

MCDR INSPECTION REPORT**General**

S N	Particulars	Details	
1	File no.	MCDR-MiFLOFE/29/2022-BBS-IBM RO BBS	
2	Name of the Inspecting Officer	Shri Vikram Deshpande, ACOM, BBSR	
3	Name of the Mine	Raikela Iron Ore Mines	
4	Total Lease Area (Ha) with breakup of Non-forest and forest land	Lease Area-	45.932 Ha
		Forest Area-Non-	43.876 Ha
		Forest Area-	2.056 Ha
5	Mine code	30ORI13019	
6	Date of Inspection	13.06.2024	
7	Name of official accompanying inspection	Shri Satyabadi Sahu, Mines Manager	
8	IBM Registration Number under rule 45 of MCDR, 1988	IBM/45759/2023	
9	Name of the lessee, Address, phone, email and fax number	Grewal Minerals & Metals LLP,	
		Post Box No.	44
		At/Po – Distt. – Pin – Phone No. –	Barbil, Keonjhar (Odisha), 758035, 06767275686,
		E-mail –	gapl_sponge@yahoo.co.in,
		Fax No. -	06767275631
10	Village	Raikela	
11	Taluka/Mandal	Koira	
12	District	Sundargarh	
13	Pincode	770042	
14	State	Odisha	
15	Post office	Dengula	
16	Nearest police station	Koira	
17	Nearest Railway station	Barsuan	
18	Date of Grant of Mining Lease	21/12/1983	
19	Date of Execution	21/12/1983	
20	Date of opening of Mine	01/11/1985	
21	Date of first Renewal, if applicable and its period & expiry	Date of first Renewal-21.12.2003 to 20.12.2033 (Extended as per MMDR Act (Amendment) 2015) Period- 30 Years Date of Expiry- 20.12.2033	
22	Date of second Renewal, if applicable and its period & expiry	NA	
23	Date of submission of renewal application if Mining Operations are continuing under deemed extension	NA	
		Shri Charanjit Singh Grewal Grewal Minerals & Metals LLP, Post Box No. 44, At/Po – Barbil,	

24	Name of the Nominated Owner with Address, phone, email, fax number and date of appointment	Distt. – Keonjhar (Odisha), Pin – 758035, Phone No. –06767275686, E-mail – gapl_sponge@yahoo.co.in, Fax No. - 06767275631	
25	Name of the Mine Agent with Address, phone, email, fax number and date of appointment	NA	
26	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-770042 (Odisha) Mob-9439118351 Email-satya.sahu099@gmail.com Date of Appointment-19.04.2023	
27	Name of the Mining Engineer & Geologist, Qualification and total experience	Mining Engineer Qualification Date of appointment Address phone/email	Shri Ambika Prasad Panda B.Tech in Mining Engineering, Date of appointment : 14.02.2024 At-Raikela, Po-Dengula Dist- Sundargarh Pin-770042 (Odisha) Mob- 7873913850 E-mail: appanda1506@gmail.com
		Geologist Qualification Date of appointment Address phone/email	Shri Ranjan Kumar Moharana Msc.(Applied Geology) 12.07.2022 At-Raikela, Po-Dengula Dist- Sundargarh Pin-770042 (Odisha) Mob-9438630946 Email- ranjanmoharana420@gmail.com
28	Whether Geologist and Mining Engineer appointed in mines satisfy the rule 42 & carrying out their duties as per rule 43 & 44.	Yes	
29	Date of Approval of Review of Mining Plan/Modified Mining Plan with five-year period and specific condition in approval letter, if any.	Date of Approval of Review of Mining Plan- 21.12.1983 (For 20 Years) Lease Period- 21.12.1983 to 20.12.2003. As per the extension provision of section 8 of MMDR, 1957 mining operation was carried out. As per the section 8A (12.01.2015) the lease was extended up to 20.12.2033.	
30	Date of Approval of Scheme of Mining/Modified Scheme of Mining with five-year period and specific condition in approval letter, if any.	Date of Approval of Review of Mining Plan 09.09.2022 Period-2023-24 to 2027-28	
31	Mineral(s) granted in lease and proved for mining	Iron Ore	
32	Method of Mining(Open cast, Underground)	Open Cast	
33	Category (Fully Mechanized, Others or Manual)	Fully Mechanized	
34	Captive/Non Captive	Non Captive	
35	Environment Clearance grant date & limit of EC	08.09.2016 & up to the lease period	
36	CTO	Valid up to 31.03.2025	

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Exploration(2023-24)

