

**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 : **OM5**) **Dr.OMKESHA MURTHY.M.G**
Officer and ID No.
- (ii) Designation : Regional Mining Geologist
- (iii) Accompanying mine : Mr. Venkatesh M. Chaligeri (Mines Manager) Mr.Parames
Official with
Designation
- (iv) Date of Inspection : 21/12/2022
- (v) Prev.inspection date : 22/02/2022

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 : 107.51 HA
- (c) Period of lease : 50Y
- (d) Date of Expiry : 29/07/2070
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 : PARAMESHA KM,Full Time
 Qualification : B.TECH MINING
 Appointment/ : 05/01/2022
 Termination date

Geologist

Name : Girish B.K,Full Time
 Qualification : MSc GEOLOGY
 Appointment/ : 15/06/2022
 Termination date

Manager

Name : VENKATESH M CHALIGERI
 Qualification : BE in Mining
 Appointment/ : 12/12/2022
 Termination date

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	NIL	NIL	NIL
1b	Exploration over lease area for geological axis 1 or 2	NIL	56 no of bore holes with 2100m of drilling	No proposals during the plan period. Form-I for the commencement of boreholes was submitted to IBM Bangalore on 06.12.2021.
1c	Exploration Agencies and Expenditure in lakh rupees during the year	NIL	126(approx.)	Not reported in the AR submitted for the year 2021-22 for that VL issued
1d	Balance area to be explored to bring Geological axis in 1 or 2	NIL	NIL	G1-40.77 Ha G2-1.78 Ha Barren Area-64.96 Ha
1e	Balance reserve as on 01/04/20	NIL	Iron Ore-19.583MMT	No reserve information incorporated in the AR for Associated mineral (Mn) VL issued for the same.
1f	General remarks of inspecting officers on geology, exploration etc			G2-1.78 Ha has to brought to G1 in the plan period, proposals for drilling 12 RC holes are in the year 2022-23.

Development :

Sl.No.	Item	Proposals	Actual work	Remarks
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2a	Location of development w.r.t. lease area	For Iron Ore: E677888 to E678409 N 1657894 to N 1658378 Section- SF-SF' to SL-SL' For Mn Ore: E 677440 to E 677551 N 1658355 to N 1658446 Section-SB-SB'	For Iron Ore: E677898 to Development carried out in the proposed area	For year 2021- 22
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	Top Soil- Nil For Iron Ore: Ore Benches-5Waste-3 For Mn Ore: Ore Benches-1Waste-1	Top Soil- NA For Iron Ore: Ore Benches-5Waste-3 For Mn Ore: Ore Benches-1Waste-1	No Top soil Generation
2c	Stripping ratio or ore to OB ratio	For Iron Ore: 1:0.31in Tonnes For Mn Ore: 1:1.27inTonnes	For Iron Ore: 1:0.38 in Tonnes For Mn Ore: 1:0.99inTonnes	Slight variation due to change in geological nature of mineralization.
2d	Quantity of topsoil generation in m3	No Proposal	NIL	NIL
2e	Quantity of overburden generation in m3	For Iron Ore: 1,77,470.00m3 For Mn Ore: 4,837.50m3	For Iron Ore: 1,89,894.50m3 For Mn Ore: 3,642.50m3	Slight variation due to change in geological nature of mineralization, however VL issued.
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc			Development is carried out as per the specified location and the nature of mineralization impact on the anticipated stripping ratio and quantity of OB generation.

Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	2	2	NIL

3b	Quantity of ROM mineral production proposed	For Iron Ore: 11,11,832.00Tonnes For Mn Ore: 7,571.00Tonnes	For Iron Ore: 10,07,885.00Tonnes For Mn Ore: 7,350.00Tonnes	VL issued for not achieving the Approved Quantity.
3c	Recovery of sailable/usable mineral from ROM production	100%	100%	NIL
3d	Quantity of mineral reject generation	No Proposals	NIL	NIL
3e	Grade of mineral rejects generation and threshold value declared.	No Proposals	NIL	NIL
3f	Quantity of sub grade mineral generation.	No Proposals	NIL	NIL
3g	Grade of sub grade mineral generation	No Proposals	NIL	NIL
3h	Manual / Mechanised method adopted for segregating from ROM	Mechanized Method proposed for segregating from ROM	As per proposal	Dry Crushing and screening 250TPH.
3i	Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects.	No Proposals	NIL	NIL
3j	Provision of drilling and blasting in mineral benches	Provision of drilling & blasting are made in mineral and waste benches.	As per proposal	Drilling & blasting carried out by combination of slurry and Nonel detonator.

