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

General:

SL. No.	Particulars	Details
1	Name of the Mine	Raikela Iron Ore Mines
2	Date of inspection	28/9/2023
3	Name of inspecting officer	Prashant S Hegde, RMG
4	Name accompanying mine officials	S/Shri Sunit Patel, Agent, Pramod Kumar Sahoo Mines Manager, Susila Kumar Pradhan Mining Engineer and Pradeept Mohapatra Geologist.
5	Last date of Inspection & Officer	11/01/2023 Shri Sanjay Mohapatra, AME
6	Total Lease Area (Ha) with breakup of Non-forest and forest land	Total Lease area: 67.586 Ha. Forest area: 66.671 Ha. Non-Forest area: 0.915 Ha.
7	Minecode	30ORI13034
8	IBM Registration Number under rule 45 of MCDR, 2017	IBM/5796/2011
9	Name of the lessee, Address, phone, email and fax number	M/s Geetarani Mohanty Shri Shrinibash Sahoo (Managing Partner) Station Road,Barbil Dist.: - Keonjhar State: - Odisha (758035) Email: geetarani.mines@gmail.com
10	Village	Raikela
11	Taluka/Mandal	Koira
12	District	Sundargarh
13	Pincode	770048
14	State	Odisha
15	Post office	Koira
16	Nearest police station	Koira
17	Nearest Railway station	Barsuan
18	Date of Grant of Mining Lease	02/07/1991
19	Date of Execution	02/07/1991
20	Date of opening of Mine	13/01/1993
21	Date of expiry	01/07/2041
22	Name of the Nominated Owner with Address, phone, email, fax number and date of appointment	Shri Shrinibash Sahoo, Managing Partner House No – 96, Station Road, Barbil – 758035, Dist–Keonjhar (Odisha) Phone No: - 9437003288 Email: geetarani.mines@gmail.com Date of Appointment: - 09/01/1992
23	Name of the Mine Agent with Address, phone, email, fax number and date of appointment	Shri Sunit Patel House No – 96, Station Road, Barbil – 758035,

24	Name of the Mines Manager with	Dist–Keonjhar (Odisha) Phone No: 7008806558 Email: geetarani.mines@gmail.com Date of Appointment: 01.09/2021 Shri Pramod Kumar Sahoo
24	Address, mobile no, email, fax number and date of appointment in mine	Raikela Iron Ore Mine of M/s Geetarani Mohanty Village: Raikela, Po: Tensa, Dist.: Sundargarh State: Odisha (770048) Email: <u>geetarani.mines@gamil.com</u> Date of Appointment: - 01.06.2019
25	Name of the Mining Engineer , Qualification and total experience with Address, mobile no, email, fax/phone number and date of appointment in mine	Shri Susila Kumar Pradhan Qualification: BE (Mining) Experience: 20 years Phone: 9438458072 Email: - <u>geetarani.mines@gamil.com</u> Date of Appointment: 24.06.2019
26	Name of the Geologist , Qualification and total experience with Address, mobile no, email, fax number and date of appointment in mine	Mr. Pradeept Mohapatra Qualification: M.Sc Geology Experience: - 18 years Phone: - 9438149715 Email: <u>geetarani.mines@gamil.com</u> Date of Appointment: - 24.10.2021
27	Date of Approval of Mining Plan/Review of Mining Plan/ their modifications with five-year period and specific condition in approval letter, if any.	1) Modification of Review of the Mining Plan No. MPMP/A/32-ORI/BHU/2021-22 dated 6/1/2022 for the period 2021-22 to 2025-26 2)Modification of Review of the Mining Plan No. IBM/5796/2011/30ORI3034 Dated: 12.07.2023 for the period from 2023- 24 to 2025-26.
28	Mineral (s) granted in lease and proved for mining	Iron Ore
29	Method of Mining(Opencast, Underground)	Open Cast
30	Category (Fully Mechanised, Others or Manual)	Fully Mechanized
31	Captive/Non Captive	Non-Captive
32	Present EC Capacity	4.99 million tonnes.

