

MCDR INSPECTION REPORT (2023-24)

S.N.	Particulars	Details
1	Name of the inspecting officer & Designation	Dr. Suresh Prasad, Regional Controller of Mines and Dr. Sudhakara T.L., SMG
2	Name of the Mine	Rama Iron Ore Mine
3	Total Lease Area (Ha) with breakup of Non-forest and forest land	32.56 Ha (FC area) which is within CEC finalized extent of 33.80 Ha.
4	Mine code	30KAR03185
5	IBM Registration Number under rule 45 of MCDR, 1988	IBM/432/2011
6	Name of the lessee, Address, phone, email and fax number	M/s. JSW Steel Ltd. JSW Centre Bandra Kurla Complex, Bandra (East), Mumbai (Suburban), Maharashtra, PIN-400051 Phone - 022-42861000 Email – sunil.singh@jsw.in
7	Village	Ramgad
8	Taluk/Mandal	Sandur
9	District	Ballari
10	Pin code	583119
11	State	Karnataka
12	Post office	Ramgad
13	Nearest police station	Sandur
14	Nearest Railway station	Ramgad
15	Date of Grant of Mining Lease	13.12.2019
16	Date of Execution	13.12.2019
17	Date of opening of Mine	15.01.2020
18	Date of first Renewal, if applicable and its period & expiry	NA
19	Date of second Renewal, if applicable and its period & expiry	NA
20	Date of submission of renewal application if Mining Operations are continuing under deemed extension	NA
21	Name of the Nominated Owner with Address, phone, email, fax number and date of appointment	Mr. Gajraj Singh Rathore M/s. JSW Steel Ltd Rama Iron Ore Mines JSW Mining Office, Near Talur Cross Vidyanagar (Post), Toranagallu, Sandur Taluk, Bellary – Dist, PIN-583275, Karnataka Email – gajraj.rathore@jsw.in Date of appointment : 27.05.2022
22	Name of the Mine Agent with Address, phone, email, fax number and date of appointment	Mr. Sunil Kumar Singh M/s. JSW Steel Ltd, Rama Iron Ore Mines JSW Mining Office, Near Talur Cross Vidyanagar (Post), Toranagallu, Sandur Taluk, Ballari – Dist, PIN-583275, Karnataka Mob: 9449598135 Email – sunil.singh@jsw.in Date of appointment: 16.12.2019
23	Name of the Mines Manager with	Mr. Sundra Raja MV

	Address, phone, email, fax number and date of appointment in mines	M/s. JSW Steel Ltd, Rama Iron Ore Mines JSW Mining Office, Near Talur Cross Vidyanagar (Post), Toranagallu, Sandur Taluk, Ballari – Dist, PIN-583275, Karnataka Mob: 9480694327 Email – mallagalu.sundarraaj@jsw.in Date of appointment: 15.06.2020
24	Name of the Mining Engineer, Qualification and total experience with Address, phone, email, fax number and date of appointment in mine	Mr. Karthik Gujjal A B.E. (Mining) Total Experience: 10 Years Email – karthikgujjal@jsw.in Date of appointment: 22.02.2021
25	Whether Geologist and Mining Engineer appointed in mines satisfy the rule 42 & carrying out their duties as per rule 43 & 44.	Mr. Karani Singh – DGM (Geology) M.Sc (Geology) Total experience: 22 years Email – karani.shekhawat@jsw.in Date of Appointment : 16.12.2019
26	Date of Approval of Mining Plan/Modified Mining Plan with five-year period and specific condition in approval letter, if any.	Date of Approval: 21.04.2023 Letter No.: 279/1092/2017/BNG-276 Five-year Plan Period- 2019-20 to 2023-24 Proposed Period of Modified Mining Plan- 2023-24 (Apr-2023 to Mar-2024)
27	Date of Approval of Scheme of Mining/Modified Scheme of Mining with five-year period and specific condition in approval letter, if any.	Date of Approval: 15.12.2023 Letter No.: MCDR-MPCOFE/1/2022-BNG-IBM_RO_BNG Proposed Period of Review and Updation of Mining Plan - 2024-25 to 2028-29
28	Mineral(s) granted in lease and proved for mining	Iron Ore
29	Method of Mining(Open cast, Underground)	Open Cast
30	Category (Fully Mechanized, Others or Manual)	Fully Mechanized
31	Captive/ Non captive	Captive
32	Date of inspection	03/10/2024
33	Name of accompanying mine officials with designation	Mr. Sundra Raja M V (Mines Manager) Mr. Karthik Gujjal (Mining Engineer) Mr. Sudip Karak (Asst. Manager, Survey) Mr. Nataraja B D (Manager, Geology) Mr. Karani Singh Shekhawat (DGM, Geology)

