

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

MCDR inspection REPORT

Bangalore regional office

Mine file No : KNT/BLR/FE/490/BNG

Mine code : 30KAR03181

- (i) Name of the Inspecting : **OM5**) **Dr.OMKESHA MURTHY.M.G**
Officer and ID No.
- (ii) Designation : Regional Mining Geologist
- (iii) Accompanying mine : Mr.Nandan S Bhandary, G M (Mines),Mr.Awadhesh Kumar R
Official with
Designation
- (iv) Date of Inspection : 21/10/2022
- (v) Prev.inspection date : 21/09/2021

PART-I : GENERAL INFORMATION

1. (a) **Mine Name** : **TUNGA IRON ORE MINES**
- (b) **Registration NO.** : **IBM/432/2011**
- (c) Category : A Fully Mechanised
- (d) Type of Working : Opencast
- (e) Postal address
- State : KARNATAKA
- District : BELLARY
- Village : HITTANAHALLI
- Taluka : SANDUR
- Post office : TARANAGAR
- Pin Code : 583275
- FAX No. : 02242863000,02242861000
- E-mail : sunil.singh@jsw
- Phone : 9448286155, 08395-245956
- (f) Police Station : BANNIHATTI
- (g) First opening date : 25/01/2018
- (h) Weekly day of rest : SUN
2. Address for : ITTANAHALLI VILLAGE, TARANAGAR
correspondance : SANDUR TALUK, BALLARI DISTRICT- 583119
3. (a) Lease Number : ML No. 0004
- (b) Lease area : 32.68 Ha
- (c) Period of lease : 50Y
- (d) Date of Expiry : 16/01/2068
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 : T. Varaprasad,Full Time
 Qualification : B. E.(Mining)
 Appointment/ : 11/09/2022
 Termination date

Geologist

Name : R S Desai,Full Time
 Qualification : M.Sc (Applied Geology)
 Appointment/ : 19/01/2018
 Termination date

Manager

Name : CHITRANJAN KUMAR
 Qualification : FCC
 Appointment/ : 15/04/2022
 Termination date

6. Date of approval of Mining	:	MP under 16(1) of MCR 2016	17/02/2017
Plan/Scheme of Mining	:	MP review under 17(1) MCR 2016	09/02/2022
	:	Modif.approved Mining Scheme	09/02/2022
	:	MP review under 17(1) MCR 2016	09/02/2022

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	No Proposals	Nil	During FY 2021-22 total 05pits were done in a grid pattern of 100*100 with a dimension (1.5*1.5*1.5)on the sub grade dump to know the quality.
1c	Exploration Agencies and Expenditure in lakh rupees during the year	NIL	NIL	
1d	Balance area to be explored to bring Geological axis in 1 or 2	No Proposals	NIL	Details of Total Mineralized Area: G1: 16.40 Ha , G2: 0, G3: 0, G4: 0 Non-mineralized Area: 16.28 Ha
1e	Balance reserve as on 01/04/20		4408759 Metric Tonnes	
1f	General remarks of inspecting officers on geology, exploration etc			Total mineralized area explored to G1 level

Development :

Sl.No.	Item	Proposals	Actual work	Remarks
2a	Location of development w.r.t.lease area	E/W 675212 / 675480 N/S 1670535 / 1670891	As per proposal	
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	Benches in Mineral and Overburden: 04	As per proposal followed	No Top Soil Generation
2c	Stripping ratio or ore to OB ratio	1:1.67 (in Metric Tonnes)	1:0.44 (in Metric Tonnes)	
2d	Quantity of topsoil generation in m3	NIL	NA	No Top Soil Generation

2e Quantity of overburden generation in m3 250713.50 m3 65909.52 m3

2f General remarks of inspecting officers on development of pit w.r.t. type of deposit etc Development in the mine as per the approved mining plan and is satisfactory

Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	01	01	-
3b	Quantity of ROM mineral production proposed	300000 Metric Tons (Annual Permissible Production Limit)	299785.67 Metric Tons	
3c	Recovery of sailable/usable mineral from ROM production	100 %	100 %	-
3d	Quantity of mineral reject generation	NIL	NA	-
3e	Grade of mineral rejects generation and threshold value declared.	NA	NA	-
3f	Quantity of sub grade mineral generation.	NIL	NA	-
3g	Grade of sub grade mineral generation	NA	NA	-
3h	Manual / Mechanised method adopted for segregating from ROM	Mechanized Method for ROM Segregation (Crushing & Screening)	Mechanized Method followed and ROM Segregation carried out by following Crushing & Screening as per the approved mining plan	Dry Crushing and Screening- 250 TPH

