



HARPER & ASSOCIATES ENGINEERING, INC.

CONSULTING ENGINEERS

1240 E. Ontario Ave., Ste. 102-312, Corona, CA 92881-8671
Phone (951) 372-9196 Fax (951) 372-9198
www.harpereng.com

PHOTOGRAPHIC SURVEY

PROJECT: Corrosion Engineering Evaluation of a Buried Welded Steel Water Storage Reservoir

STRUCTURE: Interior and Exterior of a 7,500 Gallon Welded Steel Water Storage Reservoir

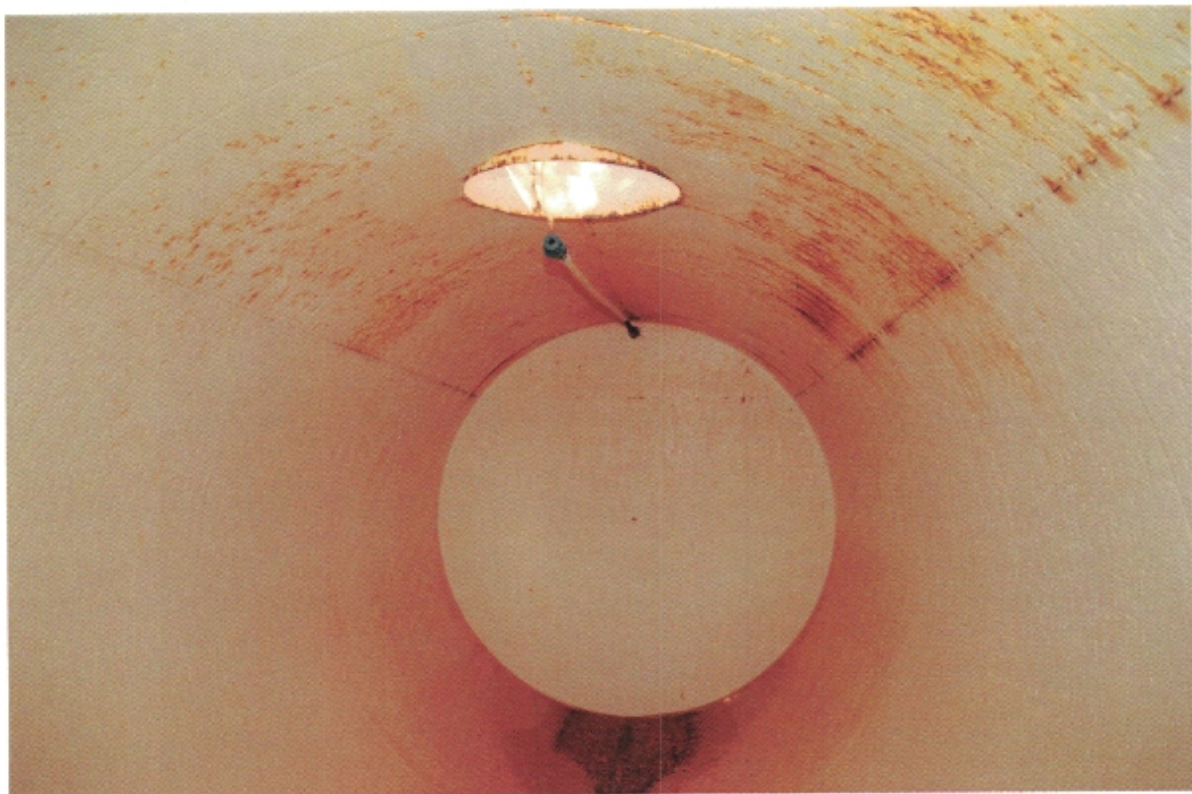
OWNER: Wheeler Crest Community Service District

