MCDR INSPECTION REPORT

General

SN	Particulars	Details
1	File no	MCDR-MiFL0Mn/3/2022-BBS-IBM_RO_BBS
2	Name of Inspecting Officer	Mr. Vikram Deshpande, ACOM, IBM, BBSR
3	Name of the Mine	Joda West Iron and Manganese Mine, Tata Steel Limited
4	Total Lease Area (Ha) with breakup of Non-forest and forest land	Lease Area – 1437.719 Ha. Reserve Forest: 505.392 ha, Khesra Forest: 43.867 Ha DLC Forest: 618.054 Ha. Sabik Forest: 79.239 Ha Total Forest: 1246.552 Ha. --- Non-Forest Area (Ha) Break up: - Waste Land: 99.27 Ha Grazing: 0 Agricultural Land: 45.250 Other Land: 46.647 (Gharbari-20.670, Road-16.578, Karkhana-8.443, Danda-0.781, Debasthali-0.175) Ha Total Non-Forest Land: - 191.167 Ha
5	Mine code	400RI08019
6	Date of Inspection	12.12.2024
7	Name of official accompanying inspection	Shri Saptharshi Datta, Mine Manager, Shri Ajoy Kumar Nandi, Geologist
8	IBM Registration Number under rule 45 of MCDR, 1988	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	Joda, Kamarjoda, Bichhakundi, Banspani, Bhuyan roida and Baitarani RF
11	Taluka/Mandal	Barbil
12	District	Keonjhar
13	Pincode	758034
14	State	ODISHA
15	Post office	Bichhakundi, VIA - Joda
16	Nearest police station	Joda
17	Nearest Railway station	Banspani
18	Date of Grant of Mining Lease	1st Grant: 30 years from 17.01.1933 to 16.01.1963 over 1437.719 ha
19	Date of Execution	07-12-1934 (Mining Lease)
20	Date of opening of Mine	19-01-1933
21	Date of first Renewal, if applicable and its period & expiry	Grant Order No. Iii(A) Mg.87/73-11510 Dt. 21.11.1973 Execution- Dt. 10.01.1978 Period-17.01.1963 to 16.01.1983
22	Date of second Renewal, if applicable and its period & expiry	Grant Order- Letter No. III (A)MG-58/83-14879 MG, 24.12.1983 Execution- Dt. 27.11.1984 Period-17.1.1983 TO 16.1.2003
23	Date of submission of renewal application if Mining Operations are continuing under deemed extension	3rd Renewal – Express order passed by Government of Odisha vide letter no. SM-SM-III (A) 14/2006/4068, dated 31.05.2014 over an area 1437.719 ha. Subsequent to promulgation of the MMDR (Amendment) Act, 2015, the lease has been extended till 31.03.2030 over the applied area of 1437.719 ha. The extension of validity period of mining lease for Joda West Iron and Manganese Mine had issued by Steel & Mine Department, Govt. of Odisha vide letter No. III (A)SM-14/20063308/SM. Bhubaneswar, dated. 18.04.2015. Supplementary lease deed for Joda West and Manganese Mine was executed on 06.05.2015 vide e-registration no. 11031500229, wherein the validity of the lease period has been extended till 31.03.2030.
24	Name of the Nominated Owner with Address, phone, email, fax number and date of appointment	Mr. Thachat Viswanath Narendran Managing Director M/S Tata Steel Limited, Jamshedpur, Dist- East Singbhum Phone-0657-2424602 Fax-022-66657724, Email: mdoffice@tatasteel.com JHARKHAND-831001 Dt. of Appointment: - 01.11.2013
25	Name of the Mine Agent with Address, phone, email, fax number and date of appointment	Mr. Shambhu Nath Jha, Agent & Chief, Manganese Group of Mines, AT/PO. Bichhakund, VIA – Joda, Dist. Keonjhar, PIN – 758034 Phone – 9438887778 Email: jhasn@tatasteel.com Dt. of Appointment – 21.03.2024
26	Name of the Mines Manager with Address, phone, email, fax number and date of appointment in mines	Shri Saptharshi Datta, B. Tech (Mining) & FCC, Experience – 14.5 yrs. Joda West Iron and Manganese Mine, At/PO- Bichhakundi, Via-Joda, Dist-Keonjhar, Odisha-758034