3i	Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects.	No proposal	NA	-
3j	Provision of drilling and blasting in mineral benches	Drilling and Blasting is proposed for mineral benches.	As per approved document followed	106 (2) (B) Permission Obtained from DGMS as per MMR 1961.
3k	Provision of mining machineries in mineral benches	Proposed Mining Machineries: Excavators-3 Tippers-7 Drill Rig- 1 Front End Loader-1 Back Hoe Loader-1 Crusher-1 Motor Grader-1 Dozer-1	Mining Machineries deployed: Excavators-3 Tippers-7 Drill Rig- 1 Front End Loader-2 Back Hoe Loader-1 Crusher-1 Motor Grader-1 Dozer-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	Bench Height- 8 m Bench Width- 8m	Bench height and width fallowed to the maximum extent	-
3m	Total area covered under excavation/pits	7.04 Ha	7.04 Ha	-
3n	Ore to OB ratio for the pit/mine during the year.	1:1.67 (in Metric Tonnes)	1:0.44 (in Metric Tonnes)	-
3o	Total area put in use under different heads at the end of year	Mining- 7.04 Ha Mineral Storage- Nil Roads- 1.22 Ha Infrastructure - 0.35 Ha O/B Dumps- 9.80 Ha Others- 14.27 Ha Total Area 32.68 Ha	Mining- 7.04 Ha Mineral Storage- Nil Roads- 1.22 Ha Infrastructure- 0.35 Ha O/B Dumps- 9.80 Ha Others- 14.27 Ha Total Area 32.68 Ha	-

3p	Production of ROM mineral during the last five year period as applicable	2017-18: 300000 2018-19: 300000 2019-20:300000 2020-21:300000 2021-22: 300000 (in tonnes)	2017-18: 273983.00 2018-19: 299993.41 2019-20: 299997.36 2020-21: 299700.00 2021-22: 299785.67
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3q	General remarks of inspecting officers on method of mining etc.	Systematic method of mining followed for extraction of ore in the mine as per the approved mining plan
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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	Separate dumping of Overburden is being carried out.	
4b	Location of topsoil, OB and mineral reject dumps	OB Dump Proposal: E 675626 toW 675883 N 1670477 to S 1670746	As per the approved document	-
4c	Number of dumps within lease area and outside of lease area	Within Lease Area- 2 Proposed Dump-1 Inactive Dump-1	2dumps	Inactive Dump was created by erstwhile lessee.
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	Proposed Dump- Outside Ultimate Pit Limit. Parts of Inactive Dump lie inside the UPL.	Dumping carried out As per proposal	-
4e	Number of active and alive dumps.	Active Dump-1	Active Dump-1	
4f	Number of dead dumps.	Inactive Dump -1	Inactive Dump -1	Dumped by the erstwhile lessee
4g	Number of dumps established.	NIL	1 No. (Part of active dump has been stabilized with plantation & Coir matting.)	Dump Stabilization under progress

4h	Whether Retaining wall or garland drain all along dumps are there.	Proposed	Constructed as per proposal	
4i	Length of Retaining wall or garland drain all along dumps	For ID-4/EID-5: Check dams - 4 Garland drain-1253 m Retension wall-=1253m	R & R Proposals were carried out as per plan	
4j	Number of settling ponds	01 Nos.	01 Nos.	-
4k	Specific comments of inspecting officer on waste dump management			Aesthetic beauty of the mine was maintained

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 of completely mining out any area in this plan period.	No area is completely mined out in this plan period.	
5b	Area under backfilling of mined out area	No Proposals	NA	No Backfilling.
5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	No Proposals	NA	No top soil generation (2021-22)
5d	Total area fully reclaimed and rehabilitated	No Proposals	NA	-
5e	General remarks of inspecting officers on backfilling and reclamation etc.			No Backfilling and reclamation proposals in the approved documents

Progressive Mine Clousre Plan:

Sl.No.	Item	Propasals	Actual work	Remarks
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6a	Whether Annual report on PMCP submitted on time and correctly. Rule 23 E(2).	Submission of Annual report on PMCP under rule 23E(2).	Annual PMCP Report for Year 2021-22 is prepared and submitted to IBM Office on 28.06.2022	-
6b	Area available for rehabilitation (ha) .	NIL	NA	-
6c	afforestation done (ha).	NIL	1.68 Ha	Safety zone plantation & Old dumps
6d	No. of saplings planted during the year	20000 (Gap filling & Dumps)	49463	Safety zone plantation & Old dumps
6e	Cumulative no .of plants	54000	90978	Plantation in Green Belt, Inactive Dump
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 are being implemented	-
6g	Cost incurred on watch and care during the year	-	Expenditure of Rs 24.403 Lakhs shown	-
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (Lx B x D	No Proposals	NA	
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	No Proposals	NA	
6j	Compliance on reclamation and rehabilitation by backfilling (iii)Afforestation on on backfilled area	No Proposals	NA	