3k	Provision of mining machineries in mineral benches	Provision of mining machineries made Excavator-7 Rock Breaker-1 Tippers - 18 Hydraulic drill - 1 Wheel loader - 6 Crusher-1 WaterTanker-5	As per proposal	NIL
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	Bench width-8m Bench Height-8m	Maintained as per the maximum extent possible as per approved mining plan	NIL
3m	Total area covered under excavation/pits	40.89Ha (entire approved mining Plan Period)	40.82Ha (as on 01.04.22)	The plan period is ongoing
3n	Ore to OB ratio for the pit/mine during the year.	ForIronOre: 1:0.31 in Tonnes For Mn Ore: 1:1.27inTonnes	ForIronOre: 1:0.38 in Tonnes For Mn Ore: 1:0.99inTonnes	NIL
3o	Total area put in use under different heads at the end of year	Total area in the plan period: "Mining-40.89Ha "Roads-2.31Ha "Infrastructure and Engineering Measures-2.62Ha "WasteDumps-13.51Ha "Green Belt-3.38Ha "Mineral Storage-1.82Ha "Others-42.98Ha	Total area as of 01.04.2022: "Mining-40.82Ha "Occupied by plant, buildings, residential, welfare buildings & roads - 3.400 "Used for waste disposal -9.47Ha "Other Purpose (Green Belt Safety Zone, R&R, future mining area, mineral storage) - 53.820 Ha	The plan period is on going.

3p	Production of ROM mineral during the last five year period as applicable	Year Mn 2020-21: 1,111 8097592 2021-22:1, 1111 8327571 2022-23: 1,111, 8837592 2023-24: 1,111, 7647592 2024-25:1, 1111, 8797571 (in Metric Tonnes)	Iron 2020-21: 2021-22: 7350 2022-23: NA NA 2023-24: NA NA 2024-25: NA NA (in Metric Tonnes)	Year Iron Mn 2020-21: 874,778 5800 2021-22: 1,007,885 2022-23: 2023-24: 2024-25: (in Metric Tonnes)	V/L issued for less production
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3q	General remarks of inspecting officers on method of mining etc.	Method of mining as per the approved mining plan followed, V/L issued for not achieving the proposed production .
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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 dumping Of overburden is proposed.	Not stick to the specified location	Violation issued
4b	Location of topsoil, OB and mineral reject dumps	OB Dump Proposal: E678072 to E678309 N 1657349 to N1657656	OB Dump location: E678468 to E678614 N 1657360 to N1657320	Violation issued
4c	Number of dumps within lease area and outside of lease area	7 Inactive Dumps and 1 Active Dump	7 Inactive Dumps and 1 Active Dump	NIL
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	Dump are outside UPL.	--	VL issued
4e	Number of active and alive dumps.	1	1	NIL

4f	Number of dead dumps.	7	7	NIL
4g	Number of dumps established.	No Proposal	NIL	NIL
4h	Whether Retaining wall or garland drain all along dumps are there.	Proposed	Violation issued	NIL
4i	Length of Retaining wall or garland drain all along dumps	Proposal as per Approved Mining Plan: Retaining Wall:230m Garland Drain: 234m	NIL	The construction of Retaining wall and Garland drain is under progress as per Approved Mining Plan, VL issued for the same.
4j	Number of settling ponds	SST-1No.	NIL	VL issued.
4k	Specific comments of inspecting officer on waste dump management			Violation letter has been issued to the lessee related to 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 proposal	NIL	NIL
5b	Area under backfilling of mined out area	No proposal	NIL	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	NIL
5e	General remarks of inspecting officers on backfilling and reclamation etc.			There is no proposal 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).	Submission of Annual report on PMCP under rule23E(2)	Annual PMCP Report for Year 2021-22 is received on 28.06.22	NIL
6b	Area available for rehabilitation (ha) .	No Proposal	NIL	NIL
6c	afforestation done (ha).	Proposed in Safety Zone-0.61 Ha	Achieved 2.33Ha	Along with green belt plantation, dump plantation and barren area.Plantation is carried out
6d	No. of saplings planted during the year	Proposed in Safety Zone .	Achieved in lease area - 4,977.	As reported in AR
6e	Cumulative no .of plants	No Proposals	NIL	NIL
6f	Any other method of rehabilitation	No Proposals	NIL	NIL
6g	Cost incurred on watch and care during the year	No Proposals	NIL	NIL
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (Lx B x D	No Proposals	NIL	No area is completely mined out in this plan period.
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	No Proposals	NIL	NIL
6j	Compliance on reclamation and rehabilitation by backfilling (iii)Afforestati on on backfilled area	No Proposals	NIL	NIL

