

## MCDR INSPECTION REPORT

**General**

**Date of Inspection: 23/07/2024**

Sl. No.	Particulars	Details
1.	Name of the Mines	Purnadih Graphite Mine (81.75ha)
2	Total Lease Area (Ha) with breakup of Non-forest and forest land	81.75 ha Forest: Nil
3.	Mine code	28BHR18020
4	IBM Registration Number under rule 45 of MCDR, 1988	IBM/4160/2011
5	Name of the lessee, Address, Phone, email and fax number	M/s Mohan Minerals 201A, Durgakutir Kanke Road, Near CMPDIL Dist.: - Ranchi, State- Jharkhand, PIN- 834008 Phone No.: - 9801048586 Email: - charanmukesh@yahoo.com
6	Village	Purnadih
7	Taluka/Mandal	Satbarwa
8	District	Palamau
9	Pin code	822126
10	State	Jharkhand
11	Post Office	Satbarwa
12	Nearest Police Station	Satbarwa
13	Nearest Railway station	Daltonganj
14	Date of Grant of Mining Lease	17.06.1994
15	Date of Execution	06.12.1994
16	Date of Opening of Mine	09.05.1995
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	03.12.2013
20	Name of the Nominated Owner with Address, phone, email ,fax number and date of appointment	NA
21	Name of the Mine Agent with Address, phone email, fax number and date appointment in mines.	NA
22	Name of the Mines Manager with Address, Phone, email, fax number and date of appointment	Sri. Surjeet Jena
23	Name of the mining engineer, qualification and total experience with Address, phone, email, fax number and date of appointment in Mines.	Nil
24	Whether Geologist and Mining Engineer appointed in Mines satisfy the rule 42 & carrying out their duties as per rule 43 & 44.	Sri. Arbind Ranjan
25	Date of Approval of Mining Plan/Modified Mining Plan with five-year period and specific condition in approval letter, if any.	Vide letter no. RAN/PLM/GRP/MP-03/2020-21 Dated 11.08.2020 period 2020-21TO-2024-25
26	Date of Approval of Scheme of Mining/Modified Scheme of Mining with five-year period and specific condition in approval letter, if any.	Vide letter no. RAN/PLM/GRP/MP-03/2020-21 Dated 11.08.2020 period 2020-21TO-2024-25
27	Mineral(s) granted in lease and proved for mining	GRAPHITE

28	Method of Mining(Open cast, Underground)	OPENCAST
39	Category (Fully Mechanized, Others or Manual)	A-OTFM
30	Captive/Non Captive	NON-CAPTIVE

Scientific Mining: Compliance of proposals of approved mining plan/scheme of mining. (Duplication of information in existing TMIS data sheets and draft write up has been avoided.)

### Exploration

Sl.No	Item	Proposals (2023-24)	Actual work (2023-24)	Remarks
1a	Backlog of previous year	160 nos	nil	Lessee has initiate exploratory drilling so far 10 BH have been drilled covering 227.6m.
1b	Exploration over lease area for Geological axis 1 or 2.	No proposal for reporting year	NIL	
1c	Exploration Agency & Expenditure in lakh Rupee during the year	NIL	NIL	nil
1d	Balance area to be explored to bring Geological axis in 1 or 2	-	NIL	Nil
1e	Balance reserves as on 01.04.2024	29002 T	83615 T	Nil
1f	General remarks of inspecting officer on geology, exploration etc.	Area predominantly represents by schistose and gneissic rocks of chhotanagpur gneissic complex of Precambrian age. Lessee initiated exploratory drilling to delineate the graphite bearing vein so far lessee has carried out 10 exploratory boreholes.		

### Development

Sl.No	Item	Proposals (2023-24)	Actual work(2023-24)	Remarks
2a	Location of development w.r.t lease area	N 2653060-2653087; E 218965-219032	N 2653186-2653213; E 219083-219273	Nil
2b	Separate benches in top soil, overburden and mineral (Rule 15)	Separate benches in top soil, overburden and mineral is in proposal	As per the proposal	Nil
2c	Stripping ratio or ore to OB ratio	1:3.73	1:2.24	Nil
2d	Quantity of topsoil generation in m <sup>3</sup>	4290 cum	3571.42 cum	Quantity included OB
2e	Quantity of overburden generation in m <sup>3</sup>	25230 cum	3571.42 cum	Quantity included top soil

2f	General remarks of inspecting officer on development etc.	Bench height of 6 m is maintained. Development done on the proposed area, however, mine was not fully developed as proposal due to financial issue of the lessee.
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### **Exploitation**

