

## MCDR INSPECTION REPORT (2023-24)

**File no: MCDR-MiFLOFE/24/2023-BNG-IBM\_RO\_BNG**

S. N.	Particulars	Details
1	Name of the Mine	Bhomman Iron Ore Mine (ML No. 0014) of M/s JSW Steel Ltd.
2	Total Lease Area (Ha) with breakup of Non- forest and forest land	Total area-93.6 ha, Forest-93.60 Ha.
3	Mine Code	30KAR07035
4	IBM Registration Number under rule 45 of MCDR, 1988	IBM/432/2011
5	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 – 002-42861000 Email – sunil.singh@jsw.in
6	Village	Bedara Bomminahalli, Hirekandavadi, Marijogihalli, Meghalahalli & Dindadahalli
7	Taluk/Mandal	Chitradurga & Holalkere
8	District	Chitradurga
9	Pin code	577520
10	State	Karnataka
11	Post office	Bheemasamudra
12	Nearest police station	Bheemasamudra
13	Nearest Railway station	Amrutapura
14	Date of Grant of Mining Lease	30.07.2020
15	Date of Execution	30.07.2020
16	Date of opening of Mine	10.12.2020
17	Date of Expiry	29.07.2070
18	Name of the Nominated Owner with Address, phone, email, fax number and date of appointment	Mr. Gajraj Singh Rathore, Whole Time Director and COO, M/s. JSW Steel Ltd., Bhomman Iron Ore Mine, JSW Mining Office, Near Talur Cross, Vidyanagar (Post), Toranagallu, Sandur Taluk, Ballari - Dist, PIN-583275, Karnataka Email – gajraj.rathore@jsw.in Date of appointment: 30.05.2023.
19	Name of the Mine Agent with Address, phone, email, fax number and date of appointment	Mr. Sunil Kumar Singh, M/s. JSW Steel Ltd., Bhomman Iron Ore Mine, JSW Mining Office, Near Talur Cross Vidyanagar (Post), Toranagallu, Sandur Taluk, Ballari - Dist, PIN-583275,

		Karnataka Mob: +91-9448286155 Email – sunil.singh@jsw.in Date of appointment: 10.08.2020
20	Name of the Mines Manager with Address, phone, email, fax number and date of appointment in mines	Mr. Srinivas N R, M/s. JSW Steel Ltd., Bhomman Iron Ore Mine, JSW Mining Office, Near Talur Cross Vidyanagar (Post), Toranagallu, Sandur Taluk, Ballari – Dist, PIN-583275, Karnataka Mob: +91-9740518766 Email – srinivas.nr@jsw.in Date of appointment: 19.10.2023
21	Name of the Mining Engineer, Qualification and total experience with Address, phone, email, fax number and date of appointment in mine	Mr. Srinivas N R B.E., Mining Engineering Total Experience: 10 Years Mob: +91-9740518766 Email – srinivas.nr@jsw.in Date of appointment: 05.01.2022
22	Whether Geologist and Mining Engineer appointed in mines satisfy the rule 42 & carrying out their duties as per rule 43 & 44.	Details of Geologist Mr. Deepak Patil B.S M.Sc., Applied Geology Total Experience- 10 Years Email: deepakpatil.badasiddappa@jsw.in Date of appointment- 10.08.2020
23	Date of Approval of Mining Plan/Modified Mining Plan with five-year period and specific condition in approval letter, if any.	Date of Approval of “Modification to the Approved Mining Plan”: 29.03.2023 IBM Letter No: 279/1104/2019/BNG for the period 2022-23 (01/01/2023 to 31/03/2023) to 2024-25.
24	Mineral(s) granted in lease and proved for mining	Iron Ore
25	Method of Mining (Opencast, Underground)	Open Cast
26	Category (Fully Mechanized, Others or Manual)	Fully Mechanized
27	Captive/ Non captive	Non-Captive
28	Date of inspection	13.06.2024
29	Name of accompanying mine officials with designation	Shri Sanjeev Kumar, AVP(Mines), Shri Srinivas N R, Mine Manager & Mining Engineer, Shri Deepak Patil B.S, Geologist and other mine officials:

