

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

MCDR INSPECTION REPORT

Bhubaneshwar regional office

Mine file No : ORI/MN/KJR/MCDR-21/BBS

Mine code : 40ORI08033

- (i) Name of the Inspecting : **RAM**) **RAMKISHAN R**
Officer and ID No.
- (ii) Designation : Sr. Asst. Contrl. Mines
- (iii) Accompanying mine : Shri Amit Dubey, Agent, Shri Niranjana Kumar, Mine Man
Official with
Designation
- (iv) Date of Inspection : 10/01/2018
- (v) Prev.inspection date : 04/11/2015

PART-I : GENERAL INFORMATION

1. (a) **Mine Name** : **TIRINGPAHAR**
- (b) **Registration NO.** : **4376**
- (c) Category : A Manual
- (d) Type of Working : Opencast
- (e) Postal address
- State : ORISSA
- District : KEONJHAR
- Village : BAMEBARI
- Taluka : CHAMPUA
- Post office : BAMEBARI
- Pin Code :
- FAX No. : 06572431818
- E-mail : mdoffice@tatasteel.com
- Phone : 06767 279208
- (f) Police Station : Joda
- (g) First opening date : 08/02/1972
- (h) Weekly day of rest : SUN
2. Address for : VILL&PO: BAMEBARI
correspondance DIST: KEONJHAR,ORISSA
PIN:758030
3. (a) Lease Number : ORI0186
- (b) Lease area : 169
- (c) Period of lease :
- (d) Date of Expiry : 31/03/2030
4. Mineral worked : MANGANESE ORE Main

5. Name and Address of the

Lessee : TISCO
 Bombay House 24, Homy Mody
 Street Mumbai MUMBAI
 (SUBURBAN) MAHARASHTRA
 Phone:
 FAX :

Owner : TISCO
 24,HOMI MODY STREET FORT
 MUMBAI-1 GREATER BOMBAY
 MAHARASHTRA
 Phone:
 FAX :

Agent : AMIT KUMAR DUBEY
 KEONJHAR ORISSA
 Phone: 9238101140
 FAX :

Mining Engineer

Name : SHRI NIRANJAN KUMAR,Full Time
 Qualification : AMIE (MINING)
 Appointment/ : 21/11/2017
 Termination date

Geologist

Name : SHRI NAGA RAJU VENGALARAJU,Full Time
 Qualification : MSC (APPLIED GEOLOGY)
 Appointment/ : 15/09/2017
 Termination date

Geologist

Name : B.K.DAS,Full Time
 Qualification : M.Sc (GEO)
 Appointment/ : 05/08/2002
 Termination date

Manager

Name : PANKAJ KUMAR
 Qualification : DEGREE IN MINING AND FCC
 Appointment/ :
 Termination date

Manager

Name : SHRI NIRANJAN KUMAR
 Qualification : AMIE (MINING)
 Appointment/ : 21/11/2017
 Termination date

6. Date of approval of Mining	:	Modif.approved Mining Scheme	24/03/2005
Plan/Scheme of Mining	:	Mining Scheme rule 12 MCDR1988	28/04/2006
	:	Mining Scheme rule 12 MCDR1988	09/07/2010
	:	Mining Scheme rule 12 MCDR1988	13/04/2012
	:	Mining Scheme rule 12 MCDR1988	29/04/2015
	:	FMCP under 23C(1)	01/09/2016

PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	No such specific proposal, however 10 nos of boreholes were proposed for the year 2016-17.	20 nos of boreholes were drilled for the year 2016-17.	Nil
1b	Exploration over lease area for geological axis 1 or 2	No such specific proposal, however 10 nos of boreholes were proposed during the year 2016-17.	20 nos boreholes were drilled during the year 2016-17.	exploration work carried out more than proposal.
1c	Exploration Agencies and Expenditure in lakh rupees during the year	No such specific proposal.	Rs 41.37 lakh expenditure incurred for exploration which was done by In-house.	Nil
1d	Balance area to be explored to bring Geological axis in 1 or 2	No such specific proposal.	However 77 ha needs to be explored to brought under G1/G2 level.	Nil
1e	Balance reserve as on 01/04/20	As per the approved document on 29.04.2015, the manganese reserves are 0.766 mi.tonnes and resources are 2.855 mi.tonnes and Iron resources are 4.77 million tonnes.	due to addition and depletion over the period of time the manganese reserves as on 01.04.2017 are 0.697 mi.tonnes and resources are 2.855 mi.tonnes and iron resources are 4.77 million tonnes.	Nil
1f	General remarks of inspecting officers on geology, exploration etc	No comments to offer.	77 ha needs to be explored for which exploration proposal given during the scheme period till 2019.20.	Nil.

