There is no indication that any acid-forming or toxic forming materials will be encountered on site. Please refer to Section 2.04.6. Please refer to Section 2.05.3(8) for a discussion of the applicant's method to handle debris and non-coal waste.

If sustained combustion of debris or non-coal waste becomes a problem the applicant will be prepared to react appropriately. Chemical fire extinguishers will be available in the shop warehouse area and on mobile equipment. A water truck will be available to respond to any problem area. Earth moving equipment may be available to smother a fire if necessary.

(2)(g) Sealing and Managing Mine Openings

Sealing of the openings which access the underground coal mining operations at the New Elk Mine will be completed upon the final closure of the operation. Sealing will consist of installation of bulkheads near the surface of the openings to prevent entry and collapse of the surface. Bulkheads will consist of a minimum of an 8 inch thick block seal as shown on Figure 15-Typical Mine Opening Seal. Particular care will be taken to ensure that excessive pressures do not collect on the inside of the seal and cause seepage or erosion around the seal. In addition, the seal will be sufficiently strong to support the surface material placed over the opening.

Air shafts that have been constructed at the New Elk Mine are cement lined to maintain the integrity of the shaft and prevent contamination of intercepted aquifers. Upon final abandonment, these shafts will be sealed with a steel reinforced cement cap. The steel form will be constructed adjacent to the shaft and set into place using a crane or other mobile equipment. The cement cap will then be poured in the form to complete the seal. Figure 16 Airshaft Seal, shows a typical air shaft seal which will be utilized by the Operator.

Abandoned drill holes will be plugged and capped below ground level, with a continuous concrete plug from the bottom of the hole to the 1 ft below grade unless drill holes are to be re-entered to deepen or used for geothechnical testing or downhole surveys. Those holes will be marked with a 4 ft long by 5/8 rebar pin at the top of the plug. A 1 ½ inch diameter aluminum cap will be attached to each pin that will identify it for location and surveying purposes. Holes that will be left open for use as monitoring wells will be constructed per Rule 14 of the 2 CCR 402-2 Water Well Construction Rules and be added to the Well Monitoring Program found on page 104 of this Section. All monitoring wells well be plugged and capped as described above when abandoned. Figure 16A-Typical Borehole Seal, shows a typical borehole seal which will be utilized by the Operator.

A probable roof failure in the West Portal Mains approximately 500 feet inby the sealed manway opening resulted in a sink hole migrating to the surface. Repeated attempts to backfill the area failed due to piping of surface waters into the mine. The Operator permanently sealed this potential mine opening by excavating down to competent strata surrounding the failure zone (approximated at 3-5 foot in diameter). The zone of failure was backfilled to the approximate level of the competent strata. A wire-mesh reinforced concrete plug at leased twice the diameter of the failure zone was poured in place across the area. A six inch layer of bentonite was placed over the concrete plug to provide a hydrologic seal at the contact between the concrete plug and the surrounding strata. The excavation was then backfilled to the natural surface.