

INDIAN BUREAU OF MINES
MCDR INSPECTION REPORT
Bhubaneswar Region

General

S N	Particulars	Details
1	Name of the Mine	Birida Graphite Mine
2	Date of Inspection	21.02.2025
3	Name of Inspection officer:	Sh. Rohita Sethi, Assistant Controller of Mines
4	Name of official accompanying inspection	Er. P.K. Mohanty, GM, Technical, Sri Harihara Barik, Geologist Sri Jyoti Ranjan Satapathy, Mines Manager
5	Last date of inspection & officer	26.10.2023 by Shri Ashok Kumar Pany, Assistant Mining Engineer.
6	Total Lease Area (Ha) with breakup of non-forest and forest land	45.753ha. Forest land – Nil Non forest land - 45.753ha.
7	Mine code	28ORI27014
8	IBM Registration Number under rule 45 of MCDR, 1988	IBM/9759/2012
9	Name of the lessee, Address, phone, email and fax number	Sri Sibananda Pradhan A-19, Trishna Residency, Phase-3 Kiit College Road, Patia Bhubaneswar-751024 Mob. No. -7008226704 Email-sundeepradhan@gmail.com
10	Village	Birida
11	Taluka / Mandal	K Singpur
12	District	Rayagada
13	Pin code	765017
14	State	Odisha
15	Post office	Kashipur
16	Nearest police station	K Singpur
17	Nearest Railway station	Sikharpai
18	Date of Grant of Mining Lease	07.01.2005
19	Date of Execution	26.12.2005
20	Date of opening of Mine	11.07.2019
21	Date of Expiry	25.12.2055
22	Name of the Nominated Owner with Address, phone, email, fax number and date of appointment	Sri Sibananda Pradhan A - 19, Trishna Residency, Phase - 3 Kiit College Road, Patia Bhubaneswar - 751024 Mob. No. - 7008226704 Email - sundeepradhan@gmail.com
23	Name of the Mine Agent with Address, phone, email, fax number and date of appointment	Sri Sundeepradhan A - 19, Trishna Residency, Phase-3 Kiit College Road, Patia Bhubaneswar-751024 Mob. No. - 7381848286 Email - sundeepradhan@gmail.com
24	Name of the Mines Manager with Address, phone, email, fax number and date of appointment in mines	Sri Jyoti Ranjan Satapathy At/Po - Sikharpai Dist. - Rayagada

		Mob. No. - 9928820567
25	Name of the Mining Engineer , Qualification and total experience with Address, mobile no, email, fax/phone number and date of appointment in mine	Sri Jyoti Ranjan Satapathy At/Po - Sikharpai Dist. - Rayagada Mob. No. - 9928820567
26	Name of the Geologist , Qualification and total experience with address, mobile no, email, fax number and date of appointment in mine.	Shri Harihara Barik (Part Time) M Sc, Geology Mob. No.- 9437361566
27	Date of Approval of Mining Plan / Review of Mining Plan / these Modifications with five-year period and specific condition in approval letter if any.	1. Approved Mining Plan for a period of five year from 2004 - 05 to 2008 - 09, Vide approved letter no.- BBS/RYG/GR/MP-154, dtd. - 23.12.2004. Valid up to 31.03.2009. 2. Approved Modification to the Approved Mining Plan for a period of five years from 2011 - 12 to 2015 - 16, Vide Approved Letter no.- MPM/OTFM/14-ORI/BHU/2011-12, dtd. - 28.11.2011. Valid up to 31.03.2016. 3. Approved Modification and Review of Mining Plan for a period of five years from 2016 - 17 to 2020 - 21, Vide approved letter no.- MPM/OTFM/08-ORI/ BHU/2016-17, dtd. -12.09.2016. Valid up to 31.03.2021. 4. Approved Review of Mining Plan along with PMCP for a period of five years from 2021 - 22 to 2025 - 26, Vide approved letter no.- RMP/A-24ORI/BHU/2020-21/2065, dtd. - 09.11.2020 Valid up to 31.03.2026.
28	Mineral(s) granted in lease and proved for mining	Graphite
29	Method of Mining (Opencast, Underground)	Opencast
30	Category (Fully Mechanised, Others or Manual)	Other than fully mechanized (OTFM)
31	Captive / non-captive	Non captive
32	Present EC Capacity	83000 TPA throughput