1. Exploration

S. N.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	Nil	Nil	-
1b	Exploration over lease area for Geological axis 1 or 2.	Nil	4 no. of Core Boreholes with drilling meterage of 280m	Cumulative: 33 nos. of Boreholes with drilling meterage of 1653m (RC drilling- 29 nos. of Boreholes with drilling meterage of 1373m. and Core Drilling- 4 nos. of Boreholes with drilling meterage of 280m.)

1c	Exploration Agency & Expenditure in lakh Rupees during the year	Nil	Rs. 32.67 lakhs	Cumulative expenditure- Rs. 114.70 lakhs
1d	Balance area to be explored to bring Geological axis in 1 or 2	Nil	G1- 27.40 Ha Non-Mineralized area- 5.16	Entire Mine lease area has been explored under G1.
1e	Balance reserves as on <u>01.04.2024</u>	Mineable Reserves = 26653035 tonnes. (as per approved Mining Plan)	Mineable Reserves = 26273035 tonnes. (As per Annual return 2023-24)	
1f	General remarks of inspecting officer on geology, exploration etc.	The iron ore deposit is Hematite ore Bedded Stratiform and Tabular deposits of regular habit. Based on the available grade, classified into Hematitic Iron ore and Hematitic silicious iron ore. As per approved Mining plan dated 15.12.2023, lessee has explored the entire mineralized area (laterally) of 27.40 Ha under G1 level and remaining 5.16 Ha is non-mineralized. During 2024-25, lessee proposed 10 no. boreholes where boreholes ended in mineralized zone and prove the ore body 3-dimensionally under G1.		

2. Development

S. N.	Item	Proposals	Actual work	Remarks
2a	Location of development w.r.t. lease area	E 657690 to E 657940 and N 1672115 to N 1672539	E 657698 to E 657940 and N 1672115 to N 1672536	Development carried out within the proposed extent.
2b	Separate benches in topsoil, overburden and mineral (Rule 15)	No top soil benches are proposed. OB and Mineral separate benches are proposed	No top soil benches OB and mineral separate benches maintained as per proposal.	-
2c	Stripping ratio or ore to OB ratio	1:0.007 Ore: 1382000 tonnes Waste: 9680 tonnes	1:0.014 Ore: 940000 tonnes Waste: 13189	Waste volume generated 5995 m ³ @2.2BD
2d	Quantity of topsoil generation in m ³	No proposal	NA	-
2e	Quantity of overburden generation in m ³	4400 m ³	5995 m ³	
2f	General remarks of inspecting officer on development of pit w.r.t. type of deposit etc.	The deposit under mining is of stratiform reef type regular deposit with inclined dipping and the working has been proposed accordingly. Benches have been maintained with proper height and width as per proposal.		

3. Exploitation

S.N	Item	Proposals	Actual work	Remarks
3a	Number of pits proposed for production	1 pit proposed for Production.	Production is carried out from 1 pit	As per proposal