			Tel: 8114384791, Email: saptharshi.datta@tatasteel.com Dt. of Appointment- 23.08.2024
27	Name of the Mining Engineer & Geologist, Qualification and total experience	Mining engineer Qualification Date of appointment Address phone/email	Shri Saptharshi Datta, B. Tech (Mining) & FCC, Experience – 14.5 yrs. Joda West Iron and Manganese Mine, At/PO- Bichhakundi, Via-Joda, Dist-Keonjhar, Odisha-758034 Tel: 8114384791, Email: saptharshi.datta@tatasteel.com Dt. of Appointment-30.05.2022
		Geologist Qualification Date of appointment Address phone/email	Shri Ajoy Kumar Nandi, M. Tech. (Geo-Exploration) Experience – 15 yrs. Joda West Iron and Manganese Mine, At/PO- Bichhakundi, Via-Joda, Dist-Keonjhar Odisha-758034 Tel: 9608016260, Email: ajaykr.nandi@tatasteel.com Dt. of Appointment- 01.06.2024
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.		

Mining Plan / Scheme of Mining	Approval Letter No. & Date	Period
Mining Plan	BBS/KJ.Mn/MP-107. Dt.12.03.2002	2001-02 to 2007-08
Modification of Mining Plan	BBS/KJ/Mn/MP-107, Dt.24.03.2005	2003-04 to 2007-08
1st Review & Scheme of Mining	MS/OTFM.MECH/39-ORI/BHU/2008-09, Dt.17.02.09	2008-09 to 2012-13
2nd Review and Scheme of Mining	MS/OTFM/47-ORI/BHU/2012-13 Dt. 21.05.2013	2013-14 to 2017-18
Review of Mining Plan & Progressive Mine Closure Plan	MS/OTFM/18-ORI/BHU/2017-18/2016 Dt. 09.11.2017	2018-19 to 2022-23
Modification of Review of Mining Plan & Progressive Mine Closure Plan	MRMP/A/10-ORI/BHU/2020-21, Dt. 06.08.2020.	2020-21 to 2022-23
Review of Mining Plan & Progressive Mine Closure Plan	MCDR-MiFL0Mn/3/2022-BBS-IBM_RO_BBS, Dt. 28.03.2023	2023-24 to 2027-28

30	Date of Approval of Scheme of Mining/Modified Scheme of Mining with five-year period and specific condition in approval letter, if any.	Review of Mining Plan for the period 2023=24 to 2027-28 approved vide letter no. MCDR-MiFL0Mn/3/2022-BBS-IBM_RO_BBS, Dt. 28.03.2023
31	Mineral(s) granted in lease and proved for mining	Manganese and Iron Ore
32	Method of Mining (Opencast, Underground)	Opencast
33	Category (Fully Mechanized, Others or Manual)	A-OTFM
34	Captive/Non-Captive	Captive
35	Environment Clearance Grant Date & limit of EC	13.09.2005 (MoEF Letter No. J11015/86/2004-IA. II(M) Production of Manganese ore - 1.8 LTPA
36	CTO	Order No. 67 (Letter No. 4235/IND-I-CON-186, Dtd. 17.03.2022 with validity till 31.03.2026. Production of Manganese ore - 1.8 LTPA

Scientific Mining: Compliance of proposals of approved mining plan/Review of mining.

Exploration

S.N.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	Core – 662 Nos. – 33145m Non-Core – 2350 Nos. – 117540m Total – 3012 Nos. – 150685m	Core – 145 Nos. – 9616.85m Non-Core – 47 Nos. – 2775m Total – 192 Nos. 12391.85m	Less exploration due to want of Stage II Forest Clearance. (Exploration FDP is under process). Violation of Rule 12(4) of MCDR 2017 has been pointed out to the lessee
1b	Exploration over lease area for Geological axis 1 or 2.		G1: 17.890 Ha, G2: 8.164 Ha, Total: 26.054 Ha (G1+G2)	Total Lease Status as on 01-04-2024 is. G1: 357.877 Ha G2: 233.636 Ha
1c	Exploration Agency & Expenditure in lakh Rupees during the year	Not Specified	Rs.634.30 Lakhs.	
1d	Balance area to be explored to bring Geological axis in 1 or 2	-	846.206 Ha	
1e	Balance reserves as on 01.04.2024 (Mn. Ore)	-	30,56,803 tonnes	+10% Mn
	Balance reserves as on 01.04.2024 (Iron Ore)	-	572,17,962 tonnes	+45% Fe
1f	General remarks of inspecting officer on geology, exploration etc.	The mining lease area has not been completely explored under G-1 category hence violation of Rule 12(4) of MCDR 2017 has been pointed out to the lessee.		

