No. MoRTH/PIU/ARAKU/IOCL/ROWPermission/NH-516E/01
Government of India
Ministry of Road Transport & Highways
(Project Implementation Unit, Araku)
Ganesh Nagar, Chinamushidiwada, Visakhapatnam - 530051

Dated the 23rd February, 2021

INVITATION OF PUBLIC COMMENTS

Subject: Right of Way (ROW) permission for laying of 16" dia. Petroleum Product Pipeline along with Optical Fibre Cable (OFC) at Km 20.960 across Bowdara to Vizianagaram section (Km 0.00 to Km 26.937) of NH-516E in the State of Andhra Pradesh - Reg.

Please find enclosed herewith the proposal in accordance with Ministry's guidelines dated 22.11.2016 received from Chief Construction Manager, IOCL, PHPL Project Vizag vide letter no. PHPL/VZG/CONST/NH/111 dated 11.01.2021 for laying 16" dia. Petroleum Product Pipeline along with Optical Fibre Cable (OFC) at Km 20.960 across Bowdara to Vizianagaram section (Km 0.00 to Km 26.937) of NH-516E in the State of Andhra Pradesh.

2. As per the guidelines, issued by the Ministry vide Circular No. RW/NH-33044/29/2015/S&R(R) dated 22.11.2016, the proposal for Highway crossing permission along & across National Highways shall be put out in the public domain for 30 days for seeking claims and objections on grounds of public inconvenience, safety and general public interest.

3. In view of the above, comments of the public on the above mentioned proposal is invited on the address mentioned below:

The Project Director,
Project Implementation Unit, Araku
Ministry of Road Transport and Highways,
Ganesh Nagar, Chinamushidiwada,
Visakhapatnam - 530051
Email id: morthpiuaraku@gmail.com

Yours faithfully,

Encl.: As above.

Gulshan 23/2/2021
[Gulshan]
Project Director
Project Implementation Unit, Araku

Copy to:

1. Senior Technical Director, NIC, MoRTH, New Delhi: for uploading on Ministry's website

Copy for information to:

1. Regional Officer, MoRTH, Vijayawa
2. The Chief Construction Manager, IOCL, PHPL Project, Visakhapatnam

स्वच्छ भारत
एक कदम स्वच्छता की ओर

इंडियन ऑयल कॉर्पोरेशन लिमिटेड
पारादीप-हैदराबाद पाइपलाइन परियोजना
चौथी मंजिल, एल.आई.सी. एनेक्सी भवन, थिक्कना (डायमंड पार्क) रोड,
आर.टी.सी. कॉम्पलेक्स के पास, विशाखापट्टणम-530 004
फोन : 0891-2595104

Indian Oil Corporation Limited
Paradip-Hyderabad Pipeline Project
4th Floor, LIC Annexe Building, Thikkanna (Diamond Park) Road,
Near RTC Complex, Visakhapatnam-530004
Phone : 0891-2595104

इंडियनऑयल
IndianOil
A Maharatna Company

पाइपलाइन्स प्रभाग
Pipelines Division

Ref.No: PHPL/VZG/CONST/NH/111

Date:11 .01.2021

To
The Project Director,
Ministry of Road Transport & Highways (MoRTH),
PIU Araku,
Visakhapatnam (Andhra Pradesh).

Sub: Regularizing the Crossing Permission obtained from R&B, Vizianagaram for laying of 16" Petroleum Product Pipeline along with Optical Fibre Cable from Paradip to Hyderabad (PHPL) across Bowdara to Vizianagaram section- km 0+000 to 26+937 at the Ch. 20+960km coming under NH-516E Project.

Dear Sir,

Indian Oil Corporation Limited (IOCL), a Govt. of India Undertaking, is engaged in petroleum refining, marketing and transportation of crude and petroleum products pipeline throughout the length and breadth of the country. IOCL operates a network of 14864 Km long crude oil, petroleum products and gas pipelines with a capacity of 94.56 million metric tonnes per annum of oil and 21.69 million metric standard cubic meters per day of gas. Cross-country pipelines are globally recognized as the safest, cost-effective, energy efficient and environment-friendly mode of transportation.

Indian Oil Corporation Limited (Pipelines Division) is in final stage of completing laying 1212 KM long Paradip – Hyderabad Pipeline (PHPL), originating from Paradip in Odisha and terminating at Hyderabad in Telangana for which foundation stone was laid by Hon'ble PM on 24th December 2018.

The Mainline Pipeline laying works are in full swing and has already laid 95% pipeline and a small portion of works in progress in Gantyada Mandal, Vizianagaram district, AP.

IOCL has obtained permission for crossing the Bowdara to Vizianagaram road by trenchless method vide approval letter no. 238/D2/Road Cutting/2013-14 dated 20.09.2017 and has also deposited the requisite fee applicable (details attached).

During the execution of Pipeline laying works at above mentioned location, it has been informed that Bowdara to Vizianagaram road crossing is now coming under MoRTH that has planned to execute the NH-516E project.

11/1/2021

टि. विद्या सागर
T. VIDYA SAGAR
मुख्य निर्माण प्रबंधक
CHIEF CONSTRUCTION MANAGER
इंडियन ऑयल कॉर्पोरेशन लिमिटेड
Indian Oil Corporation Limited
पारादीप हैदराबाद पाईपलाइन परियोजना
Paradip Hyderabad Pipeline Project

The Details of crossing are:-

S.No.	NH	Chainage (KM)	Description	ROW width	Location
1	516E	20+960	Bowdara to Vizianagaram	30.00 M	Village-Gantyada Mandal-Gantyada Dist.-Vizianagaram

1) The carrier Pipe will be of 16" Outer Diameter, Carbon Steel conforming to API 5 L X-70 Grade specifications.
2) Method of crossing will be HDD (Horizontal Directional Drilling). Total length of HDD section is approximately 60-70mtr.
3) Depth of the pipeline below the centre line of NH will be 5.0 to 7.0 m minimum.
4) During the execution of work, proper safety measures will be ensured.
5) All works will be carried out as per the attached approved drawings.
6) Cost of crossing shall be borne by IOCL.

The project is being monitored by PMO through e-Pragati wherein MoPNG is closely monitoring with Government of Andhra Pradesh for early completion of the project to be commissioned by March 2021.

Considering national importance and urgency to complete the Project it is to request to consider the proposal for regularising the permission obtained from R&B, Vizianagaram, GoAP by executing the crossing meeting technical and safety guidelines as per the MoRTH.

Since this is a time bound project of National importance, contributing to national prosperity, we solicit your most expeditious action to accord the permission for laying the pipeline along with optical fibre cable that now coming under National Highway 516E.

Thanking you,

Yours sincerely,

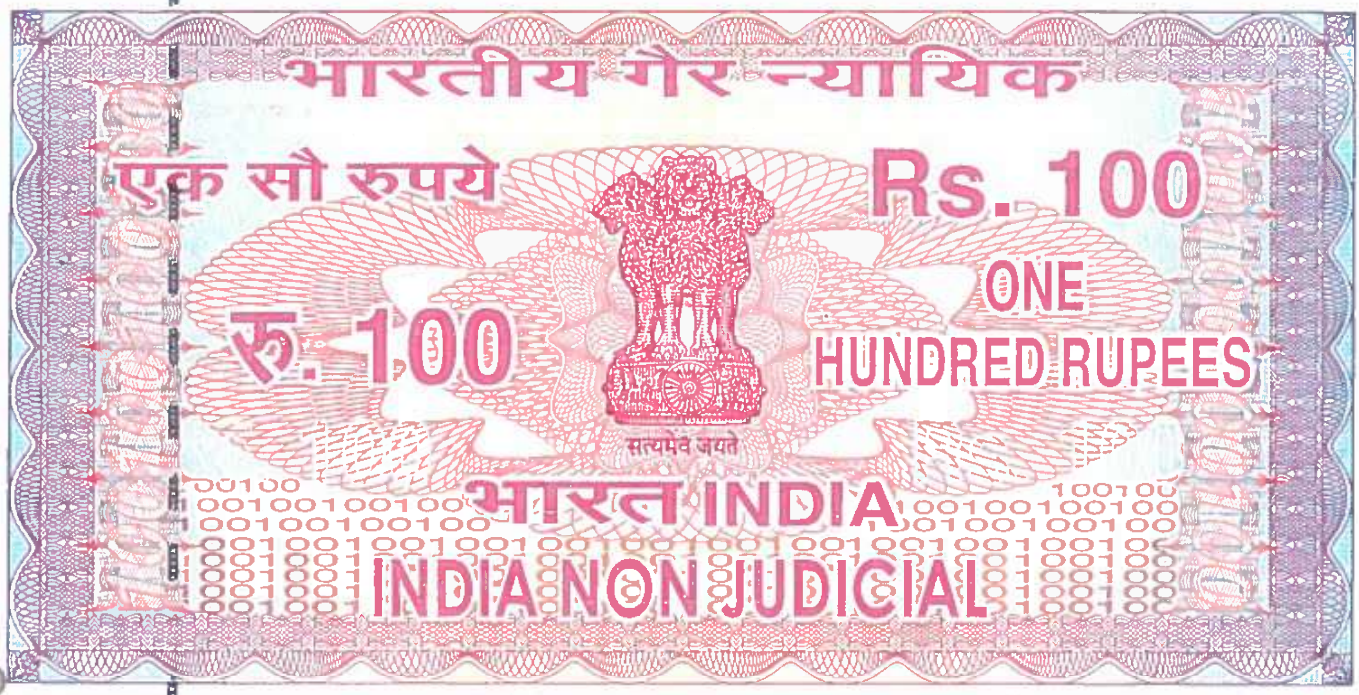
11/1/2024

Chief Construction Manager
PHPL, Vizag

टि. विद्या सागर
T. VIDYA SAGAR
मुख्य निर्माण प्रबंधक
CHIEF CONSTRUCTION MANAGER
इंडियन ऑयल कॉर्पोरेशन लिमिटेड
Indian Oil Corporation Limited
पारादीप हैदराबाद पाईपलाइन परियोजना
Paradip Hyderabad Pipeline Project
विजाग / Vizag

Enclosures

1. Checklist
2. Certificate
3. Undertaking
4. Affidavit
5. Agreement
6. Construction Methodology
7. Cross Section Drawing
8. Specification Report
9. License Fee Estimate



ఆంధ్రప్రదేశ్ आन्ध्र प्रदेश ANDHRA PRADESH

CP 352250

S. No. 691 Date 11-01-2021, Rs 100

K.SOMESWARA RAO
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R.L No 03-13-006/2021, # 2-78/42
Flat No 311. Nagalakshmi Nilayam,
Vepagunta, Visakhapatnam

Sold to: T.Vidya Sagar S/o T.Suryanarayana Murthy, VSP

For whom: Self

Power Of Attorney

Subject: Authorization for signing and execution of documents related to Permanent / statutory clearances for Paradip-Hyderabad pipeline Project (PHPL) of Indian Oil Corporation Ltd., Pipelines Division.

I do hereby authorize Shri T.Vidya Sagar, Chief Construction Manager (PHPL), Vizag to sign and execute all the documents related to Permissions/Statutory clearances from authorities for Paradip-Hyderabad Pipeline Project in the state of Andhra Pradesh.

The specimen signature of Shri. T.Vidya Sagar is attested below.

