

MCDR INSPECTION REPORT

I/3954/2023

General

S. N.	Particulars	Details
1	Name of the Mine	Bainibasa Graphite Mine
2	Total Lease Area (Ha) with breakup of Non-forest and forest land	Total Lease Area- 58.704 Ha. Total Non Forest Land- 14.666 Ha. Total Forest Land – 44.038 Ha.
3	Minecode	28ORI27015
4	IBM Registration Number under rule 45 of MCDR, 1988	IBM/4724/2011
5	Name of the lessee, Address, phone, email and fax number	M/s Pradhan Industries At- Telenga Bazar Dist- Cuttack Pin- 753009 (Odisha) Phone- 0671-2412299 Tele. fax- 0671-2423078 Mobile- 9937197435 E-mail Id- pradhanindustriesctc@yahoo.com
6	Village	Bainibasa
7	Taluka/Mandal	Muniguda
8	District	Rayagada
9	Pincode	765020
10	State	Odisha
11	Post office	Bhairabgarh
12	Nearest police station	Muniguda
13	Nearest Railway station	Muniguda
14	Date of Grant of Mining Lease	Bainibasa Graphite Mining Lease area over 58.704 Ha. granted on 10.01.2017 and the Mining Lease deed has been executed by the Collector, Rayagada and registered in favour of the grantee on 11.01.2017 for a period of 50 years.
15	Date of Execution	Bainibasa Mining Lease area over 58.704 Ha. was executed on 11.01.2017 for a period of 50 years in favour of M/s Pradhan Industries.
16	Date of opening of Mine	27.12.2019
17	Date of first Renewal, if applicable and its period & expiry	NA
18	Date of second Renewal, if applicable and its period & expiry	NA
19	Date of submission of renewal application if Mining Operations are continuing under deemed extension	NA
20	Name of the Nominated Owner with Address, phone, email, fax number and date of appointment	M/s Pradhan Industries (Partnership Firm) Telenga Bazar, Cuttack Pin- 753009 Phone - 0671-2423078 Tele/fax - 0671-2423078
21	Name of the Mine Agent with Address, phone, email, fax number and date of appointment	Er. Pranab Kumar Mohanty Plot No.- N4/32, IRC Village, Nayapalli, Bhubaneswar-751015. Odisha Date of Appointment - 21.12.2019
22	Name of the Mines Manager with Address, phone, email, fax number and date of appointment in mines	Mr. Narayan Nath, Mines Manager At/Po- Muniguda, Dist Rayagada,

		Odisha Date of Appointment – 21.12.2019
23	Name of the Mining Engineer, Qualification and total experience with Address, phone, email, fax number and date of appointment in mine.	Sri Premananda Muduly, B Tech Mining Engineer has been appointed as Mining Engineer
24	Name of the Geologist, Qualification and total experience with Address, phone, email, fax number and date of appointment in mine	Yes, Sri Harihara Barik, MSc Geology, 18 years experience has been appointed as part time Geologist to look after the mining activities at Bainibasa Graphite Mine.
25	Whether Geologist and Mining Engineer appointed in mines satisfy the rule 55 & carrying out their duties as per rule 56 & 57.	Yes
26	Date of Approval of Mining Plan / Modified Mining Plan with five - year period and specific condition in approval letter, if any.	Mining Plan along with PMCP was approved by IBM, Vide letter no. – MP - OTFM/20-ORI/BHU/2016 -17 / 7097, Dated - 17.11.2016. The period is from - 2016-17 to 2020 - 2021.
27	Date of Approval of Scheme of Mining/Modified Scheme of Mining with five-year period and specific condition in approval letter, if any.	Review of Mining Plan was approved by IBM vide letter no. - RMP/A/38-ORI/BHU/2020-21/ 2429, dtd.-12.01.2021 and the Review of Mining Plan is valid till 31.03.2026.
28	Mineral(s) granted in lease and proved for mining	Graphite
29	Method of Mining(Open cast, Underground)	Open cast
30	Category (Fully Mechanised, Others or Manual)	Other Than Fully Mechanized(OTFM)
31	Captive/Non Captive	Non - Captive

Exploration

S. N.	Item	Proposals for 2019 - 20 & 2020- 21,2021- 22, 2022-23 (till date)		Actual work during 2019 - 20 & 2020- 21,2021-22, 2022-23 (till date)		Remark
1a	Backlog of previous year	2019 - 20	10	2019 - 20	19	
		2020 - 21	12	2020 - 21	12	
		2021 - 22	33	2021 - 22	21	
		2022 - 23	6	2022 - 23	Year continuing	
1b	Exploration over lease area for Geological axis 1 or 2.	Geological Axis -2		Geological Axis -2		
1c	Exploration Agency & Expenditure in lakh Rupees during the year	Geological Axis -2		2020 - 21	M/s Sri N Balakrishna Bore Wells, Muniguda	
				2021 - 22	Balakrishna Bore Wells, Muniguda	
				2020-21	Rs 216050.00	
				2021-22	Rs 405330.00	
1d	Balance area to be explored to bring Geological axis in 1 or 2	Geological Axis -2		5.96Ha.		

