FIRST MESA CONSOLIDATED VILLAGES
WATER DEPARTMENT

June 23, 2017

Polacca Water System Significant Deficiencies:
Dated April 20, 2017

1) **Older West Storage Tank ST001 Openings in the Roof.** – FMCV will cover up the holes from the old abandoned instrument box that is covering up the top opening of the water tank using Non Corrosive Silicone Compound.

2) **Older West Storage Tank ST001 Flap Gate.** – FMCV has lubricated the Flat Gate to the over flow drain pipe. Also a Fine Stainless Steel Screen has been placed over the opening of the drain pipe to add additional securement from insects and other critters from getting into the pipe.

3) **Older West Storage Tank ST001 Vent Screen.** – FMCV at this time is not equipped to install the particular screen that is recommended. Also we believe that this issue falls under the Engineers that have designed the storage tank. This tank may have been designed for a particular reason as to why the screen was designed the way it is. FMCV will look into getting an engineer familiar with water tank designs to address this particular design of FMCV's water storage tank.

4) **New Upper Mesa Storage Tank ST004 Unprotected Target Cable Housing.** – FMCV Has places Steel Wood inside the cable housing of the storage tank. This has covered up the opening, however the steel wool has fallen out on several occasions. We will try and fix up the opening to the cable housing somehow with the same Stainless Steel Screen we have used on the drain pipe to the west storage tank.

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Polacca Water System Significant Deficiencies
April 20, 2017

1) **Older West Storage Tank ST001 Openings in the Roof** - An abandoned instrument box in ST001's roof has holes in its cover and an opening inside that penetrates the roof. These openings can allow insects, spiders and rain water to enter the tank.
Recommended Action - The openings should be sealed.

2) **Older West Storage Tank ST001 Flap Gate** - The overflow pipe for ST001 has a flap gate to prevent insects and rodents from entering the tank through the overflow pipe. However, the flap gate is not fully closing and needs lubrication. EPA Region 9's policy on protection of overflows is as follows: *In order to prevent insects, birds, and animals from entering the tank, fit the end of the overflow pipe with a flap gate (or duckbill) that seals tightly, a screen, or both. The screen may be installed loosely to come off in the event that it becomes clogged in an overflow event.*
Recommended Action - The flap gate should be lubricated so it closes securely under its own weight. EPA recommends adding an insect screen as additional protection.

3) **Older West Storage Tank ST001 Vent Screen** - The tank's vent is screened but the screen's mesh size is too large to exclude insects. EPA Region 9's policy on screening storage tank vents is as follows: *Vent screens should fit properly and be a fine enough mesh to prohibit the entry of insects and birds. Special vent designs may be necessary to prevent vents from clogging or freezing over. If the operator suspects that the tank vent tends to become clogged or frozen over, the problem should be addressed by an engineer familiar with water tank vent design.*
Recommended Action - A non-corrodible insect screen should be installed on the vent. EPA Region 9 recommends non-corrodible 24-mesh insect screen.

4) **New Upper Mesa Storage Tank ST004 Unprotected Target Cable Housing** - The new stainless steel storage tank has a functional target but the housing for the cable is not well protected against the entry of wasps and other nesting insects. Further, the tank has no access hatch to allow the operators to check for obvious contamination by insects making it even more important to ensure that insects and other contaminants cannot enter the tank.
Recommended Action - The opening around the target cable should be protected with non-corrodible screen or filled loosely with stainless steel wool. Regardless of the method chosen, the cable must have enough room to move freely as the water level changes.