3b	Quantity of ROM mineral production proposed	13,82,000 Tonnes	9,40,000 Tonnes	As lessee team reported during inspection production has been restricted to CEC capping limit due to awaited Statutory clearances viz. EC and CEC approvals
3c	Recovery of salable/usable mineral from ROM production	100 %	100 %	-
3d	Quantity of mineral reject generation	No proposal	NA	-
3e	Grade of mineral reject generation and threshold value declared	No proposal	NA	-
3f	Quantity of sub-grade mineral generation	No proposal	NA	-
3g	Grade of sub-grade mineral generation	No proposal	NA	-
3h	Manual / Mechanized method adopted for segregating from ROM	Mechanized Method proposed for segregating from ROM	Mechanized Method adopted for segregating from ROM	Dry Crushing and screening 250 TPH.
3i	Any analysis or beneficiation study proposed & carried out for sub-grade mineral and reject	No proposal	No such beneficiation study carried out.	-
3j	Provision of drilling & blasting in mineral benches	Provision of drilling & blasting is made in mineral benches.	Drilling & blasting carried out by combination of slurry and Nonel detonator.	106 (2) (B) Permission Obtained from DGMS as per MMR 1961.
3k	Provision of mining machineries in mineral benches	Provision of mining machineries made Excavator - 4 Rock Breaker -1 Tippers – 14, Hydraulic Drill – 1 Wheel loader – 4	Machineries deployed as per AR 2023-4: Excavator - 4 Rock Breaker - 1 Tippers – 14 Hydraulic Drill – 1 Wheel loader – 4	-
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	Bench width- 8m Bench Height-8m	Bench width- 8m Bench Height-8m	Proposed bench dimension maintained.
3m	Total area covered under excavation/pits	15.66 Ha (as per the approved mining Plan for Plan	15.66 Ha (as on 01.04.2024)	-

		Period)		
3n	Ore to OB ratio for the pit/mine during the year	1:0.007 Ore: 1382000 tonnes Waste: 9680 tonnes	1:0.014 Ore: 940000 tonnes Waste: 13189	Waste volume generated 5995 m ³ @2.2BD
3o	Total area put in use under different heads at the end of year	Mining- 15.66 Ha Roads -2.53 Ha Infrastructure – 0.41 Ha Waste Dumps-0.67 Ha Green Belt – 2.28 Ha Mineral Storage- 2.74 Ha Others – 8.27 Ha Total- 32.56 Ha	Mining- 15.66 Ha Roads -2.46 Ha Infrastructure – 0.41 Ha Waste Dumps-0.85 Ha Green Belt – 2.28 Ha Mineral Storage- 2.74 Ha Others – 8.16 Ha Total- 32.56 Ha	-
3p	Production of ROM mineral during last five-year period, as applicable	2019-20: 9,40,000 2020-21: 9,40,000 2021-22: 9,40,000 2022-23: 9,40,000 2023-24: 9,40,000 (in tonnes)	2019- 20:595094 2020- 21:939800 2021- 22:940000 2022- 23:940000 2023- 24:940000 (in tonnes)	Mine operations started in 2019-20.
3q	General remarks of inspecting officer on method of mining etc.	The method of mining is as per proposal. Benches have been maintained with proper height and width as per proposal. The proposed production of ROM is not achieved due to awaited statutory clearances.		

4. Solid Waste Management-Dumping

S.N.	Item	Proposals	Actual work	Remarks
4a	Separate dumping of topsoil, OB & mineral reject (Rule 32, 33)	Separate dumping of overburden is proposed.	Separate dumping of overburden is being carried out.	-
4b	Location of topsoil, OB & mineral reject dumps	OB Dump Proposal: E 657609 to E 657686 N 1672851 to N 1672920	OB Dump location: E 657609 to E 657710 N 1672805 to N 1672919	Dumping carried out within the proposed location
4c	Number of dumps within lease area and outside lease area	1 Active Dump	1 Active Dump	-
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	Parts of Active Dump is within UPL.	Parts of Active Dump is within UPL.	-
4e	Number of active & alive dumps	Active Dump-1	Active Dump-1	-
4f	Number of dead dumps	Nil	NA	-
4g	Number of dumps stabilized	Nil	NA	-
4h	Whether Retaining wall or garland drain all along dumps are	No Proposal	Nil	Retaining wall: TW1: 340 TW2: 100 Garland Drain:

	there			GD1: 447 GD2: 110 GD3: 30
4i	Length of Retaining wall or garland drain all along dump	No Proposal	Ni	
4j	Number of settling ponds	No Proposal	No Proposal	01: SST-1
4k	Specific comments of inspecting officer on waste dump management.	Lessee has constructed Retaining wall and Garland drain as per approved R & R Plan. Dumping is carried out at the proposed location.		

