



Ref:

Date: 1st Dec 2020

Date:

Joint Advisor I/c (Auth)
Petroleum & Natural Gas Regulatory Board
World Trade Centre
Babar Road, New Delhi 110001

Kitt
01/12/2020

JA (Auth - D)

Kind attention: **Mr. K Kittappa**

Subject: **Pipeline connecting Numaligarh Refinery and proposed facilities at Dabidubi**

Dear Sir

In reference to your letter no PNGRB/Auth/3-PPPL (9)/2020 (P-2457) dated 4th Nov 2020 on above subject, we are enclosing herewith our application for laying the subject LPG Pipeline from Numaligarh Refinery to the proposed facilities at Dabidubi under Regulation 19 (2) of PPPL Authorization Regulations

Shall be grateful if approval/permission is accorded for the same

Thank you
For Numaligarh Refinery Ltd

[Signature]
Dhiraj Adhikary
Head Coordination

Encl:

- Copy of the application under Regulation 19 (2)
- Route Map from NRL Site to Dabidubi
- Pre-Feasibility Report

Application form for submitting request for dedicated pipeline application under Regulation 19 of Petroleum and Natural Gas Regulatory Board (Authorizing Entities to Lay, Build, Operate or Expand Petroleum Products Pipelines) Regulations, 2010

SN	Description	Details
1.	General Details	
a	Name of the firm	Numaligarh Refinery Ltd.
b	Type of firm - Public Limited Company / Private Limited Company / Partnership firm / Proprietorship firm / Others (please specify)	Central Govt. PSU
c	Date of incorporation and date of commencement of business	22 nd April 1993
d	Address of Registered office	122A, G.S. Road, Christian Basti, Guwahati-781005, Assam
	Contact details	
e	Name of the applicant Designation of the applicant Phone number Mobile number of authorized Signatory EMAIL ID:	Dhiraj Adhikary Head Coordination 011-23739413 9811154794-14 d.k.adhikari@nrl.co.in
2.	Details of the proposal	
	Originating point of the pipeline	Numaligarh Refinery Site, Dist:- Golaghat, Assam
	End point of the pipeline	Dabidubi Gaon, Dist:- Golaghat, Assam
	Brief of the process	Rundown LPG from buffer vessel in Refinery will be pumped through the proposed underground pipeline to upcoming storage facility at Dabidubi Gaon

	Please confirm whether detailed route map of the proposed pipeline is attached.	Yes
	Please confirm whether detailed feasibility report is attached.	Pre-feasibility report is attached
3.	Details of the pipeline (product)	LPG
a	Length of pipeline	13.4 Km
b	Pipeline Diameter	8 inch
c	Pipeline Material	Carbon Steel
d	Design Capacity	600 KTPA
e	Design Pressure	30 Kg/cm ²
f	Design Temperature	65 degrees C

Date: 1st Dec 2020

Place: New Delhi

Name and signature of entity or authorized signatory



Official Seal

D K Adhikary
Head - Coordination
Numaligarh Refinery Ltd
6th Floor, Tolstoy House
15-17 Tolstoy Marg
New Delhi - 110001

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1. EXECUTIVE SUMMARY:

Project Name	Decongestion of LPG facilities for Numaligarh Refinery Expansion Project
Project Proponent	Numaligarh Refinery Ltd represented by Mr. A.P Chakravorty Sr. Chief General Manager (Projects), P.O : N. R. Project, District : Golaghat, Assam, PIN-785699
Project Location	Survey no.-273/196 in Village - Dabidubi (Tehsil- Khumtai Revenue Circle) Dist. Golaghat, Assam. Coordinates :- 26 ° 37'8.59" N 93°53'55.52"E
Total Plot Area	~48 Hectare (~120 Acres)
Plant Operations	<ol style="list-style-type: none">1. LPG Receipt: By 8" Underground Pipeline. (~15 Km, of capacity ~ 600 (KTPA)2. Storage: (8 x 2500+ 4 x 1000) MT LPG Mounded Storage Vessels.3. Cylinder Filling: 2X24 Station electronic filling carousel + LPG Bulk Loading : 2X8 Bay Loading Gantry
Project Cost	~Rs 440 Crores

