

MCDR INSPECTION REPORT**General**

S N	Particulars	Details	
1	File no.		
2	Name of the Inspecting Officer	Sri Vikram Despandae, ACOM,BBSR	
3	Name of the Mine	Mahulsukha Iron & Manganese Ore Mine	
4	Total Lease Area (Ha) with breakup of Non-forest and forest land	Total Lease area (Ha.)	390.317
		Forest Area (Ha.)	382.437
		Non-Forest Area (Ha.)	7.880
		Other (If any)	---
5	Mine code	40ORI13059	
6	Date of Inspection	28.12.2023	
7	Name of official accompanying inspection	Mr. Chandra Kanta Rath, Mines Manager Mr. Bhabagrahi Mohapatra, General Manager Mr. Jhasketan Sahoo, Geologist Mr. Gayatri Prasad Mishra, Mining Engineer	
8	IBM Registration Number under rule 45 of MCDR, 1988	IBM/343/2011	
9	Name of the lessee, Address, phone, email and fax number	Registered Office	
		AT/PO	BANEIKALA
		PS	JODA
		DIST	KEONJHAR
		PIN	758038
10	Village	Randa, Rantha&Bhutuda	
11	Taluka/Mandal	Banai	
12	District	Sundargarh	
13	Pincode	770041	
14	State	Odisha	
15	Post office	Bhutuda	
16	Nearest police station	Lahunipada	
17	Nearest Railway station	Barsuan	
18	Date of Grant of Mining Lease	29.06.2020	
19	Date of Execution	29.06.2020	
20	Date of opening of Mine	17.09.2020	
21	Date of first Renewal, if applicable and its period & expiry	NA	
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	
24	Name of the Nominated Owner with Address, phone, email, fax number and date of appointment	Name :Sri Saroj Kumar Patnaik Address: AT/PO- Baneikala, VIA- Joda, Dist: Keonjhar, PIN: 758038, Odisha Phone: 9438117980 Email: pmp123@rediffmail.com	
25	Name of the Mine Agent with Address, phone, email, fax number and date of appointment	---	
26	Name of the Mines Manager with Address, phone, email, fax number and date of appointment in mines	Name : Mr. Chandrakanta Rath Address: AT/PO- Bhutuda, VIA Barsuan Dist: Sundergarh, PIN: 770041, Odisha Phone: 9437357067 Email: rath.ranju@gmail.com Date of Appointment: 29.01.2022	

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27	Name of the Mining Engineer & Geologist, Qualification and total experience	Mining engineer Qualification Date of appointment Address phone/email	Name : Mr. Gayatri Prasad Mishra Address: AT/PO- Bhutuda, VIA Barsuan Dist: Sundergarh, PIN: 770041, Odisha Phone: 9439489644 Email: rath.ranju@gmail.com Date of Appointment: 01.06.2021
		Geologist Qualification Date of appointment Address phone/email	Name : Mr. Jhasketan Sahoo Address: AT/PO- Bhutuda, VIA Barsuan Dist: Sundergarh, PIN: 770041, Odisha Phone: 8328827589 Email: jhasaketansahoo98@gmail.com Date of Appointment: 05.03.2023
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.	----	
30	Date of Approval of Scheme of Mining/Modified Scheme of Mining with five-year period and specific condition in approval letter, if any.	01.10.2020 (Mining Plan)	
31	Mineral(s) granted in lease and proved for mining	Iron & Manganese	
32	Method of Mining(Open cast, Underground)	Open cast	
33	Category (Fully Mechanized, Others or Manual)	OTFM	
34	Captive/Non Captive	NON CAPTIVE	
35	Environment Clearance grant date & limit of EC	05.04.2007, 40,000 MTPA (Only for Manganese)	
36	CTO	40,000, MTPA -28/03/2023 (Only for Manganese)	

