

I/30052/2024

Review and updation of Mining Plan REPORT

Bangalore regional office

Mine file No : KNT/BLR/Fe-493/BNG

Mine code : 30KAR03184

- (i) Name of the Inspecting : OM5) Dr.OMKESHA MURTHY.M.G
Officer and ID No.
- (ii) Designation : Regional Mining Geologist
- (iii) Accompanying mine : Mr. Awadhesh Kumar Rai, D G M (Mines), Mr. Manjunath
Official with
Designation
- (iv) Date of Inspection : 25/09/2023
- (v) Prev.inspection date : 16/06/2023

PART-I : GENERAL INFORMATION

1. (a) Mine Name : BHADRA 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 : ITTANAHALLI
Taluka : SANDUR
Post office : TARANAGAR
Pin Code : 583119
FAX No. : 8395-250132
E-mail : PANDEY.BINAY@JSW.IN
Phone : 8395-250120-30
- (f) Police Station : SANDUR
- (g) First opening date : 01/06/2019
- (h) Weekly day of rest : SUN
2. Address for : ITTANAHALLI VILLAGE
correspondance : TARANAGAR POST
BALLARI-583119
3. (a) Lease Number : ML No 007
- (b) Lease area : 130.53 HA
- (c) Period of lease : 50 Years
- (d) Date of Expiry : 26.05.2069
4. Mineral worked : IRON ORE Main

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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 : MANJUNATH GOVINDAPPA,Full Time
 Qualification : M. Tech (Mining)
 Appointment/ : 07/10/2022
 Termination date

Geologist

Name : CHIRUKURI HSR KRISHNA,Full Time
 Qualification : MSc (Geology)
 Appointment/ : 22/11/2021
 Termination date

Manager

Name : AWADHESH KUMAR RAI
 Qualification : DIP IN MINING FCC
 Appointment/ : 15/06/2020
 Termination date

6. Date of approval of Mining Plan/Scheme of Mining : MP under 16(1) of MCR 2016 06/07/2017
 Modif.of approved Mining Plan 16/11/2021

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PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	NIL	NA	
1b	Exploration over lease area for geological axis 1 or 2	Boreholes: 14 Nos Meterage: 580 Mts	Upto 31st March 2023: RC- 27 Boreholes with cumulative meterage of 875m From 1st April, 2023 to G1 Exploration Completion date: 25th May 2023: Core- 10 Boreholes with cumulative meterage of 540m. Total Boreholes: 37 Nos. Total Meterage: 1415 Mts	Intimation of 37 number of drill holes form-I received lessee letter dated 25.02.2023. Cumulative, a Total- 69 Boreholes with total meterage of 2875.5m carried out by the lessee in the annual returns including total 32 Boreholes were drilled with total Meterage of 1460.50 m during FY 2019-20.
1c	Exploration Agencies and Expenditure in lakh rupees during the year	NIL	Drilling Agency- M/s RocktechEntreprises Expenditure- 112.45 lacs	As per AR Expenditure is Rs. 197.98 lacs which includes expenditure including total 32 Boreholes were drilled with total Meterage of 1460.50 m during FY 2019-20
1d	Balance area to be explored to bring Geological axis in 1 or 2	NIL	Details of Geological axis area as per approved mining plan: G1: 30.61 Ha G2: 28.40 Ha G3: 15.04 Ha Non mineralized Area: 56.48 Ha	As the nature of iron ore formation/mineralization in mine is bedded stratiform deposit with irregular habit and after considering the drillhole spacing as per MEMC 2015, present status Geological axis area as per recent approved mining plan is G1: 57.03 Ha G2: 4.08 Ha Non mineralized Area: 69.42 Ha

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1e	Balance reserve as on 01/04/20	As per AR 7,402,923Tonnesreserves and total resources 23,655,399Tonnes	
1f	General remarks of inspecting officers on geology, exploration etc	Exploration of the lease area has been undertaken based on the MEMC norms for iron ore formation/mineralization bedded stratiform deposit with irregular habit, there is drastic change in reserve quantity from the NIT document observed by lessee after recent exploration in the lease area	and theReview and Updation of Mining Plan approved for the changed Reserves and Resources quantity provided in the document is subject to technically audited Geological Report by Technical Committee of the State Government as per provision of rule 12 (4C) of MCDR, 2017.

