



भारत सरकार / Government of India
पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय / Ministry of Environment, Forest & Climate Change
क्षेत्रीय कार्यालय, भुवनेश्वर / Regional Office, Bhubaneswar
ए ३, चंद्रसेखरपुर / A/3, Chandrasekharpur
भुवनेश्वर - ७५१ ०२३ / Bhubaneswar - 751 023



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No.5-ORA656/2024-BHU

6th August, 2024

To

The Addl. Director General of Forests (FC),
Ministry of Environment, Forest & Climate Change,
Indira Paryavaran Bhawan,
Jor Bagh Road, Aliganj,
New Delhi - 110 003.

Sub: Proposal for seeking prior approval of the Central Government under Section 2 of the Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980 for non-forestry use of 134.69 ha of forest land for Expansion of Kulda Open Cast Mining Project of Basundhara Area of Mahanadi Coalfields Limited in Sundargarh District under Sundargarh Forest Division.

Ref: Ministry's letter No.8-7/2024-FC dated 11.06.2024.

Sir,

With reference to the subject cited above, I am to inform that the site inspection of above proposal was conducted by the undersigned on 17.07.2024. The site inspection report along with monitoring report of stipulated conditions in the earlier approval granted for an area of 227.89 ha forest land on 08.08.2007 is attached herewith for favour of kind information and necessary action.

Encl: As state above.

Yours faithfully,


(A.T. Mishra)

Dy. Director General of Forests (C)

SITE INSPECTION REPORT IN RESPECT OF PROPOSAL FOR DIVERSION OF 134.69 HA OF FOREST LAND FOR EXPANSION OF KULDA OPEN CAST COAL MINING PROJECT OF BASUNDHARA AREA OF MAHANADI COALFIELDS LIMITED IN SUNDARGARH DISTRICT UNDER SUNDARGARH FOREST DIVISION.

The Site inspection of the above project was carried out by the undersigned on 17.07.2024. During inspection RCCF, Rourkela, DFO, Sundargarh and Director (T), Chief General Manager (Env.) & General Manager from M/s Mahanadi Coalfield Limited (MCL) were present. The instant proposal is for diversion of 134.69 Ha of forest land. The total project area for expansion is 295.62 Ha comprising of 134.69 Ha of forest land and 160.93 Ha of non-forest land.

1. Legal status of the forest land proposed for diversion

As reported by State Govt., legal status of the forest land is as below:

Legal Status		Forest Area (in Ha)
Reserved Forest	:	83.24
Revenue Forest	:	51.45
Total		134.69

2. Item-wise break up details of the total land involved in the project:

Pattern of Utilization	Forest land (in Ha)			Non-forest land (in Ha)			Grand Total Area (in Ha)
	R.F.	Revenue Forest	Total Forest land	Govt. Non-forest land	Tenancy land	Total Non-forest land	
Mining	73.83	37.09	110.92	42.64	64.51	107.15	218.07
7.5m Safety Zone	9.41	0.37	9.78	17.55	31.56	49.11	58.89
Embankment	0	0.06	0.06	4.50	0.17	4.67	4.73
OB Dump	0	13.93	13.93	0	0	0	13.93
Total	83.24	51.45	134.69	64.69	96.24	160.93	295.62

As reported by the user agency 13.93 ha of forest land has been earmarked for OB Dump is actually a space demarcated for temporary top soil storage, which will subsequently be used for coal mining.

3. Whether proposal involves any construction of buildings (including residential) or not. If yes, details thereof:

No.

4. Total cost of the project at present rates:

As reported by the State Govt., the total cost of the project will be Rs.31925 Lakhs.

5. Wildlife:

As reported by the DFO, Sundargarh, wild animals such as Fox (*Vulpes vulpes*), Wild Boar (*Sus scrofa*), Indian Hare (*Oryctolagus cuniculus*), Jungle Cat (*Felis chaus*), Jungle fowl (*Gallus gallus*) etc. are seen in the applied area. No rare/ endangered/ unique species of flora and fauna found in the area.

Whether forest area proposed for diversion is important from wildlife point of view or not:

The DFO, Sundargarh Forest Division has reported that the applied area does not form a part of any National Park/ Wildlife Sanctuary/ Biosphere Reserve/ Tiger Reserve/ Elephant Corridor. It was also reported that the proposed site for the project does not come under eco-sensitive zone of any protected area.

The State Govt. has recommended for implementation of Site Specific Wildlife Conservation Plan duly approved by CWLW, Odisha and the user agency shall contribute towards the cost of Regional Wildlife Management Plan.

6. Vegetation:

As reported by the DFO, Sundargarh Forest Division, the canopy density of existing vegetation is 0.5 under Eco-value Class-III.

(a) Total number of trees to be felled.

As reported by the DFO, Sundargarh total 30,441 nos. of tree has been enumerated over total project area of 295.62 ha (Forest : 134.69 ha + Non-forest : 160.93 ha). Out of which 23,635 nos. of trees are over Forest land and 6,443 nos. of trees on Non-forest land.

Effect of removal of trees on the general ecosystem in the area:

As there are large numbers of trees to be felled, it will affect the general ecosystem of the area. Trees should be felled in a phased manner to minimize the adverse impact on the eco-system.

(b) Important species:

As reported by the DFO, Angul, the tree species available in the applied area are Arjuna (*Terminalia arjuna*), Sunajhari (*Acacia auriculiformis*), Amla (*Phyllanthus emblica*), Bara (*Ficus benghalensis*), Bahada (*Terminalia belerica*), Bela (*Aegle murex*), Bara koli (*Ziziphus mauritiana*), Dimiri (*Ficus racemos*), Gambhar (*Gmelina arborea*), Harida (*Terminalia chebula*), Jamu (*Syzygium cumini* L), Kadamba (*Neolamarckia cadamba*), Kaju (*Anacardium occidentale*), Haldu (*Adina cordifolia*), Kendu (*Diospyros melanoxylon*), Khair (*Acacia catechu*), Kumbhi (*Careya arborea*), Kusum (*Schleichera oleosa*), Neem (*Azadirachta indica*), Amba (*Mangifera indica*), Palasa (*Butea monosperma*), Panasa (*Artocarpus heterophyllus*), Aswastha (*Ficus religiosa*), Sirisa (*Albizia lebbek*), Teak (*Tectona grandis*), Asana (*Terminalia tomentosa*), Sal (*Shorea robusta*), Simili (*Bombax ceiba*), Sissoo (*Dalbergia sissoo*), Sunari (*Cassia fistula*), Tentuli (*Tamarindus indica*) etc.

7. Background note on the proposal:

Kulda Open Cast Coal Mining Project in Sundargarh District is a project of Mahanadi Coalfields Ltd., a Government of India Public Sector Undertaking company dedicated to extract coal from different coal mines located in Odisha. Kulda geological block is located western part of Ib Valley Coalfields in Sundargarh District of Odisha. The block boundary is defined by the following 1) North : Basundhara river, 2) West : Chattjhor nalla, tributary of Basundhara River, 3) East : Metamorphic exposure and 4) South & South East : Line joining boreholes CMHG-103, 129, 123, 138 & adjacent to Garjanbahal block. The location of the site

for coal mining operation fully depends upon nature's deposit of minerals and geological structure of the coal seam.

As reported by the PCCF& HoFF, Odisha, Kulda OCP is coming under CIL block and has been dispensed by the Govt. of India. The complete land coming under the project in the villages of Kulda, Bankibahal, Balinga, Siarmal (P), Tumulia & Lalma RF in the district of Sundargarh, Odisha stands acquired by the Central Govt. and the ownership is vested with MCL. The details of notification against which the land was acquired under CBA (A&D) is mentioned below:

Sl. No.	Particulars	Block details	Date
1	Date of notification under Section 4 (i) of CBA (A&D) Act, 1957	Ib Block-XI	24.07.1987
2	Date of notification under Section 7 (i) of CBA (A&D) Act, 1957	Ib Block-XI	25.09.1989
3	Date of notification under Section 9 (i) of CBA (A&D) Act, 1957	Ib Block-XI	29.10.1990
4	Date of notification under Section 11 (i) of CBA (A&D) Act, 1957	Ib Block-XI	30.03.1993

The village wise land acquired by Central Govt. and vested with MLC are as follows:

Ib Block-XI : Tiklipara (1743.85 Ac), Siarmal (852.34 Ac), Gopalpur (part) (140.67 Ac), Tumulia (2381.32 Ac), Karlikachhar (511.94 Ac), Kulda (542.85 Ac), Bankibahal (836.33 Ac), Balinga (1234.64 Ac), Garjanbahal (798.35 Ac), Kiripsira (1680.11 Ac), & Japti Jungle (Lalma RF) (420.00 Ac). Villages falling in Kulda OCP : Kulda, Bankibahal, Balinga, Tumulia, Siarmal (P) & Lalma RF.