Development

S.N.	Item	Proposals	Actual work	Remarks
2a	Location of development w.r.t. lease area	Mn. Pits – Gangaigora – 2433011N - 2433388N & 336035E - 336327E, from 544 to 456 mRL Sankhaiburu – 2432640N - 2432882N & 335936E – 336184E, from 616 to 528 mRL D'Quarry – 2433169N - 2433411N & 335445E - 335686E, from 632 to 576 mRL H'Quarry – 2432379N - 2432689N & 333867E – 334230E, from 584 to 488 mRL.	Mn. Pits – Gangaigora – 2433011N - 2433388N & 336035E - 336327E, from 542 to 465 mRL Sankhaiburu – 2432640N - 2432862N & 335936E – 336184E, from 612 to 540 mRL D'Quarry – 2433169N - 2433385N & 335445E - 335670E, from 632 to 573 mRL H'Quarry – 2432379N - 2432689N & 333867E – 334230E, from 584 to 492 mRL.	Pit Dimension (L X B X D) as on 01.04.2024 Gangaigora – 524m X 472m X 77m Sankhaiburu – 296m X 318m X 72m D Quarry – 865m X 719m X 94m H Quarry – 487m X 530m X 92m (Length and Breadth has been considered as maximum extent in N-S & E-W respectively)
2b	Separate benches in topsoil, overburden and mineral (Rule 15)	Separate benches in OB and mineral wherever possible.	Separate benches in OB and mineral are being maintained wherever possible.	No. of Benches as on 01.04.2024 – Gangaigora – 12 Nos. (OB : 9 + Ore : 3) Sankhaiburu – 10 Nos. (OB : 7 + Ore : 3) D' Quarry –11 Nos. (OB : 9 + Ore : 2) H' Quarry - 16 Nos. (OB : 12 + Ore : 4)
2c	Stripping ratio or ore to OB ratio	(ROM in Tonnes : Insitu OB in Tonnes) Gangaogora – 1:3.59 Sankhaiburu – 1: 2.20 D Quarry – 12.26 H Quarry – 5.96 Avg. – 3.51 (ROM includes Mn. Ore & Iron Ore)	(ROM in Tonnes : Insitu OB in Tonnes) Gangaogora – 1:36.31 Sankhaiburu – 1: 2.80 D Quarry – 8.44 H Quarry – 15.23 Avg. – 7.46 (ROM includes Mn. Ore & Iron Ore)	Ore & OB Ratio increased due to less excavation of in-situ Iron Ore Mineral Rejects from the Mn. Ore Pits.
2d	Quantity of topsoil generation in m^3	Gangaigora - 650 Sankhaiburu - Nil D'Quarry - Nil H'Quarry - Nil Total - 650	Gangaigora – 655 Sankhaiburu - Nil D'Quarry - Nil H'Quarry - Nil Total - 655	
2e	Quantity of overburden/waste generation in m^3	Gangaigora - 414410 Sankhaiburu - 986600 D'Quarry - 422130 H'Quarry - 517745 Total - 2340885	Gangaigora 651585.679 Sankhaiburu - 505974.998 D'Quarry - 199031.555 H'Quarry - 592419.552 Total - 1949011.786	
2f	General remarks of inspecting officer on development of pit w.r.t. type of deposit etc.	The mine workings were confined to 4 pits viz Gangaigora Sankhaiburu D'Quarry and H'Quarry. The development was carried out within the proposed grids as per the approval on the date of inspection.		

