

**MCDR INSPECTION REPORT OF KHONDBOND IRON & MANGANESE MINE-2022-23****General**

S N	Particulars	Details
1	File no	
2	Name of the Mine	Khondbond Iron and Manganese Mine
3	Total Lease Area (Ha) with breakup of Non-forest and forest land	Total Lease Area (ha)– 978 ha i)Forest area(ha): 875.198 ha ii)Non-Forest(ha):102.802 ha
4	Mine code	30ORI08059
5	Date of Inspection	29-12-2023
6	Name of official accompanying inspection	Mr. Rajesh Kumar, Mr. Dinesh Kumar Patra
7	IBM Registration Number under rule 45 of MCDR, 1988	IBM/4376/2011
8	Name of the lessee, Address, phone, e-mail and fax number	Tata Steel Limited, 24 Homi Mody Street, Fort. Mumbai-400001, Ph No.: 9262699402 Fax: 06767-272010 Email id: <a href="mailto:gm.office@tatasteel.com">gm.office@tatasteel.com</a>
9	Village	Khondbond, Guruda & Baitarani R F
10	Taluka/Mandal	Barbil
11	District	Keonjhar
12	Pin code	758034
13	State	Odisha
14	Post office	Joda
15	Nearest police station	Bamebari
16	Nearest Railway station	Banspani
17	Date of Grant of Mining Lease	17.01.1933
18	Date of Execution	08.05.2015(SLD)
19	Date of opening of Mine	1933
20	Date of first Renewal, if applicable and its period & expiry	17.01.1963, 20 years, 16.01.1983
21	Date of second Renewal, if applicable and its period & expiry	17.01.1983, 20 years, 16.01.2003
22	Date of submission of renewal application if Mining Operations are continuing under deemed extension	During the third lease renewal for the period of 20 years from 17.01.2003 to 16.02.2023, the company had applied for renewal of the mining lease over an area of 978.00 ha only dated 27.10.2001. However, as per the MMDR Amendment Act 2015, the lease period has been extended up to 31.03.2030 over the applied area of 978 ha issued by Department of Steel & Mines, Govt. of Odisha. Accordingly, the Supplementary Lease Deed has been executed on 08.05.2015 over an area of 978 ha.
23	Name of the Nominated Owner with Address, phone, email, fax number and date of appointment	Mr. T. V. Narendran P.O- Bistupur, Dist.- East Singhbhum, Jharkhand- 831001, Phone No: 06596-233706 Email id: <a href="mailto:gm.office@tatasteel.com">gm.office@tatasteel.com</a> ,

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		Date of appointment: 01.11.2013
24	Name of the Mine Agent with Address, phone, email, fax number and date of appointment	Mr. Gedela V Satyanarayana Khondbond Iron & Mn Mine, At/PO; Joda Dist: Keonjhar Phone No: - 7763807795 <a href="mailto:gv.satyanarayan@tatasteel.com">gv.satyanarayan@tatasteel.com</a> Date of appointment:12.01.2022
25	Name of the Mines Manager with Address, phone, email, fax number and date of appointment in mines	Mr. Rajesh Kumar, Khondbond Iron Mine, At/PO; Joda Dist: Keonjhar Phone No: - 7033094900 <a href="mailto:raj.k@tatasteel.com">raj.k@tatasteel.com</a> Date of appointment: 01.11.2023
26	Name of the Mining Engineer & Geologist, Qualification and total experience	Mr. Rajesh Kumar, Khondbond Iron Mine, At/PO; Joda Dist: Keonjhar Phone No: - 7033094900 <a href="mailto:raj.k@tatasteel.com">raj.k@tatasteel.com</a> Experience:27 years, Date of appointment: 01.11.2023
	Mining engineer / Qualification / Date of appointment / Address phone / email	Mr. Dinesh Kumar Patra, MSc. (Tech.) (Applied Geology), Total Experience:13 years, Khondbond Iron Mine, At/PO; Joda Dist: Keonjhar Phone No: - 8093034655, <a href="mailto:dinesh.patra@tatasteel.com">dinesh.patra@tatasteel.com</a> Date of appointment - 25.01.2021.
27	Whether Geologist and Mining Engineer appointed in mines satisfy the rule 55 & carrying out their duties as per rule 56 & 57.	Yes
28	Date of Approval of Review of Mining Plan/ <del>Modified Mining Plan</del> with five-year period and specific condition in approval letter, if any.	Approval of Review of Mining Plan vide letter no. MS/FM/17-ORI/BHU/2017-18/2010, dated 09.11.2017. Period 2018-19 to 2022-23  Modification of Review of Mining Plan Vide Letter No- MRMP/A/48-ORI/BHU/2019-20/2450, dated 12.03.2020. Period 2020-21 to 2022-23
29	Date of Approval of Scheme of Mining/ <del>Modified Scheme</del> of Mining with five-year period and specific condition in approval letter, if any.	NA
30	Mineral(s) granted in lease and proved for mining	Iron Ore and Manganese Ore
31	Method of Mining(Open cast, Underground)	Open cast
32	Category (Fully Mechanised, Others or Manual)	Fully Mechanized (Category "A")
33	Captive/Non-Captive	Captive