Your faithfully,

(D.S.Rao) 11-Jan-2021
Chief General Manager
South Eastern Region Pipelines (SERPL), Bhubaneswar

11/01/2021

Signature: T.Vidya Sagar
Chief Construction Manager (PHPL)

Attested by:

11-Jan-2021

(D.S.Rao)
Chief General Manager, SERPL, Bhubaneswar

CHECK LIST
Guidelines for processing the proposal for laying petroleum product pipeline in the land across National Highway vested with MoRTH
Relevant circulars
1. Ministry circular No. NH-41(58)/68 dated 31-01-1969
2. Ministry circular No. NH-III/P/66/76 dated 18-11-1976
3. Ministry circular No. RW-NJ-III/P/66/76 dated 01-05-1982
4. Ministry circular No. RW/NH-11037/1/86-DOI(II) dated 28-07-1993
5. Ministry circular No. RW/NH-11037/1/86-DOI dated 19-01-1995
6. Ministry Circular No.RW/NH-34066/2/95/S&R dated 25-10-1999
7. Ministry Circular No.RW/NH-34066/7/2003 S&R (B) dated 17-09-2003
8. Ministry Circular No.RW/NH-33044/29/2015/S&R(R) dated 22.11.2016

Checklist for getting approval for laying of petroleum pipeline on MoRTH land

S.No.	Item	Information/Status	Remarks
1	General Information		
1.1	Name and address of the Applicant/Agency	Indian Oil Corporation Limited (Pipelines Division) Paradip-Hyderabad Pipeline Project, 4th Floor, LIC Annexe Building, Thikkanna (Diamond Park) Road, Near RTC Complex, Visakhapatnam-530004	
1.2	National Highway Number	NH-516E	
1.3	State	Andhra Pradesh	
1.4	Location	Gantyada (Bowdara to Vizianagaram)	
1.5	(Chainage in km)	Km between 0+000 to 26+937 km at 20+960 km	
1.6	Length in Kilo Meters	Across	
1.7	Width of available ROW	30 m	
	(a) Left side from center line towards increasing chainage/km direction	15 m	
	(b) Right side from centre line towards increasing chainage/km direction	15 m	
1.8	Proposal to lay underground petroleum pipeline for supply of petroleum products		
	(a) Left side from center line towards increasing chainage/km direction	30M	
	Right side from centre line towards increasing chainage/km direction	30M	
1.9	Proposal to acquire land		

INDIAN OIL CORPORATION LIMITED PHPL VIZAG PIPELINES DIVISION

Regularizing the Crossing Permission obtained from R&B, Vizianagaram for laying of 16" Petroleum Product Pipeline along with Optical Fibre Cable from Paradip to Hyderabad (PHPL) across Bowdara to Vizianagaram section- km 0+000 to 26+937 at the Ch. 20+960km coming under NH-516E Project.

	(a) Left side from center line	N.A	
	(b) Right side from center line	N.A	
1.10	Whether proposal is in the same side where land is not to be acquired	N.A	
	If not then where to lay the cable.	N.A	
1.11	Details of already laid services, if any along the proposed route	-	
1.12	Number of existing lanes (2/4/6/8 lanes).	Existing National Highway (NH-516E)	
1.13	Proposed number of lanes (2 lane with paved shoulders/4/6/8 lanes).	2 lanes with paved shoulders	
1.14	Service road existing or not	NO	
	If yes then which side		
	(a) Left side from center line	NO	
	(b) Right side from center line	NO	
1.15	Proposed service road		
	(a) Left side from center line	N.A	
	(c) Right side from center line	N.A	
1.16	Whether proposal to lay the petroleum pipeline is after the service road or between the service road and main carriageway	Pipeline shall be laid across after the service road/truck lay byes/ Bus bays as the case may be	
1.17	Whether carrying of sewage/petroleum pipeline has been proposed on highway Bridges. If yes, then mention the methodology proposed for the same.	No pipeline is proposed on bridges.	
1.18	Whether carrying of sewage/petroleum pipeline has been proposed on the parapet/ any part of the bridges. If Yes, then mention the methodology proposed for the same.	No pipeline is proposed on parapet/any part of bridge.	
1.19	If crossings of the road involved If yes, it shall be either encased in pipes or through structure or conduits specially built for the purpose at the expenses of the agency owing the line	Yes, HDD Method. HDD is latest trenchless method without casing. It is safest and has no impact on surroundings. This method is being implemented for crossings of National Highways by pipelines all over the country. It has long life compared to cased crossing and is more reliable.	
	(a) Whether existing drainage structures are allowed to carry petroleum pipeline	No	
	(b) It is on a line normal to NH	Yes	
	(c) What is the distance of crossing the petroleum pipelines from the existing structures. Crossings shall not be too near the existing structures on the National Highway, minimum distance being 15 meter.	Complied	
	(d) The casing pipe(or conduit pipe	NA	

INDIAN OIL CORPORATION LIMITED * PIPELINES DIVISION * PHPL VIZAG

Regularizing the Crossing Permission obtained from R&B, Vizianagaram for laying of 16" Petroleum Product Pipeline along with Optical Fibre Cable from Paradip to Hyderabad (PHPL) across Bowdara to Vizianagaram section- km 0+000 to 26+937 at the Ch. 20+960km coming under NH-516E Project.

	in the case of electric cable) carrying the petroleum line shall be of steel, cast iron, or reinforced cement concrete and have adequate strength and be large enough to permit ready withdrawal of the carrier pipe/cable. Mention type of casing.		
	(e) Ends of casing /conduit pipe shall be sealed from the outside, so that it does not act as a drainage path.	NA	
	(f) The casing/conduit pipe should, as minimum extend from drain to drain in cuts and toe of slope in the fills.	NA	
	(g) The top of the casing/conduit pipe should be at least 1.2 meters below the surface of the road subject to being at least 0.3 m below the drain inverts. Mention the proposed details.	NA	
	(h) Mention the methodology proposed for crossings of road for the proposed Sewage/petroleum pipe line. Crossings shall be by boring method (HDD) (Trenchless Technology), specially, where the existing road pavement is of cement concrete or dense bituminous concrete type.	Pipeline crossing will be done by HDD Method (which is trenchless method without the need for casing). It is safest and has no impact on surroundings. This method is being implemented for crossings of NH/MORTH/NHAI by pipelines all over the country. It has long life compared to cased crossing and is more reliable.	Annex-1
	(i) The casing/conduit pipe shall be installed with an even bearing throughout its length and in such a manner as to prevent the formation of a waterway along it.	NA	
2	Document/Drawings to be enclosed with the proposal		
2.1	Cross section showing the size of trench for open trenching method (Is it normal size of 1.65m deep *0.5m wide) i. Should not be greater than 60cm wider than the outer diameter of the pipe ii. Located as close to the extreme edge of the right of way as	NA	

INDIAN OIL CORPORATION LIMITED
PHPL VIZAG
PIPELINES DIVISION

	possible but not less than 15m from the centre lines of the nearest carriageway iii. Shall not be permitted to run along the National Highways when the road formation is situated in double cutting. Nor shall be laid over the existing culverts and bridges. iv. These should be so laid that their top is least 0.6m below the ground level so as not to obstruct drainage of the road land.		
2.2	Cross section showing the size of pit and location of pipeline for HDD method	Yes, Enclosed	Annex-2
2.3	Strip plan/Route plan showing the pipe line, chainage, width of ROW, distance of proposed pipe line from the edge of ROW, important mile stone, intersections, cross drainage works etc.	Strip Plan showing all the details is attached.	Annex-3
2.4	Methodology for laying of the petroleum pipe line.	Yes, Enclosed.	
2.4.1	Open trenching method. (May be allowed in the petroleum corridor only where pavement is neither cement concrete nor dense bituminous concrete type. If yes, what is the methodology of refilling of trench?	NA	
	(a) The trench width should be at least 30cm, but not more than 60 cm wider than the outer diameter of the pipe.	NA	
	(b) For filling of the trench, bedding shall be at a depth of not less than 30cm. it shall consist of granular material, free of lumps, clods and cobbles and graded to yield a firm surface without a sudden change in the bearing value. Unsuitable soil and rock edged should be excavated and replaced by selected material.	NA	
	(c) The backfill shall be completed in two stages (i) side fill to level of the top of the pipe and (ii) overfill to the bottom of the road crust.	NA	
	(d) The side fill shall consist of granular material laid in15cm layers each consolidated by	NA	

INDIAN OIL CORPORATION LIMITED
PHPL VIZAG
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	mechanical tempering and controlled addition of moisture to95% of the proctor's density. Overfill shall be compacted to the same density as the material that has been removed. Consolidation by saturation or ponding will not be permitted		
	(e) The road crust shall be built to the same strength as the existing crust on either side of the trench. Care shall be taken to avoid the formation of a dip at the trench.	NA	
	(f) The excavation shall be protected by flagman, signs and barricades, and red lights during night hours.	NA	
	(g) If required, a diversion shall be constructed at the expense of agency owing the petroleum line.	NA	
2.4.2	Horizontal directional drilling (HDD) method.	Yes	
2.4.3	Methodology for laying of pipe line through CD works and method of laying. In cases where the carrying of petroleum pipe line on the bridge becomes inescapable.	No CD works are involved in laying of pipeline	
3	Draft license Agreement is signed by two witnesses	Yes, Enclosed	Annex-4
3.1	The license fee estimate as per Ministry's guidelines issued vide circular no. RW/NH-33044/29/2015/S&R(R) dated 22.11.2016	Enclosed	Annex-5
4	Whether performance Bank guarantee as per Ministry's circular no. RW/NH-33044/29/2015/S&R(R) dated 22.11.2016 is obtained	Undertaking for submission of BG has been obtained from M/s. IOCL	
4.1	Confirmation of BG has been obtained or not as per MoRTH/MORTH/NHAI guidelines	Confirmation of BG shall be obtained after BG Submission by M/s. IOCL	
5	Affidavit/ Undertaking from the Applicant for the following is to be furnished		
5.1	Undertaking for not to damage any other utility, if damaged then to pay the losses either to MoRTH or to the concerned agency.	Yes, Enclosed	
5.2	Undertaking for Renewal of bank guarantee as and when asked by MoRTH/MORTH/NHAI.	Yes, Enclosed	
5.3	Undertaking for confirming all standard	Yes, Enclosed	

INDIAN OIL CORPORATION LIMITED
PHPL VIZAG
PIPELINES DIVISION

Regularizing the Crossing Permission obtained from R&B, Vizianagaram for laying of 16" Petroleum Product Pipeline along with Optical Fibre Cable from Paradip to Hyderabad (PHPL) across Bowdara to Vizianagaram section- km 0+000 to 26+937 at the Ch. 20+960km coming under NH-516E Project.

	condition of Ministry circulars and MoRTH guidelines.		
5.4	Undertaking for Indemnity against all damages and claims.	Yes, Enclosed	
5.5	Undertaking for management of traffic movement during laying of petroleum line without hampering the traffic	Yes, Enclosed	
5.6	Undertaking that if any claim is raised by the concessionaire/contractor then the same has to be paid by the applicant.	Yes, Enclosed	
5.7	Undertaking that prior approval of the MORTH/NHAI shall be obtained before undertaking any work for installation, shifting or repairs, or alterations to the petroleum located in the National Highway right-of-way.	Yes, Enclosed	
5.8	Undertaking that expenditure, if any, incurred by MORTH/NHAI for repairing any damage caused to the National Highway by the laying, maintenance or shifting of the petroleum line will be borne by the applicant agency owing the line.	Yes, Enclosed	
5.9	Undertaking that text of the license deed is as per verbatim of MoRTH format (issued vide Ministry's circular no. RW/NH-33044/29/2015/S&R(R) dated 22.11.2016	Yes, Enclosed	
5.10	Undertaking that the applicant has obtained various safety clearances from the representative authorities such as Directorate of Electricity, Chief controller of Explosives, Petroleum and Explosive safety Organization, Oil Industry safety Directorate, State/Central pollution control board and any other statutory clearances as applicable, before applying to Highway Administration	Petroleum and Explosives Safety Organization (PESO) approval for the Steel network can be applied to Chief Controller of Explosives only after mechanical completion and Hydrostatic testing of the line but before commissioning, as Hydro-testing report will be part of the submittal for obtaining PESO clearance. The approval will be submitted to MORTH/NHAI after obtaining it. Electricity, OISD and PCB clearances are not applicable. Undertaking is being submitted. Petroleum transportation through pressure pipelines is done as per ASME B 31.4 guidelines.	
5.11	If the MoRTH consider it necessary in future to move the petroleum line for any work of improvement or repairs to the road, it will be carried out as desired by the MoRTH at the cost of the agency owing the petroleum line within a reasonable time (not exceeding 60 days)	Yes, Enclosed	

INDIAN OIL CORPORATION LIMITED ★ PIPELINES DIVISION ★ PHPL VIZAG

Regularizing the Crossing Permission obtained from R&B, Vizianagaram for laying of 16"3 Petroleum Product Pipeline along with Optical Fibre Cable from Paradip to Hyderabad (PHPL) across Bowdara to Vizianagaram section- km 0+000 to 26+937 at the Ch. 20+960km coming under NH-516E Project.