Gopalpur sector of Ib-valley coalfield forms the north western part of Ib River coalfield which is a Greenfield area with huge mining potential. Detailed exploration was undertaken by CMPDI to assess the quarriable potentiality of coal seams with primary view of opening up of new mining project to the extent possible. This sector has high potential for open cast mining operations including the proposed project namely Kulda Expansion Opencast Project. Kulda is a potential block having mineable reserve of about 266.49 million tonnes. Kulda Expansion OCP is a running project and has obtained all statutory clearances. Kulda OCP started its mining operations since 2007-08. Coal extracted is 86.70 MT and OB removed is 54.90 Mcum till 31.03.2020.

In earlier approved Mining Plan of Kulda Expansion OCP (Revision-1) (10 Mty to 15 Mty), mining operation was carried out in two phases. In Phase-1, surface boundary was restricted within notified area for which forest clearance has been obtained i.e. excluding Lalma Reserve Forest. In Phase-II, remaining part of block was to be worked after obtaining forest clearance for this area. With the increase in demand, MLC now wants to expand the mine in Lalma Reserve Forest area so as to enhance the production capacity to 18.75 Mty. The production capacity has been revised from 18.75 Mty to 21 Mty.

Earlier Govt. of India, MoEF&CC, New Delhi agreed for in-principle for diversion of 50.72 ha of forest land (45.71 ha of revenue forest land & 5.01 ha of Lalma RF land) for Kulda Open Cast Mines vide letter No.8-176/97-FC dated 25.07.2001 and remaining additional forest land 177.17 ha in addition to already granted 50.72 ha (total 227.89 ha) for Kulda OCP of M/s MCL vide letter No.8-176/97-FC dated 22.01.2002 for a period of 20 years in two stages respectively.

Further, the Govt. of India, MoEF&CC, New Delhi vide letter No.8-176/1997-FC dated 08.08.2007 has granted final approval for diversion of 227.89 ha of forest land (as against initially proposed 280.86 ha) for Kulda OCP of MCL.

The coal bearing area of the project with Reserve of about 266.49 MT (Mineable reserve) partially falls under the above forest land. The Opencast method of Mining has been chosen due to geo mining conditions for extraction of coal to meet the heavy demand of coal.

8. Compensatory afforestation:

As reported by the State Govt., double degraded forest land of 305.59 ha (Effective area of 286.96 ha) ha has been identified in Pandripani RF (64.10 ha), Sidarmunda RF (53.56 ha), PUnjipahar RF (131.54 ha) and Panikholia RF (56.39 ha) under Sundargarh Forest Division for raising compensatory afforestation. The DFO, Sundargarh has prepared the Site Specific CA Scheme as per approved onetime cost norm basis an average 500 seedlings per ha with 18 month old seedlings to be planted thereof with a provision of required soil moisture conservation activities, watering and fencing etc. with maintenance of upto 10 years.

The indigenous species chosen for plantation are Neem (*Azadirachta indica*), Karanja (*Derris indica*), Amla (*Emblica officinalis*), Asan (*Terminalia tomentosa*), Jamun (*Syzygium cunini*), Khair (*Acacia catechu*), Harida (*Terminalia chebula*), Sissoo (*Dalbergia sissoo*) etc.

The instant forest diversion proposal involves 295.62 ha comprising of 134.69 ha of forest land and 160.93 ha of non-forest land. As per Rule 13 (1) of Van (Sanrakshan Evam Samvardhan) Rules, 2023, equivalent non-forest land needs to be provided by the State Govt. for raising compensatory afforestation.

(a) Whether land for compensatory afforestation is suitable from plantation and management point of view or not:

-

(b) Whether land for compensatory afforestation is free from encroachment/other encumbrances:

-

(c) Whether land for compensatory afforestation is important from Religious/Archaeological point of view:

-

(d) Land identified for raising compensatory afforestation is in how many patches, whether patches are compact or not:

-

(e) Map with details:

-

(f) Total financial outlay:

-

9. Whether proposal involves violation of Forest (Conservation) Act, 1980 or not. If yes, a detailed report on violation including action taken against the concerned officials:

As reported by the DFO, Sundargarh, no violation has been committed by the user agency under Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980.

10. Whether proposal involves rehabilitation of displaced persons. If yes, whether rehabilitation plan has been prepared by the State Government or not :

Yes. As per Online Part-I of the proposal, total 975 families will be displaced due to implementation of the project, out of which 292 nos. of SC families, 585 nos. of ST families and 98 nos. of other families. State Govt. has reported that out of 96.24 ha of tenancy land involved in this project, 44.88 ha belongs to village Kulda, 21.29 ha belongs to village Bankibahal, 1.15 ha belongs to village Balinga, 28.92 ha belongs to village Tumulia. The lands of all above villages have been acquired under CBA (a&d) Act, 1957 vide Notification u/s 9(1) of the said Act vide SO No.3055 dated 09.10.1990. The above land has been vested in MCL u/s 11 (1) of said Act vide SO No.43105 dated 30.03.1993. The payment of Compensation and R&R benefit for the village Kulda, Bankibahal, Balinga and Tumulia including other 10 villages have been undertaken by the Claims Commission, set up by the Hon'ble Supreme Court of India in SLP (C) No.6933 of 2007. The compensation for land and structures for villages Kulda, Bankibahal, Balinga has been disbursed to the beneficiaries. For village Tumulia, approval of Hon'ble Supreme Court is awaited to provide the land compensation as well as R&R benefits. The Rehabilitation and Resettlement Plan prepared by the user agency has been submitted with the proposal.

11. Reclamation plan:

As reported, the Mining Plan including Mining Closure plan has been approved. The MCL Board has approved the Mining Plan & Mine Closure Plan for Kulda Expansion OCP vide letter No.MCL/SBP/CS/CR-19/2020-21/10992 dated 10.06.2020.

As per Mining Plan, at the end of mine life, major part of excavation area will be backfilled and biologically reclaimed. The progressive mine closure plan includes various land reclamation activities to be done continuously and sequentially during the entire life of the mine. This is a life time of mine process which starts from commencement of mining operations and leads to the final closure of the mine. The activities of progressive mine closure plan includes handling & dozing of OB dumps & backfilling, Technical and bio-reclamation including plantation, landscaping of the open space in leasehold are for improving its esthetics and eco value, grass carpeting/plantation around the quarry area and in safety zone, grass carpeting/plantation over the external OB dump.

12. Details on catchment and command area under the project:

Basundhara River is flowing in North-Eastern boundary of the mining lease. The mining project will affect the catchment of this Basundhara river. So there is a need for soil and moisture conservation measures in the rest catchment of this river and the forest lands in and around the proposed site. Safety zone with plantation of at least 50 meter width may be maintained along the lease boundary close to river. Efforts should be made to ensure that no discharge leads to the Basundhara river from the mining lease area.

13. Cost benefit ratio:

The State Govt. has reported that the total benefit of the project comes to Rs.730992.27 Lakhs. The total loss on forests including environmental loss comes to Rs.13281.44 Lakhs. The Cost - Benefit ratio comes to **1 : 55**.

14. Recommendations of the Principal Chief Conservator of Forests/ State Government:

The forest area proposed for diversion has been duly recommended by PCCF.

