

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

MCDR INSPECTION REPORT

Bhubaneshwar regional office

Mine file No : ORI/MN/KJR/MCDR-13/BBS

Mine code : 40ORI08026

- (i) Name of the Inspecting : **U11**) **DAYANAND UPADHYAY**
Officer and ID No.
- (ii) Designation : Sr. Asst. Contrl. Mines
- (iii) Accompanying mine : Dipanjan Pal, Mines Manager
Official with
Designation
- (iv) Date of Inspection : 11/01/2018
- (v) Prev.inspection date : 30/09/2012

PART-I : GENERAL INFORMATION

1. (a) **Mine Name** : **MANMORA**
- (b) **Registration NO.** : **4376/40ORI08026**
- (c) Category : B Manual
- (d) Type of Working : Opencast
- (e) Postal address
- State : ORISSA
- District : KEONJHAR
- Village : BICHAKUNDI
- Taluka : CHAMPURA
- Post office : BICHAKUNDI
- Pin Code :
- FAX No. : 06767-211789
- E-mail : chiefofficejoda@tatasteel.co
- Phone : 06767-211789
- (f) Police Station : Champua
- (g) First opening date : 01/04/1967
- (h) Weekly day of rest : SUN
2. Address for : MONMORA MANGANESE MINES, M/S TISCO LTD
correspondance P.O.JODA, DIST:KEONJHAR
ORISSA-758034
3. (a) Lease Number : ORI0176
- (b) Lease area : 16.34
- (c) Period of lease : 20
- (d) Date of Expiry :
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 : Tata Steel Limited
 Bombay House, 24, Homi Modi
 Street Fort Mumbai MUMBAI
 (SUBURBAN) MAHARASHTRA
 Phone: 06572424602
 FAX : 06572431818

Agent : Mukesh Ranjan
 At + Post- Joda Dist-
 Keonjhar KEONJHAR ORISSA
 Phone: 9238101370
 FAX : 06767211789

Manager
 Name : Dipanjan pal
 Qualification : B tech. (Mining)
 Appointment/ : 15/06/2004
 Termination date

6. Date of approval of Mining	:	Mining Scheme rule 12 MCDR1988	20/07/2000
Plan/Scheme of Mining	:	Renewal under rule 24 MCR1960	21/11/2005
	:	Modif.of approved Mining Plan	26/03/2009
	:	Mining Scheme rule 12 MCDR1988	31/03/2010
	:	Mining Scheme rule 12 MCDR1988	07/04/2015

PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	Proposal not furnished in approved scheme of mining.	Nil.	Not applicable.
1b	Exploration over lease area for geological axis 1 or 2	Proposal not furnished in approved scheme of mining.	Nil.	Out of total 16.38 ha lease area about 11.0 ha area is explored under G1 and 0.82 ha is under G2 and 4.53 ha area is non mineralised.
1c	Exploration Agencies and Expenditure in lakh rupees during the year	Proposal not furnished in approved scheme of mining.	Nil.	Not applicable.
1d	Balance area to be explored to bring Geological axis in 1 or 2	Proposal not furnished in approved scheme of mining.	Nil.	Out of total 16.38 ha lease area about 11.0 ha area is explored under G1 and 0.82 ha is under G2 and 4.53 ha area is non mineralised.
1e	Balance reserve as on 01/04/20	Resources /reserves as per the last approved plan under 221 : 0.07 Lakh T and 331 : 0.43 Lakh T.	Resources /reserves as on 01/04/2017 are under 221 category : 0.07 Lakh T and 331 category : 0.43 Lakh T.	There is no mineable reserves as reported in approved scheme of mining.
1f	General remarks of inspecting officers on geology, exploration etc		Out of total 16.38 ha lease area about 11.0 ha area is explored under G1 and 0.82 ha is under G2 and 4.53 ha area is non mineralised.	There is no mineable reserves as reported in approved scheme of mining.