	of the intimation given.		
5.12	Certificate from the applicant in the following format (i) laying of Petroleum pipe line will not have any deleterious effects on any of the bridge components and roadway safety for traffic. (ii) "We do undertake that I/we will relocate service road/approach road/utilities at my/our own cost notwithstanding the permission granted within such time as will be stipulated by MORTH/NHAI" for future six-lanning or any other development."	Enclosed	
6	Who will sign the agreement on behalf of pipe line agency?	Chief Construction Manager Indian Oil Corporation Limited (pipelines division) Paradip-Hyderabad pipeline project, Visakhapatnam.	
	Power of Attorney to sign the agreement is available or not	Yes, Enclosed	
7	The project Director will submit the following Certificates		
7.1	Certificate that the proposal is confirming to all standard conditions issued vide Ministry's circular No: RW/NH-33044/29/2015/S&(R) dated 22.11.2016	Yes, Enclosed.	
7.2	Certificate from PD in the following format (i)" It is certified that any other location of the Petroleum pipe line would be extremely difficult and unreasonable costly and the installation of Petroleum pipe line within ROW will not adversely affect the design, stability & traffic safety of the Highway nor the likely future improvement such as widening of the carriageway, easing of curve etc.". (ii)for 6-lanning (a) Where feasibility is available "I do certify that there will be no hindrance to proposed six-laning based on the feasibility report considering proposed structures at the said location". (b) In case feasibility report is not available "I do certify that sufficient ROW is available at site	Yes, Enclosed	

INDIAN OIL CORPORATION LIMITED
PHPL VIZAG
PIPELINES DIVISION

Regularizing the Crossing Permission obtained from R&B, Vizianagaram for laying of 16" Petroleum Product Pipeline along with Optical Fibre Cable from Paradip to Hyderabad (PHPL) across Bowdara to Vizianagaram section- km 0+000 to 26+937 at the Ch. 20+960km coming under NH-516E Project.

	for accommodating proposed six-lining".		
8	If NH section proposed to be taken up by MORTH/NHAI on BOT basis – a clause is to be inserted in the agreement. "The permitted Highway on which License has been granted the right to lay Petroleum Pipeline/duct has also been granted as a right of way to the concessionaire under the concession agreement for up-gradation of [----------section from Km----------to km----------of NH no.---------- on Build: operate and transfer basis] and therefore, the license shall honour the same."	N.A	
9	Who will supervise the work of laying of Petroleum pipe line		
	(a) On behalf of the Applicant	Chief Construction Manager Indian Oil Corporation Limited (pipelines division) Paradip- Hyderabad pipeline Project, Visakhapatnam.	
	(b) On behalf of the MoRTH	Project Director, ARAKU, MoRTH	
10	Who will ensure that the defects in road portion after laying of Petroleum pipe line are corrected and if not corrected then what action will be taken.		
	(a) On behalf of the applicant	Chief Construction Manager, Indian Oil Corporation Limited (Pipelines division) Paradip – Hyderabad pipeline Project, Visakhapatnam.	
	(b) On behalf of MoRTH	Project Director, ARAKU, MoRTH	
11	Who will pay the claims for damage done/disruption in working of concessionaire if asked by the concessionaire		
	On behalf of the applicant	Indian Oil Corporation Limited (Pipelines Division) Paradip – Hyderabad pipeline Project, Visakhapatnam	
12	A certificate from PD that he will enter the proposed permission in the register of record of the permission in the prescribed proforma (copy enclosed)		
13	If any various approval is accorded for laying of underground Petroleum pipe line then Photocopy of register of records of permission accorded (as maintained by PD) be enclosed.	Yes. Board approval is enclosed.	Annex-6

INDIAN OIL CORPORATION LIMITED
PHPL VIZAG

Regularizing the Crossing Permission obtained from R&B, Vizianagaram for laying of 16" Petroleum Product Pipeline along with Optical Fibre Cable from Paradip to Hyderabad (PHPL) at Km. Bowdara to Vizianagaram section- km 0+000 to 26+937 at the Ch. 20+960km coming under NH-516E Project.

ఆంధ్రప్రదేశ్ आन्ध्र प्रदेश **ANDHRA PRADESH**

CP 352247

K.SOMESWARA RAO
Licensed Stamp Vendor, L.No. 03-13-009/2012,
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Flat No 311. Nagalakshmi Nilayam,
Vepagunta, Visakhapatnam

S. No. 688 Date 11-01-2021, Rs 100

Sold to: T.Vidya Sagar S/o T.Suryanarayana Murthy, VSP

For whom: Self

CERTIFICATE

Name Of the Work: -Paradip- Hyderabad Pipeline Project: - Request for granting permission for laying 16" dia Petroleum product pipeline along with OFC by Standard HDD method across NH- 516Eat 20+960 Km between Bowdara-Vizianagaram section of Gantyada Village, Gantyada Mandal, Vizianagaram district in the state of Andhra Pradesh.

1) Laying of utility line will not have deleterious effects on any of the bridge components road way safety for traffic

2) for 6-laning "we do undertake theIOCLwill relocate service road/approach road /utilities (gas pipe line along with OFC) at our own cost now withstanding the permission granted with in such time as will be stipulated by **MoRTH for future 6-laning or any other development.**

3) This proposal implemented now will not affect any likely future improvement to geometrics.

टि. विद्या सागर
T. VIDYA SAGAR
मुख्य निर्माण प्रबंधक
CHIEF CONSTRUCTION MANAGER
इंडियन ऑयल कॉर्पोरेशन लिमिटेड
Indian Oil Corporation Limited
पारादीप हैदराबाद पाईपलाइन परियोजना
Paradip Hyderabad Pipeline Project
विजाग / Vizag

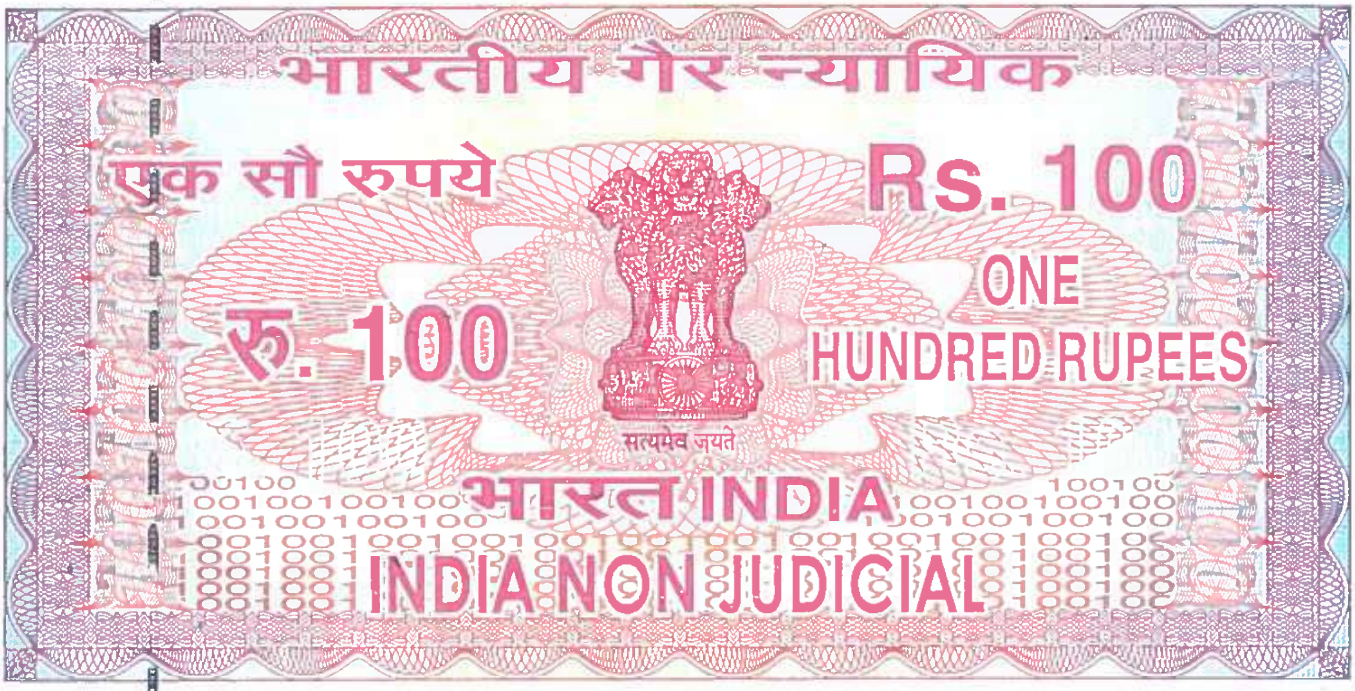
4) We undertake that permission does not lead to the adverse impact on the safety and stability of the highway structure.

5) It is also certified that the alignment as proposed is the best available option for Laying the underground utility line across NH in Vizianagaram

6) It is certifying that any other location of the underground utility line would be extremely difficult (proposed spot being located notified pipe line ROU) and the installation of underground utility line with in row will not adversely affect the design, stability and traffic safety of the highway nor the likely future improvement such as widening of the carriage way, easing of curve.

Yours sincerely,

Chief Construction Manager
PHPL, Vizag
टि. विद्या सागर
T. VIDYA SAGAR
मुख्य निर्माण प्रबंधक
CHIEF CONSTRUCTION MANAGER
इंडियन ऑयल कॉर्पोरेशन लिमिटेड
Indian Oil Corporation Limited
पारादीप हैदराबाद पाईपलाइन परियोजना
Paradip Hyderabad Pipeline Project
विजाग / Vizag



ఆంధ్రప్రదేశ్ आन्ध्र प्रदेश ANDHRA PRADESH

CP 352248

S. No. 689 Date 11-01-2021, Rs 100

Sold to: T.Vidya Sagar S/o T.Suryanarayana Murthy, VSP

For whom: Self

K.SOMESWARA RAO
Licensed Stamp Vendor, L.No. 03-13-009/2012,
R.L No 03-13-006/2021, # 2-78/42
Flat No 311. Nagalakshmi Nilayam,
Vepagunta, Visakhapatnam

UNDERTAKING

I, T.Vidya Sagar aged, years, working as Chief Construction Manager-PHPL, IOCL, Paradip-Hyderabad pipeline project, Visakhapatnam herebygive the following undertaking to the MoRTH/NHAI in connection with the permission for laying of 16" Paradip-Hyderabad petroleum product pipeline along with laying of 89 mm dia.OFC duct across NH- 516E at 20+960 Km between Bowdara -Vizianagaram section of Gantyada Village, Gantyada Mandal, Vizianagaram district in the state of Andhra Pradesh state being executed by Indian Oil Corporation Limited, Pipeline division.

1. Not to damage other utility, if any and if damaged then to pay the losses either to NHAI or to the concerned agency.
2. IOCL agrees to submit Performance Bank Guaranteeand Licensee fee estimate, if necessary.
3. The work will be carried out, confirming to all standard conditions of NHAI's guidelines.
4. Shifting of Utility Petroleum product pipelines as and when required by NHAI at the cost of the IOCL.

टि. विद्या सागर
T. VIDYA SAGAR
मुख्य निर्माण प्रबंधक
CHIEF CONSTRUCTION MANAGER
इंडियन ऑयल कॉर्पोरेशन लिमिटेड
Indian Oil Corporation Limited
पारादीप हैदराबाद पाईपलाइन परियोजना
Paradip Hyderabad Pipeline Project

5. For NH Six-laning/widening, we do undertake that we will relocate Underground Utility pipeline at our own cost notwithstanding the permission granted within such time as will be stipulated by NHAI for future six-laning or any other development.

6. Indemnity against all damages and claims.

7. Traffic movement during the laying of petroleum productpipelinesto be managed by the IOCL.

8. If any claim is raised by the Concessionaire, then the same has to be paid by IOCL.

9. Prior approval of the NHAI shall be obtained before undertaking any work of installation, shifting, repairs, or alterations to the petroleum product pipeline any other utility located in the National Highway Right-of-ways.

10. Expenditure, if any, incurred by NHAI for repairing any damage caused to the National Highway by the laying, maintenance or shifting of the petroleum product pipeline will be borne by agency owning the line.

11. If the NHAI considers it necessary in future to move the utility line for any work of improvement or repairs to the road. It will be carried out as desired by the NHAI at the cost of the agency owning the utility line within a reasonable time (not exceeding 60 days) of the intimation given.

12. In case of burst of petroleum product pipeline, the IOCL will bear the entire cost for restoration of damage caused to the road.