5. 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	NA	No area is completely mined out during this plan period.
5b	Area under backfilling of mined out area	NIL	NA	
5c	Concurrent use of topsoil for restoration or rehabilitation of mined out area (Rule 32)	No proposal	NA	No Topsoil Generation
5d	Total area fully reclaimed & rehabilitated	No proposal	NA	-
5e	General remarks of inspecting officer on backfilling, reclamation etc	The mineral is exists in the pit, hence, there was no proposal for backfilling/reclamation.		

6. 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.	Submission of Annual report on PMCP under rule 23E(2)	Annual PMCP Report for Year 2023-24 is submitted along with Annual Return	Submitted within stipulated time
6b	Area available for rehabilitation (ha)	No proposal	NA	-
6c	Afforestation done (ha)	Proposed in Safety Zone - 0.024 Ha	Achieved -0.024 Ha	
6d	No. of saplings planted during the year	Proposed in Safety Zone - 50	Achieved in lease area - 50	Safety Zone is completely covered in vegetation.

6e	Cumulative no. of plants	No proposal	1159nos.	As per Annual return
6f	Any other specific method of rehabilitation	No proposal.	Nil	Lessee has implemented Engineering Measures for Surface Water and Dump Management as per Approved R&R Plan .
6g	Cost incurred on watch & care during the year	Not Specified	Rs. 2.10 Lakhs	Cost of Plantation inside the lease area.
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (L x B x D)	Nil	NA	No area is completely mined out in this plan period.
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Void filled by waste/tailings	Nil	NA	
6j	Compliance on reclamation and rehabilitation by backfilling (iii) Afforestation on the backfilled area	Nil	NA	
6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	Nil	NA	
6l	Compliance on reclamation and rehabilitation by backfilling (v) Any other specific means	Nil	NA	
6m	Compliance of Rehabilitation of waste land within lease (i) Afforestation	Nil	NA	-
6n	Compliance of Rehabilitation of waste land within lease (ii) Area rehabilitated (ha)	Nil	NA	-
6o	Compliance of Rehabilitation of waste land within lease (iii) Method of rehabilitation	Nil	NA	-
6p	Compliance of Environmental monitoring (core zone & buffer zone)	Regular Environmental Monitoring of Core and Buffer zone is proposed.	Environmental Monitoring of Core and Buffer zone is being carried out on regular basis.	Monitoring Agency-Ecomen Laboratories Parameters which are being Monitored: Ambient Air Quality Ambient Noise Surface Water Quality Dust Fall Measurement

				Noise Monitoring (Personal Exposure) Stack Monitoring Personal Dust Monitoring Fugitive Dust Monitoring Ground Water Quality
6q	General remarks of inspecting officer on PMCP compliance & progressive closure operations	Lessee has undertaken the PMCP measures as per proposal. Environmental monitoring results are within the permissible limit.		

7. Mineral Conservation

S.N.	Item	Proposals	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	Grade wise sorting proposed within lease area.	Grade wise sorting is done within lease area.	-
7b	Method of grade-wise mineral sorting i.e. manual or mechanical	Mechanical	Mechanical. Lumps to Fines ratio is maintained as per Schedule C of Mine Lease Deed – 59:41	Dry Crushing and Screening Method Plant Capacity- 250 TPH
7c	Different grade of mineral sorted out at mines	Yes	Lumps and fines sorted out as per proposal	Lumps and Fines Dispatch ratio: 34:66
7d	Any beneficiation process at mines	No Proposal	No beneficiation process in mines	-
7e	General remarks of inspecting officer on Mineral conservation & beneficiation issues	There is no beneficiation issue. Lessee is utilizing entire mined ore to their Captive Steel Plant.		