Development :

Sl.No.	Item	Propasals	Actual work	Remarks
2a	Location of development w.r.t.lease area	E/W: 674770 / 675538 N/S: 1669934 / 1671039	E/W: 674773 / 675534 N/S:1669956 / 1671000	Development carried out as per the approved proposal
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	Benches in Mineral and Overburden: 12	Benches in Mineral and Overburden: 12	No Top Soil Generation
2c	Stripping ratio or ore to OB ratio	1:1.79 (in Metric Tonnes)	1:1.16 (in Metric Tonnes)	For the deviation already VL issued by the previous inspecting officer.
2d	Quantity of topsoil generation in m3	NIL	NIL	No Top Soil Generation
2e	Quantity of overburden generation in m3	1291646 m3	611040.325 m3	Actual work for year 2022-23. OB handled: 12,22,081 Mt

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2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc	Change in proposed stripping ratio and more handling of the waste are due to waste intercalations not anticipated and the irregular nature of the ore body as informed by the mine management due to which they have not achieved the proposed production also.
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Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	02	02	-
3b	Quantity of ROM mineral production proposed	1439939Metric Tons	1050228Metric Tons	For less production achievement VL issued by previous I/o.
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	-

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3h	Manual / Mechanised method adopted for segregating from ROM	Mechanized Method for ROM Segregation (Crushing & Screening)	Mechanized Method for ROM Segregation (Crushing & Screening)	During inspection it is observed crushing and screening machine deployed is not in accordance with the approved Mining Plan VL issued for the same for rectification.
3i	Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects.	No proposal	NIL	
3j	Provision of drilling and blasting in mineral benches	Drilling and Blasting is proposed for mineral benches.	Drilling and Blasting is carried for mineral benches.	106 (2) (B) Permission Obtained from DGMS as per MMR 1961.
3k	Provision of mining machineries in mineral benches	Proposed Mining Machineries: Excavator - 9 Rock breaker 1 Tippers - 58 Drill Rig - 2 Front end Loader - 4 Back Hoe Loader - 1	Mining Machineries deployed: Excavator - 9 Rock breaker - 1 Tippers - 50 Drill Rig - 2 Front end Loader - 4 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	Bench Height- 8 m Bench Width- 8m	Maintained the proposed height and width of the bench by and large in the working places.	
3m	Total area covered under excavation/pits	42.88Ha	42.55 Ha	-
3n	Ore to OB ratio for the pit/mine during the year.	1:1.79 (in Metric Tonnes)	1:1.16 (in Metric Tonnes)	VL issued by the previous I/o.

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3o	Total area put in use under different heads at the end of year	Mining- 42.88 Ha Mineral Storage- 00.30 Ha Roads- 1.43 Ha Infrastructure - 4.30 Ha O/B Dumps- 34.40 Ha Others- 47.22 Ha Total Area - 130.53 Ha	Mining- 42.55 Ha Mineral Storage - 00.30 Ha Roads- 1.43 Ha Infrastructure - 4.30 Ha O/B Dumps- 34.40 Ha Others- 47.55 Ha Total Area - 130.53 Ha	
3p	Production of ROM mineral during the last five year period as applicable	2019-20: 1250000 2020- 21:1440000 2021- 22:1440000 2022- 23:1439939	2019-20: 1249750 2020-21:1439800 2021-22:1432713 2022-23:1050228	Mining Operations started in 2019-20
3q	General remarks of inspecting officers on method of mining etc.			Systematic development of benches were observed.