### Exploration

S.N.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	Nil	Nil	Nil

1b	Exploration over lease area for Geological axis 1 or 2.	35 nos. of exploratory boreholes with total meterage 2580 metres.	41 nos. of exploratory boreholes drilled with total meterage of 3019 completed.	Exploration has been done 2022-23. Geological Report has been submitted on 18.07.2023
1c	Exploration Agency & Expenditure in lakh Rupees during the year	Nil.	Expenditure-Rs. 224.18 lakhs.	As reported by Lessee during inspection.
1d	Balance area to be explored to bring Geological axis in 1 or 2	G1= 59.00 Ha. G2= 3.35 Ha. G3= 5.37 Ha. Area to be explored= 25.80 Ha.	G1= 63.97 Ha. Non-mineralized Area= 29.63 Ha. (Actual after exploration)	Geological Report has been submitted on 18.07.2023.
1e	<b>Balance reserves as on <u>01.04.2024</u></b>	79,520,277 tons as of iron ore as on 1.04.2023 (HIO-51.88 % and HSIO-40.1 %)	76,720,400 tonnes of iron ore as on 01.04.2024	Depletion of Reserves 2,799,877 for the year 2023-24.
1f	General remarks of inspecting officer on geology, exploration etc.	There are two ore bands in the lease area, one major band & another small extension of major band on eastern part. Block wise bands are described below. Ore band No.1 - Average Length -1277m, Average Width - 450m, Average Depth - 55m. Ore Band-2- Average Length - 405m, Average Width - 155m, Average Depth - 40m.		

### Development

S. N.	Item	Proposals	Actual work	Remarks
2a	Location of development w.r.t. lease area	From Section G-G' to V-V'(Pit-1)	The development of benches at North western portion of pit is lagging between section F-	Violation issued under Rule 11(1) of MCDR 2017.

			F' to H-H' (N-1571680, E-631502 to N-1571590, E-631465) as per proposal.	
2b	Separate benches in topsoil, overburden and mineral (Rule 15)	Proposal of Separate benches in overburden and mineral	Developed and maintained separate benches in Over Burden and mineral.	Height of bench maintained 6 m in both OB and mineral.
2c	Stripping ratio or ore to OB ratio	1:0.03	The stripping ratio proposed for the year 2023-24(Ore: waste) is 1:0.03 against which 1:0.01 has been achieved.	Less development & corresponding waste handling (36,991 tons/ 20,550.56 Cum) has been carried out proportionate to achieved ROM production of 27,99,877 tons. Accordingly, development of benches at North western portion of pit is lagging between section F-F' to H-H' (N-1571680, E-631502 to N-1571590, E-631465) as per proposal. Violation issued under Rule 11(1) of MCDR 2017.
2d	Quantity of topsoil generation in m3	No proposal	Nil	Nil
2e	Quantity of overburden generation in m3	66479 cum./ 119662 tonnes	20550 cum./ 36991 tonnes	Less development & corresponding waste handling (36,991 tons/ 20,550.56 Cum) has been carried out proportionate to achieved ROM production of

				27,99,877 tons. Violation issued under Rule 11(1) of MCDR 2017.
2f	General remarks of inspecting officer on development of pit w.r.t. type of deposit etc.	The stripping ratio proposed for the year 2023-24(Ore: waste) is 1:0.03 against which 1:0.01 has been achieved. Less development & corresponding waste handling (36,991 tons/20,550.56 Cum) has been carried out proportionate to achieved ROM production of 27,99,877 tons. Accordingly, development of benches at North western portion of pit is lagging between section F-F' to H-H' (N-1571680, E-631502 to N- 1571590, E-631465) as per proposal. Violation issued under Rule 11(1) of MCDR 2017.		

### Exploitation

S.N.	Item	Proposals	Actual work	Remarks
3a	Number of pits proposed for production	1 pit proposed for production (Pit-1)	Actual working carried out in 1 pit (Pit-1)	Nil
3b	Quantity of ROM mineral proposed	4,000,000 tons proposed	2,799,877 tons achieved.	The earlier EC and CEC PAP was 1.00 MTPA. However, CEC enhancement of PAP for 3.66 MTPA was obtained on 19.10.2023 and CFO for 3.66 MTPA was issued on 21.02.2024. Hence less Production achieved. (As reported by Lessee during inspection)
3c	Recovery of salable/usable mineral from ROM production	100% proposed	100% achieved	Nil
3d	Quantity of mineral reject generation	No proposal	Nil	Nil
3e	Grade of mineral reject generation and threshold value declared	No proposal	Nil	Nil