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

Exploration

Sl. No	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	25 Nos. of bore holes	10 Nos. bore holes with 356m	With reference to this office violation letter no. MCDR-MiFLOGR/3/2023-BBS-IBM_RO_BBS dated 04/12/2023 lessee has explored only 10 Nos. bore holes against 25 Nos. of bore holes of backlog

				proposal, Violation issued under Rule11(1) of MCDR-2017
1b	Exploration over lease area for Geological axis 1 or 2.	No proposal	10 Nos.	Nil
1c	Exploration Agency & Expenditure in lakh Rupees during the year	Not Specified	M/s. Dalabehera & Associates conducted the drilling in the months of May of FY 2023 - 24	Nil
1d	Balance area to be explored to bring Geological axis in 1 or 2	As per Last Approved RMP- un explored area 32.306ha	8.102 Ha	Nil
1e	Balance reserves as on 01.04.2024	Mineral reserve as per approved Review of Mining Plan as on 31.08.2020 was 121-25,46,567tonnes 221-586928	Mineral reserve as on 31.03.2024 was 121-24,98,185.00tonnes 221-586928	Nil
1f	General remarks of inspecting officer on geology, exploration etc.	With reference to this office violation letter no. MCDR-MiFLOGR/3/2023-BBS-IBM_RO_BBS dated 04/12/2023 lessee has explored only 10 Nos. bore holes against 25 Nos. of bore holes of backlog proposal, Violation issued under Rule11(1) of MCDR-2017		

Development

S.N.	Item	Proposals	Actual work	Remarks
2a	Location of development w.r.t. lease area	Coordinates - 360S - 460S / 140W - 260W Cross section - X3Y3	Broadly as per the proposal	Nil
2b	Separate benches in topsoil, overburden and mineral (Rule 15)	Separate benches in topsoil, overburden and ROM ore proposed	Carried out as per proposal	Nil
2c	Stripping ratio or ore to OB ratio (t/m ³)	1:0.29	1: 0.12	Nil
2d	Quantity of topsoil generation in m ³	706 m ³	718 m ³	Nil
2e	Quantity of overburden / waste generation in m ³	21000 m ³	4410 m ³	Due to Less ROM production, proportionately OB generation is less.
2f	General remarks of inspecting officer on development of pit w.r.t. type of deposit etc.	Violation issued for Less development		

Exploitation

S.N.	Item	Proposals	Actual work	Remarks
3a	Number of pits	One	One	Nil

	proposed for production			
3b	Quantity of Graphite production proposed	75,285tonnes	40,000tonnes	Violation issued
3c	Recovery of salable / usable mineral from ROM production	71521	40,000tonnes	Nil
3d	Quantity of mineral reject generation	1792 m ³	Nil	Nil
3e	Grade of mineral reject generation and threshold value declared	Mineral reject- 2 % to 3 % F.C. Threshold Value- 2% Fixed Carbon (F.C) (Min.)	Mineral reject- 2 % to 3 % F.C. Threshold Value- 2% Fixed Carbon (F.C) (Min.)	Nil
3f	Quantity of sub-grade mineral generation	Same as Para 3d		Nil
3g	Grade of sub-grade mineral generation	Same as Para 3e		Nil
3h	Manual / Mechanized method adopted for segregating from ROM	Mechanized	Mechanized	Nil
3i	Any analysis or beneficiation study proposed & carried out for sub-grade mineral and reject	No beneficiation study proposed	Nil	Nil
3j	Provision of drilling & blasting in mineral benches	Provision of drilling & blasting not proposed in mineral benches	Backlog of previous year 10 Nos. was done in the year	Nil
3k	Provision of mining machineries in mineral benches	Excavator with dumper combination.	As per proposal	Nil
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP / SOM	As per Review of Mining plan the Bench height and bench width is supposed to be maintained at 6m respectively.	As per proposal	Nil
3m	Total area covered under excavation / pits	Quarry -1 Total area – 2.696 (Up to end of the plan period)	Total area covered under Quarry -1 is 0.31Ha.	Nil
3n	Ore to OB ratio for	1:0.29	1: 0.12	Nil

	the pit / mine during the year (t/m ³)				
3o	Total area put in use under different heads at the end of year	Area	Ha.	Area	Ha.
		Area under excavation	2.696	Area under (O-C) working 8.214	
		Storage for Topsoil	0.010		
		Overburden dump	1.212	Use for waste disposal 0.12	
		Mineral Storage	1.017	Top soil, ore, sub-grade stack 0.126	
		Infrastructure	0.400		
		Road	1.912		
		Tailing Pond	0.450		
		ETP	0		
		Mineral Separation Plant	1.700		
		Water storage / Reservoir	0.310		
		Water treatment plant	0.048		
		Settling pond	0.100		
Tailing /sand dump	0.410				
3p	Production of ROM mineral during last five - year period, as applicable	Year	Quantity Proposed	Year	Quantity Produced
		Year-2019-20	82845t	Year-2019-20	1.8t
		Year-2020-21	82845t	Year-2020-21	15.8t
		Year-2021-22	62371t	Year-2021-22	7232t
		Year-2022-23	68671t	Year-2022-23	1150t
		Year-2023-24	75285t	Year-2023-24	40000t
3q	General remarks of inspecting officer on method of mining etc.	Mechanized opencast mining method is being carried out with excavator, dumper combination. Only 53% of production achieved against the proposed production, for which violation issued.			