2. INTRODUCTION OF PROJECT /BACKGROUND INFORMATION:

i. Identification of project and project proponent:

Numaligarh Refinery Limited (NRL), the project proponent, constructed grass root 3MMTPA capacity Numaligarh Refinery which is the outcome of historic Assam Accord, 1985 and is situated on the NH-39. NRL is a joint venture Central Public Sector Undertaking with following shareholding pattern:

a) Bharat Petroleum Corporation Ltd.	- 62.65%
b) Oil India Ltd.	- 26%
c) Govt. of Assam	- 12.35%

Commercial production of existing 3MMTPA Numaligarh Refinery started in Oct, 2000 and since then it is continuously striving its journey with success and contributing immensely to the state as well as central exchequer every year apart from giving economic boost to this under developed region of North East India.

Following two mega project initiatives of NRL are underway as fallout of “Hydrocarbon Vision 2030 for North East” and “Act East Policy” of Govt. of India:

1. Bio-Refinery project with project cost of Rs.1250 Crore under JV company and expected to complete within 3 years. It will produce green fuel 2G Ethanol from bamboo feedstock and the product will be used for blending with Motor Spirit. The project construction has already started.
2. 6MMTPA Refinery as expansion project with total estimated project cost of Rs.22,594 crore to process imported crude. The crude will be received at Paradip Port and pumped through 1400KM long pipeline to Numaligarh. The project is approved by CCEA in Jan, 2019 and expected to complete within 4-5 years. Environmental Clearance by Ministry of Environment, Forest and Climate Change by letter dated 27.07.2020 for our Refinery Expansion Project

Now for decongestion of LPG facilities in view of refinery expansion, NRL proposes to construct a new LPG facility at Dabidubi, Tehsil- Khumtai Revenue circle District-Golaghat, Assam of with LPG storage capacity 600 KTPA in mounded storage vessels (MSV) with bottling capacity 120 KTPA.

LPG will be received by laying a new underground pipeline of approx. 15 kilometers from the refinery or otherwise by bulk LPG Lorrie in MSVs. LPG will be pumped from MSV to cylinder

filling shed with 2X24 station electronic carousals for cylinder filling operation. Filled LPG cylinders will be dispatched to the market by packed Lorries. Moreover LPG will be loaded into Lorries in bulk LPG loading gantry for other bulk LPG consumers.

ii. Brief description of nature of the project:

The proposed project is development of a new LPG facility along with receipt pipeline of LPG which will be a receipt line from Numaligarh Refinery Limited. LPG received will be stored in Mounded Storage Vessels (MSV). From MSV product (LPG) will be pumped to filling shed into electronic carousals to fill LPG in cylinders. Filled LPG cylinders will be sent to market by using packed lorries.

The details of the proposed facilities are given below;

1. The mode of receipt of LPG is through LPG pipeline from Numaligarh Refinery. (An 8" dia LPG line of 15 KM of 600 KTPA capacity).
2.
 - 24000 MT Mounded Storage Vessels for LPG Storage.
 - 2x24 Station electronic cylinder filling Carousal.
 - 2X8 bay loading gantry

iii. Need for the project and its importance to the country and region:

LPG is very important fuel for all household for cooking purpose. LPG is a clean fuel and does not produce any environment pollution. The Govt. of India is also promoting LPG fuel for household usage by various initiatives like PM Ujjwala Yojana etc.

The proposed LPG bottling plant is intended to cater the domestic & industrial demand of LPG in Assam and other North Eastern States, which will provide impetus to the Industries/businesses which uses LPG as their fuel.

iv. Demand Supply Gap

LPG demand is likely to be growing at average annual growth rate of 2.5 % as per Petroleum Planning Analysis Cell (PPAC). The proposed LPG plant at Dabidubi will cater to market demand in Assam and other North Eastern States. It will also facilitate timely delivery of domestic LPG refills to the customers in these states.