OBSERVATIONS/COMMENTS OF INSPECTING OFFICER:

1)Exploration:---

SL.No	Item	Proposals	Actual work	Remarks
		(FY 2022-23)		
1a	Backlog of previous year	FY-2021-22: 25	15 nos	V/L issued on
		nos of core BHs	boreholes	18/10/23 for non-
		with 2040 total	drilled with 988	submission of form-
		meterage	total meterage	I related to on-going
		FY 22-23: NIL	so far.	exploration in
			Subsequently,	current year.
			modified RMP	
			approved on	

1b	Exploration over lease area	Conversion of	12.07.2023 with 8 nos of BHs for FY 2023-24 G-1: 62.9550	As per latest
10	for Geological axis 1 or 2.	18.08 Ha G-2 area to G-1	Ha G-2: 1.5770 Ha Area proved as Non-mineralized: 3.0540 Ha	approved modified RMP dated 12.07.2023
1c	Exploration Agency & Expenditure in lakh Rupees during the year	NA	MY WORLD CONSULTAN T SERVICE PVT LTD; 34.58 lakh Rupees Expenditure	
1d	Balance area to be explored to bring Geological axis in 1 or 2	NA	Balance of 1.5770 Ha G-2 area to be explored	As per latest approved modified RMP on 12.07.2023
1e	Balance reserves as on 01.04.2023	NA	As on 1/4/23 reserves in tonnes: 111: 3,060,600(45- 55 % Fe), 80,54 8,200 (+55 % Fe); 122:1,349,600 (45-55% Fe), 2,943,960 (+55% Fe) Grand Total: 87.9 Million tonnes	As per latest approved modified RMP on 12.07.2023.
1f:	General remarks of inspecting Officer on Geology, exploration etc.	Singhbhum-Bonai succession establi area are compatib limb of the sy succession is as Massive / Lamin Considering the	-Keonjhar iron ore shed as observed ole with other loca ruclinorium. The follows: Alluvium hated in-situ ore, information of	Horse-shoe shaped belt. The lithological within the leasehold ations on the western general lithological Laterite/lateritic ore, Shale, BHQ / BHJ. existing quarries & eral deposit is 930m x

2)Development:--

SL. No.	Item	Proposals (FY 2022-23)	Actual work	Remarks
2a	Location of developme nt w.r.t. lease area	TOP portion of Pit (E- 311645-312022 &N-2419801- 2420179) & MIDDLE portion of Pit (E-311746-312022 & N- 2419800-2419989)	Within the proposed location.	
2b	Separate benches in topsoil, overburden and mineral	Separate benches in overburden and minerals; No top-soil generation.	As per proposal	
2c	Stripping ratio or ore to OB ratio	1:0.05	1: 0.08	Ratio in tonnes
2d	Quantity of topsoil generation in m3	No proposals	Nil	
2e	Quantity of overburden generation in m3	126,750	128,350	in m3
2f	General remarks of inspecting Officer on developme nt of pit w.r.t. type of deposit etc	Development of pit is being carr	ied out as per the approved modif	ied RMP.

3)Exploitation:--

SL.No.	Item	Proposals (FY 2022-23)	Actual work	Remarks
За	Number of pits proposed for production	One	One	
3b	Quantity of ROM mineral production proposed	4,990,000 tonnes	3,143,500 tonnes	Due to CTO granted on 20.02.2023.