Exploitation

S.N.	Item	Proposals	Actual work	Remarks
3a	Number of pits proposed for production	Mn. Ore Pits - 4 Nos. (Gangaigora, Sankhaiburu, D Quarry & H Quarry)	Mn. Ore Pits - 4 Nos. (Gangaigora, Sankhaiburu, D Quarry & H Quarry)	Mentioned below.
3b	Quantity of ROM mineral production proposed (Mn. Ore in Tonnes)	Gangaigora - 38322.130 Sankhaiburu - 57251.440 D'Quarry - 67073.690 H'Quarry - 35425.730 Total – 198072.990	Gangaigora - 35894.954 Sankhaiburu - 55200.786 D'Quarry - 47177.692 H'Quarry - 40556.568 Total - 178830	
3c	Recovery of salable/usable mineral from ROM production	100%	100%	Mn Content >10%
3d	Quantity of mineral reject generation (Mn. Ore in Tonnes)	Gangaigora - 3498 Sankhaiburu - 5280 D'Quarry -6094 H'Quarry - 3201 Total - 18073	Gangaigora - 3563.176 Sankhaiburu -6294.375 D'Quarry - 5369.242 H'Quarry - 4344.379 Total - 19571.172	10729.800 Tonnes of Mineral Reject blended and booked in category of >25 % Mn.
	Quantity of mineral reject generation (Iron Ore in Tonnes)	Gangaigora - 192316.37 Sankhaiburu - 1439261.62 D'Quarry - 1771.88 H'Quarry - 359352.31 Total – 1992702.18	Gangaigora - Nil Sankhaiburu - 306161.382 D'Quarry - Nil H'Quarry - 37216.708 Total – 343378.090	
3e	Grade of mineral reject generation and threshold value declared	Threshold Value Mn. Ore – Mn= 10% Iron Ore – Fe= 45% Mn Ore – Mn Content – 10-25% Iron Ore – Fe Content – 45-58%	Threshold Value Mn. Ore – Mn= 10% Iron Ore – Fe= 45% Mn Ore – Mn Content in Processed Ore – 20.12% Iron Ore – Fe Content in unprocessed ore – 49.79 %	Iron Ore (MR) - In-situ excavation Concurrent to development of Mn. Ore Pits.
3f	Quantity of sub-grade mineral generation	Included in Mineral Reject. (Point 3d)	Included in Mineral Reject. (Point 3d)	Generated from ROM and considered as product in the category of below 25% Mn.
3g	Grade of sub-grade mineral generation	Included in Mineral Reject. (Point 3d)	Included in Mineral Reject. (Point 3d)	Generated from ROM and considered as product in the category of below 25% Mn.
3h	Manual / Mechanised 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	Study on Mechanized processing of Manganese Ore proposed.	Study for beneficiation of Low/ Sub Grade Manganese Ore and Fines carried out	In-House (R & D Division of Company) Study done.
3j	Provision of drilling & blasting in mineral benches	Drilling and Blasting in Mineral benches proposed.	Drilling and Blasting in Mineral benches carried out.	Deep hole Drilling blasting Depth of hole = 8 m (max) +10% subgrade =8.8m Spacing= 3-3.5m Burden= 2.5-3.0m Volume= 60-80 CuM Specific Gravity=2.5 Tonnage/Hole= 150-180 Tonnes Powder factor= 6.0 to 7.00 kg/Tonne
3k	Provision of mining machineries in mineral benches	Deployment of HEMM proposed in mineral benches	HEMM deployed in mineral benches	Excavator (Backhoe) – 10 Nos. Dumpers – 61 Nos. Drill (100mm Dia) – 2 Nos. Loader – 2 Nos. Dozer – 3 Nos. Grader – 2 Nos. Rock Breaker – 2 No. Ripper – 1 No.
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in	Bench Height: 6-8 m Bench Width: 8-10 m	Height – 6-8 m Width- 8-10m	