15. Utility of the project:

As reported by the State Govt. the project will generate employment to 870 persons and temporary employment to 54,900 persons.

Numbers of Scheduled Caste/Scheduled Tribes to be benefited by the project:

Not reported.

16.

(a) Whether land being diverted has any socio-cultural/ religious value:

Nor reported.

(b) Whether any sacred grove or very old growth trees/forests exist in the areas proposed for diversion:

Not reported.

(c) Whether the land under diversion forms part of any unique eco-system:

Not reported.

17. Situation with respect to any Protected Area:

As reported by the DFO, Sundargarh , the ML area of Kulda OCP is at a distance of 100 Km from Debrigarh Wildlife Sanctuary.

18. Any other information relating to the project:






Photographs of Proposed site for diversion

19. Recommendations of Dy. Director General of Forests (Central) along with detailed reasons:

1. The instant proposal is for diversion of 134.69 Ha of forest land. The total project area is 295.62 Ha comprising of 134.69 Ha of forest land and 160.93 Ha of non-forest land.
2. As per the DSS analysis, the proposed site is not an inviolate area. The density class as per the DSS analysis is 03 ha coming under Moderately Dense Forest, 77 ha under Open Forest, 23 ha under Scrub and 31 ha is coming under Non-forest (blank) area. The DFO, Sundargarh has reported that , the canopy density of existing vegetation is 0.5 under Eco-value Class-III.
3. The proposed site does not come under any Protected Area or within the Eco-Sensitive Zone of any Protected Area. The nearest P.A. is Debrigarh Wildlife Sanctuary, which is about 100 Km from the project.
4. The State Govt. has recommended for implementation of Site Specific Wildlife Conservation Plan duly approved by CWLW, Odisha and the user agency shall contribute towards the cost of Regional Wildlife Management Plan.

4. As per Online Part-I of the proposal, total 975 families will be displaced due to implementation of the project, out of which 292 nos. of SC families, 585 nos. of ST families and 98 nos. of other families. The user agency shall submit duly approved R&R Plan and shall be implemented for the project displaced persons before they are displaced on final forest clearance for the project.
5. The number of trees to be felled is large. To minimize the adverse ecological impact, trees should be felled in a phased manner and when become absolutely necessary. Further, felling of trees outside forest area will adversely impact air and hydrology in the area. To mitigate the impact of the felling of trees outside forest, ten times numbers of trees is recommended to be planted for felling of trees outside the forest area.
6. The Mining Plan has been approved by the Ministry of Coal vide letter No.34012/(04)/2011-CPAM dated 09.03.2016.
7. Basundhara River is flowing in North-Eastern boundary of the mining lease. The mining project will affect the catchment of this Basundhara river. So there is a need for soil and moisture conservation measures in the rest catchment of this river and the forest lands in and around the proposed site. Safety zone with plantation of at least 100 meter width may be maintained along the lease boundary close to river. Efforts should be made to ensure that no discharge leads to the Basundhara river from the mining lease area by constructing embankment towards the lease boundary of the river.
8. The instant forest diversion proposal involves 295.62 ha comprising of 134.69 ha of forest land and 160.93 ha of non-forest land. As per Rule 13 (1) of Van (Sanrakshan Evam Samvardhan) Rules, 2023, equivalent non-forest land needs to be provided for raising compensatory afforestation.
9. As reported by the user agency 13.93 ha of forest land has been earmarked for OB Dump is actually a space demarcated for temporary top soil storage, which will subsequently be used for coal mining.

Mining of coal is a site specific activity. In view of the above, the proposal is recommended with standard general conditions and observation made during site inspection.


(A. T. Mishra)
Dy. Director General of Forests (Central)

GIS-DSS ANALYSIS

(DR-1= DECISION RULE-1, DR-2= DECISION RULE-2, OF=OPEN FOREST,MDF=MODERATELY DENSE FOREST, VDF= VERY DENSE FOREST)

1. File No. FP/ORA/656/2024

Date: 15th July 2024

2. Area- 134.69 ha

3. Name of the Project: Proposal for diversion of 134.69 Ha. forest land for Expansion OCP in Kulda Block in Basundhara area by Mahanadi Coalfield Limited (MCL) Odisha in Sundargarh Forest Division and District.

4. Location

- **State: Odisha**
- **District: Sundargarh**

5. Data provided by the User/State:

- Shape file/KML/DGPS Point/ Map file of Land to be Diverted: **Available**

6. GIS- DSS analysis of Land to be diverted

Sr. No	Land to be Diverted	Forest Area as per .kml file (In hectares)	GIS-DSS Analysis		Result
			DR-1	DR-2	
1	Sundargarh Forest Division	133.576	-	-	-
Total		133.576 (*KML Non Forest area differ 57.87 Ha. from ML area in Forwarding Letter)			
(*Not-Inviolat e -Land can be diverted for any Non-Forest activity) (*Inviolat e - Land can not be diverted for any Non-Forest activity)					

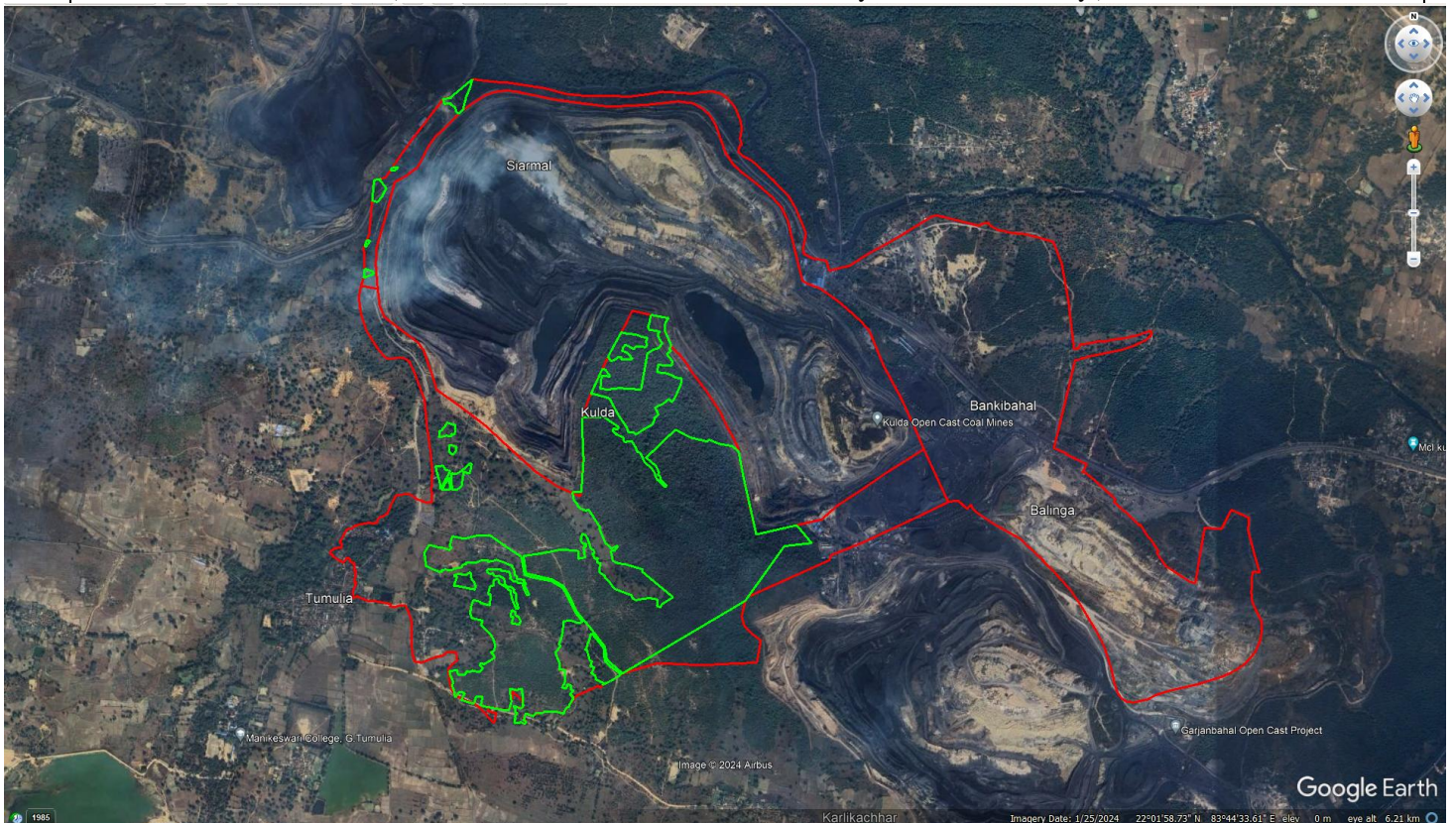


Fig:1 Google Earth image of diversion land (Date: 25.1.2024)

