

INDIAN BUREAU OF MINES
MINERALS DEVELOPMENT AND REGULATION DIVISION
MCDR INSPECTION REPORT
BHUBANESHWAR REGIONAL OFFICE

File No-MCDR-MiFLOFE/29/2022-BBS-IBM_RO_BBS

Mine Code- 30ORI13019

General

S N	Particulars	Details
1	Name of the Mine	Raikela Iron Ore Mine, M/s Grewal Minerals & Metals LLP
2	Date of Inspection	15.03.2024
3	Name of Inspecting Officer	Shri Ashok Kumar Pany, Assistant Mining Engineer
4	Name of official accompanying inspection	Shri Satyabadi Sahu, Mines Manager
5	Last date of Inspection & Officer	08.07.2022 Shri Kewal Krishan, Regional Mining Geologist
6	Total Lease Area (Ha) with breakup of Non-forest and forest land	Forest Land- 43.876 ha Non Forest Land- 2.056 ha Total Lease area- 45.932 ha
7	Mine code	30ORI13090
8	IBM Registration Number under rule 45 of MCDR, 2017	IBM/45759/2023
9	Name of the lessee, Address, phone, email and fax number	M/s Grewal Minerals & Metals LLP , Post Box No. 44, At/Po – Barbil, Distt. – Keonjhar (Odisha), Pin – 758035, Phone No. –06767275686, E-mail – gapl_sponge@yahoo.co.in, Fax No. - 06767275631
10	Village	Raikela
11	Taluka/Mandal	Koira
12	District	Sundargarh
13	Pin code	770048
14	State	Odisha
15	Post office	Dengula
16	Nearest police station	Koira
17	Nearest Railway station	Barsua
18	Date of Grant of Mining Lease	21.12.1983
19	Date of Execution	21.12.1983
20	Date of Expiry	20.12.2033
21	Date of opening of Mine	01.11.1985
22	Name of the Nominated Owner with Address, phone, email, fax number and date of appointment	Shri Charanjit Singh Grewal, M/s Grewal Minerals & Metals LLP Post Box No. 44, At/Po – Barbil, Distt. – Keonjhar (Odisha), Pin – 758035, Phone No. –06767275686, E-mail – gapl_sponge@yahoo.co.in, Fax No. – 06767275631

1/28726/2023	Name of the Mine Agent with Address, phone, email, fax number and date of appointment	NA
24	Name of the Mines Manager with Address, phone, email, fax number and date of appointment in mines	Shri Satyabadi Sahu, At-Raikela, Po-Dengula Dist- Sundargarh Pin-770048 (Odisha) Mob-9439118351 Email-neraikelamines@yahoo.com Date of Appointment-19.04.2023
25	Name of the Mining Engineer, Qualification and total experience with Address, phone, email, fax number and date of appointment in mine	Shri Ambika Prasad Panda, B tech Mining, At-Raikela, Po-Dengula Dist- Sundargarh Pin-770048 (Odisha) Mob-7873913850 Email-neraikelamines@yahoo.com Date of Appointment-14.02.2024
26	Name of the Geologist, Qualification and total experience with Address, phone, email, fax number and date of appointment in mine	Shri Ranjan Kumar Moharana M Sc.(Applied Geology) 12.07.2022 At-Raikela, Po-Dengula Dist- Sundargarh Pin-770048 (Odisha) Mob-9438630946 Email- ranjanmoharana420@gmail.com
27	Date of Approval of Review of Mining Plan/Modified Mining Plan with five-year period and specific condition in approval letter, if any.	Review of Mining Plan approved vide letter No. BBS/SNG/IRON/2173/MRMP/2022-23 dated 09.09.2022 for the period 2023-24 to 2027-28
28	Mineral(s) granted in lease and proved for mining	Iron
29	Method of Mining (Opencast, Underground)	Opencast
30	Category (Fully Mechanized, Others or Manual)	Category-A, FM
31	Captive/Non Captive	Non-Captive
32	Present EC Capacity	Iron ROM- 502200 tonne

1/28726/2024

Scientific Mining: Compliance of proposals of approved Mining Plan/Review of mining for the Year 2022-23.

Exploration

S.N.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	Nil	Nil	
1b	Exploration over lease area during the year for Geological axis 1 or 2.	Nil	05 Nos.	
1c	Exploration Agency & Expenditure in lakh Rupees during the year	NA	Asia Pacific Drilling Services. Expenditure-3.96 Lakhs	
1d	Balance area to be explored to bring Geological axis in 1 or 2	As per approved Review of Mining plan the balance area to be explored is 16.169 ha.		
1e	Balance reserves/resource as on 01.04.2023	As per the approved Review of Mining Plan, the reserve/resource status as on 31.08.2022 is follows:- Reserve- : 10200300 Tonne Resource : 4111980 Tonne Balance reserves/resource as on 01.04.2023 as per Annual Return is as follows:- Reserve- : 8497782 Tonne Resource : 3592002 Tonne		
1f	General remarks of inspecting officer on geology, exploration etc.	29.763 ha has been explored in G1 level and the balance area 16.169 is overlapping area with adjacent lease. During the year 2023-24, 17 nos. of exploratory bore holes proposed and only 3 nos. of bore holes drilled till date of inspection. Violation pointed out to lessee.		

