### Section 17.24.605

# HYDROLOGIC IMPACT OF ROADS AND RAILROAD LOOPS

(1) <u>Construction, Maintenance and Reclamation of Roads and Associated</u> <u>Structures to Prevent Additional Contributions of Suspended Solids to</u> <u>Runoff Outside the Permit Area</u>

SCCC will design, construct and maintain all roads and/or railroad loops and associated bridges, culverts, ditches and road rights-of-way to control the addition of suspended sediments to streamflow or to runoff outside the permit area. Sediment will be kept below required levels set by applicable state and federal law. Following the completion of operations, all roads and/or railroad loops and associated drainage control features will be removed and the affected land will be regraded and revegetated, unless the regulatory agency approves the retention of a road as part of the post-mining land use.

# (2) Drainage Ditch Placement and Construction

Drainage ditches will be placed at the toe of all cut slopes formed from the construction of roads and/or railroad loops. To the extent possible, using the best technology currently available, roads, and/or railroad loops constructed and maintained by SCCC will not cause additional contributions of suspended solids to streamflow or to runoff outside the permit area, or otherwise degrade the quantity or quality of surface water or groundwater. SCCC will not surface any roads and/or railroad loops with materials producing a concentration of suspended solids in surface drainage. Should water control structures intersect a stream channel, these structures will be designed and constructed to have minimal effects on stream flow or sediment load of the stream unless otherwise approved by the Department in writing for a site specific situation.

(3) <u>Water Control Structures</u>

Roads and/or railroad loops constructed by SCCC, except ramp roads, will be adequately drained utilizing structures such as, but not limited to, ditches, water barriers, cross drains, ditch relief drains, culverts or bridges.

#### (4) <u>Maintenance of Roads and/or Railroad Loops</u>

Roads and/or railroad loops to be maintained for more than 6 months and for all roads used to haul coal and/or spoil, excluding ramp roads, or to be retained as postmining features, water control structures will be designed with a discharge capacity

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capable of safely passing the peak runoff from a 10-year/24-hour precipitation event or greater as specified by the Department.

### (5) <u>Design of Bridges</u>

If bridges are required as part of the mining process, bridges spanning 30 feet or less will be designed to safely pass a 25-year/24-hour precipitation event. All other bridges will be designed to safely pass the 100-year/24-hour event or greater as specified by the Department.

### (6) <u>Construction of Drainage Pipes and Culverts</u>

Drainages pipes and culverts utilized in the mining operation will be constructed to avoid plugging and/or collapse as well as erosion at the inlet/outlet. Culverts will be designed, constructed and maintained to sustain vertical soil pressure, passive resistance of the foundation and to bear the weight of the vehicles to be used.

### (7) <u>Natural Channel Drainageways</u>

Natural channel drainageways must not be altered or relocated for road or railroad loop construction or reconstruction without the prior approval of the department in accordance with ARM 17.24.635 through 17.24.637. The department may approve alterations and relocations only if:

- (a) the natural channel drainage is not blocked;
- (b) no significant damage occurs to the hydrologic balance; and
- (c) there is not adverse impact on adjoining landowners.

# (8) Drainage Structure Requirements

Drainage structures are required for stream channel crossings. Drainage structures must not affect the normal flow or gradient of the stream or adversely affect fish migration and aquatic habitat or related environmental values. Riprap may be used for roads where an ephemeral channel is too shallow for placement of a culvert.

#### (9) <u>Vegetation Requirements</u>

Vegetation must not be cleared for more than the width necessary for road, railroad loop, and associated ditch construction, to serve traffic needs, and for utilities.