



# **EPC ENVIRONMENTAL PROCESS CONTROL FIELD REPORT**

**May 7, 2007**

**Underwater Cleaning & Inspection  
Oak Meadows  
Potable Water Storage Tanks**

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# **FIELD REPORT**

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**DVD DOCUMENTATION**

**UNDER SEPARATE COVER**

# FIELD REPORT

## 1.0 INTRODUCTION

In May 2007 Environmental Process Control (EPC), commissioned Potable Divers, Inc. (PDI) to conduct an underwater cleaning and inspection of Oak Meadows water storage tanks, located in Carbondale Colorado.

Information contained in this report was obtained from dive crew observations, and conversations with EPC personnel. References to locations within the tank will be made through out this report referring to positions on the clock. The upper man way and interior ladder being the 12:00 position as the diver looks toward the interior wall. In accordance with Federal OSHA regulations, a 3-man dive team was utilized to conduct the inspection and cleaning, which occurred on May 7, 2007.

## 2.0 OVERVIEW

These buried steel tanks are constructed of ¼" thick Circular steel plates. The interior diameter is approximately 10 feet.

Diver access was gained via. roof top man way access hatch and interior ladder provided by PDI which reached to the tank bottom.

The exterior being buried exhibited no signs of erosion or undermining of the foundation. Interior coating appeared to have been a plural component epoxy, black in color and is in poor to fair condition. Overall, these tanks are in need of maintenance, and consideration should be given to their refurbishment. A light sediment covered the floor with a typical depth of ¼ of an inch. Dive team personnel hydraulically removed the bottom sediment.

## 3.0 FINDINGS

### 3.1 FOUNDATION

Observable foundations appeared to be in good condition. No undermining of the foundation substrates was noted.

### 3.2 EXTERIOR SHELL

Exterior shells were buried.

### 3.3 EXTERIOR ROOF

The roof top man way hatches were secured and exhibited no coating. No weather stripping was present on the entry hatches.

### 3.4 INTERIOR ROOF

General appearance of the interior roofs were poor. The interior roofs exhibited heavy corrosion above the water line. Most of this corrosion has fallen to the bottom of the tanks, and continued to rust damaging the coating on the floor as well.

### 3.5 INTERIOR SHELL

The interior shells were found to be in fair to poor condition, with discrepancies noted. These discrepancies found on the wall and floor consisted of surface corrosion on and mostly near the top of the tanks where the water level is normally maintained. The coatings appear to have exceeded their life expectancy, consideration should be given to having the tanks sandblasted and recoated.

### 3.6 INTERIOR FLOOR

After bottom cleanings were conducted, random floor seams and wall seams were visually inspected and exhibited poor coating adhesion. These problem areas will continue to corrode causing damage to the integrity of the tanks possibly originating holes. Many holidays were noted sporadically through out the tank.

Bottom sediment was found to be typically a quarter of an inch deep.

## 4.0 CONCLUSION

Based on the results of the underwater inspection and the cleanings which took place, it appears these tanks are in operational condition and may continue to provide water storage capacity for potable water use. However corrective action should be taken to ensure the reliability and longevity of the tank.

## 5.0 RECOMMENDATIONS

PDI concurs with the recommendations of AWWA that all potable water reservoirs or storage tanks be cleaned and inspected *at least* every five years and in some cases, depending upon source waters, type and quantities of sediment, and presence (or lack thereof) of cathodic protection systems, more frequently.

The following recommendations are made to provide continued, uninterrupted service of your water storage tank:

1. Your tank should be inspected and cleaned at least once every five years. Sediment removal will help ensure the coating will not be harmed by bacteria living under the sediment and provide ample time to perform remedial repairs to abnormalities discovered before having a chance to become problematic.
2. It is highly recommended to have these tanks sand blasted and recoated. The coatings have reached their service life and it is highly recommended to have them replaced to ensure longer service life of the tanks.