Development

S.N.	Item	Proposals	Actual work	Remarks
2a	Location of development w.r.t. lease area	Quarry- A & B	Quarry- A & B	
2b	Separate benches in topsoil, overburden and mineral	Separate Benches Proposed	carried out	
2c	Stripping ratio or ore to OB ratio (t/Cum)	1:0.06	1:0.24	
2d	Quantity of topsoil generation in m ³	Nil	Nil	
2e	Quantity of overburden/waste generation in m ³	65594	94822	
2f	General remarks of inspecting officer on development of pit w.r.t. type of deposit etc.	Two nos. pit developed in the hill slope of the lease. Opencast mining with bench height 6m and width 8m.		

S.N.	Item	Proposals	Actual work	Remarks
3a	Number of pits proposed for production	Two	Two	
3b	Quantity of ROM production proposed	1000000 tonne	390000 tonne	Within proposed quantity
3c	Recovery of saleable/usable mineral from ROM production	900000 tonne	305045 tonne	Within proposed quantity
3d	Quantity of mineral reject generation	100000 tonne	84955 tonne	
3e	Grade of mineral reject generation and threshold value declared	Mineral reject-45% Fe to 55 % Fe. Threshold Value-45% Fe	Mineral reject-45% Fe to 55 % Fe. Threshold Value-45% Fe	
3f	Quantity of sub-grade mineral generation	Same as mineral reject	Same as mineral reject	
3g	Grade of sub-grade mineral generation	Same as mineral reject	Same as mineral reject	
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 beneficiation study proposed	Nil	
3j	Provision of drilling & blasting in mineral benches	Provision of drilling & blasting not proposed in mineral benches	Yes	
3k	Provision of mining machineries in mineral benches	Excavator – 0.9 M3 Dumper – 25 tonne	Excavator – 0.9 M3 Dumper – 25 tonne	
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/RMP	Bench Height: 6 m Bench Width: 8 m	Bench width maintained within proposal , the Bench height in some part of Top quarry is more than proposal .	Deviation pointed out to lessee through violation letter.
3m	Total area covered under excavation/pits	21.42 ha	19.62 ha	

1/28726/2024

3n	Ore to OB ratio for the pit/mine during the year	1:0.06	1:0.24	
3o	Total area put in use under different heads at the end of year	Total – 30.55 ha	Total – 29.76 ha	The degraded area is within area limit under different heads.
3p	Production of ROM mineral during last five-year period, as applicable	2018-19 - 500000 tonne 2019-20 – 500000 tonne 2020-21 -1000000 tonne 2021-22 -1000000 tonne 2022-23 -1000000 tonne	2018-19 - 50000 tonne 2019-20 – 499961 tonne 2020-21 – 499260 tonne 2021-22 - 427050 tonne 2022-23 - 390000 tonne	
3q	General remarks of inspecting officer on method of mining etc.	Mechanized opencast mining operation carried out with shovel-dumper combination. The actual production for the year 2023-24 upto Feb-24 is 234500 and the same is less than proposal. Deviation in production achievement and bench dimension is pointed out to lessee through violation letter.		

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 and mineral reject proposed	Carried out	
4b	Location of topsoil, OB & mineral reject dumps	OB Dump - N2420836 to N2420971 E-312901 to E-312682	OB Dump - N2420836 to N2420971 E-312901 to E-312682	
4c	Number of dumps within lease area and outside lease area	within lease area – One outside lease area - Nil	within lease area – One outside lease area - Nil	
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	Outside UPL	Outside UPL	
4e	Number of active & alive dumps	01	01	
4f	Number of dead dumps	Nil	Nil	
4g	Number of dumps stabilized	Nil	Nil	
4h	Whether Retaining wall or garland drain all along dumps are there	No	Proposed	
4i	Length of Retaining wall or garland drain all along dump	150 m retaining wall and 2000m garland drain proposed	200 m retaining wall and 920m garland drain constructed	
4j	Number of settling ponds	No proposal	Nil	

1/28726/2024k	Specific comments of inspecting officer on waste dump management	One waste dump located within the lease area. Waste dumping has been carried out within the proposed area.
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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	Part	Part	
5b	Area under backfilling of mined out area	0.67 ha	0.64 ha	
5c	Concurrent use of topsoil for restoration or rehabilitation of mined out area (Rule 32)	Nil	Nil	
5d	Total area fully reclaimed & rehabilitated	No proposal	Nil	
5e	General remarks of inspecting officer on backfilling, reclamation etc.	Part area of bottom quarry is proposed for backfilling and carried out.		