Sl.No	Item	Proposals (2023-24)	Actual work (2023-24)	Remarks
3a	Number of pits proposal for production	QUARRY 1& 3	QUARRY 1& 3	Nil
3b	Quantity of ROM mineral production proposed	15382 T	8022 T	Nil
3c	Recovery of salable/usable mineral from ROM production	60 %	60%	Nil
3d	Quantity of mineral reject generation	Nil	Nil	Nil
3e	Grade of mineral reject generation and threshold value declared	NIL	Nil	Nil
3f	Quantity of sub-grade mineral generation	NIL	Nil	Nil
3g	Grade of sub-grade mineral generation	NIL	Nil	Nil
3h	Manual/Mechanized method adopted for segregating from ROM	Manual/Mechanized	Manual/Mechanized	Nil
3i	Any analysis or beneficiation study proposed & carried out for sub-grade mineral and reject	No such proposal	NA	Nil
3j	Provision of drilling & blasting in mineral benches	No such proposal	NA	Crackamite is used in place of blasting.
3k	Provision of mining machineries in mineral benches	Yes	As per the proposal	Nil
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	Bench height is proposed to maintain at 6m	As per the proposal	Bench height of 6m. is maintained
3m	Total area covered under excavation/pits	8.71 ha	7.11 ha	Nil
3n	Ore to OB ratio for the pit/mine during the year	1:3.73	1:2.42	Nil
3o	Total area put in use under different heads at the end of year	11.854	9.25 ha	Nil
3p	Production of ROM mineral during last five-year period, as applicable	PROPOSED	ACTUAL	
		2018-19: 27806 T	2018-19: 0 T	

		2019-20:	28666 T	2019-20:	4908 T	
		2020-21	18948 T	2020-21	288 T	
		2022-23:	14610 T	2022-23:	2806 T	
		2023-24:	15382 T	2023-24:	8022 T	
3q	General remarks of inspecting officer on method of mining etc.	Method of mining adopted is open cast. During the reporting year quarry namely Q1 and Q3 was proposed for development. Instead of blasting, crackamite is used for loosening of strata. ROM is manually sorted before dispatch.				

### **Solid Waste Management-Dumping**

Sl.No	Item	Proposals (2023-24)	Actual work (2023-24)	Remarks
4a.	Separate dumping of topsoil, OB & mineral reject (Rule 32,33)	Separate dump of topsoil and OB is in proposal	As per proposal	Nil
4b	Location of topsoil, & OB & mineral reject dumps	N 2653186-2653213; E 219083-219273	N 2653186-2653213; E 219083-219273	Nil
4c	Number of dumps within lease area and outside lease area	Two	Two	All dumps are within the lease area
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	Proposed outside UPL	As per proposal	Nil
4e	Number of active & alive dumps	Two	As per proposal	Nil
4f	Number of dead dumps	ONE	ONE	Nil
4g	Number of dumps stabilized	ONE	ONE	Nil
4h	Whether Retaining wall or garland drain all along dumps are there	No such proposal during reporting year	Nil	Retaining wall or garland drain all along dumps
4i	Length of Retaining wall or garland drain all along dump	No proposal during reporting year	Nil	Nil
4j	Number of settling ponds	NIL	NIL	Nil
4k	Specific comments of inspecting officer on waste dump management	Top soil and waste/OB generated during development area stored in separated dumps.		

### **Solid Waste Management-Backfilling**

Sl.No	Item	Proposals (2023-24)	Actual work (2023-24)	Remarks
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5a	Status on part or full extraction of mineral from mined out area before starting backfilling	No such proposal during the reporting year	Nil	Pits are not exhaust
5b	Area under backfilling of mined out area	No such proposal during reporting year	Nil	Pits are not exhaust
5c	Concurrent use of topsoil for restoration or rehabilitation of mined out area (Rule 32)	No such proposal during reporting year	Nil	Top soil is currently used in plantation
5d	Total area fully reclaimed & rehabilitated	No such proposal during the reporting year	Nil	0.62 ha mined out pit are backfilled.
5e	General remarks of inspecting officer on backfilling, reclamation etc.	A total of 0.62ha of mined out pits are backfilled. Currently, no backfilling is being carried out as the pits are not exhausted.		

