

Annexure - III

Dated: 14-03-2007

HSE/RT/03/MS/10

To
The Director,
Ministry of Environment and Forests
Govt. of India
Paryavaran Bhawan, CGO Complex
Lodhi Road
New Delhi-110003

Dear Sir

Sub: Terms of Reference (ToR) for the proposed oil evacuation pipeline with associated facilities from Mangala Terminal, Barmer dist. Rajasthan to Salaya terminal in Jamnagar District via Viramgam (Ahmedabad dist.) in Gujarat

Cairn India Ltd. (CIL) has been actively involved in exploration of hydrocarbon resources in RJ-ON-90/1 block in the state of Rajasthan for the last five years. The massive exploration programmes undertaken by CIL have resulted in a number of oil and gas field discoveries including the giant Mangala field. These discoveries have put the state of Rajasthan in the oil and gas map of the world. The estimated oil in place is over 2000 million barrels and recoverable reserves are estimated to be over 500 million barrels of oil.

Oil & Natural Gas Corporation (ONGC) exercised their right to farm-in into the Rajasthan development Joint Venture (JV) with a participatory interest of 30% with effect from 13/01/2005.

CIL as operator of the block on behalf of JV, proposes to start production of oil and gas from these discovered fields in year 2009. The peak crude oil production envisaged from all these fields is 150,000 Barrels of Oil Per Day (BOPD). The natural and associated gas generated from these fields will be used for captive power generation and heating requirements.

The crude oil thus produced from these fields needs to be evacuated to the nearby refineries for processing into petroleum products. Mangalore Refinery and Petrochemicals Ltd. (MRPL), Indian Oil Corporation (IOC) and other refineries are potential buyers of the crude.

In order to facilitate the early production from these discovered fields, CIL in partnership with ONGC propose to lay an onshore oil evacuation pipeline of approx. 600 Km length with associated facilities from Mangala Terminal, Barmer District, Rajasthan to Salaya Terminal in Jamnagar District via Viramgam (Ahmedabad dist.) in Gujarat. Out of the total 600 km pipeline proposed, the pipeline will traverse about 150 km in Rajasthan and 450 km in Gujarat.

The overall pipeline project envisages setting up of the following facilities.

1. Laying of approx. 600 km oil evacuation pipeline (24" oil pipeline and 10" gas pipeline) from Mangala Terminal to Salaya in Gujarat via Viramgam
2. Establishment of associated facilities such as heating stations (31 nos.) and pigging stations along the pipeline route.

3. Establishment of storage, handling and pumping stations, diluent's mixing facilities at Viramgam (Ahmedabad dist.- 150,000 m³) and Salaya (Jamnagar dist. 190,000 m³) Terminals in Gujarat
4. Establishment of captive power generating facilities at all heating stations and Viramgam and Salaya terminals. The total power requirement for the entire pipeline project is estimated at 62 MW.

As the crude oil is waxy in nature, it requires Skin Effect Heat Tracing system and/or contingency gas fired indirect heating system and blending of diluents for continuous flow of liquid in the buried pipeline. Power requirement will be met by dual fired generator based on gas and/or oil. Gas will be preferably used for power generation and oil is an alternative option. A parallel gas pipeline of 10 "dia from Raageshwari gas terminal will be laid along the main crude oil pipeline corridor for supply of natural gas.

The proposed evacuation pipeline route has been finalized based on the least disturbance to the environment and would not pass through any environmentally sensitive areas, human habitations, coastal and estuarine areas, archeological monuments nor reserved forests. The major land use along the proposed pipeline is agricultural / barren land. There are no established breeding grounds and migratory routes along the pipeline route and in the proposed storage terminals.

The land required for the pipeline project will be obtained on Right of Use (ROU) basis. There will be temporary disturbance during construction phase and land will be reinstated to its original position once pipeline laying is over. The pipeline will be buried all along its length (minimum 1.0 m below the ground level). The land required for heating and storage facilities of about 149 ha. spread over several parcels will be acquired on permanent basis as per the Land Acquisition rules. Crop and land compensation will be paid as determined by the revenue officials.

The total estimated cost for the development of pipeline project including associated facilities is about Rs. 3500 Crores.

The evacuation pipeline facilities will be designed and constructed to meet the National and International standards and complies with HSE and legislation requirements. The integrity and safety of the pipeline will be monitored through computerized Supervisory Control and Data Acquisition (SCADA) and leak detection systems.

The proposed TOR for the EIA study will determine baseline conditions surrounding the proposed developmental facilities, assessment of the impacts on the environment due to the construction and operation of pipeline and storage facilities and making recommendations on the preventive measures to be taken, to minimize the impact on the environment to acceptable levels. The primary and secondary field data around proposed storage terminals and along the infield pipeline route will be collected. Environmental quality monitoring will be carried out within 10 km radius of Viramgam and Salaya terminals over period of one season (Summer) and at important environmental sensitive locations.

As the proposed pipeline is not envisaged to be passing through any environmental sensitive area, the pipeline project as such do not require EC as per the EIA notification 2006. However, as the proposed storage and handling capacities at Viramgam and Salaya terminals and power generating capacity at Salaya exceeds the threshold limits, the storage terminals requires Environmental Clearance from State Environmental authorities (Category B).

We are herewith enclosing the following documents to seek the Terms Of Reference (TOR) for the EIA studies.

- 1) Duly filled in Form-1 as per the prescribed format of the EIA notification, 2006
- 2) Project Report
- 3) Suggested Terms of Reference for the scoping of EIA study
- 4) Soft copy of item 1 to 3

We hope you will find the above in order and would be pleased to provide any additional information you may require for processing our application. Upon your instruction we shall be pleased to submit the required number of additional copies of the above.

Thanking You

Yours truly

(Robert Theriault)
Director – Midstream

Encl: As above