mirror that in Pit 1. The overburden from Pit 2 would be trucked to the stockpile developed during Pit 1 overburden removal.
4. Remove and transport coal from Pit 2 to the facilities area and processed as described for Pit 1.
5. Initiated overburden removal in Pit 3, once overburden work is complete in Pit 2. The initial material removed would be placed in the excess spoil area until enough coal is removed from Pit 2 that overburden could be placed in Pit 2 to begin the backfilling process.
6. Mining process begins to approach full production with concurrent reclamation, coal removal and overburden removal. Sequence would repeat itself moving south across pits 1-8, then west across pits 9-15, then south through pits 16-30.

Production Mining Operations: Coal Excavation

Production mining will occur sequentially with work occurring in one 'active disturbed area' at a time. Active mining operations will occur primarily in the west central and southern portion of the mine site.

For each active disturbed area, coal mining is led by the removal of topsoil (except for the first year operations which is all removed at once), the removal of overburden, coal removal and followed by the reclamation of material. This process allows for the concurrent reclamation of removed overburden by placing it in the region that has just been mined free of recoverable coal.

The mining operation will take material from one side of the active disturbed area, and use the non-product material to backfill the other side of the active disturbed area. This alleviates the need for overburden stockpiling and reduces the air quality impacts of the operation. This process also allows progressing pit development and movement without the need to begin a new pit through surface bulldozing once the initial pit has been developed.

Once production is ongoing, mining will be primarily completed with hydraulic excavators which will remove material (overburden and coal) and feed trucks that will either deliver the coal for processing or deliver the overburden to the active reclamation site. Trucks will travel on a series of developed (out of pit) and variable (in-pit) haul roads.

When practical, topsoil and subsoil will be removed immediately prior to overburden in the same geographically sequential manner. This allows the pre-mined portion of the mine region to remain undisturbed prior to active mining which helps to reduce emissions.

Reclamation Activities

Reclamation activities following the progression of the active disturbed area include replacement of the subsoil and topsoil.

Once complete for each pit area, the surface is re-contoured and prepped for seeding. Seeding of reclamation will occur as a function of the time of year (mainly late fall or early spring). This complete process will be repeated continuously as the active disturbed area moves from the northwest to the far south of the mine region.

Concern for National Park Visibility

DEQ recognizes that the close proximity of Alton Coal mine to some of Utah's premier National and State Parks raises questions about visibility and air quality. DEQ is committed to assuring that the permit will protect these values while respecting the rules and regulations that define this process. For more information on our work on National Park Visibility, visit our website address below.

The Draft Air Quality Approval Order and Comment Submittal

Available online at: http://www.deq.utah.gov/Issues/alton_coal/index.htm Written comments will be considered through Thursday, October 14 at 6 p.m. Submit to Jon Black at jblack@utah.gov Please indicate Alton Coal in the subject line.

Conditions Table: The Utah Division of Air Quality is seeking public comments on the following conditions. This is a summary only. Details are spelled out in the draft permit, available online at www.deq.utah.gov/Issues/alton_coal/index.htm

	Draft Permit Requirements	Reasoning
Production Condition	The owner/operator shall not exceed the following production limits: A. 2,000,000 tons of maximum coal production per rolling 12-month period B. 19,145,000 tons of overburden material moved per rolling 12-month period C. 373,750 tons of topsoil removed per rolling 12-month period D. 7,488 hours of operation for the mine per rolling 12-month period	Limiting the potential for site emissions created by removal of topsoil, overburden, and coal production. Recordkeeping is required for all listed information.
Site wide Opacity Condition	Unless otherwise specified in this permit, visible emissions shall not exceed: A. All crushers - 15% opacity B. All conveyor transfer points - 10% opacity C. Conveyor drop points - 20% opacity D. All diesel engines - 20% opacity E. All other points - 20% opacity	Establishing the maximum allowable opacity limitation for on-site air emissions. Compliance will be determined by these numbers. Method of determining compliance is Visual opacity readings by EPA Method 9.
Fugitive Dust Conditions	Watering requirements placed upon storage piles and unpaved operational areas. Blasting limited to 1 per day, 32 per rolling 12-month period. A fugitive dust control plan which spells out additional control for material storage, handling, transfer, hauling, loading, dumping, haul roads, clearing, leveling, earth moving, excavation, blasting, and material processing including crushing and stockpiling coal.	These conditions required the use of water sprays for control of fugitive dust from storage piles and unpaved operational areas. Limit blasting. Adhere to a fugitive dust control plan. All conditions assist in fugitive emission control.
Unpaved Haul Road Conditions	Visual opacity limited to 20% on haul roads. Method of determining visual opacity established as Method 9. Water and Chemical dust suppression requirements for short-term and long-term roads. Recordkeeping requirements for water/chemical applications. Haul road length limitations.	These conditions establish visual opacity limitations, method of determining compliance, requirements for watering and chemically treating roadways, what records to keep, and haul road length limitations. All assist in fugitive emission control.
Diesel Generator Conditions	Installation of Selective Catalytic Reduction (SCR) Technology on two main diesel stationary engines to further reduce emissions. Total annual hours of operation limit for generators. Limits on temporary diesel generator emissions. State and Federal EPA requirements for stationary diesel generators.	These conditions require the use of control equipment to reduces potential NOx emissions by 70%, limit the hours of operation of generators, limit the potential emissions from all generator use, and list Federal requirements for generator usage.

Opacity

Opacity is the amount of light that is blocked by something else – such as smoke or a tinted window. It can provide a qualitative idea of the concentration of particulate matter in the air.

Opacity is measured as a percentage - 0% means that all light passes through; 100% means that no light can pass through. The more particles present, the higher the opacity percentage is.

Opacity is commonly determined through visual observation. Inspectors [train and certify](#) as “Visible Emission Observers” and pass tests measuring their ability to determine the opacity of plumes with known percentage levels.

To determine opacity, the observer must be located in a position between the source and the sun, with the sun behind the inspector. The angle between the source, the observer and the sun cannot be less than 110 degrees. Because small particles in the air scatter sunlight, opacity always appears greater when observed facing the sun. Twenty-four observations are recorded at 15-second intervals over a six-minute period. Opacity is the average of these 24 observations.

Air Monitoring

The proposed permit requires Alton Coal to operate two air monitors in the vicinity of the Coal Hollow Mine. Monitors will establish ongoing background air quality conditions and ensure ongoing compliance with the National Ambient Air Quality Standards. The air monitors will track the long-term impacts of emissions from the facility.

Results will be reported quarterly to the State and will be reviewed by compliance staff to ensure permit conditions are being met. In addition, records and conditions will be inspected during unannounced site visits.

What Agencies Address Other Issues

Traffic Concerns

UDOT, Local Government

Zoning

Local Government

Mine Operations, excluding Air Quality issues

Utah Dept. of Oil, Gas and Mining