

**INDIAN BUREAU OF MINES  
MINERALS DEVELOPEMMENT AND REGULATION DIVISION**

**MCDR inspection REPORT**

**Bangalore regional office**

**Mine file No :** KNT/BLR/Fe-493/BNG

**Mine code :** 30KAR03184

- (i) Name of the Inspecting : **OM5** ) **Dr.OMKESHA MURTHY.M.G**  
Officer and ID No.
- (ii) Designation : Regional Mining Geologist
- (iii) Accompanying mine : Mr. Nandan Bhandary (General Manager), Mr. Awadhesh Ku  
Official with  
Designation
- (iv) Date of Inspection : 22/10/2022
- (v) Prev.inspection date : 07/08/2021

**PART-I : GENERAL INFORMATION**

1. (a) **Mine Name** : **BHADRA IRON ORE MINES**
- (b) **Registration NO.** : **IBM/432/2011**
- (c) **Category** : **A Fully Mechanised**
- (d) **Type of Working** : **Opencast**
- (e) **Postal address**
- State : **KARNATAKA**
- District : **BELLARY**
- Village : **ITTANAHALLI**
- Taluka : **SANDUR**
- Post office : **TARANAGAR**
- Pin Code : **583119**
- FAX No. : **8395-250132**
- E-mail : **PANDEY.BINAY@JSW.IN**
- Phone : **8395-250120-30**
- (f) **Police Station** : **SANDUR**
- (g) **First opening date** : **01/06/2019**
- (h) **Weekly day of rest** : **SUN**
2. **Address for** : **ITTANAHALLI VILLAGE**  
**correspondance** : **TARANAGAR POST**  
: **BALLARI-583119**
3. (a) **Lease Number** : **ML No. 007**
- (b) **Lease area** : **130.53 Ha**
- (c) **Period of lease** : **50Y**
- (d) **Date of Expiry** : **26/05/2069**
4. **Mineral worked** : **IRON ORE** **Main**

## 5. Name and Address of the

Lessee : JSW STEEL LIMITED  
 JSW Mining office, Near  
 Talur Cross Vidyanagar  
 Post, Toranagallu Sandur,  
 Bellary BELLARY KARNATAKA  
 Phone:9448286155  
 FAX :

Owner : Jayant Acharya ,Dy. Managing Director  
 JSW Mining Office, Near  
 Talur Cross Vidyanagar  
 (Post), Toranagallu, Sandur  
 Taluk,Bellary-Dist BELLARY  
 KARNATAKA  
 Phone:  
 FAX :

Agent : SUNIL KUMAR SINGH  
 JSW steel Ltd., Vijayanagar  
 works, Vidyanagar Po,  
 Bellari, Karnataka BELLARY  
 KARNATAKA  
 Phone: 9449598135  
 FAX : 08395250132/142

## Mining Engineer

Name : MANJUNATH GOVINDAPPA,Full Time  
 Qualification : M. Tech (Mining)  
 Appointment/ : 07/10/2022  
 Termination date

## Geologist

Name : CHIRUKURI HSR KRISHNA,Full Time  
 Qualification : MSc (Geology)  
 Appointment/ : 22/11/2021  
 Termination date

## Manager

Name : AWADHESH KUMAR RAI  
 Qualification : DIP IN MINING FCC  
 Appointment/ : 15/06/2020  
 Termination date

6. Date of approval of Mining Plan/Scheme of Mining : MP under 16(1) of MCR 2016 06/07/2017  
 Modif.of approved Mining Plan 16/11/2021

## PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

## Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	NIL	NIL	--
1b	Exploration over lease area for geological axis 1 or 2	Total Borehole- 26 Meterage - 1445 M	NIL	Violation issued to the lessee
1c	Exploration Agencies and Expenditure in lakh rupees during the year	NIL	NIL	-
1d	Balance area to be explored to bring Geological axis in 1 or 2	G2: 28.40 Ha G3: 15.04 Ha	NIL	Details of Geological axis area as per approved mining plan: G1: 30.61 Ha G2: 28.40 Ha G3: 15.04 Ha Non-mineralized Area- 56.48 Ha
1e	Balance reserve as on 01/04/20	--	8,453,150.54 Metric Tonnes	As per AR 2021-22
1f	General remarks of inspecting officers on geology, exploration etc			Exploration needs to be carried out to bring mineralized area to G1 in the current plan period (28.40 HA - G2 and 15.04 Ha - G3)

