



COCONINO COUNTY ARIZONA

COMMUNITY DEVELOPMENT DEPARTMENT

Jay Christelman, Director

EFFECTIVE DATE: October 28, 2019

POLICY NAME: Orangeburg Pipe

POLICY NO: EQ-2019-02

PURPOSE:

To clarify the replacement or continued use of Orangeburg Pipe in existing onsite wastewater systems.

BACKGROUND:

Orangeburg Pipe or Fiber Conduit is pipe made from layers of fiber from pitch and wood pulp. It was originally used as electrical conduit in the early 1900's. Its use as gravity sewer pipe began around the mid 1940's. The pipe is extremely brittle and crushes easily under any form of stress. The life expectancy of Orangeburg Pipe is 40 years or less, thus any pipe left in the ground needs to be replaced.

Arizona Administrative Code R18-9-A312(F)(2)(b) states that treatment pipe must be durable, watertight, structurally sound, and capable of withstanding operational loads.

Arizona Administrative Code R18-9-A312(F)(2)(c) states distribution piping must be made of clay tile, ABS, or PVC pipe.

International Plumbing Code sections 705.2 and 705.14 state ABS and PVC pipe must have either mechanical Elastomeric Seals, solvent welded, or threaded joints connecting the pipe sections.

Orangeburg Pipe is not durable or structurally sound as the pipe is brittle and collapses under earthen loads covering the disposal field, thus making it incapable of withstanding operational loads. Therefore, Orangeburg Pipe is not approved for use.

An Elastomeric Seal cannot be placed on a section of Orangeburg Pipe without fracturing the pipe, therefore a watertight connection cannot be made between Orangeburg Pipe and any other pipe material including currently acceptable pipe materials.

The existence of Orangeburg Pipe in the service line or effluent distribution except within the disposal system does not affect the operation of the wastewater system under a 1.09 General Permit. If it fails it may be replaced without an EQ or Building division permit.

The existence of Orangeburg Pipe in a functioning onsite wastewater system disposal does not affect the operation of the wastewater system under a 1.09 General Permit.

Arizona Administrative Code R-18-9-A309(A)(9)(b)(v) states that repairs do not include “Reconstructing any part of the disposal works in soil that is inadequate for the treated wastewater flow or strength”. Any “repair” of a disposal system requires that the disposal system meets current site and design criteria.

POLICY:

If a sewer service line made of Orangeburg Pipe fails, then it may be completely removed and replaced without a permit from EQ or Building Division. Since a water tight joint is not possible the entire line from the building sewer to the treatment tank must be replaced.

If a solid effluent distribution line made of Orangeburg Pipe fails, then it may be completely removed and replaced without an EQ or Building division permit. Since a water tight joint is not possible the entire line from the treatment tank to the disposal field(s) must be replaced. The last joint which will be within the disposal field must be structurally sound but does not have to be water tight since the piping with the disposal field is specifically made to distribute and discharge effluent into the disposal system.

If a perforated effluent distribution pipe in the disposal field made Orangeburg Pipe fails, then it should be completely removed and replaced as per an EQ repair permit. If the site is still suitable for a conventional (standard) septic tank leach field, then a complete replacement of the perforated effluent distribution pipe can be permitted as a repair. If the site is not suitable for the existing conventional (standard) septic tank leach field, then a complete wastewater system replacement meeting current requirements can be permitted as a new system. (This may require the replacement of the existing standard system with an alternative system.)

A site investigation may be required to make the determination of suitability. It may require the exposure of the end of the existing disposal system to determine width and depth. It will then require further excavation to a depth of 4 or 5 feet below the disposal system depending on the absence or presence of seasonal groundwater.

ACCESS:

This substantive policy statement is available for inspection at the Community Development office or on the Coconino County website: www.coconino.az.gov.

APPROVED BY:



Jay Christelman
Director, Coconino County Community Development Director

10.28.19
Date