



Ohio Administrative Code Rule 3745-54-98 Detection monitoring program.

Effective: September 5, 2010

An owner or operator required to establish a detection monitoring program under rules 3745-54-90 to 3745-54-101 of the Administrative Code must, at a minimum, discharge the following responsibilities:

(A) The owner or operator must monitor for indicator parameters (e.g., specific conductance, total organic carbon, or total organic halogen), waste constituents, or reaction products that provide a reliable indication of the presence of hazardous constituents in ground water. The director will specify the parameters or constituents to be monitored in the facility permit, after considering the following factors:

- (1) The types, quantities, and concentrations of constituents in wastes managed at the regulated unit;
- (2) The mobility, stability, and persistence of waste constituents or their reaction products in the unsaturated zone beneath the waste management area;
- (3) The detectability of indicator parameters, waste constituents, and reaction products in ground water; and
- (4) The concentrations or values and coefficients of variation of proposed monitoring parameters or constituents in the ground water background.

(B) The owner or operator must install a ground water monitoring system at the compliance point as specified under rule 3745-54-95 of the Administrative Code. The ground water monitoring system must comply with paragraphs (A)(2), (B), and (C) of rule 3745-54-97 of the Administrative Code.

(C) The owner or operator must conduct a ground water monitoring program for each chemical parameter and hazardous constituent specified in the permit pursuant to paragraph (A) of this rule in accordance with paragraph (G) of rule 3745-54-97 of the Administrative Code. The owner or



operator must maintain a record of ground water analytical data as measured and in a form necessary for the determination of statistical significance under paragraph (H) of rule 3745-54-97 of the Administrative Code.

(D) The permit will specify the frequencies for collecting samples and conducting statistical tests to determine whether there is statistically significant evidence of contamination for any parameter or hazardous constituent specified in the permit under paragraph (A) of this rule in accordance with paragraph (G) of rule 3745-54-97 of the Administrative Code.

(E) The owner or operator must determine the ground water flow rate and direction in the uppermost aquifer at least annually.

(F) The owner or operator must determine whether there is statistically significant evidence of contamination for any chemical parameter or hazardous constituent specified in the permit pursuant to paragraph (A) of this rule at a frequency specified under paragraph (D) of this rule.

(1) In determining whether statistically significant evidence of contamination exists, the owner or operator must use the method(s) specified in the permit under paragraph (H) of rule 3745-54-97 of the Administrative Code. These method(s) must compare data collected at the compliance point(s) to the background ground water quality data.

(2) The owner or operator must determine whether there is statistically significant evidence of contamination at each monitoring well at the compliance point within a reasonable period of time after completion of sampling. The director will specify in the facility permit what period of time is reasonable, after considering the complexity of the statistical test and the availability of laboratory facilities to perform the analysis of ground water samples.

(G) If the owner or operator determines, pursuant to paragraph (F) of this rule, that there is statistically significant evidence of contamination for chemical parameters or hazardous constituents specified pursuant to paragraph (A) of this rule at any monitoring well at the compliance point, he must:

(1) Notify the director of this finding in writing within seven days. The notification must indicate



what chemical parameters or hazardous constituents have shown statistically significant evidence of contamination;

(2) Immediately sample the ground water in all monitoring wells and determine whether constituents in the ground water monitoring list (found in the appendix to this rule) are present, and if so, in what concentration. However, the director, on a discretionary basis, may allow sampling for a site-specific subset of constituents from the list in the appendix to this rule and other representative/related waste constituents.

(3) For any compounds listed in the ground water monitoring list (found in the appendix to this rule) found in the analysis pursuant to paragraph (G)(2) of this rule, the owner or operator may resample within one month or at an alternative site-specific schedule approved by the director and repeat the analysis for those compounds detected. If the results of the second analysis confirm the initial results, then these constituents will form the basis for compliance monitoring. If the owner or operator does not resample for the compounds in paragraph (G)(2) of this rule, the hazardous constituents found during this initial ground water monitoring list analysis will form the basis for compliance monitoring.

(4) Within ninety days, submit to the director an application for a permit modification to establish a compliance monitoring program meeting the requirements of rule 3745-54-99 of the Administrative Code. The application must include the following information:

(a) An identification of the concentration of any constituent listed in the appendix to this rule detected in the ground water at each monitoring well at the compliance point;

(b) Any proposed changes to the ground water monitoring system at the facility necessary to meet the requirements of rule 3745-54-99 of the Administrative Code;

(c) Any proposed additions or changes to the monitoring frequency, sampling and analysis procedures or methods, or statistical methods used at the facility necessary to meet the requirements of rule 3745-54-99 of the Administrative Code;

(d) For each hazardous constituent detected at the compliance point, a proposed concentration limit



under paragraph (A)(1) or (A)(2) of rule 3745-54-94 of the Administrative Code, or a notice of intent to seek an alternate concentration limit under paragraph (B) of rule 3745-54-94 of the Administrative Code; and

(5) Within one hundred eighty days, submit to the director:

(a) All data necessary to justify an alternate concentration limit sought under paragraph (B) of rule 3745-54-94 of the Administrative Code; and

(b) An engineering feasibility plan for a corrective action program necessary to meet the requirement of rule 3745-54-100 of the Administrative Code, unless:

(i) All hazardous constituents identified under paragraph (G)(2) of this rule are listed in the table in rule 3745-54-94 of the Administrative Code and their concentrations do not exceed the respective values given in that table; or

(ii) The owner or operator has sought an alternate concentration limit under paragraph (B) of rule 3745-54-94 of the Administrative Code for every hazardous constituent identified under paragraph (G)(2) of this rule.

(6) If the owner or operator determines, pursuant to paragraph (F) of this rule, that there is a statistically significant difference for chemical parameters or hazardous constituents specified pursuant to paragraph (A) of this rule at any monitoring well at the compliance point, he may demonstrate that a source other than a regulated unit caused the contamination or that the detection is an artifact caused by an error in sampling, analysis, or statistical evaluation or natural variation in the ground water. The owner or operator may make a demonstration under paragraphs (G) to (G)(6)(d) of this rule in addition to, or in lieu of, submitting a permit modification application under paragraph (G)(4) of this rule; however, the owner or operator is not relieved of the requirement to submit a permit modification application within the time specified in paragraph (G)(4) of this rule unless the demonstration made under paragraphs (G) to (G)(6)(d) of this rule successfully shows that a source other than a regulated unit caused the increase, or that the increase resulted from error in sampling, analysis, or evaluation. In making a demonstration under paragraphs (G) to (G)(6)(d) of this rule, the owner or operator must:



- (a) Notify the director in writing within seven days of determining statistically significant evidence of contamination at the compliance point that he intends to make a demonstration under paragraphs (G) to (G)(6)(d) of this rule;
- (b) Within ninety days, submit a report to the director which demonstrates that a source other than a regulated unit caused the contamination or that the contamination resulted from error in sampling, analysis, or evaluation;
- (c) Within ninety days, submit to the director an application for a permit modification to make any appropriate changes to the detection monitoring program at the facility; and
- (d) Continue to monitor in accordance with the detection monitoring program established under this rule.
- (H) If the owner or operator determines that the detection monitoring program no longer satisfies the requirements of this rule, he must, within ninety days, submit an application for a permit modification to make any appropriate changes to the program.

[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."]