Exploration

S.N.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year (2020-21)& (2021-22)	16	16	
1b	Exploration over lease area for Geological axis 1 or 2.	Nil	G2	
1c	Exploration Agency & Expenditure in lakh Rupees during the year	---	Done by the lessee.	
1d	Balance area to be explored to bring Geological axis in 1 or 2		121Ha- G1 269.317 Ha- G2	
1e	Balance reserves as on 01.04.2023 (in MT)	<u>Manganese Ore</u> As on 01.04.2022 UNFC: 111:81780 121:----- 122:482412.00 <u>Iron Ore</u> 122: 6031188	<u>Manganese Ore</u> As on 01.04.2023 UNFC: 111:41790 121:----- 122:482412.00 <u>Iron Ore</u> 122: 6031188	
1f	General remarks of inspecting officer on geology, exploration etc.	The deposit in the area forms a part of the South Eastern part of the Singhbhum Keonjhar belt and is represented by narrow easterly plunging synclonirium of 60 KM length 25 KM width. The general strike is North East to North, dips are moderate to west.		

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Development

S.N.	Item	Proposals	Actual work	Remarks
2a	Location of development w.r.t. lease area	N2410749-24110648N & E307431-307601	N2410749-24110648N & E307431-307601	Within the proposed extent
2b	Separate benches in topsoil, overburden and mineral (Rule 15)	No proposal	Not Applicable	
2c	Stripping ratio or ore to OB ratio (T/T)	1:2.30 to 1:4.50	1:2.21	Less generation of OB during FY 2022-23 No significant change.
2d	Quantity of topsoil generation in m ³	No proposal during the reporting year	Not Applicable	
2e	Quantity of overburden/waste generation in m ³	58,220 Cu.m	39,345 Cu.m	Less generation of OB during FY 2022-23 vis a vis ROM
2f	General remarks of inspecting officer on development of pit w.r.t. type of deposit etc.	The mine working is confined to 1 pit only. The work is being broadly carried out as per proposals in the approved document.		

Exploitation

S.N.	Item	Proposals	Actual work	Remarks
3a	Number of pits proposed for production	1 pit	1 pit	Nandagira Quarry 240 m(L) x 300 m (B)x25m(D)
3b	Quantity of ROM production	59228MT	39990MT	
3c	Recovery of salable/usable mineral from ROM production	52119.6MT	44340.070MT	
3d	Quantity of mineral reject generation	7108.40MT	5677.636	
3e	Grade of mineral reject generation and threshold value declared	17%&10% - Mn.	16.01- Mn.	
3f	Quantity of sub-grade mineral generation	7108.40MT	5677.636	
3g	Grade of sub-grade mineral generation	17%&10% - Mn.	16.01 – Mn.	
3h	Manual / Mechanized method adopted for segregating from ROM	Manual method proposed for segregating from ROM	Manual method adopted for segregating from ROM	
3i	Any analysis or beneficiation study proposed & carried out for sub-grade mineral and reject	No beneficiation study proposed.	Not Applicable	
3j	Provision of drilling & blasting in mineral benches	Drilling and Blasting proposed in mineral benches.	Drilling and blasting was carried out in mineral benches	Dia of DTH: 115 Mtrs. Spacing:2.5m Burden:2.0m
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.	Mining is carried out by mechanized open cast mining in combination of backhoe(3.2 Cu.m) and Dumper (20 tonne)with

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				deep hole drilling and blasting	
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	Height of the benches proposed to be maintained as 6 meter with width of 9 m	Height of the benches maintained as 6 meter with width of 8-9 m		
3m	Total area covered under excavation/pits	27.207 ha.	27.207 ha.		
3n	Ore to OB ratio for the pit/mine during the year(T/T)	1:2.30 to 1:4.50	1:2.21	No significant change	
3o	Total area put in use under different heads at the end of year	As per the proposal		Actual	
		Excavation	27.207	Excavation	27.207
		OB dump	19.894	OB dump	19.894
		Mineral storage	17.804	Mineral storage	12.500
		Infrastructure	3.984	Infrastructure	3.984
		Road plantation & others	55.58	Road plantation & others	55.00
3p	Production of ROM mineral during last five-year period, as applicable				
	Year- 2018-19	NA	NA		
	Year- 2019-20	NA	NA		
	Year- 2020-21	44,964 MT	39,985 MT		
	Year- 2021-22	44,964 MT	39,550 MT		
	Year-2022-23	59,228 MT	39,990 MT		
	Total	1,49,156 MT	1,19,525 MT		
3q	General remarks of inspecting officer on method of mining etc.	Open-cast fully mechanised mining method with Backhoe-Dumper combination, with 6 m high and width up to 8-9m and deep drilling and blasting is being broadly carried as per approved document.			

