

**MCDR INSPECTION REPORT
BHUBANESWAR REGIONAL OFFICE**

MINE CODE : 28ORI03084

Part-I: General

S N	Particulars		Details
1	Name of the Mine		AINLAPALI & RARBAHAL GRAPHITE MINES
2	Total Lease Area (Ha) with breakup of non-forest and forest land		14.937 Ha , Non Forest: 14.937 Ha., Forest : Nil
3	Mine code		28ORI03084
4	Name of official accompanying inspection		APURBA RANJAN RAI, Mines Manager
5	IBM Registration Number under rule 45 of MCDR, 1988		IBM/115/2011
6	Name of the lessee, Address, phone, email and fax number		ANTARYAMI MISHRA
7	Village		ANTARYAMI MISHRA
8	Taluka/Mandal		BELPADA
9	District		BALANGIR
10	Pin code		767026
11	State		ODISHA
12	Post office		DHUMABHATA
13	Nearest police station		BELPADA
14	Nearest Railway station		KANTABANJI
15	Date of Grant of Mining Lease		27.03.2007
16	Date of Execution		28.03.2007
17	Date of opening of Mine		18.07.2018
18	Date of first Renewal, if applicable and its period & expiry		NA
19	Date of second Renewal, if applicable and its period & expiry		26.03.2027
20	Date of submission of renewal application if Mining Operations are continuing under deemed extension		TO BE SUBMITTED
21	Name of the Nominated Owner with Address, phone, email, fax number and date of appointment		ANTARYAMI MISHRA
22	Name of the Mine Agent with Address, phone, email, fax number and date of appointment		ANTARYAMI MISHRA
23	Name of the Mines Manager with Address, phone, email, fax number and date of appointment in mines		APURBA RANJAN RAI, Plot no.1466, Gandamunda, Khandagiri, Bhubaneswar MOB-8895076504 EMAIL-apurbaranjanray2011@gmail.com
24	Name of the Mining Engineer & Geologist, Qualification and total experience	Mining engineer Qualification Date of appointment Address phone/email	Shri APURBA RANJAN RAI, B.E(MINING) 18.07.2018 MOB-8895076504 EMAIL-apurbaranjanray2011@gmail.com
		Geologist Qualification Date of appointment Address phone/email	Shri. DIBYENDU PRAKASH MOHANTA M.SC (GEOLOGY) D.O.J-02.02.2019 KEONJHAR, MOB-8917490599 EMAIL-dibyendubbl@gmail.com

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25	Whether Geologist and Mining Engineer appointed in mines satisfy the rule 42 & carrying out their duties as per rule 43 & 44.	YES
26	Date of Approval of Review of Mining Plan/Modified Mining Plan with five-year period and specific condition in approval letter, if any.	07.02.2022, THERE IS NO SPECIFIC CONDITION.
27	Date of Approval of Scheme of Mining/Modified Scheme of Mining with five-year period and specific condition in approval letter, if any.	NA
28	Mineral(s) granted in lease and proved for mining	GRAPHITE
29	Method of Mining(Open cast, Underground)	OPENCAST
30	Category (Fully Mechanized, Others or Manual)	OTHERS
31	Captive/Non Captive	NON-CAPTIVE

Details about Mining Plan/ Mining Scheme

a) Letter No. and date of approval of mining plan	:	BBS/BLG/GR/MP-290 dt. 01.02.2007
b) Letter No. and date of approval of Review mining Plan.	:	RMP/A/33ORI/BHU/2021-22 dt. 07.02.2022
c) Condition while approving the MP/ MS/ modification	:	Nil
d) Period of mining plan/ Review of Mining Plan in force :	:	Scheme Period 2022-23 to 2026-27 (27.03.2027)

Scientific Mining: Compliance of proposals of approved mining plan/Review of mining.

Exploration

S.N.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	40 Nos of borehole	NIL	Due to no surface right
1b	Exploration over lease area for Geological axis 1 or 2.	G1-3.051Ha. G2-1.887 Ha.	NIL	Due to no surface right
1c	Exploration Agency & Expenditure in lakh Rupees during the year	NIL	NIL	
1d	Balance area to be explored to bring Geological axis in 1 or 2	5.205 Ha. Area proposed to be explored under G1 level	Nil	
1e	Balance reserves as on 01.10.2021	As per approved Review of Mining Plan the balance reserve of the mine is 115898.40 Tonne	Balance reserve as on 31.03.2023 is 110998.40 Tonne	
1f	General remarks of inspecting officer on geology, exploration etc.	The lessee has a surface right of area of 4.2490 Ha. as on date of inspection and intended to purchase land and acquire surface right for further exploration.		