3f	Quantity of sub-grade mineral generation	No proposal	Nil	Nil
3g	Grade of sub-grade mineral generation	No proposal	Nil	Nil
3h	Manual / Mechanised method adopted for segregating from ROM	Mechanized method by dry crushing and screening of ROM	Dry Crushing & Screening carried out as per the proposal	Primary Crusher-100 TPH, Feed size- -150 mm, Product size -10 mm and 10-40 mm.
3i	Any analysis or beneficiation study proposed & carried out for sub-grade mineral and reject	No Proposal	Nil	Nil
3j	Provision of drilling & blasting in mineral benches	Drilling and blasting is proposed for mineral benches in hard formation	No Drilling and Blasting has been carried out in the FY 2023-24.	As reported by Lessee during inspection.
3k	Provision of mining machineries in mineral benches	Proposed Mining Machineries: Excavators-20 Tippers-31 Drill-1 Wheel loader-8 Back Hoe Loader-1	Actual Machineries used: Excavators-22 Tippers- 49 Drill-0 Wheel loader-4	Nil
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	Proposal of 6 meters bench height in both Ore and Over Burden.	Bench height maintained 6 meters in Ore and Overburden	Bench height and width maintained.
3m	Total area covered under excavation/pits	50.91 Ha as on 01.04.2024 as per the approved document	48.44 Ha as on 01.04.2024	As reported by the Lessee during inspection.
3n	Ore to OB ratio for the pit/mine during the year	1:0.03 proposed	1:0.01 achieved	The stripping ratio proposed for the year 2023-24(Ore: waste) is 1:0.03 against which 1:0.01 has been achieved. Less development & corresponding

				waste handling (36,991 tons/ 20,550.56 Cum) has been carried out proportionate to achieved ROM production of 27,99,877 tons. Violation issued under Rule 11(1) of MCDR 2017.
3o	Total area put in use under different heads at the end of year	Mining-50.91 Ha, Waste Dumps-11.21 Ha, Infrastructure & Roads-2.5 Ha, (As on 1.04.2024)	Mining-48.44 Ha, Waste Dumps-11.21 Ha, Infrastructure & Roads-1.94 ha.	As reported by the Lessee during inspection.
3p	Production of ROM mineral during last five-year period, as applicable	<b>2020-21:</b> 1,000,000 <b>2021-22:</b> 1,000,000 <b>2022-23:</b> 1,000,000 <b>2023-24:</b> 4,000,000 <b>(in tonnes)</b>	<b>2020-21:</b> 836,994 <b>2021-22:</b> 858,407 <b>2022-23:</b> 999,995 <b>2023-24:</b> 2,799,877 <b>(in tonnes)</b>	CEC PAP was 1.00 MTPA. However, CEC enhancement of PAP for 3.66 MTPA was obtained on 19.10.2023 and CFO for 3.66 MTPA was issued on 21.02.2024. Hence less Production achieved. (As reported by Lessee during inspection)
3q	General remarks of inspecting officer on method of mining etc.	<p>i) The stripping ratio proposed for the year 2023-24(Ore: waste) is 1:0.03 against which 1:0.01 has been achieved. Less development &amp; corresponding waste handling (36,991 tons/ 20,550.56 Cum) has been carried out proportionate to achieved ROM production of 27,99,877 tons. Violation issued under Rule 11(1) of MCDR 2017.</p> <p>ii) It is observed during inspection that some mineral stacks are located at Section G-G' &amp; H-H' at North western portion, which is restricting the bench advancement at North western portion of pit as per the proposal. Violation issued under Rule 11(1) of MCDR 2017.</p>		

		iii) As per the special conditions B. (3) of mine plan approval letter dtd 29/03/2023, the integrated Slope stability study (Mine pit & Waste dumps) and the Hydrological Study of the Mine shall be carried out by the Government agencies and reports to be submitted to this office at the earliest. The abovementioned study reports have not been submitted to this office as on date of this office inspection, as per the mine plan condition. Violation issued under Rule 11(1) of MCDR 2017.
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### Solid Waste Management-Dumping

