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

General:

SL. No.	Particulars	Details
1	Name of the Mine	Siljora Kalimati Iron and Manganese Ore
1	Traine of the trime	Mine /block
2	Date of inspection	25-04-2024
3	Name of inspecting officer	Prashant S Hegde, RMG
4	Name accompanying mine	S/Shri D.N Parida, Mines Agent, Prafulla
	officials	Kumar Parida, QP & DGM(Geology), Janmejoy
		Mohanta, Mines Manager, Mohammad
		Shahrukh, Mining Engineer and other mine
5	Last data of Improstion 9 Officer	officials. 01/06/2023
5	Last date of Inspection & Officer	Shri Rajanikanta Rautaray, AME
6	Total Lease Area (Ha) with breakup	713.51 Ha (Forest: 509.71 Ha + Non-Forest :
	of Non-forest and forest land	203.80 Ha)
7	Minecode	400RI08061
8	IBM Registration Number under rule	IBM/23029/2020
	45 of MCDR, 2017	
9	Name of the lessee, Address,	Shri Debabrata Behera
	phone, email and fax number	1234/P Govind Prasad, Bomikhal, Rasulgarh,
		Bhubaneswar
		State-Odisha, Pin code-751010 Phone No- 06742549944
		Fax No- 06742549944
		Email- dbmines2020@gmail.com
10	Village	Siljora
11	Taluka/Mandal	Barbil
12	District	Keonjhar
13	Pincode	758086
14	State	Odisha
15	Post office	Siljora
16	Nearest police station	Bamberi
17	Nearest Railway station	Nayagarh
18	Date of Grant of Mining Lease	26.06.2020
19	Date of Execution	27.06.2020
20 21	Date of opening of Mine	25.07.2020 26/06/2070
22	Date of expiry Name of the Nominated Owner with	Shri Debabrata Behera
~~	Address, phone, email, fax number	1234/P Govind Prasad, Bomikhal, Rasulgarh,
	and date of appointment	Bhubaneswar
	The state of the s	State-Odisha, Pin code-751010
		Phone No- 06742549944
		Fax No- 06742549944
		Email- dbmines2020@gmail.com
23	Name of the Mine Agent with	Shri D.N. Parida
	Address, phone, email, fax number	At/Po: Baneikala,Joda
	and date of appointment	Dist-Keonjhar, Pin-758034 State-Odisha
		State-Ouisiid

		Date Of Apointment-07.09.2020
24	Name of the Mines Manager with Address, mobile no, email, fax number and date of appointment in mine	Shri Janmejoy Mohanta Diploma in Mining Vill Siljora Po- Siljora Dist-Keonjhar Odisha, 758086 Phone No-8480216106 Email: jmohanta27@gmail.com Date of Appointment – 12.05.2021 Experience-30 years
25	Name of the Mining Engineer , Qualification and total experience with Address, mobile no, email, fax/phone number and date of appointment in mine	Mohammad Shahrukh (Mining Engineer) B.Tech. Mining At/Po- Siljora VillSiljora Dist-Keonjhar Odisha,758086 Ph. No7656816068 Email-mdshahrukh2025@gmail.com Date Of Apointment-04.03.2023 Experience- 5 years
26	Name of the Geologist , Qualification and total experience with Address, mobile no, email, fax number and date of appointment in mine	Shri Prafulla Kumar Parida, M.Sc (Geology), At/Po- Barbil Dist- Keonjhar Odisha,758035 Ph. No9437009087 Experience-29 years Date Of Apointment-15.04.2022 E-Mail: paridaprafulla1@gmail.com
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.	Approved Modified Mining Plan Letter No. BBS/KJR/IRON-MN/2170/MPM/2022-23 dated 30/06/2022 for period from 2022-23 to 2024-25
28	Mineral (s) granted in lease and proved for mining	Manganese ore and Iron ore
29	Method of Mining(Opencast, Underground)	Opencast
30	Category (Fully Mechanised, Others or Manual)	A-Fully Mechanized
31	Captive/Non Captive	Non-captive
32	Present EC Capacity	0.189 MTPA for Mn-ore and 0.136 MTPA for Iron ore.