## Development :

Sl.No.	Item	Proposals	Actual work	Remarks
2a	Location of development w.r.t.lease area	Block-2 and 3 E/W 674827 / 675538 N/S 1669934 /1670984	As per proposal	
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	Benches in Mineral and Overburden: 13	As per proposal	No Top Soil Generation

2c	Stripping ratio or ore to OB ratio	1:2.15 (in Metric Tonnes)	1:1.023 (in Metric Tonnes)	Variation in nature of ore body mineralization
2d	Quantity of topsoil generation in m3	NIL	NA	No Top Soil Generation
2e	Quantity of overburden generation in m3	790,048.5 m3	696796.93 m3	Actual work for year 2021-22
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc			Maintained the specified height and width of benches during development of benched in the mine are as per approved proposal.

#### Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	2	2	1 in Block-II & 1 in Block-III
3b	Quantity of ROM mineral production proposed	1440000 Metric Tons	1432713.46 Metric Tons	As per AR 2021-22
3c	Recovery of sailable/usable mineral from ROM production	100 %	100 %	--
3d	Quantity of mineral reject generation	No Proposals	NIL	-
3e	Grade of mineral rejects generation and threshold value declared.	No Proposals	NIL	-
3f	Quantity of sub grade mineral generation.	No Proposals	NIL	-
3g	Grade of sub grade mineral generation	No Proposals	NIL	-
3h	Manual / Mechanised method adopted for segregating from ROM	Mechanized Method for Segregation (Crushing & Screening)	ROM processed by Crushing & Screening	Dry Crushing and Screening-300 TPH Mobile Screen: 250 TPH

3i	Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects.	No Proposals	NA	-
3j	Provision of drilling and blasting in mineral benches	Drilling and Blasting is proposed for mineral benches.	Carried out as proposed in MP	
3k	Provision of mining machineries in mineral benches	Proposed Mining Machineries: Excavators-9 Rock breaker-1 Tippers-58 Drill Rig- 2 Front End Loader-4 Back Hoe Loader- 1	As per the approved proposals	
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	Bench Height- 8 m Bench Width- 8m	Height and width of the benches maintained as proposed	-
3m	Total area covered under excavation/pits	41.12 Ha	41.86 Ha	Indicated in AR 41.86 Ha which is area under mining in the beginning of the year 2022-23.
3n	Ore to OB ratio for the pit/mine during the year.	1:2.15 (in Metric Tonnes)	1:1.023 (in Metric Tonnes)	Variation in nature of ore body mineralization- as informed by the mine management

3o	Total area put in use under different heads at the end of year	Mining- 41.12 Ha Mineral Storage- 0.93 Ha. Roads- 2.27 Ha Infrastructure - 0.64 Ha O/B Dumps- 33.87 Ha Others- 7.68 Ha Untouched- 44.02Ha Total Area 130.53 Ha	As per approved plan	Indicated in AR 41.86 Ha which is area under mining in the beginning of the year 2022-23.
3p	Production of ROM mineral during the last five year period as applicable	2017-18: NA 2018-19: NA 2019-20: 1250000 2020-21: 1440000 2021-22: 1440000 ( in tonnes)	2017-18: NA 2018-19: NA 2019-20: 1249750.01 2020-21: 1439800.00 2021-22: 1432713.46 (in tonnes)	As per AR 2021-22.
3q	General remarks of inspecting officers on method of mining etc.			Worked as per proposal and achieved the targeted production

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Solid Waste Management - Dumping:

