

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

Mining Plan Modification REPORT

Bangalore regional office

Mine file No : KNT/BLR/Fe-492/BNG

Mine code : 30KAR03183

- (i) Name of the Inspecting : **S19**) **SANDEEP KUMAR SINGH**
Officer and ID No.
- (ii) Designation : Assistant Controller Mine
- (iii) Accompanying mine : Shri Brajesh Kumar, AGM(Mines), Shri Nishant Kumar Sh
Official with
Designation
- (iv) Date of Inspection : 25/07/2020
- (v) Prev.inspection date :

PART-I : GENERAL INFORMATION

1. (a) **Mine Name** : **DEVADARI 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 :
- Taluka :
- Post office :
- Pin Code :
- FAX No. : **022-42863000**
- E-mail : **pandey.binay@jsw.in**
- Phone : **022-42861000**
- (f) **Police Station** : **Sandur**
- (g) **First opening date** : **28/12/2018**
- (h) **Weekly day of rest** : **SUN**
2. **Address for** : **Lakshmipura Village**
correspondance **Sandur Taluk, Bellary**
Karnataka
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:
FAX :

Agent : B P PANDEY
M/S JSW STEEL LIMITED NANDI
IRON ORE MINE BELLARY
BELLARY KARNATAKA
Phone: 9448286155
FAX :

Manager
Name : Nishant Kumar Sharma
Qualification : B E (Mining)
Appointment/ :
Termination date

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 Exploration Proposals for the year 2018-19	Nil	-
1b	Exploration over lease area for geological axis 1 or 2	10 Nos. of Boreholes amounting to 500m proposed for the year 2019-20	46 No of Boreholes with cumulative meterage of 2252 m done during the year 2019-20.	-
1c	Exploration Agencies and Expenditure in lakh rupees during the year	Not Proposed	The drilling was done by M/s JSW Limited and total expenditure incurred is 1.28 crores.	Total 46 nos. of boreholes were drilled which include 40 nos. of RC boreholes with total meterage of 2077 m and 6 nos. of core boreholes with total meterage of 175 m
1d	Balance area to be explored to bring Geological axis in 1 or 2	G-3 area not mentioned specifically. Total 32 nos. of boreholes proposed for the plan period(2018-19 to 2022-23) for converting G-3 area to G-1 out of which 10 boreholes proposed for the period 2019-20.	46 nos of boreholes drilled for the period 2019-20. 0.84 Ha balance area left for being explored to G-1/G-2 category.	-
1e	Balance reserve as on 01/04/20	21732986 tonnes of Reserves as per the approved document.	19404409 tonnes of Reserves as on 1.04.2020	The production figures for 2018-19 & 2019-20 have been depleted for calculating the balance reserve as on 1.04.2020.

1f	General remarks of inspecting officers on geology, exploration etc			The details of the 46 boreholes drilled were found, not maintained in Form-'J' during the site inspection. The violation have been pointed out.
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Development :

Sl.No.	Item	Propasals	Actual work	Remarks
2a	Location of development w.r.t.lease area	Development was proposed in Sec 2-2',3-3', 4-4' and 5-5'	Actual development was done in Sec 2-2', 3-3', 4-4' and 5-5'	-
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	Seperate benches proposed in overburden and mineral	Seperate benches maintained in overburden and mineral.	-
2c	Stripping ratio or ore to OB ratio	1: 0.88(in tons)	1:1.03 (in tons)	For the year 2019-20, Total actual ROM production is 1164618.63 tons and overburden 1206161 tons for the year 2019-20.
2d	Quantity of topsoil generation in m3	No Proposal	Nil	-
2e	Quantity of overburden generation in m3	512336 m3	603080 m3	Development for the year 2019-20 done as per the proposal.
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc			Development of the mine done as per the proposal for the year 2019-20.

Exploitation:

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

3b	Quantity of ROM mineral production proposed	1165000	1164618.63	—
3c	Recovery of sailable/usable mineral from ROM production	100 %	100 %	—
3d	Quantity of mineral reject generation	Nil	Nil	—
3e	Grade of mineral rejects generation and threshold value declared.	Nil	Nil	—
3f	Quantity of sub grade mineral generation.	Nil	Nil	—
3g	Grade of sub grade mineral generation	Nil	Nil	—
3h	Manual / Mechanised method adopted for segregating from ROM	Mechanised method(Mobile crushing and screening)	Mechanised method(Mobile crushing and screening)	—
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	Yes	Yes	Drilling to be carried out with DTH drills, Slurry/Emulsion cartridge explosive to be used for blasting.

