Chhara LNG Connectivity Pipeline: Diversion of 0.060 Hect. Of Protected Forest Land (Road Side Strip land) for laying 36" dia Natural Gas Pipeline for transportation of Natural Gas from GSPL's Lothpur CNG station in village Lothpur, Taluka Jafrabad, District Amreli to Chhara LNG Terminal Near Village Chhara, Taluka Kodinar in District Gir Somnath – Pipeline laying across to various State Highway and National Highway by Trenchless Technique, Horizontal Directional Drilling (HDD Method)

Annexure - 4

PROJECT REPORT

INTRODUCTION:

Gujarat State Petronet Limited (GSPL), having the registered office of the company situated in the State of Gujarat at Gandhinagar.

Gujarat State Petronet Limited, (GSPL) is currently in the business of Natural Gas distribution throughout pipeline and supplying Natural Gas to more than 85000 satisfied industries, commercial and domestic customer in the cities of Gujarat State.

As a part of the project, GSPL has planned to lay 36"dia Natural Gas Pipeline from GSPL's Lothpur CNG station in village Lothpur, Taluka Jafrabad, District Amreli to Chhara LNG Terminal Near Village Chhara, Taluka Kodinar in District Gir Somnath for transportation of natural gas to various demand centers. The length of proposed pipeline is about 86.614 Km. The proposed pipeline shall be laid in the space available along side of the existing ROW of State Highway at a depth of 1.2 meter below the lowest ground level and width of trench will be 10 meter. GSPL will cross the State Highway and National Highway by Trenchless Technique Horizontal Directional Drilling (HDD) Method.

One of the main objects to be pursued by the company on its incorporation is to design lay, construct and install pipeline for gas transportation and other installation including related equipments, pipes, valves fillings, meters and other allied accessories necessary and useful for the supply of gas.

Investigation: -

The route has been carefully selected to minimize total length and forests based on desktop study and reconnaissance survey carried out by consultants M/s. Secon Pvt. Ltd.

The alignment is selected in such a way that while crossing the area under forest cutting of trees is minimized / avoided.

Design:-

The entire pipeline will be designed to withstand a Maximum Design Pressure of 98 Barg. The design code that generally will be followed would be ASME B31.8 PNGRB technical guidelines. However, good engineering practices and other guidelines from other international standards like OISD (Oil Industries and Safety Directorate) will be followed as felt necessary to make the pipeline operation standard and safe. 20% excess flow capacity will be built in to pipe size to provide flexibility to the customer and to absorb hourly fluctuations of its consumption and spread its committed quantity over 24 hours.

Pipe material: -

Pipe material would be American Petroleum Institute (API) grade steel, inspected at mills through third party inspection agency. All valves would be full-bore ball with gas/gas-oil actuators for operation. Entire pipeline would be pig-gable. All pipe fittings would be matching type and class.

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Chhara LNG Connectivity Pipeline: Diversion of 0.060 Hect. Of Protected Forest Land (Road Side Strip land) for laying 36" dia Natural Gas Pipeline for transportation of Natural Gas from GSPL's Lothpur CNG station in village Lothpur, Taluka Jafrabad, District Amreli to Chhara LNG Terminal Near Village Chhara, Taluka Kodinar in District Gir Somnath – Pipeline laying across to various State Highway and National Highway by Trenchless Technique, Horizontal Directional Drilling (HDD Method)

Corrosion protection: -

The pipeline will be coated with 3 layers of Polyethylene (PE). All field joints will be coated with Raychem sleeve or equivalent followed by Holiday detection to ensure continuity of corrosion protective layer. A suitable, impressed current cathodic protection system will be provided as an additional protection to the pipeline.

A competent pipe laying contractor will be engaged for this work. The project will be monitored at site and office levels through latest project management software system like MS.

The pipeline will be constructed as per the latest international standards like ASME B31.8 and PNGRB technical guidelines. All good engineering practices will be followed during fabrication and laying of the pipe including usage of approved welding procedures, qualified welders and will identified consumable. Radiography of weld joints will be carried out as per applicable standard. Periodic pigging of the pipeline during construction will ensure expeditious completion and smooth commissioning. Entire execution will be supervised by a competent Third Party Inspection (TPI) agency who will in turn test and certify the pipeline trial commissioning will also be done under the supervision of this TPI.

Investments:-

The estimated total cost of the project is Rs. 408 Cr. Approx.

Time Schedule:

The completion schedule for this project is 2019 -20.

Place: Gandhinagar Date:/..../2019 For, Gujarat State Petronet Ltd

Avinash Kumar Singh AGM (Projects & RoU)