LOCATION: Wheeler Crest, California

PHOTOGRAPHED BY: Andre Harper, Project Engineer

DATE: August 2016

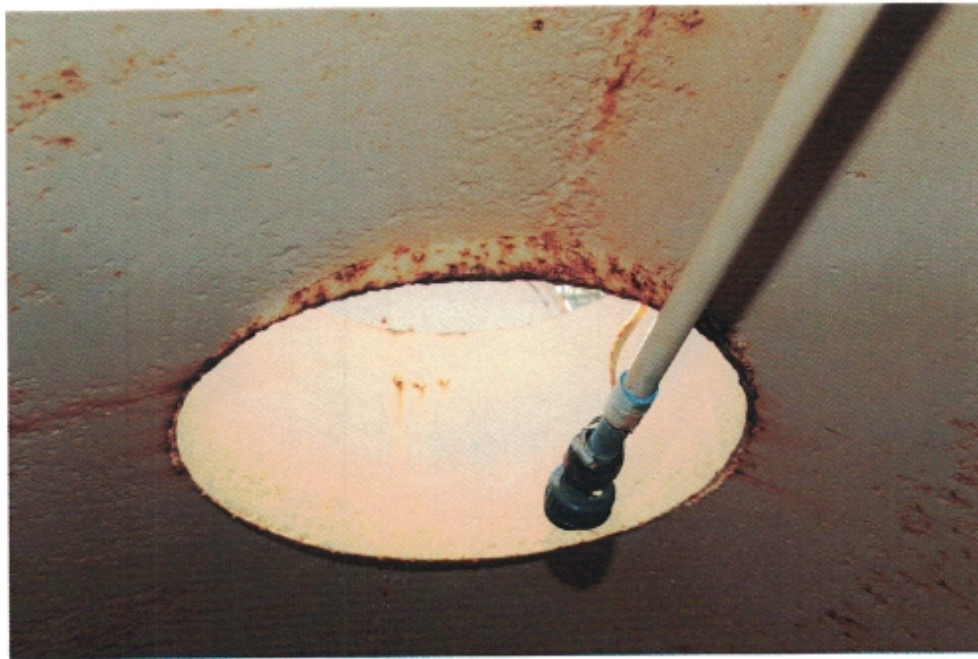
I-1 View of the interior surfaces of the reservoir, illustrating previous pitting on all surfaces and moderate to severe corrosion on the upper surfaces.



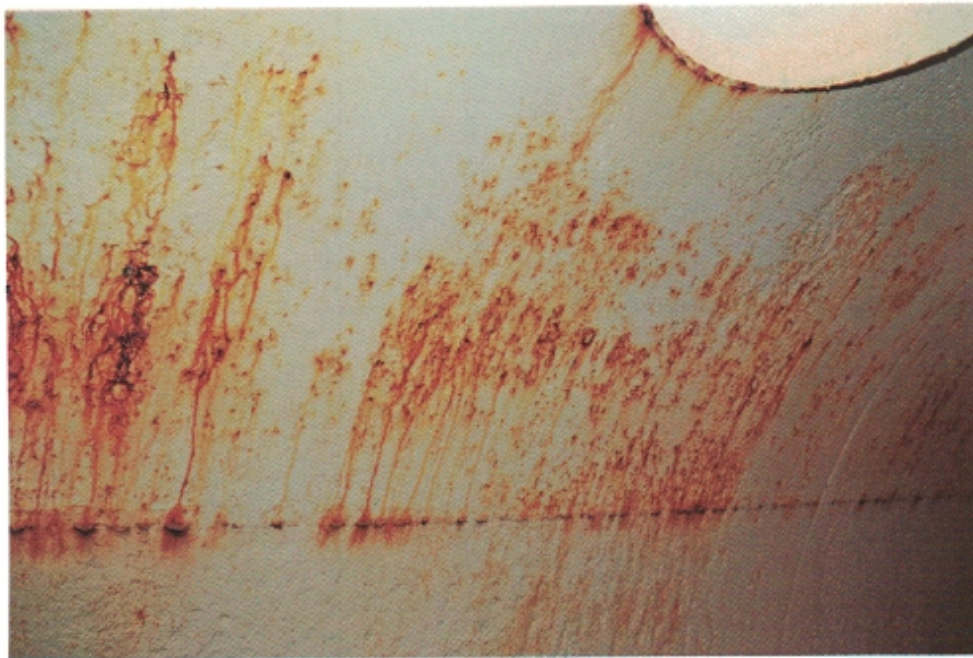
- I-2 View of the manway, illustrating moderate to severe corrosion at the lower circumference of the hatch curb.