1e	Balance reserves as on 23.10.2020		425376t
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Development (Up to October 2022)

S. N.	Item	Proposals for 2021 - 22 (till date)		Actual work during 2021-22 (till date)		Remark
		2a	Location of development w.r.t. lease area	2021-22	294S to 359S / 441W to 551W	
	2022-23	220S to 353S / 341W to 441W		2022 - 23	Within 220S to 353S/341W to 441W	
2b	Separate benches in topsoil, overburden and mineral (Rule 15)					
2c	Stripping ratio or ore to OB ratio	2021 - 22	1 : 1.9	2021 - 22	1:1.42	
		2022 - 23	1 : 1.9	2022 - 23	Year continuing	
2d	Quantity of topsoil generation in m ³	2021 - 22	5940 m ³	2021 - 22	700	
		2022 - 23	5400 m ³	2022 - 23	Year continuing	
2e	Quantity of overburden generation in m ³	2021 - 22	20300 m ³	2021 - 22	9802	
		2022 - 23	22000 m ³	2022 - 23	Year continuing	

EXPLOITATION

N.	Item	Proposals for 2021-22 and 2022-23 (till October)		Actual work during 2021-22 and 2022-23 (till October)		Remark
		2021 - 22	Q -1	2021-22	Q -1	
3a	Number of pits proposed for production	2021 - 22	Q -1	2021-22	Q -1	
		2022 - 23	Q -1	2022-23	Q -1	
3b	Quantity of ROM mineral production proposed	2021 - 22	10920t	2021-22	6879t	
		2022 - 23	11760t	2022-23	Year continuing	
3c	Recovery of salable / usable mineral from ROM production	2021 - 22	9828t	2021-22	Yet to be benefited.	
		2022 - 23	10584t	2022-23		
3d	Quantity of mineral reject generation	2021 - 22	1092t	2021 - 22	8.00t	
		2022 - 23	1176t	2022 - 23	Year continuing	
3e	Grade of mineral reject generation and threshold value declared	(2 - 3) % F.C Threshold value - 2%F.C		2.31% F.C Threshold value -2%F.C		
3f	Quantity of sub-grade mineral generation	2021 - 22	1092t	2021-22	8.00t	
		2022 - 23	1176t	2022-23	Year continuing	
3g	Grade of sub-grade mineral generation			2021-22	2.37	
				2022-23	2.31	
3h	Manual / Mechanised method adopted for segregating from ROM	Mechanised method		Manual method. Due to delay in getting 106(2)(b) Permission, lessee has not been adopted mechanized method.		
3i	Any analysis or beneficiation study proposed & carried out for sub-grade mineral and reject	The ROM is supposed to be raised and beneficiated in the Beneficiation plant. The sub grade will be blended with high grade graphite ROM and fed to the plant for Beneficiation.		ROM and Sub - grade will be utilized in the Beneficiation plant. Lessee is going to commissioning the beneficiation plant shortly.		The sub grade will be blended with high grade graphite ROM and fed to the plant for Beneficiation.
3j	Provision of drilling & blasting in mineral benches	NA		NA		No drilling & blasting have been carried out in the ML area, as the stratum is very soft.
3k	Provision of mining machineries in mineral benches	Hydraulic excavator 0.9m ³	1	Hydraulic excavator 0.9m ³	0	
		JCB/Front-end loader	1	JCB/Front-end loader	0	
		Tipper	3	Tipper	0	
		Processing Plant	1	Processing Plant	0	
		Water Pump	5	Water Pump	0	
		Generator	1	Generator	0	

		Water tanker	1	Water tanker	0	
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	As per Mining plan the Bench height is supposed to be maintained at 3m and bench width 6m		The bench dimensions have been maintained as per Mining Plan		The bench height and width have been maintained as 3m and 6m respectively.
3m	Total area covered under excavation/pits	2021-22	5940m ³	2021-22	0.078	
		2022-23	11340m ³	2022-23	0.031	
3n	Ore to OB ratio for the pit/mine during the year	2021-22	1 : 1.9	2021-22	1 : 1.42	
		2022-23	1 : 1.9	2022-23	Continuing	
3o	Total area put in use under different heads at the end of year	2021 - 22 Quarry - 1 & Quarry - 2 Ha.				
3p	Production of ROM mineral during last six-year period, as applicable 2018-19 2019-20 2020-21 2021-22 2022-23	2018 - 19	12600t	2018 - 19	0	
		2019 - 20	13272t	2019 - 20	1.700t	
		2020 - 21	13272t	2020 - 21	20.600t	
		2021 - 22	10920t	2021 - 22	6872.326t	
		2022 - 23	11760t	2022 - 23	131.00t up to October	

