CHAPTER – I

INTRODUCTION

1.1 BACKGROUND OF THE PROJECT

Three power projects are being set up by NTPC under the Mega Power Policy of Govt. of India. The three power projects are (i) North Karanpura/Tandwa STPS (2000 MW) (ii) Barh STPS (2000 MW) and (iii) Kahalgaon TPS (1500MW). Out of these three STPS/TPS, North Karanpur/Tandwa STPS and Barh STPS have been linked to North Karanpura Coalfield of CCL, which has huge reserves of power grade coal. The Hon'ble Prime Minister of India laid the foundation stone of these mega power projects on 6th March'99.

Two Opencast Projects in N.K. Coalfield have been identified for supplying coal to above two STPS. The opencast projects are Magadh OCP, which is envisaged to feed coal to North Karanpura /Tandwa STPS and Amrapali OCP, which is envisaged to feed coal to Barh STPS. The requirement of power grade coal will be around 10 M.te per annum for each STPS and with these objective in view, the above two OCP's were prepared for a rated capacity of 12 MTPA each. It is envisaged that these two OCPs will be worked at an operating efficiency of not less than 85%.

Amrapali Opencast Project was identified for a rated capacity of 12.0 MTY for supplying coal to Barh STPS (2000 MW). The proposed mining area is remote and no basic infrastructure like Road, Power, Railway, Water Supply arrangement are available in this project. To develop the area, these facilities are to be made available, which normally take a long period.

Project Report for Amrapali OCP (12Mty), CCL with both coal and OB outsourcing variant was approved by CIL Board vide letter no.CIL:XI(D):04112:2012:3874 dated 23rd February2012.

EMP for Amrapali OCP (12 Mty) was approved by MOEF vide ref no. J-11015/109/2003-IA.II(M) on 03.01.2006

1.2 SALIENT FEATURE OF APPROVED AMRAPALI OCP (12 MTY)

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1.2.1 Project Summary

The PR involves extraction of coal from two fully explored geological blocks Amrapali and Kishanpur as mentioned above are fully explored and geological information were available to plan a large scale Opencast Mine of 12 MTY capacity.

For Amrapali OCP electric power is proposed to be drawn from existing Piparwar sub station.

The summarized data of the project report (12 MTY) is given in Table-1.1

Table-1.1

Sl. No.	Particulars	Amrapali OCP (12.0 MTY) UCE' January'12
1.	Mineable Reserves (M.tes)	291.10
2.	Volume of OBR (Mm3)	459.68
3.	Av. Stripping Ratio (M3/te)	1.58
4.	Rated Capacity / annum	12.0 MTY
5.	Projected Life (Years)	30 (incl. 2 yrs. construction period)
6.	Overall Grade	F
7.	Initial Capital Requirement (Rs. Crores)	858.11
8.	Estimated cost of production (Rs./te):	
9.	(a) at 100%	471.38
	(b) at 85%	515.86
	Selling Price (Rs./te)	727.00
10.	Profit (Rs./te)	
	(a) at 100%	255.62
	(b) at 85%	211.14
11.	IRR (%)	
	(a) at 100%	31.03
	(b) at 85%	24.34
	Estimated Manpower Requirement (Nos.)	343
12.	O.M.S. (Old)	132.52

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1.2.2 Advance Action Proposal

The advance Action proposal was sanctioned by GOI at an estimated capital of Rs. 889.72 Lakhs vide letter no. 43011/24/2001-CPAM dt. 25/09/2001 to carry out following activities:

a) Land Acquisition

b) Village Rehabilitation

c) Transmission line for power supply arrangement

d) Approach road

1.3 PRESENT STATUS OF THE PROJECT

1.3.1 Approval of the Project Report

1.3.1.1 Approval of the Project by CCL Board

The DPR was prepared in April, 2005 and subsequently updated in July'2006. The UCE (July'2006) was sent along with the Draft CCEA note in November'2006 for approval. As per the relevant directives on the subject, there had been changes in the price of inputs (P&M, Civil, Salaries & Wages etc.). These changes necessitated updating of cost estimates in March'09. The Project Report for Amrapali OCP (12.0MTY) was discussed in the 360th (Item No.4 (16) meeting of CCL Board on 30.07.2009 and the Board approved the proposal envisaging outsourcing of both coal production and OB removal, to CIL board for approval of the PR. The PR was updated in Oct,2009 for consideration in ESC of CIL Board.

1.3.1.2 Approval of the Project by CIL Board

Project Report for Amrapali OCP (12Mty), CCL with both coal and OB outsourcing variant was approved by CIL Board vide letter no.CIL:XI(D):04112:2012:3874 dated 23rd February2012 for an initial capital investment of Rs. 858.11 crores.

1.3.2 Status of land acquisition

- Authentication yet to be completed.
- Physical verification for authentication of GMK land in Honhe, Ursu and Kumrang Khurd village has been completed.
- In Kumrang Kala, 80% GMK land has been verified.
- In Binglat village, verification is under process.
- MoC has sanctioned Rs. 21 lac for 2.275 acres in Kumarang Khurd and Kumarang Kalan village. Rs 21 lac disbursed to villages of Kumarang Khurd and Kumarang Kalan. In addition, Rs 15.17 Lakhs for 1.68 acres of Honhe village in respect of land compensation will be released shortly.

