

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

MCDR inspection REPORT

Bangalore regional office

Mine file No : KNT/BLR/FE/496/BNG

Mine code : 30KAR03188

- (i) Name of the Inspecting : **S011**) **K.SRINIVAS**
Officer and ID No.
- (ii) Designation : Junior Mining Geologist
- (iii) Accompanying mine : Brajesh Kumar, Mines Manager and others
Official with
Designation
- (iv) Date of Inspection : 22/02/2022
- (v) Prev.inspection date :

PART-I : GENERAL INFORMATION

1. (a) **Mine Name** : **NARAYANA 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 : NARAYANAPURA
Taluka : SANDUR
Post office : DEOGIRI
Pin Code : 583119
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 : Narayanpura Village, Deogiri 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 : MP modif under 17(3) MCR 2016 21/12/2020

PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

Exploration :

| Sl.No. | Item | Proposals | Actual work | Remarks |
|--------|---|---------------|---|--|
| 1a | Backlog of previous year | No proposals | nil | ML executed on 30.07.2020. |
| 1b | Exploration over lease area for geological axis 1 or 2 | No proposals | nil | As per Approved Mining Plan. |
| 1c | Exploration Agencies and Expenditure in lakh rupees during the year | No proposals | nil | - |
| 1d | Balance area to be explored to bring Geological axis in 1 or 2 | Not specified | G-1- 40.77 Ha G-2- 1.78 Ha G-3- 0.00 Ha Barren Area- 64.96 Ha Total Area- 107.51 Ha | - |
| 1e | Balance reserve as on 01/04/20 | - | Reserves of Mn ore as on 1.4.2021: 487607tonnes (Mn ?10%) | Reserves of Iron ore as on 1.4.2021: 1,90,55,885t Iron Ore (Fe ? 45%). Siliceous Iron Ore (Fe?35%)- |
| 1f | General remarks of inspecting officers on geology, exploration etc | - | - | There are no proposals for exploration for the year 2020-21. |

Development :

| Sl.No. | Item | Proposals | Actual work | Remarks |
|--------|--|--|--|---------|
| 2a | Location of development w.r.t.lease area | Section B-B' to H-H' and O-O' to S-S'. For Mn ore SectionA-A' RL-935m to 862m | Section B-B' to H-H' and O-O' to S-S'. For Mn ore SectionA-A' RL-935m to 862m | - |
| 2b | Separate benches in topsoil, overburden and minerals (Rule 15) | Topsoil - NIL Overburden- 6 Mineral-5 | Topsoil - NIL Overburden- 6 Mineral-5 | - |

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|----|---|---------------------------------------|--------------------|--|
| 2c | Stripping ratio or ore to OB ratio | 1: 0.43 (Iron ore) 1: 1.57(Mn Ore) | 1: 0.20 1: 0.20 | Iron ore : Ore:8,74,778t Waste: 1,80,285 t Mn.Ore : Ore :5800 t Waste :1187 t |
| 2d | Quantity of topsoil generation in m3 | No proposal | nil | - |
| 2e | Quantity of overburden generation in m3 | (Fe)2,39,122 m3 (Mn)5987m3 | 90,736 m3 593m3 | ML executed on 30.07.2020. |
| 2f | General remarks of inspecting officers on development of pit w.r.t. type of deposit etc | - | - | The lease has been executed on 30.7.2020 and the mining operations have been commenced on 25.9.2020. Hence, there is a less development. |

Exploitation:

| Sl.No. | Item | Propasals | Actual work | Remarks |
|--------|---|--------------------------------------|--------------------------------|---|
| 3a | Number of pit proposed for production | One pit | One pit | - |
| 3b | Quantity of ROM mineral production proposed | Iron ore 1111809 t Mn ore -7592 t | I/O : 874778 t Mn ore-5800t | The mining operations commenced on 25.9.2020. |
| 3c | Recovery of sailable/usable mineral from ROM production | 100% | 100% | - |
| 3d | Quantity of mineral reject generation | No proposal | NIL | - |
| 3e | Grade of mineral rejects generation and threshold value declared. | No proposal | NIL | - |
| 3f | Quantity of sub grade mineral generation. | No proposal | NIL | - |
| 3g | Grade of sub grade mineral generation | No proposal | NIL | - |