Development :

Sl.No.	Item	Propasals	Actual work	Remarks
2a	Location of development w.r.t.lease area	Proposal not furnished in approved scheme of mining.	Nil.	There is no mineable reserves as reported in approved scheme of mining and development has not been proposed.
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	Proposal not furnished in approved scheme of mining.	Nil.	There is no mineable reserves as reported in approved scheme of mining and development has not been proposed.
2c	Stripping ratio or ore to OB ratio	Proposal not furnished in approved scheme of mining.	Nil.	There is no mineable reserves as reported in approved scheme of mining and development has not been proposed.
2d	Quantity of topsoil generation in m3	Proposal not furnished in approved scheme of mining.	Nil.	There is no mineable reserves as reported in approved scheme of mining and development has not been proposed.
2e	Quantity of overburden generation in m3	Proposal not furnished in approved scheme of mining.	Nil.	There is no mineable reserves as reported in approved scheme of mining and accordingly development has not been proposed.
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc		Pit has been exhausted. There is no mineable reserves as reported in approved scheme of mining and accordingly development has not been proposed.	Pit has been exhausted. There is no mineable reserves as reported in approved scheme of mining and accordingly development has not been proposed.

Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
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3a	Number of pit proposed for production	Proposal not furnished in approved scheme of mining.	Nil.	Pit has been exhausted. The development and production of ROM from pit has not been proposed.
3b	Quantity of ROM mineral production proposed	Proposal not furnished in approved scheme of mining. Only re-hadnling of sub grade dump of manganese ore 990 T in 2016-17 has been proposed.	Re-hadnling of sub grade dump of manganese ore has not been carried out as proposed.	Pit has been exhausted. The development and production of ROM from pit has not been proposed. Deviation has been pointed out through violation letter.
3c	Recovery of sailable/usable mineral from ROM production	Proposal not furnished in approved scheme of mining. Only re-hadnling of sub grade dump of manganese ore 990 T in 2016-17 has been proposed with recovery 15%.	Re-hadnling of sub grade dump of manganese ore has not been carried out as proposed.	Pit has been exhausted. The development and production of ROM from pit has not been proposed.
3d	Quantity of mineral reject generation	Proposal not furnished in approved scheme of mining.	Nil.	Pit has been exhausted. The development and production of ROM from pit has not been proposed.
3e	Grade of mineral rejects generation and threshold value declared.	Proposal not furnished in approved scheme of mining.	Nil.	Pit has been exhausted. The development and production of ROM from pit has not been proposed.
3f	Quantity of sub grade mineral generation.	Proposal not furnished in approved scheme of mining.	Nil.	Pit has been exhausted. The development and production of ROM from pit has not been proposed.

3g	Grade of sub grade mineral generation	Proposal not furnished in approved scheme of mining.	Nil.	Pit has been exhausted. The development and production of ROM from pit has not been proposed.
3h	Manual / Mechanised method adopted for segregating from ROM	Proposal not furnished in approved scheme of mining.	Nil.	Pit has been exhausted. The development and production of ROM from pit has not been proposed. Only re- handling of sub grade dump by manual screening has been proposed.
3i	Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects.	Proposal not furnished in approved scheme of mining.	Nil.	Pit has been exhausted. The development and production of ROM from pit has not been proposed. Only re- handling of sub grade dump by manual screening has been proposed.
3k	Provision of mining machineries in mineral benches	Proposal not furnished in approved scheme of mining.	Nil.	Pit has been exhausted. The development and production of ROM from pit has not been proposed. Only re- handling of sub grade dump by manual screening has been proposed.
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	Proposal not furnished in approved scheme of mining.	Nil.	Pit has been exhausted. The development and production of ROM from pit has not been proposed. Only re- handling of sub grade dump by manual screening has been proposed.