Sl.No.	Item	Proposals	Actual work	Remarks
4a	Separate dumping of topsoil, OB and mineral rejects (Rule 32,33)	Separate dumping of Overburden is proposed	Separate dumping of Overburden is being carried out in AD-01 & PTD (Block 3)	Total of 696796.93 m3 of OB has been dumped in AD-01 & PTD.
4b	Location of topsoil, OB and mineral reject dumps	Overburden Dumping Active Dump in Block-1: (AD 1) E/W: 674684 to 675209 N/S: 1671658 to 1671960 Block-3: Proposed Temporary Dump E/W: 676634 to 676743 N/S: 1667010 to 1667141	As per proposal	

4c	Number of dumps within lease area and outside of lease area	Within Lease area: (2 Active Dumps & 6 In-active Dumps) Outside - No Proposal	As per proposal	
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	Parts of ID in block 2, block 3 & PTD in block 3 lies within UPL.	Maintained as per proposal	
4e	Number of active and alive dumps.	Active Dump -2	Active Dump -2	
4f	Number of dead dumps.	Inactive Dump -6	Inactive Dump -6	
4g	Number of dumps established.	No proposal	Stabilization of inactive dumps in progress	Construction of retaining walls and garland drains is under process as per mining plan.
4h	Whether Retaining wall or garland drain all along dumps are there.	286m	Carried out	
4i	Length of Retaining wall or garland drain all along dumps	Retaining wall 286 m (2021-22) Garland Drain 291 m (2021-22)	Retaining wall 307 m (2021-22) Garland Drain 231.6 m (2021-22)	All the construction has been completed as per the approved R&R plan. Cumulative (includes outside lease area): Retaining wall - 3357m Garland drain - 3107m.
4j	Number of settling ponds	NIL	01 No. (2021-22)	01 No. (2021-22) near AD-1 Cumulative 03 (including outside lease area).

4k	Specific comments of inspecting officer on waste dump management	Efforts were made to R & R implementation in the lease area and towards the stabilization of inactive dumps in the mining lease area
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Solid Waste Management - Backfilling:

Sl.No.	Item	Propasals	Actual work	Remarks
5a	Status of part or full extraction of mineral from mined out area before starting backfilling.	No Proposals	NIL	No area is completely mined out during this plan period.
5b	Area under backfilling of mined out area	No Proposals	NIL	No Backfilling.
5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	No Proposals	NIL	No top soil generation
5d	Total area fully reclaimed and rehabilitated	No Proposals	NIL	-
5e	General remarks of inspecting officers on backfilling and reclamation etc.			No backfilling Proposals.

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Progressive Mine Clousre Plan:

Sl.No.	Item	Propasals	Actual work	Remarks
6a	Whether Annual report on PMCP submitted on time and correctly. Rule 23 E(2).	Submission of Annual report on PMCP under rule 23E(2).	Annual report on PMCP under rule 23E(2) is submitted to IBM on 28.06.2022.	
6b	Area available for rehabilitation (ha) .	No Proposal	NIL	-



6c	afforestation done (ha).	Green Belt Plantation: 1.62 Ha	Green Belt Plantation: 0.7 Ha	
6d	No. of saplings planted during the year	4050	9649 (within lease area)	Plantation done outside lease area 15310. Total no plantation done in 2021-22 : 24959
6e	Cumulative no .of plants	--	13244 (within lease area)	Includes plantation in Green Belt.
6f	Any other method of rehabilitation	Implementation of Engineering measures for Surface Water and Dump Management as per Approved R&R Plan.	Carried out as per Approved R&R Plan are being implemented	-
6g	Cost incurred on watch and care during the year	6.5 Lakh (For plantation )	16.88 lakhs	
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling ( Lx B x D	No Proposal	NIL	
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	No Proposal	NIL	
6j	Compliance on reclamation and rehabilitation by backfilling (iii)Afforestation on on backfilled area	No Proposal	NIL	

