**Section 734.430 Monitoring Well Construction and Sampling**

a) At a minimum, all monitoring well construction must satisfy the following requirements:

1) Wells must be constructed in a manner that will enable the collection of representative groundwater samples;

2) Wells must be cased in a manner that maintains the integrity of the borehole. Casing material must be inert so as not to affect the water sample. Casing requiring solvent-cement type couplings must not be used;

3) Wells must be screened to allow sampling only at the desired interval. Annular space between the borehole wall and well screen section must be packed with clean, well-rounded and uniform material sized to avoid clogging by the material in the zone being monitored. The slot size of the screen must be designed to minimize clogging. Screens must be fabricated from material that is inert with respect to the constituents of the groundwater to be sampled;

4) Annular space above the well screen section must be sealed with a relatively impermeable, expandable material such as cement/bentonite grout that does not react with or in any way affect the sample, in order to prevent contamination of groundwater samples and groundwater and avoid interconnections. The seal must extend to the highest known seasonal groundwater level;

5) The annular space must be backfilled with expanding cement grout from an elevation below the frost line and mounded above the surface and sloped away from the casing so as to divert surface water away;

6) Wells must be covered with vented caps and equipped with devices to protect against tampering and damage. Locations of wells must be clearly marked and protected against damage from vehicular traffic or other activities associated with expected site use; and

7) Wells must be developed to allow free entry of groundwater, minimize turbidity of the sample, and minimize clogging.

b) Monitoring well construction diagrams must be completed for each monitoring well. The well construction diagrams must be submitted in the corresponding site investigation plan, site investigation completion report, or corrective action completion report on forms prescribed and provided by the Agency and, if specified by the Agency in writing, in an electronic format.

c) Static groundwater elevations in each well must be determined and recorded following well construction and prior to each sample collection to determine the gradient of the groundwater table, and must be reported in the corresponding site investigation plan, site investigation completion report or corrective action completion report.