Development :

Sl.No.	Item	Propasals	Actual work	Remarks
2a	Location of development w.r.t.lease area	Guruda-A block and Guruda-B block are proposed to be developed during the year 2016-17.	development is carried out in Guruda-A block, but Guruda-B block not developed due to want of Forest Clearance.	Nil.
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	Seperate benches in top soil, ore and waste are proposed with 6 to 8 m height.	Seperate benches in top soil, ore and waste are maintained with 6 to 8 m height.	Nil
2c	Stripping ratio or ore to OB ratio	1:6.68 t.cu.m.	1: 3.5 t.cu.m.	variation is due to less development and irregular nature of ore deposit.
2d	Quantity of topsoil generation in m3	1890 cu.m. for the year 2016-17.	1197 cu.m.	Nil
2e	Quantity of overburden generation in m3	668110 cu.m. for the year 2016-17.	112814 cu.m.	variation is due to less development and irregular nature of ore deposit.
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc	No comments to offer	Guruda-B block not developed due to want of Forest clearance.	Nil

Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	2 nos. Guruda-A and Guruda-B blocks for the year 2016-17.	production carried out from one no of pit i.e. Guruda-A block.	production not carried out from Guruda-B block due to want of Forest clearance.

3b	Quantity of ROM mineral production proposed	0.1 mi.tonnes for the year 2016-17 of manganese ore	0.0328 mi.tonnes.	variation is due to no production from Guruda-B block and less demand.
3c	Recovery of sailable/usable mineral from ROM production	85%	85%	Nil
3d	Quantity of mineral reject generation	5000 tonnes for the year 2016-17.	1659.9 tonnes	Nil
3e	Grade of mineral rejects generation and threshold value declared.	+10-25% Mn	+10-25% Mn	Nil
3f	Quantity of sub grade mineral generation.	10000 tonnes for the year 2016-17.	3265.38 tonnes	Nil
3g	Grade of sub grade mineral generation	+10-25% Mn	+10-25% Mn	Nil
3h	Manual / Mechanised method adopted for segregating from ROM	Manual	Manual	Nil
3i	Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects.	study on mechanised processing of manganese ore and beneficiation of low grade manganese ore.	study carried out on mechanised processing of manganese ore. low grade manganese ore beneficiation carried out by reduction roasting and magnetic seperation.	Nil
3j	Provision of drilling and blasting in mineral benches	deep hole drilling and blsting is proposed with 100 mm dia drill holes and blasting by SME.	deep hole drilling and blsting is carried out with 100 mm dia drill holes and blasting by SME.	Nil
3k	Provision of mining machineries in mineral benches	back hoe: 3nos, dumpers: 15 nos and drill: 5 nos.	back hoe: 2nos, dumpers: 10 nos and drill: 1 nos.	Nil

