

**BEFORE THE NATIONAL GREEN TRIBUNAL  
SOUTHERN ZONE, CHENNAI  
ORIGINAL APPLICATION NO. 165 AND 277 OF 2017 (SZ)**

IN THE MATTER OF:

O.A.No.165 and 277 of 2017 (SZ)  
Meenava Thanthai K.R. Selvaraj Kumar

.. Applicant

Vs.

The Secretary to Govt., MoEF & CC  
Union of India & others

... Respondent(s)

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**REPORT OF THE JOINT COMMITTEE IN THE MATTER OF ORIGINAL APPLICATION NO. 165 AND 277 OF 2017 (SZ) & I.A.20/2020 IN O.A.NO.165 OF 2017 IN COMPLIANCE OF THE HON'BLE NGT ORDER DATED 21-8-2020**

**1. BACKGROUND**

**Hon'ble NGT Order dated 21-8-2020:** The Hon'ble National Green Tribunal (Southern Zone), Chennai, vide order dated 21-8-2020 in O.A.No.165 and 277 of 2017 (SZ) & I.A.20/2020 in O.A.No.165 of 2017 appointed "*a Joint Committee, comprising of (1) Senior Officer of the Regional Office of MoEF & CC, Chennai (2) Senior Officer of State Coastal Zone Management Authority, Tamil Nadu and (3) Senior Officer from National Highways Department, Chennai to inspect the area and find out as to whether there is any violation or damage caused on account of any violation said to have been committed by the project proponent in carrying out the operation of laying down the pipeline in CRZ zone and if there is violation, action taken including assessment of environmental compensation may be imposed*".

The Hon'ble NGT also directed the Joint Committee "*to assess as to whether all precautionary measures have been taken to avoid future accident of oil spillage etc., and whether the pipeline provided are sufficient to meet the requirements and if there is any deviation of the conditions imposed, suggest remedial measures to rectify the same and submit the report*" and mentioned that the Regional Office of MoEF & CC, Chennai will be nodal agency for coordination and for providing necessary logistics for this purpose.

In the Hon'ble NGT Order dated 21-8-2020 it is mentioned that "I.A.20 of 2020 in O.A.No.165 of 2017 is dismissed".

**Petitioner's prayer:** Main prayer in the application was to direct the authority to revoke the CRZ clearance given to the project authority (CPCL) and to restore the project area and to take appropriate action against the CPCL for violation of the CRZ clearance.

## 2. JOINT INSPECTION OF THE COMMITTEE

As per the direction given by the Hon'ble NGT, the Joint Committee comprising of (i) Dr. R. Sridhar, Scientist 'D', Regional Office of MoEF&CC, Chennai (ii) Dr. K. G. Prijilal, Regional Office of MoEF&CC, Chennai (iii) Shri. D. Eswaran, Assistant Conservator of Forests (ACF), State Coastal Zone Management Authority, Tamil Nadu (iv) Shri. S. Janakumar, Project Director, National Highways Department, Chennai, as nominated by concerned departments/offices, inspected the site on 31-10-2020 along with the project authorities from CPCL. During the visit it was noted that the newly laid pipeline is in operation and old one was decommissioned.

Photos taken during the site inspection can be seen at **Annexure-1**.

As per the information provided by the CPCL, the project is being operated after obtaining necessary permissions / approvals from competent authorities. CPCL obtained the following necessary approvals:

- (i) CRZ clearance from the MoEFCC (**Annexure-2**)
- (ii) Consent for Establish and Consent to Operate from TNPCB (valid till 31 March 2024) (**Annexure-3**)
- (iii) Scheme construction approval from Chief Controller of Explosives, Petroleum Explosives Safety Organisation (PESO), Nagpur (**Annexure-4**)
- (iv) Permission for laying new crude pipeline inside Chennai Port trust
- (v) Approval for laying pipeline along Ennore expressway and Manali Oil Refinery Road from National Highways Authority of India (**Annexure-5**)
- (vi) Grand of Way leave facilities to cross railway land from Southern Railways (**Annexure-6**)
- (vii) Approval for laying pipeline crossing North Buckingham canal from PWD, Chennai (**Annexure-7**)
- (viii) Approval for laying of pipeline at Chennai – Ennore road.
- (ix) Permission from Corporation of Chennai (Letter from DRO (Tiruvottiyur) dated 1-6-2016 – **Annexure -8**)

## 3. STATUS OF THE 42” CRUDE PIPELINE PROJECT

During the inspection, CPCL has submitted a report on the present status of the project to the Committee (**Annexure-9**). The work of laying 42” new crude

pipeline commenced on 07-06-2017 and the same was mechanically completed on 04-10-2018. The pipeline was commissioned on 24.12.2018 and CPCL started using the pipeline for transferring crude oil from Chennai Port to CPCL. The new 42" crude pipeline is operational since then. **The pipeline project was dedicated to the nation by the Hon'ble Prime Minister on 10-02-2019.**

#### **4. SAFETY FEATURES INCORPORATED IN THE DESIGN AND EXECUTION OF THE NEW 42" CRUDE PIPELINE PROJECT OF CPCL**

The Joint Committee, while assessing any precautionary measure are taken to avoid future accident of oil spillage etc., and whether the pipeline provided are sufficient to meet the requirement, observed that key safety features, listed below, are incorporated in the design and execution of the new 42" crude pipeline project of CPCL as per the CRZ clearance.