v. Import Vs. Indigenous production :-

At proposed Dabidubi LPG plant, LPG will be received from indigenous LPG production from Numaligarh Refinery through pipeline. Also, there will be provision of supplying LPG

to Dabidubi LPG plant from other plant in bulk. Based on the availability of product Indigenous /imported product will be supplied to proposed Dabidubi LPG plant.

vi. **Export Possibility :-**

There is no export possibility envisaged.

vii. **Domestic/Export Markets:-**

Filled LPG cylinders and bulk LPG will be provided to domestic markets

viii. **Employment generation (Direct/Indirect) due to the project:**

The construction of proposed project involves civil, mechanical, electrical and instrumentation work, hence it would require significant workforce of non-technical and technical persons during construction phase. NRL will use good faith efforts to employ local people from the nearby villages depending upon the availability of skilled & un-skilled manpower surrounding the project site. During operation phase also direct and indirect employment opportunities will be generated for technical and non technical persons depending on the requirement.

3. PROJECT DESCRIPTION:

i. **Type of the project including interlinked & independent project:**

The proposed LPG facility is covered under category B, project/activity 6(b) as per General Condition of the schedule of EIA notification 2006. However, as per Ministry Notification vide no. S.O 1960(E) dated 13th June, 2019 has omitted entries relating to the item 6(b) of the EIA Notification, 2006, implying that the project under schedule 6(b) do not require prior environmental clearance for its operations/activities. The LPG pipeline from NRL to the proposed LPG facility falls under schedule 6(a) and 'A' category of EIA notification 2006. But EC is not required as it will not pass through any national park/sanctuaries/ecologically sensitive area. However, the project site is within 'No Development Zone' of Numaligarh Refinery Limited vide MOEF notification no. S.O.481 (E) dated 5th July 1996. As per the condition of said NDZ notification, prior approval is required from MOEF&CC, Govt. of India, for which application will be made in due course of time.

ii. **Project Location:**

a. Project address: - P.O. Dabidubi, via Badulipar, PIN- 785611 District olaghat, Assam

