I/23170/2024

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	Bamebari Iron and Manganese Mine
2	Date of inspection	**13/12/2023**
3	Name of inspecting officer	Prashant S Hegde, RMG
4	Name accompanying mine officials	S/Shri Sabyasachy Mishra, Head (Mines &Production Planning), Rajib Deb, Principal Geologist, Niranjan Kumar, Mines Manager and other mine officials.
5	Last date of Inspection & Officer	23/06/2022 Shri Sanjib Kumar Mohapatra, SMG
6	Total Lease Area (Ha) with breakup of Non-forest and forest land	464 Ha area retained out of original 1150.550 Ha (448.395 Ha Forest + 15.605 Ha Non- forest)
7	Minecode	400RI08003
8	IBM Registration Number under rule 45 of MCDR, 2017	IBM/4376/2011
9	Name of the lessee, Address, phone, email and fax number	M/s TATA Steel Ltd, Regd. Office: Bombay House, 24 Homi Mody Street, Mumbai – 400 001
10	Village	Palasa(ka), Kundaposi, Bandhuabeda, Namira, Boneikela, Jadibahal & Jajanga etc.
11	Taluka/Mandal	Barbil
12	District	Keonjhar
13	Pincode	758034
14	State	ODISHA
15	Post office	Bamebari
16	Nearest police station	Joda
17	Nearest Railway station	Banspani
18	Date of Grant of Mining Lease	01/04/1930
19	Date of Execution	07/07/1931
20	Date of opening of Mine	05/05/1938
21	Date of expiry	31/03/2030
22	Name of the **Nominated Owner** with Address, phone, email, fax number and date of appointment	Shri Thachat Viswanath Narendran Managing Director M/s Tata Steel Limited, Jamshedpur, Dist- East Singbhum JHARKHAND-831001 Phone-0657-2424602 Fax-022-66657724, Email: mdoffice@tatasteel.com Dt. of Appointment: - 01.11.2013
23	Name of the **Mine Agent** with Address, phone, email, fax number and date of appointment	Mr. Awnish Kumar, Agent & Chief, Manganese Group of Mines, AT/PO. Bichhakund, VIA – Joda, Dist. Keonjhar, PIN – 758034 Phone – 9238306100 Email: awnish.kumar@tatasteel.com

		Dt. of Appointment – 20.10.2021
24	Name of the **Mines Manager** with Address, mobile no, email, fax number and date of appointment in mine	Mr. Niranjan Kumar, AMIE & FCC Bamebari Iron and Manganese Mines, At/PO- Bamebari Via-Joda Dist- Keonjhar Odisha-758034 Tel: 9204058109 Email: niranjan.kumar@tatasteel.com Date of appointment: 10.05.2023
25	Name of the **Mining Engineer**, Qualification and total experience with Address, mobile no, email, fax/phone number and date of appointment in mine	Mr. Alok Singh Sardar, B.Tech. (Mining), Experience - 7.5 Years Bamebari Iron and Manganese Mines, At/PO-Bamebari, Dist- Keonjhar, Odisha-758034 Tel: 8769579977 Email: alok.sardar1@tatasteel.com Dt. of Appointment-30.05.2022
26	Name of the **Geologist**, Qualification and total experience with Address, mobile no, email, fax number and date of appointment in mine	Shri Sangeeth G Experience – 10 yrs. Bamebari Iron and Manganese Mine, At/PO-Bamebari, Via-Joda, Dist- Keonjhar Odisha-758034 Tel: 7763807661, Email: sangeeth@tatasteel.com Dt. of Appointment- 15.05.2023
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 Review of Mining Plan Letter No. RMP/A/08-ORI/BHU/2020-21 dated 03.08.2020 for period 2020-21 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)	Fully Mechanized
31	Captive/Non Captive	Captive
32	Present EC Capacity	Mn. Ore – 83,200 Tonnes/Annum.

OBSERVATIONS/COMMENTS OF INSPECTING OFFICER:

1)Exploration:---

SL.No.	Item	Proposals (FY 2022-23)	Actual work	Remarks
1a	Backlog of previous year	FY-20-21:438 nos of BHs with total 21,900 m; FY-21-22: 905 nos of BHs with total 45,430 m FY: 22-23:NIL	NIL; Backlog exploration reported to be not carried out due to non-availability of statutory clearances.	V/L issued on 4/1/24.

