



पतरातु विद्युत उत्पादन निगम लिमिटेड

PATRATU VIDYUT UTPADAN NIGAM LTD.

(A subsidiary of NTPC in Joint Venture with JBVNL)

पतरातु / Patratu

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Patratu, Dist.-Ramgarh-829119

Appendix-A

A. Justification for locating the project in forest area:

The Mining plan of Banhardih was approved by Ministry of coal on 15.07.2021 for an area of 1467.42 Ha. Vide letter no -CC/MP&MC/102/2021-22/BANHARDIH DATED 15.07.2021. Mineable reserve is 270.81 Million Tonnes and extractable reserve is 250.50 Million Tons (Estimated for the quarriable sector up to a depth range 300 meter only). Out of the total extractable reserve, 60 million tonnes of coal are reserved beneath the forest land which can only be extracted after diversion of Forest. Considering the mining activities are site specific and the mineralised zone of Banhardih Coal Block is beneath the forest patch present within the block. Thus, the diversion of bare minimum 515.32 Ha of forest area falling within the project area of 1467.42 Ha is very much essential for extraction of coal of 270.81 Million tonnes of coal. The project area of 1467.42 Ha. is involved both forest and non-forest land. Around 515.32 Ha. forest land and 952.10 Ha Non-Forest land is found within the project area of Banhardih Coal Block.

B. Justification for bare minimum use of Forest Land

Coal reserve has been estimated in the approved Mine plan by Ministry of Coal. Gross Geological Reserves up to a depth of 1200 meter is 1372.21 Million Tons. Gross Geological Reserves up to 300-meter depth is 446.18 Million tonnes. Net Geological Reserves up to a depth of 1200 meter is 1234.98 Million Tonnes. Net Geological Reserves upto 300meter depth is 401.56 Million tons and for mineable block area of 1467.42 ha, as per the inputs of Geological Report, the total coal reserve estimated as **561.56 million tonne** (Approximately) as Geological Reserve and 378 Million Tonne as Mineable reserve and **350.50 Million Tonnes** (Approximately) as extractable reserve.

Accordingly, for the initial phase of mining and similarly, in the initial phase Mineable reserve is 270.81 Million Tons (Mineable reserve estimated for the quarriable sector up to a depth range of 300 meter only) with 250.5 Million Tonnes extractable in the first phase and the balance of 100 Million tonnes(approximately) shall be extracted in the second phase of mining.

Accordingly, in the present scheme of mining based on the approved Mining Plan, there is extraction of 250 Million tonnes from initial phase of mining. Further, extraction of 100 Million tonnes (Approximately) coal is envisaged in the second phase of mining. It is also imperative to mention here in the total mineable area of 1467.42 ha, the proposed forest diversion area of 515.32 Ha including Notified Forest and GMJJ (deemed forest land) contains approximately 110 Million tonnes of coal is present beneath the forest area.

In the initial phase of mining, where the extraction of 250 Million tonne of coal is envisaged, which includes 60 million tonnes of Coal Reserve beneath the Forest area. Further, subsequently in the second phase of mining which includes additional 100 million of coal extraction also includes 80 million tonnes coal beneath the forest area proposed for future mining. However, considering the mining methodology in the second phase total envisaged 100 million tonnes of coal shall not be possible to be extracted & locked without diversion of forest. It is further concluded that around



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160 Million tonnes of coal (60 Million Tonnes in 1st Phase & 100 Million tonnes of coal in 2nd phase of mining) shall be completely lost if the proposed forest diversion over 515.32 Ha is not being recommended. Hence diversion of 515.32 Ha is highly essential.

In view of the above analysis, it is evident to mention here that elimination of any forest patch of coal bearing area of 1467.42 Ha directs to a loss of 160 million tonne of Mineable reserve (approximately). Thus, excavation of coal from all part of the project area of 1467.42 Ha. is very much essential and the proposed forest area may not be eliminated.

In addition to above, If the coal reserve under the above forest area is left out, mining is not feasible only in non-forest land also the project shall be unviable considering the coal requirement for the captive power plant where there is sustainable coal supply of 12 Million Tonne and above is essential to make the PVUNL power plant functional. Furthermore, it also leads to a loss of national wealth to a great extent.

As mining activity is a site specific and the huge demand of coal in India for Power generation and other utilities, diversion of the proposed forest land of 515.32 Ha under Section -2(ii) of FC Act 1980 is essential for Banhardih Coal project of M/s PVUNL.

C. Temporary OB Dump and Garland drain:

Based the Geological report, the Mining Plan has been approved for 1467.42 Ha in the coal bearing area where in the initial phase, the extraction of 250.50 million Tonnes of coal is envisaged from the quarriable area of 727.24 Ha for 30 years of mining period and re handling of OB for 3 years.

From the total projectized area of 1467.42 Ha from approved mining plan, in the initial phase, 727.24 Ha shall be utilised for Mining, 12.24 Ha shall be for top soil preservation, 7.85 Ha for safety zone, 10.21 Ha for haulage road in mining, 5.58 Ha for road diversion, 35.7 Ha for Mine end infra, 7.58 Ha for garland drain and 219.68 Ha shall be undisturbed considering the presence of coal in Underground mining method.

The balance coal bearing area of 440 Ha shall be utilised for extraction of coal in the second phase as per the condition mentioned in the approved mining plan, presently earmarked for temporary OB dump, which shall be re handled before commencement of mining in this area. Hence it is concluded that 440.7 Ha land shall be utilised for future mining for extraction of coal. Considering the feasibility of Mining methods and non-availability of non-coal bearing land in proximity & nearby to the coal block, the 440.7 Ha of mining land, earmarked for future mining, shall presently be utilised for temporary storage of OB and mining activities in this area shall be commenced in the second phase.

D. Underground Mining:

Presently as per approved mining plan, out of 1467.42 Ha projectized area, 219.68 Ha has been kept undisturbed and to be mined by underground mining method beyond 300 m depth



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(considered as quarriable limit for mining through opencast method). The details of underground mining shall be formulated at a later stage.

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(Signatory Authority)

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