b. Coordinates: - 26 ° 37'8.59" N 93°53'55.52"E

c. Map showing general location/Specific location

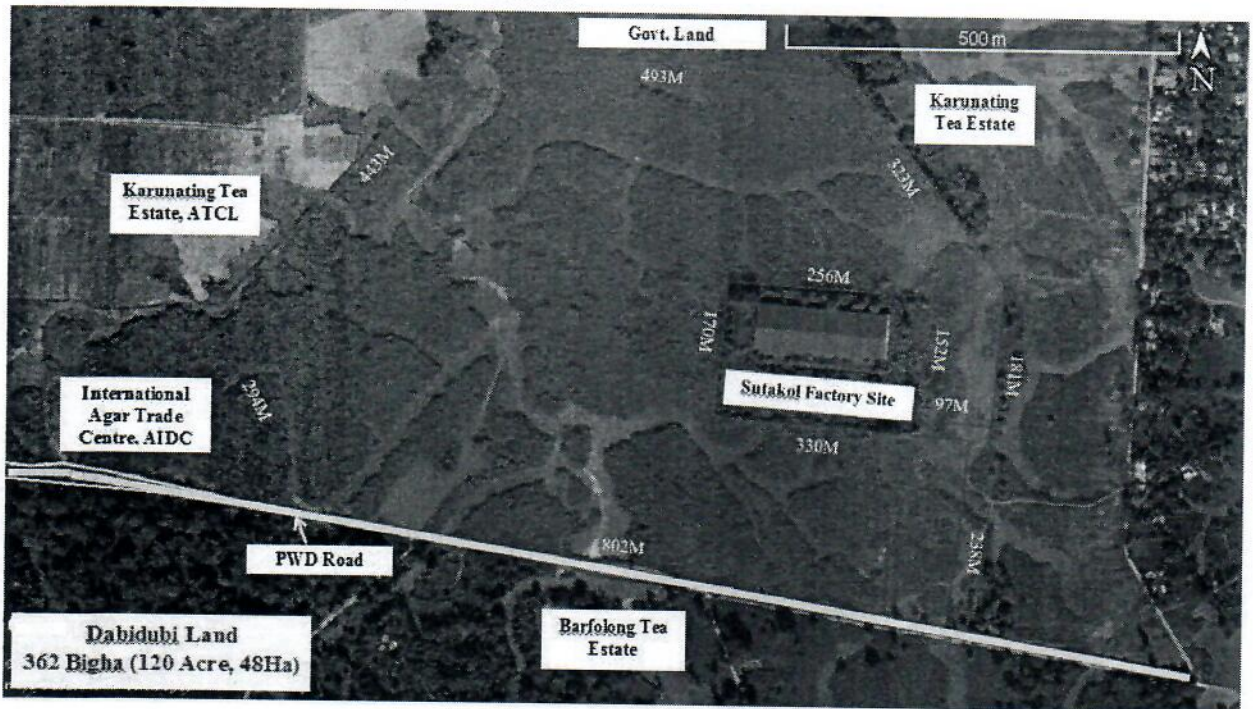


Fig : Map of Proposed Project Site for LPG Facilities of Numaligarh Refinery Ltd. Dabidubi Village, Khumtai Mouza, Khumtai Revenue Circle Golaghat District, Assam

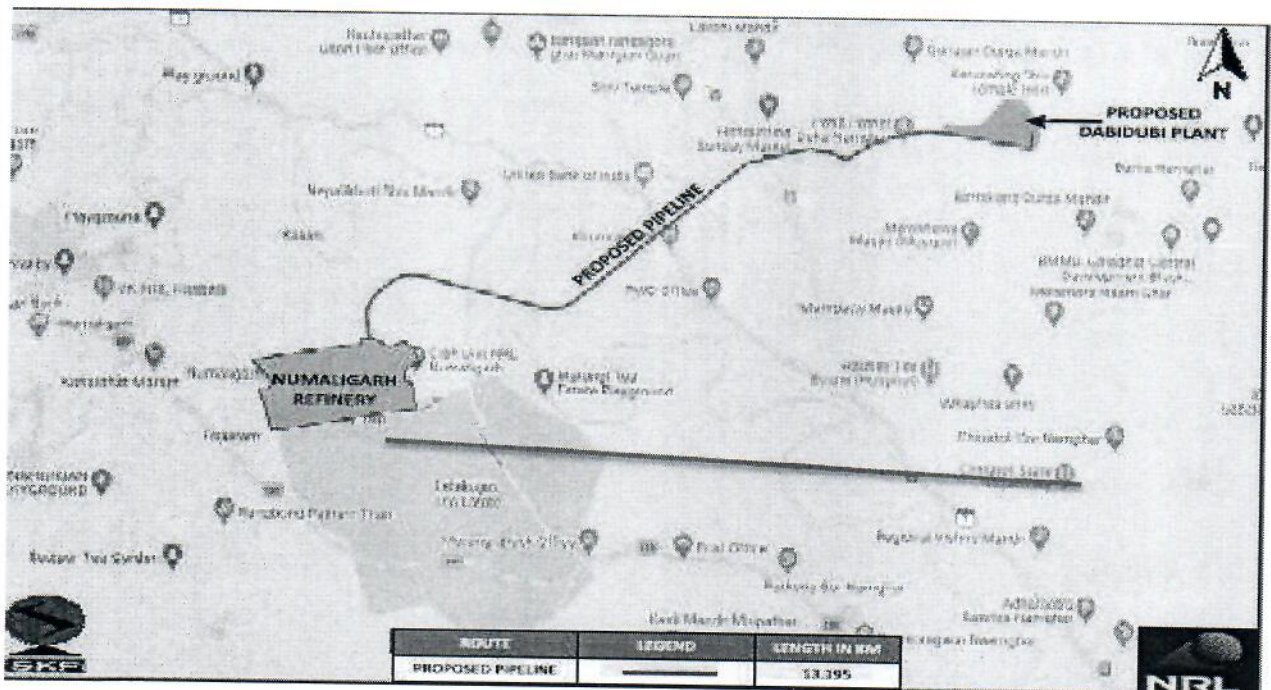


Fig : Map showing pipeline route detail

iii. Details of alternate site

No alternative site was examined for the proposed LPG Bottling Plant.