OBSERVATIONS/COMMENTS OF INSPECTING OFFICER:

1)Exploration:---

SL.No	Item	Proposals	Actual work	Remarks
		(FY 2023-24)		
1a	Backlog of previous year	FY-22-23:157	2022-23: 76 nos	V/L issued for
		nos of BHs;	of DTH BHs	deviation in
		FY-23-24: 82	drilled with	exploration.

		nos of BHs; Depth of each BH 70 m and 100 m X 50 m (Type of BHs not specified)	1874 total meterage FY-23-24:NIL	
1b	Exploration over lease area for Geological axis 1 or 2.	Exploration of remaining area to G-1 level	G-1: 476.59 Ha G-2: 236.92 Ha	As reported.
1c	Exploration Agency & Expenditure in lakh Rupees during the year	NA	Reported to Nil during FY 2023-24	
1d	Balance area to be explored to bring Geological axis in 1 or 2	NA	Balance of mineralized G-2 area to be explored to G-1 level.	
1e	Balance reserves as on 01.04.2024	NA	Mn- Ore (+10 % Mn) reserves (111+122): 3.108 million tonnes; Iron Ore (+45 % Fe) reserves (111+122) : 10.68 million tonnes	Based on approved Modified MP dated 30.06.2022
1f:	General remarks of inspecting Officer on Geology, exploration etc.	Singhbhum-Keonj occurs as lenses & upto a depth of 70 apx. 50-55 m onl follows: Laterite, within laterite & Hard shale with Q approved Modifier follows. Iron ore: 340m X 3 Mn-ore: 1000mX	har-Bonai belt/ser t pockets within th om at upper portion y. The litho-unit Lateritic iron or Manganiferous sh uarzite etc. Based	to 50 % Mn)

2)Development:--

	-/Development						
SL.	Item	Proposals (FY 2023-24)	Actual work	Remarks			
No.							
2a	Location of	BLOCK-1	Broadly within the limit of				
	developme	(2421287N-2421531N,	proposals.	Blocks 1			
	nt w.r.t.	332266E-332440E)		to 5 for			
	lease area	BLOCK-2		Mn-ore			
		(2420349N-2420533N,					
		332554E-332625E,					
		2419974N-2420166N,					
		332804-332909E)					

		T		
		BLOCK-3 (2420848N-2421129N, 333095E-333265E) BLOCK-4 (2420378N-2420586N, 333036E-333172E) BLOCK-5 (2419783N-2420324N, 333689E-333985E) BLOCK-6(Iron_ore) (2418988N-2419102N, 333988E-334283E)		
2b	Separate benches in topsoil, overburden and mineral	Separate benches for OB and Ore maintained (wherever possible due to pocket deposit nature of manganese ore).	As per the proposals.	
2c	Stripping ratio or ore to OB ratio	1: 12	1:8.55 Violation issued for deviation.	Ratio in tonnes/m3 For Mn- ore only BD:2
2d	Quantity of topsoil generation in m3	No proposals	Nil	
2e	Quantity of overburden generation in m3	2,268,036 Cum	1,299,763 Cum	As reported.
2f	General remarks of inspecting Officer on developme nt of pit w.r.t. type of deposit etc	MP. It is an auction mine of ML	ut within the limit as per approvex expired on 31/3/2020 with Final I and for deviation in stripping ratio	Bid premium

3)Exploitation:--

SL.No.	Item	Proposals	Actual work	Remarks
		(FY 2023-24)		
3a	Number of	6 Nos. (Pit/blocks nos. 1 to	6 Nos. (Pit/blocks nos. 1 to	
	pits	5 for Mn-Ore and Pit/block	5 for Mn-Ore and Pit/block	
	proposed	no.6 for iron ore)	no.6 for iron ore)	
	for			
	production			
3b	Quantity of	Mn-Ore:	Mn-Ore:	As reported

