

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

MCDR inspection REPORT

Bangalore regional office

Mine file No : KNT/BLR/FE-494/BNG

Mine code : 30KAR03185

- (i) Name of the Inspecting : **S011**) **K.SRINIVAS**
Officer and ID No.
- (ii) Designation : Junior Mining Geologist
- (iii) Accompanying mine : Sundraraja M.V, Mines Manager
Official with
Designation
- (iv) Date of Inspection : 20/09/2021
- (v) Prev.inspection date : 21/10/2020

PART-I : GENERAL INFORMATION

1. (a) **Mine Name** : **RAMA 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 : **RAMGHAD**
- Taluka : **SANDUR**
- Post office : **SHUSHEELANAGAR**
- Pin Code : **583152**
- FAX No. : **08817199500**
- E-mail : **SUNIL.SINGH@JSW.IN**
- Phone : **9449598135, 08395-245939**
- (f) **Police Station** : **SANDUR**
- (g) **First opening date** : **15/01/2020**
- (h) **Weekly day of rest** : **SUN**
2. **Address for correspondance** : **RAMGHAD VILLAGE, SUSHEELA NAGAR POST**
SANDUR TALUK
BALLARI DISTRICT, KARANATAKA
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 : Karthik Gujjal, Full Time
 Qualification : B.E(Mining)
 Appointment/ : 22/02/2021
 Termination date

Geologist

Name : Karani Singh, Full Time
 Qualification : M.Sc (Geology)
 Appointment/ : 16/12/2019
 Termination date

Manager

Name : Sundra Raja MV
 Qualification : Diploma(Mining)
 Appointment/ : 15/06/2020
 Termination date

6. Date of approval of Mining Plan/Scheme of Mining : MP under 16(1) of MCR 2016 31/05/2017
 MP modif under 17(3) MCR 2016 18/02/2021

PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	Nil	Nil	14 RC Boreholes with total depth of 673m were drilled in year 19-20.
1b	Exploration over lease area for geological axis 1 or 2	No proposal	Area under G1- 24.70 ha & G2- 0.31 ha	No proposals for the year 2020-21.
1c	Exploration Agencies and Expenditure in lakh rupees during the year	No proposals	Rs. 39 lacs spent on exploration in 2019-20.	-
1d	Balance area to be explored to bring Geological axis in 1 or 2	7.55 Ha(G3- 0.36 Ha G4- 7.19 Ha)		8 RC boreholes (410m) is proposed in Year 2022-23.
1e	Balance reserve as on 01/04/20	-	-	Reserves as on 1.4.2021 are 26379253 tonnes.
1f	General remarks of inspecting officers on geology, exploration etc	-	-	There are no proposals for the year 2020-21 in respect of exploration.

Development :

Sl.No.	Item	Proposals	Actual work	Remarks
2a	Location of development w.r.t.lease area	Proposed Location of Development: E 657764 to E 658127 N 1671932 to N 1672329 Section- S1-S1' to S5-S5'	Actual Production carried out: E 657765 to E 658146 N 1671887 to N 1672444 Section- S1-S1' to S5-S5'	Violation issued for less development.
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	Separate benches proposed in Overburden and mineral. Mineral -4 and waste-2	Separate benches proposed in Overburden and mineral. Ore Benches-10 Waste- 5	Ore Benches-10 Waste- 5

2c	Stripping ratio or ore to OB ratio	1 : 0.03 (by weight)	1: 0.015 (by weight)	-
2d	Quantity of topsoil generation in m3	No proposals	nil	No Top Soil Generated.
2e	Quantity of overburden generation in m3	46300cu.m (92600 tonnes for the year 2020-21)	7400 cu.m (14800 tonnes during the year 2020-21)	Violation issued for less handling of waste.
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc	-	-	The development has not been carried out as proposed. The violation has been pointed out.

Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	one pit	one pit	Approximate working pit dimension is 558mx132mx48m.
3b	Quantity of ROM mineral production proposed	940,000 Tonnes.	939,800 Tonnes.	-
3c	Recovery of sailable/usable mineral from ROM production	100%	100%	-
3d	Quantity of mineral reject generation	No proposal	nil	No mineral reject generated.
3e	Grade of mineral rejects generation and threshold value declared.	No proposal	nil	Nil
3f	Quantity of sub grade mineral generation.	No proposal	Nil	No sub grade mineral generated.
3g	Grade of sub grade mineral generation	No proposal	Nil	Nil
3h	Manual / Mechanised method adopted for segregating from ROM	Mechanized Method proposed for segregating from ROM.	Mechanized Method proposed for segregating from ROM.	Dry Crushing and screening 200 TPH.

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.	-
3k	Provision of mining machineries in mineral benches	Excavator and tipper combination proposed in mineral benches.	Excavator and tipper combination deployed in mineral benches.	Machineries deployed Excavator- 4 Rock Breaker- 1 Tippers - 15 Hydraulic drill - 1 wheel loader - 5
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	Bench width- 8m Bench Height- 8m proposed.	Bench width- 8m Bench Height- 8m maintained.	-
3m	Total area covered under excavation/pits	15.36 ha at the end of the plan period. (as per the approved mining Plan for Plan Period)	13.78 Ha at the end of the year (as on 01.04.21)	-
3n	Ore to OB ratio for the pit/mine during the year.	1: 0.098	1: 0.015	violation issued.