iv. Size or magnitude of Operation:

LPG Receipt	Through 8" underground LPG pipeline from Numaligarh Refinery (15 kilometer , 600KTPA) Bulk Lorry Receipt: 2x8 bay loading /unloading gantry
LPG Storage	(8 x 2500+ 4 x 1000=24000)MT Mounded Storage
Cylinder Filling	2 x 24 Station electronic filling carousals
Dispatch	Through Packed cylinders Lorries. Bulk Lorry Dispatch: 2X8 bay loading/unloading gantry

v. Project Description with process details

i. Receipt & Storage of product:

- A. Through LPG pipeline from Numaligarh Refinery Ltd.
- B. Bulk Truck unloading.
- C. LPG storage into (8 x 2500+ 4 x 1000) MT Mounded Storage Vessels (MSV).

ii. Bottling:

- A. LPG pumping from MSV to 24 station electronic carousals in filling shed.
- B. Bottling of LPG cylinders using 2x 24station electronic carousals.
- C. Quality check on filled cylinders
- D. Loading into Trucks

iii. Dispatch:

- A. Loading of quality checked filled LPG cylinders in trucks.
- B. Supply & distribution to markets.

vi. Process Description:

Cylinder / Bulk LPG Filling/dispatch Process is depicted as below.

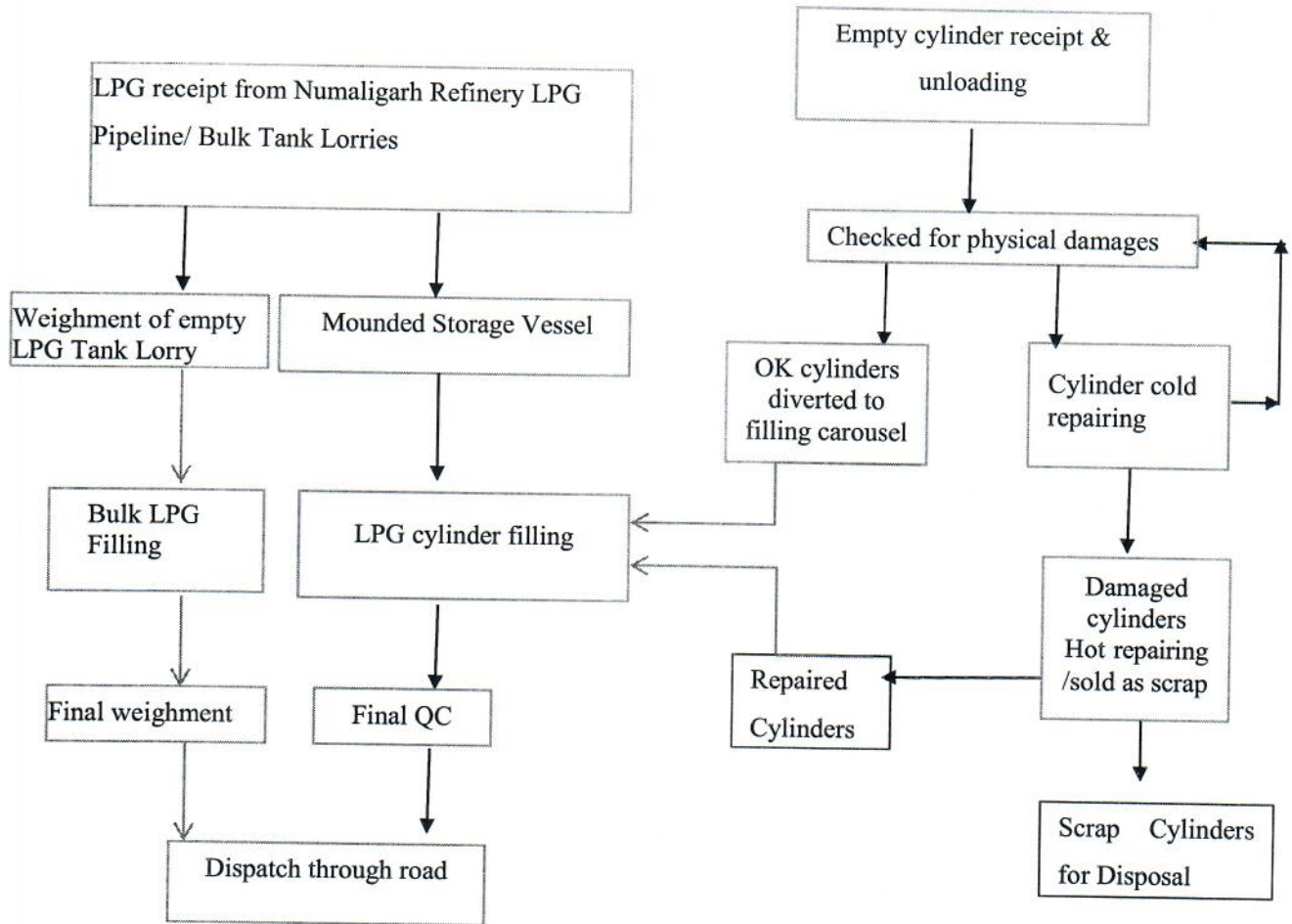


Fig . Product Flow

The entire operation of RECEIPT, STORAGE, FILLING AND DISPATCH of LPG is carried out in a closed system thereby eliminating risk of leakage of products and to achieve enhanced safety. There is no chance of mixing LPG with atmosphere outside. The facility shall have a cold flaring facility for safe disposal of LPG into atmosphere in case of any requirement. The disposal to be in a controlled manner with all necessary safety measures. The facility shall have a Ethyl Mercaptans dosing facility as stanching agent for dosing the chemical before bottling. LPG quality testing facility shall also be available.

- i. **Raw material required along with estimated quantity, likely source, marketing area of final products, mode of transport of raw material and finished products:**