S.N.	Item	Proposals	Actual work	Remarks
4a	Separate dumping of topsoil, OB & mineral reject (Rule 32, 33)	Separate dump for Overburden is Proposed	Separate dump for Overburden is being carried out.	Active waste dump AD
4b	Location of topsoil, OB & mineral reject dumps	632223 E to 632355 E & 1571449 N to 1571591 N (AD Active dump)	Waste dumping carried out within the proposed extent as per the proposal.	Active waste dump AD
4c	Number of dumps within lease area and outside lease area	1 Active Dumps and 3 Inactive Dumps within the Lease Area	1 Active Dumps and 3 Inactive Dumps within the Lease Area	The Active Dump is named AD & the Inactive Dumps are named ID-1, 2 & 3 respectively
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	Inactive dump ID-1,2 & 3 within UPL as per the current exploration data.	Inactive dump ID-1,2 & 3 within UPL as per the current exploration data.	As per the current exploration data
4e	Number of active & alive dumps	1 No.	1 No.	Active Dump- AD
4f	Number of dead dumps	3 Nos.	3 Nos.	Inactive Dumps- ID-1, 2 & 3
4g	Number of dumps stabilized	No proposal	Nil	Nil
4h	Whether Retaining wall or garland drain all along dumps are there	Yes	Yes	Nil
4i	Length of Retaining wall or	No proposal for	Nil	Nil



	garland drain all along dump	year 2023-24		
4j	Number of settling ponds	No proposal for year 2023-24	Nil	Nil
4k	Specific comments of inspecting officer on waste dump management.	<p>i)Waste dumping carried out at the earmarked location as per the proposal.</p> <p>ii) As per the special conditions B. (3) of mine plan approval letter dtd 29/03/2023, the integrated Slope stability study (Mine pit &amp; Waste dumps) and the Hydrological Study of the Mine shall be carried out by the Government agencies and reports to be submitted to this office at the earliest. The above-mentioned study reports have not been submitted to this office as on date of this office inspection, as per the mine plan condition. Violation issued under Rule 11(1) of MCDR 2017.</p>		

### 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.	Nil	Nil
5b	Area under backfilling of mined out area	No proposal.	Nil	Nil
5c	Concurrent use of topsoil for restoration or rehabilitation of mined out area (Rule 32)	No proposal.	Nil	Nil
5d	Total area fully reclaimed & rehabilitated	No proposal.	Nil	Nil
5e	General remarks of inspecting officer on backfilling, reclamation etc	No Backfilling proposals during year 2023-24.		

### 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 before 1 <sup>st</sup> of July every year.	Yet to be submitted on date of inspection.	Nil

6b	Area available for rehabilitation (ha)	0.4 ha afforestation proposed at north side of Waste dump-AD.	1 ha Afforestation carried out at active waste dump AD.	Afforestation done in Active Dump Slopes
6c	Afforestation done (ha)	0.4 ha afforestation proposed at north side of Waste dump-AD.	1 ha Afforestation carried out at active waste dump AD.	Afforestation done in Active Dump Slopes
6d	No. of saplings planted during the year	500 plants proposed	1000 plants plantation carried out.	Afforestation done in Active Dump Slopes
6e	Cumulative no. of plants	2500 nos. of plants	2710 cumulative number of plants as on 1.04.2024.	Nil.
6f	Any other specific method of rehabilitation	No proposal	Nil	Nil
6g	Cost incurred on watch & care during the year	Rs. 50,000 proposed for afforestation	Rs. 1,50,000 for afforestation	Cost incurred on plantation (As reported by the Lessee during inspection)
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (L x B x D)	No proposal	Nil	Nil
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Void filled by waste/tailings	No proposal	Nil	Nil
6j	Compliance on reclamation and rehabilitation by backfilling (iii) Afforestation on the backfilled area	No proposal	Nil	Nil
6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	No proposal	Nil	Nil
6l	Compliance on reclamation and	No proposal	Nil	Nil

	rehabilitation by backfilling (v) Any other specific means			
6m	Compliance of Rehabilitation of waste land within lease (i) Afforestation	No proposal	Nil	Nil
6n	Compliance of Rehabilitation of waste land within lease (ii) Area rehabilitated (ha)	No proposal	Nil	Nil
6o	Compliance of Rehabilitation of waste land within lease (iii) Method of rehabilitation	No proposal	Nil	Nil
6p	Compliance of Environmental monitoring (core zone & buffer zone)	Environment Monitoring proposed in both Core and Buffer zone	The Environment Monitoring in Core and Buffer zone for air, water, noise & soil carried out as per the proposal. Monitoring report of Mar-24 available during inspection. Parameters within limit.	Nil.
6q	General remarks of inspecting officer on PMCP compliance & progressive closure operations	PMCP proposals related to afforestation, Environmental monitoring etc. carried out as per the proposal.		

