

<b>SUBJECT:</b>	<b>Quarrying and Reclamation Plan</b>
<b>DATE:</b>	<b>November 1, 2001 - Revised 09-01-06</b>

**Legal Authority:** 22-4-5(b)(12), 22-4-17, and 38-3-10.3.d

New quarry permit applications must contain a Quarrying and Reclamation Plan. A Quarrying and Reclamation Plan must be prepared by an Approved or Qualified Person.

Areas disturbed as of June 8, 2000 are exempt from further reclamation requirements unless required by the approved permit. The Division of Mining Reclamation shall actively encourage voluntary reclamation to be accomplished.

In developing a Quarrying and Reclamation Plan, all reasonable measures shall be taken to eliminate damages to members of the public, their real and personal property, public roads, streams and all other public property from soil erosion, rolling stones and overburden, water pollution and hazards dangerous to life and property [22-4-17(a)]. The Quarrying and Reclamation plan shall be completed by an Approved or Qualified Person. (38-3-11.6).

The Quarry and Reclamation Plan shall include the following information:

- The purpose for which the land to be disturbed was previously used.
- The proposed useful purposes of the land following completion of quarrying [22-3-17(b)]. (There is no specific list of required post mining land uses.) The land must be reclaimed to a stable, productive use.
- The final land form shall be graded to provide positive drainage throughout the permit area except areas that are to be inundated and remain as permanent impoundments [22-4-18(d)], (38-3-7.6.b. and 8.10)
- A general description of the manner in which the land is to be opened for quarrying and how the quarry activity is to progress across the permitted area (sequence of mining) and an approximate timeframe for reclamation of each area or phase of the quarrying. The Quarrying and Reclamation Plan for each operation shall be site specific in describing how the quarrying and reclamation activities are to be coordinated to minimize total

land disturbance and to keep reclamation operations as contemporaneous as possible with the advance of the quarry operations (22-4-19).

- The manner in which topsoil is to be conserved and used in reclamation. Topsoil or other suitable material necessary for reclamation and revegetation must be removed in a separate layer and distributed over the backfilled or disturbed areas, or if not utilized immediately, segregated and stockpiled in a separate location as specified in the permit (38-3-8.2). If conditions do not permit conservation and restoration of all or part of the topsoil, provide an explanation of the conditions and proposed alternate procedures.
- Show the presence of known acid-producing materials which when present in the overburden, may cause a pH factor below 5.5, preventing effective revegetation. Appropriate soil tests or overburden analysis may be required [22-4-5(c)(9)] (38-3-10.3.b)
- The description of the proposed final topography for the applicant's proposed land use after reclamation is completed and the proposed method of accomplishment. Typical cross-sections shall illustrate the configuration of the permitted area before, during and after quarrying (38-3-3.6 a).
- All available spoil material shall be used as necessary to backfill pit areas, to provide positive drainage and to achieve reclamation. Excess spoil shall be placed in pit areas, controlled fills or spoil piles.
- The Quarrying and Reclamation Plan shall provide information on slope gradient and fill plans as required in 22-4-18. Spoil material that is approved to be placed in permanent excess spoil disposal areas is not required to be used as backfill (38-3-8.5). All outer spoil must be graded so as to blend into the adjoining undisturbed lands (38-3-8.6).
- The methods used to provide public safety for adjacent properties and provisions for fencing, signs, berms or other site improvements reasonably necessary to assure safety at the permitted site after mining and reclamation is completed.
- A planting plan describing the manner and type of revegetation or other surface treatment of the disturbed area in accordance with 38-3-10. The manner in which all fill and cut slopes of the operation and haulage ways shall be seeded and planted [22-4-14(h) and (i)], and a revegetation schedule [22-4-14(j)]

- The existence of known, threatened or endangered species located within the permit area as defined by federal Endangered Species Act of 1973. When the proposed quarry operation will affect known threatened or endangered species of plants or animals or their critical habitats, the application shall describe control measures, management techniques, and monitoring methods to be employed in order to protect or enhance such species and habitats (38-3-3.4.b). The scope and detail for such information shall be determined by the director in consultation with state and federal agencies.