There is no manufacturing process involved in the proposed LPG plant hence no raw material is required. Finished product i.e. LPG will be bottled in the cylinders by using LPG pump and electronic carousals and bulk LPG will be loaded in LPG mobile vessels.

Source of product receipt is LPG pipeline from Numaligarh Refinery. Marketing area will be in Assam and other North Eastern States. Filled LPG cylinders after quality check will be dispatched to markets through packed trucks.

- vii. **Resource optimization /recycling & reuse envisaged in the project if any should be briefly outlines :**

No recycling & reuse envisaged in the proposed Dabidubi LPG facility.

- viii. **Availability of water, its source, Energy /Power requirement and source should be given:**

Water requirement of proposed LPG facility will be met through bore well. During operation phase fire water tanks shall hold water to meet firefighting requirements as per OISD 144. Drinking water will be made available for all the workers in the plant premises. Connected load is estimated to be approx.2000 KVA. For normal Operation Power would be drawn from Assam State Electricity Distribution Co. limited. DG Sets will be provided of adequate capacity to take care of operation in power failure.

- ix. **Quantity of waste to be generated (liquid and solid) and scheme for their management / disposal:**

No industrial solid waste will be generated during the bottling process. Damaged cylinders will be segregated & stored on site prior to disposal as scrap metal. The solid and liquid waste from the toilets of Admin and other building shall be taken through Septic Tank and Soak Pit as per SPCB standards. Effluent Treatment Plant will be provided for the plant water treatment.

4. SITE ANALYSIS:

i. Connectivity:

The proposed site is located at Village- Dabidubi in (Tehsil-Khumtai Revenue Circle)
Dist. Golaghat, Assam.

