**74:27:12:03.  Site characterization.** An adequate site characterization includes the following:

 (1)  Each of the location standards of chapter 74:27:11 in relation to the proposed site;

 (2)  The number of acres comprising the proposed site;

 (3)  Climatic data, including source and location of data;

 (4)  Local wind patterns;

 (5)  Current land use and zoning within a one-mile radius;

 (6)  Occupied dwellings within a one-mile radius;

 (7)  Water usage, including sources of water and well depths, within a one-mile radius;

 (8)  Surface waters, including wetlands and their classifications, within a one-mile radius;

 (9)  General topography and drainage patterns within a two-mile radius;

 (10)  Existing site information, its source, reliability, and extent;

 (11)  Soil and geologic conditions at the proposed site, including:

 (a)  Soil types and characteristics;

 (b)  Thickness of unconsolidated materials;

 (c)  Lithologic profiles;

 (d)  Fracture patterns; and

 (e)  Unstable/seismic areas;

 (12)  Hydrogeologic conditions at the site, including:

 (a)  Depth to groundwater and the uppermost aquifer;

 (b)  Saturated thickness and lateral extent of potentially impacted aquifers or other pertinent geologic units;

 (c)  The potential for groundwater and uppermost aquifer use for domestic water supplies, livestock watering, and irrigation purposes;

 (d)  Flow rate and flow direction of groundwater; and

 (e)  Ambient quality of groundwater; and

 (13)  The calculations performed to determine the potential for leachate generation at the site.

 The secretary may require presubmission meetings as provided by § 74:27:08:05 to discuss the procedures for the site characterization as well as the results of the site characterization.

 The applicant shall include all data, maps, soil boring, logs, and geologic cross-sections identifying the types and characteristics of the geologic materials present; zones of high permeability or fractures; depth to the zone of saturation; calculations for soil characteristics, groundwater flow direction and velocity, surface water drainage direction, and potential leachate generation quantity; well logs; potentiometric surface maps; laboratory analyses; and any other pertinent information with the results of the site characterization.

 **Source:** 17 SDR 8, effective July 26, 1990; 19 SDR 186, effective June 10, 1993.

 **General Authority:** SDCL 34A-6-1.6.

 **Law Implemented:** SDCL 34A-6-1.6.