13. During the crossing of the Utility line across the road, the IOCL will take preventive steps and keep the caution boards at the point of crossing and sign boards and the reflective boards for the traffic to make aware of Cased Crossing activity so that traffic can go cautiously.

14. IOCL will be liable for any damage caused, to the road during execution of work and during service life of the Utility line.

15. The permission granted to IOCLshall not in any way to be deemed to convey to IOCL any right or any interest in Government land other than what it granted for.

16. The IOCL shall not without the prior permission in writing to NHAI authority, undertake any fitting/repair or alteration to the proposed Utility line.

17. The text of the license deed is as per verbatim of MoRTH format (issued vide Ministry's Circular no. RW/NH-33044/29/2015/S&R(R) dated 22.11.2016).

18. IOCL shall be responsible for restoring the road at theirown cost to its original condition after laying the Utility line or any damage caused due to inadequate operation/maintenance of the Utility line.

19. Thepetroleum product pipeline line will cross the road at 90 degrees/as cased crossing in trenchless method, maintaining minimum cover/depth of 1.2m National Highway RoW. The length of casing pipe shall be extended beyond national highways ROW so as to meet MoRTH as well as IOCL safety requirements

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मुख्य निर्माण प्रबंधक
CHIEF CONSTRUCTION MANAGER
इंडियन ऑयल कॉर्पोरेशन लिमिटेड
Indian Oil Corporation Limited
पारादीप हैदराबाद पाईपलाइन परियोजना
Paradip Hyderabad Pipeline Project
विजाग / Vizag

20. Undertaking that IOCL has obtained various safety clearances from the respective authorities such as Directorate of Electricity, Chief controller of Explosives, Petroleum and Explosives Safety Organization, Oil Industry Safety Directorate, State/Central Pollution Control Board and any other statutory clearances applicable, before applying to Highway Administration.

21. Undertaking that Laying of Product pipeline will not have any deleterious effects or any of the bridge components and roadway safety for traffic.

For IOCL

T. Vidya Sagar
Chief Construction Manager,
(PHPL) IOCL, Visakhapatnam

T. VIDYA SAGAR
मुख्य निर्माण प्रबंधक
CHIEF CONSTRUCTION MANAGER
इंडियन ऑयल कॉर्पोरेशन लिमिटेड
Indian Oil Corporation Limited
पारादीप हैदराबाद पाईपलाइन परियोजना
Paradip Hyderabad Pipeline Project
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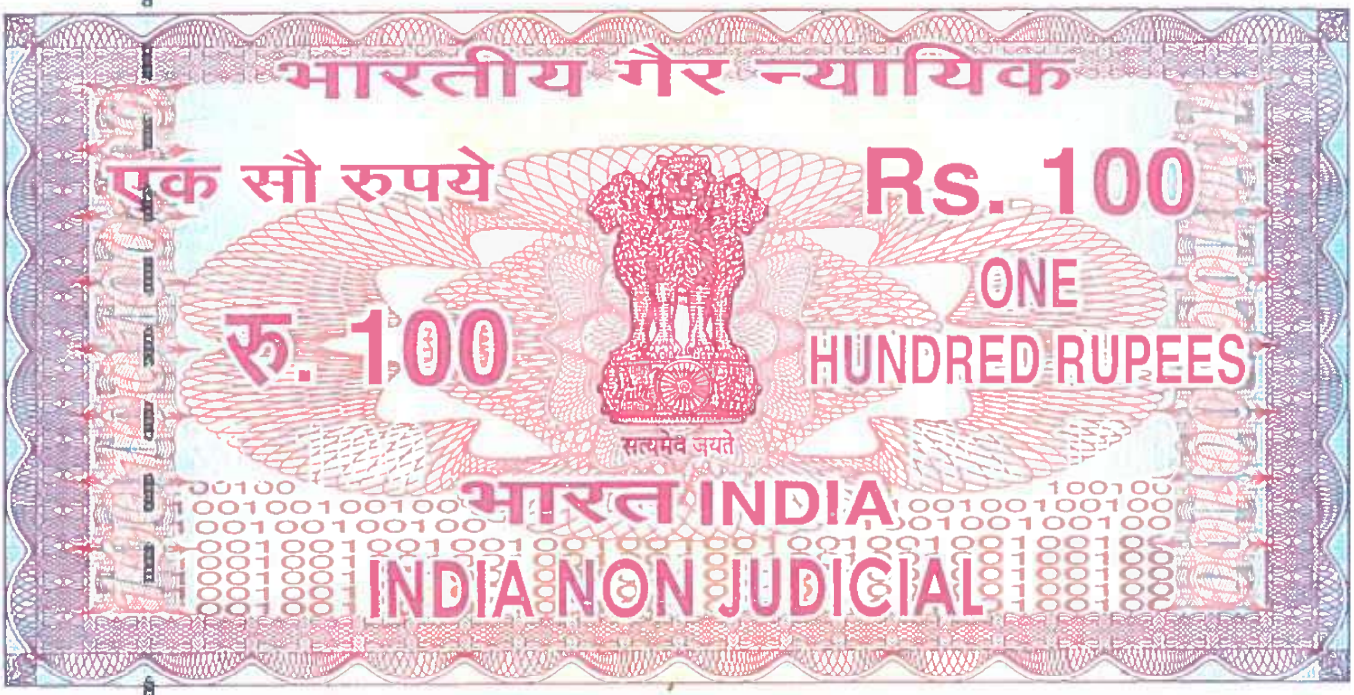

ఆంధ్రప్రదేశ్ आन्ध्र प्रदेश ANDHRA PRADESH

CP 352249

K.SOMESWARA RAO
Licensed Stamp Vendor, L.No. 03-13-009/2012,
R.L No 03-13-006/2021, # 2-78/42
Flat No 311. Nagalakshmi Nilayam,
Vepagunta, Visakhapatnam

S. No. 690 Date 11-01-2021, Rs 100

Sold to: T.Vidya Sagar S/o T.Suryanarayana Murthy, VSP

For whom: Self

AFFIDAVIT

I T. Vidya Sagar aged years, working as Chief Construction Manager- Paradip-Hyderabad pipeline project, Visakhapatnam Indian Oil Corporation Lt., Pipeline Division, hereby give the following undertaking to the MoRTH in connection with the permission for laying of 16" Paradip-Hyderabad petroleum product pipeline along with laying of 89 mm dia.OFC duct across the NH- 516E at 20+960 Km between Bowdara -Vizianagaram section of Gantyada Village, Gantyada Mandal, Vizianagaram district in the state of Andhra Pradesh.

1. Undertaking for not to damage any other utility, if damaged then to pay the losses either to MoRTH or to the concerned agency.
2. Undertaking for renewal of bank guarantee as and when asked by MoRTH/NHAI.
3. Undertaking for confirming all standard condition of Ministry circulars and NHAI's guidelines.
4. Undertaking for indemnity against all damage and claims.

टि. विद्या सागर
T. VIDYA SAGAR
मुख्य निर्माण प्रबंधक
CHIEF CONSTRUCTION MANAGER
इंडियन ऑयल कॉर्पोरेशन लिमिटेड
Indian Oil Corporation Limited
पारादीप हैदराबाद पाईपलाइन परियोजना
Paradip Hyderabad Pipeline Project

5. Undertaking for management of traffic movement during laying of Natural Gas line without hampering the traffic.
6. Undertaking that if any claim is raised by concessionaire/contractor then the same to be paid by us.
7. Undertaking that prior approval of NHAI shall be obtained before undertaking any work for installation, shifting or repairs, or alteration to the Natural Gas line located in the National Highway Right of ways
8. Undertaking that expenditure, if any, incurred by NHAI for repairing any damage caused to the National Highway by the laying, maintenance or shifting of the petroleum product pipeline will be borne by us.
9. Undertaking that text of the license deed is as verbatim of MoRTH format (issued vide Ministry's circular no. RW/NH-33044/29/2015/S&R(R) dated 22.11.2016.
10. Undertaking that the applicant willsubmit safety clearance from Petroleum and Explosive Safety Organization (PESO) before commissioningas the approval for the Steel network can be applied to Chief Controller of Explosives for PESO clearance only after mechanical completion and Hydrostatic testing of the Steel line but before commissioning, as Hydro-testing report will be part of the submittal for obtaining PESO Clearance. Electricity, OISD and PCB clearances are not applicable. The construction of the Steel Network is done as per the T4S guideline of PNGRB and as per OISD 226 guidelines.
11. If the MoRTH/NHAI considers it necessary in future to move the petroleum product pipeline for any work of improvement or repairs to the road, it will be carried out as desired by the MoRTH/NHAI at the cost of the agency owing the petroleum product pipeline within reasonable time (not exceeding 60 days) of the intimation given.
12. (i) Certify that laying of petroleum product pipeline will not have any deleterious effects on any of the bridge components and roadway safety for traffic.
    (ii) "We do undertake that;we will relocate service road / approach road /utilities at our own cost notwithstanding the permission granted within such time as will be stipulated by NHAI" for future six-lining or any other development.

For Indian Oil Corporation Ltd.

T. Vidya Sagar,
Chief Construction Manager,
IOCL- Visakhapatnam

टि. विद्या सागर
T. VIDYA SAGAR
मुख्य निर्माण प्रबंधक
CHIEF CONSTRUCTION MANAGER
इंडियन ऑयल कॉर्पोरेशन लि.
Indian Oil Corporation Limited
पारादीप हैदराबाद पाईपलाइन परियोजना
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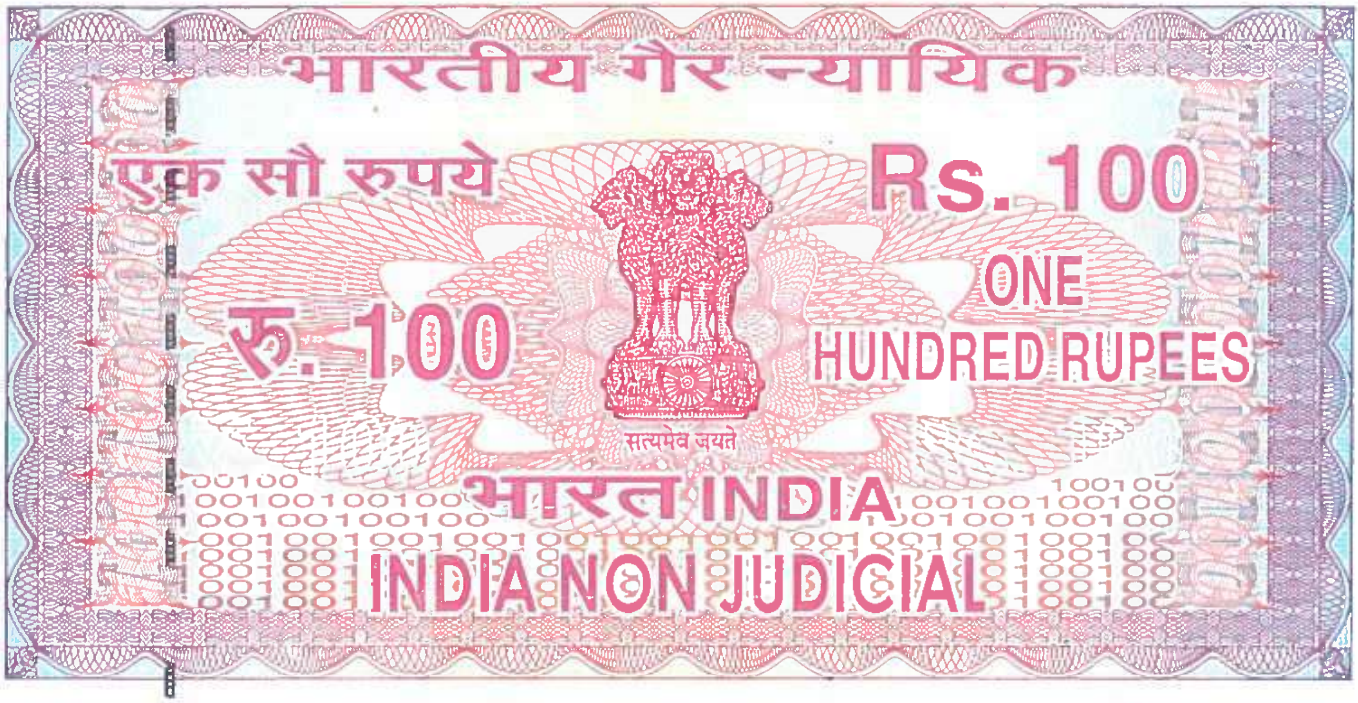
Annexure 4



ఆంధ్రప్రదేశ్ आन्ध्र प्रदेश ANDHRA PRADESH

CP 352246

S. No. 687 Date 11-01-2021, Rs 100

Sold to: T.Vidya Sagar S/o T.Suryanarayana Murthy, VSP

For whom: Self

K.SOMESWARA RAO
Licensed Stamp Vendor, L.No. 03-13-009/2012,
R.L No 03-13-006/2021, # 2-78/42
Flat No 311. Nagalakshmi Nilayam,
Vepagunta, Visakhapatnam

AGREEMENT REGARDING GRANTING OF RIGHT OF WAY PERMISSIONS FOR LAYING UTILITY SERVICES ON NATIONAL HIGHWAYS

Agreement for laying the 16" dia Petroleum product pipeline along with OFC by Standard HDD method across NH- 516E at 20+960 Km between Bowdara -Vizianagaram section of Gantyada Village, Gantyada Mandal, Vizianagaram district in the state of Andhra Pradesh.

