

**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 : 10/02/2021
- (v) Prev.inspection date : 08/07/2020

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

MP modif under 17(3) MCR 2016	03/07/2018
MP review under 17(1) MCR 2016	31/07/2020

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 69 nos of boreholes were proposed during the year 2019-20.	
1b	Exploration over lease area for geological axis 1 or 2	69 nos of boreholes were proposed during the year 2019-20 to brought area under G1/G2.	69 nos of boreholes were drilled.	
1c	Exploration Agencies and Expenditure in lakh rupees during the year		Rs. 125.6 lakh	
1d	Balance area to be explored to bring Geological axis in 1 or 2	119 nos of boreholes were proposed during the scheme period from the year 2018-19 to 2019-20 to brought area under G1/G2.	69 nos of boreholes were drilled during the year 2019-20.	
1e	Balance reserve as on 01/04/20	As per the approved document on 31.07.2020, the manganese reserves are 1.703 mi.tonnes and resources are 4.071 mi.tonnes and Iron ore reserves are 1.87 mil.t. resources are 4.14 million tonnes.	Due to addition/depletion of reserves over the period the Manganese reserves as on 01.04.20120 are 1.703 mi.tonnes and resources are 4.071 mi.tonnes and Iron ore reserves are 1.87 mil.t. resources are 4.14 million tonnes.	

1f General remarks of inspecting officers on geology, exploration etc

Manganese Ore occurs as lenses and pockets in association with laterite, cherty and jaspery quartzites, shales and iron ores. Dip and strike of the ore patches are not much in evidence. 69 nos of boreholes were drilled during the year 2019-20 as a part of exploration.

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 2019-20.	development is carried out in Guruda-A block, but Guruda-B block not developed due to want of Forest Clearance.	
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	no generation of top soil is envisaged during the year 2019-20. Seperate becnhes in OB and manganese ore zone are envisaged.	Seperate becnhes in OB and manganese ore zone are made.	
2c	Stripping ratio or ore to OB ratio	1:4.27 t/cu.m.	1:2.94 t/cu.m.	due to less developement and irregular nature of ore deposit.
2d	Quantity of topsoil generation in m3	Nil	Nil	
2e	Quantity of overburden generation in m3	426931 cu.m.	249487 cu.m.	due to less developement and irregular nature of ore deposit.

2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc	development is carried out by opencast mining method.
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Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	2 nos	1 no.	production not carried out from Guruda-B block due to want of Forest clearance.
3b	Quantity of ROM mineral production proposed	100000 t during the year 2019-20.	84998 t	
3c	Recovery of sailable/usable mineral from ROM production	85000 t of saleable ore and 15000 t of mineral reject.	74923 t of saleable ore and 10075 t of mineral reject.	
3d	Quantity of mineral reject generation	15000 t	10075 t	
3e	Grade of mineral rejects generation and threshold value declared.	+10-25% Mn	+10-25% Mn	
3f	Quantity of sub grade mineral generation.	Not applicable	Nil	
3g	Grade of sub grade mineral generation	Not applicable	Nil	
3h	Manual / Mechanised method adopted for segregating from ROM	Manual	Manual	

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 is envisaged.	study carried out on mechanised processing of manganese ore. low grade manganese ore beneficiation carried out by reduction roasting and magnetic seperation.
3j	Provision of drilling and blasting in mineral benches	drilling and blasting is proposed.	carried out
3k	Provision of mining machineries in mineral benches	shovel and dumper combination is proposed for excavation and hauling.	carried out.
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.	maintained.
3m	Total area covered under excavation/pits	26.083 ha at the end of plan period 2019-20.	23.5663 ha
3n	Ore to OB ratio for the pit/mine during the year.	1:4.27 t/cu.m.	1:2.94 t/cu.m.
3o	Total area put in use under different heads at the end of year	Total area put to use at the end of plan period is 76.439 ha	64.692 ha
3p	Production of ROM mineral during the last five year period as applicable	2015-16: 0.1 mi.tonnes. 2016-17: 0.1 mi.tonnes. 2017-18: 0.1 mil.t. 2018-19: 0.1 mil.t. 2019-20: 0.1 Mil.t.	2015-16: 0.035 mi.tonnes. 2016-17: 0.032 mi.tonnes. 2017-18: 66877.225 t 2018-19: 84923.229 t 2019-20: 84998 t

3q General remarks of inspecting officers on method of mining etc. production is carried out by opencast mining method as proposed.