3k	Provision of mining machineries in mineral benches	Yes. i)Drill(102-155 mm dia)- 2 nos. ii)Excavator-(1.4-1.6 m3)- 10 nos. Tippers(16-18 m3)- 30 nos., Front end loader-2 nos, Pay loader-3 nos. Excavator cum Rock breaker- 1 no, Water tanker(10,000 Ltrs)- 8 nos.	i)Drill(102 mm dia)-1 no. ii) Excavator-(1.6 m3)-7, Excavator(0.6 m3)-2, Tippers(14 tonnes)-22 nos, Wheel Loader- 4 nos, Water tankers(10,000 Ltrs)- 4 nos.	-
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	Height of bench-8m, Width-8 m,Bench slope- 80 degrees	Maintained as per proposal.	-
3m	Total area covered under excavation/pits	67.28 ha at the end of plan period	69.4 ha as per Annual Return 2019-20.	The land use figure in Part-I of AR 2019-20 is not furnished correctly. The violation is pointed out.
3n	Ore to OB ratio for the pit/mine during the year.	1:0.88(in tons)	1:1.03(in tons)	-
3o	Total area put in use under different heads at the end of year	The land use at the end of plan period is i) Mining- 67.28 ha, Waste dump- 23.77 ha,Roads & infrastructure -1.2 ha, Mineral storage-2.00 ha.	Mining-69.4 ha, Waste dump-13.4 ha, Roads & infrastructure- 1.2 ha as per the figures of AR 2019-20.	The area under Mining , Waste dump etc. is not given correctly in AR.2019-20. Violation pointed out.
3p	Production of ROM mineral during the last five year period as applicable	2018-19- 1165000 tonnes 2019-20- 1165000 tonnes	2018-19- 1163959 tonnes 2019-20- 1164618.63 tonnes.	The mining operations started in FY 2018-19.

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

Mining production carried out as per the proposal.

Solid Waste Management - Dumping:

Sl.No.	Item	Propasals	Actual work	Remarks
4a	Separate dumping of topsoil, OB and mineral rejects (Rule 32,33)	Seperate dumping proposed for OB dumping	Dumping of waste done as per the proposal.	—
4b	Location of topsoil, OB and mineral reject dumps	ID-1(Sec S-1 to S-11), ID-2(S-11 to S-14), Proposed Backfilling area-Sec D3-3' & D4-4' from 962 mRL to 945 mRL.	ID-1(Sec S-1 to S-11), ID-2(S-11 to S-14), Proposed Backfilling area-Sec D3-3' & D4-4' from 962 mRL to 945 mRL.	—
4c	Number of dumps within lease area and outside of lease area	3 waste dumps are observed in the ML area. The current waste dumping is proposed in the backfilling area.	3 waste dumps observed in the ML area. The current waste dumping done at the proposed backfilling area.	—
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	Outside UPL.	Outside UPL.	—
4e	Number of active and alive dumps.	One.	One.	The proposed backfilling area (D 1-1' - D4-4')
4f	Number of dead dumps.	Two within the ML area	As per proposal	Waste dump no ID-1 & ID-2.
4g	Number of dumps established.	Nil	Nil	—
4h	Whether Retaining wall or garland drain all along dumps are there.	Toe wall 266 m and garland drain 272 m proposed for the plan period at the proposed backfilling area.	Since the waste dumping in the backfilling area is currently in progress, the toe wall and garland drain has not been constructed.	It will be constructed within the plan period when the waste dumping at proposed back filling area is completed.

4i	Length of Retaining wall or garland drain all along dumps	Toe wall 266 m and garland drain 272 m proposed for the plan period at the proposed backfilling area.	Since the waste dumping in the backfilling area is currently in progress, the toe wall and garland drain has not been constructed.	It will be constructed within the plan period when the waste dumping at proposed back filling area is completed.
4j	Number of settling ponds	SST-1 at N-1 location, ST-1 at N-3 location, ST-2 at N-4 location, ST-3 at N-5 location, SST-2 at N-7 location, SST-3 at N-8 location & SST-4 at N-11 location.	SST-1 at N-1 location, ST-1 at N-3 location, ST-2 at N-4 location, ST-3 at N-5 location, SST-2 at N-7 location.	—
4k	Specific comments of inspecting officer on waste dump management			No specific comments.

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	4.67 ha area for backfilling till 2019-20	As per the proposal	—
5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	No proposal	Nil	—
5d	Total area fully reclaimed and rehabilitated	No proposal	Nil	—

5e	General remarks of inspecting officers on backfilling and reclamation etc.	Waste dumping carried out in the proposed backfilling area.
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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).	Annual PMCP report to be submitted for the year 2019-20 by 1st July 2020.	Annula PMCP report for the year 2019-20 not submitted	Violation pointed out.
6b	Area available for rehabilitation (ha) .	No proposal	Nil	—
6c	afforestation done (ha).	Total 18000 nos. saplings to be planted in 0.72 ha Green belt development area and in 4.24 ha, area under encroachment .	Total 18000 nos. saplings to be planted in 0.72 ha Green belt development area and in 4.24 ha, area under encroachment against which only 679 nos. of total saplings are planted for the year 2019-20	Violation pointed out.
6d	No. of saplings planted during the year	Total 18000 nos. saplings to be planted in 0.72 ha Green belt development area and in 4.24 ha, area under encroachment.	Total 18000 nos. saplings to be planted in 0.72 ha Green belt development area and in 4.24 ha, area under encroachment against which only 679 nos. of total saplings are planted for the year 2019-20.	Violation pointed out.
6e	Cumulative no .of plants	Not mentioned.	679 nos. of total saplings are planted for the year 2019-20	—
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	259(m)*240(m)* 30(m)	As per the proposal.	—
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	4.67 ha	As per the proposal	—
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	—
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)	Proposed	Environmental monitoring carried out.	—
6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.			No specific remarks in PMCP.

