

MCDR INSPECTION REPORT**General**

S N	Particulars	Details
1	File no	
2	Name of the Inspecting Officer	Vikram Deshpande, ACOM, IBM, Bhubaneswar
3	Name of the Mine	Badampahar Iron Ore Block
4	Total Lease Area (Ha) with breakup of Non-forest and forest land	128.427 Ha (as per DGPS) / 129.61 Ha (as per ROR) Forest Land- 125.710 Ha (as per DGPS) / 126.821 Ha (as per ROR) Non-forest land- 2.717 Ha (as per DGPS) / 2.788 Ha (as per ROR)
5	Mine code	30ORI10021
6	Date of Inspection	16.10.2024
7	Name of official accompanying inspection	Harendra Narayan Das, Agent Rajesh Kumar, Mines Manager Mohit Kumar Naik, Mining Engineer Susanta Kumar Mohanta, Geologist
8	IBM Registration Number under rule 45 of MCDR, 1988	IBM/815/2011
9	Name of the lessee, Address, phone, email and fax number	GM Iron and Steel Company Limited At/Po- Badampahar, Dist- Mayurbhanj, Odisha-757047 E-mail- gmsteelbmpr@gmail.com Phone- 06794-222834
10	Village	Dhangudimuta
11	Taluka/Mandal	Kusumi
12	District	Mayurbhanj
13	Pincode	757047
14	State	Odisha
15	Post office	Badampahar
16	Nearest police station	Badampahar
17	Nearest Railway station	Badampahar
18	Date of Grant of Mining Lease	21.08.2020
19	Date of Execution	24.08.2020
20	Date of opening of Mine	14.10.2020
21	Date of first Renewal, if applicable and its period & expiry	N/A
22	Date of second Renewal, if applicable and its period & expiry	N/A
23	Date of submission of renewal application if Mining Operations are continuing under deemed extension	N/A
24	Name of the Nominated Owner with Address, phone, email, fax number and date of appointment	Sri Raj Kumar Misra, Director At/Po- Badampahar, Dist- Mayurbhanj, Odisha-757047 E-mail- gmsteelbmpr@gmail.com Phone- 06794-222834 Date of appointment- 14.03.2007
25	Name of the Mine Agent with Address, phone, email, fax number and date of appointment	Sri Harendra Narayan Das, Agent At/Po- Badampahar, Dist- Mayurbhanj, Odisha-757047 E-mail- gmsteelbmpr@gmail.com Phone- 06794-222834 Date of appointment- 21.06.2022

26	Name of the Mines Manager with Address, phone, email, fax number and date of appointment in mines		Sri Rajesh Kumar, Mines Manager At/Po- Badampahar, Dist- Mayurbhanj, Odisha-757047 E-mail- gmsteelbmpr@gmail.com Phone- 9199445619 Date of appointment in mines- 01.09.2022 Qualification- B.E. (Mining), M. Sc. In Environmental Science Total Experience- 19 Years
27	Name of the Mining Engineer & Geologist, Qualification and total experience	Mining engineer Qualification Date of appointment Address phone/email	Sri Mohit Kumar Naik, Mining Engineer At/Po- Badampahar, Dist- Mayurbhanj, Odisha-757047 E-mail- gmsteelbmpr@gmail.com Phone- 06794-222834 Date of appointment in mines- 02.05.2022 Qualification- B.E. (Mining) Total Experience- 05 Years
		Geologist Qualification Date of appointment Address phone/email	Sri Susanta Kumar Mohanta, Geologist At/Po- Badampahar, Dist- Mayurbhanj, Odisha-757047 E-mail- gmsteelbmpr@gmail.com Phone- 8018265834 Date of appointment in mines- 03.04.2023 Qualification- M. Sc. (Geology) Total Experience- 02 Years
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.		03.08.2023 From 2023-24 to 2024-25
30	Date of Approval of Scheme of Mining/Modified Scheme of Mining with five-year period and specific condition in approval letter, if any.		N/A
31	Mineral(s) granted in lease and proved for mining		Iron Ore
32	Method of Mining(Opencast, Underground)		Opencast
33	Category (Fully Mechanized, Others or Manual)		OTFM
34	Captive/Non Captive		Non Captive
35	Environment Clearance grant date & limit of EC		26.06.2019 1.5 MTPA
36	CTO		16.03.2022 valid upto 31.03.2025 1.5 MTPA

