

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

**MCDR inspection REPORT**

**Bangalore regional office**

**Mine file No :** KNT/BLR/FE/491/BNG

**Mine code :** 30KAR03182

- (i) Name of the Inspecting : **S011** ) **K.SRINIVAS**  
Officer and ID No.
- (ii) Designation : Junior Mining Geologist
- (iii) Accompanying mine : Brijesh kumar, Mines Manager, A.S. Rakesh, Mining Engin  
Official with  
Designation
- (iv) Date of Inspection : 22/09/2021
- (v) Prev.inspection date : 17/02/2021

**PART-I : GENERAL INFORMATION**

1. (a) **Mine Name** : **NANDI IRON ORE MINE**
- (b) **Registration NO.** : **IBM/432/2011**
- (c) Category : A Fully Mechanised
- (d) Type of Working : Opencast
- (e) Postal address  
State : KARNATAKA  
District : BELLARY  
Village : MALAGOLLA  
Taluka :  
Post office :  
Pin Code :  
FAX No. : 08395250132  
E-mail : sunil.singh@jsw.in  
Phone : 08395250120
- (f) Police Station : SANDUR
- (g) First opening date : 23/04/2018
- (h) Weekly day of rest : SUN
2. Address for : Malagola Village,  
correspondance Sandur Post & Taluk  
Bellary
3. (a) Lease Number :  
(b) Lease area :  
(c) Period of lease :  
(d) Date of Expiry :
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 : DR. VINOD NOWAL  
 DY.MANAGING DIRECTOR, M/S  
 JSW STEEL LIMITED, NANDI  
 IRON ORE MINE, BELLARY  
 BELLARY KARNATAKA  
 Phone: 9448286155  
 FAX :

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

## Mining Engineer

Name : Rakesh A.S,Full Time  
 Qualification : B.E(MINING)  
 Appointment/ : 21/03/2018  
 Termination date

## Geologist

Name : Nataraj. B.D,Full Time  
 Qualification : M.Sc ( Geology)  
 Appointment/ : 21/03/2018  
 Termination date

## Manager

Name : Brajesh Kumar  
 Qualification : B,E(Mining)  
 Appointment/ : 01/03/2021  
 Termination date

6. Date of approval of Mining Plan/Scheme of Mining : MP under 16(1) of MCR 2016 16/02/2017  
 Modif.of approved Mining Plan 02/06/2020

## 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	8 boreholes proposed.	Nil	Exploration not carried out for the year 2020-21. Violation issued.
1c	Exploration Agencies and Expenditure in lakh rupees during the year	Not specified	nil	-
1d	Balance area to be explored to bring Geological axis in 1 or 2	Not specified.	G1-13.22 Ha G2-0.88Ha G3- 3.97 Ha Unexplored- 2.96 Ha	-
1e	Balance reserve as on 01/04/20	-	The reserves as on 1.4.2021 is 15.7million tonnes.	As per AR submitted for the FY 2020-21.
1f	General remarks of inspecting officers on geology, exploration etc	-	-	The exploration has not been carried out during the year 2020-21. The violation has been pointed out.

## Development :

Sl.No.	Item	Proposals	Actual work	Remarks
2a	Location of development w.r.t. lease area	Proposed Location of Development: Section- S1-S1' to S5-S5'.	Sections between S1-S1' to S5-S5'.	-
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	Separate benches proposed in Overburden and mineral.	Separate benches maintained in Overburden and mineral.	-
2c	Stripping ratio or ore to OB ratio	1: 0.21 (in Tonnes)	1: 0.007 (in Tonnes)	-
2d	Quantity of topsoil generation in m3	No Proposal	Not Applicable	No Top Soil generated.

2e	Quantity of overburden generation in m3	43119 cu.m	810 cu.m	Waste handling is very less.Violation issued.
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc	-	-	There was less development against the proposal. The violation has been pointed out.

### Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	Single pit proposed for Production.	Production is carried out in one pit only.	Approximate working pit dimension 320mx295mx112m
3b	Quantity of ROM mineral production proposed	408000Tonnes	207380 Tonnes	The less production has been reported.The violation issued.
3c	Recovery of sailable/usable mineral from ROM production	100 %	100 %	-
3d	Quantity of mineral reject generation	No proposal	nil	Mineral reject not generated.
3e	Grade of mineral rejects generation and threshold value declared.	No proposal	Not applicable	nil
3f	Quantity of sub grade mineral generation.	No proposal	nil	No sub-grade mineral generation.
3g	Grade of sub grade mineral generation	No proposal	Not applicable.	-
3h	Manual / Mechanised method adopted for segregating from ROM	Mechanized Method proposed for segregating from ROM.	Mechanized Method adopted for segregating from ROM.	Dry Crushing and screening 200 TPH capacity.
3i	Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects.	No proposal	No such beneficiation study carried out.	Nil

3j	Provision of drilling and 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 as per MMR,1961 from DGMS.
3k	Provision of mining machineries in mineral benches	Provision of mining machineries made Excavator- 4 Tippers - 10, Hydraulic Drill - 1 wheel loader - 3 Back hoe Loader-1	Machineries deployed Excavator- 3 Tippers - 8 Hydraulic drill - 1 wheel loader - 1 Back hoe Loader-1	-
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	Bench width- 8m Bench Height- 8m	Average bench width- 8m; average bench Height-8m maintained.	-
3m	Total area covered under excavation/pits	11.33Ha at the end of the Plan Period	9.18 Ha (as on 01.04.21)	-
3n	Ore to OB ratio for the pit/mine during the year.	1: 0.21 (in Tonnes)	1: 0.007 (in Tonnes)	-
3o	Total area put in use under different heads at the end of year	Total area in the plan period: " Mining- 11.33 Ha " Roads -1.2 Ha " Infrastructure - 0.004 Ha " Waste Dumps- 1.32ha " Green Belt - 1.31ha " Mineral Storage- 0.25ha	" Mining- 9.18 Ha " Infrastructure, Roads - 1.454 Ha " Waste Dumps-0.94ha " Others - 9.456 Ha	-
3p	Production of ROM mineral during the last five year period as applicable	2018-19 :408000 2019-20: 408000 2020-21: 408000 ( in tonnes)	2018-19 :407999 2019-20: 407800 2020-21:207380 (in tonnes)	Mine operations started on 01.06.2018 (2018-19).

3q	General remarks of inspecting officers on method of mining etc.	-	-	Mining operations are being carried out as per the approved proposals.
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## Solid Waste Management - Dumping:

Sl.No.	Item	Propasals	Actual work	Remarks
4a	Separate dumping of topsoil, OB and mineral rejects (Rule 32,33)	Separate temporary dumping of Overburden is proposed.	Separate temporary dumping of Overburden is being carried out.	No proposals for top soil and rejects.
4b	Location of topsoil, OB and mineral reject dumps	OB Dump(PTD) Proposal: In between sections S1-S1' and S2-S2'.	TOB Dump location: In between sections S1-S1' and S2-S2'.	No top soil and rejects generated.
4c	Number of dumps within lease area and outside of lease area	1 Active temporay Dump within the lease area.	1 Active temporay Dump within the lease area.	-
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	Active Dump is within UPL.	Active Dump is within UPL.	-
4e	Number of active and alive dumps.	One	one	-
4f	Number of dead dumps.	2	2	-
4g	Number of dumps established.	Nil	NA	-
4h	Whether Retaining wall or garland drain all along dumps are there.	No proposal	Nil	No proposals for the year 2020-21
4i	Length of Retaining wall or garland drain all along dumps	No proposals	nil	No proposals for the year 2020-21.
4j	Number of settling ponds	No proposals.	nil	No proposals for the year 2020-21.
4k	Specific comments of inspecting officer on waste dump management	-	-	Dumping is being carried out in the temporarily proposed area.

## 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 proposal	nil	No area in completely mined out during this plan period.
5b	Area under backfilling of mined out area	No proposal	nil	-
5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	No proposal	nil	No Topsoil Generated.
5d	Total area fully reclaimed and rehabilitated	No proposal	nil	-
5e	General remarks of inspecting officers on backfilling and reclamation etc.	-	-	The mineral is not exhausted in the working pit and it is not matured for backfilling.

## 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).	Annual report on PMCP under rule 26(2) of MCDR, 2017 to be submitted before 1st July of every year.	Annual PMCP Report for Year 2020-21 is submitted to on 06.07.21	-
6b	Area available for rehabilitation (ha) .	No proposals	nil	-
6c	afforestation done (ha).	Proposed in Safety Zone- 0.37 Ha.	Achieved in Office Area- 0.50Ha	Safety Zone is completely covered in vegetation.
6d	No. of saplings planted during the year	494	505	-
6e	Cumulative no .of plants	Not specified	2216 inside lease area.	255 Outside lease area.

