34011/2/2004-CRC CPAM
Ministry of Coal
CPAM Section

Shastri Bhawan, New Delhi
Date: 09th May 2017

ORDER

Subject: POLICY DECISION IN REGARD TO MMDR ACT-1957 GRANTING GOVT RECOGNITION FOR PREPRATION OF MINING PLAN.

In order to expedite the process of approval of mining plan/mine closure plan by standing committee for approval of mining plan/mine closure plan pertaining to coal, Lignite and sand for stowing it has been decided that henceforth all the mining plan/mine closure plan should be submitted along with project details duly filled up in standard checklist format in MS Word file as well as in Hard copy duly certified by RQP.

No change in format of the checklist is allowed and in case any deviation, is noticed from the respective mining plan/mine closure plan, the proposed mining plan/mine closure plan will be rejected.

Encl: Draft Checklist.

Signature Not Verified
Digitally signed by ANANDA KUMAR MANDAL
Date: 2017.05.09 13:24:32 IST
Reason: Approved

A.K Mandal
Under Secretary to the Government of India (CPAM)

Copy: NIC, Coal for uploading on the Ministry's Website.

CHECKLIST FOR MINING PLAN AND MINE CLOSURE PLAN

	Parameters	*Details*		*Observation*
1	**DETAILS OF THE BLOCK**			
a.	Name of Coal / Lignite Block			
b.	Name of the Coalfield/ Coal belt			
c.	Particulars of adjacent blocks: North, South, East, West	**North :** **South:**	**East:** **West:**	
d.	Topo sheet No with latitude and longitude	**Vesting Order**	**Mining Plan & Mine Closure Plan**	
	Topo sheet No		No. 4	
	Latitudes (N):	__° __’ __” N - __° __’ __” N	__° __’ __” N - __° __’ __” N	
	Longitude (E):	__° __’ __” E - __° __’ __” E	__° __’ __” E - __° __’ __” E	
e.	Location of the Block District / State			
f.	CMPDIL Certificate of the project boundary of the Mining Plan			
g.	Type of the Project (Operating / under Implementation)			
2	**DETAILS OF THE PRESENT PROPOSAL**			
a.	**BASE DATE OF MINING PLAN/MINE CLOSURE PLAN**			
b.	**Scope of The mining plan**			
3	**ALLOTTEE COMPANY DETAILS**			
a.	Name the Mine Allottee			
b.	Status of the Applicant Company			
c.	Details of allotment/vesting order			
d.	Name and address of the applicant	**Regd Office**	**Principal Place of Business**	
e.	Relationship between the applicant and allottee company			
f.	Name and address of RQP with registration No			
g.	Name of the Previous allottee of the Block			
4	**Details of the Previous approval of Mining plan**			
a.	Date of Approval			
b.	Conditions, if any			

		Parameters	Details	Observation
c.		Scheduled year of start of production		
d.		Proposed year of achieving the targeted production		
e.		Date of actual commencement of mining operations, if operations already started		
f.		Likely date of mining operations, if operations not yet started & reasons for non-commencement of operations		
g.		**Planned production and actual levels achieved in last 3 years (Coal in Mte, OB in MM^3, SR in M^3/te)**		
h.		Reasons for difference between the planned and actual production levels		

		Planned		Actual Coal Production "Mte"				
	Calendar year	Coal	OB	UG	OC	Total "Mte"	OB "MM3"	SR
Y-1	2007-08							
Y-2	2008-09							
Y-3	2009-10							
Y-4	2010-11							
Y-5	2011-12							
Y-6	2012-13							
Y-7	2013-14							
Y-8	2014-15							
Y-9	2015-16							
Y-10	2016-17							
	Total							

5	**Details of changes in the new mining plan compared to earlier approval**				
			Previous Mining Plan	**Current Mining Plan**	
a.		Lease area "Ha"			
b.		Project Area "Ha"			
c.		Life of the Project "Yrs"			
d.		Minimum and Maximum Depth of working "m"			
e.		Geological Block "Ha"			
f.		Production Target "MTPA"			
g.		Seams Available			

