

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

MCDR inspection REPORT

Bangalore regional office

Mine file No : KNT/BLR/FE/497/BNG

Mine code : 30KAR03189

- (i) Name of the Inspecting : **S006**) **SURESH PRASAD**
Officer and ID No.
- (ii) Designation : Deputy Controller Mines
- (iii) Accompanying mine : Shri. Vallibashasab S- Manager (Mines), Shri. Karani
Official with
Designation
- (iv) Date of Inspection : 16/03/2022
- (v) Prev.inspection date :

PART-I : GENERAL INFORMATION

1. (a) **Mine Name** : **DHARMA 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 : SUSHEELANAGARA
Pin Code :
FAX No. :
E-mail : sunil.singh@jsw.in
Phone : 9449598135
- (f) Police Station : Sandur
- (g) First opening date : 25/09/2020
- (h) Weekly day of rest : SUN
2. Address for : Ramghad Village, Susheelanagar Post
correspondance Sandur, 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

6. Date of approval of Mining :
Plan/Scheme of Mining

PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	No proposal.	Nil.	Lease granted through the auction.
1b	Exploration over lease area for geological axis 1 or 2	Proposed 10 Boreholes, Total 980m.	Nil.	Violation issued under rule 11(1) of MCDR, 2017.
1c	Exploration Agencies and Expenditure in lakh rupees during the year	No proposal.	Nil.	-
1d	Balance area to be explored to bring Geological axis in 1 or 2	G1 - 11.29 Ha G2- 0.23 Ha G3- 3.86 Ha G4- 0.00 Ha Non mineralized Area- 28.20 Ha	G1 - 11.29 Ha G2- 0.23 Ha G3- 3.86 Ha G4- 0.00 Ha	As per the available information's the unexplored area are falling under non mineralized.
1e	Balance reserve as on 01/04/20	-	1.83 MMT	Balance Reserves as per the Annual Return.
1f	General remarks of inspecting officers on geology, exploration etc			Lease granted through the auction However, the exploration has not been carried out as per the proposal of approved MP, Violation issued.

Development :

Sl.No.	Item	Proposals	Actual work	Remarks
2a	Location of development w.r.t.lease area	N 1674640 - 1674532 E 656379 -- 656506	N 1674720 - 1674530 E 656347 -- 656577	
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	No top soil benches are proposed. OB and Mineral separate benches are proposed.	No top soil generated, OB and mineral separate benches maintained as per proposal.	Material from SST-4 has been used for the plantation.

2c	Stripping ratio or ore to OB ratio	1: 0.33 (in Tonnes)	1: 0.33 (in Tonnes)	-
2d	Quantity of topsoil generation in m3	No proposal.	Not applicable.	Material from SST-4 has been used for the plantation for this financial year.
2e	Quantity of overburden generation in m3	29,379 m3	29,379 m3	As per the AR &MP
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc			Achieved the development proposal for the assessment year.

Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	1	1	-
3b	Quantity of ROM mineral production proposed	179,982 MT	179,982 MT	-
3c	Recovery of sailable/usable mineral from ROM production	90% for Iron Ore and 60% for BHQ (Siliceous Ore)	100%	-
3d	Quantity of mineral reject generation	No proposal.	Nil.	Nil.
3e	Grade of mineral rejects generation and threshold value declared.	No proposal.	Nil.	Nil.
3f	Quantity of sub grade mineral generation.	No proposal.	Not applicable.	-
3g	Grade of sub grade mineral generation	No proposal.	Not applicable.	-
3h	Manual / Mechanised method adopted for segregating from ROM	Mechanized Method proposed for Segregation from ROM.	Mechanized Method adopted for Segregation from ROM.	Dry crushing and screening was done.

3i	Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects.	No Proposal.	Not applicable.	No such beneficiation study has been carried out.
3j	Provision of drilling and blasting in mineral benches	Drilling and Blasting is proposed for mineral benches.	Drilling and Blasting carried out for production purpose.	106 (2) (B) Permission obtained from DGMS as per MMR 1961.
3k	Provision of mining machineries in mineral benches	Mining Machineries proposed: Excavators-1 Rock breaker - 1 Tippers-5 Drill-1 Front End-1 Back hoe loader-1	Deployed Mining Machineries: Excavators-2 Rock breaker -1 Tippers-5 Drill-1 Front End-2 Back hoe loader -1	106 (2) (B) Permission obtained from DGMS as per MMR 1961.
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	Maximum bench height- 7m & minimum bench width- 8m proposed.	Maximum bench height- 7m & minimum bench width- 8m (Agv.)	-
3m	Total area covered under excavation/pits	20.62 Ha.	20.62 Ha.	The work is carried out within broken up area.
3n	Ore to OB ratio for the pit/mine during the year.	1:0.33	1:0.33	Ore & Waste handled as per the approved Mine Plan.
3o	Total area put in use under different heads at the end of year	Mining- 20.62 Ha Roads - 2.35 Ha Infrastructure - 1.33 Ha Waste Dumps- 12.77 Ha Mineral Storage- 2.62 Ha Others - 3.89Ha Total - 43.58 Ha	Mining- 20.62 Ha Roads - 2.35 Ha Infrastructure - 1.33 Ha Waste Dumps- 12.77 Ha Mineral Storage- 1.44 Ha Others - 5.07Ha Total - 43.58 Ha	
3p	Production of ROM mineral during the last five year period as applicable	2020-21: 179,982 MT.	2020-21: 179,982 MT	As per approved MP & Annual returns.