	MP/SOM			
3m	Total area covered under excavation/pits	97.740 ha.	90.305 ha	
3n	Ore to OB ratio for the pit/mine during the year	(ROM in Tonnes : Insitu OB in Tonnes) Gangaogora – 1:3.59 Sankhaiburu – 1: 2.20 D Quarry – 12.26 H Quarry – 5.96 Avg. – 3.51 (ROM includes Mn. Ore & Iron Ore)	(ROM in Tonnes : Insitu OB in Tonnes) Gangaogora – 1:36.31 Sankhaiburu – 1: 2.80 D Quarry – 8.44 H Quarry – 15.23 Avg. – 7.46 (ROM includes Mn. Ore & Iron Ore)	Ore & OB Ratio increased due to less excavation of in-situ Iron Ore Mineral Rejects from the Mn. Ore Pits.
3o	Total area put in use under different heads at the end of year	Proposed as on 31.03.2024 (in ha.)- Area under Mining – 97.740 Storage of Topsoil -0. 500 Waste Dump – 101.010 Mineral Storage – 61.460 Infrastructure – 35.580 Roads – 21.570 ETP – Nil Mineral Separation Plant – 10.630 Township – 123.320 Others (Green Belt)- 69.730 Total – 521.540 ha.	Actual as on 31.03.2024 (in ha.)- Area under Mining – 90.305 Storage of Topsoil -0.100 Waste Dump – 90.90 Mineral Storage – 34.853 Infrastructure – 15.887 Roads – 22.663 Township – 123.320 Others (Green Belt)- 69.730 Total – 447.758 ha.	Road increased due to widening of State express way passing thru' lease area.
3p	Production of ROM mineral during last five-year period, as applicable			
	Year- 2019-20	95998 tonnes	93605 tonnes	
	Year- 2020-21	211755 tonnes	109415 tonnes	
	Year- 2021-22	300000 tonnes	115632 tonnes	
	Year- 2022-23	800000 tonnes	164046 tonnes	
	Year – 2023-24	198072.990 tonnes	178830 tonnes	
3q	General remarks of inspecting officer on method of mining etc.	Open-cast mining method with Shovel-Dumper combination was carried out. Deep hole drilling and blasting were carried out in OB and Mineral Benches.		

Solid Waste Management-Dumping

S.N.	Item	Proposals	Actual work	Remarks
4a	Separate dumping of topsoil, OB & mineral reject (Rule 32, 33)	Separate Dumps for topsoil, OB and mineral reject proposed.	Separate dumps for topsoil, OB, mineral reject carried out.	
4b	Location of topsoil, OB & mineral reject dumps	Waste Dump – D-Quarry – Dump D#1 - 2432640N – 2433174N & 335289E - 335888E, from 540 to 570 mRL H-Quarry – Dump D#8 - 2431463N – 2431906N & 333658E - 334053E, from 550 to 570 mRL. Mineral Reject Stack (Mn. Ore) – Within D Quarry -2433077N – 2433242N & 335108E – 335307E, from 519 to 539 mRL Mineral Reject Stack (Iron Ore) – Within – D Quarry- 2433061N – 2433317N & 335044E –335306E, from 518 to 550 mRL.	Waste Dump – D-Quarry – Dump D#1 - 2432640N – 2433116N & 335336E - 335878E, from 540 to 570 mRL H-Quarry – Dump D#8 - 2431481N – 2431855N & 333718E - 334053E, from 550 to 570 mRL. Mineral Reject Stack (Mn. Ore) – Within D Quarry - 2433077N – 2433242N & 335133E – 335307E, from 542 to 567 mRL Mineral Reject Stack (Iron Ore) – Within – D Quarry - Not Established. The generated rejects are kept at Ore Stack Area due to no processing of ore.	
4c	Number of dumps within lease area and outside lease area	10	10	All within mining lease.No dumps are outside the lease area.
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	Outside UPL	Outside UPL	
4e	Number of active & alive dumps	2	2	As per proposal, Dump No. D 11 has been merged with D8 and named as D-8 covering
4f	Number of dead dumps	1	1	
4g	Number of dumps	5	5	

	stabilized			27.68 ha. And is a active dump.
4h	Whether Retaining wall or garland drain all along dumps are there	Additional proposed over the affected area during the reporting year.	Constructed over the affected area during the year.	
4i	Length of Retaining wall or garland drain all along dump	Retaining Wall – 1600 m (D#8, D#7J, MR1 & MR2) Garland Drain – 1475 m (D#8, MR1 & MR2)	Retaining Wall – 833 m (D#8 & D#7J) Garland Drain – 833 m (D#8 & D#7J)	
4j	Number of settling ponds	Not Proposed	Not made	
4k	Specific comments of inspecting officer on waste dump management	Overburden, mineral and mineral reject 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	Nil	Nil	
5b	Area under backfilling of mined out area	No proposal	Not carried out	
5c	Concurrent use of topsoil for restoration or rehabilitation of mined out area (Rule 32)	Gangaigora – 650 tonnes Sankhaiburu - Nil D'Quarry - Nil H'Quarry - Nil	Gangaigora – 655 tonnes Sankhaiburu - Nil D'Quarry - Nil H'Quarry - Nil	100% used for plantation activities
5d	Total area fully reclaimed & rehabilitated	No proposal	Not carried out	Rehabilitation of Waste Dump No, D-8: 1.840 ha with 5152 Nos. nos. of saplings.
5e	General remarks of inspecting officer on backfilling, reclamation etc	Mineral in the area has not exhausted hence no backfilling has been proposed.		

