



ADMINISTRATIVE RULES OF MONTANA



17.50.1311 HYDROGEOLOGIC AND SOILS CHARACTERIZATION

- (1) The owner or operator of a facility required to monitor ground water shall prepare a site-specific hydrogeologic and soils report, pursuant to (2), for the facility. The following criteria and exceptions also apply:
 - (a) The owner or operator of a Class IV landfill unit located within the ground water monitoring network of a licensed Class II landfill is not required to submit a hydrogeologic and soils report;
 - (b) The owner or operator of an existing facility or lateral expansion required to monitor ground water under this rule shall submit to the department for approval a hydrogeologic and soils work plan that describes the proposed sampling, analysis, and collection methods for the data required in (2), within the following time frames:
 - (i) draft work plan(s) must be submitted within 90 days after the department mails a notification to applicant that a hydrogeologic and soils report is required;
 - (ii) revised work plan(s) must be submitted within 30 days after the department comments are mailed to the applicant; and
 - (iii) final hydrogeologic and soils reports must be submitted within 180 days after the department's approval of the work plan is mailed by the department to the applicant.
- (2) A hydrogeologic and soils report required in (1) must include the following:
 - (a) descriptions of the regional and facility specific geologic and hydrogeologic characteristics affecting ground water flow beneath the facility, including:
 - (i) regional and facility specific stratigraphy;
 - (ii) structural geology;
 - (iii) ground water potentiometric maps;
 - (iv) a discussion of any regional deep aquifers;
 - (v) regional and facility specific ground water flow patterns;
 - (vi) characterization of seasonal variations in the ground water flow regime; and
 - (vii) identification and description of the confining layers present, both above and below the saturated zone(s);
 - (b) an analysis of any topographic features that influence the ground water flow;

- (c) a description of the hydrogeologic units that overlie the uppermost aquifer, or underground drinking water source, as required in ARM 17.50.1204, or that may be part of the leachate migration pathways at the facility, including saturated and unsaturated units;
 - (d) a description of hydrogeologically significant sand and gravel layers in unconsolidated deposits;
 - (e) a description of manmade structures that affect the hydrogeology of the site, such as:
 - (i) local water supply wells;
 - (ii) pipelines;
 - (iii) drains;
 - (iv) ditches; and
 - (v) septic tanks;
 - (f) for each ground water monitoring well at the facility, the following information:
 - (i) location;
 - (ii) elevation;
 - (iii) well log;
 - (iv) sampling history; and
 - (v) operational history; and
 - (g) any other information determined by the department to be necessary to adequately characterize the hydrogeologic characteristics of the solid waste landfill facility.
- (3) If soil borings are necessary to obtain the information required in (2), the soil borings must be conducted as follows:
- (a) all borings must be within 300 feet of the limits of waste filling, if practical;
 - (b) borings must extend a minimum of 20 feet below the base of waste disposal areas, or to bedrock, whichever is less;
 - (c) the minimum required number of borings is as follows:
 - (i) 0-10
acres.....15
borings;
 - (ii) 11-20 acres.....add one boring per
additional acre;
 - (iii) 20-40 acres.....add one boring per additional
two acres; and
 - (iv) 41 or more acres.....add one boring per
additional four acres;
 - (d) 75% of the required number of borings may be conducted with a backhoe to a depth of ten feet; and

(e) borings not converted to wells must be abandoned pursuant to ARM 17.50.1312.

Authorizing statute(s): 75-10-204, MCA

Implementing statute(s): 75-10-204, 75-10-207, MCA

History: NEW, 2010 MAR p. 317, Eff. 2/12/10.