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S.N.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year (2020-21)& (2021-22)	3 Nos Nil	3 Nos 3 Nos	Bore hole 35,36,37
1b	Exploration over lease area for Geological axis 1 or 2.	G1	G1	
1c	Exploration Agency & Expenditure in lakh Rupees during the year	NA	Asia Pacific Drilling Services. (Expenditure-5.66 lakhs)	
1d	Balance area to be explored to bring Geological axis in 1 or 2	16.169 Ha	Nil	Area is overlapped by TRB mines of M/s JSPL & TR mines of M/s PTA.
1e	Balance reserves as on 01.04.2024 (in MT)	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 01.04.2024 as per Annual Return is as follows:- Reserve- : 8,252,382.00 Tonne Resource : 3592002 Tonne	
1f	General remarks of inspecting officer on geology, exploration etc.	The lease area forms a part of Precambrian sedimentary formation known as the iron-ore series developed in Singhbhum-Keonjhar-Bonai area as bedded, stratiform and tabular deposit of regular habit. It is located at the western limb of the horse shoe shaped synclinorium. In this lease area, iron ore occurs as massive, laminated, powdery and float ore. The ore body strikes NNE-SSW and dips towards west. The dip amount varies from 40° to 50°.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		

Development(2023-24)

S.N.	Item	Proposals	Actual work	Remarks
2a	Location of development w.r.t. lease area	Top-A- N2421030,E312303 N2420696,E312730 Bottom-B- N2420784, E312859 N2420552, E312863	Top-A- N2421006,E312303 N2420846,E312701 Bottom-B- N2420780, E312821 N2420606, E312860	Quarry Top-A and Bottom B
2b	Separate benches in topsoil, overburden and mineral (Rule 15)	Separate benches in, mineral and Overburden proposed.	Separate benches in, mineral and Overburden maintained.	OB-5, Mineral-6
2c	Stripping ratio or ore to OB ratio (T/T)	1:0.28	1:0.351	No Significant change
2d	Quantity of topsoil generation in m ³	No Topsoil proposed to be generated during reporting year.	No Topsoil generated during reporting year.	
2e	Quantity of overburden/waste generation in m ³	141500	86177.215	Less generation of waste due less ROM production.
2f	General remarks of inspecting officer on	The mine working is confined to 2 pits i.e Top-A quarry and Bottom -B Quarry. The work has not been carried out as per		

development of pit w.r.t. type of deposit etc.	proposals in the last approved document.
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Exploitation(2023-24)

S.N.	Item	Proposals	Actual work	Remarks
3a	Number of pits proposed for production	2	2	Quarry Top-A and Bottom B
3b	Quantity of ROM production	1000000 MT	245400 MT	For less production of ROM, violation of Rule 11(1) of MCDR has been issued to the lessee
3c	Recovery of salable/usable mineral from ROM production	194562.5 MT (73%)	50837.5MT (20.72%)	Within proposed quantity.
3d	Quantity of mineral reject generation	247505MT	194562.5 MT	
3e	Grade of mineral reject generation and threshold value declared	MR=45% Fe-55% Fe Threshold value= 45% Fe	MR=45% Fe-55% Fe Threshold value= 45% Fe	
3f	Quantity of sub-grade mineral generation	247505MT	194562.5 MT	
3g	Grade of sub-grade mineral generation	45% Fe-55% Fe	45% Fe-55% Fe	
3h	Manual / Mechanized method adopted for segregating from ROM	Mechanised method proposed for segregating from ROM	Mechanised method carried out for segregating from ROM	
3i	Any analysis or beneficiation study proposed & carried out for sub-grade mineral and reject	Chemical analysis (Fe%) proposed	Chemical analysis (Fe%) carried out	
3j	Provision of drilling & blasting in mineral benches	Drilling and Blasting proposed in mineral benches.	Drilling and Blasting carried out in mineral benches.	Drill bit dia – 100mm Spacing - 2.5Mtr Burden – 2 mtr
3k	Provision of mining machinery in mineral benches	Use of HEMMs is proposed in Mineral Benches.	Mechanized O/C mining is carried out with engaging HEMMs in mineral benches	Dumper– 30MT/25MT Excavator- 2.8MT
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	Bench Height – 6Mtr	Bench height in Bottom B Quarry maintained broadly as per proposal but in Top A Quarry Bench height is much more than the proposal.	For less not maintaining bench height as per proposal, violation of Rule 11(1) of MCDR has been issued to the lessee
	Total area covered	19.620	20.120	