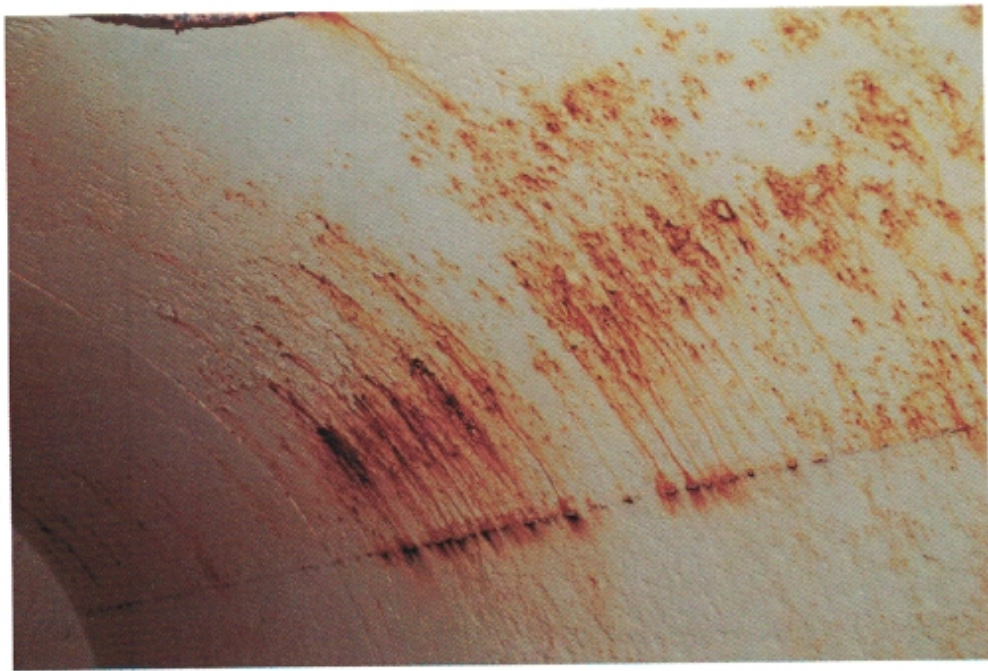
- I-3 Same as Photo I-2, except from a different angle.



- I-4 Close-up view of the shell just above the high waterline, illustrating moderate to severe corrosion at and above the waterline.



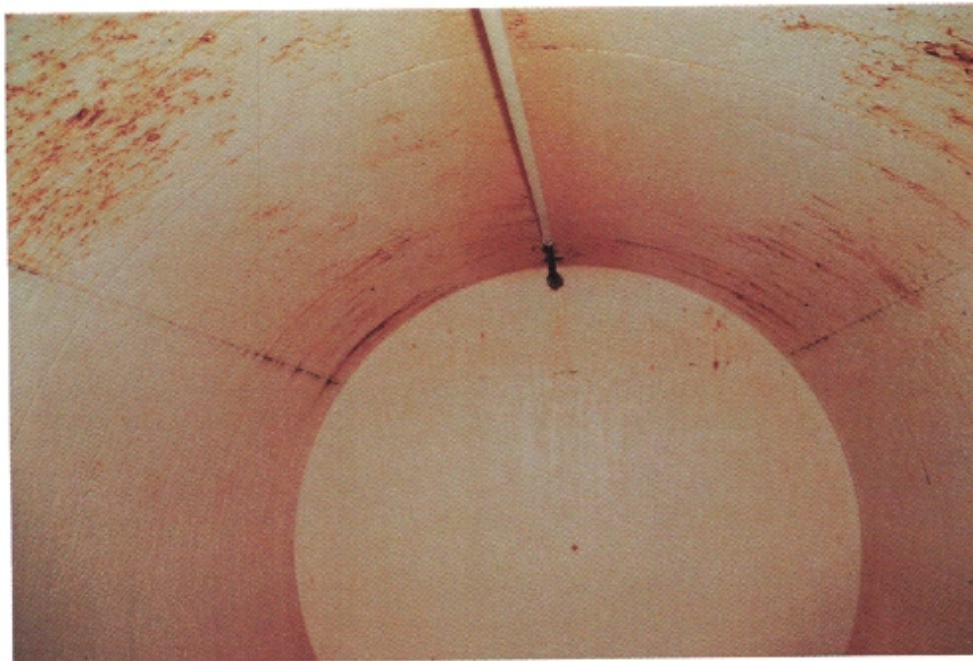
I-5 Same as Photo I-4, except in a different location.



I-6 Same as Photos I-4 and I-5, except in a different location. Note area where the coating is starting to delaminate from the substrate.