6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	No Proposal	NIL	
6l	Compliance on reclamation and rehabilitation by backfilling (v)any other specific means.	No Proposal	NIL	
6m	Compliance of rehabilitation of waste land within lease (i)afforestation	No Proposal	NIL	
6n	Compliance of rehabilitation of waste land within lease (ii)Area rehabilitation (ha)	No Proposal	NIL	
6o	Compliance of rehabilitation of waste land within lease (iii)Method of rehabilitation	No Proposal	NIL	
6p	Compliance of environmental monitoring (core zone and 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.	
6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.			PMCP proposals have been undertaken satisfactorily

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Mineral Conservation:

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Sl.No.	Item	Propasals	Actual work	Remarks
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7a	ROM Mineral dispatch or grade-wise sorting within lease area	YES		Dispatch of finished product after taking Bulk Permits from DMG.
7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	Mechanical Sorting	As per proposal	Dry Crushing and Screening Method
7c	Different grade of mineral sorted out at mines.	Yes	Grade reported up to Fe 55%	For the year 2021-2022.
7d	Any beneficiation process at mines	No Proposals	NA	-
7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues			ROM processed 100% and mineral conservation aspects taken care in process of mining

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Environment :

Sl.No.	Item	Propasals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	No Topsoil Generation.	No Topsoil generated during operations.	Majority area is broken.
8b	Concurrent use or storage of topsoil	No Proposals	NIL	
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	Separate dump for overburden is proposed	As per proposal	
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	No Proposals	NIL	-

8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	No Proposals	NIL	--
8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	Proposed Planation- 4050	Total Plantation carried out inside lease area- 9649	Green Belt Plantation, Gap plantation, Plantation over Encroached Inactive Dump has been carried out.
8g	Survival rate	85 - 90 %	90 %	-
8h	Water sprinkling on roads to control airborne dust	Water sprinkling on roads proposed to control airborne dust.	It is observed that Water tankers have been deployed for control of dust in mining area	
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area			Environmental monitoring system is taken care during the mining operation

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Compliance of Rule 45:

Sl.No.	Item	Propasals	Actual work	Remarks
9a	Status of submission of Monthly and Annual returns	M.R. Submitted up to: June-2022 Submitted on: 08.07.2022 ***** A.R. Submitted up to F. Y 2021-22 Submitted on: 30.06.2022		--

9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Mining Engineer- ManjunathGovin dappa Geologist- Chirukuri HSR Krishna Mine Manager- Awadhesh Kumar Rai	Mining Engineer and Geologist appointed as statutory requirement were verified and are present during the inspection.
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Mining- 41.86 Ha Mineral Storage- 0.30 Ha. Roads- 1.43 Ha Infrastructure - 4.30 Ha O/B Dumps- 34.40 Ha Others- 48.24 Ha Total Area 130.53 Ha	Verified
9d	Scrutiny of Annual return on afforestation	Total Plantation carried out inside lease area- 9649 Total Plantation Carried out in year 2021-22: 15310	Reported afforestation are seems to be correct
9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	No mineral reject generated	Verified
9f	Scrutiny of Annual return on ROM stock and/or graded ore	Opening Balance:0 Tonne Total Production:143 2713.46 Tonnes Closing Balance:60950 Tonnes	Verified reported values are correct

9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	Lumps 55%>Fe - 700.0 ?/T 58%>Fe?55% - 700.0 ?/T Fines 55%>Fe- 700.0 ?/T 58%>Fe?55%- 700.0 ?/T	Verified
9h	Scrutiny of Annual return on fixed assets	Value of Fixed Assets: ?. 920110681.0 Depreciation on Fixed Assets: ?. 157773062.0	Verified with returns
9k	Scrutiny of Annual return on mining machineries	Actual list of Mining Machineries: Excavators-9 Rock breaker-1 Tippers-60 Drill Rig- 2 Front End Loader-4 Back Hoe Loader- 1	Verified

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**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
MCDR17	Rule 11(1)	19/01/2023	24/03/2023				
MCDR17	Rule 34(2)	11/11/2022	23/12/2022				

**Date :**

(Dr.OMKESHA MURTHY.M.G)

Indian Bureau of Mines