	Parameters		Details		Observation
		"As per GR"			
h.		Seams not considered for Mining with Reasons			
i.		Geological Reserve "Mt"			
j.		Blocked Reserve "Mt"			
k.		Minable Reserve "Mt"			
l.		Extractable Reserves "Mt"			
m.		% of Extraction/ recovery			
n.		Reserve Depleted (till the base date) Reserves " Mt"			
o.		Balance Extractable reserve "Mt"			
p.		Average Grade			
q.		OB in MM3			
r.		SR MM3/te			
s.		Mining Technology			
t.		Coal Beneficiation envisaged			
u.		Handling of Rejects			
v.		Land use pattern " Ha"			
1		Excavation Area			
2		Top Soil Dump			
3		External Dump			
4		Safety Zone			
5		Other Use			
6		Infrastructure area			
7		Green Belt			
8		Undisturbed Area			
9		**Total**			
w.		**Reasons for Revision**			
6	**END USE OF COAL/LIGNITE**				
a.	End Use of Coal/Lignite as per approval by the Competent Authority				
b.	Norms adopted for calculating ROM quantity requirement based in the allotment order				

	Parameters	Details	Observation

	Clinker "MTPA"		Power Plant "kW"		Blast Furnace "Mtpa"	
Capacity of the end use plant						
Capacity of the Project "MTPA"						
Raw Coal availability from this project "MTPA"						
Washed coal availability "MTPA"						
Reject "MTPA"						
Station Heat Rate "K Cal/Kwhr						
Avg Calorific Value of Coal "Kcal/Kg"						
Raw coal						
Washed coal						
Rejects						
Specific consumtion "Kg/Kwhr"						
Consumption Norm (Kg/Tonne)	175	175				
Plant Load Factor/ Capacity Utilisation	0.85	0.85	0.85			
Coal Requirement "MTPA"						
Total Requirement for the End Use Plants "MTPA"						
Source of coal requirment						
Coal from this project "MTPA"						
Lingkages/ E-auction from CIL "MTPA"						
Other block of the Company "MTPA"						
Total availability "MTPA"						

c.	Percentage of end use requirement to be met from this mine		
d.	If washing / beneficiation of the coal/ lignite is planned to be conducted on site or adjacent to the extraction area, briefly describe the nature of the beneficiation and recovery rate, consumption of water etc.		
e.	Proposed Use of Rejects/Middling's		
f.	Distance of End use plant from the pit head of the project in "km"		
g.	Mode of Coal Transport		
7	**EXPLORATION AND GEOLOGY**		
a.	Geological Block Area " Ha"		
b.	Status of Exploration of the block		
c.	Area covered by 'detailed' exploration within the block (sq. km)		
d.	Whether entire lease area has been covered by 'detailed' exploration.		
e.	No. of boreholes drilled within the block		
f.	Whether any further exploration/study is		

	Parameters	*Details*	*Observation*
	required or suggested and time frame in which it is to be completed		
g.	Overall borehole density within the block (no./ sq. km) approx		
h.	No of Seams available as per GR		
i.	Seams not considered for Mining with Reasons		
j.	Dip of the Seam		
k.	Seam wise Thickness and Depth with Reserve assessment		
l.	Average GCV		
m.	Gross Geological Reserve of the block "Mte"		
n.	Net Geological Reserve of the block "Mte"		
o.	Minable Reserve of the block "Mte"		
p.	Blocked Reserve "Mte		
q.	Corresponding extractable reserve of the block "Mte"		
r.	Percentage of Extraction		
s.	Reserve already depleted (Base date of Mining Plan)		
t.	Balance Reserve (As on Base Date)		
8			
a.	Existing method of mining if the mine is under operation		
b.	Proposed method of mining with justification on suitability of method of mining		

Seam	Thickness Range 'm'	Depth Range 'm'	Net Geological Res "Mte"	Blocked Reserve below					Min Res " Mte"		Mining losses
				Highwall/ Batter	Nala/ River/Road	Barrier	Un-economi	Total Blocked	UG	OC	
Rajhara A											
P											
Rajhara B											
P											
Pandwa Top											
P											
Pandwa Bottom											
Total											

