TRANSPORTATION FACILITIES PLAN

(1)(a) Description of Each Haul Road, Access Road, Conveyor, and Railroad loop; Including Maps, Cross Sections and Specifications for Width, Gradient, Surface Cut, Embankment, Culvert, Bridge and Drainage Structure

Primary roads associated with the SCM operation are the mine access road, the pit haul roads and ancillary roads. Temporary-Use roads may also be constructed when accessing soil stockpile areas or other mine related areas. Temporary-Use roads will be used for limited duration(s) of time, such as during topsoil handling operations, which will be intermittent in nature.

The mine access road as-built map with profile and cross-sections is depicted on Plate 17.

The railroad spur as-built map with cross-sections is presented on Plate 16.

Temporary-Use roads will typically be constructed to the following standards:

- The A horizon soil will be removed and stockpiled or otherwise windrowed to the side to be used for reclamation after the access is no longer required.
- Width will be determined by the nature of the traffic, but typically not to exceed 60 feet.
- If required, culverts will be used to control runoff. Culverts installed for over 6 months will meet the performance standards of ARM 17.24.605 as shown on Exhibit 1 of Appendix K.
- No scoria surfacing will be used unless employed for safety reasons during inclement weather conditions.
- When inactive, the subsoil road surface will be disc-ed and seeded with the temporary seed mix.
- When the road is no longer required, the A horizon soil will be replaced and the road reclaimed according to procedures outlined in Section 17.24.313.

The centerlines of haul roads and the overland conveyor associated with the operations in the permit area are shown on Plate 18, Haul Road and Conveyor Centerline Alignments. Future haul roads projected for construction are also depicted on Plate 18 along with the estimated period each road will be in use. The profiles associated with each centerline are shown on Plate 18A; Haul Road and Conveyor Profiles. Typical sections for overland conveyors, haul roads, ancillary roads and the Dragline corridor are shown on Plate 18B, Typical Road Sections. The initial ramp in the Pit 4 area will be used for approximately four years before

being replaced by the permanent or final ramp. The drainage control plan for the mine site is depicted on Appendix K, Exhibit 1 (Hydrologic Control Plan During Mining).

For stream crossing requirements reference Section 17.24.602(2).

The ramps and roads will be built as pits develop, and will maintain the grade as shown on Plate 18A where the ramp enters the pit from the low wall and highwall sides. Where ramp roads enter from the side of the mining panel, the ramp will remain in place and maintain a constant grade as shown on Plate 18A. All roads and ramps will be designed and constructed so as not to interfere with or delay recontouring and revegetation of immediately adjacent spoils.

Topsoil material as identified for salvage along the Mine access road, railroad corridor and loop, and all other disturbed areas prior to initial construction will be stockpiled.

Spring Creek Mine will construct drainage ditches on both sides of the Mine access road, haul roads, or ancillary roads, and on the inside shoulder of a cut fill section. The company will line the side slopes of some haul roads with 2 to 4 inches of 2 inch minus scoria for sediment control, wherever the runoff from these haul roads intercepts any drainage ditch carrying undisturbed runoff. Ditch-type cross drains will be spaced as needed according to grade, so that water can be intercepted before reaching a switchback or large fill. Should water control structures intersect a stream channel, they will be designed to cross the channel without affecting the flow or sediment load of the stream.

Roads to be maintained for more than six months will have drainage design capable of safely passing the peak runoff from a 10-year, 24-hour precipitation event. Drainage ditches will be equipped with trash racks and debris basins as needed to ensure that debris from the drainage area cannot impair the functions of drainage and sediment control structures. Drainage pipes will be constructed to minimize the possibility of plugging or collapse and erosion at inlets and outlets. Drainage pipes (culverts) will be installed and maintained as shown on Exhibit 1 of Appendix K to maintain proper surface water drainage.

Spring Creek Mine will not surface any roads or railroad loops with refuse coal, acid producing or toxic materials or with any material which will produce a concentration of suspended solids in surface drainage. The Mine access road will be surfaced with asphaltic concrete two inches thick. Haul roads will be surfaced with 18 inches of crushed scoria. Ancillary roads will be surfaced have 12 inches of crushed scoria. Upon notification of the Department, Temporary-Use and ranch roads may be surfaced with a thin layer of scoria. The railroad loop will be surfaced with clean ballast rock. Vegetation will be cleared only to the width

necessary to accommodate road and associated ditch construction and to serve traffic needs. As part of the air-quality control program, when in use, all haul and ancillary roads will be sprinkled with water. Chemical dust suppressants may be applied to high traffic areas. Varieties of chemical dust suppressants to be tested for binding qualities and cost effectiveness include:

(1) Compounds of lignosulfonate
(i.e., Ammonium, Sodium and Calcium)
(2) Calcium Chloride
(3) Coherex

At the first seasonal opportunity, Spring Creek Mine will revegetate or otherwise stabilize all cut and fill slopes resulting from construction of roads outside the area to be mined. Procedures will follow methods outlined in Section 17.24.313.

(1)(b) Geotechnical Analyses

Not applicable.

(1)(c) Alteration or Relocation of Natural Drainageways

Reference the discussion and commitments in Section 17.24.317.

(1)(d) Protection of Inlet Ends of Ditch Relief Culverts

SCM will utilize manufactured galvanized steel flared-end inlet structures and rip-rap as necessary to protect culvert inlets.

(1)(e)(f) Demonstration of Compliance with Section 17.24.601 Through 17.24.606 and Any Other Design Criteria

Plates 18, 18A and 18B demonstrate compliance with Section 17.24.601 through 17.24.606, and any other design criteria as established by the department.

(1)(g) Reclamation of Roads Outside Normal Reclamation Activities

Roads outside the mine excavation, that will not be retained pursuant to ARM 17.24.610, will be reclaimed by proper removal and disposal of all road related materials (for example: road surface material and culverts) followed by reclamation in accordance with Section 17.24.313.

(2) Low-water Crossings of Perennial and Intermittent Streams

There are no perennial or intermittent streams within the permit area.

(3) Plans and Drawings for Haul Roads, Access Roads, Conveyors, and Railroad loop

Plans and drawings for haul roads, access roads, conveyors, and railroad loops will be prepared by, or under the direction of, and certified by a qualified registered professional engineer with experience in the design and construction of such facilities. The certification will state that the designs meet the performance standards of (1) and (2) of this rule, A.R.M. 17.24.601 through 17.24.606, and current prudent engineering practices.

(4) Ramp Roads

Ramp roads are presented on the maps required for Section 17.24.321(1)(a).