Solid Waste Management-Dumping

S.N	Item	Proposals	Actual work	Remarks
4a	Separate dumping of topsoil, OB & mineral reject (Rule 32, 33)	Separate dump for OB and Mineral Reject Proposed proposed.	Separate dump for OB and Mineral Reject Proposed made.	Dumping are being carried out at Dump- 4 (Active)
4b	Location of topsoil, OB & mineral reject dumps	Dump – 4 OB: 2410970 – 2411450 & 308660-308840	Dump – 4 OB : 2410970 – 2411450 & 308660-	Dumping are being carried out at Dump- 4 (Active)

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4c	Number of dumps within lease area and outside the lease area	Within ML:06 Outside ML:00	Within ML:06 Outside ML:00	Dump – 1 : 2412330- 2412710 & 307415- 307648 Dump – 2 : 2412105- 2412275 & 3017240 - 307335 Dump – 3 : 2411780 – 2412350 & 307400- 307750 Dump – 4 : 2410970 – 2411450 & 308660- 308840 Dump – 5 : 2410570 – 2410595 & 308360- 308440 Dump – 6 : 24101025 – 2410110 &308360- 308470
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	Beyond UPL	Beyond UPL	
4e	Number of active & alive dumps	01	01	Dump – 4 N2410970 – N2411450 & E308660- E308840
4f	Number of dead dumps	05	05	Dump – 1 : 2412330- 2412710 & 307415- 307648 Dump – 2 : 2412105- 2412275 & 3017240 - 307335 Dump – 3 : 2411780 – 2412350 & 307400- 307750 Dump – 5 : 2410570 – 2410595 & 308360- 308440 Dump – 6 : 24101025 – 2410110 &308360- 308470

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4g	Number of dumps stabilized	05	05	Dump – 1 : 2412330- 2412710 & 307415- 307648 Dump – 2 : 2412105- 2412275 & 3017240 - 307335 Dump – 3 : 2411780 – 2412350 & 307400- 307750 Dump – 5 : 2410570 – 2410595 & 308360- 308440 Dump – 6 : 24101025 – 2410110 &308360- 308470		
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 made all along dumps.			
4i	Length of Retaining wall or garland drain all along the dump	Retaining wall(m)	Garland drain(m)	Retaining wall(m)	Garland drain(m)	--
		270 m x 1 m x 1 m	300 m x 1 m x 1.5 m	350 m x 1 m x 1 m	450 m x 1 x 1.5 m	
4j	Number of settling ponds	1 no.	1no.	N21°47'33.47" , E85°08'48.48'		
	Specific comments of inspecting officer on waste dump management	Overburden, mineral management is broadly as per proposal are being carried out as per the approved proposals				

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 proposal during the reporting year	Not Applicable	
5b	Area under backfilling of mined out area	No proposal during the reporting year	Not Applicable	
5c	Concurrent use of topsoil for restoration or rehabilitation of mined out area (Rule 32)	No Top Soil Generation during reporting year	Not Applicable	
5d	Total area fully reclaimed & rehabilitated	No proposal during the reporting year	Not Applicable	
5e	General remarks of inspecting officer on backfilling, reclamation etc	There is no proposal for Backfilling during the reporting year.		

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Progressive Mine Closure Plan