Seam	Ext Res "Mte"			As on base date "Mte"							Reason not considered for mining
				Depletion of Reserve			Balance Reserve				
	UG	OC	Highwall	UG	OC	Highwall	UG	OC	Highwall	Total	
Rajhara A											
Rajhara B											
Pandwa Top											
Pandwa Bottom											
Total											

	Parameters	*Details*	*Observation*
c.	Coal production capacity proposed "Mtpa"		
d.	Justification for optimisation Coal production capacity		
e.	Calendar year from which the production will start		
f.	Year of Achieving rated production		
g.	Coal production Plan "MT"		

Year		Coal production		OB "MM3"	SR
		UG	OC		
Y-1	2017-18				
Y-2	2018-19				
Y-3	2019-20				
Y-4	2020-21				
Y-5	2021-22				
Y-6	2022-23				
Y-7	2023-24				
Y-8	2024-25				
Y-9	2025-26				
Y-10	2026-27				
Y-11	2027-28				
Y-12	2028-29				
Y-13	2029-30				
Y-14	2030-31				
Y-15	2031-32				
Y-16	2032-33				
Y-17	2033-34				
Y-18	2034-35				
Y-19	2035-36				
Y-20	2036-37				
Y-21	2037-38				
Y-22	2038-39				
Y-23	2039-40				
Y-24	2040-41				
Y-25	2041-42				
Y-26	2042-43				
Y-27	2043-44				
Y-28	2044-45				
Y-29	2045-46				
Total					

i.	**Peak/Rated Capacity**			
	-	By OC		
	-	By UG		
	-	Overall		
j.	**Life of the mine :**			
	-	By OC		
	-	By UG		
	-	Overall		
k.	Whether the proposed external OB dump site is coal/ lignite bearing: If so, whether coal/lignite below waste disposal area is extractable.			

	Parameters	*Details*	*Observation*
l.	Whether negative proving for coal / lignite in the proposed site for OB dump/ infrastructure has been done.		
m.	Whether the mining operations to be carried out through departmental equipment/ MDO/ outsourcing.		
n.	Operations that are proposed to be outsourced		
o.	Proposed configuration of HEMM for OC (Coal & OB) & Major Equipment for UG.		
p.	Mode of entry for underground mines (shaft, incline, adit,):		
q.	Results of any investigation carried out for scientific mining, conservation of minerals and protection of environment; future proposals.		
9	**IMPORTANT SAFETY ASPECTS –** Major Risks and uncertainties to the project viz. Proximity to river, adjacent working, geo-mining disturbances, slope stability and remedial measures suggested. It should also include proposed overall slope of the quarry and OB dump, dump height, strata control, fire and spontaneous heating, gas monitoring, disaster management, danger from inrush of water etc		
10	**STATUS OF LEASE**		

	Parameters	*Details*	*Observation*
a.	Status of Lease		
b.	Existing Lease Area "Ha"		
c.	Period for which Mining Lease has been granted/is to be renewed/ is to be applied for.		
d.	Date of expiry of earlier Mining Lease, if any		
e.	Whether the lease boundary/ required boundary is same as demarcated by CMPDI/ SCCL/ NLC for delineating block/sub-block		
f.	Lease Area (applied/ required) as per the Mining Plan under consideration (Ha)		
g.	Whether the applied lease area falls within the allotted block		
i.	Area (Ha) of lease which falls outside the block/sub-block delineated by CMPDI/SCCL/NLC.		
j.	**Details of outside area:**		
	– Whether forms part of any other coal block		
	– Whether it contains any coal/lignite reserves		
	– Purpose for which it is required, e.g. roads/ OB dumps/ service buildings/ colony/ safety zone/ others (specify)		
k.	**Whether some part(s) of the allotted block has not been applied for mining lease.**		

	Parameters	Details	Observation
	- Total area in Ha of such part(s).		
	- Total reserves in such part(s). (Mt)		
	- Brief reasoning for leaving such part(s)		
11	**ENVIRONMENTAL MANANGEMENT**		
a.	Land use pattern in Ha Pre Mining , During Mining and Post Closure Land Use and Post Closure Management of the Land should be provided in the following table		