Exploration

S.N	Item	Proposals(2023-24)	Actual work	Remarks
1a	Backlog of previous year	47 Bore holes	47 Bore Holes	
1b	Exploration over lease area for Geological axis 1 or 2.	G1 & G2- 34 Ha (34*100*100/10,000)		
1c	Exploration Agency & Expenditure in lakh Rupees during the year	---	Gemko Kati Exploration Pvt. Ltd. Rs. 45 Lakh	
1d	Balance area to be explored to bring Geological axis in 1 or 2	24.56 Ha	Nil	
1e	Balance reserves as on 01.04.2024 (in MT)	121 - 9514339 MT 221 - 1060221 MT	121 - 9514339 MT 221 - 1060221 MT	

1f	General remarks of inspecting officer on geology, exploration etc.	The rocks of this area are exposed in topographically high hill ranges. Most of the low lying areas are covered with alluvium and laterite and BHQ. A large portion of the area is occupied by Quartzite & BHQ. These two rock units are well stratified though local bedding plane and irregularities are present in minor scale. A number of local faults are located at north, south and western side of Badampahar peak. Mesoscopic folds of various dimensions are numerous in the banded iron formation (BIF).
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Development

S.N	Item	Proposals	Actual work	Remarks
2a	Location of development w.r.t. lease area	Peak, Bapet and Champajharan Quarry- 3 Pits	Peak and Bapet Quarry- 2 Pits	Peak- 1210x390m Bapet- 1340x180m
2b	Separate benches in topsoil, overburden and mineral (Rule 15)	Separate benches in overburden & mineral proposed	Separate benches in overburden & mineral maintained	Topsoil Bench- Nil OB Benches- 02 Mineral Benches- 17
2c	Stripping ratio or ore to OB ratio	1:1.25	1:1.50	No Significant Change
2d	Quantity of topsoil generation in m ³	No proposal	Nil	No top soil generated during the reporting year.
2e	Quantity of overburden/waste generation in m ³	709800 m ³	850509 m ³	Less OB achieved vis-à-vis the production of ROM.
2f	General remarks of inspecting officer on development of pit w.r.t. type of deposit etc.	In all there are 11 pits within the lease. During 2023-24 mining was proposed in 3 pits however mining was carried out in 2 pits without proposal. Benches have height more than the proposed height of 9m and width of 15m.		

Exploitation

S.N.	Item	Proposals	Actual work	Remarks
3a	Number of pits proposed for production	3	2	Peak- 1210x390m Bapet- 1340x180m Violation of Rule 11(1) of MCDR 2017 has been pointed out to the lessee.
3b	Quantity of ROM production	1136673 MT	1136630 MT	Production done within EC limit
3c	Recovery of salable/usable mineral from ROM production	466278 MT	307490 MT	
3d	Quantity of mineral reject generation	670395 MT	689910 MT	
3e	Grade of mineral reject generation and threshold value declared	45 to 55% Fe	45 to 55% Fe	
3f	Quantity of sub-grade mineral generation	670395 MT	689910 MT	
3g	Grade of sub-grade mineral generation	45 to 55% Fe	45 to 55% Fe	
3h	Manual / Mechanized method adopted for	Mechanised method proposed for	Mechanised method	

	segregating from ROM	segregating from ROM	adopted for segregating from ROM	
3i	Any analysis or beneficiation study proposed & carried out for sub-grade mineral and reject	Not proposed	Nil	Grade analysis is done at Lessees own chemical laboratory.
3j	Provision of drilling & blasting in mineral benches	Drilling and Blasting proposed in mineral benches.	Drilling and blasting was carried out in mineral benches.	Hole Dia-115 mm, Avg. Burden-3 m, Avg. spacing-3.25 m, Hole Depth-11m, Staggered drilling pattern Blasting:-Deep hole drilling & blasting.
3k	Provision of mining machineries in mineral benches	Use of HEMMs is proposed in Mineral Benches.	Mechanized O/C mining is carried out with engaging HEMMs in mineral benches.	Mining is carried out by Shovel and Dumper combination.
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	9 mtr	15 m	
3m	Total area covered under excavation/pits	52.980 ha	52.980 ha	
3n	Ore to OB ratio for the pit/mine during the year	1:1.25	1:1.50	No significant Change
3o	Total area put in use under different heads at the end of year	Area under excavation-52.98 Ha. OB Dumps- 7.25 Ha. Infrastructure- 6.750 Ha. Others- 2.35 Ha.	Area under excavation-52.98 Ha. OB Dumps- 7.25 Ha. Infrastructure- 6.750 Ha. Others- 2.35 Ha.	
3p	Production of ROM mineral during last five-year period, as applicable	Height of the benches proposed to be maintained as 9 meter with width of 15 m.	Broadly maintained as per proposal.	It is suitable for method of mining proposed in MP for the height of the benches in overburden and mineral.
	Year- 2020-21	1136640 MT	224570 MT	Lease awarded to GM Iron & Steel Co. Ltd. on 24.08.2020 by e-auction.
	Year- 2021-22	1136640 MT	1136630 MT	
	Year-2022-23	1136640 MT	1136630 MT	
	Year-2023-24	1136673 MT	1136630 MT	
Year-2024-25	1136696 MT	954370 MT (upto Sept-2024)		
3q	General remarks of inspecting officer on method of mining etc.	The mining method adopted is opencast method by shovel-dumper combination and is same as proposed		