### **Progressive Mine Closure Plan**

Sl.No	Item	Proposals (2023-24)	Actual work (2023-24)	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	Submitted	Submitted	Nil
6b	Management of worked/mined out benches			
	i) Area available for rehabilitation (ha)	No such proposal on mined out benches	Nil	Pit are not exhausted
	ii) Afforestation done (ha)	No such proposal on mined out benches	Nil	Nil
	iii) No. of sapling planted during the year	No such proposal on mined out benches	Nil	
	iv) Cumulative no. of plants	No such proposal on mined out benches	Nil	
	v) Any other specific method of rehabilitation	No such proposal on mined out benches	NIL	Nil

	vi) Cost incurred on watch & care during the year	No such proposal on mined out benches	Nil	Nil
6c	Compliance on reclamation and rehabilitation by back filling			
	i) Voids available for backfilling (LxBxD)	No such proposal	NIL	Availability of 127mx92mx15m void was in proposal, however, backfilling was not in the proposal as the pit were not exhausted
	ii) Void filled by waste/tailings	No such proposal	NIL	nil
	iii) Afforestation on the backfilled area	No such proposal	NIL	Nil
	iv) Rehabilitation by making water reservoir	No such proposal	NIL	Nil
	v) Any other specific means	No such proposal	Nil	Nil
6d	Compliance of Rehabilitation of waste land within lease			
	i) Afforestation	400 nos	200 nos	Plantation carried out on safety zone
	ii) Area rehabilitated (ha)	No such proposal	NIL	Nil
	iii) Method rehabilitation	No such proposal	NIL	Nil
6e	Compliance of Environmental monitoring (core zone & buffer zone)	Environmental monitoring of core and buffer zone	Environmental monitoring has been carried out	Nil
6f	General remarks of inspecting & progressive closure operations.	Availability of 127mx92mx15m void was in proposal, however, backfilling was not in the proposal as the pit were not exhausted. Plantation was carried out on safety zone.		

### **Mineral Conservation**

Sl.No	Item	Proposals (2023-24)	Actual work (2023-24)	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	15382 T	8022 T	Nil
7b	Method of grade-wise mineral sorting i.e. manual or mechanical	Manual And Mechanical	As per proposal	Nil
7c	Different grade of mineral sorted out at mines	No such proposal	NIL	Nil

7d	Any beneficiation process at mines	No such proposal	NA	Nil
7e	General remarks of inspecting officer on Mineral conservation & beneficiation issues	ROM is manually sorted and dispatched from the mines		

### **Environment**

Sl.No	Item	Proposals (2023-24)	Actual work (2023-24)	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	Proposal of stacking and utilization of top soil	Top soil has used in plantation	Nil
8b	Concurrent use or storage of topsoil	No such proposal	Nil	Top soil is stored in separate dump
8c	Separate dumps for overburden, waste rock rejects and fines (Rule 33)	Proposal of separate dump for top soil and waste	As per proposal	Nil
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	No such proposal during reporting year	Nil	Waste is proposed to be stored as dump and will be used for backfilling once the pit is fully exhausted
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	No such proposal during reporting year	Nil	Nil
8f	Baseline information on existence of plantation & additional plantation done (Rule 42)	500 nos	400 nos were planted along safety zone	Nil
8g	Survival rate	30%	30%	Nil
8h	Water sprinkling on roads to control airborne dust	Yes	As per proposal	Nil
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area.	Mine is located in chhotanagpur gneissic complex and is having moderately undulating terrain. Area is of thin vegetation. The drainage of surrounding area is controlled by Maila river which is flowing SE to NW.		

**Compliance of Rule 45**

Sl.No	Item	COMMENTS	Remarks
9a	Status of submission of Monthly and Annual returns	Submitted	Nil
Sl.No.	Item		
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Geologist: Sri. Arbind Ranjan	information seems to be in order
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Already exploited and abandoned by opencast (O-C) mining: 6.16 ha, Covered under current (O-C) Workings: 0.95 ha, used for waste disposal: 0.38ha, Occupied by plant, buildings, residential, welfare buildings and roads: 1.82 ha	information seems to be in order
9d	Scrutiny of Annual return on afforestation	400 nos.	Plantation carried out along safety zone
9e	Scrutiny of Annual return on mineral reject generation (Grade & Quantity)	Nil	No reject generation
9f	Scrutiny of Annual return on ROM stock and/or graded ore	Opening stock: 0T, closing stock: 0T, production: 8022 T	information seems to be correct
9g	Scrutiny of Annual return on sale value, Ex. Mine price & production cost.	Cost of production Rs. 859.93	information seems to be correct
9h	Scrutiny of Annual return on fixed assets	Nil	information seems to be correct
9i	Scrutiny of Annual return on mining machineries	Dumper (10t): 3 Nos., Back hoe (0.9 Cum): 1nos. , Tractor (20 hp): 1 nos., Water Tanker (12kl): 1nos.	information seems to be correct



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