Pre Mining Land Use "Ha"			Type	Land use (During Mining)	Land Use (End of Life)	Land Use (Post Closure)								
						Agricultural land	Plantation	Water Body	Public/Company Use	Water Harvesting	Dismentaled area	Forest Land (Returned)	Undisturbed	Total
Tenancy	Agricultural		Excavation Area											
	Township		Backfilled Area											
	Grazing		Excavated Void											
	Barren		Without plantation											
	Water Bodies		Top Soil Dump											
	Road		External Dump											
	Community		Safety Zone //Rationalisation area											
	Inhabitated		Road diversion											
	Village		Diversion/ below River/Nala/canal											
Govt Non Forest	Agricultural		Road & Infrastructure area											
	Township		Garland drains											
	Grazing /other		Embankment											
	Road		Green Belt											
	Water body		Water Reservoir near pit/Water body											
	Other		UG entry											
Forest	Reserve		Pit head power plant											
	Protected		Resettment											
	C-J-B-J		Undisturbed/ Mining right for UG											
Free Hold			others											
Total														

b.	Surface features over the block area			
c.	No. of villages/Houses to be shifted			
d.	Population to be affected by the project			
e.	Monitoring schedules for different environmental components after the commencement of mining and other related activities.	Air Quality		
		Water & effluent quality		
		Ground water level monitoring		
		Noise level		
		Study of Flora and Fauna		
		Soil Quality		
12	**PROGRESSIVE & FINAL MINE CLOSURE PLAN**			
12.1	**Parameters of Mining Plan vis-a-vis Mine Closure plan (When only Mine Closure Plan is being placed for approval details of approved mining plan must be provided)**			
		Approved Mining Plan	**Revised Mining Plan & Mine Closure Plan**	
a.	Lease area "Ha"			
b.	Project Area "Ha"			

	Parameters		Details		Observation
c.		Life of the Project in Years			
d.		Minimum and Maximum Depth of working “m”			
e.		Geological Block “Ha”			
f.		Production Target “MTPA”			
g.		Seams Available “as per GR”			
h.		Seams not considered for mining with reasons			
i.		Geological Reserve “Mte”			
j.		Blocked Reserve “Mte”			
k.		Minable Reserve “Mte”			
l.		Extractable Reserves “ Mte”			
m.		% of recovery			
		Reserve Depleted (till base date) in Mt			
		Balance Extractable Reserve in Mt			
		Avg. Grade			
n.		OB MM3			
o.		SR MM3/te			
p.		Mining Technology			
q.		Coal Beneficiation envisaged			
r.		Handling of Rejects			
s.		Land use pattern “ Ha”			
	1	Excavation Area			
	2	Top Soil Dump			
	3	External Dump			
	4	Safety Zone			
	5	Other Use			
	6	Infrastructure area			
	7	Green Belt			
	8	Undisturbed Area			
		Total			
12.2	**Statutory obligations**				

	Parameters	*Details*	*Observation*
12.3	**Waste Management** (Figures in MM3)		

	Cummulative OB Removal			External Dump (Cummulative)		Internal Dump/ Backfilling (Cummulative)		Embankment	
	Top Soil	OB	Total	OB	Top Soil	OB	Top Soil	OB	Top Soil
Y-1									
Y-3									
Y-5									
Y-10									
Y-15									
Y-20									
Y-25									
Y-29									
Y-30-32									

12.4 **Biological and technical reclamation of mined out land**

Year/Stage	Cummulative area "Ha"							Cumulative Plantation area "Ha"					
	Excavation area for OC/ Reclaimed area for UG	Backfilling	Void	TS Dump	Extn Dump	Others	Total	Backfill	Dump	Green Area	Infrastructure/ Barren	Agri Land	Total
Y-1													
Y-3													
Y-5													
Y-10													
Y-15													
Y-20													
Y-25													
Y-29													
Y-30 to Y-32													

12.5	**Water Quality management : (**Existing water bodies available in the lease hold area; Measures to be taken for protection of the same including control of erosion, sedimentation, siltation, water treatment, diversion of water course if any; Measures for protection of contamination of ground water from leaching etc; Quality of surface water bodies and measures proposed to meet the water quality; Report of hydrological study of the area ; Water Balance Chart etc)		