This Agreement made this day of 2021 between Project Director acting in his executive capacity through the President of India/ National Highways Authority of India (hereinafter referred to as the Authority" which expression shall unless excluded by or repugnant to the context, include his successors in office and assigns) on the one part, and M/s Indian Oil Corporation Limited(Pipeline Division),Paradip-Hyderabad Pipeline Project,4th Floor,LIC Building,Thikkanna (Diamond Park) Road, Near RTC Complex, Visakhapatnam-530004, a Company registeredunder the CompaniesAct.1956 and have its Registered Office at Indian Oil Bhavan,G-9,Ali Yavar Jung Marg. Bandra (East),Mumbai-400051 (hereinafter called the "Licensee') which expression shall unless excluded by repugnant to the context, include his successors/administrator assignees on the second part.

टि. विद्या सागर
T. VIDYA SAGAR
मुख्य निर्माण प्रबंधक
CHIEF CONSTRUCTION MANAGER
इंडियन ऑयल कॉर्पोरेशन लिमिटेड
Indian Oil Corporation Limited
पारादीप हैदराबाद पाईपलाइन परियोजना
Paradip Hyderabad Pipeline
विशाखा / Vis

Whereas the Authority is responsible, inter-alia, for development and maintenance of lands in

1. NH- 516E at 20+960 Km between Bowdara -Vizianagaram section of Gantyada Village, Gantyada Mandal, Vizianagaram district in the state of Andhra Pradesh.

Whereas the Licensee proposes to lay 16" Petroleum product pipelinesalong with OFC Cable referred to as utility services in subsequent paras.

Whereas the Licensee has applied to the Authority for permission to lay the utility services at the following locations:

(i) NH- 516E at 20+960 Km between Bowdara -Vizianagaram section of Gantyada Village, Gantyada Mandal, Vizianagaram district in the state of Andhra Pradesh.

And whereas the Authority has agreed to grant such permission for way leave on the NH Row as per terms and conditions hereinafter mentioned.

Now this agreement witnessed that in consideration of the conditions hereinafter contained and on the part of the Licensee to be observed and performed, the Authority hereby grants to the Licensee permission to lay 16" diameter underground Petroleum Product Pipeline utility services as per the approved drawing attached hereto subject to the following conditions, namely.

1. Row permissions are only enabling in nature. The purpose of extending the way leave facility on the National Highway Row is not for enhancing the scope of activity of a utility service provider, either by content or by intent. Further, enforceability of the permission so granted shall be restricted only to the extent of provisions/scope of activities defined in the license agreement & for the purpose for which it is granted.

2. No Licensee shall claim exclusive right on the Row and any subsequent user will be permitted to use the Row, either above or below, or by the side of the utilities laid by the first user, subject to technical requirements being fulfilled. Decision of the Authority in relation to fulfilment of technical requirements shall be final and binding on all concerned parties. In case any disruption/damage is caused to any existing user by the subsequent user, the Authority shall not be held accountable or liable in any manner.

3. The Licensee shall be responsible for undertaking all activities including, but not limited to site identification, survey, design, engineering, arranging finance, project management, obtaining regulatory approvals & necessary clearances, supply of equipment, material, construction, erection, testing and commissioning, maintenance and operation and all other activities essential or required for efficient functioning of their own utility/ industrial infrastructure facilities.

4. The Licensee shall pay license fees @ Rs ..... /sq m/month to the Authority. The License fee shall become payable from the date of handing over of Row land to the Licensee, for laying of utilities/cables/conduits/pipelines for infrastructure/ service

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Paradip Hyderabad Pipeline Project
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provider. As regards Tariff and Terms and conditions for providing common utility ducts along National Highways, there shall be a separate agreement regime.

5. Fee shall have to be paid in advance for the period for which permission is granted for entering into a license agreement. In case of renewal, rate prevailing at the time of renewal shall be charged. Delay in deposition of fee shall attract interest @ 15% per annum compounded annually.

6. Present policy of the MoRT&H is to provide a 2.00 m wide utility corridor on either side of the extreme edge of Row. In cases where utility ducts with sufficient space are already available along NH, the utility services shall be laid in such ducts subject to technical requirements being fulfilled.

7. The utility services shall be laid at the edge of the Row. In case of restricted width of Row, which may be adequate only to accommodate the carriageway, central verge, shoulders, slopes of embankment, drains, other road side furniture etc.; the utility services shall be laid beyond the toe line of the embankments and clear of the drain.

8. The Licensee shall make his own arrangement for crossing of cross drainage structure, rivers, etc. below the bed. In case, this is not feasible, the utility services may be carried outside the railings/parapets and the bridge superstructure. The fixing and supporting arrangement with all details shall be required to be approved in advance from the concerned Highway Administration. Additional cost on account of fixing and supporting arrangement as assessed by the Authority shall be payable by the Licensee.

9. In exceptional cases, where Row is restricted the utility services can be allowed beneath the carriageway of service road, if available, subject to the condition that the utility services be laid in concrete ducts, which will be designed to carry traffic on top. The width of the duct shall not be less than one lane. In such cases, it also needs to ensure that maintenance of the utility services shall not interfere with the safe and smooth flow of traffic. The cost of operation and maintenance will have to be borne by the Licensee.

10. It is to be ensured that at no time there is interference with the drainage of the road land and maintenance of the National Highways. Towards this, the top of the utility services shall be at least 0.6 metre below the ground level. However, any structure above ground shall be aesthetically provided for / landscaped with required safety measures as directed by the concerned Authority.

11. The utility services shall be permitted to cross the National Highway either through structure or conduits specially built for that purpose. The casing / conduit pipe should, as minimum, extend from drain to drain in cuts and toe of slope to toe of slope in the fills and shall be designed in accordance with the provision of IRC and executed following the Specifications of the Ministry.

12. Existing drainage structures shall not be allowed to carry the lines across.

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Indian Oil Corporation Limited
पारादीप हैदराबाद पाईपलाईन परि...
Paradip Hyderabad Pipelin...
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13. The top of the casing/conduit pipe containing the utility services to cross the road shall be at least 1.2m below the top of the sub grade or the existing ground level whichever is lower, subject to being at lease 0.3m below the drain inverts. A typical sketch showing the clearances is given in Attachment-I.

14. The utility services shall cross the National Highway preferable on a line normal to it or as nearly so as practicable.

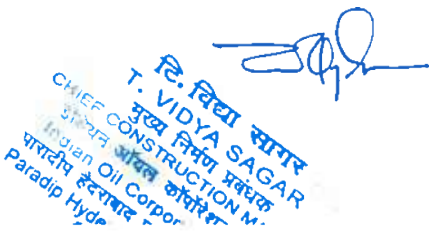
15. The casing/conduit pipe for crossing the road may be installed under the road embankment either by boring or digging a trench. Installation by boring method shall be preferred.

16. In case of trenching, the sides of the trench should be done as nearly vertical as possible. The trench width should be at least 30 cm. but not more than 60 cm wider than the outer diameter of the pipe. Filling of the trench shall conform to the specifications contained here-in-below or as supplied by the Highway Authority.
    a. Bedding shall be to a depth not less than 30 cm. It shall consist of granular material, free of lumps, clods and cobbles, and graded to yield a firm surface without sudden change in the bearing value. Unsuitable soil and rock edges should be excavated and replaced by selected material.
    b. The backfill shall be completed in two stages (i) Side-till to the level of the top of the pipe (ii) Overfill to the bottom of the road crust.
    c. The side fill shall consist of granular material laid in 15 cm. Layers each consolidated by mechanical tamping and controlled addition of moisture to 95% of the Proctor's Density. Overfill shall be compacted to the same density as the material that had been removed. Consolidation by saturation or ponding will not be permitted.
    d. The road crust shall be built to the same strength as the existing crust on either side of the trench or to thickness and specifications stipulated by the Highway Authority.

17. The Licensee shall ensure making good the excavated trench for laying utility services by proper filling and compaction, so as to restore the land in to the same condition as it was before digging the trench, clearing debris/loose earth produced due to execution of trenching at least 50m away from the edge of the right of way.

18. All required restoration works subsequent to laying of the cable shall be required to be undertaken by the Licensee at its cost either by itself or through its authorized representative in consultation with the Authority as per predetermined time schedule and quality standards.

19. Prior to commencement of any work on the ground, a performance Bank Guarantee @ Rs. per route metre / Rs. ..... per sq m with a validity of one year initially (extendable if required till satisfactory completion of work) shall have to be furnished by the Licensee to the Authority/its designated agency as a security against improper restoration of ground in terms of filling/unsatisfactory compaction damages caused to



other underground installations/utility services & interference, interruption, disruption or failure caused thereof to any services etc. In case of the Licensee failing to discharge the obligation of making good of the excavated trench/other restoration work, the Authority shall have a right to make good the damages caused by excavation, at the cost of the Licensee and recover the amount by forfeiture of the Bank Guarantee.

20. In case, the Performance Bank Guarantee is invoked as mentioned above, the Licensee shall be required to replenish and reinstate the required Performance Bank Guarantee within one month of such invoking. In case the work contemplated herein is not completed to the satisfaction of the Authority, which has granted the permission, within a period of 11 months from the date of issue of the Bank Guarantee, the Licensee shall either furnish a fresh guarantee or extend the guarantee for a further period of one year. Notwithstanding this, the Licensee shall be liable to pay full compensation to the aggrieved Authority/ its designated agency for any damage sustained by them by reason of the exercise of the Row facility.

21. The Licensee shall shift the utility services within 90 days (or as specified by the respective Authority) from the date of issue of the notice by the concerned Authority to shift/relocate the utility services, in case it is so required for the purpose of improvement/widening of the road/route/highway or construction of flyover/bridge and restore the road/land to its original condition at his own cost and risk.

22. The Licensee shall be responsible to ascertain from the respective agency in co-ordination with Authority. regarding the location of other utilities /underground installations/ facilities etc. The Licensee shall ensure the safety and security of already existing underground installations/utilities/facilities etc. before commencement of the excavation/using the existing cable ducts. The Licensee shall procure insurance from a reputed insurance company against damages to already existing underground installations/utilities/facilities etc.

23. The Licensee shall be solely responsible/ liable for full compensation/indemnification of concerned agency / aggrieved Authority for any direct, indirect or consequential damage caused to them/claims or replacements sought for, at the cost and risk of the Licensee. The concerned agency in co-ordination with Authority shall also have a right make good such damages/ recover the claims by forfeiture of Bank Guarantee.

24. If the Licensee fails to comply with any condition to the satisfaction of the Authority, the same shall be executed by the Authority at the cost and risk of the Licensee.

25. Grant of License is subject to the Licensee satisfying (a) minimum disruption of traffic and (b) no damage to the highways. As far as possible, the Licensee should avoid cutting of the road for crossing highway, and other roads and try to carry out the work by trenchless technology. In case any damage is caused to the road pavement in this process, the Licensee will be required to restore the road to the original condition at its cost. If due to unavoidable reasons the road needs to be cut for crossing or laying utility

T. VIDYA SAGAR
CHIEF CONSTRUCTION MANAGER
Indian Oil Corporation Limited
Paradip Hyderabad Pipeline
Vizag

services, the Licensee has to execute the restoration work in a time bound manner at its cost either by itself or through its authorized representative in consultation with the Authority as per predetermined time schedule and quality standards. In case of the Licensee failing to discharge the obligation of making good of the excavated trench/other restoration work, the Authority shall have a right to make good the damages caused by excavation, at the cost of the Licensee and recover the amount by forfeiture of the Bank Guarantee.