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| 3h | Manual / Mechanised method adopted for segregating from ROM | Mechanised method for segregation. | Mechanised method for segregation. | Dry Crushing and Screening 250 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. | - |
| 3j | Provision of drilling and blasting in mineral benches | Provision of Drilling and Blasting is proposed for mineral benches. | Drilling has been carried out. No Blasting has been carried out yet. | 106(2)(B) Permission obtained from DGMS as per MMR, 1961. |
| 3k | Provision of mining machineries in mineral benches | Mining Machineries proposed- Excavators- 2 Tippers- 18 Drill-1 Wheel Loaders -2 Water tanker-5 | Machinery deployed: Excavators- 7 Tippers- 18 Drill-1 Wheel Loaders-5 Water tanker-7 | 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 | Bench Height- 8m Bench Width- 8m | Bench Height- 8m Bench Width- 8m | - |
| 3m | Total area covered under excavation/pits | 40.89 Ha (At the end of the plan period) | 40.89 Ha. | - |
| 3n | Ore to OB ratio for the pit/mine during the year. | 1: 0.43 (Iron ore) 1: 1.57(Mn Ore) | 1: 0.20 1: 0.20 | - |
| 3o | Total area put in use under different heads at the end of year | Mine Working- 40.82 Ha Dumping -13.51 ha Roads -2.31ha Afforestation- 0.67 Ha | Mine Working- 40.82 Ha Dumping - 7.84 Ha Other purpose-54.750ha Infrastructure-4.10ha | Dumping of waste not carried out in the proposed dumping area. The violation issued. |

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| 3p | Production of ROM mineral during the last five year period as applicable | 2020-21: 1111809 t (Iron ore) 7592t (Mn.Ore) | 2020-21: 1111809 t (Iron ore) 7592t (Mn.Ore) | Mine Started in 2020-21. |
| 3q | General remarks of inspecting officers on method of mining etc. | - | - | There is no change in method of mining. The dumping of waste was not carried out in the proposed dumping area. The violation has been issued. |

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 of Overburden is proposed. | Separate Dumping of Overburden is carried out . | - |
| 4b | Location of topsoil, OB and mineral reject dumps | OB dump proposed in South western corner of the mining lease. | Overburden Dumping not carried out in the proposed location dumping in ADlative dump. Location | Violation issued. |
| 4c | Number of dumps within lease area and outside of lease area | Within Lease Area- 6 Outside lease- NIL | Within Lease Area- 6 Outside lease- NIL | - |
| 4d | Location of dumps w.r.t. ultimate pit limit (Rule 16) | Outside the Ultimate Pit Limit. | Outside the Ultimate Pit Limit. | - |
| 4e | Number of active and alive dumps. | 2 | 1 | - |
| 4f | Number of dead dumps. | 5 | 5 | - |
| 4g | Number of dumps established. | NIL | NIL | - |
| 4h | Whether Retaining wall or garland drain all along dumps are there. | Retaining wall & Garland drain proposed along the Proposed dump. | Not constructed. | Violation issued. |
| 4i | Length of Retaining wall or garland drain all along dumps | Garland Drain- 271m Retaining wall- 266m | Not constructed. | Violation issued. |

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|----|--|--------------------|------------------|--|
| 4j | Number of settling ponds | 1 of 20m x10m x 3m | Not constructed. | Violation issued. |
| 4k | Specific comments of inspecting officer on waste dump management | - | - | The area has been proposed for dumping for the year 2020-21. The waste generated has not been dumping in the proposed area. The violation has been issued. |

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 | - |
| 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 | NIL |
| 5d | Total area fully reclaimed and rehabilitated | No proposal | NIL | - |
| 5e | General remarks of inspecting officers on backfilling and reclamation etc. | - | - | No backfilling proposals for the year 2020-21. |

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 under rule 26(2) of MCDR, 2017 before 1st July of every year. | Submitted. | Mine started on 25.09.2020. |

