



ADMINISTRATIVE RULES OF MONTANA



17.50.1611 OPERATION AND MAINTENANCE PLAN FOR LANDFARM FACILITIES

- (1) Prior to accepting contaminated soils, the owner or operator of a soil treatment facility shall submit to the department for approval an operation and maintenance plan that includes the following information:
 - (a) background soil sampling results for the BTZ soils;
 - (b) for the TZ and BTZ soil:
 - (i) sample collection procedures;
 - (ii) sample collection frequency;
 - (iii) analytical parameters and procedures;
 - (iv) chain-of-custody control; and
 - (v) quality assurance and quality control plan;
- (2) Prior to application of any stockpiled or stored contaminated soils in a treatment cell, the owner or operator of a landfarm facility shall submit to the department for approval the contaminated soil analytical data collected and analyzed for TPH, EPH, VPH, TCLP metals, BTEX, MTBE, and any other contaminants determined by the department to be necessary to protect human health and the environment.
- (3) The owner or operator of a landfarm facility shall place contaminated soils that do not have the required documentation in (2) in a bermed treatment cell or in an approved designated stockpile or storage area for sampling and analysis to determine the characteristics of the soil contamination and physical soil properties.
- (4) A designated stockpile or storage area for contaminated soils located outside of a treatment cell must:
 - (a) be approved by the department prior to the stockpiling or storage of any contaminated soils;
 - (b) meet the requirements of ARM 17.50.1608; and
 - (c) provide for surface water run-on and run-off controls to collect and control at least the water volume resulting from a 24-hour, 25-year storm event.
- (5) The owner or operator of a landfarm facility using a stockpiling or storage area that is unlined shall, upon removal of the stockpiled or stored soil, sample the BTZ of the area for contaminant infiltration.
- (6) Pursuant to the sampling required in (5), the owner or operator shall:

- (a) collect and analyze, for the contaminants listed in ARM 17.50.1613, one composite sample per 1/2 acre of the stockpile or storage area; and
 - (b) produce each composite sample by combining five subsamples.
- (7) For contaminated soils that are newly applied on a treatment cell, the owner or operator shall:
 - (a) collect at least one composite sample consisting of five subsamples per composite for each 200 cubic yards of contaminated soil from the same contaminant source; and
 - (b) analyze the composite samples for contaminants suspected to be in the soil and the contaminants listed in ARM 17.50.1613.
- (8) After departmental approval has been granted, the owner or operator of a landfarm facility may place newly accepted contaminated soils in a treatment cell with similar types of contaminants (i.e., gasoline, diesel), if:
 - (a) newly accepted contaminated soils are segregated from the existing contaminated soils; and
 - (b) each distinct treatment zone in the treatment cell can be easily identified.
- (9) The owner or operator of a landfarm facility shall manage each treatment zone, as follows:
 - (a) contaminated soil must be applied in lifts less than or equal to one foot depending on the capability of the tilling equipment;
 - (b) contaminated soil must be tilled (when soils are not frozen) twice during the first month on the treatment cell, and at least monthly thereafter;
 - (c) tillage must occur at the full depth of the treatment zone; and
 - (d) cobbles, boulders, rocks, debris, or other consolidated materials that impede soil mixing and passage of air or water through the soil or damage tillage equipment must be removed.
- (10) The owner or operator of a landfarm facility shall monitor the remediation of contaminated soil by:
 - (a) collecting representative soil samples from the TZ during April, July, and October, or according to an alternative schedule approved by the department, in the following manner:
 - (i) one composite sample must be collected per one-half acre from the TZ of each treatment cell;
 - (ii) each composite sample must be composed of five subsamples;
 - (iii) all subsamples must be from the same treatment cell;
 - (iv) at least one composite sample must be collected from each treatment cell; and
 - (v) sampling activities must protect the liner of the treatment cell, and must not open a contaminant migration pathway;
 - (b) analyzing the soil samples for TPH, EPH, VPH, TCLP metals, BTEX, MTBE, naphthalene and for gasoline releases before 1996 sample for lead scavengers 1,2 DCA & 1,2 EDB and any other contaminants determined by the department to be necessary to protect human health and the environment;

