

Kansas Administrative Regulations

Department of Health and Environment

Article 30.—Water Well Contractor's License; Water Well Construction and Abandonment

28-30-6. Construction regulations for all water wells not included under K.

A.R. 28-30-5. (a) Each water well shall be constructed to minimize the potential for contamination of the delivered or obtained groundwater and to protect groundwater aquifers from pollution and contamination.

(b) The following requirements for grouting shall be met:

(1) Each constructed water well and each reconstructed water well shall be sealed by grouting the annulus between the casing and the boring from ground level to at least 20 feet or to at least five feet into the first clay or shale layer if one is present, whichever is greater. If a pitless well adapter or unit is being installed, the grouting shall start below the point at which the pitless well adapter or unit attaches to the casing and shall continue at least 20 feet below this point or to at least five feet into the first clay or shale layer, whichever is greater.

(2) The diameter of the drilled boring shall be at least three inches greater than the maximum outside diameter of the casing.

(3) Water from two or more separate aquifers shall be separated from each other in the boring by sealing the annulus between the aquifers with grout.

(c) If groundwater is encountered at a depth less than the minimum grouting requirement, the grouting requirement may be modified by the secretary to meet local conditions.

(d) A well vent shall be used and shall terminate at least one foot above the ground surface. The well vent shall be screened with brass, bronze, copper screen, or other screen materials approved by the secretary that are 16-mesh or greater and turned down in a full 180-degree return bend to prevent the entrance of contaminating materials.

(e) Before the completion of a constructed water well or a reconstructed water well, the water well shall be cleaned of mud, drill cuttings, and other foreign matter to make the water well suitable for pump installations.

(f) Casing shall meet the following requirements:

(1) Each water well shall have durable watertight casing from at least one foot above the finished ground surface to the top of the producing zone of the aquifer. The watertight casing shall extend at least 20 feet below the ground level. Exceptions to either of these requirements may be granted by the secretary if warranted by local conditions.

(2) Each water well shall be an above-grade surface completion, except that an at-grade surface completion may be used if all requirements of subsection (s) are met. Casing may be cut off below the ground surface to install a pitless well adapter or unit.

(3) No opening shall be made through the casing, except for the installation of a pitless well adapter or unit designed and fabricated to prevent soil, subsurface, and surface water from entering the water well.

(4) The casing shall meet the requirements of the department's document titled "approved water well casing: water well casing for water wells other than public water-supply wells," dated November 7, 2012, which is hereby adopted by reference. Used, reclaimed, defective, or contaminated pipe shall not be used for casing any water well.

(g) Each water well, when unattended during construction, reconstruction, treatment, or repair or during use as a cased test hole or as an observation or monitoring well, shall have the top of the casing securely capped in a watertight manner.

(h) During construction, reconstruction, treatment, or repair and before its first use, each water well producing water for human consumption or food processing shall be disinfected according to K.A.R. 28-30-10.

(i) The top of the casing shall be sealed by installing a sanitary well seal when the water well is completed.

(j) Each groundwater-producing zone that is known or suspected to contain natural or man made pollutants shall be cased and grouted in accordance with subsection (b) during construction of any water well to prevent the movement of groundwater to either overlying or underlying fresh groundwater zones.

(k) Toxic material shall not be used in the construction, reconstruction, treatment, or plugging of a water well, unless the material is flushed from the water well before use.

(l) The pipe from the pump or pressure tank in the pump pit to the water well shall be sealed in a watertight manner where the pipe passes through the wall of the pump pit.

(m) A water well shall not be constructed in a pit, basement, garage, or crawl space. Each existing water well that is reconstructed, abandoned, or plugged in a basement shall conform to the requirements specified in this article, except that the finished grade of the basement floor shall be considered ground level.

(n) Drilling fluid used during the construction or reconstruction of each water well shall be initially disinfected by mixing sodium hypochlorite with water to produce at least 100 milligrams per liter (mg/l) of available chlorine.

