

MCDR INSPECTION REPORT (2023-24)**File No: MCDR-MiFLOFE/15/2022-BNG-IBM_RO_BNG**

S. N.	Particulars	Details
1	Name of the Mine	Tunga Iron Ore Mine (ML No. 0004)
2	Total Lease Area (Ha) with breakup of non-forest and forest land	Total Lease area-32.68 Ha, Forest land-32.68 Ha, Non -Forest- Nil
3	Mine code	30KAR03181
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 LIMITED, JSW Centre Bandra Kurla Complex, Bandra (East) Mumbai (Suburban), Maharashtra, 400051 02242863000 02242861000 sunil.gupta@jsw.in
6	Village	Ittanahalli
7	Taluk/Mandal	Sandur
8	District	Bellary
9	Pin code	583119
10	State	Karnataka
11	Post office	Taranagar
12	Nearest police station	Sandur
13	Nearest Railway station	Toranagallu
14	Date of Grant of Mining Lease	12.01.2018
15	Date of Execution	12.01.2018
16	Date of opening of Mine	12.02.2018
17	Date of Expiry	11.01.2068
18	Name of the Nominated Owner with Address, phone, email, fax number and date of appointment	Mr. Gajraj Singh Rathore Whole Time Director & COO M/s JSW Steel Limited, JSW Mining Office, Near Talur Cross, Vidyanagar Post, Toranagallu, Sandur Taluk, Ballari Dist.-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 Limited, JSW Mining Office, Near Talur Cross, Vidyanagar Post, Toranagallu, Sandur Taluk, Ballari, Dist.-583275, Karnataka Mob: +91 9449598135 Email: sunil.singh@jsw.in Date of appointment: 28.11.2019
20	Name of the Mines Manager with Address, phone, email, fax number and date of appointment in mines	Mr. Chitranjan Kumar, First Class Mine Manager. M/s JSW Steel Limited,

		Tunga Iron Ore Mine, JSW Mining Office, Near Talur Cross, Vidyanagar Post, Toranagallu, Sandur Taluk, Ballari Dist.-583275, Karnataka Mob: +91 9480694325 Email – chitranjan.kumar@jsw.in Date of appointment: 15.04.2022
21	Name of the Mining Engineer, Qualification and total experience with Address, phone, email, fax number and date of appointment in mine	Mr. T. Varaprasad B. E in Mining Engg., Total Experience: 11 Years, M/s. JSW Steel Limited, Tunga Iron Ore Mine, JSW Mining Office, Near Talur Cross, Vidyanagar Post, Toranagallu, Sandur Taluk, Ballari Dist.-583275, Karnataka Mob: +91 7022578538 Email: t.varaprasad@jsw.in Date of appointment: 11.09.2022
22	Whether Geologist and Mining Engineer appointed in mines satisfy the rule 42 & carrying out their duties as per rule 43 & 44.	Mr. Raghavendra S Desai M.Sc. Applied Geology, Total Experience- 27 Years, M/s JSW Steel Limited, Tunga Iron Ore Mine JSW Mining Office, Near Talur Cross, Vidyanagar Post, Toranagallu, Sandur Taluk, Ballari Dist.-583275, Karnataka Mob: +91 9480694329 Email – raghavendra.desai@jsw.in Date of appointment: 16.01.2018
23	Date of Approval of Scheme of Mining/Modified Scheme of Mining with five-year period and specific condition in approval letter, if any.	Review and updation of mining was approved by IBM vide letter no. 279/1090/2017/BNG dated 09/02/2022 for the period 2022-23 to 2026-27
24	Mineral(s) granted in lease and proved for mining	Iron Ore
25	Method of Mining (Opencast, Underground)	Opencast
26	Category (Fully Mechanized, Others or Manual)	A-Fully Mechanized
27	Captive/ Non captive	Captive
28	Date of Previous inspection	16.06.2023
29	Date of inspection	28.11.2024
30	Name of accompanying mine officials with designation	Shri Chitranjan Kumar, Mines Manager, Shri T. Varaprasad, Mining Engineer, Shri Raghavendra S Desai, 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.	No proposal	Nil	Nil
1c	Exploration Agency & Expenditure in lakh Rupees during the year	No proposal	Nil	Nil
1d	Balance area to be explored to bring Geological axis in 1 or 2	G-1- 16.40 ha Non mineralized area-16.28 ha (As per the last approved mine plan document)	G-1- 16.40 ha Non mineralized area-16.28 ha	Geological report submitted to State DMG on 12.06.2023.
1e	Balance reserves as on <u>01.04.2024</u>	4,413,526 tonnes of iron ore as on 1.12.2021(3,445,674 tons of iron ore with avg Fe grade 57.92 % & 967,582 tons with avg Fe grade 38.46 %. (As per the approved document)	3,808,759 tons of iron ore as on 1.04.2024 after depletion of production	As reported by Lessee in AR 2023-24.
1f	General remarks of inspecting officer on geology, exploration etc.	i)Geological Reserves/Resources reported correctly by the Lessee in AR 2023-24 after depletion of production quantity. ii)Geological report submitted to State DMG on 12.06.2023.		

