2.05 APPLICATION FOR PERMIT FOR SURFACE OR UNDERGROUND MINING APPLICATIONS

2.05.1 Objectives

The information provided by this Section reviews plans for underground mining and the associated surface operations which New Elk Coal Company, LLC will conduct at the New Elk Mine during the current and future permit terms. Information is provided in this section to ensure that operations are conducted to protect those environmental resources identified in Section 2.04 of this application.

Information regarding surface and coal ownership within and adjacent to the permit area is shown on Map l Surface Ownership and Map 2 Coal Ownership. The Primary Permit Boundary is also shown on Map 1 and Map 2. The Permit Boundary also includes the Jansen Loadout (Exhibit 40), the former Golden Eagle site, and monitoring well sites located outside the Primary Permit Boundary. The Jansen Loadout is a 10.5-acre loadout located west just outside of Trinidad. The former Golden Eagle Fan site is a 2-acre site now located within the Primary Permit Boundary and is shown on Maps 1, 2, and 3. However, if a new ventilation shaft is required for the north area a technical revision to the permit will be submitted.

2.05.2 Operation Plan — Life of Operation

Background

During previous permit terms the underground workings were sealed and bond release granted for those surface areas overlying underground workings not required for continued operations of the surface facilities. Flooding of the mine since temporary closure in 1989 has been monitored in accordance with the hydrologic monitoring plan. During the more recent permit terms, the surface facilities were used to process and ship coal from nearby mines. These mines, the Golden Eagle underground mine and the Lorencito Canyon surface mine are closed. The railroad tracks running from the Jansen Yard near Trinidad to the New Elk Mine were removed, as well as the unit train load out facility at the East Portal. Obsolete buildings were removed and Phase I bond release granted for most of the West Portal Area.

In 2007, New Elk Coal Company LLC acquired the New Elk Mine and all related permits necessary to begin reentry into the mine and eventually resume mining. Approval was received from MSHA to reopen the east portal airshaft and install a vertical turbine pump to dewater the mine. Approval was received from DRMS to construct a mine-water holding and settling pond adjacent to the east portal airshaft, and drill and set a vertical turbine de-watering pump in a new borehole adjacent to the East Portal Industrial Building. The pump was placed in operation in 2008. Mine dewatering is expected to take up to six months and be completed by early to mid-2009.

(l) Production Methods and Equipment

The New Elk Mine is a typical underground coal mining operation with access to the Blue Seam through a set of incline slopes driven from the surface to the coal seam. Ventilation is provided by intaking air at the Bates Portal (slope to the Blue Seam) and a return fan located next to the portal. Development will utilize continuous mining methods by pairing continuous miners with shuttle cars for coal transport to a conveyor belt. Coal extraction will be achieved using room- and-pillar mining with no pillar recovery (secondary mining). No secondary mining is planned in any area where protection from subsidence of surface structures is required.

The major mining equipment used at the New Elk Mine is listed in Table 18 Mining Equipment List. Surface facilities associated with the underground operation consist of facilities necessary for the production and loading of coal into truck and rail cars for transport. Ancillary facilities consist of shops, warehouses, administrative buildings, and bathhouse. Operational facilities included ventilation shafts, ventilation fans, escape ways, and production and supply slopes to access the Blue Seam. Control of surface water in the surface facilities area is provided by ditching and drop structures to sediment control structures for holding runoff for settlement and/or treatment prior to discharge. Mine water is provided through small dams and pump stations located adjacent to the Purgatoire River. Wastewater treatment is provided by septic tanks and by a sewage treatment plant.

Table 18 Mining Equipment List

Continuous Miners	Feeder Breakers
Roof Bolters	Belt Drives with Structure and Belting
Shuttle Cars	Rock Dust Equipment
Man Trips	Supply Scoops
Electric and Diesel Powered Scoops	Maintenance Vehicles
Ventilation fans and Intake Heaters	Excavators and Backhoes
Track and rubber tired dozers	Front-end Loaders

Roads are required to provide access to the surface facilities of the mine. These roads include employee access and service maintenance roads to associated water storage tanks, pumping stations, ventilation fans, supply yards and refuse disposal area. A coal haulage road is employed in the transport of coal from the coal processing and storage area to State Highway 12.

(2) Operation Description

The aerial extent of existing underground mine workings in the Allen Seam is shown on Map 22 Mine Progress Map. Surface facilities associated with the underground mining are shown on Maps I l, Sheets 1-3 and Map 12. Future mining is subject to conditions encountered.

Mining is currently planned within the area bounded by the permit boundary as

shown on Map 3. When mining, the Blue Seam mining will proceed east to near the permit boundary and have room and pillar sections developed to the South and then the North. Proceeding north, the main will be driven under the Purgatoire River to open the north reserves for room and pillar mining as shown on Map 3. Minor additional surface disturbance may be associated with the continued operation of the mine. This surface disturbance, if required, will provide for ventilation and escape ways as development progresses away from the main portal area to maintain continued production and safe working conditions. The total affected area based on the TR-58 mine plan and historic mining is 3,799.5 acres. The permit boundary totals 7,055.79 acres. Long-term mine plans are shown on Figure 2. Life of mine acreage as shown on Figure 2 totals approximately 19,050 acres. Future revisions to the permit may propose mining in the Maxwell seam.