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 OB-proposed.	Separate dumping of OB-done.	OB-(Dump 3 & 5)
4b	Location of topsoil, OB & mineral reject dumps	Location of OB dump (3) N22°03'59.26"-E86°07'42.56", dump (5) N22°04'3.48" E86°07'13.09"	Location of OB dump (3) N22°03'59.26"-E86°07'42.56", dump (5) N22°04'3.48" E86°07'13.09"	
4c	Number of dumps within lease area and outside lease area	No dump is proposed to outside Lease area. For the year 2023-24 two no. of dumps are proposed 3 and 5 among total 6 no of dumps.	Done as per proposal	For the year 2023-24 two nos. of dumps (3 and 5) proposed
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	Dump (3) UPL-691m E-426045.894 N-2440380.577 E-426003.063 N-2440407.121 E-426049.507 N-2440393.567 E-425994.017 N-2440381.584 Dump (5) UPL-724m E-429415 N-2441097 E-429502.97 N-2441045.63 E-429391.8 N-2440932.7 E-429459.86 N-2440913.28	Dump (3) UPL-691m E-426045.894 N-2440380.577 E-426003.063 N-2440407.121 E-426049.507 N-2440393.567 E-425994.017 N-2440381.584 Dump (5) UPL-724m E-429415 N-2441097 E-429502.97 N-2441045.63 E-429391.8 N-2440932.7 E-429459.86 N-2440913.28	
4e	Number of active & alive dumps	2 (dump no 3 & 5)	2 (dump no 3 & 5)	
4f	Number of dead dumps	Not Proposed	Nil	
4g	Number of dumps stabilized	Proposed 3 and 5	Dump no 5 is stabilized.	
4h	Whether Retaining wall or garland drain all along dumps are there	Proposed- 380 m	Retaining wall and garland drains (410 mtr) are provided in all along the dumps	
4i	Length of Retaining wall or garland drain all along dump	Proposed length of Retaining wall - 385m Garland Drain - 385m	Retaining wall - 280m Garland Drain - 400m	
4j	Number of settling ponds	Not proposed	Existing 8 nos. of Settling ponds.	
4k	Specific comments of inspecting officer on waste dump management	The dumps have been terraced properly and have been secured by way of construction of retaining wall and garland drains.		

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	No Backfilling has been proposed during the reporting year.	Nil	
5b	Area under backfilling of mined out area	Not proposed	Nil	

5c	Concurrent use of topsoil for restoration or rehabilitation of mined out area (Rule 32)	Not Proposed.	No top soil generated.	
5d	Total area fully reclaimed & rehabilitated	Not proposed	Nil	
5e	General remarks of inspecting officer on backfilling, reclamation etc	No proposal for backfilling was envisaged during the year 2023-24.		

Progressive Mine Closure Plan

	Item	Proposals	Actual work	Remarks
6a	Whether Annual report on PMCP submitted on time and correctly. Rule 23 E(2).	-----	Submitted	
6b	Area available for rehabilitation (ha).	Not proposed	Nil	
6c	afforestation done (ha).	Yes	Done	
6d	No. of saplings planted during the year	1400	1400	Safety zone area 0.65 Ha.
6e	Cumulative no. of plants	7500	6665	
6f	Any other method of rehabilitation	Not proposed	Nil	
6g	Cost incurred on watch and care during the year			
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (Lx B x D)	Not Proposed	Nil	
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	Not Proposed	Nil	
6j	Compliance on reclamation and rehabilitation by backfilling (iii) Afforestation on backfilled area	Not proposed	Nil	
6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	Not proposed	Nil	
6l	Compliance on reclamation and rehabilitation by backfilling (v) any other specific means.	Not proposed	Nil	
6m	Compliance of rehabilitation of waste land within lease (i) afforestation	Not proposed	Nil	
6n	Compliance of rehabilitation of waste land within lease (ii) Area rehabilitation (ha)	Not Proposed	Nil	
6o	Compliance of rehabilitation of waste land within lease (iii) Method of rehabilitation	Not proposed	Nil	
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.	Monitoring of Noise, Water etc done.	Env. parameters were observed to be within the permissible limit. Monitoring is done by a third party called SUPCO
6q	General remarks of inspecting officers on	The lessee is regularly monitoring the Environmental Parameters. No Proposal for backfilling has been made and		