Nearest Main Road	Gohain Ali, Atmaram Gogoi Road and Satakali Ali
Nearest High Way	NH-37 (7.5KM)
Nearest Railway Station	Golaghat (25KM)
Nearest Bus Station	Golaghat (25KM)
Nearest Airport	Jorhat (50KM)
Nearest Water Body	River Dhansiri \approx 6 KM Aerial distance

ii. Land form, land use and land ownership:

Govt of Assam has allotted a plot of land of \sim 100 acres at Dabidubi to M/s NRL. Registration of the land is in progress.. The land is already industry class and there will be no change in land use.

iii. Topography:

The existing topography of the project site is high land with natural channels for storm water drainage. The surrounding area is tea garden covered with tea bushes and shed trees. The area is not exposed to any flood since there is no river in the vicinity. The area is about 90M from MSL.

iv. Existing Land use pattern (agriculture, non-agriculture, forest, water bodies, (including area under CRZ), shortest distances from the periphery of the project to periphery of the forest, national park , wild life sanctuary, eco sensitive areas, water bodies (distance from the HFL of the river), CRZ. In case of notified industrial area, a copy of the Gazette notification should be given:

The land of the proposed plot is Industry Class classified by collector of Golaghat district. In the said plot there is no human habitation thus there is no resettlement / rehabilitation activities are involved. Site grading/development will be required. There are no trees, only shrubs are there.

- Nearest Water body is Dhansiri River which is \sim 6 KM (Aerial distance) from the proposed site.
- Nearest Wildlife Sanctuary is Nambar Doigrung and is \sim 17 KM (Aerial distance) to its northern boundary.

- Kaziranga National Park is ~22 KM (Aerial distance) to its eastern boundary
- The project site is within 'No Development Zone' of Numaligarh Refinery Limited vide Ministry notification no. S.O.481 (E) dated 5th July 1996. As per the condition of NDZ, prior approval is required from MOEF&CC, Govt. of India, for which application will be made in due course of time.

v. **Existing Infrastructure:**

There is no prominent infrastructure at the project site. Proposed land is mostly vacant.

vi. **Soil Classification:**

Detailed Soil Investigation will be conducted at site and its results will be incorporated in EIA Report.

vii. **Climate Data:**

The climate is moderate at Dabidubi. The Minimum temperature is 6°C and Maximum temperature is 38°C. In a year, the rainfall is in range of 90mm for 1 hr period and 160 mm for 24 hr period.

viii. **Social Infrastructure available:**

The proposed project location is located in the Dabidubi village and 15 Km away from Golaghat Town , where all the social infrastructural facilities are available. Plot is connected with PWD roads and main approach is from NH-37 which is 7.5 KM away

5. **PLANNING BRIEF**

i. **Planning Concept (type of industries, facilities, transportation etc. Town and country planning/development authority classification:**

Numaligarh Refinery Ltd proposes to construct a LPG facility at Village Dabidubi Tehsil- Khumtai Revenue Circle Dist- Golaghat, and Assam. NRL have identified ~48 Hectare (~120 acres) of land at Dabidubi , which is well connected to roads for easy movements of packed lorries. The proposed site is well connected with Govt. Roads (Gohain Ali, Atmaram Gogoi Road and Sutakal Ali) which is then connected to NH-37.

ii. **Population Projection:**

NRL is taking over the industry class land from Govt of Assam at Dabidubi. This is vacant land and hence No Resettlement / Rehabilitation of people is envisaged due to the project .

iii. **Land Use Planning (breakup along with green belt):**

The land use approximate breakup is given in below table:-

Total area	~ 120 acres
Parking Area	12.32 acres
Green Area	7.46 acres
Area for facility & future space for expansion	13.57 acres

iv. **Assessment of Infrastructure demand (physical and social)**

NRL will provide basic utilities and other infrastructural facilities for its employees in the proposed project. All other infrastructure facilities like housing, market, education, communication etc. are well developed in Golaghat/Dergaon/Jorhat which are the nearest towns.

v. **Amenities/Facilities**

A building will be provided for administrative purposes, which includes office space, canteen, amenities etc. with internal partitions / furniture. Rest Room for Tank Lorry drivers shall be provided nearer to packed lorry parking area. Toilet / Wash room will be provided as per requirement. Also proper site services such as First Aid, Drinking Water, etc. will be provided to the workers.

