

3745-65-92 Sampling and analysis.

(A) The owner or operator must obtain and analyze samples from the installed ground water monitoring system. The owner or operator must develop and follow a ground water sampling and analysis plan. He must keep this plan at the facility. The plan must include procedures and techniques for:

- (1) Sample collection;
- (2) Sample preservation and shipment;
- (3) Analytical procedures; and
- (4) Chain of custody control.

[Comment: See the most recent "Technical Manual for Hydrogeologic Investigations and Ground Water Monitoring" for discussions of sampling and analysis procedures.]

(B) The owner or operator must determine the concentration or value of the following parameters in ground water samples in accordance with paragraphs (C) and (D) of this rule:

- (1) Parameters characterizing the suitability of the ground water as a drinking water supply, as specified in the table in this rule.
- (2) Parameters establishing ground water quality:
 - (a) Chloride;
 - (b) Iron;
 - (c) Manganese;
 - (d) Phenols;
 - (e) Sodium; and
 - (f) Sulfate.

[Comment: These parameters are to be used as a basis for comparison in the event a ground water quality assessment is required under paragraph (D) of rule 3745-65-93 of the Administrative Code.]

- (3) Parameters used as indicators of ground water contamination:
 - (a) pH;
 - (b) Specific conductance;

- (c) Total organic carbon; and
- (d) Total organic halogen.

(C)

- (1) For all monitoring wells, the owner or operator must establish initial background concentrations or values of all parameters specified in paragraph (B) of this rule. He must do this quarterly for one year.
- (2) For each of the indicator parameters specified in paragraph (B)(3) of this rule, at least four replicate measurements must be obtained for each sample and the initial background arithmetic mean and variance must be determined by pooling the replicate measurements for the respective parameter concentrations or values in samples obtained from upgradient wells during the first year.

(D) After the first year, all monitoring wells must be sampled and the samples analyzed with the following frequencies:

- (1) Samples collected to establish ground water quality must be obtained and analyzed for the parameters specified in paragraph (B)(2) of this rule at least annually.
- (2) Samples collected to indicate ground water contamination must be obtained and analyzed for the parameters specified in paragraph (B)(3) of this rule at least semi-annually.

(E) Elevation of the ground water surface at each monitoring well must be determined each time a sample is obtained.

Parameters Characterizing the Suitability of the Ground Water as a Drinking Water Supply	
Parameter	Maximum level (mg/L)
Arsenic	0.01
Barium	2.0
Cadmium	0.005
Chromium	0.1
Fluoride	4.0
Lead	0.015
Mercury	0.002
Nitrate (as N)	10.0
Selenium	0.05

Parameter	Maximum level (mg/L)
Silver	0.01
Endrin	0.002
Lindane	0.0002
Methoxychlor	0.04
Toxaphene	0.003
2,4-D	0.07
2,4,5-TP Silvex	0.05
Radium	5 pCi/L
Gross Alpha	15 pCi/L
Gross Beta	4 pCi/L
Turbidity	5 NTU
Coliform Bacteria	no fecal at all; 5% of all other

[Comment: For dates of non-regulatory government publications, publications of recognized organizations and associations, federal rules, and federal statutory provisions referenced in this rule, see rule 3745-50-11 of the Administrative Code titled "Incorporated by reference."]

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