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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: 2021-22	208	Nil	Boreholes proposed in Un-diverted forest area could not be drilled in 2022-23 due to unavailability of forest clearance. All the backlog boreholes have been included in proposal of current mine plan (FY23-24 to FY27-28)
1b	Exploration over lease area for Geological axis 1 or 2.	137 ha	None	
1c	Exploration Agency & Expenditure in lakh Rupees	Tata Steel Ltd. & 752.8 Lakhs	Not Done	
1d	Balance area to be explored to bring Geological axis in 1 or 2	372.92 ha. (Remaining in G3 & G4 area)	Not Done	
1e	Balance reserves as on 01.04.2023	-	Reserve: 129.89 Mt (Iron) Reserve: 0.615 Mt (Mn)	
	General remarks of inspecting officer on geology, exploration etc.	Khondbond iron and manganese deposit belong to the Iron ore group in the Singhbhum Super Group formed during the Pre-Cambrian era (c. 3100 Ma), of the Dharwarian age as observed from the stratigraphic tables. The are two main ore bodies viz. northern ore body has a strike length of around 2.5 km and southern ore body has a strike length of around 1.8 km. The northern ore body has small ore bodies. The width of the ore bodies varies from 200m to 500m.		

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**Development**

S.N.	Item	Proposals	Actual work	Remarks
2a	Location of development w.r.t. lease area	<p><b>Iron Ore Part Pit 1</b> N: 13750 to 14490 E: 10340 to 11020 Bottom RL-660</p> <p><b>Pit 2</b> N: 13050 to 13560 E: 9780 to 10450 Bottom RL-660</p> <p><b>Pit 3</b> N: 9950 to 10885 E: 9248 to 9790 Bottom RL-640</p> <p><b>Mn Part Pit 1</b> N: 13691 to 14314 E: 8608 to 9122 Bottom RL-506</p>	<p><b>Iron Ore Part Pit 1</b> N: 13913 to 14275 E: 10610 to 11000 Bottom RL-666</p> <p><b>Pit 2</b> N: 13052 to 13550 E: 9788 to 10440 Bottom RL-672</p> <p><b>Pit 3</b> N: 9960 to 10800 E: 9250 to 9788 Bottom RL-648</p> <p><b>Mn Part Pit 1</b> N: 14087 to 14305 E: 8838 to 9120 Bottom RL-513</p>	
2b	Separate benches in topsoil, overburden and mineral (Rule 15)	Separate Benches in Mineral and OB Proposed	Separate Benches in Mineral and OB made	
2c	Stripping ratio or ore to OB ratio	Iron ore - 1:0.10 T/m <sup>3</sup> Mn ore- 1:8.43 T/m <sup>3</sup>	Iron ore - 1.0.06 T/m <sup>3</sup> Mn ore – 1:7.90 T/m <sup>3</sup>	No Significant Change
2d	Quantity of topsoil generation in m <sup>3</sup>	No Top Soil generation proposed during reporting year.	Not Applicable	
2e	Quantity of overburden/waste generation in m <sup>3</sup>	2350000 Cu.m	1204245.68 Cu.m	
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 3 for Iron Ore i.e Pit, Pit-2 & Pit-3 and 1 Mn viz Pit-1. The development was carried out within the proposed grids as per the approval on the date of inspection.		