Mineral Conservation:

Sl.No.	Item	Propasals	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	Sorting and sizing will be carried out.	Sorting and sizing carried out .	—
7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	Mechanical. Sorting and sizing to be carried out by Mobile crushing and screening.	Mechanical. By mobile crushing and screening	—
7c	Different grade of mineral sorted out at mines.	+45 % Fe, Cal. Ore(10-40mm) and Fines (-10 mm)	+45 % Fe, Cal. Ore(10-40mm) and Fines (-10 mm)	—
7d	Any beneficiation process at mines .	No proposal	Nil	—
7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues			No specific Remarks on Mineral Conservation.

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)	Waste generated to be filled in the earmarked proposed backfilling area.	Carried out as per the proposal.	—
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	Waste generated to be filled in the earmarked proposed backfilling area.	Carried out as per the proposal.	—
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	Waste generated to be filled in the earmarked proposed backfilling area.	Carried out as per the proposal	—
8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	18000 nos. saplings to be planted in 0.72 ha Green belt development area and in 4.24 ha, area under encroachment for the year 2019-20.	679 nos. of total saplings planted for the year 2019-20.(161 nos. of saplings within the lease area and 518 nos. of saplings outside the lease area)	Violation pointed out.
8g	Survival rate	Not mentioned	99 %.	—
8h	Water sprinkling on roads to control airborne dust	Water sprinkling proposed	Water sprinkling carried out as per the proposal.	—
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area			The aesthetic beauty in and around the mines are looks pleasant and good.

Compliance of Rule 45:

Sl.No.	Item	Proposals	Actual work	Remarks
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9a	Status of submission of Monthly and Annual returns	Annual return for 2019-20 submitted.	Annual return for 2019-20 submitted.	—
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Mining Engineer, Geologist and Manager information given in the AR 2019-20.	The Mining Engineer-Mr. Venu Gopal G. does not possess minimum 5 years of professional experience of working in a supervisory capacity in the field of mining.	Violation pointed out.
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Area covered under O/c working-69.4 ha, used for waste disposal-13.4 ha, occupied by plant, buildings, residential, welfare buildings & roads-1.2 ha and Other purpose-16.540 ha.	The area covered under current O/C working (12(ii)) is given as 69.4 ha, area used for waste disposal (12(iv)) as 13.4 ha and area under other purpose (12(vi)) as 16.54 ha in AR 2019-20 is not reported correctly as per the last approved document.	Violation pointed out.
9d	Scrutiny of Annual return on afforestation	Provided, 161 saplings planted within lease area and 518 outside lease area with 99 % survival rate	Appears to be correct.	—
9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	Nil quantity of Mineral Reject generated	Appears to be correct.	—
9f	Scrutiny of Annual return on ROM stock and/or graded ore	Opening stock of ROM-634920.910 tonnes, ROM production-1164618.630 tonnes, Closing stock-0.010 tonnes	Appears to be correct.	—

9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	Cost of Production is mentioned as Rs. 238.21 & Ex mine price as Rs. 228.83	Royalty, DMF & NMET are not included in Cost of production. Since it is a Captive mine, the Ex-mine price per tonne is the per unit cost of production. Accordingly the Ex-mine price calculated is also not correct.	Violation pointed out.
9h	Scrutiny of Annual return on fixed assets	Details given.	Details provided	—
9k	Scrutiny of Annual return on mining machineries	Mining Machineries detail given. Bach Hoe(1.6 m3)- 7 nos., Back Hoe(0.62 m3)- 2 nos, Dumper(14 tonnes)- 22 nos., Blast hole drill(102 mm)-1, Wheel Loader(2.6 m3)-4 nos., Dozer(200 HP)- 1 no, Motor grader(145 HP)- 1 no, Crusher(250 TPH)- 2 nos, Crusher-200 TPH(1 no), Water tanker(10,000 Litres)- 4 nos, Explosive van(7.493 tonne)	Appears to be correct.	—

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
MCDR17	Rule 11(1)	31/07/2020	06/10/2020				
MCDR17	Rule 26(2)	31/07/2020	06/10/2020				
MCDR17	Rule 45(5)(a)	31/07/2020	06/10/2020				
MCDR17	Rule 48	31/07/2020	06/10/2020				
MCDR17	Rule 55(1)(1)	31/07/2020	06/10/2020				
MCDR17	Rule 11(1)	03/08/2020	06/10/2020				
MCDR17	Rule 26(2)	03/08/2020	06/10/2020				
MCDR17	Rule 45(5)(c)	03/08/2020	06/10/2020				
MCDR17	Rule 48	03/08/2020	06/10/2020				
MCDR17	Rule 55(1)(1)	03/08/2020	06/10/2020				

Date :

(SANDEEP KUMAR SINGH)

Indian Bureau of Mines