8. Environment

S.N.	Item	Proposals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	No proposal	No Topsoil generated during operations.	Proposed Working Area is already broken.
8b	Concurrent use or storage of topsoil	Nil	NA	-
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	Separate dump for overburden is proposed.	Separate dumping of overburden is being carried out.	-
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	No proposal	NA	-
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc.)	No proposal	NA	-

8f	Baseline information on existence of plantation & additional plantation done (Rule 41)	Safety Zone is completely covered in Vegetation. Proposed plantation in Safety Zone- 50	Achieved plantation in 2023-24- 50 Nos.	Year wise Plantation Details: 2020-21- 165 2021-22- 816 2022-23- 128 2023-24- 50
8g	Survival rate	No proposal	90%	-
8h	Water sprinkling on roads to control airborne dust	Water sprinkling on road is Proposed to control airborne dust.	Water tankers have been deployed for sprinkling on roads to control airborne dust.	Four Company Water Tankers of 10kL and Four hired water tanker of 8kL capacity.
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area	The lease area is surrounded by natural vegetation. Aesthetic beauty in and around mines area is good.		

9. Compliance of Rule 45

S. No	Item	COMMENTS	Remarks	
9a	Status of submission of Monthly and Annual returns	M.R. Submitted up to August 2024: Submitted on 09.09.2024 A.R. Submitted up to FY 23-24 Submitted on 29.06.2024	Submitted within stipulated time.	
S.N.	Item	Details GIVEN in A.R.	Observation of I/Officer	Remarks
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Mining Engineer: - Karthik Gujjal A Geologist: - Karani Singh Shekhawat Manager- Sundra Raja M V	All Mine officials mentioned were present during the day of inspection.	
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Working: 15.66 Ha Waste Dump: 0.85 Ha Infrastructure: 2.87 Ha Others: 13.18 Ha Total Area: 32.56 Ha	Appears to be correct	Nil
9d	Scrutiny of Annual return on afforestation	Plantation Within Lease - 50 nos. and Survival Rate: 90%	Appears to be correct	
9e	Scrutiny of Annual return on mineral reject generation (Grade & Qty)	No Mineral Reject Generation	Nil	
9f	Scrutiny of Annual return on ROM stock and/or graded ore	Opening Stock ROM- 0.05 T Production ROM: 9,40,000.00 T Closing Stock ROM- 0.05 T Fines Production Opening Stock: 0.22 58%>Fe≥55%:1,25,000.00 60%>Fe≥58% :5,94,500.00 Fines Dispatch 58%>Fe≥55%:1,25,000.00	Appears to be correct	Total Fines production: 7,19,500.00 T Total Lumps production: 2,20,500.00T

		60%>Fe≥58% :5,94,499.96 Closing Stock: 0.26 <u>Lumps Production</u> Opening Stock: 0.40 60%>Fe≥58%: 19,500.00 62%>Fe≥60%: 2,01,000.00 <u>Lumps Dispatch</u> 60%>Fe≥58%: 19,500.00 62%>Fe≥60%:2,00,999.99 Closing Stock: 0.41		
9g	Scrutiny of Annual return on sale value, Ex. Mine price & production cost	Lumps 60%>Fe≥58%- 901.63 ₹/T 62%>Fe≥60%- 901.63 ₹/T Fines 58%>Fe≥55%- 901.63 ₹/T 60%>Fe≥58%- 901.63 ₹/T	Appears to be correct	
9i	Scrutiny of Annual return on fixed assets	Value of Fixed Assets: ₹. 44,69,80,007.00 Depreciation on Fixed Assets: ₹. 4,35,25,842.00	Appears to be correct	
9k	Scrutiny of Annual return on mining machineries	Air Compressor-1 Back Hoe Loader- 1 Crusher-2 Dozer- 1 Explosive Van- 1 Diesel Generator-4 Jeep/Tractor-3 Motor Grader-1 Pump-1 Rock Drill- 1 Shovel- 5 Tipper-14 Water Tanker (10 kL)- 4 Water Tanker (8 kL)- 4 Water Tanker (1.5 kL)-1 Wheel Loader- 4	Appears to be correct	

Details of violations observed during current inspection and compliance position of violation pointed out					
<u>Violation observed</u>			<u>Show cause position</u>		
Rule No.	Issued on	Compliance on	Rule No.	Issued on	Compliance on
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(डॉ. सुरेश प्रसाद / Dr. Suresh Prasad)
क्षेत्रीय खान नियंत्रक / Regional Controller of Mines