

Zahrani oil installation consists of two sites: Terminal and Refinery

The Terminal:

Was constructed by BECHTEL CO and owned by TAPLINE (TRANS ARABIAN PIPE LINE). On December 31, 1983 Its owner ship was released to the Lebanese government.

TAPLINE used to receive light Arabian crude oil (before 1982) approx 500000 BPD from kingdom of Saudi Arabia thru 31" pipe line crossing Jordan and Syria reaching Zahrani in south Lebanon at a total distance of 1213km.

The total area of the Terminal is 2,200,000 m²

The Terminal consists of two zones:

- lower zone consists of marine department and shore operation
- upper zone consists of tank farm area

Marine department:

There was 4 SEA BERTHS in operation

1 south of the boat jetty was cancelled in 1970 because the anchors of the tanker were dragging due rocky sea red.

Berth 2-3-4 were in Full operations day & night loading 3 tankers at the same time by gravity.

Berth no.3 & berth no. 4 are out of function since 1985 and no. use to repair them.

There is only one berth (#2) in operation it extends 1800 m from shore and it has three (3) sub sea lines at a depth of 60 ft (20 m)

a-one line 20 in. for clean products (gasoline and gas oil)

b- one line 20 in. for fuel oil (2a)

c-one line 36 in. for fuel oil or crude oil (2b)

-the jetty inside the harbour used to moor our mooring boats.

-there are five boats (3 in good condition each one is operated by 360 hp engine, 1 diving boat operated by 180 hp engine and the fifth needs a 500 hp engine)

-there is one barge with a fixed boom.

-there is one dredge.

SHORE CONTROL AREA (for loading and discharging operation)

Consists of:

Pump house of three booster pumps in operation for unloading (discharging) tankers at a rate of 1000 MT per hour if the cargo pump discharge rate of the tankers reach 100 PSI.

Utilities

Two (2) generators for electricity generation they are in good condition (1 generator 300 kva put in service in year 1996, one generator 300 kva put in service in year 2002).

One (1) water well at a depth of 880 ft quipped with two pumps (1 electric driven pump of 140 gpm capacity put in service in year 2006 , 1 diesel driven pump of 400gpm capacity put in service in year 2007 . and each pump discharges water to the water tank at tank farm (380 ft above sea level high).

TANK FARM

-22 tanks with floating roofs have the capacity of 4.5 million barrels (approx 550,000M.T) these tanks are located 370 ft above sea level.

These tanks are divided as follows:

product	Tank #	Tank capacity			
		Bbls	Kilo liter	M.T	
Gasoline (1 grade)	101	187246	29770	24709	In operating condition and could be used for gas oil storage
	102	187597	29825	24755	
	126	100555	15987	11671	close to the shore-REHABILITED RECENTLY YR. 2009
TOTAL		475398	75582	61135	
GASOIL	103	182576	29027	24092	Now used for emergency cases
	112	187330	29783	24720	
	113	187331	29783	24720	There is sludge in it
	114	187614	29828	24757	REHABILITED RECENTLY YR. 2009
	115	187490	29808	24741	REHABILITED RECENTLY YR. 2009
	119	14021	2229	1850	A special tank used for stripping cargo from tanker to shore
	124	187091	29745	24688	
	104	182567	29026	27284	
	105	182584	29028	27286	
	116	187233	29768	24707	REHABILITED RECENTLY YR. 2009
TOTAL		1685837	268025	228845	
Fuel	106	182635	29037	27295	
	107	187327	29782	27995	
	108	188200	29921	28126	Needs repair of floating roof
	109	188186	29919	28124	Needs repair of floating roof
	110	188160	29915	28120	Needs repair of floating roof
	111	188205	29922	28127	REHABILITED RECENTLY YR. 2009
	120	14016	2228	2094	A special tank used for stripping cargo from tanker to shore
	121	187190	29761	27971	
	122	187085	29744	27959	Out of service- burst bottom – needs repair .
	123	187203	29763	27977	Needs repair of floating roof
	129	498320	79226	74472	Out of service
	128	498381	79236	74482	
TOTAL		2694908	428454	402742	

All these tanks need scheduled maintenance (sandblasting and painting)

The Refinery

The refinery was commissioned in early 1950 and it was owned by CALTEX under the name of "MEDRECO-MEDITERANEAN REFINERY CO". In September 30, 1986 this company abandoned its ownership in favor of Lebanese government.

The refinery used to operate in the capacity of 17500 barrel per day but it was completely shutdown in 1989 .It used to produce the following products daily:

HP	\		
		LPG	500 Bbls.
LP	/		
Gasoline		3000	Bbls.
J-Kerosene		1700	Bbls.
I-Kerosene		500	Bbls.
Gas oil		2800	Bbls.
Fuel oil		8000	Bbls.

The total land area of the refinery is 313000 sq met.

Total capacity for delivery

All tankers discharge their cargo of refined products in Zahrani oil installation terminal tanks. This product are then transferred to refinery tanks for delivery by gravitation through many lines designed for this purpose and then to loading racks where by trucks are loaded

The storage tanks in the refinery are as follows.

type	qty	Total max. allowable capacity
(1 grade)gasoline tanks	2	26300 bbls(=4,179 m ³)
(1 grade)gas oil tanks	4	111.600 bbls(=17,700 m ³)
(1 grade)fuel oil tanks	2	45000 bbls(=7,150 m ³)

(NB: a new steam boiler (3000 LB) was purchased and installed in 2007 for heating fuel oil through a coil that was installed in a tank 801).

Loading racks area consists of twelve loading plat forms distributed as follows:

Eight (8) plat forms supplied by arms for loading trucks with gas oil
Four (4) plat forms supplied by arms for loading trucks with fuel oil

Transfer lines" between terminal and refinery are as follows:

One line 8" dia. constructed recently on April 2002 as a replacement of old 10" line for gasoline product

One line 8" dia .for fuel oil product.

One line 6" dia. for gas oil product.

The refinery consists of the following units:

a-crude unit for light Arabian crude oil (shut down)

b-PBS plant and three (3) plat formers units for gasoline treatment (shut down)

c-power house for electricity generation of two generators (1 generator 400 kva, 1 generator 180 kva)

d-ethyl zing plant for raising gasoline octane (shut down)

e-loading racks for trucks and rails (for rails out of services)

f-storage tanks (discussed before)

g-three (3)water wells each supplied by pumps of at a depth of 200 m 1900 liter per minute (2 working and 1 out of service)

h-laboratory supplied by update technical equipment

i-HP/LP –LPG storage cylinders:

There are 16 bullet type cylinders as follows:

-Seven (7) ready to use cylinders of 400 cu.met total capacity and connected to refinery system .They need maintenance.

-nine (9) cylinders on concrete supports of 250cu.met.Capacity each (total: 2250cu. met.) need to be connected.

All refinery units and equipments need comprehensive over haul and maintenance. Some don't have spare parts. Besides it is not feasible any more to operate it at 17500 bbl per day

Storage capacity at refinery is 150,000bbl for all products and for this reason we are now using the terminal storage facilities.

Utilities

Two (2) generators for 400 kva each for electricity generation . They are in good condition. one (1) put in service in year1996, and the second put in service in year 2012.

Two (2) water wells 220 m depth each (1 equipped with electric driven pump of 600 gallons per minute capacity put in service in 2004- in good condition).

(1 equipped with diesel driven pump of 500 gallons per minute capacity put in service in 1982 – in good condition) .