2.05.3 Operation Plan-Permit Area

The planned underground workings are shown on Map 3. The generalized stratigraphy of the Allen, Apache and Blue Seams are shown on Figure l. The mine was temporarily closed and sealed in 1989. Dewatering ceased and the lower areas of the mine were gradually flooded.

Phase I of resuming operations required remotely pumping mine water from the East Portal airshaft and other boreholes using surface-powered pumps. Approvals for this process were granted in 2008 and dewatering started in December of 2008. Phase II re-establishes mine ventilation by breaching temporary seals at the East and West Portals and Apache Canyon, and reinstallation of fans at the East Portal and West Portal airshafts. Phase III is the development of entries to establish ventilation at the Apache Seam level. Phase IV is the active mining of coal.

The planned development of mains and panels will occur as shown on Map 3. Mining in the Blue Seam will begin upon completion of the rock slopes from the Bates Portal. One set of seven entry east mains will advance towards the permit boundary. Panels will be developed to the south before panels are developed to the north. Partial pillaring is performed in the panels that vary in length from 1,705 feet to 6,985 feet for the south panels, and 8,910 feet to 13,530 feet for the north panels. No secondary mining is planned in any area where protection from subsidence of surface structures and the Purgatoire River is required. As mining proceeds under the river, monitoring of seepage will be conducted to detect any fractures that may convey water.

Production estimates are dependent on demand and system capacity and may be adjusted to economic conditions in the coal industry. In the early years, coal will be trucked to the Jansen Yard load out for transfer to rail. Clean coal production greater than 1.2 million tons annually is expected to facilitate re- establishing rail transportation to the mine site.

(1) Production, Methods and Equipment

Four types of material were generated from the Bates Portal development. They are topsoil, subsoil, common subsoil and bedrock subsoil. Topsoil was removed and stored in the topsoil storage pile #2. Subsoil was stored in subsoil pile #1 . Bedrock and common subsoil were being stored in subsoil piles #2 and #3 respectively.

Slope development will generate coalmine waste. A temporary conveyor will be installed to convey the coalmine waste to the east side of the clean coal stockpile. The coalmine waste will then be hauled and placed on the conveyor that transports material to the development waste disposal area.

Maps 15 and 16 show disturbed areas on the site. The disturbance area boundary has been established to include a buffer should additional disturbance activities become necessary. The surface disturbance boundary shown on maps 15 & 16 will be the boundary marked in the field in accordance with Rule 4.02. These markers will consist of roof bolts or rebar covered with white PVC pipe or painted white. As portions of the site are reclaimed, boundary markers will be moved to the reclamation limits of the disturbed areas.

Late in 2011, drill hole NE-16-11 was installed west of Pond 7. The purpose of the hole was hydrologic testing. The hole was located in a previously disturbed area. No mud pit was required.

In early 2012 one exploration hole, NE-17-12, was drilled south of the mine facilities as shown on Map 20 Sheet l . In mid-2012, six explorations holes will be drilled. Five of the holes NE-05-12, NE-1 1-12, NE-15-12, NE-16-12, NE-18-12 are located on DPW land. Exploration hole NE-01-12 is located on NECC property.

Three facilities, Apache Canyon Air Shafts #1 and #2 were previously reclaimed and Phase Ill released and the Golden Eagle Fan site was reclaimed and Phase II released. These facilities will be returned to use for mine ventilation. The cement caps will be elevated or removed, broken up and transported back to the New Elk main facility for disposal. The facilities will be enclosed with a minimum six-foot chain-link fence with access gates maintained in a closed and locked position except in the presence of authorized mine personnel. Access will be by existing roads. A vehicle parking area will be provided adjacent to the airshafts. Reopening of the shafts will not require disturbance to vegetation already established during the afore-mentioned reclamation process. The location of these surface facilities is shown on Map 3 and the surface disturbance boundary indicated on Figure 2c.

Table 19 Surface Facilities List

Map 3C New Elk Mine Slope Bottom Area — Apache Seam
Post-law facilities
Apache Canyon air shaft #1 and #2
Golden Eagle Fan site

Map 13 Sediment and Surface Water Control Plan East Portal	
Post-law facilities	*Pre-law facilities*
Ditches	
Culverts	
Ponds, embankments, outlet works	

Map 14 Sediment and Surface Water Control Plan — West Portal	
Post-law facilities	*Pre-law facilities*
Ditches	
Culverts	
Ponds, embankments, outlet works	

Map 11 New Elk Mine Site Plan, East Portal, Sheet 1 — Roads, Slope Track, Cut Areas		
Post-law facilities	*Pre-law facilities*	
Slope Track	Roads	
Access road (Bates Portal)		
Light Use Road (Bates Portal)		
Light Use roads (RDA expansion area)		
Light Use road to cell repeater		

Map 11 New Elk Mine Site Plan, East Portal, Sheet 1a — Roads, Slope Track, Cut Areas		
Post-law facilities	*Pre-law facilities*	
Light use roads to drill sites		

Map 11 New Elk Mine Site Plan, East Portal, Sheet 2 – Utilities		
Post-law facilities	*Pre-law facilities*	*Removed from site*
25,000 gallon water tank	Water pumphouse tanks	Load out substation
400,000 gallon water tank		
65,000 gallon water tank		
Central pumping station (pumps to water tanks)		
East Portal substation		
Prep Plant substation		
Refuse substation & conc. slab (temporary)		
Refuse substation		
Power line to dewatering pumps(3)		
Power line to load out substation		
Power line to Prep Plant substation		
Power line to RDA substation		