3q General remarks of inspecting officers on method of mining etc.

Open cast method of mining with excavator tipper combination along with drilling & blasting carried out.

Solid Waste Management - Dumping:

Sl.No.	Item	Propasals	Actual work	Remarks
4a	Separate dumping of topsoil, OB and mineral rejects (Rule 32,33)	Separate dumping proposed for Overburden.	Separate dumping of Overburden is being carried out.	-
4b	Location of topsoil, OB and mineral reject dumps	OB Dump Location: N 1674649 to 1674862 E 655891 to 655982	OB Dump Location: N 1674720 to 1674840 E 655855 to 655978	
4c	Number of dumps within lease area and outside of lease area	Active Dump(AD-1 & AD-2) Inactive Dump (ID-1 to ID-5)	Active Dump (AD-1 & AD-2) Inactive Dump (ID-1 to ID-5)	Active and Inactive dumps are present within lease area.
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	A part of ID-4 comes under UPL as per Approved Mining Plan	A part of ID-4 comes under UPL as per Approved Mining Plan	Nil.
4e	Number of active and alive dumps.	2 (AD-1 and AD-2)	2 (AD-1 and AD-2)	Nil.
4f	Number of dead dumps.	5 Inactive Dumps (ID-1 to ID-5)	5 Inactive Dumps (ID-1 to ID-5)	Inactive dumps were created by earlier lessee.
4g	Number of dumps established.	NIL.	Stabilization Under Progress.	Stabilization Under Progress as per approved R&R Plan.

4h	Whether Retaining wall or garland drain all along dumps are there.	Yes	Yes Details of Existing Retaining Wall: TW-1: 503m TW-2 :115m TW-5: 240m TW-6: 193m Details of Existing Garland Drain: GD-1: 518m GD-2: 115m GD-5: 260m GD-6: 200m	The Retaining walls and Garland drains present are constructed by the erstwhile lessee and being maintained by JSW.
4i	Length of Retaining wall or garland drain all along dumps	TW-7 = 105m	Nil.	The proposed Toe wall (105m x 2.5 m x0.6 m) at the bottom of temporary mineral stock has not been carried out. Hence, violation issued under rule 11(1) of MCDR, 2017.
4j	Number of settling ponds	No proposal.	Nil.	SST-4 is present and is constructed by the earlier lessee and being maintained by JSW.
4k	Specific comments of inspecting officer on waste dump management			The proposed Toe wall (105m x 2.5 m x0.6 m) at the bottom of temporary mineral stock has not been carried out. Hence, violation issued under rule 11(1) of MCDR, 2017.

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 is completely mined out till this plan period.

5b	Area under backfilling of mined out area	No proposal.	Not applicable.	No area is completely mined out till this plan period.
5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	No proposal.	Not applicable.	-
5d	Total area fully reclaimed and rehabilitated	No proposal.	Nil.	
5e	General remarks of inspecting officers on backfilling and reclamation etc.			Mineral in the mine area not exhausted fully. Thus, no. proposal in the mining pit or 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).	To be submitted before 1st July of every year.	Annual PMCP Report for Year 2020-21 is submitted to IBM Office.	
6b	Area available for rehabilitation (ha) .	No proposal.	Not applicable.	-
6c	afforestation done (ha).	Proposed Plantation Area- 0.52 Ha	Achieved Plantation Area-0.60 Ha.	-
6d	No. of saplings planted during the year	Proposed within Mine Lease: 1290	Saplings planted Within Mine Lease: 700 & Outside Mine Lease: 800	Total of 700 plants were planted on ID-1 and safety zone. However, due to unavailability of sufficient area on ID-1, 800 plants were planted at EID-1, outside the Lease Area.
6e	Cumulative no .of plants	Proposed 1290	1500	-

