



**SOUTHERN
CORROSION**
ENGINEERED TANK CARE.

***250,000 GALLON 8TH STREET
ELEVATED WATER TANK
KILL DEVIL HILLS, NORTH CAROLINA***



***Inspected by:
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**SOUTHERN CORROSION INC.
INSPECTION REPORT**

Inspection Date: May 9, 2017

Tank Information:

Capacity: 250,000 gallons

Tank Style: Toro Ellipsoidal Elevated Tank

Height to Low Water Level: 108'

No. of Legs: 6

No. of Strut Levels: 2

EXTERIOR

The exterior finish coating is white in color, with a blue and black logo/mural on the shell wall. The coatings are in good condition, with mildew occurring in some areas. Chalking is evident. Dry film thickness readings conducted ranged from 23.7-33.8 mils on the column legs; 22.0-32.7 mils on the riser column; 19.6-21.9 mils on the exterior shell wall; and 29.4-39.7 mils on the tank roof.

Foundations:

The concrete foundations are in good condition. There is no evidence of cracking or spalling. The tops and sides of the foundations are painted white.

Base Plates:

The base plates are in good condition. There is surface rust occurring on less than 5% of base plate surfaces.

Anchor Bolts:

Each column leg is equipped with four 1 $\frac{3}{4}$ -inch anchor bolts. There is corrosion present on less than 5% of anchor nut and bolt surfaces. The riser pipe is equipped with four 1-inch anchor bolts that are in good condition. One of these bolts appears to be bent inward toward the riser pipe.

Column Legs:

The coatings of the column legs appear to be in good condition with less than 1% observed corrosion.

Rods & Struts:

The tank is not missing any rods. The rods are securely attached to the column legs. Surface corrosion is visible on approximately 5% of the rods, struts, and turnbuckles.

Riser Pipe:

The riser pipe is in good condition with no observed leaks. The riser is equipped with a round manway measuring 18 inches in diameter. There are no observed leaks on the manway.

Tower Ladder:

The tower ladder is attached to the column leg via welded stand off supports. The ladder is in good condition with less than 5% surface corrosion. It is equipped with a cable-style fall protection system as required by OSHA fall prevention regulations. The hardware components of the fall protection system are visibly corroded and there are multiple missing bolts and/or nuts. The rungs are round and not anti-slip. There are no missing, bent, or otherwise deteriorating rungs. An anti-climb prevention device (ladder guard) is attached to the lower portion of the ladder.

Tank Bowl:

The tank bowl is in good condition. There were no leaks evident at the time of inspection. The coatings appear to be in fair condition with no observed corrosion present. Mildew is visible throughout the surface of the tank bowl.

Underside of Catwalk:

The underside of the catwalk appears to be in good condition with observed corrosion on less than 1% of surfaces.

Topside of Catwalk:

The catwalk balcony has a toe plate, supports, and hand rail that are welded to the catwalk floor. The hand rail measures 42 inches in height as required by OSHA safety regulations. The hand rail, its supports, and toe plate are in good condition with observed corrosion on less than 5% of surfaces.

The catwalk floor is in good condition with observed corrosion on less than 1% of surfaces. The catwalk floor is equipped with weep holes to prevent pooling. There is mildew present in various areas throughout the catwalk.

Tank Shell:

The tank features a ladder that provides access from the catwalk to the roof. The shell ladder is attached to the shell wall and tank roof by welded stand off supports. The shell ladder is equipped with a cable-style fall prevention system as required by OSHA fall prevention regulations. The ladder is in good condition with no missing, bent, or deteriorated rungs or railings. There is observed surface corrosion on approximately 10% of ladder surfaces.

There is a steel structure (non-structural) located on the exterior shell wall that shows significant signs of corrosion (steel loss). This structure measures approximately 2 feet wide by 6 inches tall. This structure could potentially be used to create space between conduit/electrical wires and the tank shell wall (there are no such conduit/wires on this tank).

The exterior shell wall appears to be in fair condition with no leaks present. The tank logo is featured on two sides of the tank and reads *KILL DEVIL HILLS*. The logo is cast in white letters upon a blue background. Both the letters as well as the blue background are framed with a black outline. The logo measures 40 feet in width and 6 feet in height. Each logo is complete with a mural of a sun dial.