3m	Total area covered under excavation/pits	Proposal not furnished in approved scheme of mining.	Total area covered under pit is about 10.16ha.	Pit has been exhausted. The development and production of ROM from pit has not been proposed. Only re- handling of sub grade dump by manual screening has been proposed.
3n	Ore to OB ratio for the pit/mine during the year.	Proposal not furnished in approved scheme of mining.	Nil.	
3o	Total area put in use under different heads at the end of year	Proposal not furnished in approved scheme of mining.	Nil. Pit has been exhausted. The development and production of ROM from pit has not been proposed.	Pit has been exhausted. The development and production of ROM from pit has not been proposed. Only re- handling of sub grade dump by manual screening has been proposed.
3q	General remarks of inspecting officers on method of mining etc.		Pit has been exhausted. The development and production of ROM from pit has not been proposed.	Pit has been exhausted. The development and production of ROM from pit has not been proposed. Only re- handling of sub grade dump by manual screening has been proposed. Re- handling of sub grade dump as proposed has not been carried out.

Solid Waste Management - Dumping:

Sl.No.	Item	Propasals	Actual work	Remarks
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4a	Separate dumping of topsoil, OB and mineral rejects (Rule 32,33)	Proposal not furnished in approved scheme of mining.	Nil.	Pit has been exhausted. The development and production of ROM from pit has not been proposed. Only re-handling of sub grade dump by manual screening has been proposed.
4b	Location of topsoil, OB and mineral reject dumps	Proposal not furnished in approved scheme of mining.	Nil.	Pit has been exhausted. The development and production of ROM from pit has not been proposed. Only re-handling of sub grade dump by manual screening has been proposed.
4c	Number of dumps within lease area and outside of lease area	Proposal not furnished in approved scheme of mining.	There is one old waste dump in south western part the lease and one sub grade dump in south eastern part of lease.	The waste dump is fully rehabilitated by plantation.
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	Proposal not furnished in approved scheme of mining.	There is one old waste dump in south western part the lease and one sub grade dump in south eastern part of lease.	The waste dump is fully rehabilitated by plantation.
4e	Number of active and alive dumps.	Proposal not furnished in approved scheme of mining.	There is one old waste dump in south western part the lease and one sub grade dump in south eastern part of lease.	The waste dump is fully rehabilitated by plantation.
4f	Number of dead dumps.	Proposal not furnished in approved scheme of mining.	One dead dump of OB.	The dead dump is fully rehabilitated by plantation.
4g	Number of dumps established.	Proposal not furnished in approved scheme of mining.	The dead dump is fully rehabilitated by plantation.	The dead dump is fully rehabilitated by plantation.

4h	Whether Retaining wall or garland drain all along dumps are there.	Proposal not furnished in approved scheme of mining.	Nil.	Not applicable.
4i	Length of Retaining wall or garland drain all along dumps	Proposal not furnished in approved scheme of mining.	Nil.	Not applicable.
4j	Number of settling ponds	Proposal not furnished in approved scheme of mining.	Nil.	Not applicable.
4k	Specific comments of inspecting officer on waste dump management		There is one old waste dump in south western part the lease and one sub grade dump in south eastern part of lease. The dead dump is fully rehabilitated by plantation.	Pit has been exhausted. The development and production of ROM from pit has not been proposed. Only re- handling of sub grade dump by manual screening has been proposed.

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.	2.36 ha area proposed for waste filling to form embankment.	Pit is covering about 10.16 ha has been mined out. About 3.6 ha area has been filled by waste to form embankment.	Pit is covering about 10.16 ha area which has been mined out and exhausted. The development and production of ROM from pit has not been proposed. Only re- handling of sub grade dump by manual screening has been proposed.
5b	Area under backfilling of mined out area	2.36 ha area proposed for waste filling to form embankment.	About 3.6 ha area has been filled by waste to form embankment.	Pit is covering about 10.16 ha area which has been mined out and exhausted.