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	During inspection hugequantity of processed ore stack found in block-1which has been earmarked for disposal of waste and a crushing and screening machine is also in operation which is not in accordance with approved Mining Plan. VL issued for the same.	

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4b	Location of topsoil, OB and mineral reject dumps	Overburden dumping Active Dump in block-1 (AD-1) E/W 674707 / 675185 N/S 1671680 / 1671937 Block -3: Proposed Temporary Dump: E/W 676635 / 676730 N/S 1667022 / 1667128	During inspection huge quantity of processed ore stack found in block-1 which has been earmarked for disposal of waste and a crushing and screening machine is also in operation which is not in accordance with approved Mining Plan. VL issued for the same.	
4c	Number of dumps within lease area and outside of lease area	Within Lease Area- (2 - Active dumps & 6 In-active dumps) Outside - No Proposal	Within Lease Area- (2 - Active dumps & 6 In-active dumps) Outside - No Proposal	Inactive Dump was created by erstwhile lessee
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	Active Dump in block-1 (AD-1) E/W 674707 / 675185 N/S 1671680 / 1671937 Block -3: Proposed Temporary Dump: E/W 676635 / 676730 N/S 1667022 / 1667128	During inspection huge quantity of processed ore stack found in block-1 which has been earmarked for disposal of waste and a crushing and screening machine is also in operation which is not in accordance with approved Mining Plan. VL issued for the same.	
4e	Number of active and alive dumps.	Active Dump- 2	Active Dump- 2	
4f	Number of dead dumps.	Inactive Dump - 6	Inactive Dump - 6	Dumped by the erstwhile lessee
4g	Number of dumps established.	NIL	Total of 6 (ID & EID) dumps are stabilized till now.	
4h	Whether Retaining wall or garland drain all along dumps are there.	Yes	Yes	

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4i	Length of Retaining wall or garland drain all along dumps	NIL	NIL	All the construction has been completed as per the approved R&R plan. Cumulative (includes outside lease area): Retaining wall - 3357m Garland drain - 3107m.
4j	Number of settling ponds	NIL	NIL	Cumulative 03 (including outside lease area).
4k	Specific comments of inspecting officer on waste dump management			During inspection huge quantity of processed ore stack found in block-1 which has been earmarked for disposal of waste and a crushing and screening machine is also in operation which is not in accordance with approved Mining Plan. VL issued for the same.

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.	NIL	NA	No area is completely mined out during this plan period.
5b	Area under backfilling of mined out area	NIL	NA	No Backfilling.
5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	NIL	NA	No top soil generation (2022-23)

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5d	Total area fully reclaimed and rehabilitated	NA	NA	-
5e	General remarks of inspecting officers on backfilling and reclamation etc.			Ore in the pit is not exhausted 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 rule 23E(2).	Annual PMCP Report for Year 2022-23 received before 30.06.2023	
6b	Area available for rehabilitation (ha) .	NIL	NA	
6c	afforestation done (ha).	1.62 Ha	1.48Ha	
6d	No. of saplings planted during the year	4050 Nos.	3697 Nos. (Within lease area)	Plantation done outside lease area 1596 Nos. Total no plantation done in 2022-23: 5293 Nos.
6e	Cumulative no .of plants	Not specified in AMP	16789Nos. (Within lease area)	As per AR
6f	Any other method of rehabilitation	Implementation of Engineering measures for Surface Water and Dump Management as per Approved R&R Plan.	Proposals as per ApprovedR&R Plan were implemented.	-
6g	Cost incurred on watch and care during the year	6.50 Lakhs	6.47 Lakhs	Cost incurred for plantation within lease area.

