Remotely Operated Vehicle (ROV) Inspections of Water Storage Tanks

If operational conditions prevent you from removing a storage tank from service, our maintenance experts can inspect the interior of the tank using an underwater remotely operated vehicle (ROV).

The challenge



Water Scarcity

Draining a storage tank to inspect the interior can be difficult and costly especially in water stressed areas.



Customer Disturbance

Removing a water storage tank from service can affect normal operating pressures and capacities.



Costs and Safety

Relying on divers to inspect your tank is costly and risky because of the inherent dangers of confined spaces.

ROV inspections eliminate the inconvenience and expense of taking a tank completely out of service for several days for draining, inspection and filling.



Tank condition assessments using a remotely operated vehicle (ROV)

Regular condition assessments should be part of the preventative maintenance of any water storage tank. They keep the tank in like-new condition, improving the return on your large capital investment while lowering related operation and maintenance costs. When you cannot remove the tank from service, we can inspect the interior of the tank using an ROV.

The Process

Step 1

All equipment used during an ROV inspection is dedicated for potable water storage facilities only and is stored in a manner that prevents both chemical and bacteriological contamination. Prior to opening the tank, the access hatch and immediate area are cleaned and free of any loose dirt and debris. The equipment is disinfected with a 200-ppm chlorine solution—in accordance with AWWA C652 Method 2—prior to entering the tank.

Step 2

Once inside the tank, the remotely operated vehicle swims throughout the tank to observe the upper sidewalls, the roof's interior and the floor from only a few feet away. An ROV inspection will satisfactorily address the following categories:

- Safety (recording an interior loose ladder that could cause danger or injury)
- Sanitary (noting objects or carcasses that could contaminate the water and jeopardize public health)
- **Structural** (documenting badly corroded bolted connections and other metal surfaces that could affect the integrity of the tank)
- Security (recording unlocked gates or any other factor that could pose a threat)
- **Coatings** (identifying obvious adhesion bubbling and coating failures as well as signs of corrosion).

Step 3

A remote monitor is available during the ROV inspection to provide live feed to personnel during the operation. An inspection report with photos of the interior surfaces is delivered to the customer. All USG inspectors are NACE-certified and receive extensive OSHA Health and Safety training.

The benefits



Can be completed on short notice



Cost to perform an ROV inspection is approximately a third of the cost of a dive inspection



Acceptable form of inspection that is recognized on a Sanitary Survey



Safer than a diver inspection