GIS-DSS ANALYSIS

(DR-1= DECISION RULE-1, DR-2= DECISION RULE-2, OF=OPEN FOREST,MDF=MODERATELY DENSE FOREST, VDF= VERY DENSE FOREST)

Decision Support System (DSS):

- Area of Proposed Land (DSS Calculated): **134 hectare.**

Forest Cover Map Statistics of Proposed Land (DSS Calculated)		
SL No	Forest Cover	Area in hectare
1	MODERATELY DENSE FOREST	3
2	OPEN FOREST	77
3	SCRUB	23
4	NON FOREST	31
Total		134

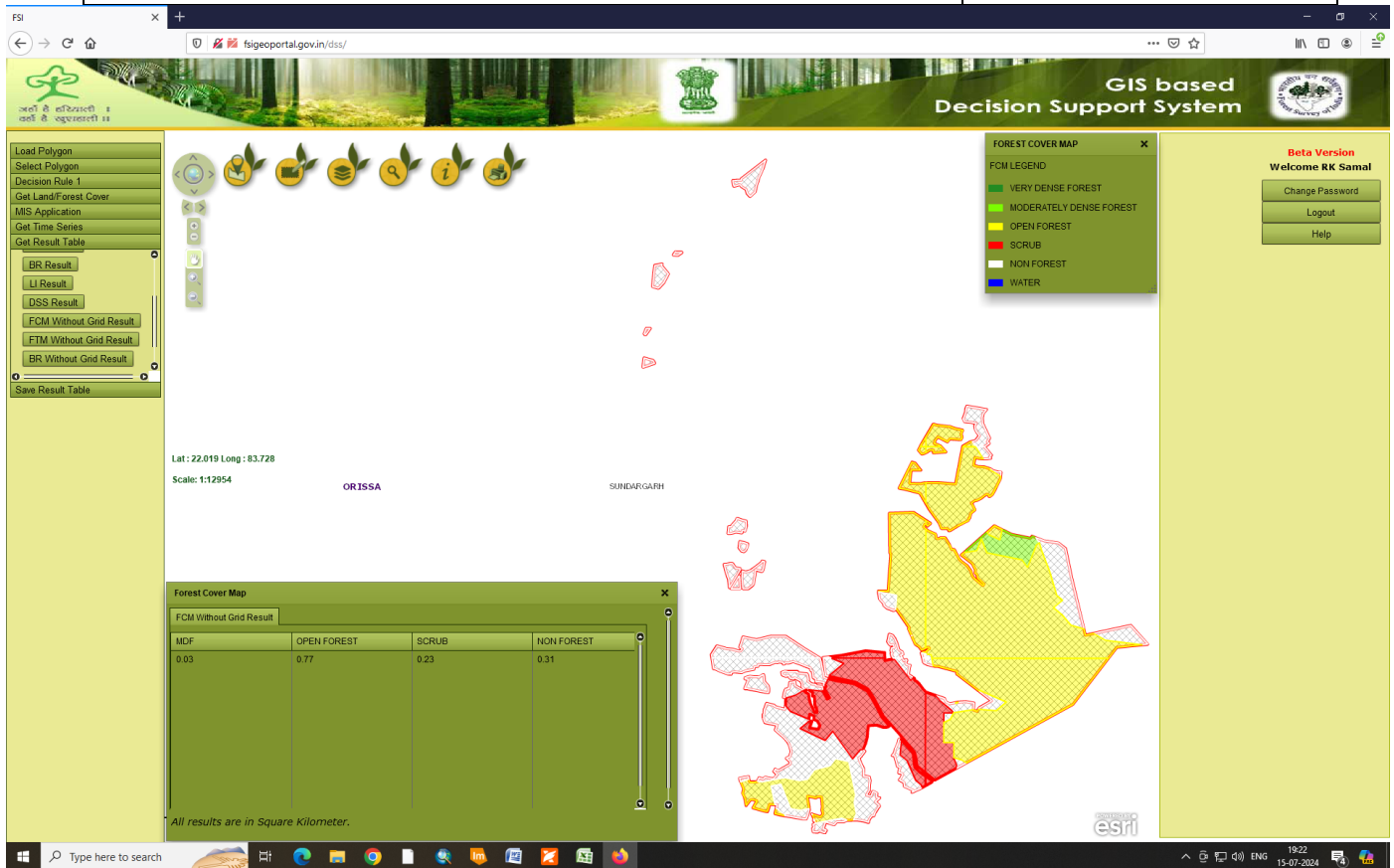


Fig:2 Forest Cover information of proposed land

Observation:

1. Basundhara Nala river is present in northern direction and very close to ML boundary.

- *VDF- Very Dense Forest (More than 70% Tree Cover)
- *MDF- Moderately Dense Forest (40-70 % Tree Cover)
- * OF- Open Forest (10-40% Tree Cover)
- * SCRUB- Shrub / Bushy (Less than 10% Tree Cover)
- * Non Forest- No Forest Cover (0% Tree Cover)

Ref. No.: MCL/BA/PO/KOCP/2024-25/44

Date: 18.07.2024

To,
The Dy. Director General of Forest (Central)
Ministry of Env., Forest and Climate Change,
Integrated Regional Office (EZ), A/3, Chandrasekharpur,
Bhubaneswar-751023

Sub: Proposal for seeking prior approval of the Central Government under Section 2 of the Van (Sanrakshan Evam Samvardhan) Adhnyam, 1980 for non-forestry use of 134.69 ha of forest land for the Expansion of Kulda Opencast Coal Mining Project of Basundhara Area of Mahanadi Coalfields Limited in Sundargarh District under Sundargarh Forest Division.

Dear Sir,

This is in reference to the recent discussions held with you during your visit to inspect the area of 134.69 Ha proposed for diversion for Kulda Expansion Project of MCL, regarding the area of land proposed for OB Dump for the expansion project on the 16th of July'2024.

In this connection, this is to confirm you that the area of land shown under OB Dump i.e. 13.93 Ha is actually a space demarcated for temporary top soil storage, which will subsequently be used for coal mining.

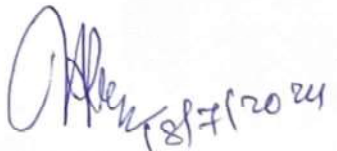
The related stage wise mine plans of 1st, 3rd, 5th year and the final mine closure plan is attached herewith for reference.