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**Exploitation**

S.N	Item	Proposals	Actual work	Remarks
3a	Number of pits proposed for production	4	4	Iron ore: Pit 1, 2 and 3 Mn ore: Pit 1
3b	Quantity of Iron and Mn ore production proposed	Iron ore:11.67 MT Mn: 350000 T	Iron ore: 7.52 MT Mn: 89879 T	Violation of Rule 11(1) issued to the lessee on 14/02/2024
3c	Recovery of salable/usable mineral from ROM production	Iron ore: 10.00 MT Mn ore: 245000 T	Iron ore: 6.84 MT Mn ore: 79457 T	
3d	Quantity of mineral reject generation	Iron ore: 1.67 MT Mn ore: 105000 T	Iron ore : 0.68 MT Mn ore: 10422 T	
3e	Grade of mineral reject generation and threshold value declared	Fe: ≥45% to <58% Mn: ≥10% to <25%	Avg Fe % :54.69 Avg Mn% : 18.67	
3f	Quantity of sub-grade mineral generation	Iron ore: 1.67 MT Mn ore: 105000 T	Iron ore : 0.68 MT Mn ore: 10422 T	
3g	Grade of sub-grade mineral generation	Fe: ≥45% to <58% Mn: ≥10% to <25%	Avg Fe % :54.69 Avg Mn% : 18.67	
3h	Manual / Mechanised method adopted for segregating from ROM	Mechanised and Manual method proposed for segregating from ROM	Mechanised method for Iron Ore and Manual for Manganese Ore	Fe ROM is fed to Dry plant for processing and Wet Plant for beneficiation. For Mn ore, manual sorting is adopted.
3i	Any analysis or beneficiation study proposed & carried out for sub-grade mineral and reject	No beneficiation study proposed	No beneficiation study carried out.	
3j	Provision of drilling & blasting in mineral benches	Drilling and Blasting proposed in mineral benches.	Drilling and blasting were carried out in mineral benches.	<b>Deep Hole Drilling</b> <b>Iron Ore</b> Dia:- 150/165 mm Depth:- 11 m Spacing:- 4 Burden:-3.2 Explosive

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				used:- SME  <b>Mn ore:</b> Dia: 100 mm Depth: 6.6 m Spacing: 3  Burden: 2.5 Explosive used: Slurry (cartridge)
3k	Provision of mining machineries in mineral benches	Use of HEMMs was proposed in Mineral Benches.	Mechanized O/C mining was carried out engaging HEMMs in the mine.	Mining was carried out by Shovel (2.5 m <sup>3</sup> ) Dumper (10 tonne) combination.
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	Proposed Bench Height-Fe-10 m and width-20-25 m, Mn-Bench Height6-8m and Width: 10m.	Bench Height-Fe-10 m and width-20-25 m, Mn-Bench Height6-8m and Width: 10m made.	
3m	Total area covered under excavation/pits	224.25 Ha	231.257 Ha	AR-2022-23
3n	Ore to OB ratio for the pit/mine during the year	Iron ore - 1:0.10 T/m <sup>3</sup> Mn ore- 1:8.43 T/m <sup>3</sup>	Iron ore - 1.0.06 T/m <sup>3</sup> Mn ore – 1:7.90 T/m <sup>3</sup>	No Significant Change