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3c	Recovery of			Due to CTO
	salable/usab le mineral from ROM production	4,411,541 tonnes (88.4 %)	2,522,830 tonnes (80.2 %)	granted on 20.02.2023.
3d	Quantity of mineral reject generation	578,459 tonnes	620,670 tonnes	Top Capping remove & development workings.
Зе	Grade of mineral reject generation and threshold value declared	45 to 55 % Fe	45 to 55 % Fe	Threshold value of Iron Ore : +45 % Fe
3f	Quantity of sub-grade mineral generation	Same as para 3d		Sub-grade mineral/ mineral reject are
Зg	Grade of sub-grade mineral generation	Same as para 3e		being stacked separately & utilized as per market condition.
3h	Manual / Mechanised method adopted for segregating from ROM	Mechanized	Mechanized	
3i	Any analysis or beneficiatio n study proposed & carried out for sub- grade mineral and reject	Nil	NIL	
Зј	Provision of drilling & blasting in mineral benches	Drilling and blasting in mineral benches is proposed with burden, spacing and diameter of hole at 3.25m, 3.75m and 104 mm respectively.	As per proposals.	
3k	Provision of mining machineries in mineral	Yes, mining by Shovel Dumper Combination. ROM will be excavated and loaded in the 30 T	As per proposals.	

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	benches	dumpers by 0 m3 excavators			
31	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	10m bench he 10m width	ight with	As per proposals.	
3m	Total area covered under excavation/ pits	36.14	3 Ha	36.143 Ha	
3n	Ore to OB ratio for the pit/mine during the year	1:0	.05	1: 0.08	Ratio in tonnes
30	Total area put in use under different heads at the end of year	Particulars Area under Mining Overburden/	Total Area(Ha) at at the end of FY 2022-23 36.143	Broadly within the limit. However, the actual lease area (surface area) utilization information furnished under AR was not matching as	V/L issued under rule 45(7) on 18/10/23.
		Waste dumping Mineral Storage	2.716	compare to latest approved modified RMP dated 12.07.2023 and land-use map submitted along with	
		Infrastructure (Occupied by plants buildings & roads	4.859	DAI under rule 34A.	
Зр	Production of ROM mineral during last five-years period, as applicable	2018-19 2019-20 2020-21 2021-22 2022-23	864,058 1,982,165 2,990,000 2,990,000 4,990,000	2018-19 NIL 2019-20 575,700 2020-21 1,214,000 2021-22 2,981,000 2022-23 3,143,500	Unit: In tonnes
3q		arks of inspecti	ing Officer on	Open-cast fully mechin method is being carried as modified MP. Less prodctio 23 was due to CTO 20.02.2023	per approved n for FY 22-

4)Solid Waste Management-Dumping:--

SL.N	Item	Proposals (FY 2022-23)	Actual work	Remarks
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4a	Separate dumping of topsoil, OB & mineral reject	Separate dumping of OB and mineral reject proposed; Top soil: Nil	As per the proposals.	
4b	Location of topsoil, OB & mineral reject dumps	For Dump: N-2419733 to 2419827, & E-312256 to 312390 Mineral Mineral Reject : N-2419500, E-311600	As per proposals.	
4c	Number of dumps within lease area and outside lease area	One within ML	One within ML	
4d	Location of dumps w.r.t. ultimate pit limit	Dumping proposed outside of ultimate pit limit (NE part of ML)	As per proposals.	
4e	Number of active & alive dumps	One active	One active	
4f	Number of dead dumps	NIL	NIL	
4g	Number of dumps stabilishe d	NIL	NIL	
4h	Whether Retaining wall or garland drain all along dumps are there	Yes, proposed	Proposals carried out as per approved modified MP.	
4i	Length of Retaining wall or garland drain all along dump	Retaining wall- 530 m Garland drain- 677 m	Retaining wall- 556 m Garland drain- 700 m	V/L issued on 18/10/23 for improper maintenance of Retaining wall & garland drain.