6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	No Proposals	NIL	NIL
6l	Compliance on reclamation and rehabilitation by backfilling (v)any other specific means.	No Proposals	NIL	NIL
6m	Compliance of rehabilitation of waste land within lease (i)afforestation	No Proposals	NIL	NIL
6n	Compliance of rehabilitation of waste land within lease (ii)Area rehabilitation (ha)	No Proposals	NIL	NIL
6o	Compliance of rehabilitation of waste land within lease (iii)Method of rehabilitation	No Proposals	NIL	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.	MonitoringAgency- EcomenLaboratories Parameterswhichare beingMonitored: "Ambient AirQuality "AmbientNoise "Surface WaterQuality "Dust FallMeasurement "Noise Monitoring(PersonalExposure) "StackMonitoring "Personal DustMonitoring "Fugitive DustMonitoring "Ground WaterQuality "SoilQuality

6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.	No specific PMCP proposals however plantation and environmental monitoring has been done as per plan.
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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.	As per proposal	NIL
7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	Mechanical	Mechanical	Dry Crushing and Screening Method
7c	Different grade of mineral sorted out at mines.	YES	Fe<55% Mn< 25%	NIL
7d	Any beneficiation process at mines	No Proposal	NIL	NIL
7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues			The mineral conservation activities are carried out inside mine as per the proposal.

Environment:

Sl.No.	Item	Propasals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	No Topsoil Generation.	NIL	NIL
8b	Concurrent use or storage of topsoil	No Proposal	NIL	NIL

8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	Separate dump for overburden is proposed.	VL issued for deviation	NIL
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	No Proposal	NIL	NIL
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	No Proposal	NIL	NIL
8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	No Proposal	NIL	Plantation along green belt, barren area and dump has been carried out. Achieved plantation in 2021-22 4977 Nos.
8g	Survival rate	Not Specified	89%	NIL
8h	Water sprinkling on roads to control airborne dust	Water sprinkling on road is proposed to control air borne dust.	Water tankers deployed in the active mine lease area to control the airborne dust on haul roads and screening plant.	NIL
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area			Efforts made to maintain the environmental condition around the mining area and to maintain the aesthetic beauty of the mine

Compliance of Rule 45:

Sl.No.	Item	Propasals	Actual work	Remarks
9a	Status of submission of Monthly and Annual returns	A.R. Submitted up to FY 21-22 Submitted on 30.06.22	A.R. Submitted up to FY 21-22 Submitted on 30.06.22	

9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Mining Engineer- Paramesh KM Geologist- Girish Kumar Manager- Venkatesh M Chaligeri	Appointed	
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Total area as of 01.04.2022: "Mining- 40.82Ha "Occupied by plant, buildings, residential, welfare buildings & roads - 3.400 "Used for waste disposal -9.47Ha "Other Purpose (Green Belt Safety Zone, R&R, future mining area, mineral storage) - 53.820 Ha	Appears to be correct	NIL
9d	Scrutiny of Annual return on afforestation	Plantation Within Lease- 4977 nos. Survival Rate:89%	Appears to be correct	NIL
9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	No Mineral Reject Generation	NIL	NIL
9f	Scrutiny of Annual return on ROM stock and/or graded ore	For Fe: Opening Stock- 265522.9 T Production: 1007885.00 T Closing Stock- 114652.5 T ForMn: Opening Stock- 582.00 T Production: 7350.00 T ClosingStock- 1090.00T	Appears to be correct	NIL

9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	Fe: Lumps Fe<55%- 2383.75?/T Fines Fe<55%- 1488.92?/T Mn:Mn<25%- 3132.5?/T	Appears to be correct	NIL
9h	Scrutiny of Annual return on fixed assets	Value of Fixed Assets: ?.898649524.0 Depreciation on Fixed Assets: .45246681.0	Furnished I the AR	NIL
9k	Scrutiny of Annual return on mining machineries	Excavator-7 Rock Breaker-1 Tippers - 18 Hydraulic drill - 1 Wheel loader - 6 Crusher-1 WaterTanker-5	Appears to be correct	NIL

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)	18/01/2023			
MCDR17	Rule 45(7)(a)	18/01/2023			

Date :

(Dr.OMKESHA MURTHY.M.G)

Indian Bureau of Mines