- 1) Higher thickness of pipe was used for increased safety of pipeline. 12.5 mm thick pipe was used for open cut method and 17.5 mm thick pipe was used for Horizontal Directional Drilling (HDD) method.
- 2) Three Layer Polyethylene (3LPE) Coated pipes were used for prevention of external corrosion of pipeline.
- 3) Impressed current cathodic protection has been provided to protect the pipeline from corrosion.
- 4) SCADA based Leak Detection System has been provided for the crude pipeline.
- 5) Corrosion Inhibitor System has been provided.
- 6) The pipeline was designed as Piggable pipeline which permits cleaning of pipeline using pigs to prevent internal corrosion. Health assessment through intelligent pigging can be done for this pipeline.

Information on significance of the new crude oil pipeline project and Distinctive State of the Art and safety features of the project as submitted by the CPCL is given at **Annexure-10.**

CPCL has prepared and adopted a "Crisis Management Plan for New 42" Crude Oil Pipeline Project" (**Annexure-11**). It was suggested that "in case of leak in the crude oil pipeline, the same will be collected from leaky location and the oil content will be recovered after treating in the existing effluent treatment plants at the Refinery". As per the Plan, "the existing 30" crude oil pipeline will be made hydrocarbon free by water and steam flushing. The same will be disconnected and discontinued. As the existing 30" crude oil pipeline is buried, the same shall be left as it is and will be declared as redundant".

Further, it was claimed by the Applicant that necessary safety measures were not provided for laying down the pipeline and it was contended that one accident occurred alleging death of a child because of the non-compliance of necessary safety measures while laying the pipeline. During the meeting with CPCL and site inspection, it was informed by the CPCL that the above claimed death of a child was occurred not in the project area and the incident was not connected with the construction activities.

With regard to the representation dated 25-6-2017 of Shri M.R.Thiyagarajan, president , Meenava Thanthai, K.R Selvarajkumar Meenava Nala Sangam, Chennai, regarding alleged violations, in respect of CRZ clearance, it was informed by the Tamil Nadu Coastal Zone Management Authority (TNCZMA), the said representation was forwarded to the Tamil Nadu Pollution Control Board by the TNCZMA, vide letter dated 8-9-2017 with a request to furnish present stage of project implementation (**Annexure-12**). The prayer of the said representation was also to revoke the CRZ clearance given to the project authority (CPCL).

CPCL has the following mechanism of inspection and monitoring of 42” crude pipeline:

1. Daily walk through of pipeline from CPCL to Chennai Port trust (Inspection report dated 10-20-2020 is at **Annexure-13**).
2. Monitoring of cathodic protection by taking pipe to soil potential once in a month (**Annexure-14**).
3. Soil and Ground water sample test along the new 42” crude oil pipeline route and soil and water analysis has been carried out before commissioning and also after commissioning of the pipeline (**Report of the Soil and Ground water Analysis carried out through IIT, Madras is given at Annexure-15**).

The IIT, Madras conducted a study on ground water samples in 2019 and concluded as *“This report gives the details of ground water sample tests conducted after 3 months at new crude oil pipe line route from Chennai Port to Manali refinery in the month of February 2019. Physical, Chemical and Biological parameters have been analyzed to assess the existing status of the ground water quality and compared with results of soil samples tested data after 3 months. The results of ground water samples have been compared with. IS 10500:2012 code Standards. Two analytical methods were primarily used to detect the oil contamination. They are UV-VIS*

*spectrometer and Fourier transforms infrared spectrometer. UV-Vis studies are good enough to understand any crude oil contamination. FTIR studies are done to get more confirmation. **Based on conducted test results, there was no oil contamination on both water samples. Comparison of test results of stage-1 and stage-2 it is concluded that there are no leakages or spills from crude oil pipe and also there is no contamination of water in the new pipe line surrounding area***".

## **5. CONTRACT EXECUTION METHODOLOGY**

The Petitioner contended that the project authority CPCL, handled no qualified engineers to do this project with scientific technology. As per the information provided by CPCL, an agreement was entered with Indian Oil Corporation Limited (Pipelines Division) for providing Project Management Consultancy (PMC) Services for laying of new Crude Oil Pipeline from Chennai Port to Manali Refinery. CPCL engaged IOCL-Pipeline Division for providing design, detailed engineering and procurement services, construction, installation, pre-commissioning, commissioning and performance guarantee run of the pipeline as per the agreement and the work was completed by IOCL on 24.12.2018.

As per the information provided by CPCL, IOC had engaged M/s. NRP project Pvt. Ltd. for laying of Crude Oil Pipeline from Chennai Port to CPCL Refinery and Combined Station works of Scrapper Launching Barrel and Scrapper Receiving Barrel Stations. M/s. NRP Projects Pvt. Ltd. was a techno-commercially qualified party based on the Global tender issued by IOCL as per the tender specifications and experience criteria.

CPCL informed that the pipeline work has been completed as per the applicable Codes, standards of cross-country crude oil pipelines and contract specifications and the pipeline has been hydrostatically tested at the requisite pressure. All the requisite inspections and Pre-commissioning Audits by Oil Industry Safety Directorate (OISD) have been carried out and the pipeline has been commissioned.

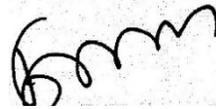
The Joint Committee during the inspection noted that the pipeline system has been provided with state of art features including 24 hours monitoring through Supervisory Control and Data Acquisition (SCADA), Leak detection system, 24 hours monitoring of SRB & SLB Stations through CCTV, dedicated Optical Fibre Cable (OFC) for real time monitoring of parameters.

## 6. CONCLUSION

On examination of facts and documents provided to the Committee and based on the observation made during the site visit, the Joint Committee observed that there is no violation or damage caused to the environment during laying of crude oil pipeline by CPCL and the project was executed in compliance of necessary permissions / approvals from competent authorities.



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