3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	bench height proposed are 6 to 8 m.	bench height are 6 to 8 m	maintained	Nil
3m	Total area covered under excavation/pits	31.2303 ha at the end of plan period 2019-20.	22.153 ha till the year 2016-17.		Nil
3n	Ore to OB ratio for the pit/mine during the year.	1:6.68 t.cu.m. for the year 2016-17.	1: 3.5 t.cu.m.		Nil
3o	Total area put in use under different heads at the end of year	total area: 88.894 ha, excavation: 31.303 ha, waste disposal: 41.44 ha, infra: 3.453 ha, mineral storage: 12.698 ha. till the end of plan period 2019-20.	total area: 56.389 ha, excavation: 22.153 ha, waste disposal: 21.323ha, infra: 2.1 ha, mineral storage: 10.813 ha.		Nil
3p	Production of ROM mineral during the last five year period as applicable	2012-13: 0.1 mi.tonnes of manganese ore 2013-14: 0.1 mi.tonnes 2014-15: 0.1 mi.tonnes 2015-16: 0.1 mi.tonnes. 2016-17: 0.1 mi.tonnes.	2012-13: 0.084 mi.tonnes of manganese ore 2013-14: 0.099 mi.tonnes 2014-15: 0.021 mi.tonnes 2015-16: 0.035 mi.tonnes. 2016-17: 0.032 mi.tonnes.		variation is due to less demand.
3q	General remarks of inspecting officers on method of mining etc.	No comments to offer.	production from Guruda-B block not carried out due to want of forest clearnace.		Nil.

Solid Waste Management - Dumping:

Sl.No.	Item	Propasals	Actual work	Remarks
--------	------	-----------	-------------	---------

4a	Separate dumping of topsoil, OB and mineral rejects (Rule 32,33)	Seperate dumps for top soil, OB and mineral rejects are proposed.	seperate dumps for top soil, OB and mineral rejects are maintained.	Nil.
4b	Location of topsoil, OB and mineral reject dumps	Guruda-A block dump: 11826N-11879N, 11879E-12325E, Guruda-B block: 10340N-10822N, 11162E-11665E.	Guruda-A block dump: 11826N-11879N, 11879E-12325E, Guruda-B block: 10340N-10822N, 11162E-11665E.	Nil
4c	Number of dumps within lease area and outside of lease area	2 dumps with in lease area.	2 dumps with in lease area.	Nil
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	out side the UPL	out side the UPL.	Nil
4e	Number of active and alive dumps.	2 dumps	2 dumps.	Nil
4f	Number of dead dumps.	No proposal.	Nil	Nil
4g	Number of dumps established.	No proposal.	Nil	Nil
4h	Whether Retaining wall or garland drain all along dumps are there.	retaingwall and garland drain were proposed.	retaingwall and garland drain were maintained. Guruda-B block dump reataingwall and garland drain not provided.	Nil
4i	Length of Retaining wall or garland drain all along dumps	575 m for the year 2016-17.	315 m.	Nil
4j	Number of settling ponds	1 no proposed.	1 no maintained.	Nil
4k	Specific comments of inspecting officer on waste dump management	No comments to offer.	soild waste management is carried out as per the proposal except for Guruda-B block as forest clearnce was not obtained.	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.	mineral fully extracted before backfilling in the proposed area.	mineral fully extracted before backfilling in the proposed area.	Nil
5b	Area under backfilling of mined out area	3 Ha. for the year 2016-17.	2 Ha.	Nil
5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	top soil proposed to be used for dump plantation purpose.	top soil is being used for planation purposes on dumps.	Nil
5d	Total area fully reclaimed and rehabilitated	No proposal.	Nil	Nil
5e	General remarks of inspecting officers on backfilling and reclamation etc.	No comments to offer.	backfilling carried in the proposed area.	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).	submitted.	submitted in stipulated time period.	Nil
6b	Area available for rehabilitation (ha) .	5.457 ha for the year 2016-17.	3.6 ha.	violation observed letter no:ORI/MN/KJR/MCDR-21/BBS/VOL-II/2521 dated 12/01/2018.
6c	afforestation done (ha).	5.457 ha.	3.6 ha.	Nil
6d	No. of saplings planted during the year	13643 nos for the year 2016-17.	20820 nos	Nil

