

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

MCDR INSPECTION REPORT

Bhubaneshwar regional office

Mine file No : ORI/IRON/SNG/MCDR-7/BBS

Mine code : 30ORI13028

- (i) Name of the Inspecting : **RAM**) **RAMKISHAN R**
Officer and ID No.
- (ii) Designation : Sr. Asst. Contrl. Mines
- (iii) Accompanying mine : Shri B.D.Sahoo, Mine Manager, Shri R.K.Chaturvedi, Ge
Official with
Designation
- (iv) Date of Inspection : 21/08/2019
- (v) Prev.inspection date : 05/10/2018

PART-I : GENERAL INFORMATION

1. (a) **Mine Name** : **TANTRA, RAIKELA & BANDHAL**
- (b) **Registration NO.** : **IBM/4355/2011**
- (c) **Category** : **A Mechanised**
- (d) **Type of Working** : **Opencast**
- (e) **Postal address**
- State : **ORISSA**
- District : **SUNDARGARH**
- Village : **TANTRA**
- Taluka : **BONAI**
- Post office : **TENSA**
- Pin Code : **770042**
- FAX No. : **95-6625-236023**
- E-mail : **trbmine@jindalsteel.net**
- Phone : **95-6625-236023,236024**
- (f) **Police Station** : **Lahunipara**
- (g) **First opening date** : **17/02/1990**
- (h) **Weekly day of rest** : **SUN**
2. **Address for** : **T.R.B IRON MINES**
correspondance : **PO-TENSA**
: **DIST-SUNDERGARH**
3. (a) **Lease Number** : **ORI0652**
- (b) **Lease area** : ~~297.85~~ **207.113 ha**
- (c) **Period of lease** : **50**
- (d) **Date of Expiry** : **24/05/2035**
4. **Mineral worked** : **IRON ORE** Main

5. Name and Address of the

Lessee : m/s Jindal Steel and Power Ltd
 TRB Iron Ore Mines At
 P.O.Tensa SUNDARGARH
 ORISSA
 Phone:06625 - 82023, 82024
 FAX :

Owner : Jindal steel & power ltd
 Barbil KEONJHAR ORISSA
 Phone: 06767 30158
 FAX :

Agent : SHRI P K PATRA
 SUNDARGARH ORISSA
 Phone:
 FAX :

Mining Engineer

Name : B D SAHOO, Full Time
 Qualification : BE-MINING AND FCC
 Appointment/ : 17/09/2014
 Termination date

Geologist

Name : R K CHATURVEDI, Full Time
 Qualification : M TECH IN APPLIED GEOLOGY
 Appointment/ : 17/09/2014
 Termination date

Manager

Name : PANCHANAN SINGH
 Qualification : BE-MINING AND FCC
 Appointment/ : 26/12/2016
 Termination date

6. Date of approval of Mining Plan/Scheme of Mining	:	Mining Scheme rule 12 MCDR1988	25/08/2000
		Renewal under rule 22 MCR1960	09/10/2003
		Modif.of approved Mining Plan	19/12/2007
		Mining Scheme rule 12 MCDR1988	22/03/2010
		FMCP under 23C(1)	29/07/2010
		Modif.approved Mining Scheme	11/08/2010
		Modif.approved Mining Scheme	23/04/2012
		Mining Scheme rule 12 MCDR1988	27/03/2015
		MP modif under MCR 1960	27/03/2015
		MP review under 17(1) MCR 2016	18/10/2017
		MP modif under 17(3) MCR 2016	05/12/2018

PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	No such specific proposal for backlog	NA	Nil
1b	Exploration over lease area for geological axis 1 or 2	15 nos of boreholes were proposed as a part of exploration over lease area for G1/G2 level during the year 2018-19.	15 nos of boreholes were carried out.	Nil
1c	Exploration Agencies and Expenditure in lakh rupees during the year	No such specific proposal.	Exploration Agency: Mapp Drilling & Exploration Pvt. Ltd, and Expenditure incurred was Rs.36.75 lakhs as reported by lessee.	Nil
1d	Balance area to be explored to bring Geological axis in 1 or 2	As per the approved document on 05.12.2018 the potential mineralied area of 107.82 ha has ben explored under G1 level.	15 nos of boreholes were drilled in G1 area for lateral and depth wise extension of mineral deposit.	Nil
1e	Balance reserve as on 01/04/20	As per the approved documnet on 05.12.2018 the iron ore reserves under catoegory 111: 11.013 mil.t., 121: 1.411 mil.t. and resources under category 211: 6.67 mil.t, 221: 0.282 mil.t.	due to addition and depletion over the period the iron ore reserves as on 01.04.2019 under catoegory 111: 10.24 mil.t., 121: 0.73 mil.t. and resources under category 211: 6.67 mil.t, 221: 0.282 mil.t.	