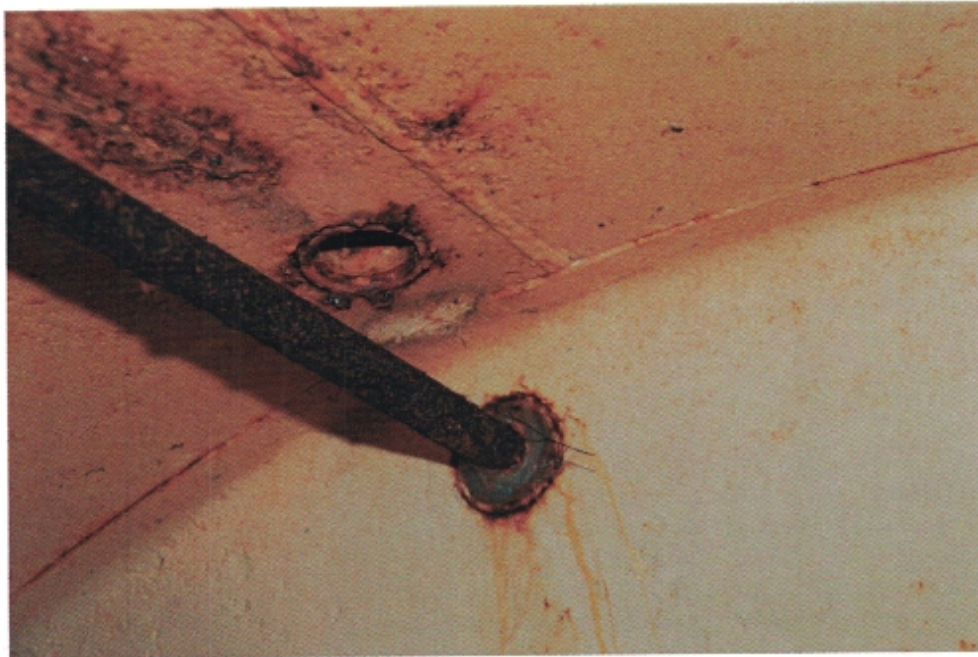
I-7 View of a portion of the reservoir, illustrating previous pitting on all surfaces and moderate corrosion on the upper portion of the reservoir.



I-8 View of the inlet pipe where it enters the reservoir, illustrating severe corrosion of the carbon steel portion of the pipe.



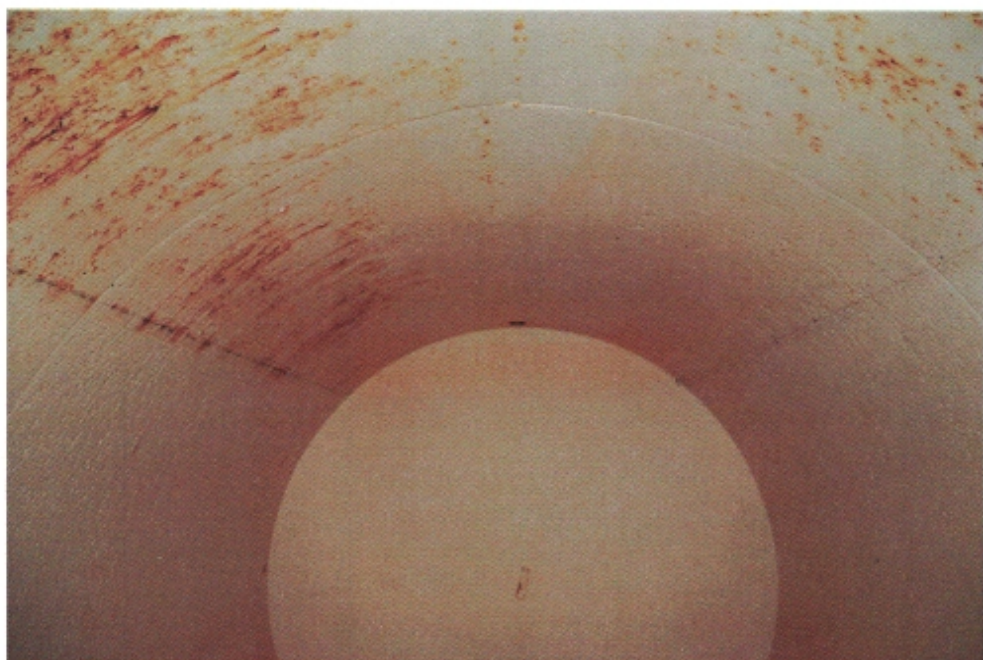
I-9 Same as Photo I-8, except a closer view of the carbon steel portion of the pipe.



I-10 Same as Photo I-9, except from a different angle.



I-11 View of the opposite end of the reservoir, illustrating previous pitting on all surfaces and moderate corrosion on the upper portion of the reservoir.



I-12 View of the upper portion of the reservoir, illustrating moderate corrosion at the circumference of a capped penetration and minor corrosion on the adjacent surfaces.



I-13 View of the shell where it meets the dished head, illustrating a defect at the weld and minor corrosion on the adjacent surfaces.