	DOM	1.00.000 +	1.52.002.4	1
	ROM	1,89,000 tonnes Iron Ore:	1,52,082 tones Iron Ore:	less
	mineral production	1,36,000 tonnes	5,103 tonnes	production iron ore due to
	proposed	1,50,000 tolliles	Within limit.	local
	proposed		vvitimii iiiiit.	issues/proble
				ms.
3c	Recovery of	90%	8 %	AR not yet
	salable/usab	(1,70,100 Mn-ore: >25 %	(12,404 tonnes Mn- ore	received. No
	le mineral	Mn)	>25 % Mn)	dispatch of
	from ROM		The violation already	Iron ore.
	production		pointed out regarding	
			major variation in grade of	
			Manganese Ore produced	
			in	
			mine on 09.06.2023	
			during last inspection dated 01.06.2023 and not	
			yet complied so far.	
			Subsequently, the lessee	
			has submitted draft	
			modified MP on	
			26/03/2024 with up-	
			gradation Of low-Grade	
			Manganese Ore reserves/	
			resources and change in	
			grade of Mn-ore	
			production and was under	
			process.	
3d	Quantity of	Mn Ore: 18,900Tonnes	Mn Ore: 1,39,678 Tonnes	AR not yet
	mineral		Action already taken as	received. No
	reject		stated at para no. 3c	dispatch of
	generation			Iron ore; It is
				reported by
				the lessee that
				proposed quantity of
				quantity of high grade ore
				(> 25 % Mn)
				not available
				in the mine.
Зе	Grade of	MR:	MR:	Threshold
	mineral	Mn ore:10 to <25 % Mn	Mn ore:10 to <25 % Mn	value of Iron
	reject	Iron Ore: 45 to < 55 % Fe	Iron Ore: 45 to < 55 % Fe	Ore : +45 %
	generation			Fe; & Mn-ore
	and threshold			+10 % Mn;
	value			
	declared			
3f	Quantity of	Same as para 3d		Sub-grade
_	sub-grade	F		mineral/
	mineral			mineral reject
	generation			are being
3g	Grade of	Same as para 3e		stacked

	sub-grade mineral generation			separately & MR of Mn ore is being utilized based on market demand.
3h	Manual / Mechanised method adopted for segregating from ROM	Manual	Manual	Sorting and picking of ore from ROM by Masdoor / laborer.
3i	Any analysis or beneficiatio n study proposed & carried out for sub- grade mineral and reject	No such proposals during FY.	NIL	
3j	Provision of drilling & blasting in mineral benches	Yes; Deep Hole drilling and blasting (110 mm dis. Hole) was proposed keeping depth 6.6m, spacing up to 2.5m, burden 2m; few rock breakers will be used for hard Ore breaking.	As per the proposals.	
3k	Provision of mining machineries in mineral benches	Yes; Excavators and Dumpers combination.	As per the proposals.	
31	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	Bench Height: 6 m Bench Width: 9 m	Broadly as per the proposals.	
3m	Total area covered under excavation/ pits	153.063 ha Ha (For end of FY).	150.25 Ha. as on 01.04.2024	As reported.
3n	Ore to OB ratio for the pit/mine during the	1: 12	1:8.55 Violation issued for deviation.	Ratio in tonnes/m3 For Mn-ore only