<table>
<tr><th></th><th>Parameters</th><th>Details</th><th>Observation</th></tr>
<tr><td>12.6</td><td colspan="2">Top Soil Management – (Including Action plan for Top Soil management)
<table>
<tr><th rowspan="2">Year/ Stage</th><th rowspan="2">Top Soil Removal "MM3"</th><th colspan="4">Top Soil Used "MM3"</th></tr>
<tr><th>Embankment</th><th>Spreading over the backfilled area</th><th>Spreading over the ob dump area</th><th>Using for Green Belt area</th><th>Total utilised ts</th></tr>
<tr><td>1st year</td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>3rd year</td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>5th year</td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>10th year</td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>15th year</td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>20th year</td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>25th year</td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>29th year</td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>32nd year</td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
</table></td><td></td></tr>
<tr><td>12.7</td><td>Coal beneficiation and management of Coal Rejects, proposal regarding future maintenance and dismantling of structures, slurry pond and rejects</td><td></td><td></td></tr>
<tr><td>12.8</td><td>Infrastructure to be retained and to be dismantled and measures to be taken for their physical stability and maintenance for the retained infrastructure facilities;</td><td></td><td></td></tr>
<tr><td>12.9</td><td>Decommissioning of mining equipment and their possible post mining use</td><td></td><td></td></tr>
<tr><td>12.10</td><td>Safety measures to be implemented to prevent access to surface opening for underground working, excavation etc (fencing to be carried out by barbed wires</td><td></td><td></td></tr>
<tr><td>12.11</td><td>Economic Repercussions of closure of mine - Manpower retrenchment, compensation to be given, socio-economic repercussions and remedial measures</td><td></td><td></td></tr>
</table>

	Parameters	*Details*	*Observation*
	consequent to closure		
12.12	**Time scheduling for abandonment with bar chart for the life of the project plus 3 years**		
12.13	**Cost of Activities to be taken up for closure of the mine**		

Head		Unit	Quantity	Rate Rs/ Unit	Amount "Rs. Cr"
Progressive closure	Water quality management	LS			
	Air quality management	LS			
	Waste Management	M Cum			
	Barbed wire fencing around dump	m			
	Barbed wire fencing around the Pit	m			
	Filling of Void - Rehanding of Crown Dump	MM3			
	Top Soil management	MM3			
	Technical and Biological Reclamation of Mined out of land and OB Dump	Ha.			
	Plantation over virgin area including green belt	Ha			
	Manpower Cost and supervision				
	Toe Wall around the dump	m			
	Garland drain	m			
	Garland Drain around the dump	m			
	Any other Activity				
Dismentaling of Infrastructure & Disposal/ rehabilitation of Mining machinery	Dismentaling of workshop	LS			
	Rehabilitation of the dismentaled Facilities	LS			
	Dismentaling of pumps and Pipes/ other facilitites	LS			
	Dismentaling of stowing bunker, provisioning of pumps for borewell pumping arrangement				
	Dismentaling of UG equipment				
	Rearranging water pipeline to dump top park/ Agricultural land	LS			
	Dismentaling of Power lines				
Safety and security	Barbed wire fencing around dump				
	Barbed wire fencing around the Pit	m			
	Barbed wire fencing with masonary pillars				
	Concrete wall with Masonary pillars around the pit	m			
	Securing air shaft and installation of borewell pump				
	Securing of Incline				
	Concrete wall fencing around the water body				
	Boundary wall around the water body				
	Stabilisation(viz benching, pitching etc) of side walls of the water body				
	Toe Wall around the dump				
	Garland drain				
	Garland Drain around the dump				
	Drainage Channel from main Ob dump				
Technical and Biological Reclamation of Mined out of land and OB Dump	Filling of Void	Ha			
	Top Soil management	MM3			
	OB Rehandling for backfilling	MM3			
	Terracing, blanketing with soil and vegetation of External OB Dump	Ha			
	Paripheral road, gates, view point, cemented steps on bank				
	Expenditure on development of Agricultural land				
	Landscaping and Plantation	LS			
Post Closure management and supervision	Power Cost	LS			
	Post Mining Water quality management	LS			
	Post Mining Air quality management	LS			
	Subsidence monitoring for 5 years	LS			
	Waste Management	LS			
	Manpower Cost and supervision	LS			
Others	Enterprenuership development (vocational/skill development training for sustainable income of affected people				
	Golden Handshake / Retrenchment benefits to 100 employees of OC				
	Golden Handshake / Retrenchment benefits to 200 employees of UG				
	Onetime financial grant to societies / institutions /organisations which is dependent upon the project;				
	Provide jobs in other mines of the company				
	Continuation of other services like running of schools etc.				
Total					