Development

S.N.	Item	Proposals	Actual work	Remarks
2a	Location of development w.r.t. lease area	Pit-1-(894-866 mRL), Section-S-5 to S-12]	It is observed from drone data and during inspection that the vertical extent(mRL) for	Violation issued under Rule 11(1) of MCDR 2017.

			pit 1 have been developed till 860 mRL at Sec S7-7'(N-1670648, E-675411) to S10-10'(N 1670768, E-675346) for the year 2023-24 which is beyond the proposed maximum vertical limit of 866 mRL	
2b	Separate benches in topsoil, overburden and mineral (Rule 15)	Separate benches proposed in mineral and Overburden. 8m benches propose both in OB & mineral.	Separate benches maintained in overburden & mineral. 8m benches maintained in OB & mineral	Nil
2c	Stripping ratio or ore to OB ratio	1:0.30 (In Tonnes) Proposed	1:0.32 (In Tonnes) achieved	ROM-3,00,000 tons OB- 96,612 tons~48,306 Cum.
2d	Quantity of topsoil generation in m3	No proposal	NIL	Nil
2e	Quantity of overburden generation in m3	45,235 Cum OB generation proposed	48,306 Cum OB generated.	More OB generation due to localized interburden layer occurrence/handling as reported by the Lessee during inspection.
2f	General remarks of inspecting officer on development of pit w.r.t. type of deposit etc.	It is observed from drone data and during inspection that the vertical extent(mRL) for pit 1 have been developed till 860 mRL at Sec S7-7'(N-1670648, E-675411) to S10-10'(N 1670768, E-675346) for the year 2023-24 which is beyond the proposed maximum vertical limit of 866 mRL. Violation issued under Rule 11(1) of MCDR 2017.		

Exploitation

S.N	Item	Proposals	Actual work	Remarks
3a	Number of pits	01 pit (Pit-1)	01 pit (Pit-1). It is	-

	proposed for production	proposed for production	observed from drone data and during inspection that the vertical extent(mRL) for pit 1 have been developed till 860 mRL at Sec S7-7'(N-1670648, E-675411) to S10-10'(N 1670768, E-675346) for the year 2023-24 which is beyond the proposed maximum vertical limit of 866 mRL	Violation issued under Rule 11(1) of MCDR 2017.
3b	Quantity of ROM mineral production proposed	3,00,000 tons of ROM proposed	3,00,000 tons of ROM production achieved	Nil
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 / Mechanized method adopted for segregating from ROM	Only Crushing & Screening proposed	Crushing & Screening carried out within the Lease area	Crusher -250 TPH capacity. O/p Size 0 - 10 mm (Fines) 10-40 mm (Lumps)
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	Deep hole Drilling and Blasting is	Deep hole Drilling and Blasting is being carried out for	Drill-102 mm dia. Explosive-Slurry Explosive.