1b	Exploration over lease area for Geological axis 1 or 2.	Exploration of remaining area to G-1 level	Nil	Total Lease Status as on 01-04-2023 is G1: 115.73 HA G2: 88.72 Ha
1c	Exploration Agency & Expenditure in lakh Rupees during the year	NA	Nil	_____
1d	Balance area to be explored to bring Geological axis in 1 or 2	NA	Balance of 259.55 Ha to be explored	V/L issued.
1e	Balance reserves as on 01.04.2023	NA	Mn- Ore (+10 % Mn) reserves 111: 2,693,961 tonnes; Iron Ore (+45 % Fe) reserves(111+122) : 673,618 tonnes	Based on approved RMP dated 3/8/2020
1f:	General remarks of inspecting Officer on Geology, exploration etc.	Bamebari Iron & Manganese deposit lies in the western portion of Singhbhum-Orissa Craton. Manganese mineralization is mainly confined to the weathered shale horizon. General strike of the formation is NS to NE-SW with dip varying from 10 to 30 degree towards west. Manganese ore occurs as lenses and pockets (length of a meter to 200 m & thickness 2 to 49 m) in association with laterite, cherty & jaspery quartzite, shale and iron ore. Backlog exploration reported to be not carried out due to non-availability of statutory clearances. However, V/L pointed out for deviation of exploration for speed-up of action.		

2)Development:--

SL. No.	Item	Proposals (FY 2022-23)	Actual work	Remarks
2a	Location of development w.r.t. lease area	Bamebari Block– 2450N - 2731N & 3262E - 3545E; from 524 mRL to 628 mRL Joribar Block - 11298N-11572N & 12312E-12777E; from508 mRL to 628 mRL Bonaikela Block - 4175N-4281N & 4825E-4958E; from 550 mRL to 582 mRL.	Bamebari – No development; Joribar - 11299N-11565N & 12322E-12771E from 510 mRL to 628 mRL (Broadly as per the proposals) Bonaikela - No development.	Due to pending Forest Clearance.
2b	Separate benches in topsoil, overburden and mineral	Separate benches for OB and Ore	As per the proposals.	_____

2c	Stripping ratio or ore to OB ratio	(Ratio in Tonnes) Bamebari – 1: 7.27 Joribar – 1: 1.05 Bonaikela – 1: 2.22 Overall Avg. 1: 2.25 (Ore includes Mn. Ore & Iron Ore Mineral Rejects)	(Ratio in Tonnes) Bamebari – Nil Joribar – 1: 3.73 Bonaikela – Nil Overall Avg. 1: 3.73 (Ore includes Mn. Ore & Iron Ore Mineral Rejects) (BD:2 for OB wastes)	Due to working at Joribar Block only and pending FC. V/L issued for deviation.
2d	Quantity of topsoil generation in m3	No proposals	Nil	_____
2e	Quantity of overburden generation in m3	Bamebari – 372,745 CuM Joribar – 224,894 CuM Bonaikela – 60,315 CuM Total –657,954 CuM	Bamebari – Nil Joribar – 221,084 CuM Bonaikela – Nil Total – 221,084 CuM	Due to working at Joribar Block only and pending FC. V/L issued.
2f	General remarks of inspecting Officer on development of pit w.r.t. type of deposit etc	Development of Joribar-block is being carried out as per approved RMP. Developments of Bamebari and Bonaikela-blocks are not being carried out due pending FC and EC limit. However, the violation pointed out for deviation.		

3)Exploitation:--

SL.No.	Item	Proposals (FY 2022-23)	Actual work	Remarks
3a	Number of pits proposed for production	Bamebari Block – 1 No. Joribar Block – 1 No. Bonaikela Block – 1 No.	Bamebari Block – Nil Joribar Block – 1 No. Bonaikela Block – Nil	Due to pending FC & EC.
3b	Quantity of ROM mineral production proposed	Mn-Ore: Bamebari – 58,039 Tonnes Joribar – 3,41,049 Tonnes Bonaikela – 35,712 Tonnes Grand Total – 4,34,800 Tonnes	Mn-Ore Bamebari – Nil Joribar – 83,073 Tonnes Bonaikela – Nil Grand Total – 83,073 Tonnes	Due to pending FC & EC.
3c	Recovery of salable/usable mineral from ROM	56 % (Joribar-block) (191,110 Tonnes)	82 % (Joribar-block) (68,058 Tonnes)	As per actual mining & EC limit. V/L issued for