Progressive Mine Closure Plan

S.N.	Item	Proposals (Yr.2022-23)	Actual work	Remarks
6a	Whether Annual report on PMCP submitted on time and correctly - Rule 26.	To be submitted before 1 st July	Submitted	
6b	Area available for rehabilitation (ha)	Nil	NIL	
6c	Afforestation done (ha)	0.5 ha	0.5 ha	
6d	No. of saplings planted during the year	1250	2000	
6e	Cumulative no. of plants	Total 60100 Nos. of trees planted.		-
6f	Any other specific method of rehabilitation	-	-	-
6g	Cost incurred on watch & care during the year	NA	Rs. 50000/-	-
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (L X B X D).	0.67 ha	0.64 ha	-
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Void filled by waste/tailings.	0.67 ha	0.64 ha	-

1/28726/2024

6j	Compliance on reclamation and rehabilitation by backfilling (iii) Afforestation on the backfilled area.	Nil	Nil	-
6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir.	Nil	Nil	-
6l	Compliance on reclamation and rehabilitation by backfilling (v) Any other specific means	Nil	Nil	-
6m	Compliance of Rehabilitation of waste land within lease (i)Afforestation	Nil	Nil	-
6n	Compliance of Rehabilitation of waste land within lease (ii) Area rehabilitated (ha) Method of rehabilitation	Nil	Nil	-
6o	Compliance of Rehabilitation of waste land within lease (iii) Method of rehabilitation	Nil	Nil	-
6p	Compliance of Environmental monitoring (core zone & buffer zone)	Quarterly monitoring of Air, Noise Level and Ground water quality proposed	Monitoring carried out quarterly.	-
6q	General remark of inspecting officer on PMCP compliance and progressive closure operation etc.	Progressive closure operation carried out as per proposal.		

Mineral Conservation

S.N.	Item	Proposals	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	Grade wise sorting within lease area	Grade wise sorting within lease area	
7b	Method of grade-wise mineral sorting i.e. manual or mechanical	Mechanised	Mechanised	
7c	Different grade of mineral sorted out at mines	45% to 55% Fe and above 55% Fe	45% to 55% Fe and above 55% Fe	
7d	Any beneficiation process at mines	No Beneficiation plant within lease area	Installation of Beneficiation plant is under progress	
7e	General remarks of inspecting officer on Mineral conservation & beneficiation issues	Around 13 lakh tonne of low-grade ore stock in the lease area and proposed beneficiation plant work is under progress.		

1/28726/2024

Environment

S.N.	Item	Proposals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	Nil	Nil	
8b	Concurrent use or storage of topsoil	No proposal	Nil	
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	Separate dump proposed	Carried out	
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	No proposal	Nil	
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	No proposal	Nil	
8f	Baseline information on existence of plantation & additional plantation done (Rule 41)	1250 Nos. of Plantation	2000 Nos.	
8g	Survival rate	NA	55%	
8h	Water sprinkling on roads to control airborne dust	Water sprinkling on haul roads proposed to suppress the dust	Carried out	
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area	The aesthetic beauty in & around the mine area maintained.		

Compliance of Rule 45

S.N.	Item	COMMENTS		Remarks
9a	Status of submission of Monthly and Annual returns	Monthly Return and Annual return has been submitted within due date.		
S.N.	Item	Details Given in AR.	Observation of I/Officer	Remarks
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Information on Geologist and Manager is furnished in the return.	Appointed and present in the field during inspection.	
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Area under Pit- 19.62 ha, Reclaimed area- Nil Area under waste disposal- 1.96 ha	Within the proposed land use.	
9d	Scrutiny of Annual return on afforestation	2000 Nos. of plantation during the year	Plantation carried out.	

1/28726/2024	9e	Scrutiny of Annual return on mineral reject generation (Grade & quantity)	Nil	NA	
	9f	Scrutiny of Annual return on ROM stock and/or graded ore	ROM closing stock-62100 tonne	Found to be in order	
	9g	Scrutiny of Annual return on sale value, Ex. Mine price & production cost	Ex- Mine price of varies from Rs. 1344 to Rs.3821/- Cost of production - Rs. 1811.33/-	Ex- Mine price of varies from Rs. 1344 to Rs.3821/- Cost of production - Rs. 1811.33/-	
	9i	Scrutiny of Annual return on fixed assets	Value of fixed asset is Rs. 1269614860/-	Value of fixed asset is Rs. 1269614860/-	
	9k	Scrutiny of Annual return on mining machineries	Back Hoe- 6 Nos. Dumper- 12 Nos. Water sprinkler- 1 Nos.	Machinery deployed.	

Violation observed during current inspection and compliance position of earlier violation pointed out:

- (a) Compliance position of earlier violation pointed out: - Violation of Rule 11(1) & 45(7) of MCDR, 2017 has been pointed out on 15.07.2022 during earlier inspection and complied on 09.09.2022.
- (b) Violation of provisions of Rule 11(1) of MCDR, 2017 is observed during current inspection and pointed out to lessee.

Ashok Kumar Pany
Assistant Mining Engineer