26. The Licensee shall inform/give a notice to the concerned agency designated by the Authority at least 15 day in advance with route details prior to digging trenches,for fresh or maintenance/repair works. A separate performance Bank Guarantee for maintenance/repair works shall have to be furnished by the Licensee.

27. Each day, the extent of digging the trenches should be strictly regulated so that utility services is laid and trenches filled up before the close of the work that day. Filling should be completed to the satisfaction of the concerned agency designated by the Authority.

28. The licensee shall indemnify the concerned agency in co-ordination with Authority, against all damages and claims, if any due to the digging of trenches for laying cables/ducts.

29. The permission for laying utility services is granted maximum for 5 years at a time, which can thereafter be considered for renewal. On payment of additional fee at the time of renewal, the permission shall automatically be renewed, unless defaults exist. In case of renewal, rate prevailing at the time of renewal shall be charged. Delay in deposition of fee shall attract interest @ 15% per annum compounded annually.

30. The permission shall be valid only for the period it is issued and fee deposited. However, the Authority also has a right to terminate the permission or to extend the period of Agreement.

31. That the Licensee shall not undertake any work of shifting, repairs or alterations to the utility services without prior written permission of the concerned agency in coordination with the Authority.

32. The permission granted shall not in any way be deemed to convey to the Licensee any ownership right or any interest in route/road/highway land /property, other than what is herein expressly granted. No use of NH Row will be permitted for any purpose other than that specified in the Agreement.

33. During the subsistence of this Agreement. the utility services located in highway land / property shall be deemed to have been constructed and continued only by the consent and permission of the Authority so that the right of the Licensee to the use thereof shall not become absolute and indefeasible by lapse of time.

T. VIDYA SAGAR
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CHIEF CONSTRUCTION MANAGER
इंडियन ऑयल कॉर्पोरेशन लिमिटेड
Indian Oil Corporation Limited
पारादीप हैदराबाद पाईपलाईन परियोजना
Paradip Hyderabad Pipeline P
विशाखा / Vizag

34. The Licensee shall bear the Stamp Duty charged on this Agreement.

35. Three copies of 'as laid drawings' of utilities (hard and soft copies) with geo-tagged photographs and geo-tagged video recordings of laying of cables in the trench (with respect to the NH) and after complete restoration shall be submitted to the Authority for verification and record within a month of completion of works.

36. The Licensee shall allow free access to the Site at all times to the authorised representatives of Authority to inspect the Project Facilities and to investigate anymatter within their Authority, and upon reasonable notice. shall provide reasonable assistance necessary to carry out their respective duties and functions.

37. The utility services shall not be made operational by the Licensee unless a completion certificate to the effect that the utility services has been laid in accordance with the approved specifications and drawings and the trenches have been filled up to the satisfaction of the concerned agency in co-ordination with the Authority has been obtained. Notwithstanding anything contained herein, this Agreement may be cancelled at any time by Authority for breach of any condition of the same and the Licensee shall neither be entitled to any compensation for any loss caused to it by such cancellation not shall it be absolved from any liability already incurred.

38. The Licensee shall ensure adherence to relevant Indian standards and follow best industry practices, methods and standards for the purpose of ensuring the safe, efficient and economic design, construction, commissioning, operation, repair and maintenance of any part of the utility lines/industrial infrastructure facilities and which practices, methods and standards shall be adjusted as necessary, to take account of
    a. operation, repair and maintenance guidelines given by the manufacturers,
    b. the requirements of Law,
    c. the physical conditions at the Site, and
    d. The safety of operating personnel and human beings.

39. The Licensee shall have to provide safety measures like barricading, danger lighting and other necessary caution boards while executing the work.

40. While laying utility services, at least one lane of road shall be kept open to traffic at all times. In case of single lane roads, a diversion shall be constructed. If any traffic diversion works are found necessary during the working period such diversion shall be provided at the cost of Licensee.

41. After the termination/expiry of the agreement, the Licensee shall remove the utility services within 90 days and the site shall be brought back to the original condition failing which the Licensee will lose the right to remove the utility services. However before taking up the work of removal of utility services the Licensee shall furnish a Bank Guarantee to the Authority for a period of one year for an amount assessed by the Authority as a security for making good the excavated trench by proper filling and

T. VIDYA SAGAR
CHIEF CONSTRUCTION MANAGER
Indian Oil Corporation Ltd.
Paradip Hyderabad Pipeline

compaction. clearing debris, loose earth produced due to excavation of trenching at least 50m away from the edge of the Row.

42. Any disputes in interpretation of the terms and conditions of this Agreement or their implementation shall be referred to the redress mechanism prevailing in the Ministry and the decision of the redress mechanism shall be final and binding on all.

43. For PPP Projects. in case of any financial loss incurred by the respective project concessionaires due to such laying/shifting of utility services by the Licensee. compensation for the same shall be required to be borne by the Licensee in mutual agreement with the respective project concessionaires. MoRTH/ NHAI/ implementing authorities for the project shall not be liable to the concessionaire in any way in this regard.

This agreement has been made in duplicate, each on a Stamp Paper, Each party to this Agreement has retained one stamped copy each.

IN WITNESS WHEREOF THE PARTIES HERETO HAVE CAUSED THIS AGREEMENT TO BE EXECUTED THROUGH THEIR RESPECTIVE AUTHORISED REPRESENTATIVES THE DAY AND THE YEAR FIRST ABOVE WRITTEN.

SIGNED SEALED AND DELIVERED FOR AND ON BEHALF OF AUTHORITY.

BY SHRI.....

(Signature, name & address with stamp)

SIGNED ON BEHALF OF M/S .....(LICENSEE)

BY SHRI .....

टि. विद्या सागर
T. VIDYA SAGAR
मुख्य निर्माण प्रबंधक
CHIEF CONSTRUCTION MANAGER
इंडियन ऑयल कॉर्पोरेशन लिमिटेड
Indian Oil Corporation Limited
पारादीप हैदराबाद पाईपलाइन परियोजना
Paradip Hyderabad Pipeline Project
विजाग / Vizag

(Signature, name & address with stamp)

HOLDER OF GENERAL POWER OF ATTORNEY DATED.....

EXECUTED IN ACCORDANCE WITH THE RESOLUTION NO. .....DATED .....PASSED BY HTE BOARD OF DIRECTORS IN THE MEETING HELD ON .....

IN THE PRESENCE OF (WITNESSES):

1.

2.

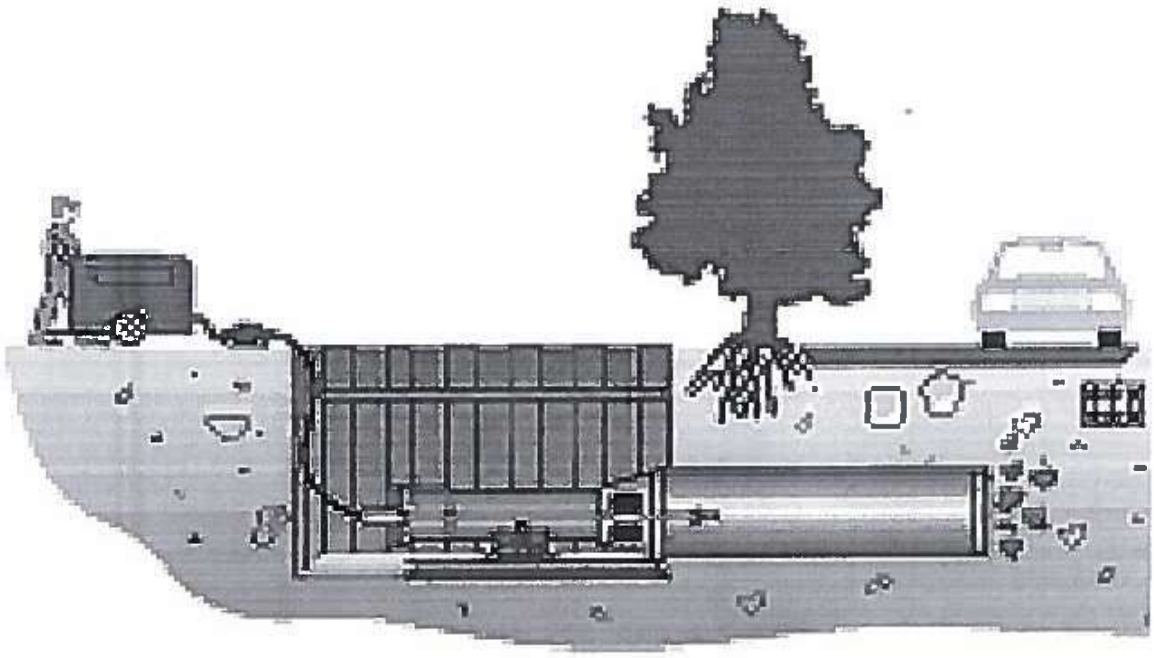
Annexure - I

IndianOil

Indian Oil Corporation Limited

CONSTRUCTION METHODOLOGY:

For laying underground pipeline
Crossing National highways by
Horizontal Boring Method



INDIAN OIL CORPORATION LIMITED
PHPL VIZAG
PIPELINES DIVISION

HORIZONTAL DIRECTIONAL DRILLING

GENERAL

Horizontal Directional Drilling or HDD, is a steerable trenchless method of installing underground pipes, conduits and cables in a shallow arc along a prescribed bore path by using a surface launched drilling rig, with minimal impact on the surrounding area. HDD is used when trenching or open excavation is not possible/practical. Directional boring minimizes environmental disruption. It is suitable for a variety of soil conditions and jobs including road, landscape and river crossings. Pipes can be made of materials such as Steel, PVC, etc. if the pipes can be pulled through the drilled hole.

Technique

Directional boring is used for installing infrastructure such as telecommunications and power cable conduits, water lines, sewer lines, gas lines, oil lines, product pipelines and environmental remediation casings. It is used for crossing waterways, roadways, shore approaches, congested areas, environmentally sensitive areas, and areas where other methods are costlier. It is used instead of other techniques to provide less traffic disruption, lower cost, deeper and/or longer installation, no access pit, shorter completion times, directional capabilities, and environmental safety. The technique has extensive use in urban areas for developing subsurface utilities as it helps in avoiding extensive open cut trenches.

The method comprises a three stage process wherein first stage drills a pilot hole on the designed path and the second stage enlarges the hole by passing a larger cutting tool known as the back reamer. The third stage places the product or casing pipe in the enlarged hole. The directional control capabilities assist the rig operator in making necessary changes in the directions of the drilling head.

Horizontal directional drilling is done with the help of a viscous fluid known as drilling fluid. It is a mixture of water and, usually, bentonite or polymer continuously pumped to the cutting head or drill bit to facilitate the removal of cuttings, stabilize the bore hole, cool the cutting head, and lubricate the passage of the product pipe.

Location and guidance of the drilling is a very important part of the drilling operation, as the drilling head is under the ground while drilling and, in most cases, not visible from the ground surface.

Advantages

HDD offers several advantages when compared to other trenchless construction methods:

(a) Complicated crossings can be quickly and economically accomplished with a great degree of accuracy since it is possible to monitor and control the drilling operation.
(b) Sufficient depth can be accomplished to avoid other utilities.
(c) In river crossing applications, danger of river bed erosion and possible damage from river traffic is eliminated.
(d) Requires only a small construction footprint.

The Horizontal Directional Drilling Process

The tools and techniques used in the horizontal directional drilling (HDD) process are an outgrowth of the oil well drilling industry. The components of a horizontal drilling rig used for pipeline construction are similar to those of an oil well drilling rig with the major exception being that a horizontal drilling rig is equipped with an inclined ramp as opposed to a vertical mast. HDD

pilot hole operations are not unlike those involved in drilling a directional oil well. Drill pipe and downhole tools are generally interchangeable and drilling fluid is used throughout the operation to transport drilled spoil, reduce friction, stabilize the hole, etc. Because of these similarities, the process is generally referred to as drilling as opposed to boring.

Installation of a pipeline by HDD is generally accomplished in three stages as illustrated in Figure 1. The first stage consists of directionally drilling a small diameter pilot hole along a designed directional path. The second stage involves enlarging this pilot hole to a diameter suitable for installation of the pipeline. The third stage consists of pulling the pipeline back into the enlarged hole.

