



## गेल (इंडिया) लिमिटेड

(भारत सरकार का उपक्रम – महारत्न कंपनी)

## GAIL (India) Limited

(A Government of India Undertaking - A Maharatna Company)

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**GAIL/PROJ/C2-C3/PIPELINE/01/E27733/3799**

**Date: 18.07.2024**

To  
The Secretary,  
Petroleum and Natural Gas Regulatory Board,  
1<sup>st</sup> Floor, World Trade Centre,  
Babar Road, New Delhi-110001

**Subject: Laying of Dedicated Pipeline (14" x 360 km) from GAIL, Vijaipur to GAIL, Pata under Regulation 19(2) of PNGRB (Authorizing Entities to Lay, Build, Operate or Expand Petroleum and Petroleum Product Pipelines) Regulations, 2010.**

Madam,

GAIL is operating a Petrochemical Complex at Pata, Uttar Pradesh where Ethane / Propane (C2/C3) are extracted from natural gas for producing petrochemicals such as HDPE (High Density Poly-Ethylene), LLDPE (Linear Low Density Poly-Ethylene) etc.

In order to meet the feedstock requirement of the Petrochemical Complex at Pata, the Board of Directors of GAIL has accorded approval for laying a Dedicated Pipeline for transporting C2/C3 from GAIL, Vijaipur (C2/C3 Recovery Plant), Madhya Pradesh to Petrochemical Complex, Pata.

Salient features of the proposed Dedicated Pipeline are given below:


- Length and Size : ~ 360 km, 14" Diameter
- Product : C2/C3 Liquid
- Start Point : GAIL, Vijaipur, Madhya Pradesh
- End Point : GAIL Petrochemical Complex, Pata, Uttar Pradesh
- Design Throughput : 119 TPH [180 TPH (100% C2) with additional pump]
- Design Pressure : 98 Kg/cm2

In this regard, the following information are submitted under Regulation 19(2) of the PNGRB PPPL Authorization Regulations for kind consideration of the Hon'ble Board.

- Project Brief - **Annexure-A**
- Tentative Route Map - **Annexure-B**

This letter has the approval of Competent Authority in GAIL.

Yours Sincerely,

  
(Ashish Anand Gupta)  
CGM (Mktg.-RA & Trans)

**Encl: As above**

**Project Brief of proposed C2/C3 Dedicated Pipeline  
from GAIL, Vijaipur to GAIL Petrochemical Complex, Pata**

**A. BACKGROUND:**

GAIL is operating a Petrochemical Complex at Pata, Uttar Pradesh where Ethane/Propane (C2/C3) are extracted by processing natural gas in the Gas Processing Unit (GPU), which is further cracked in the Gas Cracker Unit to produce Ethylene and Propylene. The Ethylene produced is finally converted into HDPE (High Density Poly Ethylene) and LLDPE (Linear Low Density Poly Ethylene) in the downstream polymer units.

Rich gas is processed at GPU, GAIL, Pata to recover C2/C3 components from the Natural Gas which becomes the feedstock for production of HDPE and LLDPE at Petrochemical Complex, Pata. Presently, rich gas availability through pipeline has reduced, and hence, in order to meet the feedstock with desired C2/C3 fraction, Board of Directors of GAIL has accorded approval to lay a Dedicated Pipeline for transporting C2/C3 liquid from GAIL, Vijaipur (C2/C3 Recovery Plant) to GAIL, Pata.

**B. DESIGN BASIS:**

1	Design Pressure at Source	98 kg/cm <sup>2</sup> g
2	Available Pressure at Source	94-95 kg/cm <sup>2</sup> g
3	Terminal Drop	~ 3 kg/cm <sup>2</sup> g
4	Design Pressure at Terminal Point	Min. 60 kg/cm <sup>2</sup> g along the pipeline for C2-Case and 50 Kg/cm <sup>2</sup> g for C2/C3-Case
5	Operating Pressure at Terminal Point	As per Hydraulics
6	Pipeline Operating Life	25 years
7	Design Pressure of Pipeline	98 kg/cm <sup>2</sup> g
8	Design Temperature	Above Ground : - 29 to 65 °C Below Ground : - 29 to 60 °C
9	Material of Construction	Carbon Steel
10	Pipeline Route	Route is based on desktop study. However, it may change after detailed route survey and as per actual site conditions during the execution.
11	Line Pipe	Conforming to API 5L PSL 2. Type of line pipe to be used shall be Seamless/ ERW/ LSAW/ HSAW. Line pipe grade shall be Gr. X70 for Trunk-line with varying thickness depending upon the location class. Pipe wall thickness shall conform to ASME B31.4 and shall also meet the requirements of OISD and PNGRB PPPL T4S Regulations.
12	SCADA	OFC based system

13	Design Codes	Latest edition of ASME B31.4, PNGRB Regulations and OISD Guidelines will be followed, as applicable. However, in case of contradictory stipulations, the more stringent conditions will prevail.
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**C. ROUTE DESCRIPTION:**

The proposed Dedicated Pipeline route from GAIL, Vijaipur to GAIL, Pata passes through the districts of Guna (M.P.), Shivapuri (M.P.), Jhansi (U.P.), Jalaun (U.P.) and Etawah (U.P.) Districts, falling in the states of Uttar Pradesh (U.P.) and Madhya Pradesh (M.P.).

It is planned to lay the proposed Dedicated Pipeline along the existing Integrated HVJ Pipeline for which additional / new RoU of 10 metre may be required.

Annexure-B

