

BRIEF SUMMARY OF THE PROJECT

Proposed installation of Single Point Mooring & associated infrastructure By Coviva Energy Terminals Limited (a subsidiary of Nayara Energy Limited Company) At OOT (Offshore Oil Terminal), DPT Vadinar.

Background

Nayara Energy Limited, erstwhile Essar Oil Limited, is a strong name worldwide in Oil & Gas sector having its registered office at Khambhalia Post, PO Box 24, District- Devbhumi Dwarka, Gujarat-361305. Its 20MMTPA Vadinar Refinery is second largest single location Refinery in India and is also among the top 5 most complex refineries in the world. The company continues to strive for excellence with its strengths, differentiated product mix, state-of-the-art technology, excellence in execution and focus on sustainability. Company is operating a 20MMTPA refinery complex at Vadinar, Devbhumi Dwarka, Gujarat. In addition, it has a strong retail network of more than 5000 retail station catering to different part of Country. The network is being expanded to 7500 and more retail stations are going to be added in near future. The existing marine facilities to support the Refinery have been developed by Vadinar Oil Terminal Limited a subsidiary of Nayara Energy Limited. There is a plan to expand the capacity of Nayara Refinery to 46 MMTPA along with Petrochemicals, Accordingly one more SPM is needed for handling the additional Crude for the Refinery, which will be developed by Coviva Energy Terminals Ltd, another subsidiary of Nayara Energy Limited.

Existing Marine facilities:

Existing Marine facilities consist of two product berths and one Single Point Mooring (SPM) at Vadinar Gujarat. Product Berth is capable to accommodate ships up to 100,000 DWT, SPM is capable to handle ships up to 350000 DWT. Oil jetties are located in the Pathfinder Inlet and the SPM is in the Gulf of Kutch. Said facilities operate on 24x7 basis servicing the crude intake and product evacuation requirements of Nayara Energy Refinery. Efficient operation of Marine facilities is vital for functioning Nayara Energy Refinery. Design capacity of two product berths

and one SPM is 14 MMTPA and 27 MMTPA respectively. Nayara Energy's Vadinar Oil Terminal presently operates the Marine facility under conservancy of DPT (Deendayal port trust) OOT (Offshore Oil Terminal) off Vadinar, Gujarat. The Single Point Mooring (SPM) is Catenary Anchor Leg Mooring Type and moored in water depth of 35 meters and is connected to the crude oil tank farm via a 48 inch offshore and onshore pipeline of total length of 19 kilometres. Existing SPM is located in position: Latitude 22° 30' 14" N & Longitude 69° 39' 35" E. Jetty facilities consists of 2 berths in position - Berth A: Latitude 22° 26' 59" N & Longitude 69° 40' 18" E and Berth B: Latitude 22° 27' 10" N & Longitude 69° 40' 10" E in the Pathfinder Inlet. The product tank farm in the refinery is connected to the berths by cross country pipelines each of 21 kms. Berths are being utilized for evacuating the refined products from refinery. Typically the products handled are MS (Motor Spirit), High speed diesel (HSD), Super Kerosene Oil (SKO), Aviation Turbine Fuel (ATF), Naphtha, VGO (Vaccum Gas Oil) & black oil e.g. Fuel Oil (FO).

Plan for Expansion:

Nayara Energy Ltd. has a plan to expand Refinery capacity from existing 20 MMTPA to 46 MMTPA in along with Petrochemical units and applied for Environment Clearance for the same. Existing SPM is not sufficient to handle the additional Crude required for future expansion. Accordingly an additional SPM will be required. This SPM will be developed by M/s Coviva Energy Terminals Ltd, a subsidiary of Nayara Energy Terminals Ltd, the special purpose company created as per requirement of the Agreement signed with Deendayal Port Trust on 16th April 2015 for development of Marine facilities consisting of one SPM and two Product Jetties in DPT waters. The plan to expand the Refinery capacity and the expansion of Marine facilities was envisaged in year 2007- 2008 itself. Accordingly EC for the SPM was obtained and extended / bifurcated vide letter F. NO. 10-52/2007 IA III dated 26th Oct, 2016 which is valid up to 16.08.2019, however due to the prevailing business requirements the expansion project could not be implemented. Looking to the present expansion plan of the Refinery SPM is required to be installed to meet the requirement and accordingly EC and CRZ clearance is required for the same.

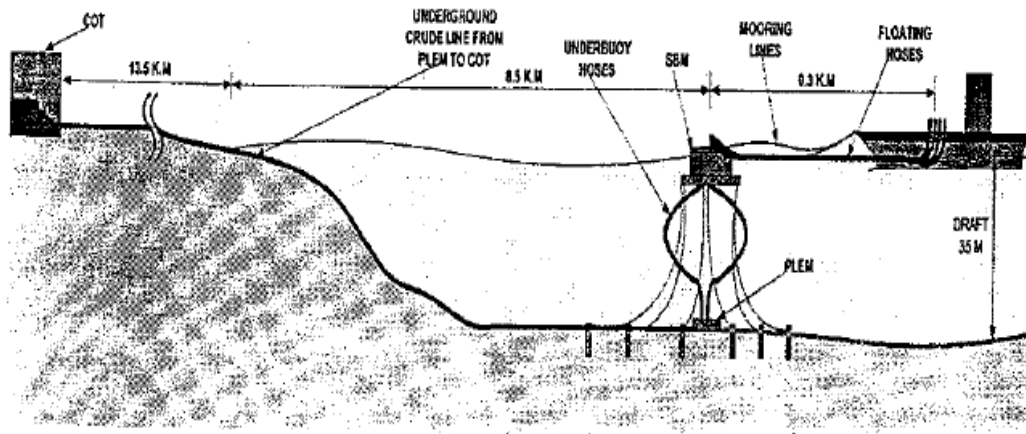
Project Description

Coviva Energy Terminals Limited proposes to install new SPM and associated infrastructure (subsea pipeline) at OOT DPT (Deendayal Port Trust) Vadinar as per details below

SPM will be capable of mooring vessels from 87,000 DWT to 350,000 DWT.

A schematic diagram of SPM is given below

Figure 4.1: Schematic diagram of the SPM



The crude from the tankers will be discharged via two flexible hoses (Double carcass type floating hoses) whose diameter will be 16” at the ship end & 24” at the inlet of SPM.

Basic technical specifications of the existing SPM are as follows:

- a. Design Pressure: 18 bars
- b. Operating Pressure: 10 bars
- c. Operating Temperature: 20 to 45 deg C
- d. Maximum allowable discharge rate of tankers: 10000 m³/hr

Submarine hose strings connect the SPM to Pipeline End Manifold (PLEM). The pipeline End Manifold (PLEM) is a steel base structure which supports the subsea pipeline termination.

The approximate longitude-latitude of the proposed SPM to be built by CETL is as follows:

Latitude : 22⁰ 31' 19"N

Longitude: 69⁰ 39' 38"E