	production			deviation.
3d	Quantity of mineral reject generation	Joribar-block : Mn Ore: 149,939 Tonnes Fe Ore: 86,922 Tonnes	Joribar-block: Mn Ore: 15,015 Tonnes Fe Ore: 35,535 Tonnes	4,984 Tonnes consumed by blending with upper grade.
3e	Grade of mineral reject generation and threshold value declared	MR: Mn ore:10 to <25 % Mn Iron Ore : 45 to < 58 % Fe	MR: Mn ore: 20 % Mn Iron Ore : 46 % Fe	Threshold value of Iron Ore : +45 % Fe ; & Mn-ore +10 % Mn; Sub-grade/MR of iron ore incidentally generated and stacked separately.
3f	Quantity of sub-grade mineral generation	Same as para 3d		Sub-grade mineral/ mineral reject are being stacked separately & MR of Mn ore is being utilized by blending based on market demand.
3g	Grade of sub-grade mineral generation	Same as para 3e		
3h	Manual / Mechanised method adopted for segregating from ROM	Manual	Manual	-----
3i	Any analysis or beneficiation study proposed & carried out for sub-grade mineral and reject	No such proposals during year	NIL	_____
3j	Provision of drilling & blasting in mineral benches	Yes; Deep hole Drilling blasting Depth of hole = 8 m +10% subgrade =8.8m Spacing= 3m Burden= 2.5 m Volume= 60 CuM Specific Gravity=2.5 Tonnage/Hole= 150	As per the proposals.	_____

<table>
<tr><td></td><td></td><td>Tonnes
Powder factor= 6.0 kg/Tonne</td><td></td><td></td></tr>
<tr><td>3k</td><td>Provision of mining machineries in mineral benches</td><td>Yes; Excavators and Dumpers combination.</td><td>As per the proposals.</td><td>_____</td></tr>
<tr><td>3l</td><td>Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM</td><td>Bench Height: 6-8 m
Bench Width: 8-10 m</td><td>Height – 6-8 m
Width- 8-10m</td><td>_____</td></tr>
<tr><td>3m</td><td>Total area covered under excavation/ pits</td><td>101.138 Ha (For end of FY-24-25).</td><td>88.485 ha.</td><td>Due to delay in processing of fresh Environment Clearance for enhanced production.</td></tr>
<tr><td>3n</td><td>Ore to OB ratio for the pit/mine during the year</td><td>(Ratio in Tonnes)
Bamebari – 1: 7.27
Joribar – 1: 1.05
Bonaikela – 1: 2.22
Overall Avg. 1: 2.25
(Ore includes Mn. Ore & Iron Ore Mineral Rejects)</td><td>(Ratio in Tonnes)
Bamebari – Nil
Joribar – 1: 3.73
Bonaikela – Nil
Overall Avg. 1: 3.73
(Ore includes Mn. Ore & Iron Ore Mineral Rejects)</td><td>Due to working at Joribar Block only and pending FC. V/L issued.</td></tr>
<tr><td>3o</td><td>Total area put in use under different heads at the end of year</td><td><table><tr><td>Particulars</td><td>Total Area(Ha) at the end of FY 2024-25</td></tr><tr><td>Area under Mining</td><td>101.138</td></tr><tr><td>Overburden/ Waste dumping</td><td>57.166</td></tr><tr><td>Mineral Storage</td><td>14.708</td></tr><tr><td>Area Occupied Infrastructure, plants, buildings , roads etc</td><td>41.221</td></tr></table></td><td><table><tr><td>Particulars</td><td>Total Area(Ha) at the end of FY 2022-23</td></tr><tr><td>Area under Mining</td><td>88.485</td></tr><tr><td>Overburden/ Waste dumping</td><td>46.884</td></tr><tr><td>Mineral Storage</td><td>9.634</td></tr><tr><td>Area Occupied Infrastructure, plants, buildings , roads etc</td><td>41.928</td></tr></table>
Broadly within the proposals.</td><td>As reported Infrastructure & Road_ Widening of NH 215 by NHAI affected area at Bonaikela Block.</td></tr>
<tr><td>3p</td><td>Production of ROM mineral during last five-years</td><td>Mn-Ore:
FY 18-19: 97,882
FY 19-20: 97,882
FY 20-21: 96,400
FY 21-22: 2,75,680</td><td>Mn-Ore:
FY 18-19: 79,619
FY 19-20: 92,223
FY 20-21: 89,839
FY 21-22: 56,182</td><td>Unit in Tonnes</td></tr>
</table>