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3o	Total area put in use under different heads at the end of year	<p>Covered under current O/C Workings-268.946</p> <p>Used for Waste Disposal-104.727</p> <p>Occupied by Plant, Buildings, residential , welfare buildings and road-14.89</p> <p>Mineral Storage-78.517</p>	<p>Covered under current O/C Workings-231.257</p> <p>Used for Waste Disposal-66.546</p> <p>Occupied by Plant, Buildings, residential , welfare buildings and road-63.219</p> <p>Mineral Storage-49.664</p>	
3p	Production of ROM mineral during last five-year period, as applicable	<b>Proposed ROM Production</b>	<b>Actual ROM Production</b>	
	Year- 2018-19	Fe: 4850000 Mn: 55000	Fe: 2806573.745 Mn: 45488.5	All units in Metric Tonnes. Actual production is within the proposed limit.
	Year- 2019-20	Fe: 5640000 Mn: 59014	Fe: 3494185.16 Mn: 54169	
	Year- 2020-21	Fe: 8710000 Mn: 100000	Fe: 4437378.13 Mn: 55,768	
	Year- 2021-22	Fe: 8830000 Mn: 250000	Fe: 4801367.803 Mn: 44989	
	Year- 2022-23	Fe: 11670000 Mn: 350000	Fe: 7523352.54 Mn: 89879	
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.		

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**Solid Waste Management-Dumping**

S.N	Item	Proposals	Actual work	Remarks
4a	(Rule 32, 33)	Separate dumping of OB & mineral reject proposed	Separate dumping of OB & mineral reject made.	
4b	Location of topsoil, OB & mineral reject dumps	<p><b><u>Iron ore part:</u></b></p> <p><b>Waste Dump C:</b> Position: N: 13683 N to 13840 N E: 9225 E to 9243 E</p> <p><b>Waste Dump 5A:</b> Position: N: 11295 N to 11706 N E: 9141 E to 9315 E</p> <p><b>Waste Dump 5B:</b> Position: N: 11904 N to 12186 N E: 9020 E to 9099 E</p> <p><b>Mineral Reject-3:</b> Position: N: 12388 N to 12240 N E: 9205 E to 9224 E</p> <p><b><u>Mn ore part:</u></b></p> <p><b>Backfilling Area:</b> Position: N: 13998 N to 14320 N E: 8947 E to 9380 E</p> <p><b>Mineral Reject 1:</b> N: 14460 N to 14610 N E: 9400 E to 9690 E</p>	<p><b><u>Iron ore part:</u></b></p> <p><b>Waste Dump C:</b> Position: N: 13690 N to 13820 N E: 9230 E to 9240 E</p> <p><b>Waste Dump3:</b> Position: N: 11300 N to 11700 N E: 9145 E to 9310 E</p> <p><b>Waste Dump 5B:</b> Position: N: 11910 N to 12180 N E: 9025 E to 9090 E</p> <p><b>Mineral Reject-3:</b> Position: N: 12390 N to 12233 N E: 9210 E to 9220 E</p> <p><b><u>Mn ore part:</u></b></p> <p><b>Backfilling Area:</b> Position: N: 14008 N to 14268 N E: 9120 E to 9338 E</p> <p><b>Mineral Reject 1:</b> N: 14460 N to 14576 N E: 9494 E to 9690 E</p>	