	year					BD:2
30	Total area put in use under different	Particulars	Total Area(Ha) at the end of Plan period i.e.FY 2023-	Particulars	Total Area(Ha) at the end of FY 2023-24	As reported and AR not yet received.
	heads at the	Area under	24	Area under Mining	150.25	
	end of year	Mining Overburden/	153.063	Overburden/ Waste	53.60	
		Waste dumping	53.60	dumping Mineral	63.87	
		Mineral Storage	63.872	Storage Area Occupied	33107	
		Area Occupied Infrastructure, plants, buildings, roads etc	38.48	Infrastructure, plants, buildings, roads etc	38.48	
				proposals.	within the	
3р	Production of ROM mineral during last five-years period, as applicable	FY 2020-21: Mn: 1,89,000 Iron: 1,36,000 FY 2021-22: Mn: 1,89,000 Iron: 1,36,000 FY 2022-23: Mn: 1,89,000 Iron: 1,36,000 FY 2023-24: Mn:1,89,000 Iron: 1,36,000		FY 2020-21: Mn:1,03,485 Iron:: NIL FY 2021-22: Mn-1,29,951 Iron:- NIL FY 2022-23: Mn-1,25,530 Iron:-NIL FY 2023-24: Mn-1,52,082 Iron:- 5,104	1	Unit: in Tonnes Date of opening of mine on 25.07.2020
3q	General remainmethod of m	arks of inspectir ining etc	ng Officer on	is being carrie an auction min with Final B lessee has sub on 26/03/202 Grade Manga beneficiation	ed as per apprine of ML expirited premium comitted has draw with up-gramese Ore resolution of low-grade fin-ore product	I mining method roved RMP. It is red on 31/3/2020 of 154 %. The aft modified MP adation Of Low serves/resources, Mn-ore, change tion etc and was

4)Solid Waste Management-Dumping:--

SL.No	Item	Proposals (FY 2023-24)	Actual work	Remarks
4a	Separate dumping of topsoil, OB & mineral reject	No topsoil generation; Separate OB waste dumping & stacking of mineral rejects.	As per proposals.	
4b	Location of topsoil, OB		No top soil is generated. Mineral reject generations are	

	& mineral reject dumps	generation are proposed to stack separately. OB wastes disposal at in DUMP-A (2420706N-2421132N,332594E-332789E) and by backfilling in BF-2 (2419888N-2420061N, 33328E-333566E); BF-3(2419240N-2419678N, 334207E-334550E); BF-4(2421037N-2421418N, 331491E-331683E); BF-5(2420522N-2420763N, 332269E-332482E); BF-6(2419898N-2420190N, 332575E-332777E).	stacked separately. Dumping of waste generated is done in DUMP-A and Backfilling in BF-2, BF-3, BF-4, BF-5, BF-6.	
4c	Number of dumps within lease area and outside lease area	2 Nos of dumps within ML.	2 Nos of dumps within ML.	
4d	Location of dumps w.r.t. ultimate pit limit	Dumps Located outside UPL.	As per the proposals.	
4e	Number of active & alive dumps	1 Nos.	1 Nos.	Besides 5 nos of back-filling locations.
4f	Number of dead dumps	1 Nos.	1 Nos.	
4g	Number of dumps stabilished	1 Nos.	1 Nos.	
4h	Whether Retaining wall or garland drain all along dumps are there	Yes; Proposed to be well maintained	Well Maintained	
4i	Length of Retaining wall or garland drain all	NIL during FY.	NIL during FY. Cumulative of 2661 m Retaining wall and 960m of garland drain sofar.	

	along dump			
4j	Number of	Nil	NIL	
	settling			
	ponds			
4k	Specific	Overburden wastes and mir	neral reject management are being	carried out as
	comments	per the approved proposals.		
	of			
	inspecting			
	Officer on			
	waste dump			
	managemen			
	t			

5)Solid Waste Management-Backfilling:--

SL.No	Item	Proposals (FY 2023-24)	Actual work	Remarks
5a	Status on part or full extraction of mineral from mined out area before starting backfilling	Backfilling in BF-2, BF-3, BF-4, BF-5, BF-6 at exhausted part of relevant pits/blocks.	BF-3, BF-4, BF-5, BF-6 at exhausted part of relevant pits/	
5b	Area under backfilling of mined out area	13.419 Ha	11.66 Ha Within limit as per the achievement.	
5c	Concurrent use of topsoil for restoration or rehabilitation of mined out area	No proposals	NIL	
5d	Total area fully reclaimed & rehabilitated	No proposals	NIL	
5e	General remarks of inspecting Officer on backfilling and reclamation etc	Back-filling are being carried out at ore/miner exhausted part of 5 nos of pits/blocks as per the proposals. As reported a cumulative total of 41.75 Harea has been covered under back-filling so far.		ocks as per the otal of 41.75 Ha

6)Progressive Mine Closure Plan:---

SL.N.	Item	Proposals ((FY 2023-24)	Actual work	Remarks
6a	Whether Annual report on PMCP submitted on time and correctly - Rule 26(2). (Hard copy same provided)	Before 1 st July 2024	Not due for submission at the time of inspection.	NIL
6b	Management of worked/ mined out benches/dumps i) Area available for rehabilitation (ha) ii) Afforestation done	i)Nil ii) NIL	i)Nil ii)NIL	NIL.