	period, as applicable	FY 22-23: 4,34,800	FY 22-23: 83,073	
3q	General remarks of inspecting Officer on method of mining etc		Open-cast fully mechanized mining method is being carried as per approved RMP. The production was restricted to present EC limit and target of production was not achieved due to delay in processing of fresh Environment Clearance for enhanced production. The V/L issued for deviation in approved proposals.	

4)Solid Waste Management-Dumping:--

SL.No.	Item	Proposals (FY 2022-23)	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 & mineral reject dumps	Waste Dump: ***Bamebari Block***: Back filling of quarry within the extent of 2182N - 2730N & 3047E - 3543E from 590 mRL to 620 mRL; ***Joribar Blcok :***Due to dearth of space, disposal proposed at exhausted quarry of Bamebari Block by back-filling within the extent of 2182N - 2730N & 3047E - 3543E from 590 mRL to 620 mRL; **Bonaikela Block**: New Waste dump will be developed from 2020-21 within the extent of 4395N – 4606N & 4890E - 5180E from 570 mRL to 580 mRL; **Mineral Reject Dumps**: **Bamebari Block** : Mn. Ore - 2503N – 2702N & 3141E – 3250E from 577 to 580 mRL; Iron Ore - 2759N – 2966N & 3162E – 3406E from 603 to 620 mRL; **Joribar Block** : Mn. Ore - 11620N-	No development and OB waste/ MR generation from Bamebari & Bonaikela Blocks. ***Joribar Blcok :***– Overburden generated from Joribar Block disposed at exhausted quarry of Bamebari Block, by back-filling within the extent of 2182N - 2361N & 3086E - 3354E from 558 mRL to 582 mRL; **Mineral Reject:** Joribar Block (temporary in pit stacking due to want of Forest Clearance over proposed area) Mn. Ore – 11502 N-11592N & 12588E- 12796E from 572 to 587 mRL; Iron Ore – 11600N – 11698N & 12912E – 13010E from 565 to 575 mRL (Broadly as per proposals).	Due to delay in processing of fresh Environment Clearance and FC.

		11731N & 12456E - 12807E from 590 to 620 mRL; Iron Ore - 11600N – 11697N & 12800E - 13034E from 565 to 575 mRL; **Bonaikela Block** : Mn. Ore - 4033N – 4193N & 4980E – 5088E from 517 to 523 mRL; Iron Ore - 3842N - 3854N & 5054E - 5122E (within Ore Stack Area).		
4c	Number of dumps within lease area and outside lease area	7 nos of dumps within the lease area and one new dump proposed at Bonaikela Block.	7 nos of dumps within the lease area; new dump not developed due to non-working at Bonaikela Block.	_____
4d	Location of dumps w.r.t. ultimate pit limit	Dumps Located UPL and back-filling at ***Bamebari Block.***	Only back-fillings at Bamebari Block due to pending statuary clearance.	_____
4e	Number of active & alive dumps	OB of Bamebari and Joribar-block proposed to backfilled at Bamebari exhausted Pit. 1 Nos.new dump at Bonaikela Block.	Back-filling carried out as per proposals at Bamebari Block. New-Dump at Bonaikela Block was not developed due to non-operation at said block.	___
4f	Number of dead dumps	Bamebari:3 Nos. Joribar: 2 Nos. Bonaikela: 2 Nos.	Bamebari:3 Nos. Joribar: 2 Nos. Bonaikela: 2 Nos.	_____
4g	Number of dumps stabilished	No such proposal during year; Cum. details as follows Bamebari:3 Nos. Joribar: 1 Nos Bonaikela: 2 Nos.	NIL during year; Cum. details as follows Bamebari:3 Nos. Joribar: 1 Nos Bonaikela: 2 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	During year-22-23 Joribar Block – 270m of Retaining wall and garland drain	Joribar Block: 171.5m of Retaining wall and garland drain constructed during year.	The retaining wall and garland

	drain all along dump			drain of 171.5m at toe of MR Stack (M#1) has been constructed due to no further extension of stack due to want of Forest Clearance.
4j	Number of settling ponds	Nil	Existing Settling Ponds were well maintained.	____
4k	Specific comments of inspecting Officer on waste dump managemen t	Overburden wastes and mineral reject management are being carried out as per the approved proposals.		