		proposed for mineral benches.	production purpose. Drilling is done with drill of 102 mm dia. and slurry explosive used in conjunction with delay detonators.	
3k	Provision of mining machineries in mineral benches	Mining Machineries proposed.	i)Excavators-1.6 Cum-3 nos. 0.25 Cum- 1no. ii)Front End Loader- 2.6 Cum-2 nos. iii)Tippers-14 Cum-7 nos. iv)Drill-102 mm-1 no. v)Water tanker-10 KL-2 nos. vi)Crusher- 250 TPH-1.	As reported by the Lessee in AR 2023-24.
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	Proposed Bench Height- 8m for both OB & Mineral.	Bench Height- 8m maintained for both OB & mineral.	Nil
3m	Total area covered under excavation/pits	7.42 Ha proposed as on 01.04.2024	7.33 Ha as on 1.04.2024	As reported by the Lessee in AR 2023-24.
3n	Ore to OB ratio for the pit/mine during the year	1:0.30 (In Tonnes) Proposed	1:0.32 (In Tonnes) achieved	ROM-3,00,000 tons OB- 96,612 tons~48,306 Cum.
3o	Total area put in use under different heads at the end of year	Mining- 7.42 Ha O/B Dumps- 10.52 Ha	Mining- 7.33 Ha O/B Dumps- 10.50 Ha	As reported by the Lessee in AR 2023-24.
3p	Production of ROM mineral during last five-year period, as applicable	2019-20: 300000 2020-21: 300000 2021-22: 300000 2022-23: 300000 2023-24: 300000 (in tonnes)	2019-20: 299997 2020-21: 299700 2021-22: 299785 2022-23: 300000 2023-24: 300000 (in tonnes)	CEC limit: 0.3 MTPA
3q	General remarks	It is observed from drone data and during inspection that the		

of inspecting officer on method of mining etc.	vertical extent(mRL) for pit 1 have been developed till 860 mRL at Sec S7-7'(N-1670648, E-675411) to S10-10'(N 1670768, E-675346) for the year 2023-24 which is beyond the proposed maximum vertical limit of 866 mRL. Violation issued under Rule 11(1) of MCDR 2017.
--	--

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 (AD dump)	It is observed from drone data and during inspection that waste dumping for proposed waste dump (AD) has been carried out between Section S4-4' to S6-6' (N-1670671, E 675736) for the year 2023-24 which is not the earmarked location for waste dumping as per the proposal.	Violation issued under Rule 11(1) of MCDR 2017.
4b	Location of topsoil, OB & mineral reject dumps	OB Dump Proposal: (Section S1-1' to S3-3 proposed)	It is observed from drone data and during inspection that waste dumping for proposed waste dump (AD) has been carried out between Section S4-4' to S6-6' (N-1670671, E 675736) for the year 2023-24 which is not the earmarked location for waste dumping as per the proposal.	Violation issued under Rule 1(1) of MCDR 2017.
4c	Number of dumps within lease area and outside lease area	Within Lease Area- 2 Proposed Dump-1(AD) Inactive Dump-1 (ID-4)	Within Lease Area- 2 Proposed Dump-1(AD) Inactive Dump-1 (ID-4)	Nil
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	Proposed Dump (AD)- Outside Ultimate Pit Limit.	Proposed Dump (AD)- Outside Ultimate Pit Limit.	As per the current exploration

