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MEMORANDUM

DATE: May 28, 2014

TO: Minnesota Licensed Well Contractors and Other Interested Parties

FROM: Christopher D. Elvrum, P.G., Manager
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SUBJECT: Approved PVC Fittings for Joining Pitless Units to 6-inch Diameter PVC Well Casing

Effective immediately, socket x internal (female) thread fittings meeting the requirements of ASTM D2466-02: *Standard Specification for Poly(Vinyl Chloride) (PVC) Plastic Pipe Fittings, Schedule 40* may be used to attach a threaded pitless unit to a 6-inch diameter PVC well casing. The fitting is to be threaded to the pitless unit and joined to the PVC well casing by solvent welding. Fittings meeting the ASTM D2466-02 requirements can be recognized using the following criteria:

1. Fitting must meet the following dimensional requirements for 6-inch nominal pipe size: the socket entrance diameter is 6.647 ± 0.011 inches, socket bottom diameter is 6.614 ± 0.011 inches, minimum inside diameter is 5.986 inches, minimum socket wall thickness is 0.280 inches, and minimum socket depth is 3.000 inches.
2. Fitting must be marked with the manufacturer's name or trademark, material designation (usually PVC D), size (6"), the designation number "D2466," and the seal or mark of the laboratory evaluating this product for potable use (this will almost always be the "NSF-PW" marking).

Other markings which may be present include the "SCH 40" designation and "435-060," a commonly used industry part number. Fittings with these numbers are not approved unless they also have all of the markings specified in Item 2 above.

Prior to this policy change, only fittings meeting the ASTM F480-02: *Standard Specification for Thermoplastic Well Casing Pipe and Couplings made in Standard Dimension Ratios (SDR), SCH 40 and SCH 80*, or meeting the dimensional requirements of ASTM F480-02 were approved. Unfortunately, there are currently no fittings available for 6-inch diameter PVC well casing that meet those dimensional requirements. Industry representatives have advised the Minnesota Department of Health (MDH) that demand is not sufficient to justify the costs of manufacturing such fittings, so there are none being made now nor likely to be made for the foreseeable future.

The main difference between the two standards, with regard to the 6-inch fittings, is that the minimum socket depth for the ASTM F480-02 coupling is 3.500 inches, compared to 3.000 inches for the ASTM D2466-02 fitting. The shorter socket depth for the ASTM D2466-02 fitting leaves less room for error in assembly, but MDH Well Management staff concluded that a watertight, reliable joint could be made if good and careful workmanship is employed. Contractors are reminded that Minnesota Rules, part 4725.2650, subpart 2 requires that, when cutting plastic casing, casing ends must be cut square using fine-tooth blades with little or no set or a plastic pipe cutter equipped with extra wide rollers and thin cutting wheels.

Please note that only *socket x internal (female) thread* fittings are approved. **Socket x external (male) thread fittings are not approved for use with 6-inch PVC well casing, and must not be used.** The threaded portion of the 6-inch socket x external threaded fitting has an inside diameter of less than 6 inches, so protrudes inside the casing. This protrusion may make it difficult to install and remove pumps and screens.

If you have any questions regarding this change in policy, please contact Ed Schneider at 651-201-4595.

CDE:ECS:dg