1f General remarks of inspecting officers on geology, exploration etc 15 nos of boreholes were carried out during the year 2018-19 as a part of exploration.

Development :

Sl.No.	Item	Proposals	Actual work	Remarks
2a	Location of development w.r.t.lease area	three quarries were proposed for developemnt called as patch-1, Patch-2&float, patch-3A during the year 2018-19.	three quarries were developed called as patch-1, Patch-2&float, patch-3A during the year 2018-19.	the joint mining in patch-1 could not be carried out due to want of statutory clearances.
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	seperate benches in OB and mineral are proposed. seperate benches in top soil not proposed, however if top soil encountered it will be removed and utilised.	seperate benches in OB and mineral are mainatined.	Nil
2c	Stripping ratio or ore to OB ratio	1:1.279 t/cu.m.	1:1.16 t/cu.m.	due to pending of obtaining of statutoy clearnces, the production and development have not been carried out as per the proposal.
2d	Quantity of topsoil generation in m3	No top soil generation is envisaged during the uear 2018-19.	294 cu.m. top soil generated and utilised.	Nil

2e	Quantity of overburden generation in m3	3967356 cu.m. during the year 2018-19.	3211883 cu.m.	due to less production and development due to want of statutory clearnces.
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc		development is carried out in the proposed quarries. joint mining in patch-1 area could not be done due to want of statutory clearnces.	Nil

Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	3 nos called as patch-1, patch-2 and patch-3A are proposed for production during the year 2018-19.	production is carried out from 3 quarries.	joint mining in patch-1 quarry could not be carried out due to want of statutory clearnces.
3b	Quantity of ROM mineral production proposed	3.1 mil.t during the year 2018-19.	2.76 mil.t.	due to want of statutory clearnces the joint mining could not be carried out and also due to market demand.
3c	Recovery of sailable/usable mineral from ROM production	2451851 t of saleable ore and mineral rejects of 648486 t	2610623 t of saleable ore and mineral rejects of 154746 t	some quantity of mineral rejects generated blended with ROM to make it saleable ore.
3d	Quantity of mineral reject generation	648486 t	154746 t	some quantity of mineral rejects generated blended with ROM to make it saleable ore.
3e	Grade of mineral rejects generation and threshold value declared.	+45-58% Fe	+45-58% Fe	Nil

3f	Quantity of sub grade mineral generation.	Not applicable	Nil	already addressed in mineral rejects.
3g	Grade of sub grade mineral generation	Not applicable	Nil	Nil
3h	Manual / Mechanised method adopted for segregating from ROM	Mechanised	Mechanised.	Nil
3i	Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects.	Not applicable.	Nil	Nil
3j	Provision of drilling and blasting in mineral benches	deep hole drilling and blasting is proposed. blasting is proposed to be done by using electric delay detonator or NONEL system of initiation is in use to reduce vibration and fly rock	deep hole drilling and blasting is carried out as per proposal.	Nil
3k	Provision of mining machineries in mineral benches	shovel and dumper combination is proposed for excavation and hauling of material.	shovel and dumper combination is deployed for excavation and hauling of material.	Nil
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	9 m bench height is proposed.	9 m bench height is maintained.	patch-2 quarry some benches are not maintained so violation observed and communicated dated 06.09.2019