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, OB & mineral reject proposed	Separate dumping of topsoil, OB & mineral reject is being carried out as per proposal	Nil
4b	Location of topsoil, OB & mineral reject dumps	Topsoil - 580S / 590S and 180W / 205W OB Dump - 495S / 560S and 30W / 80E Sub grade - 600S / 620S and 110W / 180W	Topsoil, OB & mineral reject dumped / Stacked carried out in the earmarked area.	Nil
4c	Number of dumps within lease area and outside lease	Within lease area – One	Within lease area – One outside lease area - Nil	Nil

	area	outside lease area - Nil		
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	Dump - 1 OB Dump - 495S / 560S and 30W / 80E	Dump - 1 OB Dump - 510S / 530S and 800W / 105W	Nil
4e	Number of active & alive dumps	One	One Dump (Active)	Nil
4f	Number of dead dumps	Nil	Nil	Nil
4g	Number of dumps stabilized	Nil	Nil	Nil
4h	Whether Retaining wall or garland drain all along dumps are there	Retaining Wall (Around Dump) - 70m x 2m x 2m Garland drain (Around Dump) - 75m x 1m x 1m	Yes	Nil
4i	Length of Retaining wall or garland drain all along dump	Retaining Wall (Around Dump) - 70m x 2m x 2m Garland drain (Around Dump) - 75m x 1m x 1m	Retaining Wall (Around Dump) - 90m x 2m x 2m Garland drain (Around Dump) - 75m x 1m x 1m	Nil
4j	Number of settling ponds	No proposal	Nil	Nil
4k	Specific comments of inspecting officer on waste dump management	Top soil, overburden wastes and mineral reject dump management are being carried out as per the approved proposals.		

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	Nil	Nil	Nil
5b	Area under backfilling of mined out area	Nil	Nil	Nil
5c	Concurrent use of topsoil for restoration or rehabilitation of mined out area (Rule 32)	Nil	Nil	Nil
5d	Total area fully reclaimed & rehabilitated	Nil	Nil	Nil
5e	General remarks of inspecting officer on backfilling, reclamation etc	Existing pit is not matured for backfilling as ore/mineral not exhausted completely.		

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	As per Rule 26(2) Annual PMCP report to be submitted before 1st day of July of	Yes. Submitted the online copy of PMCP under Rule 26(2) on time.	Nil

	format as given in Annexure-20.	Every Year.		
6b	<p>Management of worked / mined out benches/dumps</p> <p>i) Area available for rehabilitation (ha)</p> <p>ii) Afforestation done (ha)</p> <p>iii) No. of saplings planted during the year</p> <p>iv) Cumulative no. of plants</p> <p>v) Any other specific method of rehabilitation</p> <p>vi) Cost incurred on watch & care during the year</p>	<p>i. Nil</p> <p>ii. Nil</p> <p>iii. Nil</p> <p>iv. Nil</p> <p>v. Nil</p> <p>vi. Nil</p>	<p>vii. Nil</p> <p>viii. Nil</p> <p>ix. Nil</p> <p>x. Nil</p> <p>xi. Nil</p> <p>xii. Nil</p>	Nil
6c	<p>Compliance on reclamation and rehabilitation by backfilling</p> <p>i) Voids available for backfilling (L *B * D)</p> <p>ii) Void filled by waste/tailings</p> <p>iii) Afforestation on the backfilled area</p> <p>iv) Rehabilitation by making water reservoir</p> <p>v) Any other specific means</p>	NA	No proposal for back filling in the Review of Mining Plan Period.	Nil
6d	<p>Compliance of Rehabilitation of waste land within lease</p> <p>i) Afforestation</p> <p>ii) Area rehabilitated (ha)</p> <p>iii) Method of rehabilitation</p>	<p>i) 1000 no's of saplings</p> <p>ii) 0.40ha.</p> <p>iii) Plantation</p>	<p>1000</p> <p>0.40ha.</p> <p>1000 saplings have been planted during the year and the rate of survival is 36%</p>	Nil
6e	Compliance of Environmental monitoring (core zone & buffer zone)	Environment monitoring in the core zone and Buffer Zone proposed.	Environment monitoring in the core zone and Buffer Zone have been done periodically	Nil
6f	General remarks of inspecting officer on PMCP compliance & progressive closure operations	Lessee has implementing PMCP proposals as per approved RMP.		