6f	Any other method of rehabilitation	Implementation of Engineering Measures for Surface Water and Dump Management as per Approved R&R Plan.	Engineering Measures for Surface Water and Dump Management as per Approved R&R Plan have been implemented.	-
6g	Cost incurred on watch and care during the year	Not Specified	Cost of Plantation inside the lease area- 0.88 Lac Rupees.	-
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling ( Lx B x D	No proposal	nil	The pit is not matured for backfilling.
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 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.	Monitoring is presently being carried out by M/s Ecomen Laboratories Pvt.Ltd. All the parameters were observed to be within the permissible limit.
6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.	-	-	The operations are being carried out as per the proposals on progressive mine closure plan.

#### Mineral Conservation:

Sl.No.	Item	Propasals	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 being done within lease area.	-
7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	Mechanical method with crushers and screening plants.	Mechanically dry crushing and screening being done.	Dry Crushing and Screening Plant Capacity- 200 TPH.
7c	Different grade of mineral sorted out at mines.	Fines :0 to- 10mm Lumps : 10- 40mm	Fe<55% 58%>Fe?55% 60%>Fe?58%	Mineral is used for captive purpose only.
7d	Any beneficiation process at mines .	No Proposal	No beneficiation processing in mines.	Beneficiation process carried out in the plant and outside the Mining lease area.

7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues	-	-	All the crushed and screened ROM including fines are used for captive consumption and beneficiated in the plant.
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## Environment:

Sl.No.	Item	Propasals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	No proposal	nil	No topsoil generated.
8b	Concurrent use or storage of topsoil	No proposal	nil	-
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	nil	-
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	No proposal	Not applicable	-
8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	Planation proposed in Safety Zone- 494 saplings.	Planted 505 saplings during the year 2020-21.	Safety Zone is completely covered in Vegetation. Plantation in Office premises has been carried out.
8g	Survival rate	Not Specified.	95%	-

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.	2Water Tankers of 10000 Liters Capacity are being used.
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area	-	-	There is no change in aesthetic beauty in and around mines area. The ML is situated in the reserved forest.

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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 August 2021: Submitted on 10.09.21	A.R. Submitted up to FY 20-21 Submitted on 30.06.21	-
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Mining Engineer- A. S. Rakesh Geologist- Natraj B.D Manager- Brajesh Kumar	The same officers were present during the inspection.	-
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Working: 9.18 Ha Waste Dump: 0.94 Ha Infrastructure & Roads:1.454 Ha Others: 9.456 Ha Total Area: 21.03 Ha	Appears to be correct	-
9d	Scrutiny of Annual return on afforestation	Plantation Within Lease - 505 nos. Survival Rate: 95%	Appears to be correct.	-

9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	No Mineral Reject Generation.	Appears to be correct.	-
9f	Scrutiny of Annual return on ROM stock and/or graded ore	Opening Stock- 0.37 T Production:207 380.00 T Closing Stock- 40021.77 T	Appears to be correct.	-
9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	Sale value -0 Ex-mine price -578.47/ t(lumps) ; 536.66 /t (fines) Production cost : Rs546 /t	Ex-mine price is the cost of the per unit production in case of Captive mines.	Violation issued.
9h	Scrutiny of Annual return on fixed assets	Value of Fixed Assets: Rs. 284052739 Depreciation on Fixed Assets: Rs. 20100954	Appears to be correct.	-
9k	Scrutiny of Annual return on mining machineries	Back Hoe Loader- 1 Crusher-1 Dozer- 1 Rock Drill- 1 Truck-8 Water Tanker (10 kl)-2 Wheel Loader- 1 Generator -4 Shovel- 3 Jeep/Tractor- 3 Explosive Van- 1	Appears to be correct	-

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

Violation observed				Show couse position			
Rule NO.		Issued on	Compliance on	Rule NO.		Issued on	Compliance on
MCDR17	Rule 11(1)	14/10/2021	14/12/2021				
	Rule 45(7)	14/10/2021	14/12/2021				

**Date :**

**(K.SRINIVAS)**

Indian Bureau of Mines