

*** DRAFT – NOT FOR FILING ***

3745-506-110 Determination of ground water elevations and ground water flow direction.

(A) Measuring ground water elevations. An owner or operator shall measure ground water elevations in accordance with the following:

(1) Ground water elevations shall be measured in all ground water monitoring wells at the facility at least semiannually.

(2) Whenever a ground water sampling event includes greater than half of the ground water monitoring wells in a single aquifer system or significant zone of saturation, ground water elevations shall be measured in all monitoring wells within the particular aquifer system or significant zone of saturation in conjunction with that sampling event.

(3) If both the ground water elevation is to be measured and a water sample is to be collected from a ground water monitoring well during the same event, the ground water elevation shall be measured prior to that well being purged and sampled. When more than one well is to be sampled during a sampling event, the ground water elevations shall be measured in all ground water monitoring wells to be sampled during that sampling event prior to purging and sampling any of those wells.

(4) All ground water elevations shall be measured and recorded to an accuracy of plus or minus 0.01 feet from the fixed, marked, and surveyed reference point on each ground water monitoring well.

(5) Ground water elevations shall be measured within a period of time short enough to avoid temporal variations in ground water flow that could preclude an accurate determination of ground water flow rate and direction, and within a period of time not to exceed twenty-four hours.

(B) Measuring well depth. Annually, an owner or operator shall measure the total depth in all ground water monitoring wells that do not have a dedicated pump installed. The total depth of ground water monitoring wells containing dedicated pumps shall be measured whenever the dedicated pump is removed for maintenance.

(C) Reference points. An owner or operator shall measure the ground water elevation in each ground water monitoring well from the surveyed reference point for the ground water monitoring well established in accordance with rule 3745-506-100 of the Administrative Code.

(D) Potentiometric map. An owner or operator shall create one potentiometric map for each zone monitored using the collected ground water elevation measurements whenever ground water elevation measurements are obtained from all the ground

*** DRAFT – NOT FOR FILING ***

water monitoring wells in an uppermost aquifer system or a significant zone of saturation. Each potentiometric map shall include the following:

- (1) The locations of all monitoring wells from which ground water elevation data was used to produce the map.
- (2) The limits of potential sources of contamination.
- (3) Ground water elevation data expressed in the datum used in accordance with paragraph (C) of this rule and located next to the applicable ground water monitoring well from which the data was derived.
- (4) Date the ground water elevation data was collected.
- (5) If sufficient data exist, potentiometric contours based on a contour interval that accurately depicts the potentiometric surface and allows the clear depiction of ground water flow directions.
- (6) If sufficient data exist, ground water flow direction arrows that are drawn perpendicular to the potentiometric contours to illustrate the ground water flow direction.
- (7) Identification of ground water flow boundaries that influence the movement of ground water.

(E) Annual evaluation of ground water elevation data.

- (1) At least annually an owner or operator shall evaluate the ground water elevation data obtained in accordance with this rule to determine whether the requirements of rule 3745-506-100 of the Administrative Code for locating the ground water monitoring wells continue to be satisfied. The results of this evaluation including potentiometric maps for every geologic unit monitored shall be included in a report that shall be submitted to Ohio EPA and the approved board of health not later than the first day of April of each year.
- (2) If the evaluation shows that the requirements of rule 3745-506-100 of the Administrative Code are no longer satisfied, the owner or operator shall revise the number, location, and depth of the ground water monitoring wells as needed to bring the ground water monitoring system into compliance with rule 3745-506-100 of the Administrative Code. The owner or operator shall submit documentation of all revisions to Ohio EPA and the approved board of health. Revisions shall be submitted in accordance with rule 3745-506-50 of the Administrative Code.