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4c	Number of dumps within lease area and outside lease area	<p>Within Lease Area: Waste Dump- 8 Mineral Reject- 3</p> <p>No dumps outside lease area</p>	<p>Within Lease Area: Waste Dump- 8 Mineral Reject- 3</p> <p>No dumps outside lease area</p>	<p>Waste dumps within lease area:</p> <p>Iron ore:</p> <ol style="list-style-type: none"> <li>1. Waste Dump A</li> <li>2. Waste Dump 5A</li> <li>3. Waste dump 5B</li> <li>4. Waste dump C</li> <li>5. Mineral Reject 1A &amp; 2A</li> <li>6. Mineral Reject 3</li> </ol> <p>Mn ore:</p> <ol style="list-style-type: none"> <li>1. Waste Dump 1</li> <li>2. Waste Dump 2</li> <li>3. Waste Dump 4</li> <li>4. Backfilling area</li> <li>5. Mineral Reject 1</li> </ol>
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	<p><u>Iron ore part:</u></p> <p>Within UPL Area: Waste Dump: 1</p> <p>Outside UPL: Waste Dump: 2</p> <p><u>Mn ore part:</u></p> <p>Within UPL Area: Waste Dump: 2</p> <p>Outside UPL: Waste Dump:2 Mineral Reject: 1</p>	<p><u>Iron ore part:</u></p> <p>Within UPL Area: Waste Dump: 1</p> <p>Outside UPL: Waste Dump: 2</p> <p><u>Mn ore part:</u></p> <p>Within UPL Area: Waste Dump: 2</p> <p>Outside UPL: Waste Dump:2 Mineral Reject: 1</p>	<p><u>Iron ore part:</u></p> <p>Dumps Within UPL: Waste Dump 5B,</p> <p>Outside UPL: Waste Dump 5A, Waste Dump C</p> <p><u>Mn ore part:</u></p> <p>Dumps Within UPL: Backfilling area, Waste Dump 4</p> <p>Outside UPL: Waste Dump1, Waste Dump 2 Mineral Reject 1</p>
4e	Number of active & alive dumps	Waste Dump - 5 Mineral Reject - 3	Waste Dump - 5 Mineral Reject - 3	<p>Iron ore part:</p> <ol style="list-style-type: none"> <li>1. Waste Dump 5A</li> <li>2. Waste dump 5B</li> <li>3. Waste dump C</li> <li>4. Mineral Reject 1A &amp; 2A</li> <li>5. Mineral Reject</li> </ol>

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				3 Mn ore part: 1. Waste Dump 4 2. Backfilling area 3. Mineral Reject 1
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4f	Number of dead dumps	Waste Dump - 3	Waste Dump - 3	Iron ore part: 1. Waste Dump A  Mn ore part: 1. Waste Dump 1 2. Waste Dump 2
4g	Number of dumps stabilized	Waste Dump - 3	Waste Dump - 3	Partially stabilized dumps Iron ore part: 1. Waste Dump A  Mn ore part: 1. Waste Dump 1 2. Waste Dump 2
4h	Whether Retaining wall or garland drain all along dumps are there	Retaining wall and garland drain proposed all along the dump.	Retaining wall and garland drain were constructed all along the dump.	
4i	Length of Retaining wall or garland drain all along dump	<b>Iron ore part:</b> Toe wall: 850 m Garland Drain: 850 m  <b>Mn ore part:</b> No proposals for the period 2022-23	<b>Iron ore part:</b> Toe wall: 473 m Garland Drain: 473 m  <b>Mn ore part:</b> No proposals for the period 2022-23	In iron ore part: Waste Dump 1, Mineral Reject 2
4j	Number of settling ponds	1	1	Near Mineral Reject 3
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	Part extraction of mineral proposed from mined out area before starting backfilling	Part extraction of mineral proposed from mined out area before starting backfilling	
5b	Area under backfilling of mined out area	2.838 ha	1.748 Ha	Backfilling in Mn ore pit. Violation of Rule 11(1) issued to the lessee on 14/02/2024
5c	Concurrent use of topsoil for restoration or rehabilitation of mined out area (Rule 32)	No Top Soil Generation	Not done	

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		proposed during reporting year		
5d	Total area fully reclaimed & rehabilitated	No such proposal	Not done	
General remarks of inspecting officer on backfilling, reclamation etc.		Backfilling was carried out in the mine (Mn Pit) and is in progress.		