- (c) in addition to the sampling required in (10)(a), analyzing the representative soil samples collected from the TZ during April and making adjustments to maintain optimum bioremediation conditions for all types of contaminated soils under treatment for the following parameters:
 - (i) organic carbon to available nitrogen to phosphorous ratio (C:N:P);
 - (ii) moisture content;
 - (iii) soil pH;
 - (iv) temperature; and
 - (d) while sampling, protecting the liner of the treatment cell and preventing the creation of a contaminant migration pathway;
 - (e) analyzing the soil samples using the analytical methods in ARM 17.50.1612 or other methods approved by the department; and
 - (f) conducting sampling at a greater frequency or conducting treatability studies if the department determines it is necessary to protect human health or the environment.
- (11) At the end of each treatment season, the owner or operator of a minor, intermediate, or major landfarm facility shall collect and analyze BTZ soil samples for the contaminants listed in (10)(b). BTZ sampling must be conducted in the following manner:
- (a) one composite sample must be collected per 1/2 acre from the BTZ of each treatment cell;
 - (b) each composite sample must be composed of five subsamples;
 - (c) all subsamples must be from the same treatment cell;
 - (d) at least one composite sample must be taken for each treatment cell; and
 - (e) sampling must protect the liner of the treatment cell and not create a contaminant migration pathway.
- (12) If the results of the BTZ sampling indicate the migration of contaminants from the TZ into the BTZ, the owner or operator shall:
- (a) notify the department within seven calendar days of receipt of the analytical results;
 - (b) consult with the department to determine appropriate corrective measures;
 - (c) collect BTZ soil samples at a rate of five samples per acre and analyze the samples for the contaminants listed in (10)(b);
 - (d) within 90 calendar days of receipt of the analytical results required in (13), submit to the department an assessment of corrective measures, and the results of the analysis conducted pursuant to (13);
 - (e) implement the corrective measures within 30 calendar days of department approval, or another time period approved by the department; and
 - (f) cease the acceptance of additional contaminated soils at the facility until the department approves the resumption of the receipt of contaminated soils.

- (13) If ground water monitoring is required for the facility, the owner or operator of a landfarm facility shall:
- (a) analyze ground water samples collected pursuant to ARM 17.50.1606; and
 - (b) submit to the department the contaminated soil analytical data collected and analyzed for TPH, EPH, VPH, TCLP metals, BTEX, MTBE, and any other contaminants determined by the department to be necessary to protect human health and the environment. Based upon the soil analytical results, the department will determine the analytical requirements necessary for ground water monitoring.
- (14) Whenever ground water monitoring indicates the presence of contaminants listed in (13), the owner or operator of the landfarm facility shall notify the department in writing within 14 calendar days of receipt of the analytical results. The notification must include the concentration of the contaminant(s) and the location of the well.
- (15) Whenever ground water monitoring indicates contaminants listed in (13) in the ground water in two consecutive sampling events, the owner or operator of the landfarm facility shall consult with the department in the manner provided in ARM 17.50.1308. The assessment of corrective measures must be submitted within 90 calendar days from the date of the receipt of the analytical results from second sampling event.
- (16) If the owner or operator of a landfarm facility cannot remedy contaminant migration, the department may require the owner or operator of the landfarm facility to close the treatment cell and remediate any contamination.
- (17) The owner or operator of a landfarm facility may apply liquid waste on the treatment cells only if:
- (a) the soils undergoing treatment will not be saturated above the field capacity of the soil;
 - (b) the liquid wastes meet the requirements of ARM 17.50.1612; and
 - (c) liquid wastes will be applied only to soils containing similar contaminants.
- (18) The owner or operator of a landfarm facility may not use bioremediation agents unless approved by the department prior to application to the treatment zone.

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

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

History: NEW, 2017 MAR p. 285, Eff. 3/11/17.