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|----|--|-------------|-------------------------------------|---|
| 6b | Area available for rehabilitation (ha) . | No proposal | NIL | - |
| 6c | afforestation done (ha). | No proposal | Not specified. | - |
| 6d | No. of saplings planted during the year | No proposal | 200 saplings planted in green belt. | - |
| 6e | Cumulative no .of plants | No proposal | 200 saplings. | - |
| 6f | Any other method of rehabilitation | No proposal | nil | - |
| 6g | Cost incurred on watch and care during the year | No proposal | NIL | - |
| 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 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 | - |

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| 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) | Environment monitoring is proposed for Core and Buffer Zone. | Environment monitoring is being carried out monthly in Core and Buffer Zone. | All the environmental parameters observed to be within the permissible limits. |
| 6q | General remarks of inspecting officers on PMCP compliance and progressive closure operations etc. | - | - | There are no specific proposals for the year 2020-21 in PMCP. |

Mineral Conservation:

| Sl.No. | Item | Propasals | Actual work | Remarks |
|--------|---|---|---|--------------------------|
| 7a | ROM Mineral dispatch or grade-wise sorting within lease area | Grade wise sorting is 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 Sorting | Mechanical Sorting | Dry Crushing & Screening |
| 7c | Different grade of mineral sorted out at mines. | Grade wise sorting is proposed. | Grade wise sorting is done in lease area. | - |
| 7d | Any beneficiation process at mines | No proposal | NIL | - |

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| 7e | General remarks of inspecting officer on Mineral conservation and beneficiation issues | - | - | There are no specific comments on Mineral Conservation and beneficiation issues. |
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Environment:

| Sl.No. | Item | Propasals | Actual work | Remarks |
|--------|---|---|-------------------------------------|---------|
| 8a | Separate removal and utilization of topsoil (Rule 32) | No proposal | NIL | - |
| 8b | Concurrent use or storage of topsoil | No proposal | NIL | - |
| 8c | Separate dumps for overburden, waste rock, rejects and fines (Rule 33) | Proposal for Separate dumping of Overburden | Separate dumping of Overburden. | - |
| 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 | NIL | - |
| 8f | Baseline information on existence of plantation and additional plantation done (Rule 41) | No proposal | 200 saplings planted in green belt. | - |
| 8g | Survival rate | No proposal | 92% | - |

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|----|--|---|--|---|
| 8h | Water sprinkling on roads to control airborne dust | Water sprinkling on haul roads proposed to control airborne dust. | Water tankers are deployed to control the airborne dust on haul roads and screening plant. | 7 nos. of water tanker each of 8000 liters capacity. |
| 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. |

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 January, 2022. A.R for the year 2020-21 submitted on 30.6.2021. | Appears to be correct | Mine Started on 25.09.2020 |
| 9b | Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager | Paramesha K M Mining Engineer Sakshi Singhal, Geologist Mallikarjun SHM, Manager | Appears to be correct. | - |
| 9c | Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc. | Mine Working- 40.82 Ha Dumping - 7.84 Ha Other purpose- 54.750ha Infrastructure -4.10ha | Appears to be correct | - |
| 9d | Scrutiny of Annual return on afforestation | 200saplings within the ML with 92% survival rate. | Appears to be correct | - |
| 9e | Scrutiny of Annual return on mineral reject generation (Grade and quantity) | NIL | Appears to be correct | - |

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|----|---|---|-----------------------|---|
| 9f | Scrutiny of Annual return on ROM stock and/or graded ore | O/S -Nil Production of Iron ore - 874778t C/S -265522.9t | Appears to be correct | - |
| 9g | Scrutiny of Annual return on sale value, Ex. Mine price and production cost | Cost of production-Rs 472.86/tonne. Av.Ex- pricemine- Rs 584.56/tonne | Appears to be correct | - |
| 9h | Scrutiny of Annual return on fixed assets | Fixed Assets- Rs943896205/- | Appears to be correct | - |
| 9k | Scrutiny of Annual return on mining machineries | Excavators- 7 Tippers- 18 Drill-1 Wheel Loaders- 5 Water tanker-7 | 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) | 08/03/2022 | | MCDR17 Rule 45(7) | 08/03/2022 | |
| MCDR17 Rule 45(7)(a) | 08/03/2022 | | | | |

Date :

(K.SRINIVAS)

Indian Bureau of Mines