**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).	Annual report on PMCP to be submitted on or before 1 <sup>st</sup> July every year.	PMCP Report Submitted.	PMCP Report Submitted on 30.06.2023.
6b	Management of worked/mined out benches 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	Nil	Nil	
6c	Compliance on reclamation and rehabilitation by backfilling: i) Voids available for backfilling ii) Void filled by waste/tailings iii) Afforestation on the backfilled area iv) Rehabilitation by making water reservoir v) Any other specific means	<ul style="list-style-type: none"> <li>• Backfilling in Mn pit : 2.838 ha</li> <li>• Waste (L cum): 15</li> <li>• Nil</li> <li>• Nil</li> </ul>	<ul style="list-style-type: none"> <li>• Backfilling in Mn pit : 1.748 ha</li> <li>• Waste (L cum): 7.10</li> <li>• Nil</li> <li>• Nil</li> </ul>	
6d	Compliance of Rehabilitation of waste land/ Dump Management within lease i) Afforestation ii) Area rehabilitated (ha) iii) Method of rehabilitation	<p>Dump Management</p> <ul style="list-style-type: none"> <li>• (nos.) : 14000</li> <li>• Area: 5.4 ha</li> <li>• Method: Plantation</li> </ul>	<p>Dump Management</p> <ul style="list-style-type: none"> <li>• (nos.) : 8050</li> <li>• Area: 3.23 ha</li> <li>• Method: Plantation</li> </ul>	<p>Iron ore part: Mineral Reject 3, Waste Dump 1, 5A, 5B</p> <p>Mn ore part: Waste Dump 1</p>

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6e	Compliance of Environmental monitoring (core zone & buffer zone)	Environmental Monitoring proposed in Core and buffer zone proposed as per MOEFCC and SPCB guidelines.	Regular Environmental Monitoring was carried out for air, water, noise on qtrly basis.	Env monitoring is being carried out by the lessee himself. Environmental Parameters are within prescribed limits
General remarks of inspecting officer on PMCP compliance & progressive closure operations		PMCP activities were carried out as per the proposal.		

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**Mineral Conservation**

S.N.	Item	Proposals	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	ROM Mineral dispatch or grade-wise sorting within lease area proposed	ROM Mineral dispatch or grade-wise sorting within lease area carried out.	<p><b>CLO</b></p> <p>a) 60% to below 62%- Nil  b) 62% to below 65%- Nil  c) 65% and above- 2484351.587</p> <p><b>Fines</b></p> <p>a) 60% to below 62% - Nil  b) 62% to below 65%- 2697947.910  c) 65% and above- Nil</p> <p><b>Manganese Ore:</b></p> <p>a) Below 25% - Nil  b) 25% to below 35% - 21795.290  c) 35% to below 46% - 25728.900  d) 46% and above – 23632.230</p> <p>Dioxide ore – Nil</p>

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7b	Method of grade-wise mineral sorting i.e. manual or mechanical	For iron ore: Grade-wise sorting not Proposed  For Mn ore: Manual sorting proposed	For iron ore: Grade-wise sorting not carried out.  For Mn ore: Manual sorting carried out	<b>For Mn Ore:</b>  a) Below 25% b) 25% to below 35% c) 35% to below 46% d) 46% and above e) Dioxide ore
7c	Different grade of mineral sorted out at mines	Manganese Ore:  a) Below 25% b) 25% to below 35% c) 35% to below 46% d) 46% and above e) Dioxide ore	Manganese Ore:  f) Below 25% g) 25% to below 35% h) 35% to below 46% i) 46% and above j) Dioxide ore	
7d	Any beneficiation process at mines	For iron ore Wet Beneficiation with hydrocyclone and paste thickener proposed.	For iron ore Wet Beneficiation with hydrocyclone and paste thickener carried out.	
General remarks of inspecting officer on Mineral conservation & beneficiation issues		Beneficiation is carried out by the lessee for Iron Ore.		