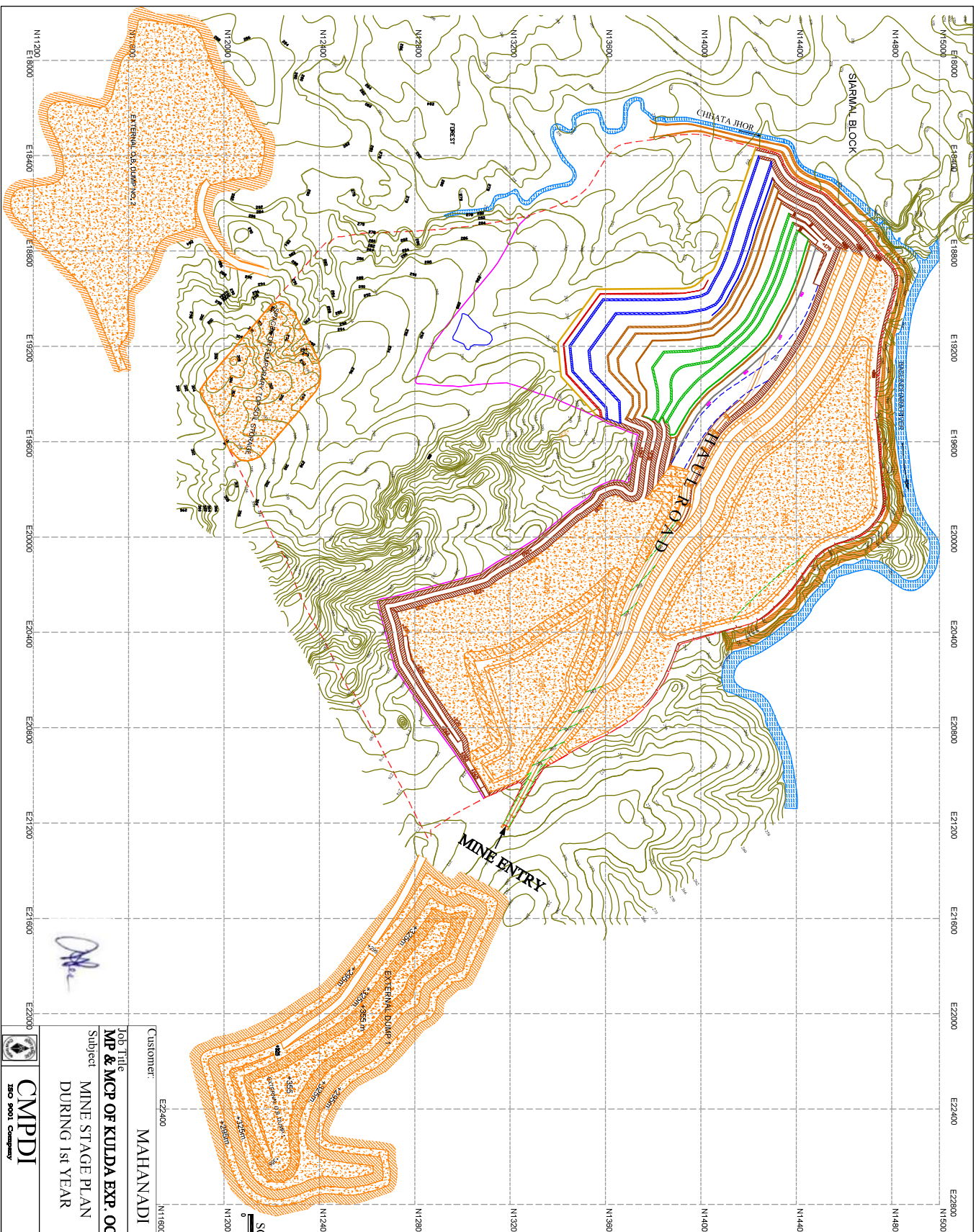
Thanking you

Yours faithfully

Copy to :

- GM, Basundhara Area, MCL
- Staff Officer (E&F), Basundhara Area, MCL


Project Officer,
Basundhara Area, MCL



MP & MCP OF KUDA EXP. OCP-21.00 Mt/Revision-4) 172302017

MINE STAGE PLAN DURING 1st YEAR

CMPDI
ZAO 5001 Company

MAHANADI COALFIELDS LIMITED

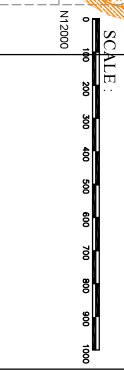
Customer: E22400
Job No.: 172302017

Activity	Name	Designation	Signature	Date
Drawn	G.Srinivas	Char/Mdgr	[Signature]	JUNE 2022
Design	G.Srinivas	Char/Mdgr	[Signature]	JUNE 2022
Checked	D.ROY	HO/PRAD	[Signature]	JUNE 2022
Approved	S.K. BHAR	R.D.	[Signature]	JUNE 2022

R.F. - 1 : 10,000

Sheet 004877

Rev.No. []



REFERENCES

1. TOPOGRAPHICAL PLAN OF KUDA BLOCK R-7/650/82/194
2. FLOOR CONTROL PLAN OF B BOTTOM SEAM R-7/650/82/194
3. FLOOR CONTROL PLAN OF RAUPUR-I SEAM R-7/650/82/197

Sl.	NAME OF DRAWING	DRAWING NO
1	TOPOGRAPHICAL PLAN OF KUDA BLOCK	R-7/650/82/194
2	FLOOR CONTROL PLAN OF B BOTTOM SEAM	R-7/650/82/194
3	FLOOR CONTROL PLAN OF RAUPUR-I SEAM	R-7/650/82/197

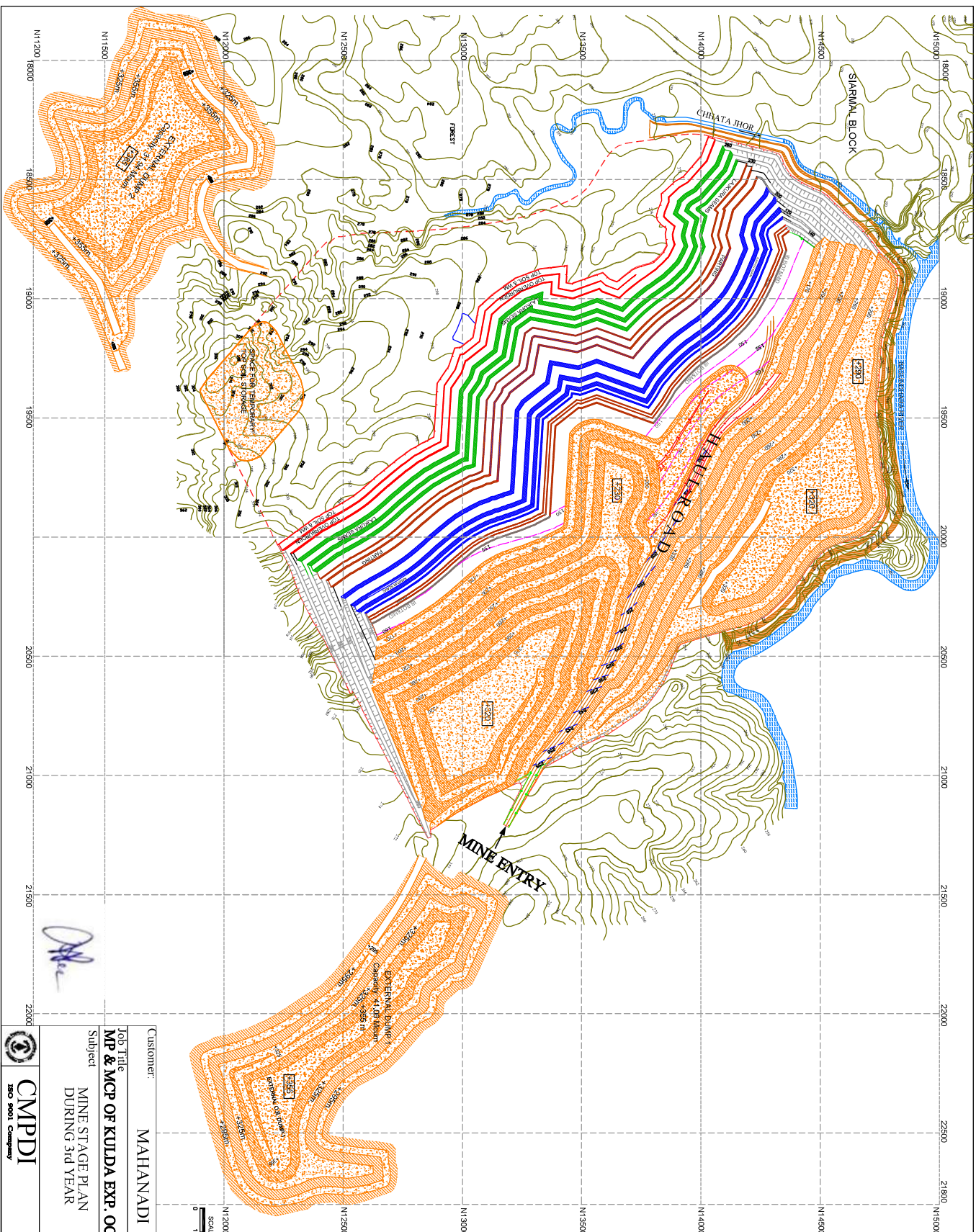
NOTE

1. ALL DIMENSIONS ARE IN METRE.
2. ALL DATA ARE TAKEN FROM S.A. ON KUDA BLOCK, B MINE CONTROL PREPARED BY C.M.P.D.I. IN RAJAP.