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6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (Lx B x D	No Proposals	NIL
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	No Proposals	NIL
6j	Compliance on reclamation and rehabilitation by backfilling (iii)Afforestation on on backfilled area	No Proposals	NIL
6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	No Proposals	NIL
6l	Compliance on reclamation and rehabilitation by backfilling (v)any other specific means.	No Proposals	NIL
6m	Compliance of rehabilitation of waste land within lease (i)afforestation	No Proposals	NIL
6n	Compliance of rehabilitation of waste land within lease (ii)Area rehabilitation (ha)	No Proposals	NIL
6o	Compliance of rehabilitation of waste land within lease (iii)Method of rehabilitation	No Proposals	NIL

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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.
6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.		Implementation of the PMCP activities satisfactory

Mineral Conservation:

Sl.No.	Item	Propasals	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	Yes	As per proposal	As AR for the year 2022-23 ROM Closing stock: 652.790 MT Closing stock: 144480.860MT. fines 44250.310 MT grade 51% to below 55% Fe
7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	Crushing and screening	As per proposals	Dry Crushing and Screening Method
7c	Different grade of mineral sorted out at mines.	Yes	(i) Lumps (a) 45% to below 51% Fe (b) (b) 51% to below 55% Fe (ii) Fines (a) 45% to below 51% Fe (b) (b) 51% to below 55% Fe	Dispatch of lumps 1)Grade:45-51 % Qty.: 29502.00 2)Grade:51-55 % Qty.: 307046.31 Dispatch of Fines 1)Grade:45-51 % Qty.: 8000.00 2)Grade:51-55 % Qty.: 733127.7
7d	Any beneficiation process at mines	No Proposals	NIL	-

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7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues	Dry Crushing and Screening Method of ROM ore and grade wise segregation and dispatch is in practice from the mine.
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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)	Separate dump for overburden is proposed at 2 locations (Block 1 & Block 3)	During inspection huge quantity of processed ore stack found in block-1 which has been earmarked for disposal of waste and a crushing and screening machine is also in operation which is not in accordance with approved Mining Plan. VL issued for the same.	
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	No Proposals	NIL	
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	No Proposals	NIL	

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8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	Green Belt development across safety zone Proposed Planation-4050 Nos.	Green Belt Plantation, Gap plantation, Plantation over Encroached Inactive Dump has been carried out. Total Plantation Carried out in year 2022-23: 5293 Nos.	
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.	During the inspection it is observed that water tankers have been deployed for sprinkling on roads to control airborne dust.	No. of Water Tankers: 03 Capacity: 10000 Litre
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area			Environmental protection measures are in place and the aesthetic beauty of the mine has been maintained.

Compliance of Rule 45:

Sl.No.	Item	Propasals	Actual work	Remarks
9a	Status of submission of Monthly and Annual returns	F. Y 2022-23 AR received online on: 30.06.2023		
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Mining Engineer- Manjunath Govindappa Geologist- Chirukuri HSR Krishna Mine Manager- Awadhesh Kumar Rai	Verified found ok	

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9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Mining- 42.55 Ha Mineral Storage- 0.30 Ha. Roads- 1.43 Ha Infrastructure - 4.30 Ha O/B Dumps- 34.40 Ha Others- 47.55 Ha Total Area 130.53 Ha	As per Approved MP
9d	Scrutiny of Annual return on afforestation	Total Plantation carried out inside lease area- 3697 Cumulative Plantation Carried out till Mar-2023: 16789	Seems to be correct
9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	No mineral reject generated	NIL
9f	Scrutiny of Annual return on ROM stock and/or graded ore	Opening Balance: 60950.00 Tonnes Total Production: 1050228Tonnes Closing Balance: 652.79Tonnes	OK
9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost		-
9h	Scrutiny of Annual return on fixed assets		-

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9k	Scrutiny of Annual return on mining machineries	Mining Machineries deployed: Excavator - 9 Rock breaker - 1 Tippers - 50 Drill Rig - 2 Front end Loader - 4 Back Hoe Loader - 1	Ok as per Approved Mining Plan
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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)	03/11/2023	MCDR17	Rule 11(1)	03/11/2023

Date :**(Dr.OMKESHA MURTHY.M.G)**

Indian Bureau of Mines