

Tank History for Tank 16, Red Hill

<u>Date</u>	<u>Remarks</u>
	Unless otherwise noted, all work in the following entries was done by Morrison Knudsen Company, Inc. and their subcontractors under Pacific Naval Air Base Contractors Contracts NOy 3550 and NOy 4173 (Project Nos. 16, 45, 224, 225, 535, 690, and 691).
7/22/41	Started excavation of 4' x 6' centerline shaft from top of Red Hill to top of upper dome.
8/27/41	1. Finished excavation of 4' x 6' centerline shaft. 2. Started excavation of 12' x 12' centerline shaft from top of dome to lower access tunnel.
10/30/41	Started ring tunnel.
12/5/41	Finished ring tunnel.
3/30/42	Started upper dome excavation.
3/9/42	Finished excavation of 12' x 12' centerline shaft.
5/16/42	Finished upper dome excavation.
6/7/42	Started upper dome structural steel erection.
7/5/42	Finished upper dome structural steel erection.
7/20/42	Started upper dome steel liner plate.
8/17/42	Finished upper dome steel liner plate.
8/24/42	Started upper dome concrete.
8/28/42	Finished upper dome concrete.
8/29/42	Started upper dome grouting.
9/6/42	Finished upper dome grouting.
9/7/42	Started ring blasting to enlarge 12' x 12' shaft to 30' dia.
9/14/42	1. Finished ring blasting. 2. Started excavation of barrel and lower dome.
10/22/42	Started guniting side walls.
12/31/42	Finished guniting side walls.
1/6/43	Finished excavation of barrel and lower dome.

1/6/43	Started erection of steel tower.
1/7/43	Finished erection of steel tower.
1/11/43	Started steel liner plate and concreting lower dome.
1/24/43	Finished steel liner plate and concreting lower dome.
1/26/43	Started steel liner plate and concreting side walls.
2/14/43	Finished steel liner plate and concreting side walls.
2/26/43	Started grouting lower dome.
3/8/43	<ol style="list-style-type: none"> 1. Finished grouting lower dome. 2. Started pre-stress grouting lower dome and barrel.
3/9/43	Finished pre-stress grouting lower dome and barrel.
3/11/43	Started bottom plate and piping connections.
3/14/43	Finished bottom plate and piping connections.
3/18/43	Started leak testing with water.
4/19/43	Started and finished installing gauges and steam coils.
5/4/43	<ol style="list-style-type: none"> 1. Finished leak testing. 2. Started to drain and clean tank.
5/13/43	<ol style="list-style-type: none"> 1. Finished draining and cleaning tank. 2. Tank turned over to Navy for operation.

RED HILL TANK NO. 16
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7/21/48	First leak developed. Leak at 242'-5-5/16"
7/27-8/4/48	Transferred oil and emptied tank.
8/48-4/49	Cleaned and washed tank. Filled and tested tank with water. Leak found on telltale pipe in tank.
6/13-22/49	Shop 72 sandblasted inside tank bottom.
6/24-30/49	Shop 08 painted inside tank bottom.
7/15/49	Tank back in commission. Started to fill tank with oil; stopped at 10'-0-3/4". No leaks at this height for three days.
7/24-8/30/49	Filled oil in tank up to 167'-7-1/2". Telltale started leaking again. Lost 2-1/4" in 11 days. $2.25 \times 4853 = 11,009 \text{ gal}$
9/12-10/3/49	Lowered oil down to 47'-0-0" and leak stopped. 1001 gal/day
12/10/49	Topped off tank at 242'-1-13/16". Lost 3-5/8" in four days. Tank still leaking. $3.625 \times 4853 = 17,737 \text{ gal}$
12/49-1/50	Checking and testing for leak. Tank leaking. Oil transferred and tank emptied.
2/28/50	Started cleaning and washing interior of tank.
3/50	Filling and testing tank with water.
1/51	Leak determined to be cracked weld on jumper pipe in lower dome. Weld would open up after 150'+ head imposed.
1/17/51	Tank back in commission. Started filling tank with oil.
1/24/51	Tank topped off at 242'-2-5/8". Okay. No leaks.
10/11/63	Calibrated gauge. Installed on 11/15/63.
7/22/64	Tank cleaned by PHNSYD.
2/14/68	Replaced defective switch for tank's light circuit on top of tank (2 hours).
7/5/72	Emptied and cleaned for conversion.
7/21-31/72	Cleaned tank to convert from NSFO to Navy Distillate.
9/13/72	Telemeter system installed.

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10/10-11/1/72	Repaired two holes in 3/4" telltale pipe #11 at tank bottom. Tested all telltales to 20 psi. Telltale numbers 6 and 10 leaking in concrete block. Cut off and blanked 6 and 10 inside tank at point where they leave tank to go to lower tunnel. Cross connected #6 to #7 and cross connected #10 to #11. Retested to 20 psi. (See Exhibit 1.)
11/10/72	Converted to Navy Distillate.
5/23/73	Telltale started leaking. 1 drop 20 seconds.
1/8/75	Emptied tank due to leakage.
1/13/75	Secured vent, installed blower and opened manhole covers.
1/28/75	Cleaned tank.
1/30/75	Pumped water into tank. Emptied tank. PWC working in tank.
2/3/75	Started filling water. Finished 26 Feb. 160'0-0".
4/24/75	Started draining water into Halawa Stream.
5/19/75	Repaired collector ring. Repaired telemeter system.
5/22/75	Leak located on collector ring. Repaired seams.
5/23/75	Leak located on telltale #8--bottom of tank. Repaired seam. Renewed approximately 10'-0-0 length.
6/11/75	Bolted manhole. Tank vent opened.
6/75	Tank repairs completed by PWC.
6/11/75	Filled oil from Tank 18.
6/15/75	Refilled with DFM.
10/16/75	PWC personnel inspected bottom of tank.
12/75	PWC cut out 8' manhole to install flange.
Jan-May 1976	PWC magnafluxed bottom of tank. Found large pits approximately 1/2". Removed collector ring and related system.
2/81	Tank was removed from service and turned over to the contractor for initial repairs and lining.

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10/19/81	Deputy Director made final inspection of interior repairs and lining to tank. Tank was very clean. A few minor repairs were noted for rework. Tank was conditionally accepted.
10/23/81	Tank was refilled to 242 feet and was found to leak badly.
11/10/81	Tank was removed from service and turned over to the contractor for rework.
12/28/81	Tank was returned to service for leak testing after contractor rework.