LEGEND

Sl.	SYMBOL	PARTICULARS
1	● C.M.P.-215	BORHOLE DRILLED BY C.M.P.I.
2	● C.M.P.-099	BORHOLE DRILLED BY C.M.P.I.
3	● HSR-028/ HSR-001	BORHOLE DRILLED BY OS
4	200	SURFACE CONTOUR
5	355	FLOOR CONTROL OF RAUPUR I SEAM
6	140	FLOOR CONTROL OF B BOTTOM SEAM
7	=====	NALA / RIVER
8	=====	HAUL ROAD
9	-----	SURFACE BOUNDARY
10	-----	FLOOR BOUNDARY
11	-----	EMBANKMENT
12	-----	OB DUMP





LEGEND

SL. SYMBOL	PARTICULARS
1	BORING HOLE DRILLED BY CARNO
2	BORING HOLE DRILLED BY CARNO
3	BORING HOLE DRILLED BY GSI
4	SURFACE CONTOUR
5	FLOOR CONTOUR OF RAUMER II SEAM
6	FLOOR CONTOUR OF B BOTTOM SEAM
7	SURFACE BOUNDARY
8	FLOOR BOUNDARY
9	NALA / RIVER
10	HAUL ROAD
11	EMBANKMENT
12	EXTERNAL DUMP

NOTE

1. ALL DIMENSIONS ARE IN METRE.
2. ALL DATA ARE TAKEN FROM C.A. ON KULDA BLOCK, B WHICH CONFIDED PREPARED BY CARNO, No-7 h RAUMER.

REFERENCES

Sl.	NAME OF DRAWING	DRAWING NO
1.	TOPOGRAPHICAL PLAN OF KULDA BLOCK	R-7/020/02/104
2.	FLOOR CONTOUR PLAN OF B BOTTOM SEAM	R-7/020/02/104
3.	FLOOR CONTOUR PLAN OF RAUMER II SEAM	R-7/020/02/107



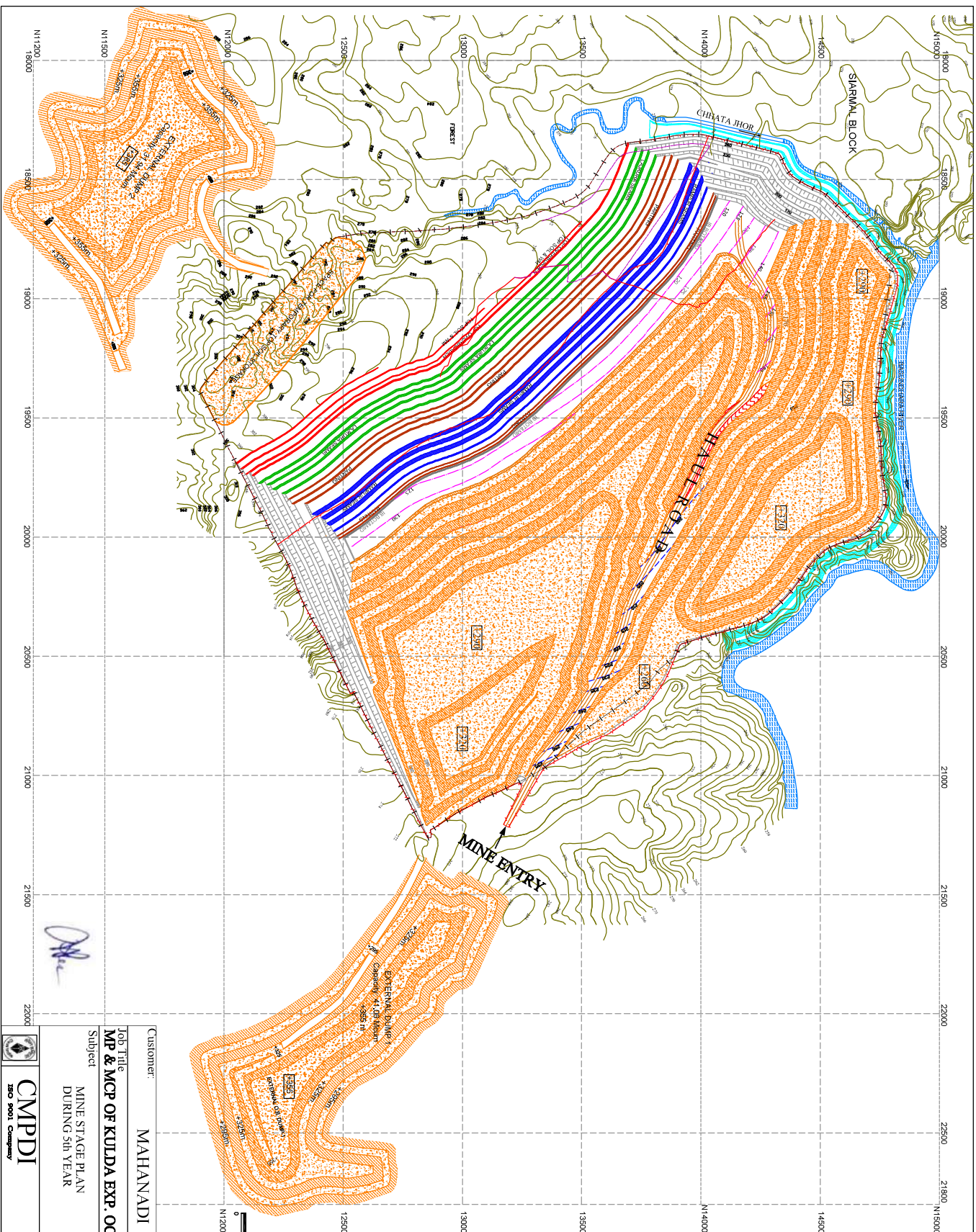
Customer: MAHANADI COALFIELDS LIMITED
Job No. 172302017

Job Title: MP & MCP OF KULDA EXP - OCP-21.00 Mt/yr (Revision-4)
Subject: MINE STAGE PLAN DURING 3rd YEAR

Activity	Name	Description	Signature	Date
Drawn	A.RAVI	Chief D/MN	[Signature]	JUNE 2022
Design	G.SRINIVAS	Senior E.T.	[Signature]	JUNE 2022
Checked	D.ROY	Chief Manager	[Signature]	JUNE 2022
Approved	S.K. BHAR	HOD/PROJ. RD.	[Signature]	JUNE 2022

CMPDI
3RD 9001 Company

D/Gr.No.	Rev.No.
R7 E2D	004878



LEGEND

Sl.	SYMBOL	PARTICULARS
1	● CMC-215	BORHOLE DRILLED BY CMC
2	● CMB-099	BORHOLE DRILLED BY CMC
3	● HSC-004/ ● HSC-201	BORHOLE DRILLED BY GSI
4	---	SURFACE CONTOUR
5	---	FLOOR CONTOUR OF RAUMER II SEAM
6	---	FLOOR CONTOUR OF IB BOTTOM SEAM
7	---	SURFACE BOUNDARY
8	---	FLOOR BOUNDARY
9	---	NALA / RIVER
10	---	HAUL ROAD
11	---	EMBANKMENT
12	---	EXTERNAL DUMP

NOTE

1. ALL DIMENSIONS ARE IN METRE.
2. ALL DATA ARE TAKEN FROM G.S. ON KUDA BLOCK, IS REFER CORRECTED PREPARED BY CMC, M-7 IN PAKA.