Progressive Mine Closure Plan

S.N.	Item	Proposals	Actual work	Remarks
6a	Whether Annual report on PMCP submitted on time and correctly - Rule 23E(2). Details should be given in the format as given in Annexure-20.	To be submitted by 30th June every year	Submitted on 26.06.2024 for the year 2023-24	
6b	Area available for rehabilitation (ha)	Waste Dump No. D8– 2 ha.	Waste Dump No. D8– 1.840 ha.	
6c	Afforestation done (ha)	Waste Dump No. D8– 2 ha.	Waste Dump No. D8– 1.840 ha.	
6d	No. of saplings planted during the year	5000 Nos	5152 Nos	
6e	Cumulative no. of plants	305000 Nos. over the dumps.	309862 Nos. over the dumps.	
6f	Any other specific method of rehabilitation	No proposal	Not carried out	
6g	Cost incurred on watch & care during the year	Rs.1100000/-	Rs. 1004640/-	
	Compliance on reclamation and rehabilitation by backfilling i) Voids available for backfilling (L *B * D) ii) Void filled by waste/tailings iii) Afforestation on the backfilled area iv) Rehabilitation by making water reservoir v) Any other specific means	There was no proposal of back filling during the year.	Nil	
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (L *B * D)	There was no proposal of back filling during the year.	Nil	
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Void filled by waste/tailings	There was no proposal of back filling during the year.	Nil	
6j	Compliance on reclamation and rehabilitation by backfilling (iii) Afforestation on the backfilled area	No proposal during the year	Nil	

6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	No proposal during the year	Nil	
6l	Compliance on reclamation and rehabilitation by backfilling (v)any other specific means.	No proposal during the year	Nil	
6m	Compliance of rehabilitation of waste land within lease (i)afforestation	No proposal during the year	Nil	
6n	Compliance of rehabilitation of waste land within lease (ii)Area rehabilitation (ha)	There is no proposal for rehabilitation of waste land.	Nil	
6o	Compliance of rehabilitation of waste land within lease (iii) Method of rehabilitation	There is no proposal for rehabilitation of waste land.	Nil	
6p	Compliance of Rehabilitation of waste land within lease i) Afforestation ii) Area rehabilitated (ha) iii) Method of rehabilitation	There is no proposal for rehabilitation of waste land.	Nil	
6q	General remarks of inspecting officer on PMCP compliance & progressive closure operations	The PMCP proposals are being broadly carried as per proposals.		

Mineral Conservation

S.N.	Item	Proposals	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	Mn Ore ROM = 198072.990 Tonnes	Mn.Ore ROM = 178830 Tonnes	
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	Chemical Grade - (Mn> 48% & Fe< 4%) (+10 -75mm, +6 - 25mm, -10mm) High Grade - (Mn>46%) (+10 -75mm, +6 - 25mm, -10mm) Medium Grade - (Mn>35% & Mn< 26%) (+10 -75mm, +6 - 25mm, -10mm) Low Grade - (Mn >25% & < 35%) (+10 -75mm, +6 - 25mm, -10mm) Sub Grade / MR- (Mn> 10% & Mn < 25%) (All Size)	Chemical Grade - (Mn> 48% & Fe< 4%) (+10 -75mm, +6 - 25mm, -10mm) High Grade - (Mn>46%) (+10 -75mm, +6 - 25mm, -10mm) Medium Grade - (Mn>35% & Mn< 26%) (+10 -75mm, +6 - 25mm, -10mm) Low Grade - (Mn >25% & < 35%) (+10 -75mm, +6 - 25mm, -10mm) Sub Grade/MR- (Mn> 10% & Mn < 25%) (All Size)	
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 except manual sorting is carried out		

Environment

S.N.	Item	Proposals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	Gangaigora - 650 Sankhaiburu - Nil D'Quarry - Nil H'Quarry - Nil Total - 650	Gangaigora – 655 Sankhaiburu - Nil D'Quarry - Nil H'Quarry - Nil Total - 655	Topsoil excavated during pit development is stored separately for immediate utilization.
8b	Concurrent use or storage of topsoil	100%	100%	Topsoil has been utilized completely within 3 months of excavation.
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	Separate Dumps for Overburden, and	Separate Dumps for Overburden, and	