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	Bamebari Block -Back filling of exhausted quarry within the extent of 2182N - 2730N & 3047E - 3543E from 590 mRL to 620 mRL	Bamebari Block – Back-filling carried out within the extent of 2182N - 2361N & 3086E - 3354E from 558 mRL to 582 mRL	_____
5b	Area under backfilling of mined out area	4.300 Ha.	3.857 Ha.	_____
5c	Concurrent use of topsoil for restoration or rehabilitation of mined out area	No generation of Topsoil.	NIL	_____
5d	Total area fully reclaimed & rehabilitated	No proposals	NIL	_____
5e	General remarks of inspecting Officer on backfilling and reclamation etc	Due to dearth of space, the back-filling are being carried at exhausted part of quarry at Bamebari Block as per approved proposals. As reported, the cumulative of 19.857 Ha area back-filled so far (within the ML).		

6)Progressive Mine Closure Plan:---

SL.N.	Item	Proposals **(FY 2022-23)**	Actual work	Remarks
6a	Whether Annual report on PMCP submitted on time and correctly - Rule 26(2). (Hard copy same provided)	Before 1st July 2023	Submitted on time	NIL
6b	Management of worked/ mined out benches/dumps i) Area available for rehabilitation (ha) ii) Afforestation done (ha) 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 year	i)Nil ii) 1.8 HA iii4500 nos iv) NA v)Plantation vi) NA	i)Nil ii)1.2 Ha iii)3181 nos Within ML+1895 nos Outside ML iv) 2,87,220 nos v) Plantation vi) 8.10 lakhs	The cumulative planation include plantation on waste dump, safety zone, back filled area and avenue.
6c	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)4.3 Ha ii) 5,97,369 m3 iii)NIL iv)NIL v)NIL	i)3.857 Ha ii) 221,084 m3 iii)1 Ha iv)NIL v)NIL	Due to Less overburden wastes generation.
6d	Compliance of Rehabilitation of waste land within lease i) Afforestation ii) Area rehabilitated (ha) iii) Method of rehabilitation	i)NIL ii)Nil iii)Nil	i)NIL ii)Nil iii)Nil	NIL
6e	Compliance of Environmental monitoring (core zone & buffer zone)	Environmental monitoring in Core zone and buffer zone will	Environmental monitoring in Core zone and buffer zone was carried out	NIL

		be as per MOEF& CC and SPCB guidelines.	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 implementing PMCP proposals as per approved MP.		

7)Mineral Conservation:---

SL.No.	Item	Proposals **((FY 2022-23)**	Actual work	Remarks
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 mechanical	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 (iii)35 to below 46 % Mn And (iv)46 % and above Mn Size Range : +10 to 75mm, +6 to 25mm & -10mm	As per proposals	NIL
7d	Any beneficiation process at mines	None	None	NIL
7e	General remarks of inspecting Officer on mineral conservation & beneficiation issues	Grade-wise manual soring & dispatches of ore/mineral as per the proposals and there is no mineral conservation 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	OB wastes will be Back-filled at exhausted part of quarry at Bamebari Block & Separate	Carried out as per approved proposals.	_____