6. PROPOSED INFRASTRUCTURE:

i. Industrial Area (Processing Area)

The main structural facilities for the proposed LPG Terminal include:

1. Security Block
2. Cycle/ Car shed
3. Admin+Amenities Block
4. Planning room / Control room /Time office
5. Change room & toilet
6. Inspection platform
7. Engg./Consumables stores
8. DG shed
9. MCC/MLDB/LT room /HT room
10. Transformer yard
11. Fire water pump shed
12. Air compressor shed
13. Fire water tanks
14. U/G HSD tanks
15. Weigh Bridge
16. Bulk loading/unloading bays
17. Industrial Cylinder Filling shed
18. Filling/Empty cylinder shed
19. Filled cylinder shed
20. Cold repair/Painting shed
21. Degassing unit
22. LPG pump/compressor shed
23. Mounded Storage Vessels
24. Cathodic Protection room
25. Cylinder crushing unit/scrap yard
28. High mast towers
29. Parking area
31. PCV crew rest room
32. Fire control room
33. FW P/H Operator cabin
34. Overhead Tank
35. Health Centre

ii. **Residential Area (Non Processing Area):**

As of now no colony/ residential area is proposed in the project.

iii. **Green Belt:**

Approx 5-10 M width will be included in greenbelt/green area around the boundary of the plot.

iv. **Social Infrastructure**

The proposed site is well connected with Govt. Roads (Gohain Ali, Atmaram Gogoi Road and Sutakal Ali) which is then connected to NH-37 for free movement of man & material .

v. **Connectivity (traffic & transportation road /rail /metro/Water ways etc.)**

The proposed site is well connected with the national high way NH-37 for free movement of man & material. These road are not traffic congested. Nearest railway station in 15 Km from site .

vi. **Drinking water management (Source and supply of water)**

Water requirement for the project will be approx. 80 m³ /day during construction phase and 60 m³/day during operation phase. The source of water is from ground water.

vii. **Sewage system**

The waste water generated will be send to the septic tank followed by soak pit.

viii. **Industrial waste Management**

In the proposed LPG facility, the generation of Solid/Liquid waste will be as follows

a. **During Construction Phase:**

Due to construction material handing like cement, brick, steel, sand etc. These will be used for back filling of the site. Metal scraps will be disposed off through scarp dealers.

b. **During Operation Phase:**

Waste will be generated due to spent oil from DG set, greases, cotton waste, paint residue, sludge from cleaning of mounded storage vessels in 5 years. Waste oil will be stored in MS drums & sent to authorized reprocessors. Sludge from mounded storage vessels & paint sludge will be disposed off through approved agency of NRL.

ix. Solid waste management

There is no manufacturing process involve hence less solid waste will be generated. Solid waste generated like dry garbage will be handed over to authorized recycler. Wet garbage will be used for Composting and manure usage to gardening.

x. Power requirement & supply/ source

Total power requirement is around 2000 KVA and it will be met through Assam Power Distribution Co. Ltd. (APDCL). For power back up DG sets of appropriate capacity will be provided

7. REHABILITATION & RESETTLEMENT (R & R Plan)

i. Policy to be adopted

The proposed plot of Land is industry class land allotted by Govt. of Assam. The land is free from any human habitation , thus no displacement is involved, Therefore , rehabilitation and resettlement activities are not required.

8. PROJECT SCHEDULE & COST ESTIMATE:

i. Likely date of start of construction & likely date of completion

The construction of project will be started after obtaining statutory clearance and completion time is 36 months from the said clearance.

ii. Estimated project cost

The estimated cost of the proposed project is Rs 440 Crores.

9. ANALYSIS OF PROPOSAL

- i. Financial and social proposal with special emphasis on the benefit to the local people including tribal population , if any , in the area
 - a. NRL proposes to construct a LPG Bottling plant of capacity 120 TMTPA and storage capacity of 24 TMT at Dabidubi to supply domestic/commercial cylinders mainly in Assam and other eastern states of India.
 - b. This project will produce both direct and indirect job /business opportunity to the local people. There will be positive Impact on Social conditions in and around the site due to the proposed project.
 - c. Environmental initiatives like Rain Water Harvesting system, green area development solar power panels, energy efficient lighting will be part of this project.
 - d. The marginal impact of setting up the Development in the proposed location will be fully mitigated by the Environment Management Plans. (EMP)