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Stage-II FC obtained in Oct-10. 307.40 Ha handed over to CCL out of total requirement for initial 10 years. Balance land will be handed over in phases.

1.3.3 Construction of Railway Siding

- Survey work for finalization of alignment for Construction of Railway Siding by M/s RITES - CMPDI has been requested for plotting of final route alignment drawing on Mouza map for preparation of land schedule by Area.
- Revised DPR submitted.

1.3.4 Status of EMP

EMP for Amrapali OCP (12 Mty) was approved by MOEF vide ref no. J-11015/109/2003-IA.II(M) on 03.01.2006

1.3.5 Present Mine Operation

Two separate coal winning and OB removal contracts for 15.0 Mtes and 23.93 Mcum respectively is under implementation. Yearwise coal production and OB removal is summarized below:

Year	Coal (Mtes)	OBR(Mcum)
2013-14	-	2.54
2014-15	2.54	17.74
Total	2.54	20.28

1.3.6 Existing Manpower

Executive	:	20
Monthly Rated	:	71
Daily Rated	:	184
Total	:	275

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1.4 PRESENT PROPOSAL

As per XIIIth plan document CIL is required to produce 795 Mtes of coal in the terminal year of XIII plan i.e. 2021-22 which is likely to be revised upward. To meet the ever increasing demand of coal annual capacity of big opencast projects of CCL like Magadh, Amrapali and Ashok are required to be reassessed.

Project Report of Amrapali Expansion OCP (12.0 MTY) has been recast with an annual nominal capacity of 25.0 MTY and a peak annual capacity of 35.0 MTY. The expansion of the report from 12.0 MTY to 25.0 MTY is proposed to be achieved with following considerations:

- Increased advance rate of about 125 - 150m per annum as achieved by nearby mines like Ashok and Piparwar.
- Ample reserves available in the dip side, beyond the extent of 12 MTY project, within the considered Amrapali and Kishanpur blocks and beyond dip side limits of these blocks. The area beyond the block limit of Amrapali and Kishanpur block is partly explored in the name of Magadh North East Block (block area 3.35 sq km, geological reserves 166.72 Mtes & total metrage drilled 8350.45m) and partly unexplored. The area is provisionally identified as CIL block.

The mine is proposed to work through two sections (East section and West section) without any inter quarry barrier.

PHASES OF MINING PROPOSED

Mining operation is proposed to be carried out in two phases. In the first phase (Phase I) reserves of fully explored Amrapali and Kishanpur Blocks only are proposed to be exploited upto Chudru nala (block boundary). Reserves of the area beyond block boundary of Amrapali and Kishanpur blocks is proposed to be mined in Phase II after detailed exploration and geological proving.

The present proposal is the detailed mining proposal for Phase I only. Mining proposal for Phase II will be prepared after detailed exploration of the area identified for Phase II.

1.5 MINING VARIANTS PROPOSED

This proposal of Amrapali Expansion OCP (25.0 MTY) envisages two variants options of mine operation & capital investment for consideration and to take investment decision.

Variant - I

The option envisages total coal production & OB removal by departmental means. Departmental Coal production is proposed to be carried out using shovel-dumper/surface Miner-pay loader-dumper combination. OB removal is proposed to be carried out using shovel-dumper combination.

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Variant - II

The option envisages outsourcing of total coal production & OB removal for both Quarry I &II.

Reclamation equipment in both the variants mentioned above is proposed to be departmental.

1.6 TARGET CAPACITY OF THE PROJECT

Considering the geo-mining parameters of the block the target capacity of the proposed quarry has been fixed at 12.0 MTY with a peak capacity of 25.0 MTY

1.7 PRODUCTIVITY ENHANCEMENT

The mine has been designed to produce at the rate of 12MTY. The design of the mine is mainly based on lay & deposition of coal seams and intervening partings of the block as estimated in the Geological report and the HEMM productivity norms adopted in CIL mines.

Keeping into account the current state of development in technology and attainment of improved skills of operators and maintenance crew, it will be possible for coal producing company to achieve higher coal production from the targeted by achieving higher availability and utilization of HEMM.

It is therefore, Amrapali Expansion OCP may produce coal higher to 20.0 MTY in any one or all the year of the life of the mine against nominal mine capacity of 12 MTY.

1.8 TECHNOLOGY UPGRADE

Upgrading technology is a prerequisite for more effective use of resources and thus improving environmental performance, which becomes all the more important in view of a rapidly growing demand of coal in our country. In most cases, newer technologies and processes are both more efficient and less polluting than the technology they replace, allowing increased production using less material and causing less pollution.

Considering, what has been stated in the above paragraph, the proposed Project Report suggests flexibility in the implementation stage within the scope of the report to respond to improvements in technology and equipment which would result in improved profitability, productivity and mitigate environmental hazards due to mining.

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