12.14 Amount to be deposited in Escrow account as a security against the mine activities to be carried out for the closure of the mine

WPI as on August'09	Aug-09	129.60
WPI as on base date "Base Date for the Mining Plan/ Mine Closure Plan"		
Escalation rate of Closure cost		
Rate of componding of Annual Closure Cost		5.00%
Amount to be deposited into Escrow Account after compounding @ of 5% "Rs. in Crs"		

	UG	OC
Base Rate of Closure Cost "Rs. Crs./Ha"	0.01	0.06
Closure Cost "Rs. Crs/Ha"		
Lease Area		
Amount to be depostied into Escrow Account "Rs. in Crs"		
Amount already deposited into Escrow Account "Rs. in Crs"		
Net Amount to be depostied into Escrow Account "Rs. in Crs"		
Balance Life of the project "in Yrs"		
Annual Closure Cost		

13	**Responsibility of Mine owner**			
14	**Provision of Mine Closure**			
15	**ANNEXURES**			
I	Copy of allotment order /Vesting order.	**Mandatory**		
II	Certificate of CMPDIL that the project boundary considered for the Mining plan is in coherence with the block boundary vested with the allottee.	**Mandatory**		

	Parameters	*Details*		*Observation*
III	Approvals of Mine Closure plan form the Board of the company.	**Mandatory**		
IV	Copy of earlier approval of mining plan.	**Mandatory**		
V	Copy of MOC's Letter granting recognition to RQP for preparation of Mining plan.	**Mandatory**		
VI	Letter of authorisation by the Block allottee for formulation of Mining Plan & Mine Closure Plan by the RQP.	**MP & MCP**		
VII	Certificate of acceptance of the RQP to formulate the Mining Plan & Mine Closure Plan on behalf of the project proponent.	**MP & MCP**		
VIII	A certificate by the RQP that he has been duly authorized by the mining company to prepare Mining plan & MCP on their behalf and that he has a valid recognition from MOC under MCR, 1960 to prepare the Mining plan and that provisions of all relevant rules and regulations made there under have been observed in the preparation of mining plan.	**MP & MCP**		
IX	The Mining plan/ Mine Closure plan has been prepared considering the guidelines pertaining to mining plan/ mine closure plan issued by MoC, GOI & wherever specific permission will be required the applicant will approach the concerned	**MP & MCP**		

	Parameters	*Details*		*Observation*
	authorities.			
X	Confirmation from RQP that he has verified the block area with the relevant plans supplied by CMPDI/ SCCL / NLC and area covered by the mining plan does not encroach on any other coal lignite block.	**MP**		
XI	Certificate from empowered representative of / or Block allottee/ applicant that he mine will be developed as per the approval of the mining plan from Ministry of coal and all other approvals, as required will be obtained from relevant authorities	**MP**		
XII	Copy of the document to establish that the geological report has been duly purchased from CMPDI, GSI/ MECL as the case may be.	**MP**		
XIII	Certificate of RQP that the project boundary considered for the Mining Closure Plan has been verified by RQP. It is in coherence with the block boundary of vesting order and approved mining plan and no discrepancy has been found.	**MP & MCP**		
XIV	Certificate that the Mine Plan & Mine Closure plan have been prepared in line with the approved Mining plan and the mine parameters considered for formulation of mine closure plan is	**MP & MCP**		