Development

S.N.	Item	Proposals	Actual work	Remarks
2a	Location of development w.r.t. lease area	713611E-713753E 2275631N-2275722N	713581E-713648E 227517N-2275688N	
2b	Separate benches in topsoil,			

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	overburden and mineral (Rule 15)	YES	YES	
2c	Stripping ratio or ore to OB ratio	1:3.39	1:3.20	
2d	Quantity of topsoil generation in m ³	9150	5980	Less No of Working Days due to non-availability of labour and rainy season.
2e	Quantity of overburden/waste generation in m ³	18920	9720	Less No of Working Days
2f	General remarks of inspecting officer on development of pit w.r.t. type of deposit etc.	Less development due to Less No of Working Days due to non-availability of labour and rainy season.		

Exploitation

S.N.	Item	Proposals	Actual work	Remarks
3a	Number of pits proposed for production	01	01	
3b	Quantity of Graphite production proposed	7524MT	4900MT	1.Less no.of working days 2.Non Availability of Labour 3.Processing of De-Watering
3c	Recovery of salable/usable mineral from ROM production	7524MT	4900MT	
3d	Quantity of mineral reject generation	No proposal	Nil	
3e	Grade of mineral reject generation and threshold value declared	NIL Threshold Value-2%	NIL Threshold Value-2%	
3f	Quantity of sub-grade mineral generation	No proposal	Nil	
3g	Grade of sub-grade mineral generation	No proposal	Nil	
3h	Manual / Mechanized method adopted for segregating from ROM	MECHANIZED	MECHANIZED	
3i	Any analysis or beneficiation study proposed & carried out for sub-grade mineral and reject	No proposal	Nil	
3j	Provision of drilling & blasting in mineral benches	No proposal	Nil	
3k	Provision of mining machineries in mineral benches	Excavator-01 JCB-01 Tipper-01	Excavator-01 JCB-01 Tipper-01	
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	Height-2.5M Width-2.8M	Height-2.5M Width-2.8M	
3m	Total area covered under excavation/pits	0.868Ha	0.678Ha	Less no of working days
3n	Ore to OB ratio for the pit/mine during the year	1:3.39	1:3.20	
3o	Total area put in use under	Area under mining-	Area under mining-	Less no of working

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	different heads at the end of year	0.451 Top Soil-0.020 OB-0.389 Mineral Storage-0.28	0.190 Top Soil-0.001 OB-0.275 Mineral Storage-0.21	days
3p	Production of ROM mineral during last five-year period, as applicable			
	Year -2018-19	12237.000 tonne	3220.000 tonne	
	Year- 2019-20	12771.000 tonne	2670.000 tonne	
	Year- 2020-21	12754.000 tonne	4920.000 tonne	
	Year- 2021-22	12779.000 tonne	2610.000 tonne	
	Year- 2022-23	7524.000 tonne	4900.000 tonne	
3q	General remarks of inspecting officer on method of mining etc.	Less production due to less working days due to non-availability of labour and mining operation is closed during rainy season.		

Solid Waste Management-Dumping

S.N.	Item	Proposals	Actual work	Remarks
4a	Separate dumping of topsoil, OB & mineral reject (Rule 32, 33)	Separate dumping of topsoil and OB have been proposed	Separate dumping of topsoil and OB have been made	
4b	Location of topsoil, OB & mineral reject dumps	713541E-713652E 2275430N-2275456N	713541E-713652E 2275430N-2275456N	
4c	Number of dumps within lease area and outside lease area	2nos of Dump within Lease	2nos of Dump within Lease	
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	713541E-713652E 2275430N-2275456N	713541E-713652E 2275430N-2275456N	
4e	Number of active & alive dumps	2	2	Old Dump is Proposed for shifting
4f	Number of dead dumps	No proposal	Nil	
4g	Number of dumps stabilized	No proposal	Nil	
4h	Whether Retaining wall or garland drain all along dumps are there	YES	YES	
4i	Length of Retaining wall or garland drain all along dump	126M	85M	Balance work is in progress.
4j	Number of settling ponds	1	1	
4k	Specific comments of inspecting officer on waste dump management	Old Dump has been proposed for shifting for expanding the mining quarry.		

