

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

MCDR INSPECTION REPORT

Bhubaneshwar regional office

Mine file No : ORI/IRON/KJR/MCDR-32/BBS

Mine code : 30ORI08027

- (i) Name of the Inspecting : **RAM**) **RAMKISHAN R**
Officer and ID No.
- (ii) Designation : Sr. Asst. Contrl. Mines
- (iii) Accompanying mine : Shri D. Vijendra, Mines Manager
Official with
Designation
- (iv) Date of Inspection : 20/10/2019
- (v) Prev.inspection date : 13/07/2019

PART-I : GENERAL INFORMATION

1. (a) **Mine Name** : **JODA EAST**
- (b) **Registration NO.** : **IBM/4376/2011**
- (c) Category : A Mechanised
- (d) Type of Working : Opencast
- (e) Postal address
- State : ORISSA
- District : KEONJHAR
- Village : JODA
- Taluka : BARBIL
- Post office : JODA
- Pin Code : 758034
- FAX No. : 06767272010
- E-mail : gm.office@tatasteel.com
- Phone : 9234301340
- (f) Police Station : JODA
- (g) First opening date : 01/04/1956
- (h) Weekly day of rest : SUN
2. Address for : JODA EAST IRON MINES
correspondance VILL/PO-JODA
DIST-KEONJHAR PIN- 758034
3. (a) Lease Number : ORI0106
- (b) Lease area : 671.09
- (c) Period of lease :
- (d) Date of Expiry : 31/03/2030
4. Mineral worked : IRON ORE Main
MAGNESITE Associated
KAOLIN Associated

5. Name and Address of the

Lessee : TATA STEEL LTD.
 KEONJHAR ORISSA
 Phone:
 FAX :

Owner : Tata Steel Limited
 Bombay House, 24, Homi Modi
 Street Fort Mumbai MUMBAI
 (SUBURBAN) MAHARASHTRA
 Phone: 06572424602
 FAX : 06572431818

Agent : Rajesh Kumar
 At- Joda Post-Joda Dist
 Keonjhar KEONJHAR ORISSA
 Phone: 9234612797
 FAX :

Geologist
 Name : SANJAY KUMAR BHUYAN, Full Time
 Qualification : Msc Tech Geology
 Appointment/ : 01/07/2015
 Termination date

Manager
 Name : D. Vijayendra
 Qualification : B.Tech (mining)
 Appointment/ : 02/04/2018
 Termination date

6. Date of approval of Mining	:	Renewal under rule 22 MCR1960	07/06/2004
Plan/Scheme of Mining	:	Modif.of approved Mining Plan	19/07/2007
	:	Mining Scheme rule 12 MCDR1988	02/07/2010
	:	Mining Scheme rule 12 MCDR1988	26/03/2015
	:	Modif.approved Mining Scheme	21/02/2018

PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	No such specific proposal.	62 nos of boreholes were proposed during the eyar 2018-19.	Nil
1b	Exploration over lease area for geological axis 1 or 2	62 nos of boreholes were proposed during the year 2018-19 for geological axis G1/G2.	67 nos of boreholes were drilled during the year.	Nil
1c	Exploration Agencies and Expenditure in lakh rupees during the year		Rs. 129.7 lakh	
1d	Balance area to be explored to bring Geological axis in 1 or 2	total of 106 nos of boreholes were proposed during the last approved minnig plan period i.e. from 2017-18 to 2019-20 to explored balance area under G1/G2 level.	67 nos of boreholes were drilled during the eyar 2018-19.	
1e	Balance reserve as on 01/04/20	In the modification of review of mining plan, dated 21/02/2018 the iron ore reserve estimated as 152.03 mil.t. and resources are 71.08 mil.t.	The reserves/resources for iron ore as on 01.04.2019 are reserves 147.52 mil.t. and resources are 71.08 mil.t.	

1f General remarks of inspecting officers on geology, exploration etc exploration has been carried out as proposed.

Development :

Sl.No.	Item	Propasals	Actual work	Remarks
2a	Location of development w.r.t.lease area	by opencast mining method with two quarries called as North quarry and south quarry.	development is carried out by opencast mining method of two quarries.	Nil
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	Separate benches in OB and mineral are propsoed. no top soil generation is envisaged.	Separate benches in OB and mineral are maintained	
2c	Stripping ratio or ore to OB ratio	1:0.063 t/cu.m. during the year 2018-19.	1:0.063 t/cu.m.	
2d	Quantity of topsoil generation in m3	Not applicable	Nil	
2e	Quantity of overburden generation in m3	0.76 mil.cum.	0.74 mil.cu.m.	Nil
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc		mine development is carried out by opencast mining method two quarries as proposed.	

Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
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3a	Number of pit proposed for production	two nos.	two nos.	
3b	Quantity of ROM mineral production proposed	12 mil.t. during the year 2018-19.	11.72 mil.t.	
3c	Recovery of sailable/usable mineral from ROM production	11.12 mil.t. of saleable ore and 0.88 mil.t. mineral rejects	10.96 mil.t. of saleable ore and 0.76 mil.t. mineral rejects	
3d	Quantity of mineral reject generation	0.88 mil.t.	0.76 mil.t.	
3e	Grade of mineral rejects generation and threshold value declared.	+45%-58% Fe	+45%-58% Fe	
3f	Quantity of sub grade mineral generation.	Addressed in mineral rejects.	Nil	
3g	Grade of sub grade mineral generation	Not applicable	Nil	
3h	Manual / Mechanised method adopted for segregating from ROM	Mechanised.	Mechanised.	
3i	Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects.	Not applicable	Nil	
3j	Provision of drilling and blasting in mineral benches	drilling and blsting is proposed.	drilling and blasting is carried out.	
3k	Provision of mining machineries in mineral benches	shovel and dumper combination is proposed for excvation.	shovel and dumper combination is deployed as proppoed.	Nil

3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	bench height proposed is 9m.	maintained and found to be suitable.	
3m	Total area covered under excavation/pits	388.65 ha.	384.755 ha.	Nil
3n	Ore to OB ratio for the pit/mine during the year.	1:0.063 t/cu.m.	1:0.063 t/cu.m.	
3o	Total area put in use under different heads at the end of year	Total area proposed under different heads for the year 2018-19 are Pit-388.655 ha, waste dump-25.792 ha, Infrastructure -27.352, roads, conveyor-21.656 ha & Mineral storage-57.481ha, tailing pond -42.996 ha	Total area covered under different heads for the year 2018-19 are Pit-384.755 ha, waste dump-25.792 ha, Infrastructure-7.352,roads, conveyor-21.656 ha & Mineral storage- 57.481ha, tailing pond - 42.996 ha.	Nil
3p	Production of ROM mineral during the last five year period as applicable	2014-15: 12 million tonnes 2015-16: 14.14 million tonnes 2016-17: 14.62 million tonnes 2017-18: 12 million tonnes 2018-19: 12 million tonnes	2014-15: 8.17 million tonnes 2015-16: 9.97 million tonnes 2016-17: 11.17 million tonnes 2017-18: 11.24 million tonnes 2018-19: 11.72 million tonnes	Nil
3q	General remarks of inspecting officers on method of mining etc.		production is carried out by opencast mining method with two quarries.	

Sl.No.	Item	Propasals	Actual work	Remarks
4a	Separate dumping of topsoil, OB and mineral rejects (Rule 32,33)	Separate dumping for overburden and mineral reject/subgrade envisaged.	Separate dumping for overburden and mineral reject/sub-grade are being done.	Nil
4b	Location of topsoil, OB and mineral reject dumps	waste dump-1 and mineral rejects dump-1A are proposed during the year 2018-19.	waste dump-6 and mineral rejects dump-2A	violation has been pointed out in the previous inspection.
4c	Number of dumps within lease area and outside of lease area	5 nos. within lease area.	5 nos with in lease area.	
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	outside UPL	outside UPL	
4e	Number of active and alive dumps.	2 nos.	2 nos.	
4f	Number of dead dumps.	Not applicable	Nil	
4g	Number of dumps established.	Not applicable	Nil	
4h	Whether Retaining wall or garland drain all along dumps are there.	provided, no fresh proposal	provided.	
4i	Length of Retaining wall or garland drain all along dumps	provided. 1873 m	1873 m.	
4j	Number of settling ponds	Not applicable	Nil	
4k	Specific comments of inspecting officer on waste dump management		Overburden/waste generated during mining operations are not being done as per proposal. violation has been observed in the previous inspection.	

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 area is matured for backfilling/reclamation as the mineral has not been exhausted.	Not applicable	Nil
5b	Area under backfilling of mined out area	Not applicable	Nil	
5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	Not applicable	Nil	
5d	Total area fully reclaimed and rehabilitated	Not applicable	Nil	
5e	General remarks of inspecting officers on backfilling and reclamation etc.		No area is matured for backfilling/reclamation as the mineral has not been exhausted.	

