

EXTERNAL GUIDANCE for the Water Supply Division (WSD)—Plan and Technical Review (PTR) Section

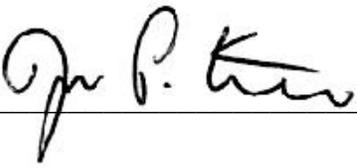
Title: Polyvinyl Chloride (PVC) Casing for Proposed Public Water Supply Wells Submittal Guidance

Responsible Team/Section/Program: Plan Review Team/PTR Section

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Approval:

Joel Klumpp:  _____ Date: September 20, 2019
Section Manager

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PVC Casing for Proposed Public Water Supply Wells Submittal Guidance

Acronyms and Definitions

Term	Definition
ASTM	American Society for Testing and Materials
ANSI	American National Standards Institute
NSF	National Sanitation Foundation
PVC	Polyvinyl Chloride
VOC	Volatile Organic Compound
PWS	Public Water System
TAC	Texas Administrative Code
TCEQ	Texas Commission on Environmental Quality

Regulatory Reference

Title 30 Texas Administrative Code §290.41(c)(3)(B); 30 TAC §290.41(c)(l)(A);

TCEQ Contact Information

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Background

The well casing for proposed public water supply (PWS) wells shall have sufficient mechanical strength to withstand the forces expected during installation, cementation and normal service. These forces increase with increased well depth. The selection of the well casing material should allow for the expected increase. Accordingly, the minimum wall thicknesses for PVC well casing shall take into account the following:

- The PVC well casing shall conform to American Society for Testing and Materials (ASTM) F480 and must be designed based on a potential for hydraulic collapse considering external and internal pressures.
- In all cases, the PVC casing pipe shall be labeled "NSF-wc" by the pipe manufacturer, conform to American National Standards Institute/National Sanitation Foundation Standard (ANSI/NSF) Standard 14 and must be certified by an organization accredited by ANSI.
- PVC casing shall not be approved for use in the construction of a PWS well under any of the following circumstances:
 - a. An exception has been requested and/or granted to the required separation distances specified in 30 TAC §290.41(c)(1)(A) to allow the construction of the proposed PWS well within 150 feet of an underground petroleum and chemical storage tank or liquid transmission pipeline.
 - b. The proposed PWS well location is within the boundaries of a Volatile Organic Compound (VOC) plume or contaminated soil.
 - c. The capture zone of the proposed PWS well will intersect groundwater containing VOCs in sufficient quantity to dissolve or degrade the PVC well casing.

Available Resources

The engineer can get information from:

1. Texas Water Development Board:
<http://www.twdb.texas.gov/wwd/data/wwd.html.asp>
2. AWWA A-100-15 Water Wells:
<https://www.awwa.org/default.aspx>
3. ASTM F480:
<https://www.astm.org/Standards/F480.htm>
4. NSF/ANSI Standard 14:
<https://www.contractormag.com/piping/nsf-internationals-plastic-pipe-and-fitting-standard-nsfansi-14-now-required-uniform-plumbing>

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5. Groundwater Contamination Viewer:

<https://www.tceq.texas.gov/gis/groundwater-contamination-viewer>

Please be aware the online viewers may not be up to dated. Many of the viewers have disclaimers.