Solid Waste Management - Dumping:

Sl.No.	Item	Proposals	Actual work	Remarks
4a	Separate dumping of topsoil, OB and mineral rejects (Rule 32,33)	Separate dumps maintained for OB and mineral rejects are proposed.		
4b	Location of topsoil, OB and mineral reject dumps	Guruda-A waste dump and Guruda-B waste dump.		
4c	Number of dumps within lease area and outside of lease area	2 nos	1 no.	
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	Out side UPL	Out side UPL	
4e	Number of active and alive dumps.	2 nos.	1no.	
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.	Yes	provided.	
4i	Length of Retaining wall or garland drain all along dumps	795 m	587	208 m of retaining wall and garland drain was proposed in Guruda-B dump area of which forest clearance not obtained.
4j	Number of settling ponds	Not applicable	Nil	

4k Specific comments of inspecting officer on waste dump management waste dumping is being carried out as per proposal.

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.	Area not matured for reclamation and rehabilitation	Nil	
5b	Area under backfilling of mined out area	Not applicable	Nil	0.06 ha area has been backfilled which is of previous year backlog.
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.		Area not matured for reclamation and rehabilitation	

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).	PMCP report to submitted before 1 st July.		

6b	Area available for rehabilitation (ha) .	Not applicable Nil	
6c	afforestation done (ha).	1.49 ha during the year 2019-20.	2.831 ha
6d	No. of saplings planted during the year	3725 nos	6000 nos
6e	Cumulative no .of plants		162020 nos
6f	Any other method of rehabilitation	Not applicable Nil	
6g	Cost incurred on watch and care during the year		Rs 19.99 lakh
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (Lx B x D	Not applicable Nil	
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	Not applicable Nil	backfilling over an area of 0.06 ha of previous year backlog has been carried out.
6j	Compliance on reclamation and rehabilitation by backfilling (iii)Afforestation on 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 environmental monitoring of core zone and buffer zone are proposed.	carried out.
6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.		PMCP measures were carried out as propped.

Mineral Conservation:

Sl.No.	Item	Propasals	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	Grade wise sorting is proposed.	carried out	

7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	Manual	Manual
7c	Different grade of mineral sorted out at mines.	+10%-25% Mn and +25% Mn	+10%-25% Mn and +25% Mn
7d	Any beneficiation process at mines .	Not applicable	Nil
7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues		manual sorting of different grades of managanese ore is being carried out.

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)	Separate Dumps for Overburden, subgrade and Mineral rejects Proposed	Separate Dumps for Overburden, subgrade and Mineral rejects are maintained.	
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 proposed for stabilisation	carried out.
8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	3725 nos	6000 nos
8g	Survival rate		84%
8h	Water sprinkling on roads to control airborne dust	Haul roads are regularly sprinkled with the help of mobile water sprinklers.	Haul roads are regularly sprinkled with the help of mobile water sprinklers is being carried out.
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area		aesthetic beauty in and around the mines area is maintained.

Compliance of Rule 45:

Sl.No.	Item	Proposals	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.	
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Graduate Mining Engineer 2, Geologist 1	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: 23.563 ha, Used for waste disposal: 23.2 ha. etc.,	found to be in order.
9d	Scrutiny of Annual return on afforestation	6000 nos	6000 nos
9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	10075 t	10075 t
9f	Scrutiny of Annual return on ROM stock and/or graded ore	ROM closing stock is Nil	found to be in order.
9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	Production cost is Rs.3963.90	Production cost is Rs.3963.90
9h	Scrutiny of Annual return on fixed assets	Rs. 79832441	Rs. 79832441
9k	Scrutiny of Annual return on mining machineries	BACK HOE 1.900 CUM 2, DOZER 130.000 HP 1, FRONT END LOADER 2.100 CUM 1 etc.,	found to be in order.

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

Date :

(RAMKISHAN R)

Indian Bureau of Mines