	(ha)	iii)NIL	iii) NIL	
	iii) No. of saplings planted during the year iv) Cumulative no. of plants v) Any other specific method of rehabilitation vi) Cost incurred on watch & care during the	iv) NA v)Plantation vi) NA	iv) 20,940 nos sofar within ML v) Plantation vi) 3.53 lakhs	
	year			
6c	Compliance on reclamation and rehabilitation by	i) 13.41 Ha	i) 13.41 Ha	Within limit as per the achievement
	backfilling i) Voids available for backfilling (L X B X D)	ii) 13.41 Ha	ii) 11.66 Ha	during FY.
	ii) Void filled by waste/tailings	iii)NIL	iii) NIL	
	iii) Afforestation on the backfilled area	iv)NIL	iv)NIL	
	iv) Rehabilitation by making water reservoir v) Any other specific means	v)NIL	v)NIL	
6d	Compliance of Rehabilitation of waste land within lease i) Afforestation	i)3500 nos ii)1.4 Ha	i)3000 nos ii)1.6 Ha	Safety zone plantation and as reported,
	ii) Area rehabilitated (ha) iii) Method of rehabilitation	iii)Plantation	iii) Plantation	9590 Nos. sapling were planted during previous FY against 3750 nos.
6e	Compliance of Environmental monitoring (core zone & buffer zone)	Environmental monitoring in Core zone and buffer zone will be as per MOEF& CC and SPCB guidelines.	Environmental monitoring in Core zone and buffer zone was carried out as per the proposals and parameters are within the limit.	NIL
6f	General remarks of inspecting Officer on PMCP compliance & progressive closure operation etc		enting PMCP proposals	s as per

7)Mineral Conservation:---

SL.No	Item	Proposals (FY 2023-24)	Actual work	Remark s
7a	ROM Mineral dispatch or grade-wise sorting within lease area	Grade wise sorting within lease area.	As per proposals	NIL
7b	Method of grade-wise mineral sorting i.e. manual or mechanica l	Manual	Manual	NIL
7c	Different grade of mineral sorted out at mines	Grade wise Mn-ore sorting and dispatched (i) Below 25 % Mn (ii)25 to below 35 % Mn Iron Ore: (i)Below 55 % Fe (ii)Above 55 % Fe	AR not yet received. No dispatch of Iron ore; It is reported by the lessee that proposed quantity of high grade ore (> 25 % Mn) not available. The violation already pointed out on 09.06.2023 during last inspection dated 01.06.2023	NIL
7d	Any beneficiation process at mines	None	None	NIL
7e	General remarks of inspecting Officer on mineral conservation & beneficiation issues	The violation already pointed out regarding major variation in grade of Manganese Ore produced in mine on 09.06.2023 during last inspection dated 01.06.2023 and not yet complied so far. Subsequently, the lessee has submitted draft modified MP on 26/03/2024 with upgradation Of low-Grade Manganese Ore reserves/ resources and change in grade of Mn-ore production and was under process.		