**Environment**

S.N.	Item	Proposals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	No such proposal	No such proposal	Topsoil generated was concurrently used in plantation as and when produced
8b	Concurrent use or storage of topsoil	No such proposal	Topsoil	

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			generated was concurrently used in plantation as and when produced	
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	Yes	Yes	
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	Yes	Yes	<i>Backfilling of mined-out pit</i>
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc.)	Yes	Yes	
8f	Baseline information on existence of plantation & additional plantation done (Rule 41)	14000 saplings to be planted	8050 saplings planted	
8g	Survival rate	NA	87%	
8h	Water sprinkling on roads to control airborne dust	Yes	Yes	
General remarks of inspecting officer on aesthetic beauty in and around mines area				

**Compliance of Rule 45**

S.N	Item	COMMENTS		Remarks
9a	Status of submission of Monthly and Annual returns	M.R. Submitted upto: December A.R. submitted upto: FY 2022-23		Annual Return submitted on 30.06.2023.
S.N	Item	Details given in AR	Observation of I/Officer	Remarks
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Mining Engineer: Sh. SS Mishra Mining Geologist: Sh. Dinesh Patra Mines Manager: Sh. SS Mishra	Mining Engineer: Rajesh Kumar Mining Geologist: Sh. Dinesh Patra Mines Manager: Sh. Rajesh Kumar	
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Covered under current O/C Workings-268.946  Used for Waste Disposal-104.727  Occupied by Plant, Buildings, residential , welfare buildings and road-14.89	Covered under current O/C Workings- 231.257  Used for Waste Disposal-66.546  Occupied by Plant, Buildings, residential , welfare buildings and road-63.219	



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		Mineral Storage- 78.517	Mineral Storage- 49.664	
9d	Scrutiny of Annual return on afforestation	Area: 5.4 ha, 14000 nos.	Area: 3.23 ha, 8050 nos.	
9e	Scrutiny of Annual return on mineral reject generation (Grade & quantity)	Iron ore: ≥45% to <58%, 1.67 MT Mn ore: ≥10% to <25% 105000 T	Iron ore: Avg 54.69%, 0.68 MT Mn ore: Avg 18.67%, 10422 T	0
9f	Scrutiny of Annual return on ROM stock and/or graded ore	Iron Ore <b>Fines:</b> 60-62% Fe- 365917.120 MT 62-65% Fe- 1425924.672MT 65% and above Fe - 18391.544 MT <b>CLO:</b> Below 62% Fe- 2078.600 62% to below 65% Fe(5-18 mm)-3.10 MT 62% to below 65% Fe(10-40 mm)-192.58 MT 65% and above Fe (5-18 mm)-5.420 MT 65% and above Fe (10- 40 mm)-576209.908 MT Manganese Ore: Below 25% Mn- 118367.645 MT 25% to below 35 % Mn- 6418.468 MT 35% to below 46% Mn- 7397.820 MT 46% and above Mn- 1001.220 MT Dioxide Ore-0.305 MT	Appears to be correct	
9g	Scrutiny of Annual return on sale value, Ex. Mine price & production cost	Sale Value- Rs.4754735975.28 Ex-Mines Price- 3151.43 Cost of Production: Rs. 2482.66 <b>Sale price of Fines;</b> Fe 51%-55%: Rs 1411.94	Rs. 1864.47	Violation of Rule 45(7 has been issued to the lessee for not furnishing correct information.

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		Fe 55%-58%: Rs 2005.95 Fe 58%-60%: Rs 2058.66 Fe 60%-62%: Rs 3467.41 Fe 62%-65%: Rs 4642.76 <b>Sale price of CLO;</b> -62% Fe(CLO any size- Rs 3991.96 62-65% Fe (5-18mm size CLO)-Rs6441.89 62-65% Fe (10-40mm size CLO)-Rs6441.89		
9i	Scrutiny of Annual return on fixed assets	Rs. 13777501491 including land, buildings etc	Appears to be correct	
9k	Scrutiny of Annual return on mining machineries	Drill Machine-05 Back Hoe-04 Shovel-05 Dozer-06 Dumper-12 Front End Loader-01 Wheel Loader-02 Water Tanker-04 LMV-13 Motor Grader-01	Drill Machine01 Back Hoe-01 Shovel-05 Dozer-06 Dumper-10 Front End Loader-01 Wheel Loader-02 Water Tanker-04 LMV-13 Motor Grader-01	