3m	under excavation/pits			
3n	Ore to OB ratio for the pit/mine during the year(T/T)	1:0.28	1:0.351	No Significant Change

		As per the proposal		Actual		
3o	Total area put in use under different heads at the end of year	Mining	20.120 Ha	Mining	20.120 Ha	
		OB/Waste Dumping	2.810 Ha	OB/Waste Dumping	2.810 Ha	
		Mineral Storage	4 Ha	Mineral Storage	4 Ha	
		Infrastructure	0.983 Ha	Infrastructure	0.983 Ha	
		Roads	0.780 Ha	Roads	0.780 Ha	
		Others	1.070 Ha	Others	1.070 Ha	
		3p	Production of ROM mineral during last five-year period, as applicable			
Year- 2019-20	5,00,000 MT		4,99,961 MT			
Year- 2020-21	10,00,000 MT		4,99,260 MT			
Year- 2021-22	10,00,000 MT		4,27,050 MT			
Year-2022-23	10,00,000 MT		3,90,000 MT			
Year-2023-24	10,00,000 MT		245400 MT			
3q	General remarks of inspecting officer on method of mining etc.	Open-cast fully mechanised mining method with Shovel-Dumper combination, with 6 m high and excess high benches and deep drilling and blasting is being carried out.				

Solid Waste Management-Dumping(2023-24)

S.N	Item	Proposals	Actual work	Remarks
4a	Separate dumping of topsoil, OB & mineral reject (Rule 32, 33)	Separate dumping of OB and Mineral reject proposed.	Separate dumping of OB and Mineral reject carried out.	
4b	Location of topsoil, OB & mineral reject dumps	OB- N2420869 to N2420964 E-312755 to E-312953	OB- N2420896 to N2420946 E-312901 to E-312023	
4c	Number of dumps within lease area and outside the lease area	Within Lease Area-01 Outside Lease Area-Nil	Within Lease Area-01 Outside Lease Area-Nil	

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4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	N2420869 to N2420964 E-312755 to E-312953	N2420896 to N2420946 E-312901 to E-312023	Outside UPL
4e	Number of active & alive dumps	01	01	
4f	Number of dead dumps	NA	NA	
4g	Number of dumps stabilized	01	01	
4h	Whether Retaining wall or garland drain all along dumps are there	Retaining wall and garland drain proposed all along dumps	Retaining wall and garland drain maintained all along dumps	
4i	Length of Retaining wall or garland drain all along the dump	Retaining Wall-120 m	Retaining Wall-161 m	
		Garland Drain- 103 m	Garland Drain- 150 m	
4j	Number of settling ponds	01	02	
	Specific comments of inspecting officer on waste dump management	Overburden, mineral and mineral reject management is broadly as per proposal in the approved document.		

Solid Waste Management-Backfilling(2023-24)

S.N.	Item	Proposals	Actual work	Remarks
5a	Status on part or full extraction of mineral from mined out area before starting backfilling	No such proposal	Not done	
5b	Area under backfilling of mined out area	No backfilling proposed during reporting year.	No backfilling carried out during reporting year.	
5c	Concurrent use of topsoil for restoration or rehabilitation of mined out area (Rule 32)	No such proposal	Not done	
5d	Total area fully reclaimed & rehabilitated	Nil	Nil	
5e	General remarks of inspecting officer on backfilling, reclamation etc	No backfilling proposed during reporting year.		

Progressive Mine Closure Plan(2023-24)

SI.N	Item	Proposals	Actual work	Remarks
6a	Whether Annual report on PMCP submitted on time and correctly. Rule 23 E(2).	As per rule 23E(2) of MCDR, 2017, the holder of mining lease shall submit to the competent authority a yearly report as per the format specified by the IBM, before 1 st day of July every year setting forth the extent of the	Submitted within stipulated time	

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		protective and rehabilitative works carried out as envisaged in the approved mine closure plan, and if there is any deviation, reasons thereof.		
6b	Area available for rehabilitation (ha).	Nil	Nil	
6c	afforestation done (ha).	0.50	0.50	
6d	No. of saplings planted during the year	1250 Nos	1400 Nos	
6e	Cumulative no. of plants	66844 Nos	61500 Nos	Cummulative nos of saplings planted is from the year 2006-07 to 2023-24.
6f	Any other method of rehabilitation	NA	NA	
6g	Cost incurred on watch and care during the year	NA	50000/_	
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (Lx B x D	NA	NA	
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	NA	NA	
6j	Compliance on reclamation and rehabilitation by backfilling (iii)Afforestation on backfilled area	NA	NA	
6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	NA	NA	
6l	Compliance on reclamation and rehabilitation by backfilling (v)any other specific means.	NA	NA	
6m	Compliance of rehabilitation of waste land within lease (i)afforestation	NA	NA	
6n	Compliance of rehabilitation of waste land within lease (ii)Area rehabilitation (ha)	NA	NA	
6o	Compliance of rehabilitation of waste land within lease (iii) Method of rehabilitation	NA	NA	
6p	Compliance of environmental monitoring (core zone and buffer zone)	Environmental monitoring in Core zone and buffer zone proposed as per MOEFCC and SPCB guidelines	Monthly and Quarterly monitoring of AAQ, Water Quality and Noise Level are being carried out by third party M/s Superintendence India.	All Environmental parameters found to be within permissible limits