4j	Number	NIL	NIL		
	of				
	settling				
	ponds				
4k	Specific	Overburden wastes and miner	al reject management are being car	ried out as per	
	comment	the approved proposals. State	Govt. yet to grant the permission f	for disposal of	
	s of	OB/Waste as minor mineral	OB/Waste as minor mineral under Rule 12(1)(k) of Minerals (Other than		
	inspectin	Atomic and Hydro Carbons Energy Minerals) Concession Rules, 2016.			
	g Officer	However, V/L issued on 18/1	0/23 for improper maintenance of I	Retaining wall	
	on waste	& garland drain.			
	dump				
	managem				
	ent				

5)Solid Waste Management-Backfilling:--

SL.No	Item	Proposals (FY 2022-23)	Actual work	Remarks
5a	Status on part or full extraction of mineral from mined out area before starting backfilling	No such proposals	NIL	
5b	Area under backfilling of mined out area	No such proposals	NIL	
5c	Concurrent use of topsoil for restoration or rehabilitation of mined out area	NA	Nil	
5d	Total area fully reclaimed & rehabilitated	NA	NIL	
5e	General remarks of inspecting Officer on backfilling and reclamation etc	Pit or part of pit	is not matured for back	filling so far.

6)Progressive Mine Closure Plan:---

SL.N.	Item	Proposals (FY	Actual work	Remarks
		2022-23)		
6a	Whether Annual report on PMCP submitted on time and correctly - Rule 26(2). (Hard copy same provided)	Before 1 st July of, 2022-23	Submitted on time	NIL
6b	Management of worked/ mined out benches/dumps i) Area available for rehabilitation (ha) ii) Afforestation done (ha)	i)Nil ii) Nil	i)Nil ii) Nil	2000 nos saplings planted within ML at safety zone during year 22-23,
	iii) No. of saplings	iii)NIL	iii) 2000 nos	besides 7500

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	planted during the year iv) Cumulative no. of plants v) Any other specific method of rehabilitation vi) Cost incurred on watch & care during the year	iv) NA v) NIL vi) Nil	 (Within ML) iv)31,648 nos so far (Within ML) v) Plantation vi)NA 	nos saplings planted outside ML.
6с	Compliance on reclamation and rehabilitation by backfilling i) Voids available for backfilling (L X B X D) ii) Void filled by waste/tailings iii) Afforestation on the backfilled area iv) Rehabilitation by making water reservoir v) Any other specific means	i) No such proposals ii) NA iii)NA iv) No such proposals v) No such proposals	i) Nil ii) Nil iii) Nil iv)Nil v) Nil	Pit is not matured for back-filling.
6d	Compliance of Rehabilitation of waste land within lease i) Afforestation ii) Area rehabilitated (ha) iii) Method of rehabilitation	i)550 nos at safety zone ii)0.22 ha iii)Plantation	i)2000 nos ii) 0.5 Ha iii) Plantation	
6e	Compliance of Environmental monitoring (core zone & buffer zone)	Environmental monitoring in Core zone and buffer zone will be as per MOEFCC and SPCB guidelines.	Environmental monitoring in Core zone and buffer zone was carried out as per the proposals and parameters are within the limit.	
6f	General remarks of inspecting Officer on PMCP compliance & progressive closure operation etc	Lessee has imp approved modified for improper main	lementing PMCP pr l MP. However, V/L iss ntenance of Retaining eral reject & waste dum	sued on 18/10/23 wall & Garland

7)Mineral Conservation:---

SL.No	Item	Proposals ((FY 2022-23)	Actual work	Remark
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7a	ROM Mineral dispatch or grade-wise sorting within lease area	Grade wise sorting by crushing and screening within lease area.	As per proposals	NIL
7b	Method of grade-wise mineral sorting i.e. manual or mechanica l	Mechanical	Mechanical	NIL
7c	Different grade of mineral sorted out at mines	Iron Ore of different size and grade (CLO & Fines) proposed to be sorted out and dispatched (Iron Grade range- 51-55% Fe, 55-58% Fe, 58-60% Fe, 60-62% Fe & 62-65% Fe)	As per proposals	NIL
7d	Any beneficiation process at mines	None except dry crushing and screening	As per proposals	NIL
7e	General remarks of inspecting Officer on mineral conservation & beneficiation issues	Grade-wise soring & dispat requirement of buyers and the issue.		•