8)Environment:--

SL.No.	Item	Proposals (FY 2023-24)	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 and Mineral Rejects	Carried out as per approved proposals.	
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	Backfilling in BF-2, BF-3, BF- 4, BF-5, BF-6 at exhausted part of relevant pits/blocks.	Backfilling in BF-2, BF-3, BF-4, BF-5, BF-6 at exhausted part of relevant pits/blocks as per proposal.	Nil

8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	13.41 Ha area backfilling at exhausted part of pits/blocks.	11.66 Ha area backfilling at exhausted part of pits/blocks.	Nil
8f	Baseline information on existence of plantation & additional plantation done	3500 nos saplings plantation during FY 23-24.	During year 23-24, 3000 nos of saplings planted within ML and cumulative 20,940 nos of saplings planted within ML	As reported, 9590 Nos. saplings were planted during previous FY against 3750 nos.
8g	Survival rate	85 %	85 %	
8h	Water sprinkling on roads to control airborne dust	Regular sprinkling of water on Haul roads, manual sorting site and dump/backfilling location etc using Water tankers to suppress the dust.	Carried out as per the proposals.	
8i	General remarks of inspecting Officer on aesthetic beauty in & around mines area.		n & around mines area in PMCP proposals are proposals.	

9)Compliance of Rule 45

SL.No.	Item	COMMENTS		
				Remarks.
9a	Status of submission of Monthly and Annual returns	Regularly submitting the MRs/ARs of Submission of AR 2023-24 was inspection and scrutiny of AR made.	s not due at time of	
S.N.	Item	Details GIVEN in A.R. 2022- 23	Actual in field	
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Mines Manager – Shri Janmejoy Mohanta Mining Engineer – Shri Mohammad Shahrukh Geologist – Shri Prafulla Kumar Parida	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- 144.376 Ha. Used for Waste Disposal- 53.6 Ha. Occupied by plant, buildings, residential, welfare, buildings and roads- 38.474 Ha. Other Purpose (including 	Actual also as per AR at that time.	

		Mineral Storage)- 74.202 Ha		
9d	Scrutiny of Annual return on afforestation	9,590 nos WML	Actual also as per AR	
9e	Scrutiny of Annual return on mineral reject generation (Grade & quantity)	During year-22-23 Generation of MR. Mn: from Unprocessed Ore (10-25 % Mn) Mn:	Lessee has dispatching <25 % Mn ore also based on market demand.	
		From Processed Ore NIL (Mn 10-25 % Mn)		
9f	Scrutiny of Annual return on ROM stock and/or graded	As on 31.03.2023 tonnes Stock Mn-Ore ROM: NIL	Appear to be correct at that time.	
	ore	Mn_ore closing stock in tonnes Below 25 % Mn 74,476 25%- below 35% Mn 3007		
9g	Scrutiny of Annual return on sale value, Ex. Mine price & production cost	Cost of production: Rs-3049.62 per tonne; Ex-mine price:	Appear to be correct except cost of production.	V/L issued.
		Ex-mine Price of Mn ore		
		in Rs per tonne Below 25 %		
		Mn 3011.27		
		35% Mn 7017.20		
9i	Scrutiny of Annual return on fixed assets	Fixed Value of Assets: Rs 72,44,09,372	Appear to be correct.	
9k	Scrutiny of Annual return on mining machineries	Excavator (Backhoe) – 5 Nos. Dumpers – 26 Nos. Rock Drill – 5 Nos. Dozer – 1 Nos. Wheel Loader- 1 Nos. Crusher – 1 Nos. Water Tanker – 3 Nos.	Observed to be correct.	

(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 01/06/23, the violation of rules 11(1) 47, and 48 of MCDR 2017 were pointed out and subsequently, rules 47 and 48 complied on 18/8/23. The violation of rule 11(1) was kept abeyance till the approval of modified MP.

MCDR-MiFLOMn/1/2022-BBS-IBM_RO_BBS

1/32093/2024

- (b)During current inspection: The violation of Rules 11(1) & 45(7) of MCDR 2017 have been observed and the violation letter issued on 20/05/2024.
- (11) On-line validation of star rating of templates submitted under rule 35 (FY-2022-23) has been made on 13/7/23 for three star at RO level.
- (12)The lessee had submitted DAI/drone survey data under rule 34A for FY 22-23 on 01/07/2023. The submission of DAI/drone survey data i.r.o. FY 2023-24 was not due at time of inspection.

Date: 20/05/2024

(Prashant S. Hegde) Regional Mining Geologist