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6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.	The lessee has done adequate plantation and is regularly monitoring the Environmental Parameters.
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Mineral Conservation(2023-24)

S.N.	Item	Proposals	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	Grade wise mineral sorting within lease area.	Grade wise mineral sorting within lease area carried out.	1. Below 45% 2. 45% to 51% 3. 51% to 55% 4. 55% to 58% 5. 58% to 60% 6. 60% to 62%
7b	Method of grade-wise mineral sorting i.e. manual or mechanical	Mechanical method of mineral sorting proposed	Mechanical method of mineral sorting carried out	
7c	Different grade of mineral sorted out at mines	NA	Below 45% 45% to 51% 51% to 55% 55% to 58% 58% to 60% 60% to 62%	
7d	Any beneficiation process at mines	Beneficiation process proposed	Beneficiation plant of 180 TPH is under construction.	
7e	General remarks of inspecting officer on Mineral conservation & beneficiation issues	Beneficiation plant of 180 TPH is under construction.		

Environment

S.N.	Item	Proposals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	No proposal for the year for reporting year.	Not done	
8b	Concurrent use or storage of topsoil	No proposal for the year for reporting year.	Not done	-do-
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	Separate dumps for OB proposed	Separate dumps for OB made	Location of OB dump- N2420896 to N2420946 E-312901 to E-312023
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	No such proposal	Not Done	
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc.)	No such proposal	Not Done	
8f	Baseline information on existence of plantation & additional plantation done (Rule	NA	Plantation up to 2022-23 is 60100 nos.	

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	41)		Plantation done in the year 2023-24 is 1400 nos.
8g	Survival rate	80%	52%
8h	Water sprinkling on roads to control airborne dust	Water sprinkling on roads to control airborne dust proposed.	Regular water sprinkling is being done with one 9 KL water tanker.
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area	Aesthetic beauty in & around mines area broadly well maintained. The lessee is implementing the PMCP proposal and has carried out adequate plantation. Sprinkling of water on Haul roads and transport roads using water tanker is done to suppress the dust.	

Compliance of Rule 45

S.N.	Item	Observation of I/Officer		Remarks
9a	Status of submission of Monthly and Annual returns	M.R. Submitted upto June, 2024 A.R. Submitted upto financial year 2023-24.		
	Item	As per AR	As Observed	
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Manager Mines: Satyabadi Sahu Mining Engineer: Ambika Prasad Panda Mining Geologist: Ranjan Kumar Moharana	Manager Mines: Satyabadi Sahu Mining Engineer: Ambika Prasad Panda Mining Geologist: Ranjan Kumar Moharana	
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Area covered under excavation: 20.120 Ha; Used for waste disposal: 2.810 ha. Infrastructure: 1.763 ha. Mineral Storage-4.00 ha.	Broadly as per proposal	
9d	Scrutiny of Annual return on afforestation	1400	Appears to be correct	
9e	Scrutiny of Annual return on mineral reject generation (Grade & quantity)	1404585 tonnes, 52% Fe	Appears to be correct	
9f	Scrutiny of Annual return on ROM stock and/or graded ore	ROM-25700 tonnes	Appears to be correct	
9g	Scrutiny of Annual return on sale value, Ex. Mine price & production cost	Fines: 45% to below 51% Fe- Rs.1151.00 51% to below 55% Fe- Rs. 2428.75 55% to below 58% Fe- Rs. 3450.00	Appears to be correct	

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		Lumps: Below 62% Fe (CLO any size)-Rs. 3634.96		
9h	Scrutiny of Annual return on fixed assets	₹ 1266842453	Appears to be correct	
9i	Scrutiny of Annual return on mining machineries	Excavator – 4 Nos Dumper – 9 Nos Crusher Plant – 1 No Water Tanker-2 Nos	Appears to be correct	