		Parts of Inactive Dump (ID-4) lie inside the UPL.	Parts of Inactive Dump (ID-4) lie inside the UPL.	data.
4e	Number of active & alive dumps	Active Dump-1(AD)	Active Dump - 1(AD). It is observed from drone data and during inspection that waste dumping for proposed waste dump (AD) has been carried out between Section S4-4' to S6-6' (N-1670671, E 675736) for the year 2023-24 which is not the earmarked location for waste dumping as per the proposal.	Violation issued under Rule 11(1) of MCDR 2017.
4f	Number of dead dumps	Inactive Dump - 1(ID-4)	Inactive Dump - 1(ID-4)	Nil
4g	Number of dumps stabilized	No proposal	Nil	Nil
4h	Whether Retaining wall or garland drain all along dumps are there	No proposal	Nil	Nil
4i	Length of Retaining wall or garland drain all along dump	No proposal	Nil	Nil
4j	Number of settling ponds	No proposal	Nil	Nil
4k	Specific comments of inspecting officer on waste dump management.	It is observed from drone data and during inspection that waste dumping for proposed waste dump (AD) has been carried out between Section S4-4' to S6-6' (N-1670671, E 675736) for the year 2023-24 which is not the earmarked location for waste dumping as per the proposal. Violation issued under Rule 11(1) of MCDR 2017.		

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	No proposal	Nil	Nil

	mined out area			
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.		

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 st of July Every year.	Annual PMCP report for the year 2023-24 submitted along with Annual Return 2023-24 on 28/06/2024.	Submitted within timeline.
6b	Area available for rehabilitation (ha)	0.30 ha afforestation in Greenbelt proposed	0.17 ha afforestation carried out in green belt, Dump area, Gap plantation etc.	As reported by Lessee during inspection.
6c	Afforestation done (ha)	0.30 ha afforestation in Greenbelt proposed	0.17 ha afforestation carried out in green belt, Dump area, Gap plantation etc.	As reported by Lessee during inspection.
6d	No. of saplings planted during the year	500 nos. of saplings plantation proposed	500 nos. of saplings plantation carried out.	As reported by Lessee in AR 2023-24.
6e	Cumulative no. of plants	Not mentioned.	95,708 nos. of plants cumulative within lease as on 1.04.2024.	As reported by Lessee in AR 2023-24.
6f	Any other specific method of rehabilitation	No proposal	Nil	Nil-

6g	Cost incurred on watch & care during the year	Rs. 87,500 proposed for plantation during year 2022-23	As per proposal.	Nil
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 rehabilitation by backfilling (v) Any other specific means	No proposal	Nil	Nil-
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)	Regular Environmental Monitoring of Core and Buffer zone is proposed.	Environmental Monitoring of Core and Buffer zone is being carried out. Environmental monitoring report of March-24 verified during inspection. All parameters	Parameters which are being Monitored: (Air, Noise, Surface water quality, Ground water & Dust).

			within limit.	
6q	General remarks of inspecting officer on PMCP compliance & progressive - closure operations	The PMCP proposals implemented inside the mine 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 Crushing & Screening proposed	Crushing & screening carried out. ROM production- 300,000 tons. Graded ore production- 300,000 tons Graded ore Despatch- 299,996 tons.	Crusher -250 TPH capacity. O/p Size 0 - 10 mm (Fines) 10-40 mm (Lumps)
7b	Method of grade-wise mineral sorting i.e. manual or mechanical	Only crushing and screening proposed	Fines Fe 45-51 % Fe 51-55% Fe 55-58% Lumps Fe 45-51 % Fe 51-55% Fe 55-58%	As reported by the Lessee in AR 2023-24.
7c	Different grade of mineral sorted out at mines	Only crushing and screening proposed	Fines Fe 45-51 % Fe 51-55% Fe 55-58% Lumps Fe 45-51 % Fe 51-55% Fe 55-58%	As reported by the Lessee in AR 2023-24.
7d	Any beneficiation process at mines	No proposal	Nil	Nil-
7e	General remarks of inspecting officer on Mineral conservation & beneficiation issues	Mineral Conservation activities carried out inside mine as per the proposal. There is no beneficiation activity proposal inside mine.		