Solid Waste management - Dumping

S.N.	Item	Proposals for 2018 - 19 & 2019 - 20, 2020 - 21, 2021 - 22, 2022 - 23 (till date)				Actual work 2018 - 19 & 2019 - 20, 2020 - 21, 2021 - 22, 2022 - 23 (till date)				Remark
		Year	Topsoil (m ³)	OB (m ³)	Mineral Reject (m ³)	Year	Topsoil (m ³)	OB (m ³)	Mineral Reject (m ³)	
4a	Separate dumping of topsoil, OB & mineral reject (Rule 33, 37)	2021-22	5940	20300	520	2021-22	110	9802	8	Overburden, mineral reject and topsoil could not be generated as per the approved mining plan due to less production
		2022-23	5400	22000	560	2022-23	0	0	0	
4b	Location of topsoil, OB & mineral reject dumps	Top soil - 550S/610S and 410W/540W OB Dump - 370S/430S and 580W/610W Sub grade - 180S/200S and 325W/340W				OB, top soil and Mineral Rejects dumped / Stacked in the earmarked area.				
4c	Number of dumps within lease area and outside lease area	OB Dump - 1				OB Dump - 1 No. Within Lease Area				
4d	Location of dumps w.r.t. ultimate pit limit	Name of Dump	Location			Location of existing dump is within 370S / 430S and 580W / 610W and beyond the ultimate pit limit.				
		OB Dump - 1	370S/430S and 580W/610W							

4e	Number of active & alive dumps	One			One Dump (Active)	Dump - 1 is the active dump
4f	Number of dead dumps	Nil			Nil	
4g	Number of dumps stabilised	Nil			Nil.	
4h	Whether Retaining wall or garland drain all along dumps are there	Protective Measure	Location	Dimension	Yes.	
		Retaining Wall	Dump -1	385m x 2m x 2m		
		Garland drain		400m x 1m x 1m		
4i	Length of Retaining wall or garland drain all along dump	It was proposal to construct the retaining wall and garland drain all along the dump.			Yes. As per proposed dimensions.	
4j	Number of settling ponds	0			0	

Solid Waste management - Backfilling

S.N.	Item	Proposals for 2018-19, 2019-20 & 2020 - 21, 2021 - 22, 2022 - 23 (till date)	Actual work during 2018 - 19, 2019 - 20 & 2020 - 21, 2021 - 22, 2022 - 23 (till date)	Remark
5a	Status on part or full extraction of mineral from mined out area before starting backfilling	Nil	Nil	
5b	Area under backfilling of mined out area	Nil	Nil	
5c	Concurrent use of topsoil for restoration or rehabilitation of mined out area (Rule 36)	Nil	Nil	
5d	Total area fully reclaimed & rehabilitated	Nil	Nil	

Progressive Mine Closure Plan

N.	Item	Proposals for 2018-19, 2019-20 & 2020-21, 2021-22, 2022-23 (till date)	Actual work during 2018-19, 2019-20 & 2020-21, 2021-22, 2022-23 (till date)	Remark	
6a	Whether Annual report on PMCP submitted on time and correctly - Rule 26(2).	For the Year 2021-22	Yes. Lessee has submitted the online copy of PMCP on time.		
6b	Management of worked/mined out benches	Height	3m	Height	3m
		Width	6m	Width	6m
	i) Area available for rehabilitation (ha)	NA		NA	
	ii) Afforestation done (ha)	1.2		1.2	

	iii) No. of saplings planted during the year	3000	3000	
	iv) Cumulative no. of plants	No	No	
	v) Any other specific method of rehabilitation		Only Plantation	
	vi) Cost incurred on watch & care during the year		Rs 75000.00	
6c	Compliance on reclamation and rehabilitation by backfilling i) Voids available for backfilling (L X B X D) ii) Void filled by waste/tailings iii) Afforestation on the backfilled area iv) Rehabilitation by making water reservoir v) Any other specific means	NA	NA	
6d	Compliance of Rehabilitation of waste land within lease i) Afforestation ii) Area rehabilitated (ha) iii) Method of rehabilitation	20.903Ha. 1.2Ha plantation	19.703Ha. 1.2Ha plantation	
6e	Compliance of Environmental monitoring (core zone & buffer zone)		Environment monitoring in the Core Zone and Buffer Zone have been done periodically.	