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).	Yearly has to be submitted.	submitted.	
6b	Area available for rehabilitation (ha) .	Not applicable	Nil	
6c	afforestation done (ha).	3 ha. during the year 2018-19.	3.5 ha	
6d	No. of saplings planted during the year	5000 nos	12050 nos	
6e	Cumulative no .of plants	Not applicable	Nil	

6f	Any other method of rehabilitation	Not applicable	Nil
6g	Cost incurred on watch and care during the year	Rs 21 lakhs	Rs 33.12 lakhs
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (L x B x D	Not applicable	Nil
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	Not applicable	Nil
6j	Compliance on reclamation and rehabilitation by backfilling (iii) Afforestation on backfilled area	Not applicable	Nil
6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	Not applicable	Nil
6l	Compliance on reclamation and rehabilitation by backfilling (v) any other specific means.	Not applicable	Nil
6m	Compliance of rehabilitation of waste land within lease (i) afforestation	Not applicable	Nil

6n	Compliance of rehabilitation of waste land within lease (ii)Area rehabilitation (ha)	Not applicable Nil		
6o	Compliance of rehabilitation of waste land within lease (iii)Method of rehabilitation	Not applicable Nil		
6p	Compliance of environmental monitoring (core zone and buffer zone)	periodical monitoring of environmenatl parameteres are proposed.	carried out.	
6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.		PMCP measures were implemenetd as proposed.	Nil

Mineral Conservation:

Sl.No.	Item	Propasals	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	Grade-wise sorting & sizing envisaged.	carried out.	
7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	Mechanical	Mechanical	
7c	Different grade of mineral sorted out at mines.	+45%-58% Fe and +58% Fe	+45%-58% Fe and +58% Fe	
7d	Any beneficiation process at mines	wet beneficiation is propsoed.	wet beneficiation is carried out.	

7e General remarks of inspecting officer on Mineral conservation and beneficiation issues wet beneficiation is carried out as propsoed.

Environment:

Sl.No.	Item	Propasals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	Not applicable	Nil	
8b	Concurrent use or storage of topsoil	Not applicable	Nil	
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	Provisions for separate dumping of overburden and mineral reject/subgrad e envisaged.	carried out.	
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	Not applicable	Nil	
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	dump plantation is propsoed.	carried out.	

8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	5000 nos during the year 2018-19.	12050 nos
8g	Survival rate		80.2%
8h	Water sprinkling on roads to control airborne dust	water sprinkling for dust suppression is proposed.	carried out.
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area		Aesthetic beauty in and around the mine is maintained.

Compliance of Rule 45:

Sl.No.	Item	Propasals	Actual work	Remarks
9a	Status of submission of Monthly and Annual returns	Monthly and yearly returns are to be submitted.	submitted.	Nil
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Graduate Mining Engineer 11, Diploma Mining Engineer 1, Geologist 4	found to be in order.	

9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Covered under current (O/C) Workings 384.755 ha, Used for waste disposal 28.092 ha, Occupied by plant, buildings, residential, welfare buildings & roads 70.319 ha, Other Purpose ((Storing of minerals, top soil, tailing pond, tools and machineries, Ma gazie & green belt)) 136.088 ha.	found to be in order.
9d	Scrutiny of Annual return on afforestation	12050 nos	12050 nos
9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	0.76 mil.t.	0.76 mil.t.
9f	Scrutiny of Annual return on ROM stock and/or graded ore	closing stock of lumps 65% and above 280493.247 t and fines 65% and above 359375.956 t.	closing stock of lumps 65% and above 280493.247 t and fines 65% and above 359375.956 t.
9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	production cost Rs. 1270.31	production cost Rs. 1270.31
9h	Scrutiny of Annual return on fixed assets	Rs. 6341642011	Rs. 6341642011

9k	Scrutiny of Annual return on mining machineries	DUMPER 50.000 TONNE 4, DUMPER 100.000 TONNE 9, DOZER 450.000 HP 2, DOZER 480.000 HP 1, SHOVEL (HYDRAULIC) 5.900 CUM 5, ROCK DRILL (NONELEC.) 6.000 MM 4, etc.,	found to be in order.	Nil
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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

Date :

(RAMKISHAN R)

Indian Bureau of Mines