Pilot Hole Directional Drilling

Pilot hole directional control is achieved by using a non-rotating drill string with an asymmetrical leading edge.

It is common in soft soils to achieve drilling progress by hydraulic cutting with a jet nozzle. In this case, the direction of flow from the nozzle can be offset from the central axis of the drill string thereby creating a steering bias. This may be accomplished by blocking selected nozzles on a standard roller cone bit or by custom fabricating a jet deflection bit. If hard spots are encountered, the drill string may be rotated to drill without directional control until the hard spot has been penetrated.

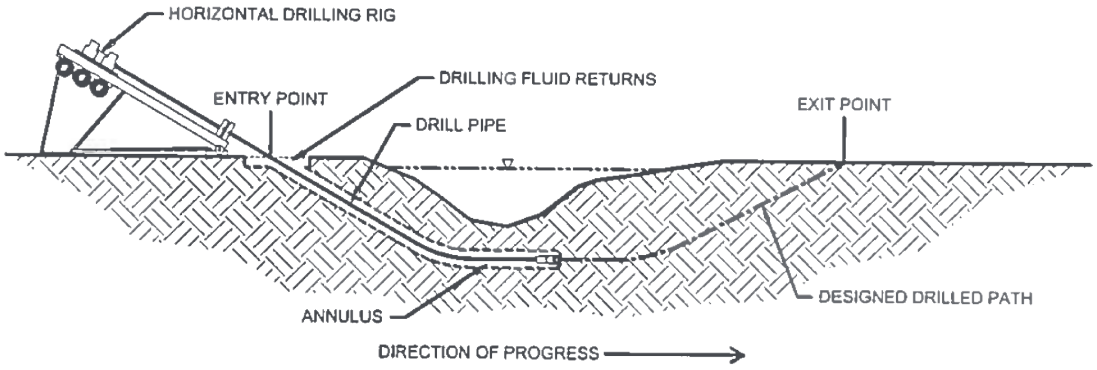
Pre-reaming

For a pre-reaming pass, reamers attached to the drill string at the exit point are rotated and drawn to the drilling rig thus enlarging the pilot hole. Drill pipe is added behind the reamers as they progress toward the drill rig. This insures that a string of pipe is always maintained in the drilled hole..

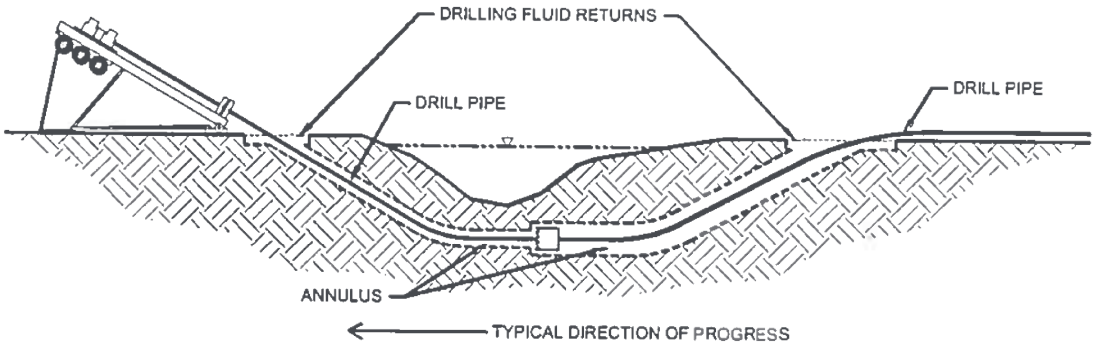
Pullback

Pipe installation is accomplished by attaching the prefabricated pipeline pull section behind a reaming assembly at the exit point and pulling the reaming assembly and pull section back to the drilling rig. This is undertaken after completion of pre-reaming or, for smaller diameter lines in soft soils, directly after completion of the pilot hole. A swivel is utilized to connect the pull section to the leading reaming assembly to minimize torsion transmitted to the pipe.

PILOT HOLE



PREREAMING



PULLBACK

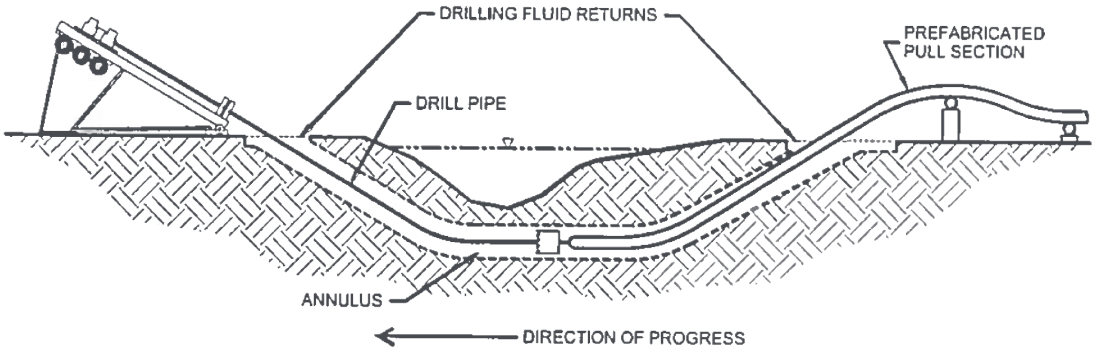


Figure 1
The HDD Process

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PIPELINES DIVISION

Disadvantages of Cased Crossing:

Cased Crossings are being worldwide discouraged due to technical & operational issues/problems being faced by people involved in installing & maintaining pipelines. Some of the points going against cased crossings are as follows:

- For installing a pipeline by cased crossing method, large launching & receiving pits are required to be excavated on both sides of the crossing (highway/ railway etc.). In case of high water table conditions, it is very difficult to keep these pits in stable/ dry condition. De-watering and sheet piling / shoring methods may be required especially for higher depth crossings.

- Collapse of the pits may lead to severe accidents. Several such accidents, fatal in some cases, have been reported in the past due to collapse of deep pits excavated at cased crossing locations.

- Due to requirement of deep pits and water table, depths more than of 3-4m are practically difficult to be achieved by this technique and may be risky.

- The installation is done by horizontal auger boring machine placed in the launching pit. The boring process is un-guided and at times may deviate considerably from the intended straight path due to soft soil conditions and/or presence of rock/ hard strata beneath the road/ rail surface. Under such conditions the hole may have to be abandoned and a new boring at a separate location may be required. Filling the abandoned hole is very difficult and settlement of road/ ground surface may occur in future.

- Maximum length of boring which can be practically achieved depends on the soil conditions and size of boring. However any length beyond 50-60m is difficult, risky & time consuming. As highway crossings, especially NH & SH are of longer lengths, this method has got limitations of installation.

- Problems of short-circuiting between casing & carrier pipes is another problem prevalent in cased crossings. This leads to loss of cathodic protection current thereby reducing the secondary protection to the carrier pipe. Any damage to pipe coating at such locations may lead to development of corrosion spots and potential areas for leakage of petroleum products in future.

- In case widening of the highway is undertaken in future, the low depth of the pipe may become a hindrance. Extension of the casing to cover the new width of crossing is very cumbersome and time consuming.

Advantages of HDD Technique:

- Horizontal Directional Drilling (HDD) technique is a trenchless technique used worldwide for crossing of obstacles like rivers, canals, drains, highways etc. by petroleum pipelines (liquid / gas), sewer lines etc.

- It is a environment friendly technique for pipeline crossings

- It is a much safer technique as compared to other techniques of pipeline crossings.

- Small excavation is required at both ends

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- By the use of this technique the pipeline can be installed at a much greater depth from the obstacle as per requirement of client. In PRRPL project, the depth below highway has been kept more than 5m. Such depths may not be possible by cased crossing technique.

- In this technique, use of casing pipe is not required as the hole drilled for installation of the carrier pipe is kept stable due to presence of drilling fluid (bentonite) under pressure and the drill pipe / product pipe being always present in the hole.

- Much longer crossing lengths can be achieved by HDD technique. Thus highway widening activities can be carried out without any hindrance as the pipeline is laid at much higher depth and for longer length as compared to cased crossing. In PRRPL project HDD crossing length of more than 100m have been envisaged. Such lengths cannot be obtained by cased crossing method.

- Success rate of HDD technique is much higher than auger boring. Problems of abandonment of hole which have been mentioned above in cased crossings are almost nil in case of HDD crossings of small lengths for highways, small canals etc.

METHODOLOGY OF CROSSING

The method of crossing the National Highway Road is by Horizontal Directional Drilling method (HDD) which is a Trenchless method. In this method, thepipelinewhich is of size 16" OD X 0.438" WTconfirming to API 5L X-70 grade and Coated with 3LPE is laid across the NH. The pipeline is pulled underground by HDD method, maintaining a clear depth (As specified in the drawing) from the top of the subgrade. The duct for OFC is also laid along with this pipeline by the same method. The pits of size 2m x 2m x 1.5m for carrying out HDD are laid away from the ROW of NH. The detailed procedure is given below:

DESIGN & ENGINEERING

i) The limits of each crossing shall be determined on the basis of crossing profile, design,equipment, installation techniques and site condition.

ii) Within the entire limits of crossing, the cover to top of coated pipe shall beas specified in the crossing drawing enclosed.

iii) The entry and exit points of the pipeline at ground level shall not come within the limits ofcrossing as defined in the crossing drawings.

iv) **Maximum longitudinal stress during installation**
Total maximum longitudinal stress in the pipeline due to tension and bending at any location shall not exceed 95% of the SMYS of the pipe material.

v) **Maximum equivalent stress during final hydrostatic test**
After installation, the pipeline shall be hydrostatically tested at a pressure stipulated in the contract. During hydrostatic testing, the combined equivalent stressin the pipeline due to bending and test pressure shall not exceed 95% of the SMYS ofpipe material.

vi) **Maximum equivalent stress during service**
Permissible values of maximum equivalent stress during service shall be governed by therequirements of ANSI B 31.8/B 31.4, as applicable.

vii) The minimum allowable radius of curvature for the pipeline shall be the highest value ofthe minimum pipeline elastic radius and above, after correction for drilling inaccuracies or multiplication by thefactor 1.85, whichever results in the highest permissible value of minimum elastic bendradius.

viii) **Pipeline configuration along the supported string before Entry Point**
The required pipeline configuration in order to allowsmooth pull in the crossing entry point and admissible stress in the supported pipelinestring shall be ensured. Pipeline

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combined stress shall not exceed 95% of the specified minimum yieldstrength for line pipe material.

CONSTRUCTION

i) **Pipe String Preparation**

Complete pipe string shall be prepared as a single string for pulling. Welding,radiographic inspection of joints and joint coating of the string shall be performed inaccordance with the standard IOCL specifications.

ii) **Pre-testing**

The complete pipe string shall be hydrostatically pre-tested before installation as per approved procedure for a minimum period of 24 hours.Joint coating of the welds shall be done after this pre-test.

iii) The section of the pipeline corresponding to the crossing shall before installation, be subjected to hydrostatic test pressure as stipulated in the contract and checks for leakage of welds shall be done. Failure, if any, duringthe test shall be rectified immediately.

iv) **Gauging**

Before pre and post installation hydrostatic testing, gauging of the pipeline shall be done by passing a gauging pig through the pipeline. The gauging pigshall have a diameter equal to 95% of the nominal internal diameter of the pipe. Necessary temporary scraper launchers/ receivers and other equipment for piping shall be installed.

v) **Installation**

The lateral offset of the actual exit point of the pilot hole from the calculated and theoretical exit point shall not exceed half per cent (0.5%) of the length of the crossing.

vi) The length tolerance shall not exceed one per cent of the crossing length, subject to thecondition that the actual exit point shall not be within the limits of crossing as defined inthe drawings.

vii) Back reaming shall be done separately from the pipeline pulling operation. The size of theback-reamed hole shall be adequate (approximately 1.5 times the pipeline diameter) toallow enough clearance for a smooth pull-back of the pipeline.

viii) The drilled hole shall be maintained till such time thepipeline is pulled in.

ix) During pulling operation, the buoyancy of the pipeline shall be controlled by suitable

approved methods so as to maintain the buoyancy as close as possible to zero during ,pull-back in order to reduce friction forces of the pipeline in the hole.

x) Bentonite slurry of specified viscosity shall be pumped into the hole, preventing the wallfrom collapsing and protecting the pipeline coating.

xi) The integrity of the corrosion coating shall be maintained.

xii) After pull back operation, in order to ensure the integrity of pipe coating, megger test ofthe coating shall be carried out in accordance with the following steps:

a) The test must be carried out before the bored pipe is tied-in to the mainline pipe.

b) Measure the natural potential of the bored pipe at both ends.

c) Set up the temporary impressed current system with a digital multi-meter connectedto measure the output current. Position the test electrode/anode as far from thebored pipe as interconnecting cable will allow and no closer than 10 meters.

d) Place the reference electrode at the remote end (opposite to impressed current system) to monitor the bored pipe potential.

e) Impress a current into the bored pipe start at zero amp. and increase slowly until the bored pipe potential is depressed to 1.5 V with respect to the reference electrode.

f) Note the current from the digital multi-meter and calculate the current density.

g) The desirable value of calculated current density should be less than 95 micro ampere per square meter of drilled pipe surface in contact with the soil.