6f	Any other method of rehabilitation	Implementation of Bio-engineering measures for Surface Water and Dump Management as per Approved R&R Plan.	Bio-engineering measures for Surface Water and Dump Management as per Approved R&R Plan are being implemented.	Mineral in the mine area not exhausted fully. Thus, no. proposal in the mining pit or backfilling.
6g	Cost incurred on watch and care during the year	No proposal.	Not applicable.	-
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (Lx B x D	No proposal.	Not applicable.	Mineral in the mine area not exhausted fully. Thus, no. proposal in the mining pit or backfilling.
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	No proposal.	Not applicable.	Mineral in the mine area not exhausted fully. Thus, no. proposal in the mining pit or backfilling.
6j	Compliance on reclamation and rehabilitation by backfilling (iii) Afforestation on backfilled area	No proposal.	Not applicable.	Mineral in the mine area not exhausted fully. Thus, no. proposal in the mining pit or backfilling.
6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	No proposal.	Not applicable.	Mineral in the mine area not exhausted fully. Thus, no. proposal in the mining pit or backfilling.
6l	Compliance on reclamation and rehabilitation by backfilling (v) any other specific means.	No proposal.	Not applicable.	Mineral in the mine area not exhausted fully. Thus, no. proposal in the mining pit or backfilling.
6m	Compliance of rehabilitation of waste land within lease (i) afforestation	No proposal.	Not applicable.	

6n	Compliance of rehabilitation of waste land within lease (ii)Area rehabilitation (ha)	No proposal.	Not applicable.	
6o	Compliance of rehabilitation of waste land within lease (iii)Method of rehabilitation	No proposal.	Not applicable.	
6p	Compliance of environmental monitoring (core zone and buffer zone)	Regular Environmental Monitoring proposed in the Core zone and Buffer zone.	Environmental Monitoring carried out in the Core zone and Buffer zone regularly.	Monitoring done by Ecomen Laboratories Pvt. Ltd.
6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.			Mineral in the mine area not exhausted fully. Thus, no. proposal in the mining pit or backfilling.

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 done within lease area.	-
7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	Mechanical Sorting and sizing proposed.	Mechanical Sorting and sizing done within the ML area.	Dry Crushing and Screening adopted.
7c	Different grade of mineral sorted out at mines.	Yes	Fe<55% Fe?55-58%	-
7d	Any beneficiation process at mines	No Proposal.	No beneficiation process is carried out within lease area.	-

7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues	Mechanized method adopted for mineral sorting with dry crushing & screening.
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Environment:

Sl.No.	Item	Propasals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	No proposal.	No topsoil generated.	Working in the broken area.
8b	Concurrent use or storage of topsoil	No proposal.	Nil.	Proposed to work within the broken up area for plan period.
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.	Not applicable.	-
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)	Green belt development and inactive Dump Stabilization No. of plantation: 1290	Plantation inside & outside the mine lease area has been carried out to increase the green cover in & around the mine Achieved Plantation- Within Mine Lease area: 700 Outside Mine Lease area: 800	Total of 700 plants were planted on ID-1 and safety zone. However, due to unavailability of sufficient area on ID-1, 800 plants were planted at EID-1, outside the Lease Area.

8g	Survival rate	80%	70%	-
8h	Water sprinkling on roads to control airborne dust	Water sprinkling on roads is proposed to control airborne dust.	Water tanker have been deployed for sprinkling on roads to control airborne dust.	No. of Water Tankers:2 Capacity: 5000 Liter
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area			Developed mine office area for the aesthetic beauty are observed in progress.

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: March, 2021, Submitted on 09.04.2021 A.R. Submitted up to: Year 2020-21, submitted on 23.06.2021	-
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Mining Engineer: Manjunatha Geologist: Karani Singh Mine Manager: Vallibashasab S	During the inspection it is observed that Geologist engaged in the adjacent mine also.	Violation issued under rule 55(1)(3) (iii) of MCDR, 2017.
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Working Area: 20.62 Ha Waste Dumps: 12.77 Ha Infrastructure & Road: 5.12 Ha Others (Safety Zone, R&R, future mining area and untouched area): 5.07 Ha	Appears to be correct.	-
9d	Scrutiny of Annual return on afforestation	Within Mine Lease: 700, Outside Mining Lease: 800& survival rate 70%	Appears to be correct.	-

9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	Nil.	Nil.	-
9f	Scrutiny of Annual return on ROM stock and/or graded ore	ROM: Opening stock: Nil. Production: 179982Tonne. Closing stock: 5782 Tonne. Grade-wise ore: Lumps:Fe < 55% = 46200 Tonne Fines:Fe< 55% = 128000 Tonne	Appears to be correct.	-
9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	Cost of production Rs. 500.82/- per tonne. Ex. Mine price: Iron Ore Lumps: Fe < 55%: Rs. 578.86/- per tonne Iron Ore Fines: Fe < 55%: Rs. 472.55/- per tonne	Appears to be correct.	-
9h	Scrutiny of Annual return on fixed assets	Value of Fixed Assets: Rs. 202,246,044/-	Appears to be correct.	-
9k	Scrutiny of Annual return on mining machineries	Shovel -2 Wheel Loader-2 Back Hoe Loader- 1 Rock Drill-1 Crusher-1(100 TPH) Tipper- 5 Jeep/Tractor-2 Generator- 2 Water Tanker-2	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)	06/04/2022			
MCDR17	Rule 55(1)(3)	06/04/2022			

Date :

(SURESH PRASAD)

Indian Bureau of Mines