Tank Roof:

The tank roof is in good condition with light surface rust visible on less than 5% of surfaces. The tank roof is equipped with an access hatch that is round and in good condition. The hinges and hasp are functioning properly, but are visibly corroding. The access hatch has a pin (attached to a chain, which is welded to the lid) to keep the lid closed. No lock was present at the time of inspection, but per customer request, a Southern Corrosion lock was installed upon completion of the inspection. Observed corrosion is prevalent on the access hatch interior and lip.

The roof vent is in good condition, with observed corrosion present on approximately 20% of surfaces.

INTERIOR

The tank interior is in good condition with observed staining consistent with elements in the water. The ROV inspection revealed surface corrosion on the fill pipe/overflow support rods as well as along the interior shell wall.

The tank is equipped with an interior overflow pipe.

Ladders:

The interior ladder is in fair to poor condition with surface corrosion exceeding 50%. There are multiple areas of steel loss where the coatings have failed on one or more rungs. The interior ladder is equipped with a cable-style fall protection system as required by OSHA fall prevention regulations.

Roof:

The roof interior appears to be in good condition with approximately 10% visible surface corrosion.

Shell:

The observed interior shell wall has apparent staining and discoloration, which is generally caused by the elements in the water. The ROV inspection revealed buildup of sediment in several areas along the interior shell wall. There is apparent surface corrosion along the painter's ring.

Bowl:

The ROV inspection indicated that the bowl is covered in sediment.

Sanitary:

The tank site is enclosed by a chain link fence with 3 strands of barbed wire at the top. The fence is equipped with a locking gate. The fence is in good condition.

The exterior ladder is equipped with an anti-climb prevention device.

The vent openings on the roof are currently covered with screening. No holes in the roof were observed.

No foreign matter and/or substances were observed inside the tank.

View of the painted concrete foundations and base plates.



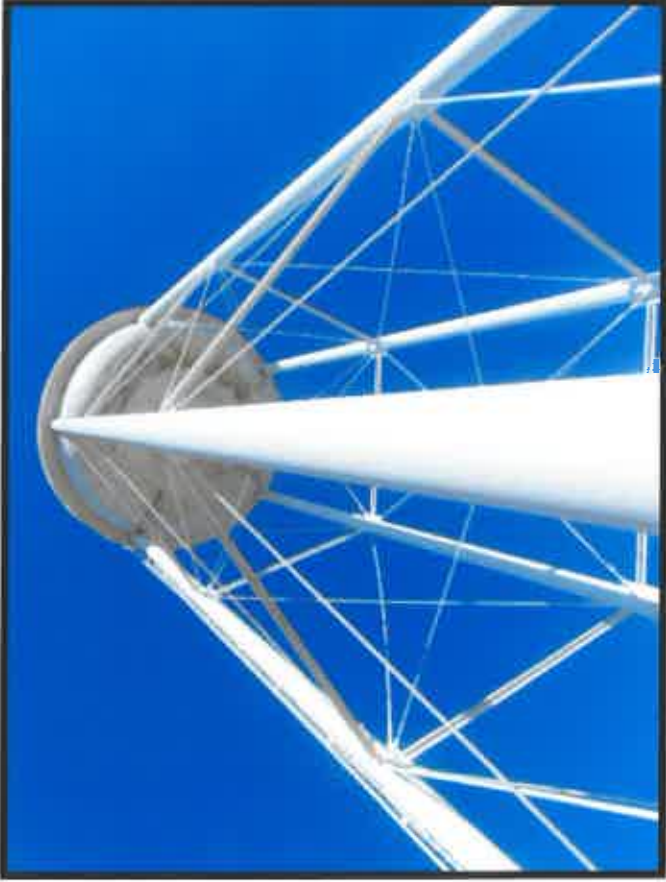
View of the base plates and grout.



View of the anchor bolts on the column legs and riser column.



View of the column legs, wind rods, and turnbuckles.



View of the turnbuckles.



View of the struts and wind rods.



View of the ladder.



View of the tank bowl and underside of the catwalk.



View of the catwalk, toe plate, hand rail, and ladder.



View of the shell wall.



View of the roof ladder, and roof.



View of the roof ladder and vent.



View of the access hatch, hinges, and interior lip of access hatch.



View of the interior roof.



View of the interior shell wall.



View of the overflow pipe and support rods.