6e	Cumulative no .of plants	No such specific proposal.	122130 nos planation on dumps carried out till december 2017 cumulatively.	Nil
6f	Any other method of rehabilitation	No such proposal.	however vetiver is being used for dump stabilisation.	Nil
6g	Cost incurred on watch and care during the year	Rs 342375 during the year 2016-17.	Rs 425722 inccured.	Nil
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (Lx B x D	3 ha for the year 2016-17.	2 ha.	Nil
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	3 ha	2 ha.	Nil
6j	Compliance on reclamation and rehabilitation by backfilling (iii)Afforestati on on backfilled area	No proposal.	Nil	Nil
6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	No proposal.	Nil	Nil
6l	Compliance on reclamation and rehabilitation by backfilling (v)any other specific means.	No proposal.	Nil	Nil

6m	Compliance of rehabilitation of waste land within lease (i)afforestation	No proposal.	Nil	Nil
6n	Compliance of rehabilitation of waste land within lease (ii)Area rehabilitation (ha)	No proposal.	Nil	Nil
6o	Compliance of rehabilitation of waste land within lease (iii)Method of rehabilitation	No proposal.	Nil	Nil
6p	Compliance of environmental monitoring (core zone and buffer zone)	periodical monitoring of environment parameters.	carried out.	Nil
6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.	No comments to offer.	PMCP implemented more or less as per proposal.	Nil

Mineral Conservation:

Sl.No.	Item	Propasals	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	+25% Mn, +25-35% Mn, +35-46% Mn, +45% Mn	+25% Mn, +25-35% Mn, +35-46% Mn, +45% Mn	Nil
7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	Manual	Manual	Nil
7c	Different grade of mineral sorted out at mines.	+25% Mn, +25-35% Mn, +35-46% Mn, +45% Mn	+25% Mn, +25-35% Mn, +35-46% Mn, +45% Mn	Nil

7d	Any beneficiation process at mines .	Manual sorting and sizing.	Manual sorting and sizing.	Nil
7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues	No comments to offer.	manual sorting and sizing carried out.	Nil

Environment:

Sl.No.	Item	Propasals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	1890 cu.m. proposed for the year 2016-17.	1197 cu.m. generated and utilised.	Nil
8b	Concurrent use or storage of topsoil	carried out.	carried out.	Nil
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	seperate dumps for OB, subgrade and mineral rejects are proposed.	seperate dumps for OB, subgrade and mineral rejects are maintained.	Nil
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	for backfilling purposes proposed.	backfilling carried out.	Nil
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	3 ha proposed for backfilling.	2 ha backfilling carried out.	Nil

8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	No such proposal.	planation on dumps: 122130 cumulteive.	Nil
8g	Survival rate	No specific proposal.	78% as reported by lessee.	Nil.
8h	Water sprinkling on roads to control airborne dust	haul roads are water sprinkled by mobile water sprinklers for dust suppression besides to fixed water sprinklers.	haul roads are water sprinkled by mobile water sprinklers for dust suppression besides to fixed water sprinklers.	Nil.
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area	No commnets to offer.	aesthetic beauty and environment are maintained.	Nil

Compliance of Rule 45:

Sl.No.	Item	Propasals	Actual work	Remarks
9a	Status of submission of Monthly and Annual returns	submitted.	submitted within stipulated time period.	Nil
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Graduate Mining engineer: 1, Geologist:1	Graduate Mining engineer: 1, Geologist:1	Nil
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	O/c workings: 22.153 ha, waste disposal: 21.323 ha, mineral storage: 10.813 ha, infra: 2.1 ha	found to be in order.	Nil

9d	Scrutiny of Annual return on afforestation	20820 nos	found to be in order.	Nil
9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	4925 tonnes	found to be in order.	Nil
9f	Scrutiny of Annual return on ROM stock and/or graded ore	ROM production: 32835 tonnes stock: 0 tonnes.	found to be in order.	Nil
9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	production cost: Rs 4256.47	found to be in order.	Nil
9h	Scrutiny of Annual return on fixed assets	fixed assests: Rs 74538876	fixed assests: Rs 74538876	Nil
9k	Scrutiny of Annual return on mining machineries	back hoe: 2nos, dozer: 1 no, loader: 1no, drill: 1 no, dumper: 10 nos	found to be in order.	Nil

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)	12/01/2018	16/03/2018				

Date :**(RAMKISHAN R)**

Indian Bureau of Mines