

Challenge

Issue

H₂S gas damaged the concrete in a wet well and sludge tanks leading to loss of coverage and dislodgement of the aggregate.

Goals

Protect against further aggregate loss and preserve the wet well structure.

Root Cause

Hydrogen sulfide gases from micro-biological corrosion caused damage to concrete.



Wet well location.

Solution

Preparation

- Surface was high-pressure water blasted and verified to have pH between 7 – 10.
- Surface was sweep sandblasted to ICRI CSP#3 finish

Application

- **ARC S1HB** was applied in one single coat system application to a final wet film thickness of >3 mm (120 mils)

Note: **ARC S1HB** was available for many years as a custom product, but is now available commercially.



Surface of wet well was high pressure cleaned and abrasive sweep sandblasted.

Results

Client Reported

- Lining was installed in three separate structures over an eight-day period.
- After more than six years, no signs of further concrete loss have been noted during inspections.

Repair Costs

- Conventional concrete repairs: \$18,000/12 days
- **ARC S1HB** repairs: \$21,500/6 days

\$=USD



Surface of the wet well with final coat of **ARC S1HB**.