5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	0.26 ha area area proposed for rehabilitation .	About 0.3 ha area has been rehabilitated by bench plantation.	About 0.3 ha area has been rhabilitated by bench plantation.
5d	Total area fully reclaimed and rehabilitated	0.26 ha area area proposed for rehabilitation .	About 0.3 ha area has been rehabilitated by bench plantation and waste dump of 1.08 ha area has been rahbilitated by plantation.	About 0.3 ha area has been rhabilitated by bench plantation and waste dump of 1.08 ha area has been rahbilitated by plantation.
5e	General remarks of inspecting officers on backfilling and reclamation etc.		Pit is covering about 10.16 ha has been mined out. About 3.6 ha area has been filled by waste to form embankment.	About 0.3 ha area has been rhabilitated by bench plantation and waste dump of 1.08 ha area has been rahbilitated by plantation.

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).	Not specified.	Annual return on PMCP has been submitted by lessee.	Annual return on PMCP has been submitted by lessee.
6b	Area available for rehabilitation (ha) .	0.26 ha area area proposed for rehabilitation .	About 0.3 ha area has been rehabilitated by bench plantation and waste dump of 1.08 ha area has been rahbilitated by plantation.	About 0.3 ha area has been rhabilitated by bench plantation and waste dump of 1.08 ha area has been rahbilitated by plantation.
6c	afforestation done (ha).	0.26 ha area.	About 0.3 ha area has been rehabilitated by bench plantation.	About 0.3 ha area has been rhabilitated by bench plantation.
6d	No. of saplings planted during the year	1500nos of saplings.	About 1880 saplings have been planted for the year 2016-17.	About 1880 saplings have been planted for the year 2016-17.

6e	Cumulative no .of plants	Not specified.	So far 41841 nos. of saplings have been planted by lessee.	o far 41841 nos. of saplings have been planted by lessee.
6f	Any other method of rehabilitation	Bench plantation.	About 0.3 ha area has been rehabilitated by bench plantation.	About 0.3 ha area has been rehabilitated by bench plantation.
6g	Cost incurred on watch and care during the year	Rs 180000/-	Cost incurred during watch and care is Rs 185000/-	Cost incurred during watch and care is Rs 185000/-
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (Lx B x D	2.36 ha area proposed for waste filling to form embankment.	About 3.6 ha area has been filled by waste to form embankment.	About 3.6 ha area has been filled by waste to form embankment.
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	2.36 ha area proposed for waste filling to form embankment.	About 3.6 ha area has been filled by waste to form embankment.	About 3.6 ha area has been filled by waste to form embankment.
6j	Compliance on reclamation and rehabilitation by backfilling (iii)Afforestation on on backfilled area	1000nos of sapling.	Total 1880 saplings have been planted on waste filling and bench plantation.	Total 1880 saplings have been planted on waste filling and bench plantation.
6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	Proposal not furnished in approved scheme of mining.	Nil.	Not applicable.
6l	Compliance on reclamation and rehabilitation by backfilling (v)any other specific means.	Proposal not furnished in approved scheme of mining.	Nil	Not applicable.

6m	Compliance of rehabilitation of waste land within lease (i)afforestation	Proposal not furnished in approved scheme of mining.	Nil.	Not applicable.
6n	Compliance of rehabilitation of waste land within lease (ii)Area rehabilitation (ha)	Proposal not furnished in approved scheme of mining.	Nil.	Not applicable.
6o	Compliance of rehabilitation of waste land within lease (iii)Method of rehabilitation	Proposal not furnished in approved scheme of mining.	Nil.	Not applicable.
6p	Compliance of environmental monitoring (core zone and buffer zone)	Quarterly monitoring.	Quarterly monitoring.	Quarterly monitoring is being carried out.
6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.		About 0.3 ha area has been rehablitated by bench plantation and waste dump of 1.08 ha area has been rahbilitated by plantation.	About 0.3 ha area has been rehablitated by bench plantation and waste dump of 1.08 ha area has been rahbilitated by plantation.