	Parameters	*Details*		*Observation*
	exactly the same, which has been approved in the Mining plan.			
XV	Certificate from empowered representative of / or Block allottee/ applicant that he mine that the reclamation & rehabilitation work shall be carried out in accordance with the approved mine closure plan and any modification /amendments which may be made in the mine Closure Plan by Ministry of Coal, from time to time.	**MP & MCP**		
XVI	Documents in support of Mining Lease, in case the lease has already been granted.	**MP & MCP**		
XVII	Hydrological study carried out if any.	**MP & MCP**		
XVIII	Other document	**MP & MCP**		
XIX	Environment Clearance to previous allottee & Transfer to current allottee	**MP & MCP**		
XX	Stage – I FC diversion approval from MoEF & CC to the previous allottee & Transfer to current allottee	**MP & MCP**		
16	**LIST OF PLANS**			
I	Location plan	**MP & MCP**		
II	Reference no. of plan of block boundary issued by CMPDI/ SCCL/ NLC (A copy of the Plan also to be annexed)	**MP**		
III	Plan in scale of not less than 1: 10000 showing approved block boundary vis-à-vis proposed/existing mining lease & Mine boundary	**MP & MCP**		

<table>
<tr><th></th><th>Parameters</th><th colspan="2">Details</th><th>Observation</th></tr>
<tr><td></td><td>superimposed over it in distinct colour.</td><td></td><td></td><td></td></tr>
<tr><td>IV</td><td>Geological plan showing all the boreholes drilled and proposed to be drilled showing allotted block boundary and required lease area</td><td>MP & MCP</td><td></td><td></td></tr>
<tr><td>V</td><td>Graphic Litholog</td><td>MP & MCP</td><td></td><td></td></tr>
<tr><td>VI</td><td>Surface Plan showing drainage system, Contour , at minimum 3m interval, location of BH</td><td>MP & MCP</td><td></td><td></td></tr>
<tr><td>VII</td><td>Conceptual plan showing infrastructure facilities including colony, boundary of mining area, mine entries, roads including road diversion alignment etc</td><td>MP & MCP</td><td></td><td></td></tr>
<tr><td>VIII</td><td>Land use plan showing Govt, forest and Tenancy land</td><td>MP & MCP</td><td></td><td></td></tr>
<tr><td>IX</td><td>Floor contour plan and seam folio plan, iso-grade plan</td><td>MP & MCP</td><td><table><tr><th>Seam</th><th>Floor Contour</th><th>Seam Folio</th></tr><tr><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td></tr></table></td><td></td></tr>
<tr><td>X</td><td>X-section showing coal/Lignite seams</td><td>MP & MCP</td><td></td><td></td></tr>
<tr><td>XI</td><td>Plan showing existing and proposed surface layout</td><td>MP & MCP</td><td></td><td></td></tr>
<tr><td>XII</td><td>Post mining land use plan</td><td>MP & MCP</td><td></td><td></td></tr>
<tr><td>XIII</td><td>Progressive mine closure plan/ stage plan indicating stages at 1st,3rd, 5th, 10th, and 20th interval (showing area, volume, dump height etc for OC and seam-wise layout projects and ventilation system in UG)</td><td>MP & MCP</td><td><table><tr><th>Year</th><th>Plate No</th></tr><tr><td>1st</td><td></td></tr><tr><td>3rd</td><td></td></tr><tr><td>5th</td><td></td></tr><tr><td>10th</td><td></td></tr><tr><td>15th</td><td></td></tr><tr><td>20th</td><td></td></tr><tr><td>25TH</td><td></td></tr><tr><td>29TH</td><td></td></tr></table></td><td></td></tr>
<tr><td>XIV</td><td>Reclamation plan</td><td>MP & MCP</td><td></td><td></td></tr>
<tr><td></td><td>OPENCAST MINES</td><td></td><td></td><td></td></tr>
</table>

	Parameters	***Details***		***Observation***
XV	Plan showing total coal thickness and overburden thickness and stripping ratio	**OC**		
XVI	Final stage quarry plan showing haul road alignment	**OC**		
	UNGRAOUND MINES			
XVII	Plan showing mode and location of entries and surface layouts	**UG**		
XVIII	Layout of the panel for each system Longwall, Bord & Pillar, road header should be given)	**UG**		
XIX	Layout of pillar extraction	**UG**		
XX	Support system	**UG**		
XXI	Haulage and transport system	**UG**		