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Memo No. ୫୨୩ /4F (Misc.),
Dated Jharsuguda the 19th February, 2021.

To

The Regional Chief Conservator of Forests,
Sambalpur Circle, Sambalpur.

Sub: -

Proposal for diversion of 65.4036 ha. of forest land for construction of Jagadishpur-Haldia-Bokara-Dhamra Natural Gas Pipeline(JHBDPL), Odisha Phase-II Project of GAIL (India) Limited in Angul, Deogarh, Sambalpur, Jharsuguda and Sundargarh District.

Ref: -

Letter No. GAIL/ ODISHA/ JHBDPL/ FOREST/ JHARSUGUDA/ 01, dt.17.02.2021 PH-11/2021/3 dt.21.01.2021 of the General Manager (Construction), Gas Pipeline Project Office, GAIL India, Bhubaneswar. (Proposal No.46243/2020 and State SL No. OR-09/2021 dt.19.01.2021)

With reference to the letter cited above, I am submitting herewith the proposals for diversion of 65.4036 ha. of forest land for construction of Jagadishpur-Haldia-Bokara-Dhamra Gas Pipeline(JHBDPL), Odisha Phase-2 Project of GAIL (India) Limited in Angul, Deogarh, Sambalpur, Jharsuguda, Sundargarh District in five copies for onward transmission for obtaining approval of Central Government of India under Section-2 of Forest Conservation Act, 1980.

1. Brief Description:

GAIL India Limited India's principal Gas Transmission and marketing Company, was set up by the Government of India in August 1984 to create gas sector infrastructure for sustained development of the Natural gas sector in the country. The 1800-Km Hazira-Vijaipur-Jagdishpur (HVJ) pipeline became operational in 1989. During 1991-93, Three LPG plants were constructed and some regional pipeline acquired, enabling GAIL to begin its regional gas distribution in various parts of India.

GAIL (INDIA) Limited, India's is flagship Natural Gas company, integrating all aspects of the Natural Gas value chain (including Exploration & production, processing, Transmission, Distribution and Marketing) and its related service. In a rapidly changing scenario, GAIL is spearheading the move to a new area of clean fuel Industrialization, creating a quadrilateral of green energy corridors that connect major consumption centre in India with major Gas Fields, LNG terminals and other cross border gas sourcing points. Gail is also expanding its business to become a player in the International market.

M/s. GAIL (INDIA) Limited envisages to strengthen local gas grid network in any state/U.T. of India via authorization by MoPNG. GAIL India Limited GAIL a public Sector undertaking (PSU) company is also one of the leading companies in the field of Natural Gas transmission pipeline. GAIL has taken a lead in developing energy transportation infrastructure and connecting major natural gas supply sources and demand markets. GAIL is first company in India to transport natural gas on open access basis and is a pure natural gas transmission company. The company has developed requisite expertise and confidence with proven project management competencies.

GAIL has been awarded authorization by Ministry of petroleum and Natural Gas to lay a network of Gas pipeline and associated facilities for the transportation of natural gas to fulfill the requirement of various consumers in the states of Eastern UP, Bihar, Jharkhand, Odisha, & West Bengal.

In view of this M/s GAIL (India) Limited, is planning to lay a pipeline for transportation of natural gas from Jagdishpur to Halda and Dhamra along with various super pipeline through the Jagdishpur-Halda-Bokaro-Dhamra Gas pipeline (JHBDPL)

GAIL (India) Limited, (GAIL) has proposed to lay Jagdishpur-Halda-Bokaro-Dhamra Natural Gas Pipeline (JHBDPL) project under Authorization from MoPNG (Ministry of Petroleum and Natural Gas), Govt of India. The Jagdishpur-Halda-Bokaro-Dhamra Gas pipeline (JHBDPL) project of GAIL is a part of the Prime Minister Urja Ganga project. The approximate length of the JHBDPL pipeline is 2600 Kms and passes through the various parts of eastern UP, Bihar, Jharkhand, Odisha & west Bengal.