Environment

S. N.	Item	Proposals	Actual work	Remarks
8a	Separate removal and utilization of	No Topsoil Generation	Nil	Nil

	topsoil (Rule 32)	proposal		
8b	Concurrent use or storage of topsoil	No proposal	Nil	Nil
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	Separate dump for overburden is proposed (AD)	It is observed from drone data and during inspection that the vertical extent(mRL) for pit 1 have been developed till 860 mRL at Sec S7-7'(N-1670648, E-675411) to S10-10'(N 1670768, E-675346) for the year 2023-24 which is beyond the proposed maximum vertical limit of 866 mRL.	Violation issued under Rule 11(1) of MCDR 2017.
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)	Not mentioned.	95,708 nos. of plants cumulative within lease as on 1.04.2024.	As reported by Lessee in AR 2023-24.
8g	Survival rate	85-90% proposed within lease area.	95% achieved within lease area	As reported by Lessee in AR 2023-24.
8h	Water sprinkling on	Water sprinkling	Water tankers	No. of Water

	roads to control airborne dust	on roads are proposed to control airborne dust.	have been deployed for sprinkling on roads to control airborne dust	Tankers:2 Capacity: 10 KL
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area	It is observed from drone data and during inspection that the vertical extent(mRL) for pit 1 have been developed till 860 mRL at Sec S7-7' (N-1670648, E-675411) to S10-10'(N 1670768, E-675346) for the year 2023-24 which is beyond the proposed maximum vertical limit of 866 mRL. Violation issued under Rule 11(1) of MCDR 2017.		
Compliance of Rule 45				
S. N.	Item	COMMENTS		Remarks
9a	Status of submission of Monthly and Annual returns	M.R. Submitted up to: Oct-2024 Submitted on: 08.11.2024 ***** A.R. for the year 2023-24 submitted on 28/06/2024.		Submitted within timeline.
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 – T. Varaprasad Geologist – Raghavendra S Desai Mine manager – Chitranjan Kumar	Appears to be correct.	Mine Manager, Mining Engineer, and Geologist present on date of inspection.
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Mining- 7.33 Ha. O/B Dumps- 10.50 Ha	Appears to be correct.	Nil
9d	Scrutiny of Annual return on afforestation	Plantation Within Lease -500 nos. Survival Rate: 95 %, Outside lease area-500 nos. with 90 % survival rate. Cumulative plantation within	Appears to be correct.	Nil

		lease-95708 Nos.		
9e	Scrutiny of Annual return on mineral reject generation (Grade & quantity)	Nil	Appears to be correct	Nil
9f	Scrutiny of Annual return on ROM stock and/or graded ore	ROM: O/s -0 ton, Production - 300,000 tons, C/s – 0 ton Graded Ore (Lumps + Fines) O/s- 10.830 tons Production- 300,000 tons Despatch- 299,996.69 tons C/s- 14.140 tons.	Appears to be correct	Nil
9g	Scrutiny of Annual return on sale value, Ex. Mine price & production cost	Ex. Mine price: Rs/Ton, Lumps 45-51 % Fe- 974.81 Rs/ton 51-55 % Fe- 974.81 Rs/ton 55-58 % Fe- 974.81 Rs/ton Fines 45-51 % Fe- 974.81 Rs/ton 51-55 % Fe- 974.81 Rs/ton 55-58 % Fe- 974.81 Rs/ton Cost of production: 974.81 Rs/Ton,	Appears to be correct.	The mine is a captive mine.
9i	Scrutiny of Annual return on fixed assets	Rs. 196098723 including industrial, plant & machinery and Capitalized expenditure.	Appears to be correct.	Nil
9k	Scrutiny of Annual return on mining machineries	i)Excavators-1.6 Cum-3 nos. 0.25 Cum- 1no. ii)Front End Loader- 2.6 Cum- 2 nos.	Appears to be correct	Nil

		iii)Tippers-14 Cum-7 nos. iv)Drill-102 mm- 1 no. v)Water tanker- 10 KL-2 nos. vi)Crusher- 250 TPH-1. etc.		
--	--	---	--	--

Details of violations observed during current inspection and compliance position of violation pointed out

Violation observed			Show cause position		
Rule No.	Issued on	Compliance on	Rule No.	Issued on	Compliance on
11(1)	13/12/2024	17/02/2025	Nil	Nil	Nil

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