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S.N.	Item	Proposals for 2018-19, 2019-20 & 2020-21,2021-22, 2022-23 (till date)	Actual work during 2018-19, 2019-20 & 2020-21,2021-22, 2022-23 (till date)	Remark
7a	ROM Mineral dispatch or grade - wise sorting within lease area	ROM ore is sorting within lease area	6892t ROM have been produced within the year 2021 - 22 and 62.38t have been produced in this year up to October 2022.	
7b	Method of grade - wise mineral sorting i.e. manual or mechanical	NA	Manually doing at present	Mechanized method of sorting will be adopted after commissioning of plant.
7c	Different grade of mineral sorted out at mines	ROM - +3%FC Subgrade -2 - 3%FC Flaky ore.	+3%FC and 2-3% FC have been separated in the mine	
7d	Any beneficiation process at mines		Yes.	Lessee is going to commissioning the plant shortly.

Environment

S.N.	Item	Proposals for 2018-19, 2019-20 & 2020-21,2021-22, 2022-23 (till date)	Actual work during 2018-19, 2019-20 & 2020-21,2021-22, 2022-23 (till date)	Remark		
8a	Separate removal and utilization of topsoil (Rule 36)	2018 - 19	5400	2018 - 19	0	No generation of topsoil during the year 2022 - 23.
		2019 - 20	7788	2019 - 20	0	
		2020 - 21	7922	2020 - 21	0	
		2021 - 22	5940	2021 - 22	700	
		2022 - 23	5400	2022 - 23	0	
8b	Concurrent use or storage of topsoil	Proposal is given to scrap 1m thick topsoil on an average and store the topsoil in the lease area for spreading over the waste dump, backfilled area and plantation and pits for rehabilitation of waste dump and reclamation of mined out area.	Due to less production, no top soil has been generated during this year.			
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 37)	2021-22 - 20300 2022-23 - 22000	19605t.Overburden / waste / rejects have been dumped in the earmarked area separately.			

8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	There is no mineral under the waste dump. Therefore, dump re-handling is not necessarily required for the purpose of recovery of mineral.	The use of OB, waste rock, rejects and fines dumps have not mentioned in the review of mining plan. The OB has been stacked in the existing dump.	
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	NA	NA	No reclamation and rehabilitation have been proposed in this review of mining period.
8f	Baseline information on existence of plantation & additional Plantation done	For the live & growth of the saplings at the plantation site, Mine water will be used for water spraying	In situ plants are available in ML areas. Watering and manuring are doing properly as per requirement. Post plantation care such as soil working, pruning etc. are doing properly. Casual replacement is doing properly. Insecticides are being spread for pest control. Proper watch and ward will be there to save the trees.	
8h	Water sprinkling on roads to control airborne dust	Mine water will be used for water spraying for dust suppression.	After full operationalization of mining, spraying for dust suppression will be done.	Not spraying at present, because the mine is not in full operation stage.

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S.N.	Item	COMMENTS		Remarks
9a	Status of submission of Monthly and Annual returns	M.R. Submitted up to October 2022 A.R. Submitted up to March 2022		
S.N.	Item	Details given in A.R. for the year 2021-22	Observation of I/Officer	Remarks
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Mines Manager - 1No. Geologist- 1 No.	Mines Manager- 1no. Geologist - 1 no. (Part time)	
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.		Found in order	
9d	Scrutiny of Annual return on afforestation	As far as post mining land use is concerned, area under excavation will be fully reclaimed/ rehabilitated by the overburden / sand filling and water storage. Road will be left for use of the local people. Area under sub-grade stack, mineral separation plant, mineral stacking & infrastructure may also be utilized for plantation after mine life.	Care is being undertaking for survival & growth of existing trees in the area and drought resistant & fast growing saplings are being planted in the no-tree land to form a comprehensive green belt.	
9e	Scrutiny of Annual return on mineral reject generation (Grade & quantity)	Mineral rejects/Sub-grade Grade - 2 - 3%FC	Sub-grade ore/mineral rejects which will be initially stacked and subsequently beneficiated in the Beneficiation Plant.	
9f	Scrutiny of Annual return on ROM stock and/or graded ore	ROM graphite ore produced from the mine will fed into the washing plant for up-gradation in to graphite concentrate.	ROM graphite ore is stacked in the existing stack yard and it will be transferred to processing plant as per the requirement of plant.	
9g	Scrutiny of Annual return on sale value, Ex. Mine price & production cost		Sale Value- Rs 30304.00 Ex Mine Price - Rs 975.00 Production Cost - Rs 638.49	
9i	Scrutiny of Annual return on fixed assets		Found in order	
9k	Scrutiny of Annual return on mining machineries	Mine machinery and total land use details. Working under current opencast workings- 0.078 ha. Used for waste disposal- 0.211 ha Occupied by plant, buildings, roads- 0.003 ha Other purpose- 0.274 ha	Found in order	

MCDR-MjFLOGR/1/2023-BBS-IBM_RO_BBS
Details of violations observed during current inspection and compliance position of earlier violation pointed out:- Nil violations.

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