GAIL (INDIA) Limited has been authorized by Govt. of India vide dated 14.03.2016 to lay, Build and operate across country Gas pipeline from Jagdishpur to Halda (West Bengal)/ Dhamra, Odisha including associated super pipe lines. The said pipeline shall be passing through the state of U.P , Bihar, Jharkhand, west Bengal and Odisha for supply and distribution of natural Gas /RLNG to various industries and city Gas Distribution networks. Accordingly, GAIL has to start pre-project activities immediately and pipeline is scheduled to be completed by 2021.

The proposed Jagdishpur-Halda-Bokaro-Dhamra Gas pipeline along with spur lines will be laid across forest land falling along/ across the ROU (Right of Use) and various utilities such as roads, canals, rivers etc. the said pipeline shall be laid at the minimum depth of 1.2 mts. Below NGL (Natural ground level).

The Jagdishpur-Halda-Bokaro-Dhamra Gas pipeline (JHBDPL) project is being executed in Odisha in two parts.

Part-1: Dhamra-Angul Pipeline (DAPL)

Part-2: Bokaro-Angul Pipeline (BAPL) Odisha section.

- 1) The Dhamra-Angul Pipeline (DAPL) is a part of Jagdishpur-Halda-Bokaro-Dhamra Gas pipeline (JHBDPL). The JHBDPL is the part of Pradhan Mantri Urja Ganga project being executed by GAIL (INDIA). Ltd, a central Government Maharastra company for uninterrupted supply of the environment friendly natural gas to various Industries, domestic consumption and CNG fuel for vehicle etc. The Dhamra-Angul

underground pipeline which is a liner project will pass through various villages in eight Districts of Odisha involving 12.2282 ha. forest land and 1051.8811 ha. of non-forest land. The stage-1 in Principal approval for Dhamara Angul Pipeline (DAPL) section is already obtained.

- 2) The present proposal is for laying of underground natural gas pipeline along with optical Fiber cable (OFC) from Bokaro to Angul (Odisha section). The Bokaro-Angul Natural Gas Pipe line (BAPL) Odisha section by GAIL India Ltd. Involves 65.4036 ha of forest land and 657.0659 ha. of non- forest land passing through 212 villages in Odisha section. This BAPL Odisha section involves 07 forest division namely Rourkela, Sundargarh , Jharsuguda, Rairakhol, Bamra, Deogarh and Angul. The starting point of Bokaro-Angul Pipeline (BAPL) Odisha section is villages Bankuba, Tehsil Biramitrapur District- Sundargarh latitude N 22 26'51 .7673'' and longitude E 84 46 '12 .0843'' and end point is village Budhapankha Tehsil Banarpal District Angul latitude N20 52' 54. 286'' and Longitude E 85 15' 7 .687'' length of pipeline is 296 .105 Km.

The above project has been involved 65.4036 ha of forest land. Out of the total forest land 0.7705 ha. in Jharsuguda Forest Division, 3.4062 ha. in Rourkela Forest Division 1.0948 ha. in Sundargarh Forest Division, 14.5667 ha. in Bamara Wildfire Division, 7.2598 ha in Rairakhol Forest Division, 27.533 ha. in Deogarh Forest Division & 10.7726 ha. in Angul Forest Division.

2. Justification:

The Criteria for route selection are

- . Optimum distance between source of supply and consumer location (demand points).
- . Avoidance of wildlife Sanctuaries, reserved Forest, Mining area and Defense establishment to the best possible.
- . Avoidance rocky marshy and low-lying areas.
- . Safety of people and environment.
- . Easy access to route during construction and operation.

The route was selected based on least disturbance to environment, forest human habitation and aquatic bodies. It avoids National parks and wild Life sanctuaries.

The selected route is optimized considering the above factors and connectivity between supply source and consumer location.

3. Maps:

The user agency has submitted the following maps duly authenticated.