	PMCP compliance and progressive closure operations etc.	lessee has planted around 7500 saplings.
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Mineral Conservation

S.N.	Item	Proposals	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	Proposed	ROM Mineral is sorting grade wise within the lease area	
7b	Method of grade-wise mineral sorting i.e. manual or mechanical	Mechanical	Mechanical	
7c	Different grade of mineral sorted out at mines	-55% Fe +55% Fe	45% to below 51% Fe 51% to below 55% Fe 55% to below 58% Fe 58% to below 60% Fe	
7d	Any beneficiation process at mines	No proposal	No beneficiation process within the lease area	Tirilipi Beneficiation Unit of M/s Lal Trades & Agencies Pvt. Ltd. have been located at a distance of 8 km from the mines. M/s Lal Trades & Agencies Pvt. Ltd. and the lessee GM Iron and Steel Company Ltd. are the related party and we have sold the materials as captive consumption.
7e	General remarks of inspecting officer on Mineral conservation & beneficiation issues	ROM Mineral is sorted grade wise within the lease area. Tirilipi Beneficiation Unit of M/s Lal Trades & Agencies Pvt. Ltd. is located at a distance of 8 km from the mines. M/s Lal Trades & Agencies Pvt. Ltd. and the lessee GM Iron and Steel Company Ltd. are the related party and has sold the materials as captive consumption		

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	Nil	Nil	
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	Proposed	Separate dumps for Overburden and fines	
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	Not proposed	Not Done	
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc.)	Not proposed	Nil	
8f	Baseline information on existence of plantation & additional plantation done (Rule 41)	No specific proposal	The total lease area is not deforested; partly deforestation has	Inside- 0.65 Ha Outside- 0.35 Ha

			been done for excavation within the lease area. There is a dense growth of forest.	
8g	Survival rate	-----	85%	
8h	Water sprinkling on roads to control airborne dust	Water sprinkling to be done on roads.	We are using water tankers for water sprinkling on roads through 10kl, 5 kl and 15kl capacity water tankers.	
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area	The lessee is regularly monitoring the air, water and other parameters. Adequate plantation has been done and for dust suppression regular water sprinkling is being done. Due to these efforts, there is no adverse impact on the aesthetic beauty in and around the mines		

Compliance of Rule 45

	Item		Observation of I/Officer	Remarks
9a	Status of submission of Monthly and Annual returns	M.R. Submitted upto September-2024 A.R. Submitted upto FY 2023-24		
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Mr. Rajesh Kumar, Mines Manager Mr. Prabhat Kumar Jha, Mining Engineer Mr. Susanta Kumar Mohanta, Geologist	Mr. Rajesh Kumar, Mines Manager Mr. Mohit Kumar Naik, Mining Engineer Mr. Susanta Kumar Mohanta, Geologist	
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Area under excavation-52.98 Ha. OB Dumps- 7.25 Ha. Infrastructure- 6.750 Ha. Others- 2.35 Ha.	Appears to be correct.	
9d	Scrutiny of Annual return on afforestation	Within lease- 900 nos. Outside lease- 500 nos.	Appears to be correct.	
9e	Scrutiny of Annual return on mineral reject generation (Grade & quantity)	MR Quantity- 689910 MT Grade- 45% to below 55% Fe	Appears to be correct.	
9f	Scrutiny of Annual return on ROM stock and/or graded ore	193880.000 MT	Appears to be correct.	
9g	Scrutiny of Annual return on sale value, Ex. Mine price & production cost	Cost of Production -Rs 2274 Ex Mine Price: Fines: 45% to below 51% Fe-Rs 764.00 51% to below 55% Fe-Rs 2141.00 55% to below 58% Fe-Rs 3006.00 CLO: Below 62% Fe (CLO any size)-Rs 4396.00	Appears to be correct.	
9i	Scrutiny of Annual return on fixed assets	₹ 362746530	Appears to be correct.	

9k	Scrutiny of Annual return on mining machineries	Excavator- 7 nos. Wheel Loader- 5 nos. Dumper- 29 nos. Air compressor- 1 no. Crusher- 4 nos. Screen Plant- 5 nos. Generator- 3 nos. Water Tanker- 5 nos.	Appears to be correct.	
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