Solid Waste Management-Backfilling

S.N.	Item	Proposals	Actual work	Remarks
5a	Status on part or full extraction of mineral from mined out area before starting backfilling	No proposal	Nil	
5b	Area under backfilling of mined out area	No proposal	Nil	
5c	Concurrent use of topsoil for restoration or rehabilitation of mined out area (Rule 32)	YES	YES	1.used in Plantation 2.used in internal cultivation in Mine area.
5d	Total area fully reclaimed & rehabilitated	No proposal	Nil	
5e	General remarks of inspecting officer on backfilling, reclamation etc.			

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Progressive Mine Closure Plan

S.N.	Item	Proposals	Actual work	Remarks
6a	Whether Annual report on PMCP submitted on time and correctly - Rule 23E(2). Details should be given in the format as given in Annexure-20.	YES	Submitted in time	
6b	Management of worked/mined out benches i) Area available for rehabilitation (ha) ii) Afforestation done (ha) iii) No. of saplings planted during the year iv) Cumulative no. of plants v) Any other specific method of rehabilitation vi) Cost incurred on watch & care during the year	No Proposal 0.237 600 1600 No proposal 50000/-	NIL 0.110 180 1300 NIL 20000/-	Rest work is under progress.
6c	Compliance on reclamation and rehabilitation by backfilling i) Voids available for backfilling (L * B * D) ii) Void filled by waste/tailings iii) Afforestation on the backfilled area iv) Rehabilitation by making water reservoir v) Any other specific means	No proposal	Nil	
6d	Compliance of Rehabilitation of waste land within lease i) Afforestation ii) Area rehabilitated (ha) iii) Method of rehabilitation	0.237	0.110	
6e	Compliance of Environmental monitoring (core zone & buffer zone)	proposed	Quarterly report on Environmental monitoring (core zone & buffer zone) is submitted.	
6f	General remarks of inspecting officer on PMCP compliance & progressive closure operations			

Mineral Conservation

S.N.	Item	Proposals	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	7524 Tonne	4900 Tonne	
7b	Method of grade-wise mineral sorting i.e. manual or mechanical	MECHANICAL	MECHANICAL	
7c	Different grade of mineral sorted out at mines	No proposal	Nil	
7d	Any beneficiation process at mines	No proposal	Nil	
7e	General remarks of inspecting officer on Mineral conservation & beneficiation issues	The total ROM having grade below 20% FC has been dispatched from the mine to the beneficiation plant.		

Environment

S.N.	Item	Proposals	Actual work	Remarks
8a	Separate removal and utilization of	Proposed	Top soil is used for	

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	topsoil (Rule 32)		internal cultivation	
8b	Concurrent use or storage of topsoil	Proposed	Top soil is used for internal cultivation	
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	YES	Separate dumps for overburden has been made	
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	NA	NA	
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	NIL	NIL	
8f	Baseline information on existence of plantation & additional plantation done (Rule 41)	YES	YES	
8g	Survival rate	85%	50%	
8h	Water sprinkling on roads to control airborne dust	YES	YES	
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area			

Compliance of Rule 45

S.N.	Item	COMMENTS		Remarks
9a	Status of submission of Monthly and Annual returns	Annual Return is not due for submission and monthly return has been submitted in time.		
S.N.	Item	Details furnished by the lessee	Observation of I/Officer	Remarks
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Annual Return is not due for submission		
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Annual Return is not due for submission		
9d	Scrutiny of Annual return on afforestation	Annual Return is not due for submission		
9e	Scrutiny of Annual return on mineral reject generation (Grade & quantity)	Annual Return is not due for submission		
9f	Scrutiny of Annual return on ROM stock and/or graded ore	Annual Return is not due for submission		
9g	Scrutiny of Annual return on sale value, Ex. Mine price & production cost	Annual Return is not due for submission		
9i	Scrutiny of Annual return on fixed assets	Annual Return is not due for submission		
9k	Scrutiny of Annual return on mining machineries	Annual Return is not due for submission		

Details of violations observed during current inspection and compliance position of violation pointed out

Violation observed			Show cause position		
Rule No.	Issued on	Compliance on	Rule No.	Issued on	Compliance on
Nil, however monthly return for May, 2023 & April, 2023 have been rectified by reporting in grade wise section.					

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Date : 12.06.2023

(Rajani Kanta Rautaray)
INDIAN BUREAU OF MINES