6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	No Proposals	NA	
6l	Compliance on reclamation and rehabilitation by backfilling (v)any other specific means.	No Proposals	NA	
6m	Compliance of rehabilitation of waste land within lease (i)afforestation	No Proposals	NA	
6n	Compliance of rehabilitation of waste land within lease (ii)Area rehabilitation (ha)	No Proposals	NA	
6o	Compliance of rehabilitation of waste land within lease (iii)Method of rehabilitation	No Proposals	NA	
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 regular basis.	
6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.			PMCP proposals were carried out in the mine satisfactorily

Mineral Conservation:

Sl.No.	Item	Propasals	Actual work	Remarks
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7a	ROM Mineral dispatch or grade-wise sorting within lease area	YES	Crushing and screening in practice as per the approved mining plan. Grade wise stocks are demarcated on the available stock	-
7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	Mechanical Sorting	Mechanical Sorting	Dry Crushing and Screening Method
7c	Different grade of mineral sorted out at mines.	YES	Fe<55% and Fe 55 to below 58 %	-
7d	Any beneficiation process at mines .	NIL	No beneficiation process is carried out within lease area.	-
7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues			Mineral Conservation aspects are taken care by the lessee in the mine lease

Environment:

Sl.No.	Item	Propasals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	No Topsoil Generation.	No Topsoil generated during operations.	Majority area is broken.
8b	Concurrent use or storage of topsoil	NA	NA	
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	250713.50 m3	65909.52 m3	Actual work for the year 2021-22

8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	NA	NA	-
8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	Green Belt development across safety zone Proposed Planation- 20000	Plantation Carried out 49463	Green Belt Plantation, Gap plantation, Plantation over Encroached Inactive Dump has been carried out.
8g	Survival rate	85 - 90 %	90 %	-
8h	Water sprinkling on roads to control airborne dust	Water sprinkling on roads are proposed to control airborne dust.	Water tankers have been deployed for sprinkling on roads to control airborne dust	
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area			Environmental restoration and protective measures are taken care by the lessee

Compliance of Rule 45:

Sl.No.	Item	Propasals	Actual work	Remarks
9a	Status of submission of Monthly and Annual returns	Submitted		-
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Mining Engineer: Aman Kumar. Geologist: Raghavendra S Desai. Mine Manager: Chitranjan Kumar	Statutory appointment of Mining Engineer and Geologist verified and they present during the inspection	

9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Mining- 7.04 Ha Mineral Storage- Nil Roads- 1.22 Ha Infrastructure - 0.35 Ha O/B Dumps- 9.80 Ha Others- 14.27 Ha Total Area 32.68 Ha	Data furnished verified and found ok
9d	Scrutiny of Annual return on afforestation	Green Belt Plantation, Gap plantation, Plantation over Encroached Inactive Dump has been carried out. Total Plantation Carried out in year 2021-22: 49463	Verified and seems to be ok
9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	No mineral reject generated	No Mineral reject reported
9f	Scrutiny of Annual return on ROM stock and/or graded ore	Opening Balance: 0 Tonne Total Production: 299785.67 tonnes. Closing Balance: 0 Tonne	Verified
9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	Lumps 55%>Fe - 858.70 Rs/T 58%>Fe?55% - 858.70 Rs/T Fines 55%>Fe- 858.70 Rs/T 58%>Fe Rs55%- 858.70 Rs/T 58%>Fe Rs55%- 858.70 Rs/T	Verified and found to be ok

9h	Scrutiny of Annual return on fixed assets	Value of Fixed Assets: Rs. 224994404.0 Depreciation on Fixed Assets: Rs. 25644255.0	Reported and seems to be ok
9k	Scrutiny of Annual return on mining machineries	Mining Machineries deployed: Excavators-3 Tippers-7 Drill Rig- 1 Front End Loader-2 Back Hoe Loader-1 Crusher-1 Motor Grader-1 Dozer-1	Details furnished

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

Violation observed		Show cause position	
Rule NO.	Issued on Compliance on	Rule NO.	Issued on Compliance on

Date :

(Dr.OMKESHA MURTHY.M.G)

Indian Bureau of Mines