8)Environment:--

SL.No.	Item	Proposals (FY 2022-23)	Actual work	Remarks
8a	Separate removal and utilization of topsoil	No such proposals.	Nil	
8b	Concurrent use or storage of topsoil	No such proposals.	Nil	Nil
8c	Separate dumps for overburden, waste rock, rejects and fines	Separate dumping of OB wastes/ mineral rejects proposed	Carried out as per proposals.	Nil
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	No such proposals	NIL	Nil
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	No such proposals	NIL	
8f	Baseline information on existence of plantation & additional plantation done	550 nos saplings proposed during FY 22-23.	2000 nos saplings planted within ML at safety zone during year 22-23; besides 7500 nos saplings planted outside ML with cum. Of 43,550 nos	
8g	Survival rate	85 %	70 %	

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8h	Water sprinkling on roads	Regular	Carried out as per the
_	to control airborne dust	sprinkling of	proposals.
		water on Haul	
		roads, Waste	
		dumps &	
		crushing plant	
		locations using	
		Water tanker to	
		suppress the dust.	
8i	General remarks of	Aesthetic beauty in	& around mines area is good as lessee
	inspecting Officer on	implementing the	PMCP proposal and carried out
	aesthetic beauty in &	plantation as per th	e proposals.
	around mines area.		

9)Compliance of Rule 45

SL.No.	Item	COMMENTS		Remarks.
9a	Status of submission of Monthly and Annual returns	Presently regularly submitting the MRs/ARs on-time. Earlier, the lessee had paid Amount of Rs 40,000/ towards delay in submission of MR-June-23 on 7/8/23 under Rule 45 (7A)		Nil
S.N.	Item	Details GIVEN in A.R.	Actual in field	
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Mines Manager: Shri Pramod Kumar Sahoo Mining Engineer: Shri Susila Kumar Pradhan Geologist: Shri Pradeept Mohapatra	Actual also the same	
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	 Covered under current (O/C) Workings- 36.143 Ha Used for Waste Dis- posal-2.716 Ha Occupied by plant, buildings, residential, welfare, buildings and roads- 4.859 Ha Other Purpose (Mineral Storage)- 13.194 Ha 	Broadly within the limit. However, the actual lease area (surface area) utilization information furnished under AR was not matching as compare to latest approved modified RMP dated 12.07.2023 and land-use map submitted along with DAI under rule 34A.	V/L issued under rule 45(7) on 18/10/23.
9d	Scrutiny of Annual return on afforestation	2000 nos within ML +7500 nos Outside ML	Actual also as per AR	
9e	Scrutiny of Annual return on mineral reject generation (Grade & quantity)	During year-22-23 Iron Processed Ore (45-55 620,670 % Fe, Avg. tonnes 52.5 % Fe)	Appear to be correct.	