		Mineral rejects (Mn.Ore & Iron Ore) Proposed	Mineral rejects (Mn.Ore & Iron Ore) are being maintained.	
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	Only Mineral Reject storage has been proposed for storage within exhausted part of D Quarry within the extent of 2480N-2740N & 4740E-4935E from 550 to 580 mRL	Mineral Reject is being stored within exhausted part of D Quarry within the extent of 2500N-2660N & 4751E-4926E from 550 to 575 mRL.	
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	Rehabilitation of inactive slopes of Waste Dumps.	Rehabilitation of inactive slopes of Waste Dumps.	
8f	Baseline information on existence of plantation & additional plantation done (Rule 41)	Rehabilitation of Waste Dump No, D8 – 2.00 ha with 5000 Nos. of saplings.	Rehabilitation of Dump Slopes of Dump No D8 – 1.840 ha. with 5152 Nos. of saplings.	
8g	Survival rate	85%	91%	
8h	Compliance of Environmental monitoring (core zone & buffer zone)	Air quality monitoring: Monthly reporting. Surface Water quality monitoring: Quarterly reporting. Ground Water quality monitoring: Quarterly Reporting. Noise survey: Monthly Reporting	Regular Monitoring of Air quality, Surface Water, Ground Water , Noise carried out	▪ Dust suppression systems (water jets) have been provided in drill machine. ▪ Haul roads are regularly sprinkled with the help of mobile water sprinklers. ▪ Fixed water sprinklers have been installed along the haul roads of D quarry. ▪ Dumping and screening are regularly sprinkled with the help of mobile water sprinklers.
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area	The aesthetic beauty in and around mines area is well maintained.		

Compliance of Rule 45

S.N.	Item	COMMENTS		Remarks
9a	Status of submission of Monthly and Annual returns	Monthly Returns are being submitted within stipulated time. Annual Return for the year 2023-24 is submitted on 16.06.2024		
S.N.		Item	Observation of I/Officer	Remarks
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Manager – Mr. Rajesh Kumar Ranjan Mining Engineer – Mr. Saptharshi Datta Geologist – Mr. Ajoy Kumar Nandi	Manager – Mr. Rajesh Kumar Ranjan Mining Engineer – Mr. Saptharshi Datta Geologist – Mr. Ajoy Kumar Nandi	
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Area covered under Mining – 90.305 ha Reclaimed / Rehabilitated – 13.150 ha. Used for Waste Disposal – 90.90 ha. Occupied by Plant, Building, residential, welfare buildings & Roads – 161.870 ha. Others (Storage of Top Soil, Mineral Storage, & Green Belt) – 104.683 ha. Work done under PMCP during the year – 1.840 ha.		
9d	Scrutiny of Annual return on afforestation	5152	Appears to be correct	
9e	Scrutiny of Annual return on	Mn Ore – Mn Content in -		

	mineral reject generation (Grade & quantity)	Unprocessed Ore – 18.90% Processed Ore – 20.12% Iron Ore – Fe Content in Unprocessed ore – 49.79%		
9f	Scrutiny of Annual return on ROM stock and/or graded ore	Mn. Dioxide – Nil 46% & above – 14723.790 Tonnes 35% & above but below 46% - 34003.393 Tonnes 25% & above but below 35%- 110531.645 Tonnes Below 25% - 19571.172 Tonnes Total – 178830 Tonnes		
9g	Scrutiny of Annual return on sale value, Ex. Mine price & production cost	Ex-Mines Price (Rs. /T)– 6088.86 (= Cost of Production	Appears to be correct.	Mine is Captive
9i	Scrutiny of Annual return on fixed assets	₹ 325614053	Appears to be correct.	
9k	Scrutiny of Annual return on mining machineries	Excavator (Backhoe) – 10 Nos. Dumpers – 61 Nos. Drill (100mm Dia) – 2 Nos. Loader – 2 Nos. Dozer – 3 Nos. Grader – 2 Nos. Water Tanker – 3 Nos. Explosive Van – 1 No. Other HEM Machinery- Rock Breaker – 2 No. Ripper – 1 No.	Observed to be correct.	

Signed by Vikram Prakash Deshpande
Date: 17-02-2025 10:39:26
(विक्रम देशपांडे)
सहायक खान नियंत्रक
भारतीय खान ब्यूरो