Sl No.	Plates Description	Scale	Index
1	Location Map (Topo sheet)		
a	F45M1	1:50000	Plate No.1
b	F45G4	1:50000	Plate No.2
c	F45G8	1:50000	Plate No.3
2	Key Map	1:60:00,000	Plate No.4
3	Map Showing alternative Routes	1:2,50,000	Plate No.5 & 6
4	DGPS & cadastral Maps		
a	Cadastral Map of Baijapali and DGPS Map of Baijapali Mouza.	16''=1 Mile 1:3,960	Plate. 7 & 8
b	Cadastral Map of Barpan and DGPS Map of Barpan Mouza	16''=1Mile 1:3,960	Plate.9, 10, 11 & 12
c	Cadastral Map of Kuluthmal and DGPS Map of Kuluthmal Mouza	16''=1Mile 1:1,000	Plate No.13 & 14
d	Cadastral Map of Uriapali and DGPS Map of Uriapali Mouza	16''=1Mile 1:3,960	Plate No.15 & 16
5	KML file of the Project		In CD

4. Forest land:

The project involved 0.7705 ha. forest land in Jharsuguda Forest Division. The detail is furnished below.

Forest Land Schedule							
Name of the Division	Name of the Tahasil	Name of the Mouza	Khata No.	Plot No.	Revenue Forest area in Ha.	DLC Forest area in Ha	Remarks
Jharsuguda Forest Division	Kirmira	Baijapali	72	1295/1300	0.0569	0	Gramya Jungle
				1301	0	0.0903	Gramya Jungle
	Kirmira	Barpan	258	453	0.0458	0	Gramya Jungle
				492	0.0473	0	Gramya Jungle
				508	0.1163	0	Gramya Jungle
				243	487	0	0.0654
			490		0	0.0615	Ata Sadharana
			149	1086	0	0.0399	Ata Sadharana
			52	1077	0	0.0067	Berna Sadharana
			55	1076	0	0.0060	Bahal Sadharana
			Kuluthamal	112	340/1864	0	0.0816
	Laikera	Uriapali	406	660	0.0492	0	Gramya Jungle
				661/2958	0.0775	0	Gramya Jungle
				693	0.0261	0	Gramya Jungle
	Total:-					0.4191	0.3514

5. Flora and Fauna:

(a) **Flora:** Tree species which are commonly noticed in the proposed area are Akari (*Acacia auriculaeformis*) Arjun (*Terminalia arjuna*) Asana (*Pterocarpus marsupium*) Mahula (*Madhuca Latifolia*) Palasa (*Butea monosperma*) Patas (*Erythrocebus patas*) Pijuli (*Psidium guajava*) Sala (*Shroea robusta*).

(b) **Fauna:** Frequently wild elephant movement are noticed. The wildlife noticed in the area are Wildlife like Hanuman (*Presbytis entellus entellus*), Odha (*Lutra perspicillata perspicillata*), Gunduchi musa (*Funambulus Pennanti*) and Musa (*Rattus rattus rufescens*) are seen in the forest land proposed for diversion but their population is very thin. Birds like Tentei (*anellus malabaricus*) Koili (*Eudynamys scolopacea scolopacea*), Kubhati (*Centropus sinensis Parroti*), Kopata (*Streptopelia decaocto*), Damara Kua (*Curvas macrohyachos culmintatus*) etc are seen. Common reptiles and lizards like Dhandasapa (*Enhydris enhydris*), Dhamana Sapa (*Elephe radiata*), Chitti Sapa (*Dendrelaphis ahaetulla*), Naga Sapa (*Naga naja kothia*)..

6. Tree enumeration:

Plot wise tree enumeration has been carried out in the Forest area applied for diversion. The details enumeration list of 41 nos trees has been annexed separately with the proposals.