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9f	Scrutiny of Annual	As on 31.03.	2023 tonnes	Appear to be correct.	
	return on ROM stock	Stock Iron RO	DM:1,28,200		
	and/or graded ore	tonnes.			
		Fines closing stock			
		in tor	nnes		
		51%-55%	6,48,806		
		55%-58%	3,93,428		
		58%-60%	1,73,901		
		60%-62%	31,607		
		62%-65%	9,733		
		65% and	NIL		
		above	INIL		
		CLO stock	in tonnes		
		<62% Fe	1 21 22		
		(clo any	1,21,33 0		
		size)	0		
		62%-	7		
		65% Fe	144		
		(5-18	144		
		mm)			
		62 to 65			
		% Fe and	8,045		
		above(10	0,045		
		-40mm)			
0					
9g	Scrutiny of Annual	Ex-Mine		Appear to be correct.	
	return on sale value,	Fin			
	Ex. Mine price &	1 51%-55%			
	production cost		869.29		
	production cost	55%-58%	1538.78		
	production cost	55%-58% 58%-60%	1538.78 2266.01		
	production cost	55%-58% 58%-60% 60%-62%	1538.78 2266.01 2468.57		
	production cost	55%-58% 58%-60% 60%-62% 62%-65%	1538.78 2266.01 2468.57 3020.23		
	production cost	55%-58% 58%-60% 60%-62% 62%-65% Ex-Mine	1538.78 2266.01 2468.57 3020.23 Price of		
	production cost	55%-58% 58%-60% 60%-62% 62%-65% Ex-Mine CL	1538.78 2266.01 2468.57 3020.23 Price of		
	production cost	55%-58% 58%-60% 60%-62% 62%-65% Ex-Mine CL <62% Fe	1538.78 2266.01 2468.57 3020.23 Price of O		
	production cost	55%-58% 58%-60% 60%-62% 62%-65% Ex-Mine CL <62% Fe (clo any	1538.78 2266.01 2468.57 3020.23 Price of		
	production cost	55%-58% 58%-60% 60%-62% 62%-65% Ex-Mine CL <62% Fe (clo any size)	1538.78 2266.01 2468.57 3020.23 Price of O		
	production cost	55%-58% 58%-60% 60%-62% 62%-65% Ex-Mine CL <62% Fe (clo any size) 62%-	1538.78 2266.01 2468.57 3020.23 Price of O 4854.03		
	production cost	55%-58% 58%-60% 60%-62% 62%-65% Ex-Mine CL <62% Fe (clo any size) 62%- 65% Fe	1538.78 2266.01 2468.57 3020.23 Price of O		
	production cost	55%-58% 58%-60% 60%-62% 62%-65% Ex-Mine CL <62% Fe	1538.78 2266.01 2468.57 3020.23 Price of O 4854.03		
	production cost	55%-58% 58%-60% 60%-62% 62%-65% Ex-Mine CL <62% Fe (clo any size) 62%- 65% Fe (5-18 mm)	1538.78 2266.01 2468.57 3020.23 Price of O 4854.03		
	production cost	55%-58% 58%-60% 60%-62% 62%-65% Ex-Mine CL <62% Fe	1538.78 2266.01 2468.57 3020.23 Price of O 4854.03 5105.32		
	production cost	55%-58% 58%-60% 60%-62% 62%-65% Ex-Mine CL <62% Fe	1538.78 2266.01 2468.57 3020.23 Price of O 4854.03		
	production cost	55%-58% 58%-60% 60%-62% 62%-65% Ex-Mine CL <62% Fe	1538.78 2266.01 2468.57 3020.23 Price of O 4854.03 5105.32		
	production cost	55%-58% 58%-60% 60%-62% 62%-65% Ex-Mine CL <62% Fe	1538.78 2266.01 2468.57 3020.23 Price of O 4854.03 5105.32 4551.60		
9i	production cost	55%-58% 58%-60% 60%-62% 62%-65% Ex-Mine CL <62% Fe	1538.78 2266.01 2468.57 3020.23 Price of O 4854.03 5105.32 4551.60 action: Rs onne d of Assets:	Appear to be correct	

1	return on mining	nos;	
1	machineries	Back Hoe (0.9 cum) : 5	
		nos;	
		Wheel Loader: 9 nos;	
		Dumpers (30 T):27 nos ;	
		Water tanker: 3 nos;	
		Crusher: 2 nos;	
		Dozer: 1nos	
		Motor Grader: 1 nos.	
		Blast Hole Drill: 1nos	

(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 11/01/2023, the violation of rules 11(1), 12(4) and 33 of MCDR 2017 were pointed out and subsequently, said rules complied on 29/3/23 (Rule 33) and 16/10/23 (Rules-11(1) & 12(4)).

(b)During current inspection: The violations of Rules 37 (2), 45(7) and 47 of MCDR 2017 have been observed and the violation letter issued on 18/10/23.

(11) On-line validation of star rating of templates submitted under rule 35 (FY-2022-23) has been made on 18/10/23 for four star at RO level.

(12) The lessee has submitted DAI/drone survey data under rule 34A for FY 22-23 on 30/06/23.

Date:18/10/2023

(Prashant S. Hegde) Regional Mining Geologist