Sl.N	Item	Proposals	Actual work	Remarks
6a	Whether Annual report on PMCP submitted on time and correctly. Rule 23 E(2).	To be submitted by 1 st July	Submitted	Submitted on : 20.04.2023
6b	Area available for rehabilitation (ha).	No Proposal	Nil	
6c	afforestation done (ha).	1.0	1.5	308721/2411094-308765/2411201
6d	No. of saplings planted during the year	2,000 nos.	3,000 nos.	Within lease area (2,000 nos.) Outside lease area (00100,00000 000 nos.- distribution)
6e	Cumulative no. of plants	6,000 nos.	10,000 nos.	Within lease area (10,000 nos.) Outside lease area (2750 nos.- distribution)
6f	Any other method of rehabilitation	Coir mating, grass seeding	Coir mating, grass seeding	308721/2411094-308765/2411201
6g	Cost incurred on watch and care during the year	Not Specified	1,37,500.00	
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (Lx B x D	Nil	Nil	
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	Nil	Nil	
6j	Compliance on reclamation and rehabilitation by backfilling (iii)Afforestation on 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 rehabilitation (ha)	Nil	Nil	
6o	Compliance of rehabilitation of waste land within lease (iii) Method of rehabilitation	Nil	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.
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

S.N.	Item	Proposals	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	Grade wise sorting and sizing proposed	Grade wise sorting and sizing done.	
7b	Method of grade-wise mineral sorting i.e. manual or mechanical	Manual Method of grade-wise mineral sorting proposed.	Manual Method of grade-wise mineral sorting carried out.	
7c	Different grade of mineral sorted out at mines	Below 25 % Mn. 25 % to 35 % Mn. 35 % to 46 % Mn.	Below 25 % Mn. 25 % to 35 % Mn. 35 % to 46 % Mn.	
7d	Any beneficiation process at mines	No Beneficiation process proposed	No Beneficiation process carried out.	
7e	General remarks of inspecting officer on Mineral conservation & beneficiation issues	No Beneficiation process carried out. Manual Method of grade-wise mineral sorting was carried out		

Environment

S.N.	Item	Proposals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	No proposal for Top Soil generation during the reporting year	Not done	
8b	Concurrent use or storage of topsoil	Not Applicable	Not Applicable	
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	Separate dumps for OB and Mineral rejects proposed	Separate dumps for OB and Mineral rejects made	
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	No such proposal	Not Applicable	
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc.)	No such proposal	Not Applicable	
8f	Baseline information on existence of plantation & additional plantation done (Rule 41)	2,06,196 Nos.	3,300 nos.	2,09,496 nos.
8g	Survival rate	76.00 %	82.00 %	
8h	Water sprinkling on roads to control airborne dust			Engaged 2 nos. of mobile water tanker (20,000 KL capacity)
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area	Aesthetic beauty in & around mines area is 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.		

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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 December -2023 A.R. Submitted upto 2022-23		AR 2023-24 submitted on 28 th June, 2023.
	Item	Details given in AR	Observation of I/Officer	
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Mine Manager- Mr. Chandra Kanta Rath, Mining Engineer- Mr. Gayatri Prasad Mishra, Mining Geologist- Mr. Jhasketan Sahoo,	Mine Manager- None, Mining Engineer- None Mining Geologist- None	
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Mining- 27.07Ha Mineral Storage- 17.804 Ha Waste Disposal- 19.894Ha Infrastructure- 3.984Ha Road Plantation etc-55.58 Ha	Mining- 27.07Ha Mineral Storage- 12.500 Ha Waste Disposal- 19.894Ha Infrastructure- 3.984Ha Road Plantation etc- 55.00 Ha	
9d	Scrutiny of Annual return on afforestation	Inside ML-2000 Outside ML-1000	Appears to be correct	
9e	Scrutiny of Annual return on mineral reject generation (Grade & quantity)	2304 tonnes, 10%	Appears to be correct	
9f	Scrutiny of Annual return on ROM stock and/or graded ore	ROM-6575 tonnes	Appears to be correct	
9g	Scrutiny of Annual return on sale value, Ex. Mine price & production cost	Below 25 % Mn-Rs 3066.64 25 % to 35 % Mn-6973.28 35 % to 46 % Mn.-10300 Cost of Production: Rs. 7703.89	Appears to be correct	
9h	Scrutiny of Annual return on fixed assets	Rs 80287016 including land, plant etc	Appears to be correct	
9i	Scrutiny of Annual return on mining machineries	Excavator-05 Wheel Loader-01 Back Hoe Loader-01 Tipper-09 Drill-01 Dozer-01	Wheel Loader-01 Dozer-01 Back Hoe-01 Tipper-09 Shovel-03	