3m	Total area covered under excavation/pits	108.038 ha at the ned of plan period i.e. year 2019-20.	107.82 ha till the end of year 2018-19.	Nil
3n	Ore to OB ratio for the pit/mine during the year.	1:1.279 t/cu.m.	1:1.16 t/cu.m.	
3o	Total area put in use under different heads at the end of year	(i) Covered under current (O/C) Workings 108.038 ha (ii) Used for waste disposal 29.233 ha (iii) Occupied by plant, buildings, residential, welfare buildings & roads 26.204 ha (vi) Other Purpose (Mineral Storage, Top Soil, Tailing Pond, Green Belt, Safety Zone) 43.856 ha till the end of plan period.	(i) Covered under current (O/C) Workings 107.82 ha (ii) Used for waste disposal 29.233 ha (iii) Occupied by plant, buildings, residential, welfare buildings & roads 26.204 ha (iv) Other Purpose (Mineral Storage, Top Soil, Tailing Pond, Green Belt, Safety Zone) 43.856 ha	
3p	Production of ROM mineral during the last five year period as applicable	2014-15: 3.1 mil.t. 2015-16: 3.1 mil.t. 2016-17: 3.1 mil.t. 2017-18: 3.1 mil.t. 2018-19: 3.1 mil.t.	2014-15: 2.5 mil.t. 2015-16: 2.92 mil.t. 2016-17: 2.72 mil.t. 2017-18: 2.57 mil.t. 2018-19: 2.76 mil.t.	due to market demand
3q	General remarks of inspecting officers on method of mining etc.		production is carried out from 3 nos of pits as proposed.	Nil

Solid Waste Management - Dumping:

Sl.No.	Item	Proposals	Actual work	Remarks
4a	Separate dumping of topsoil, OB and mineral rejects (Rule 32,33)	seperate dumping for Ob and mineral reject are proposed.	seperate dumping for Ob and mineral reject are maintained.	Nil
4b	Location of topsoil, OB and mineral reject dumps	OB dump: E/W- 490-1409, N/S- 550-1109. Mineral reject: E/W- 530-1385, N/S -550-1092.	Ob and mineral rejects dumps are maintained as per the proposed desginated areas only.	Nil
4c	Number of dumps within lease area and outside of lease area	one no. with in lease area. outside lease area: Nil	one no. with in lease area. outside lease area: Nil	Nil
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	beyond UPL	beyond UPL	Nil
4e	Number of active and alive dumps.	1 no.	1 no.	Nil
4f	Number of dead dumps.	Nil	Not applicable	Nil
4g	Number of dumps established.	Nil	Not applicable	Nil
4h	Whether Retaining wall or garland drain all along dumps are there.	proposed.	maintained.	Nil
4i	Length of Retaining wall or garland drain all along dumps	293 m length of retaining wall constcution proposed during the year 2018-19.	300 m length of reataining wall constrcuted around dumps during the year 2018-19.	Nil
4j	Number of settling ponds	Not applicable	Not applicable	Nil
4k	Specific comments of inspecting officer on waste dump management		waste and mineral rejects management are being caried out as proposed in the mining plan.	Nil

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.	full extraction of mineral from mined out area before backfilling is proposed.	full extraction of mineral is carried out from mined out area before backfilling.	Nil
5b	Area under backfilling of mined out area	5.77 ha during the year 2018-19.	5.77 ha	Nil
5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	Not applicable	294 cu.m. of top soil generated and concurrently used for rehablitation of mined out area.	Nil
5d	Total area fully reclaimed and rehabilitated	Not applicable	Not applicable	Nil
5e	General remarks of inspecting officers on backfilling and reclamation etc.		backfilling is carried out as per the mining plan proposal.	Nil

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 report on PMCP to be submitted before 1 st July.	Submitted.	Nil
6b	Area available for rehabilitation (ha) .	Not applicable	Nil	Nil
6c	afforestation done (ha).	1600 nos saplings proposed	1863 nos of saplings aone under afforestation	Nil
6d	No. of saplings planted during the year	1600 nos.	1863 nos.	Nil
6e	Cumulative no .of plants	40425 nos	240101 nos	Nil

6f	Any other method of rehabilitation	Not applicable	Nil	Nil
6g	Cost incurred on watch and care during the year	Rs 2.2 lakhs	Rs. 3.91 lakhs	Nil
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (Lx B x D	Not applicable	Nil	Nil
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	5.77 ha	5.77 ha	Nil
6j	Compliance on reclamation and rehabilitation by backfilling (iii)Afforestation on on backfilled area	1600 nos	1863 nos	Nil
6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	Not applicable	Nil	Nil
6l	Compliance on reclamation and rehabilitation by backfilling (v)any other specific means.	Not applicable	Nil	Nil
6m	Compliance of rehabilitation of waste land within lease (i)afforestation	Not applicable	Nil	Nil

6n	Compliance of rehabilitation of waste land within lease (ii)Area rehabilitation (ha)	Not applicable Nil	Nil
6o	Compliance of rehabilitation of waste land within lease (iii)Method of rehabilitation	Not applicable Nil	Nil
6p	Compliance of environmental monitoring (core zone and buffer zone)	environmental monitoring of core zone and bufer zone to be carried out.	monitoring of environmenatl parameters such as quality of Air, water Noise etc., are being carried out.
6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.		PMCP measures being carried out as per the proposal of mining plan.