REFERENCES

Sl.	NAME OF DRAWING	DRAWING NO
1.	TOPOGRAPHICAL PLAN OF KUDA BLOCK	M-7/650/8/2/184
2.	FLOOR CONTOUR PLAN OF IB BOTTOM SEAM	M-7/650/8/2/184
3.	FLOOR CONTOUR PLAN OF RAUMER II SEAM	M-7/650/8/2/187

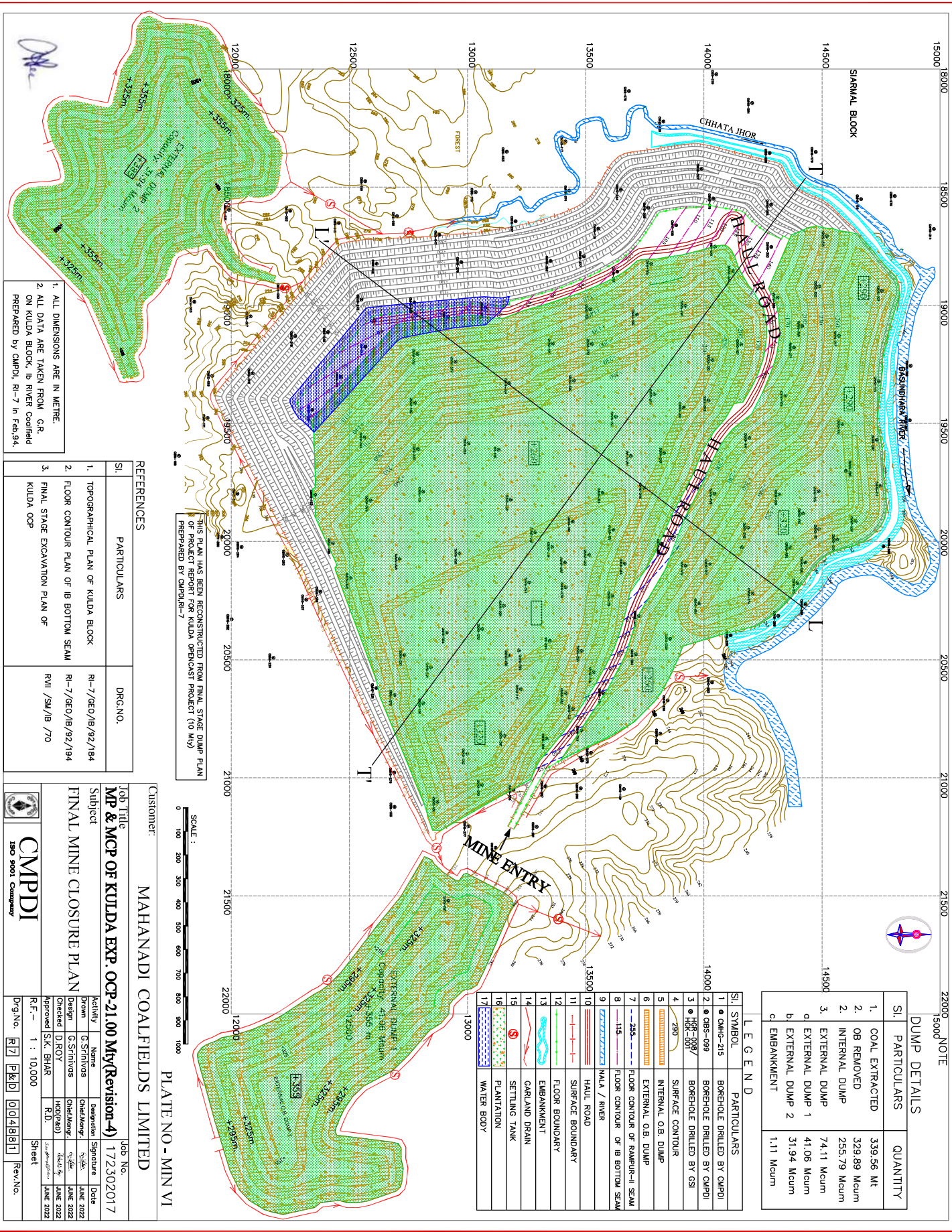


SCALE : 1 : 10,000

Customer:	MAHANADI COALFIELDS LIMITED	Job No.:	172302017
Subject:	MINE STAGE PLAN DURING 5th YEAR	Rev. No.:	04
Job Title:	MP & MCP OF KUDA EXP OCP-21.00 Mt/Revision-4)	Design:	G.Srinivas
Activity:	MINE STAGE PLAN DURING 5th YEAR	Checked:	D.ROY
Name:		Approved:	S.K. BHAR
Designation:		H.O.D.:	
Signature:		Date:	JUNE 2022
Date:		Signature:	
Date:		Date:	JUNE 2022
Date:		Date:	JUNE 2022
Date:		Date:	JUNE 2022

CMPDI
3RD FLOOR COMPANY

07/No. [R7] [E2D] [004879] Rev.No.



1. ALL DIMENSIONS ARE IN METRE.
2. ALL DATA ARE TAKEN FROM G.R. ON KULDA BLOCK, Ib RIVER Coalfield PREPARED BY CMPDI, RI-7 in Feb.94.

THIS PLAN HAS BEEN RECONSTRUCTED FROM FINAL STAGE DUMP PLAN OF PROJECT REPORT FOR KULDA OPENCAST PROJECT (10 MW) PREPARED BY CMPDI/RI-7

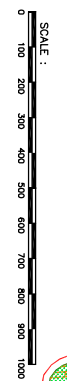
Sl.	PARTICULARS	DRG.NO.
1.	TOPOGRAPHICAL PLAN OF KULDA BLOCK	RI-7/GEO/IB/92/184
2.	FLOOR CONTOUR PLAN OF IB BOTTOM SEAM	RI-7/GEO/IB/92/194
3.	FINAL STAGE EXCAVATION PLAN OF KULDA OCP	RI/11/9M/IB/770

CUSTOMER: MAHANADI COALFIELDS LIMITED
 JOB NO: 172302017

JOB TITLE		DATE	
MP & MCP OF KULDA EXP. OCP-21.00 Mty(Revision 4)		JUNE 2022	
Subject		DATE	
FINAL MINE CLOSURE PLAN		JUNE 2022	
Activity	Name	Designation	Signature
Drawn	G.Srinivas	Chartered Engg.	[Signature]
Checked	D.D.ROY	Chartered Engg.	[Signature]
Approved	S.K. BHAR	R.D.	[Signature]
RF. No.	1 : 10,000	Sheet	

CMPDI
 ISO 9001 Certified

DRG.No. [R7] [R10] [0148811] Rev.No.



Sl.	PARTICULARS	QUANTITY
1.	COAL EXTRACTED	339.56 Mt
2.	OB REMOVED	329.89 Mcum
2.	INTERNAL DUMP	255.79 Mcum
3.	EXTERNAL DUMP	74.11 Mcum
a.	EXTERNAL DUMP 1	41.06 Mcum
b.	EXTERNAL DUMP 2	31.94 Mcum
c.	EMBANKMENT	1.11 Mcum

LEGEND

Sl.	SYMBOL	PARTICULARS
1	●	OBMS-218
2	●	OBMS-099
3	●	OBMS-098 / OBMS-001
4	—	290 SURFACE CONTOUR
5	—	INTERNAL O.B. DUMP
6	—	EXTERNAL O.B. DUMP
7	—	255 SURFACE CONTOUR OF RAMBUR-II SEAM
8	—	115 FLOOR CONTOUR OF IB BOTTOM SEAM
9	—	NALA / RIVER
10	—	HAUL ROAD
11	—	SURFACE BOUNDARY
12	—	FLOOR BOUNDARY
13	—	EMBANKMENT
14	—	GARLAND DRAIN
15	—	SETTLING TANK
16	—	PLANTATION
17	—	WATER BODY

22000
 15000 NOTE

MONITORING OF THE STIPULATED CONDITIONS IN DIVERSION 227.89 HA OF FOREST LAND FOR KULDA OCP OF MAHANADI COALFIELDS LIMITED IN SUNDARGARH DISTRICT OF ODISHA, APPROVED BY THE GOVT. OF INDIA UNDER SECTION 2 OF THE FOREST (CONSERVATION) ACT, 1980.