7. Environmental Clearance:

State pollution Control Board, Odisha has conveyed its consent to lay out gas pipelines underground for transportation of natural gas over a length of 762 Kms (Jagdishpur- Haldia- Bokaro-Dhamra Natural Gas Pipeline (JHBDPL phase-II) passing through 13 Districts(Sundargarh, Jharsuguda, Deogarh, Sambalpur, Angul, Dhenkanal, Khordha, Cuttack, Bhadrak, Kendrapada, Jagatsingpur, Puri)

8. Cost benefit Analysis:

The Cost benefit analysis for the above project submitted by user agency is enclosed the Diversion Proposal.

9. Compensatory Afforestation:

136.0 ha. degraded forest land identified in Lamra PRF of Jamankira Range under Bamra Wildlife Division for compensatory afforestation purpose. The user agency has submitted undertaking to pay the entire amount for compensatory afforestation in lieu of the total forest area proposed for laying out natural gas pipelines for (Jagdishpur- Haldia- Bokaro-Dhamra Natural Gas Pipeline (JHBDPL) phase-II ,project of GAIL India.

10. Forest right Act Certificate:

The User Agency has submitted undertaking to furnish Forest Right Act Certificate. The same is enclosed in the Proposals.

11. Resettlement & Rehabilitation:

There will be no displacement of any human habilitation so the rehabilitation and resettlement plan is not requirement for this project.

12. Wilde life Management:

Frequently wild elephant movement are noticed. The wildlife noticed in the area are Wildlife like Hanuman (*Presbytis entellus entellus*), Odha (*Lutra perspicillata perspicillata*), Gunduchi musa (*Funambulus Pennanti*) and Musa (*Rattus rattus rufescens*) are seen in the forest land proposed for diversion but their population is very thin. Birds like Tentei (*anellus malabaricus*) Koili (*Eudynamys scolopacea scolopacea*), Kubhati (*Centropus sinensis Parroti*), Kopata (*Streptopelia decaocto*), Damara Kua (*Curvas macrohyachos culmintatus*) etc are seen. Common reptiles and lizards like Dhandasapa (*Enhydris enhydris*), Dhamana Sapa (*Elephe radiata*), Chitti Sapa (*Dendrelaphis ahaetulla*), Naga Sapa (*Naga naja kothia*). The User agency needs to prepare and implement a Site Specific Wildlife Conservation Plan with due approved from PCCF (WL) & Chief Wildlife Warden, Odisha at the project Cost.

13. Net Present Value:

The user agency has submitted undertaking to pay Net Present value (NPV) of the forest land to be diverted for the above project. The same is enclosed in the proposals.

14. Violation:

No violation has been committed by the user agency under FC Act-1980.

15. Geo-Reference Map:

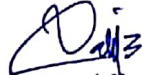
As per the guidelines, all diversion proposals is to be accompanied by the DGPS map duly authenticated by the ORSAC (Odisha Space Application Centre), Bhubaneswar. The user agency has submitted the DGPS map duly authenticated by the ORSAC & the same is enclosed in the Diversion Proposal.

16. Others:

- (i) The Project area has been inspected on 14.02.2021 and the Site Inspection Report is enclosed in in the DP.
- (ii) Part-II is enclosed in the DP


17. Recommendation:

Keeping in view of the discussion, 0.7705 ha. forest land proposed for laying out gas pipeline for Jagdishpur- Haldia- Bokaro-Dhamra Natural Gas Pipeline (JHBDPL) Odisha Phase-II project of GAIL (Indai) in Jharsuguda Forest Division is recommended for diversion in favour of General Manager, (Const.) GAIL India Limited, Bhubaneswar.


Divisional Forest Officer,
Jharsuguda Forest division.


Memo No. 824 /dated. 19.02.2021.

Copy forwarded to the Principal Chief Conservator of Forests (Forest Diversion & Nodal Officer, FC Act), O/o the PCCF, Odisha, Bhubaneswar for favor of kind information & necessary action.


Divisional Forest Officer,
Jharsuguda Forest Division.

Memo No. 825 /dated. 19.02.2021.

Copy forwarded to the General Manager (Construction), Gas Pipeline Project Office, GAIL India, Bhubaneswar for information & necessary action.


Divisional Forest Officer,
Jharsuguda Forest division.