Mineral Conservation:

Sl.No.	Item	Propasals	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	grade wise sorintg has been proposed.	grade wise sorting of mineral is being carried out.	Nil
7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	Mechanical	Mechanical	Nil

7c	Different grade of mineral sorted out at mines.	(a) Below 55% Fe (b) 55% to below 58% (c) 58% to below 60% (d) 60% to below 62% (e) 62% to below 65% (f) 65% and above	(a) Below 55% Fe (b) 55% to below 58% (c) 58% to below 60% (d) 60% to below 62% (e) 62% to below 65% (f) 65% and above	Nil
7d	Any beneficiation process at mines	No such specific proposal.	dry crushing and screening is carried out.	Nil
7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues		different grade wise sorting of mineral is carried out.	Nil

Environment:

Sl.No.	Item	Propasals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	No such specific proposal.	294 cu.m. of top soil sperately removed and utilised with in lease area.	Nil
8b	Concurrent use or storage of topsoil		concurent use of top soil is being carried out.	Nil
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	seperate dumps for OB, rejects are proposed.	maintained.	Nil
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	use of OB for backfilling of mined out land is propsoed.	carried out.	Nil

8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	backfilling of mined out area is proposed for backfilling by waste.	carried out.	Nil
8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	3200 nos proposed during the year 2018-19.	3211 nos carried out.	Nil
8g	Survival rate		72%	Nil
8h	Water sprinkling on roads to control airborne dust	moile water sprinkling on haul raods for dust supression is proposed.	carried out.	Nil
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area		aesthetic beauty in and around mines area are maintined.	Nil

Compliance of Rule 45:

Sl.No.	Item	Propasals	Actual work	Remarks
9a	Status of submission of Monthly and Annual returns	monthly and annual returns are to be submitted as per rule 45 of MCDR, 2017.	submitted.	Nil

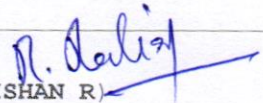
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	(i) Graduate Mining Engineer 6 nos (ii) Diploma Mining Engineer 4 nos (iii) Geologist 2 nos	found to be in order.	Nil
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	(i) Covered under current (O/C) Workings 107.82 ha (ii) Used for waste disposal 29.233 ha (iii) Occupied by plant, buildings, residential, welfare buildings & roads 26.204 ha (iv) Other Purpose (Mineral Storage, Top Soil, Tailing Pond, Green Belt, Safety Zone) 43.856 ha	found to be in order.	Nil
9d	Scrutiny of Annual return on afforestation	15115 nos.	15115 nos.	Nil
9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	154746 t	154746 t	Nil

9f	Scrutiny of Annual return on ROM stock and/or graded ore	ROM closing stock: 22650 t (b) 55% to below 58% 122.850 t (c) 58% to below 60% 25939.978 t (d) 60% to below 62% 22133.935 t (e) 62% to below 65% 2924.906 t (f) 65% and above 1660.230 t	found to be in order.	Nil
9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	production cost Rs. 955.68	Rs. 955.68	Nil
9h	Scrutiny of Annual return on fixed assets	Rs. 561439541	Rs. 561439541	Nil
9k	Scrutiny of Annual return on mining machineries	SHOVEL (HYDRAULIC) 3.500 CUM 3 nos BACK HOE 0.400 CUM 2 nos BACK HOE 0.900 CUM 6 nos BACK HOE 1.800 CUM 3 nos BACK HOE 2.100 CUM 4 nos BACK HOE 2.800 CUM 1 nos BACK HOE 3.100 CUM 1 nos BACK HOE 5.200 CUM 1 nos FRONT END LOADER 1.800 CUM 2 nos FRONT END LOADER 2.400 CUM 1 no.	found to be in order.	Nil

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)	06/09/2019				
Rule 45(7)	06/09/2019				

Date : 21/11/19


(RAMKISHAN R)

Indian Bureau of Mines