

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

MCDR INSPECTION REPORT

Bhubaneswar regional office

Mine file No : ORI/MN/KJR/MCDR-8/BBS

Mine code : 40ORI08019

- (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 & R.L.Joshi Mine Manager
Official with
Designation
- (iv) Date of Inspection : 09/02/2021
- (v) Prev.inspection date : 07/07/2020

PART-I : GENERAL INFORMATION

1. (a) **Mine Name** : JODA WEST
- (b) **Registration NO.** :
- (c) **Category** : A ~~Manual~~ *Mechanised*
- (d) **Type of Working** : Opencast
- (e) **Postal address**
- State : ORISSA
- District : KEONJHAR
- Village : BICHAKUNDI
- Taluka : CHAMPUA
- Post office : BICHAKUNDI
- Pin Code :
- FAX No. : 916767-72010
- E-mail :
- Phone : 916767-72239
- (f) **Police Station** :
- (g) **First opening date** : 04/06/1935
- (h) **Weekly day of rest** : SUN
2. **Address for correspondance** : JODA WEST MN MINE, M/S TISCO LTD
P.O.BICHHAKUNDI
DIST-KEONJHAR, ORISSA-758034
3. (a) **Lease Number** : ORI0056
- (b) **Lease area** : 1437.72
- (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 : M/sTISCO
Mr. N.P.Sinha M/s TISCO
singhbhum SINGHBHUM (WEST)
JHARKHAND
Phone: 06767-72010
FAX :

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

Mining Engineer
Name : SHRI SOUMYA RANJAN MOHANTA, Full Time
Qualification : DEGREE, FCC
Appointment/ : 01/08/2018
Termination date

Geologist
Name : SHRI ANSUMAN DASGUPTA, Full Time
Qualification : MSC GEOLOGY
Appointment/ : 01/02/2016
Termination date

Manager
Name : SHRI S S MISHRA
Qualification : DIPLOMA, FCC
Appointment/ : 05/05/2017
Termination date

6. Date of approval of Mining Plan/Scheme of Mining : Renewal under rule 22 MCR1960 12/03/2002
Modif.of approved Mining Plan 24/03/2005
Mining Scheme rule 12 MCDR1988 17/02/2009
Mining Scheme rule 12 MCDR1988 21/05/2013
MP review under 17(1) MCR 2016 09/11/2017
Modif.approved Mining Scheme 06/08/2020

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 40 nos of boreholes were proposed during the year 2019-20.	
1b	Exploration over lease area for geological axis 1 or 2	40 nos of boreholes were proposed during the year 2019-20 to brought area under G1/G2.	40 nos of boreholes were drilled.	
1c	Exploration Agencies and Expenditure in lakh rupees during the year		Rs. 94.32 lakh	
1d	Balance area to be explored to bring Geological axis in 1 or 2	190 nos of boreholes were proposed during the scheme period from the year 2018-19 to 2022-23 to brought area under G1/G2.	40 nos of boreholes were drilled during the year 2019-20.	
1e	Balance reserve as on 01/04/20	As per the approved document on 06.08.2020 the Manganese ore reserves are 1.062 million tonnes and resources of 5.25 million tonnes. and iron reserves are 27.17 millio tonnes and resources of 79.81 million tonnes.	Due to addition/depletion of reserves over the period the Manganese reserves as on 01.04.20120 are 2.921 mt. and resources are 2.705 mt. and iron reserves are 56.31 mt. and resources are 13.539 mt.	

1f	General remarks of inspecting officers on geology, exploration etc	General strike of the formations is NS to NE-SW with dip varying from 100-300 towards west which is congruent to the regional structure of the Singbhum Bonai Synclinorium. 40 nos of boreholes were drilled during the year 2019-20 as a part of exploration.
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Development :

Sl.No.	Item	Propasals	Actual work	Remarks
2a	Location of development w.r.t.lease area	two quarries proposed for development called as D-quarry and H-Quarry during the year 2019-20.	development is carried out in two quarries as proposed.	
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	The top soil capping is proposed to be scrapped. Seperate becnhes in OB and manganese ore zone are envisaged.	Seperate becnhes in OB and manganese ore zone are made. The top soil scrapped was used for saplings plantation.	
2c	Stripping ratio or ore to OB ratio	1:8.18 t/cu.m.	1:9.13 t/cu.m.	due to irregular nature of ore deposit.
2d	Quantity of topsoil generation in m3	971 cu.m.	629 cu.m.	
2e	Quantity of overburden generation in m3	785413 cu.m. during the year 2019-20.	854268 cu.m.	
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc		Development was carried out in two no of quarries only by opencast mining method.	

Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	2 nos.	2 nos.	
3b	Quantity of ROM mineral production proposed	95998 t of Mn ore during the year 2019-20.	93605 t	
3c	Recovery of sailable/usable mineral from ROM production	81000 t of saleable ore and 14998 t of mineral reject.	79714 t of saleable ore and 13891 t of mineral reject.	
3d	Quantity of mineral reject generation	14998 t	13891 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.	1.Study on Mechanized processing of Manganese Ore 2. study for beneficiation of Low/ Sub Grade	Study done on Mechanized processing of Manganese Ore. study for beneficiation of Low/ Sub Grade Manganese Ore and Fines carried out by reduction roasting and magnetic separation.	
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	8 m.	maintained.
3m	Total area covered under excavation/pits	139.413 ha at the end of plan period 2022-23.	82.393 ha
3n	Ore to OB ratio for the pit/mine during the year.	1:8.18 t/cu.m.	1:9.13 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 596.748 ha	436.086 ha
3p	Production of ROM mineral during the last five year period as applicable	2015-16: 188235 MT 2016-17: 200000 MT 2017-18: 211765 MT 2018-19: 81000 MT 2019-20: 95998 MT	2015-16: 114585.335 MT 2016-17: 93777.678MT 2017-18: 81854.524 MT 2018-19: 64866.193 MT 2019-20: 93605 MT
3q	General remarks of inspecting officers on method of mining etc.		the mine production is carried out from two quarries only.

Solid Waste Management - Dumping:

Sl.No.	Item	Proposals	Actual work	Remarks
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4a	Separate dumping of topsoil, OB and mineral rejects (Rule 32,33)	Separate Dumps , OB and mineral reject has been proposed. top soil will be used for plantation.	Separate Dumps, OB and mineral reject has been maintained. top soil was used for plantation.	
4b	Location of topsoil, OB and mineral reject dumps	dump-1, dump-8 and dump-14	dump-1, dump-8 and dump-14	
4c	Number of dumps within lease area and outside of lease area	3 nos.	3nos.	
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.	3 nos.	3 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.	Yes	provided.	
4i	Length of Retaining wall or garland drain all along dumps	645 m	380 m	violation observed and communicated to lessee letter dated 23/02/2021.
4j	Number of settling ponds	1 no	1 no	
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
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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	1.43 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 Closure Plan:

Sl.No.	Item	Proposals	Actual work	Remarks
6a	Whether Annual report on PMCP submitted on time and correctly. Rule 23 E(2).	PMCP report to submitted	submitted before 1 st July.	
6b	Area available for rehabilitation (ha) .	Not applicable	Nil	
6c	afforestation done (ha).	3 ha	3 ha	
6d	No. of saplings planted during the year	8824 nos	13800 nos	

6e	Cumulative no .of plants	4736288 nos	
6f	Any other method of rehabilitation	Not applicable Nil	
6g	Cost incurred on watch and care during the year	Rs.478479	
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 1.43 ha of previous year backlog has been carried out.
6j	Compliance on reclamation and rehabilitation by backfilling (iii)Afforestati 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)	1 ha	1 ha	
6o	Compliance of rehabilitation of waste land within lease (iii)Method of rehabilitation	plantation	plantation	
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 proposed.	

Mineral Conservation:

Sl.No.	Item	Proposals	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.
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Environment:

Sl.No.	Item	Propasals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	No such spacific proposal, however generated top soil is used for plantation purpose.	generted top soil is being used for plantation purpose.	
8b	Concurrent use or storage of topsoil	top soil generated will be used for plantation purpose.	top soil generated used for plantation purpose.	
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)	8824 nos	13800 nos
8g	Survival rate		87%
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	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.	
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Graduate Mining Engineer 1, Diploma Mining Engineer 1, 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: 82.393 ha, Used for waste disposal: 90.095 ha. etc.,	found to be in order.
9d	Scrutiny of Annual return on afforestation	13800	13800
9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	13891 t	13891 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. 4843.54	production cost is Rs. 4843.54
9h	Scrutiny of Annual return on fixed assets	Rs. 622531412	Rs. 622531412
9k	Scrutiny of Annual return on mining machineries	FRONT END LOADER 4.000 CUM 1, DOZER 200.000 HP 1, DOZER 180.000 HP 1 etc.,	found to be in order.

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
11(C)	23/2/21	19/4/21			

Date : 19/4/21

R. Daulif
(RAMKISHAN R)

Indian Bureau of Mines