

Full Title of the Project : Kandla Gorakhpur LPG Pipeline Project
Proposal No. : FP/UP/Pipeline/42798/2019
Forrest Land Proposed for Diversion : 3.9806 Ha.

MUCK DISPOSAL CERTIFICATE

M/s IHB Private Limited, the user agency is hereby certified that the proposal of protected forest with reserve forest land diversion of **1.7730 hectare under Awadh forest division in District Lucknow by which PF land diversion proposal of 0.0200 hectare Bani-Mohan Marg, Village-Latif Nagar Tehsil-Sarojni Nagar, 0.2199 hectare forest land under Lonaha reserve forest Tehsil-Sarojni Nagar, 0.3978 hectare forest land under Piparsand reserve forest Tehsil- Sarojni Nagar, 0.4788 hectare reserve forest land under Gehru reserve forest Tehsil-Sarojni Nagar, 0.3490 hectare forest land under Amausi reserve forest Tehsil-Sarojni Nagar, 0.2985 hectare forest land under Banshi Gadi reserve forest Tehsil-Lucknow and 0.0090 hectare National Highway-24(Lucknow-Sitapur) & Railway line (Section Bakshi Ka Talab-Itaunja) protected forest Village Degoi, Tehsil-Bakshi Ka Talab in District Unnao for Laying of proposed 10.75 inch diameter LPG Pipeline from Unnao – Gorakhpur section under Kandla-Gorakhpur LPG Pipeline Project. The soil digging will not be done in the protected forest land but in the reserve forest area the pipeline will be laid through open cut method whereas the user agency will ensure complete disposal of muck by utilizing complete muck in project activities during laying of proposed LPG pipeline. Hence Muck disposal plan is not permissible for Kandla – Gorakhpur LPG pipeline project.**

Disposal/ Management Plan

While preparing FCA Case, if there is any activity in the project involved digging of Land, muck disposal/ management plan has to be prepared.

It should include of the following,

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| 1. Calculation of muck to be generated self factor has to be applied. | N.A. |
| 2. Quantity of muck to utilized in the project activities. | N.A. |
| 3. Balance quantity of muck which requires disposal/ Management plan? | N.A. |
| 4. Carriage of muck from the muck generation site to the dumping site? | N.A. |
| 5. Ownership of land and the consent of land owner, in case muck disposal on non forest land. | N.A. |
| 6. Photograph & carrying capacity of proposed dumping site. (Muck disposal site) | N.A. |
| 7. Development of dumping site – construction of retaining walls and other structure as per requirement of the site. The objectives is to complete stop rolling down of the muck. | N.A. |
| 8. Rehabilitation of dumping site like leveling planting of grass, shrubs and trees species. | N.A. |

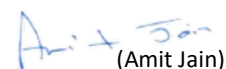
After Construction work of approach road will be done.

Cost to be incurred on the above activities has to be given as component wise. Details of dumping site including length, width and height of structure to be exacted must be mentioned.

Undertaking by the user agency has to be given to the effect that:

1. Muck management plan will be implemented by the user agency and in case of non implementation of the play, they will be liable to the penalty / action at the cost.
2. The proposed dumping site is located away from river/ stream/ Nala.

M/s IHB Private Limited


(Amit Jain)

Chief Manager (Project)

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Calculation of Muck

Quantity of excavation:

Pipeline length = 1.744 km

$$= 1744 \text{ m (L)}$$

Pipeline trench width = 1.2 m (B)

Pipeline trench depth = 1.5 m (H)

Quantity of earth excavation for pipeline trench = $L \times B \times H$

$$= 1744 \times 1.2 \times 1.5$$

$$= \mathbf{3139.20 \text{ cum}}$$

Pipeline volume in trench

Pipeline diameter (considering maximum size of pipeline as 16" OD) = 16 inch = 0.406 m (D)

Area of circular cross section = $(\pi \times D^2)/4 = 0.130 \text{ sqm (A)}$

Pipeline volume = $A \times L = 0.130 \times 1744 = \mathbf{226.72 \text{ cum}}$

Quantity of soil backfilled with proper compaction = $3139.20 - 226.72 = 2912.48 \text{ cum}$

Total extra excavated earth = Pipeline volume in trench = 226.72 cum

We consider approx. 200 mm to 250 mm convex shape crown over the 1.2 m width of trench considering the shape is near to triangle with a base of 1.2 m width.

Volume of crown = $1744 \times 0.5 \times 1.2 \times (0.200 + 0.250)/2 = 235.44 \text{ cum}$

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