(o) Natural organic or nutrient-producing material shall not be used during the construction, reconstruction, or treatment of a water well, unless this material is flushed from the water well and the groundwater aquifer or aquifers before the water well is completed. Natural organic or nutrient-producing material shall not be added to a grout mix used in the annulus to grout the water well.

(p) Each water well pump shall meet the following requirements:

(1) Each pump installed directly over the casing shall be installed to form an airtight and watertight seal between the top of the casing and the gear or pump head, pump foundation, or pump stand.

(2) A sanitary well seal shall be installed between the pump column pipe or pump suction pipe and the casing if the pump is not mounted directly over the casing and the pump column pipe or pump suction pipe emerges from the top of the casing.

(3) An airtight and watertight seal shall be provided for the cable conduit if submersible pumps are used.

(q) Each sand point constructed, replaced, or reconstructed shall meet the following requirements:

(1) Each sand point shall be constructed by drilling or boring a pilot hole at least three feet below ground surface. The pilot hole shall be at least three inches greater in diameter than the maximum outside diameter of the drive pipe or blank casing if the casing method is used.

(2) Each sand point shall be completed using one of the following methods:

(A) Casing method.

(i) Water well casing that meets the requirements of the department's document titled "approved water well casing: water well casing for water wells other than public water-supply wells," as adopted by reference in paragraph (f)(4), shall be set from at least three feet below the ground surface to at least one foot above the ground surface. The casing shall be sealed between the casing and the pilot hole with grouting material approved by the secretary from the bottom of the casing to ground surface.

(ii) The drive pipe shall be considered the pump drop pipe and shall be capped with a solid cap.

(iii) For underground discharge completions, a "T" joint shall be used.

(iv) A sanitary well seal and a well vent shall be installed on the top of the casing in accordance with subsections (d) and (i).

(B) Drive pipe method.

(i) A sand point may be installed without a casing for aboveground discharge completions only. In these completions, the drive pipe shall terminate at least one foot above finished ground level.

(ii) The annulus between the drive pipe and the pilot hole shall be sealed from the bottom of the pilot hole to ground surface with grout. The top of the drive pipe shall be sealed airtight and watertight with a solid cap of the same material as that of the drive pipe.

(iii) A well vent shall not be required.

(C) Other methods. Other methods may be approved by the secretary on a case-by-case basis using the appeal procedure specified in K.A.R. 28-30-9.

(r) Upon abandonment of a sand point, the contractor or landowner shall pull the drive pipe or leave it in place.

(1) If the drive pipe is left in place, the sand point shall be plugged from the bottom of the well to three feet below the ground surface with approved grouting material. The sand point constructed by the drive pipe method shall be cut off three feet below the ground surface, and the remaining three-foot-deep hole shall be backfilled with surface soil.

(2) If the drive pipe is completely pulled, the remaining hole shall be plugged with approved grouting material from the bottom of the remaining hole to three feet below the ground surface. The hole shall be backfilled with surface soil from three feet to ground surface.

(s) Each monitoring well shall be an above-grade surface completion, unless the monitoring well is located on a roadway, sidewalk, driveway, parking lot, or other heavily trafficked area that requires an at-grade surface completion monitoring well. The following requirements shall be met for each at-grade surface completion:

(1) The location of each monitoring well shall be identified by a unique well number marked on a scaled map that shows latitude and longitude coordinates. The water well contractor shall submit the scaled map and coordinates to the department with the water well record form provided by the department.

(2) The construction method for each monitoring well shall meet the requirements of the department's procedure document titled "flushmount well construction detail," dated May 23, 2012, which is hereby adopted by reference.

(Authorized by K.S.A. 82a-1205; implementing K.S.A. 82a-1202 and 82a-1205; effective, E-74-34, July 2, 1974; modified, L. 1975, ch. 481, May 1, 1975; amended May 1, 1980; amended May 1, 1983; amended May 1, 1987; amended June 21, 1993; amended June 7, 2013.)

***** Authenticated Kansas Administrative Regulation *****