### Mineral Conservation

S.N.	Item	Proposals	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	Only dry crushing & Screening Proposed	Production 2023-24 are as follows <b>Lumps:</b> <u>Grade:</u> <u>Production Qty in tons</u> 51-55 %: 229,964 <b>Fines:</b> <u>Grade: Qty in tons</u>	As reported by the Lessee during inspection.

			51-55 %: 1,258,739	
7b	Method of grade-wise mineral sorting i.e. manual or mechanical	Only dry crushing & Screening Proposed (Mechanical)	Production 2023-24 are as follows <b>Lumps:</b> <u>Grade: Production Qty in tons</u> 51-55 %: 229,964 <b>Fines:</b> <u>Grade: Qty in tons</u> 51-55 %: 1,258,739	As reported by the Lessee during inspection.
7c	Different grade of mineral sorted out at mines	Proposed ROM grade range as per the approved document 35-58 %	Production 2023-24 are as follows <b>Lumps:</b> <u>Grade: Production Qty in tons</u> 51-55 %: 229,964 <b>Fines:</b> <u>Grade: Qty in tons</u> 51-55 %: 1,258,739	As reported by the Lessee during inspection.
7d	Any beneficiation process at mines	No Proposal	No beneficiation process in mines	Nil
7e	General remarks of inspecting officer on Mineral conservation & beneficiation issues	There is only dry crushing and screening carried out inside the mine. The mineral conservation activities carried out inside mine as per proposal.		

### Environment

S.N	Item	Proposals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	No proposal	Nil	Nil
8b	Concurrent use or storage of topsoil	No proposal	Nil	Nil
8c	Separate dumps for	Separate	Separate	Nil

	overburden, waste rock, rejects and fines (Rule 33)	Dump for overburden / Waste is proposed at AD dump	dumping of overburden is being carried out at AD dump	
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	No proposal	Nil	Nil
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	No proposal	Nil	Nil
8f	Baseline information on existence of plantation & additional plantation done (Rule 41)	2500 nos. of plants	2710 cumulative number of plants as on 1.04.2024.	Nil.
8g	Survival rate	80% proposed	90% achieved	As reported by Lessee during inspection.
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.	No. of Water Tanker: 05 Capacity: 4 tankers of 10 KL & 1 tanker of 8 KL.
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area	The aesthetic beauty in and around the mines looks good.		
<b>Compliance of Rule 45</b>				
<b>S.N .</b>	<b>Item</b>	<b>COMMENTS</b>		<b>Remarks</b>
9a	Status of submission of Monthly and Annual returns	M.R. Submitted up to May 2024 Submitted on 08.06.2024 A.R. yet to be submitted for FY 2023-2024 on dated of inspection.		Nil
<b>S.N .</b>	<b>Item</b>	<b>Details GIVEN in A.R.</b>	<b>Observation of I/Officer</b>	<b>Remarks</b>
9b	Scrutiny of Annual return for information on Mining Engineer,	AR 2023-24 yet to be submitted on date of inspection	AR 2023-24 yet to be submitted on date of	Nil

	Geologist and Manager		inspection	
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	AR 2023-24 yet to be submitted on date of inspection	AR 2023-24 yet to be submitted on date of inspection	Nil
9d	Scrutiny of Annual return on afforestation	AR 2023-24 yet to be submitted on date of inspection	AR 2023-24 yet to be submitted on date of inspection	Nil
9e	Scrutiny of Annual return on mineral reject generation (Grade & quantity)	AR 2023-24 yet to be submitted on date of inspection	AR 2023-24 yet to be submitted on date of inspection	Nil
9f	Scrutiny of Annual return on ROM stock and/or graded ore	AR 2023-24 yet to be submitted on date of inspection	AR 2023-24 yet to be submitted on date of inspection	Nil
9g	Scrutiny of Annual return on sale value, Ex. Mine price & production cost	AR 2023-24 yet to be submitted on date of inspection	AR 2023-24 yet to be submitted on date of inspection	Nil
9i	Scrutiny of Annual return on fixed assets	AR 2023-24 yet to be submitted on date of inspection	AR 2023-24 yet to be submitted on date of inspection	Nil
9k	Scrutiny of Annual return on mining machineries	AR 2023-24 yet to be submitted on date of inspection	AR 2023-24 yet to be submitted on date of inspection	Nil

**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
11(1)	26/06/202	05/09/2024	Nil	–	–
	4				

(संदीप कुमार सिंह. /Sandeep Kumar Singh)  
वरिष्ठ सहायक खान नियंत्रक/ Senior Assistant Controller of Mines