		stacking of mineral rejects proposed		
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	i)Backfilling of exhausted pit (Bamebari Block) ii)Rehabilitation of inactive slopes of Waste Dumps (Bonaikela Block)	i)Back-filling is in progress. ii)New dump was yet to be developed due to pending statutory clearances. .	Nil
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	Rehabilitation of Back filled part (Bamebari Block) – 1 ha with 2500 Nos, of saplings. Dump slope stabilization (Bonaikela Block) – 0.8 ha – 2000 Nos. of saplings.	Rehabilitation of Back filled part (Bamebari Block) – 1.20 ha with 3181 Nos of saplings. New dump has not yet been developed due to pending statutory clearances. .	Nil
8f	Baseline information on existence of plantation & additional plantation done	4500 nos saplings plantation during FY 22-23.	3181 nos saplings planted in 1.2 Ha area within ML +1895 nos ousdie the ML. during year 22-23 with cumulative 2,87,220 nos of saplings within ML and 10,899 nos of saplings outside ML.	_____
8g	Survival rate	NA	84 %	____
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 tanker/mobile water sprinklers to suppress the dust.	Carried out as per the proposals.	_____
8i	General remarks of inspecting Officer on aesthetic beauty in & around mines area.	Aesthetic beauty in & around mines area is good as lessee implementing the PMCP proposal and carried out plantation as per the 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 on-time.		_____
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 – Mr. Niranjan Kumar Mining Engineer – Mr. Alok Singh Sardar Geologist – Mr. Sangeeth G	Actual also the same.	_____
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	(1) Covered under current (O/C) Workings- 88.485 Ha (2) Used for Waste Disposal- 46.884 Ha (3) Occupied by plant, buildings, residential, welfare, buildings and roads- 41.928 Ha (4) Other Purpose (including Mineral Storage)- 30.97 Ha (5) Reclaimed-rehabilitated : 54.986	Actual also as per AR except Reclaimed-rehabilitated area.	V/L issued.
9d	Scrutiny of Annual return on afforestation	3,181 nos WML 1,895 nos OML	Actual also as per AR	____
9e	Scrutiny of Annual return on mineral reject generation (Grade & quantity)	During year-22-23 Mn: from Unprocessed Ore (Avg. 20 % Mn (10-25 % Mn) — 5,933 tonnes Mn: From Processed Ore (Avg 20 % Mn 10-25 % Mn) — 9,082 tonnes Iron: from Unprocessed Ore (Avg. 46 % Fe 45 to 58 % Fe) — 35,535 tonnes	Actual also as per AR	____
9f	Scrutiny of Annual return on ROM stock and/or graded ore	As on 31.03.2023 tonnes Stock Mn-Ore ROM: NIL **Mn_ore closing stock in tonnes** below 25 % Mn — 3,50,328 25%- below — 20,253	Appear to be correct.	_____

<table>
<tr><td></td><td></td><td><table>
<tr><td>35%Fe</td><td></td></tr>
<tr><td>35%- below 46%Fe</td><td>890</td></tr>
<tr><td>46 % and above Mn</td><td>1,308</td></tr>
</table></td><td></td><td></td></tr>
<tr><td>9g</td><td>Scrutiny of Annual return on sale value, Ex. Mine price & production cost</td><td>Cost of production: Rs-4891.16 per tonne;
Ex-mine price:<table>
<tr><th colspan="2">Ex-mine Price of Iron ore Fines in Rs per tonne</th></tr>
<tr><td>below 25 % Mn</td><td>1119.67</td></tr>
<tr><td>25%- below 35%Fe</td><td>2873.88</td></tr>
<tr><td>35%- below 46%Fe</td><td>5147.88</td></tr>
<tr><td>46 % and above Mn</td><td>9156.41</td></tr>
</table></td><td>Cost of Production appear to be correct; and ex-mine calculation was not as per rule 45(8)(b)</td><td>V/L issued on 4/1/24.</td></tr>
<tr><td>9i</td><td>Scrutiny of Annual return on fixed assets</td><td>Fixed Value of Assets: Rs 14,57,25,000</td><td>Appear to be correct.</td><td>_____</td></tr>
<tr><td>9k</td><td>Scrutiny of Annual return on mining machineries</td><td>Excavator (Backhoe) – 4 Nos.
Dumpers – 24 Nos.
Drill (100mm Dia) – 1 Nos.
Dozer – 1 Nos.
Wheel Loader- 1 Nos.
Grader – 1 No.
Water Tanker – 1 No.
Explosive Van – 1 No.</td><td>Observed to be correct.</td><td>_____</td></tr>
</table>

(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 23/6/22, the violation of rule 11(1) of MCDR 2017 was pointed out and subsequently, said rule complied on 31/8/22.

(b)During current inspection: The violation of Rules 11(1) & 45(7) of MCDR 2017 have been observed and the violation letter issued on 04/01/24.

(11) On-line validation of star rating of templates submitted under rule 35 (FY-2022-23) has been made on 04/01/24 for four star at RO level.

(12)The lessee was submitted DAI/drone survey data under rule 34A for FY 22-23 on 18/7/2023.

Date: 5/01/2024

Signed by Prashant S Hegde
Date: 05-01-2024 16:21:20
Reason: Approved

(Prashant S. Hegde)
Regional Mining Geologist