3o	Total area put in use under different heads at the end of year	Total area in the plan period: " Mining- 15.36 Ha " Roads -0.91 Ha " " Infrastructure - 0.39 Ha " Waste Dumps- 0.70 " Green Belt - 2.28 " R & R structures - 0.11 " Mineral Storage- 2.19 " Others - 10.62 Ha	" Mining- 13.78 Ha " Roads -0.91 Ha " Infrastructure - 0.39 Ha " Waste Dumps-0.04 " Green Belt - 2.28 " R & R structures - 0.11 " Mineral Storage- 2.06 " Others - 12.99 Ha	-	
3p	Production of ROM mineral during the last five year period as applicable	2016-17 : NA 2017-18: NA 2018-19 : NA 2019-20 : 939998.4 t 2020-21 : 940000t	2016-17 : NA 2018-19 : NA 20 : 595094 t 2020-21 : 939800t	2017-18: 2019- 2020-21 :	Mine operations started in 2019-20.
3q	General remarks of inspecting officers on method of mining etc.	-	-		Opencast method of mining was adopted with excavator and tipper combination. Drilling and blasting was carried out as and when required for hard rock formations.

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.	No top soil generated.
4b	Location of topsoil, OB and mineral reject dumps	OB Dump Proposal: E 657652 to E 657722 N 1672886 to N 1672974	OB Dump location: E 657652 to E 657677 N 1672896 to N 1672921	-

4c	Number of dumps within lease area and outside of lease area	1 Active Dump	1 Active Dump	Dumping proposed in northeastern corner of the mining lease area.
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	Part of Active Dump is within UPL.	Part of Active Dump is within UPL.	-
4e	Number of active and alive dumps.	one	one	-
4f	Number of dead dumps.	Nil	NA	-
4g	Number of dumps established.	Nil	NA	-
4h	Whether Retaining wall or garland drain all along dumps are there.	No proposals other than R&R proposals.	NA	-
4i	Length of Retaining wall or garland drain all along dumps	No proposals	NA	-
4j	Number of settling ponds	No proposal	Nil	-
4k	Specific comments of inspecting officer on waste dump management	-	-	No specific comments on waste dump management.

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 in completely mined out during this plan period.
5b	Area under backfilling of mined out area	No proposals	nil	-
5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	No proposals	nil	-

5d	Total area fully reclaimed and rehabilitated	No proposals	nil	-
5e	General remarks of inspecting officers on backfilling and reclamation etc.	-	-	As no area is completely mined out , the backfilling of mined out area is proposed.

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 PMCP Report for Year 2020-21 is submitted to on 06.07.21	-
6b	Area available for rehabilitation (ha) .	No proposal	nil	-
6c	afforestation done (ha).	Proposed in Safety Zone- 0.55 Ha	Achieved in Office Area- 0.55 Ha	Safety Zone is completely covered in vegetation.
6d	No. of saplings planted during the year	100 saplings in Safety Zone.	165 saplings in office area.	-
6e	Cumulative no .of plants	Not specified	165 inside lease area.	500 Outside lease area.
6f	Any other method of rehabilitation	No proposal	nil	-
6g	Cost incurred on watch and care during the year	Not specified	Cost of Plantation inside the lease area- Rs 0.29 Lacs	-
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	No area is completely mined out in this plan period.
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 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 officers on PMCP compliance and progressive closure operations etc.	-	-	The progressive mine closure plan operations are being carried out as proposed.

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 done within lease area.	-
7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	Mechanical method with crusher and screening plants.	Mechanical method with crusher and screening plants.	Dry Crushing and Screening Method, Plant Capacity- 200 TPH.
7c	Different grade of mineral sorted out at mines.	Yes	Fe<55% 58%>Fe?55% 60%>Fe?58%	For captive consumption only.
7d	Any beneficiation process at mines	No proposal	nil	Beneficiation process carried out in the plant outside the ML.

7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues	-	-	RoM is crushed and screened in the mine and beneficiated outside the ML, which is used for captive purpose only.
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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 Generation.
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	No proposal	nil	-
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	Separate dump for overburden is proposed.	Separate dumping of overburden is being carried out.	-
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	No proposal	nil	-
8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	Safety Zone is completely covered in Vegetation. Proposed plantation in Safety Zone-100	Plantation in Office Area has been carried out. Achieved plantation in Office Area-165	-
8g	Survival rate	No proposal	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.	No. of Water Tankers:4 Capacity: 10000 Liters.
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.

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 29.06.21	-	-
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Mining Engineer- Karthik Gujjal Geologist- Karani Singh Shekhawat Manager- Sundra Raja M V	Appears to be correct.	-
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Working: 13.78 Ha Waste Dump: 0.04 Ha Infrastructure :3.36 Ha Others: 15.38 Ha Total Area: 32.56 Ha	Appears to be correct.	-
9d	Scrutiny of Annual return on afforestation	Plantation Within Lease - 165 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- 254367.00 T Production:939 800.00 T Closing Stock- 0.010 T	appears to be correct.	-
9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	Cost of production - Rs 575/-per tonne. Ex-mine price -Rs 748.93 for lumps and Rs 529.075 for fines per tonne.	In case of Captive mines, the Ex-mine price per tonne is the per unit cost of production. This mine is a captive mine.	The Ex-mine price reported in Part-VI (3) has not been reported correctly. Violation issued.
9h	Scrutiny of Annual return on fixed assets	Value of Fixed Assets: Rs. 525990729 Depreciation on Fixed Assets: Rs. 42173167	appears to be correct.	-
9k	Scrutiny of Annual return on mining machineries	Back Hoe Loader- 1 Crusher-2 Dozer- 1 Motor Grader-1 Rock Drill- 1 Truck-15 Water Tanker (10 kl)-4 Wheel Loader- 4 Generator -4 Shovel- 5 Jeep/Tractor- 3 Explosive Van- 1 Water Tanker(1.5 kl)-1	Appears to be correct.	-

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)	13/10/2021	13/12/2021				
	Rule 45(7)	13/10/2021	13/12/2021				

Date :

(K.SRINIVAS)

Indian Bureau of Mines