FINAL HYDROSTATIC TEST

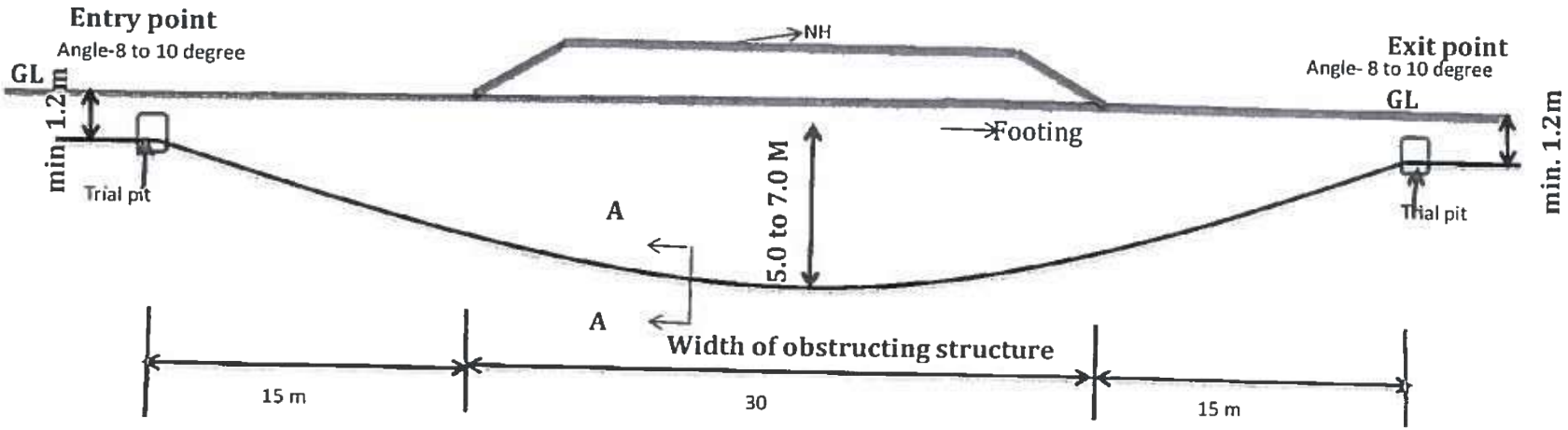
The complete crossing section shall be tested after installation. The test pressure shall beas stipulated in the Contract. After temperature stabilisation,pressure shall be retained in the pipeline for a period of 6 hours and recorded bymanothermograph. The hydrostatic testing shall be carried out in accordance withapproved procedures and specification detailed elsewhere in the document.

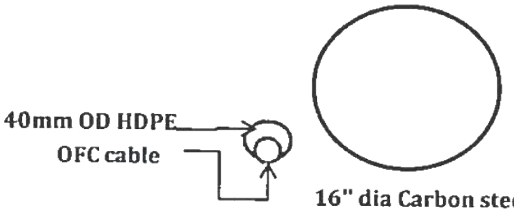
FINAL CLEAN UP

After completion of construction, the site shall be cleaned from balancematerial and debris and bentonite slurry. Site/ ROW shall be cleared to the completesatisfaction of the land OWNER's and authorities having jurisdiction.

Annexure-2

STANDARAD DRAWING OF PIPELINE LAYING BY HDD METHOD





16" dia Carbon steel Pipe(API 5L-X 70 grade) 11.13 mm wall thickness

SECTION A-A

DRAWING NOT TO SCALE

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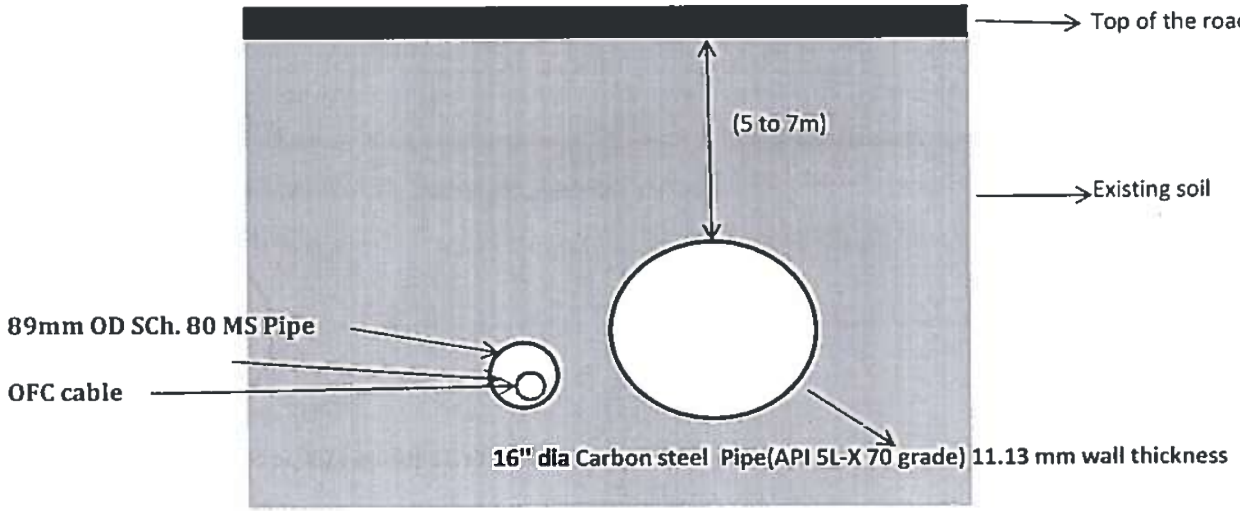
PIPELINES DIVISION

CROSS SECTION DRAWING OF PIPELINE ALONG WITH OFC (BY HDD METHOD)



LICENSE FEE ESTIMATE

Estimate towards License Fee for laying 16" dia Petroleum product pipeline along with OFC by Standard HDD method across NH- 516E at 20+960 Km between Bowdara -Vizianagaram section of Gantyada Village, Gantyada Mandal, Vizianagaram district in the state of Andhra Pradesh.
M/s. Indian Oil Corporation Ltd.

Estimate-A

From	To	No	Measurements			Quantity	Rate Per	Unit	Amount
			L	B*	D	Sq.M	Sq.M		
NH- 516E at 20+960 Km between Bowdara - Vizianagaram section of Gantyada Village, Gantyada Mandal, Vizianagaram district in the state of Andhra Pradesh.		1	30	0.495	-	14.85	865	Sq.M	12842.73
Total Amount									12842.73
License Fee (Rs/Sq.Mtr/Month)					=	$\frac{12842.73}{10 * 12}$		=	107.02
License Fee for 5 years					=	5*12*107.02		=	6421.36

License fee prescribed for Industrial Utilities shall be 100% of the fee per MORTH Guide lines vide Lr. No: RW/NH-33044/29/2015/S&R(R) Dated: 22/11/2016	6421.36
Rounding Off	6421

two thousand one hundred and ninteen rupees only

*Breadth is considered by taking 16" Dia pipe

INDIAN OIL CORPORATION LIMITED
PHPL VIZAG
PIPELINES DIVISION

Unit Rates - Village Wise

District Name	VIZIANAGARAM	Mandal Name	GANTYADA
City/Town/Village	GANTYADA	Survey No.	Select =To view Survey No. Wise Details

S.No.	Habitation	Nature Of Use	Land Rate Rs. per Acre	Effective Date (dd/mm/yyyy)
1.	BUDIPETA	Dry land	2,000,000	10/08/2020
2.	GANTYADA	Dry land	2,000,000	10/08/2020
3.	BUDIPETA	Wet Land double crop	2,000,000	10/08/2020
4.	GANTYADA	Wet Land double crop	2,000,000	10/08/2020
5.	BUDIPETA	Coconut Garden	2,000,000	10/08/2020
6.	GANTYADA	Coconut Garden	2,000,000	10/08/2020
7.	GANTYADA	House Sites	12,100,000	10/08/2020
8.	GANTYADA	Agricultural Land fit for H.S.	4,500,000	10/08/2020
9.	GANTYADA	Land abutting NH/SH/ZPP/MPP	3,500,000	10/08/2020

Back

Note :

1.This is provisional information as per records maintained by registration department for the purpose of helping the registering public to estimate the stamp duty only, subject to change due to revision of market value once in a year OR adhocly due to anomalies.

2.For further details contact Sub Registrar office
VIJAYANAGARAM (WEST),
,
NEARCOLLEC,ROFFICE,CON,NMENT, Vizianagaram
Vizianagaram
Phone : 230259

Annexure - 6

IndianOil

DGM(PJ-Sys) 9/2/2015

गोपनीय
CONFIDENTIAL

S. Ganguly 9.2.2015

कार्यसूचि मद संख्या :
AGENDA ITEM NO. P/233

प्रति TO ED(PD) Pipelines Divn.

620th Board Meeting

बैठक की तारीख
Meeting Held on 29th January, 2015

SUBJECT विषय	ACTION BY किसके द्वारा कार्रवाई
Investment approval for Paradip-Hyderabad Pipeline	DGM(PJ-Sys) Pipelines Divn.

कार्यवृत्त MINUTES

The Project Evaluation Committee of the Board at its meeting held on 13.01.2015 had evaluated the proposal and recommended the same to the Board for consideration.

The proposal seeks approval of the Board for laying of Paradip-Hyderabad Product Pipeline for evacuation of white oil products (i.e. MS, HSD, SKO & ATF) from the upcoming Paradip Refinery to depots in Andhra Pradesh, Telangana and Odisha.

The pipeline is proposed with a capacity of 4.5 MMTPA for 1150 km length and would have pumping facilities at Paradip, delivery cum pumping facilities at Behrampur, Vizag, Rajahmundry and Vijayawada etc. The products from the pipeline would be supplied to the states of Andhra Pradesh and Telangana and would also help in avoiding inter-state sales.

The project would be completed in a period of 36 months after receipt of statutory clearances. The capital cost of the project is estimated at Rs.2,789 crore and operating cost is expected to be Rs.108 crore per annum.

The Board noted the original envisaged evacuation plan from Paradip Refinery and the justification for increase in the cost since first stage approval for the project as detailed in the agenda item.

The Board approved the proposal and passed the following resolution:-

"RESOLVED THAT approval of the Board be and is hereby accorded for laying a 18" / 16" / 14" OD, 1150 km long dedicated product pipeline from the upcoming Paradip Refinery to Hyderabad for providing pipeline connectivity to a new grassroots depot at Berhampur in Odisha and also to IndianOil's existing depots at Vizag, Rajahmundry and Vijayawada in Andhra Pradesh and Hyderabad in Telangana, alongwith associated facilities at Paradip Refinery and at Rajahmundry and Vijayawada depots at an estimated cost of Rs.2789 crore, including foreign exchange component of Rs.45 crore at September, 2014 price level."

T. VIDYA SAGAR
मुख्य निर्माण प्रबंधक
CHIEF CONSTRUCTION MANAGER
इंडियन ऑयल कॉर्पोरेशन लि. के
Indian Oil Corporation Limited
पारादीप हैदराबाद पाइपलाइन परियोजना
Paradip-Hyderabad Pipeline Project
विजाग / Vizag

प्रतिलिपि COPY TO : DGM I/C (F), IOC, Pipelines Divn.

DATED : 6th February, 2015
दिनांक :

कंपनी सचिव COMPANY SECRETARY