Mineral Conservation:

Sl.No.	Item	Propasals	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	Proposal not furnished in approved scheme of mining.	Nil.	Pit has been exhausted. The developepment and production of ROM from pit has not been proposed.
7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	Proposal not furnished in approved scheme of mining.	Nil.	Pit has been exhausted. The developepment and production of ROM from pit has not been proposed.

7c	Different grade of mineral sorted out at mines.	Proposal not furnished in approved scheme of mining.	Nil.	Pit has been exhausted. The development and production of ROM from pit has not been proposed.
7d	Any beneficiation process at mines .	Proposal not furnished in approved scheme of mining.	Nil.	Pit has been exhausted. The development and production of ROM from pit has not been proposed. Only re- handling of sub grade dump by manual screening has been proposed.
7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues		Pit has been exhausted. The development and production of ROM from pit has not been proposed. Only re- handling of sub grade dump by manual screening has been proposed.	Pit has been exhausted. The development and production of ROM from pit has not been proposed. Only re- handling of sub grade dump by manual screening has been proposed.

Environment :

Sl.No.	Item	Propasals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	Proposal not furnished in approved scheme of mining.	Nil.	Pit has been exhausted. The development and production of ROM from pit has not been proposed.
8b	Concurrent use or storage of topsoil	Proposal not furnished in approved scheme of mining.	Nil.	Pit has been exhausted. The development and production of ROM from pit has not been proposed.

8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	Proposal not furnished in approved scheme of mining.	Nil.	Pit has been exhausted. The development and production of ROM from pit has not been proposed.
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	Waste/tailings has been proposed to form embankment..	About 3.6 ha area has been filled by waste to form embankment.	Pit has been exhausted. The development and production of ROM from pit has not been proposed.
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	2.36 ha area proposed for waste filling to form embankment.	About 3.6 ha area has been filled by waste to form embankment.	About 3.6 ha area has been filled by waste to form embankment.
8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	1500 no. saplings.	About 1880 saplings have been planted by lessee.	So far cumulative 41841 nos. of saplings have been planted by lessee.
8g	Survival rate	85%	Rate of survival is about 85%.	Rate of survival is about 85%.
8h	Water sprinkling on roads to control airborne dust	Proposal not furnished in approved scheme of mining.	Nil.	Not applicable.
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area		About 1880 saplings have been planted by lessee. So far cumulative 41841 nos. of saplings have been planted by lessee.	Pit has been exhausted. The development and production of ROM from pit has not been proposed. Only re- handling of sub grade dump by manual screening has been proposed.

Compliance of Rule 45:

Sl.No.	Item	Propasals	Actual work	Remarks
9a	Status of submission of Monthly and Annual returns	Annual return and monthly return has been submitted regularly.	Annual return and monthly return has been submitted regularly.	Annual return and monthly return has been submitted regularly.
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Diploma mining engineer-1, Geologist-1	Diploma mining engineer-1, Geologist-1	
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Waste disposal-4.59ha, Plant, building-0.57, Railway & others-4.53ha. Area under PMCP-3.5ha.	Waste disposal-4.59ha, Plant, building-0.57, Railway & others-4.53ha. Area under PMCP-3.5ha.	Pit has been exhausted. The development and production of ROM from pit has not been proposed.
9d	Scrutiny of Annual return on afforestation	1880nos of saplings.	1880nos of saplings.	
9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	Nil	Nil	Pit has been exhausted. The development and production of ROM from pit has not been proposed.
9f	Scrutiny of Annual return on ROM stock and/or graded ore	Nil	Nil.	Pit has been exhausted. The development and production of ROM from pit has not been proposed.
9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	Nil.	Nil.	
9h	Scrutiny of Annual return on fixed assets	Nil.	Nil.	Pit has been exhausted. The development and production of ROM from pit has not been proposed.

9k	Scrutiny of Annual return on mining machineries	Nil	Nil.	Pit has been exhausted. The develpoment and production of ROM from pit has not been proposed.
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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
MCDR17	Rule 11(1)	12/01/2018			

Date :

(DAYANAND UPADHYAY)

Indian Bureau of Mines