The status of compliance on stipulated conditions was monitored by the undersigned on 17.07.2024 along with the DFO, Sundargarh Forest Division and representatives from M/s Mahanadi Coalfields Ltd.

PART-I
(GENERAL PARTICULARS)

1. Name/purpose of the proposal : Diversion of 227.89 ha of forest land (as against initially proposed 280.86 ha) for Kulda OCP of Mahanadi Coalfields Ltd. in Sundargarh District of Odisha.
2. No. and date of Govt. of India's letter according permission : 8-176/1997-FC dated 08.08.2007
3. Area permitted to be diverted (In ha) : 227.89 ha
4. District and Forest Division : Sundargarh & Sundargarh Forest Division.
5. Area actually diverted(in ha) : 227.89 ha

PART-II
(DETAILS OF COMPENSATORY AFFORESTATION)

The DFO, Sundargarh reported that the user agency has deposited Rs.66,40,710/- towards compensatory afforestation. The compensatory afforestation has already been done in an area of 455.78 ha at Kumkani RF of Lephripara Range of Sundargarh Division.

PART III
(PLANTING OF DWARF TREES IN CASE OF TRANSMISSION LINE)

Not applicable

PART-IV
(RECLAMATION OF THE AREA WORKED UNDER MINING/QUARRYING)

The user agency informed that the reclamation process under Kulda OCP is being carried out as per the approved mining plan in progressive manner. The plantation is being done by DFO, Sundargarh and is being monitored by the Forest Range Officer. The following year wise plantation has been done in reclaimed land.

Year	Area (ha)	No. of plants	Location
2019-20	3.36	8400	Internal Backfilled Area + External OB dump
2020-21	5.23	13075	Internal Backfilled Area
2022-23	14.3	35780	Internal Backfilled Area
2023-24	22.4	56000	External OB dump

PART-V
(CONDITIONS STIPULATED BY THE GOVT. OF INDIA OTHER THAN MENTIONED ABOVE)

Sl. No.	Condition	Compliance
1	Legal status of the forest land shall remain unchanged.	Complied.
2 (i)	Compensatory Afforestation shall be raised and maintained by the State Forest Department at the project cost.	As reported in Part-II above.
(ii)	Fencing, protection and generation of the safety zone area (7.5 meter strip all along the outer boundary of the mining lease area) shall be done at the project cost. Besides this, afforestation on degraded forest land, to be selected elsewhere measuring one and half times the area under safety zone, shall also be done at the project cost.	<p>As reported by the DFO, a part of mine lease boundary including safety zone was covered by the concrete boundary wall and barbed wire fencing was done in some parts. However, regeneration was not good in rest part, because no maintenance of fencing was done. As per field observation, the natural regeneration in the Safety Zone maintained along the mine boundary.</p> <p>The plantation on degraded forest land measuring one and half times the safety zone (3.23 ha) has been taken up at Dhangergudi RF under Ujalpur Range of Sundargarh Division.</p>
(iii)	Wherever possible and technically feasible, the User Agency shall undertake afforestation measures in the blanks within the lease area, as well as along the roads outside the lease area diverted under this approval, in consultation with the State Forest Department at the project cost.	As reported by the user agency plantation has been taken in the blanks within the lease area and a nursery has also been constructed for meeting the needs of plantation in the mining lease area.
3	Following activities shall be undertaken by the State Forest Department at the project cost:	
(i)	Proper mitigative measures to minimize soil erosion and choking of streams shall be prepared and implemented.	As reported by user agency the total runoff generated over the overburden is collected back in the mine sump inside the mine which acts as settling ponds. This water is reused for dust suppression. The drains are regularly de-silted and maintained. 5.81 Km long garland drain with check dams have been constructed to channelize runoff from the dump to the ground water recharge pit. RCC retaining wall of length 604 meter has been constructed at the foot of external OB dump. Gabion wall of length 450 meter was constructed around internal dump.
(ii)	Planting of adequate drought hardy plant species and sowing of seeds to arrest soil erosion.	
(iii)	Construction of check dams, retention/toe walls to arrest sliding down of the excavated material along the contour.	
4	The period of diversion under this approval shall be twenty (20) years subject to possession of valid lease by the User Agency under the MMDR Act, 1957.	The user agency agreed to comply.

- 5 (i) The User Agency shall take up planting work on the static dumps during the advance mining operation. The user agency reported that there is only one active external OB dump at present and reclamation of the same is under progress.
- (ii) All the dumps shall be fully reclaimed by afforestation immediately after closure of the mine in the shortest possible period under supervision of the State Forest Department. As reported by the user agency all progressive reclamation is under progress in internal dump as well. All the dumps will be fully reclaimed after closure of the mine. The following area has been reclaimed.
- | | |
|--|----------|
| Area of Internal Backfilled dump technically reclaimed till now | 25.69 ha |
| Area of Internal Backfilled dump Biologically reclaimed till now | 22.69 ha |
| Area of External OB dump biologically reclaimed. | 33.18 ha |
- The DFO, Sundargarh reported that biological reclamation was done by plantation of suitable species on the internal dump, progressively in each year. The plantation over internal dump done in the year 2022-23 was visited. The growth was generally good. Growth on the slopes was slightly less due to gully erosion.
- 6 Any tree felling shall be done only when it is absolutely necessary and unavoidable, and that too under strict supervision of the State Forest Department. As reported by the user agency tree felling has been done in 6 phases only when required, under strict supervision of DFO, Sundargarh. The tree felling work has been executed by the OFDC as per the work order given by the DFO, Sundargarh.
- 7 The user agency shall ensure that no damage to the flora and fauna of the area shall be caused. Being complied.
- 8 Reclamation Plan shall be strictly implemented which shall be monitored regularly by the State Forest Department. The user agency shall submit progress of reclamation works to the State Forest Department and the Regional Office, Bhubaneswar. As reported in Part-IV above.
- 9 It shall be ensure that no labour camps are set up inside the forest area. Reported to be complied.
- 10 The mining lease area shall be demarcated on ground at the project cost, using four feet high RCC pillars, with each pillar inscribed with the serial number, forward and backward bearings and distance between two adjacent pillars. Reported to be Complied.
- 11 The forest land shall not be used for any purpose other than that specified in the proposal. Being complied.

- 12 The forest land thus diverted shall be non-transferable. Whenever and whatever extent of forest land is required by the User Agency, it shall be surrendered to the State Forest Department after proper rehabilitation under intimation to this Ministry. As reported by the user agency the forest land of 8.52 ha has been processed for re-diversion for Basundhara Washery and Stage-I clearance has been obtained vide Ministry's letter No.8-176/1997-FC (Vol) dated 11.03.2019 and remaining forest area of 219.37 ha is only used for the purpose specified in the proposal.
- 13 Any other condition that CCF (Central), Regional Office, Bhubaneswar may impose from time to time for protection and improvement of flora and fauna in the forest area, shall also be applicable. Assured to comply.

PART - VI

CONDITIONS IMPOSED BY THE STATE GOVT. IN ADDITION TO THE GOVT. OF INDIA'S CONDITIONS AND OTHER STEPS TAKEN TO PRESERVE FOREST, WILDLIFE AND PREVENT SOIL EROSION ETC.)

Nil

PART-VII **(MONITORING)**

1. Whether any committee has been formed for monitoring of the action on conditions stipulated. : No.
2. If no, give reasons. If yes, give details of the committee. : Not known.
3. Reports of the Monitoring Committee, if any. : Nil.

PART-VIII

1. Abstract reports of inspection of Forest Officers, if any. :
2. Remarks of the inspecting officer in regard to progress of the action on stipulated conditions. Effect of the project on forest and wildlife. : Proper fencing of the Safety Zone to be ensured. Gap filling should be done in the Safety Zone.



(A. T. Mishra)

Dy. Director General of Forests (Central)