Mineral Conservation

S.N	Item	Proposals	Actual work	Remarks
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7a	ROM Mineral dispatch or grade-wise sorting within lease area	ROM ore is sorting within lease area	Grade wise sorting within lease area	Nil
7b	Method of grade-wise mineral sorting i.e. manual or mechanical	Mechanized	Mechanized	Nil
7c	Different grade of mineral sorted out at mines	Beneficiation consider - +3%FC Subgrade - 2 - 3%FC	Beneficiation consider- +3%FC Subgrade - 2 - 3%FC	Nil
7d	Any beneficiation process at mines	Yes	No, Yet to be commissioned of beneficiation plant. It is under process.	Nil
7e	General remarks of inspecting officer on Mineral conservation & beneficiation issues	No beneficiation plant exists within lease area. The material Beneficiate at lessee's own plant outside.		

Environment

S.N	Item	Proposals		Actual work		Remarks
		Year	Topsoil (m ³)	Year	Topsoil (m ³)	
8a	Separate removal and utilization of topsoil (Rule 32)	2023-24	706	2023-24	500	Topsoil has been completely utilized for plantation
8b	Concurrent use or storage of topsoil	Proposal is given to store the topsoil in the ML for plantation and reclamation of mined out area.		Topsoil has been completely utilized for plantation		Nil
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	Separate dump proposed		Separate dumping carried out as per proposal		Nil
8d	Use of overburden, waste rock, rejects and fines dump for restoring the land to its original use	No Proposal		Nil		Nil
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	No Proposal		No Proposal		Nil
8f	Baseline information on existence of plantation &	1000no's of saplings		1000no's of saplings		Nil

	additional plantation done (Rule 41)			
8g	Survival rate	NA	Around 31%	Nil
8h	Water sprinkling on roads to control airborne dust	Water sprinkling on haul roads proposed to suppress the dust	Water sprinkling by truck mounded sprinklers used for dust suppression.	Nil
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area	The aesthetic beauty in & around the mine area is good.		

Compliance of Rule 45

Sl. No	Item	COMMENTS				Remarks
9a	Status of submission of Monthly and Annual returns	All monthly returns for the reporting year are submitted with in the stipulated time period except for the month of Dec-2023, for which fine imposed vide this office letter no. MCDR-MiFLOGR/2/2023-BBS-IBM_RO_BBS dated 02/02/2024. Annual return for the year 2023-24 has submitted with in the stipulated time period				-----
S. N.	Item	Details Given in A.R.		Actual in field		Remarks
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Mining Engineer - 1 No. Geologist - 1 No.		Actual also the same		-----
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Area	Ha.	Area	Ha.	-----
		Covered under current (O - C) working	0.310	Appears to be correct		
		Reclaimed-rehabilitated	0.000			
		Used for waste disposal	0.120			
Used for any other purpose	0.126					
9d	Scrutiny of Annual return on afforestation	1000 no's of saplings		Found to be correct		-----
9e	Scrutiny of Annual return on mineral reject generation (Grade & quantity)	Nil		Nil		-----
9f	Scrutiny of Annual return on ROM stock and / or graded ore	ROM Closing stock-47851.752tonnes		Appears to be correct at that time		-----
9g	Scrutiny of Annual return on sale value, Ex. Mine price & production	Less than 20%F.C. 1253		Appears to be correct		-----

	cost			
9i	Scrutiny of Annual return on fixed assets	Value of fixed Assets: Rs.4112000/-	Appears to be correct	-----
9k	Scrutiny of Annual return on mining machineries	Tractor- 1No. Back hoe- 1No.	Observed to be correct	-----

(10) Violation observed during current inspection and compliance position of earlier

Violation pointed out:

(a) Compliance position of earlier violation pointed out: During last inspection dated

26/10/2023, the violation of rule 11(1) and 45(7) of MCDR 2017 was pointed out and subsequently, said rule complied on 31/01/2024.

(b) During current inspection: The violations of Rule 11(1), 45(7) of MCDR 2017 have been observed and the violation letter issued on 28/03/2025.

(11) The lessee was submitted DAI/drone survey data under rule 34A for FY 23-24 on 27/06/2024.

Rohita Sethi
Assistant Controller of Mines