

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

MCDR inspection REPORT

Nagpur regional office

Mine file No : MP/BGT/MN-191/NGP

Mine code : 40MPR01017

- (i) Name of the Inspecting : **SQ32**) **SANDEEP KUMAR SINGH**
Officer and ID No.
- (ii) Designation : Deputy Controller Mines
- (iii) Accompanying mine :
Official with
Designation
- (iv) Date of Inspection : 17-JAN-20
- (v) Prev.inspection date : 20-MAY-11

PART-I : GENERAL INFORMATION

1. (a) **Mine Name** : **TIRODI**
- (b) **Registration NO.** : **IBM/5711/2011**
- (c) Category : A Mechanised
- (d) Type of Working : Opencast
- (e) Postal address :
State : MADHYA PRADESH
District : BALAGHAT
Village : TIRODI
Taluka : KATANGI
Post office : TIRODI
Pin Code :
FAX No. :
E-mail :
Phone : 76735
- (f) Police Station :
- (g) First opening date : 22-JUL-62
- (h) Weekly day of rest : MON
2. Address for : M/S MANGANESE ORE INDIA LTD.
correspondance : P.O. -TIRODI, DISTT. BALAGHAT
PIN - 481 449
3. (a) Lease Number : MPR0573
- (b) Lease area : 254.59
- (c) Period of lease : 20
- (d) Date of Expiry : 30-JUN-22
4. Mineral worked : MANGANESE ORE Main

5. Name and Address of the

Lessee : M/S MANGANESE ORE (INDIA) LTD.
 3, MOUNT ROAD EXTENSION
 POST BOX NO. 34, NAGPUR
 (MP) NAGPUR MAHARASHTRA
 Phone:
 FAX :

Owner : C.P.N.PATHAK
 3, MOUNT ROAD EXTN. POST
 BOX NO. 34 NAGPUR NAGPUR
 MAHARASHTRA
 Phone: 0712 - 2545703
 FAX : 0712 - 2524996

Agent : M.D.SORTHIA
 BHANDARA MAHARASHTRA
 Phone:
 FAX :

Mining Engineer

Name : P.KARAIYA, Full Time
 Qualification :
 Appointment/ :
 Termination date

Mining Engineer

Name : MANOJ SINGH, Full Time
 Qualification :
 Appointment/ :
 Termination date

Geologist

Name : Shri A.K.Singh, Full Time
 Qualification : M.Sc. (Geology)
 Appointment/ :
 Termination date

6. Date of approval of Mining	:	Renewal under rule 22 MCR1960	12-NOV-03
Plan/Scheme of Mining		Mining Scheme rule 12 MCDR1988	22-SEP-05
		Mining Scheme rule 12 MCDR1988	22-SEP-05
		Mining Scheme rule 12 MCDR1988	03-MAR-06
		Mining Scheme rule 12 MCDR1988	05-FEB-08
		Mining Scheme rule 12 MCDR1988	07-MAR-12
		Mining Scheme rule 12 MCDR1988	21-JAN-13
		Modif.of approved Mining Plan	23-DEC-15

PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	04	NIL	
1b	Exploration over lease area for geological axis 1 or 2	04		
1c	Exploration Agencies and Expenditure in lakh rupees during the year	NIL	NIL	
1d	Balance area to be explored to bring Geological axis in 1 or 2	170 Ha	170 Ha	
1e	Balance reserve as on 01/04/20	518027	518027	
1f	General remarks of inspecting officers on geology, exploration etc			VIOLATION ISSUED IN 17-18.THE LEESE HAS GIVEN TO DO GEOTECHNICAL STUDY.A REVISED PROPOSAL FROM 19020 HAS BEEN GIVEN WITH 15 HOLES/YEAR.

Development :

Sl.No.	Item	Proposals	Actual work	Remarks
2a	Location of development w.r.t.lease area	N 210 40' 48.4" E 790 43' 42.5	N 210 40' 48.4" E 790 43' 42.5	
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	YES	YES	
2c	Stripping ratio or ore to OB ratio	4.60M3/t	16.5m3/T	OB: CLEAN ORE,OC

2d	Quantity of topsoil generation in m3	NIL	NIL	
2e	Quantity of overburden generation in m3	3,50,000m3	3,72,837 m3	
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc			WORKING IS DONE IN ABOVE PITS BY BENCHING. IN PIT 4, 10MTR IN WASTE, 3MTR IN ORE.

Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	03PIT/4 DUMP	03PIT/4 DUMP	
3b	Quantity of ROM mineral production proposed	107000	106900	
3c	Recovery of sailable/usable mineral from ROM production	60%	60%	
3d	Quantity of mineral reject generation	50664	3177	
3e	Grade of mineral rejects generation and threshold value declared.	Below 10%	Below 14%	
3f	Quantity of sub grade mineral generation.	31000 T	75,127 T	
3g	Grade of sub grade mineral generation	10%-20%	10%-20%	
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.	NA	NA	
3j	Provision of drilling and blasting in mineral benches	NA	NA	
3k	Provision of mining machineries in mineral benches	By Shovel Dumpers	By Shovel Dumpers	
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	Yes	Yes	
3m	Total area covered under excavation/pits	62.358 Ha	59.240 Ha	
3n	Ore to OB ratio for the pit/mine during the year.	4.60M3/T	16.50M3/t	OB:CLEAN ORE
3o	Total area put in use under different heads at the end of year	146.92 Ha	146.92 Ha	
3p	Production of ROM mineral during the last five year period as applicable	16-17- 107000 17-18- 105500 18-19- 107000	104306 104900 106900	
3q	General remarks of inspecting officers on method of mining etc.			

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)	Yes	Implemented	
4b	Location of topsoil, OB and mineral reject dumps	CH-2-6, SOUTH SECTION, CH46-50 SOUTHBEDPIT, CH 62-72-NORTH MAGZINE DUMP	CH-2-6, SOUTH SECTION, CH46-50 SOUTHBEDPIT, CH 62-72-NORTH MAGZINE DUMP	WASTE DUMPS FOR DISPOSING WASTE.
4c	Number of dumps within lease area and outside of lease area	17 Outside - Nil	17 Outside - Nil	
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	CH-2-6, SOUTH SECTION, CH46-50 SOUTHBEDPIT, CH 62-72-NORTH MAGZINE DUMP	CH-2-6, SOUTH SECTION, CH46-50 SOUTHBEDPIT, CH 62-72-NORTH MAGZINE DUMP	
4e	Number of active and alive dumps.	4	4	
4f	Number of dead dumps.	13	13	
4g	Number of dumps established.	17	17	
4h	Whether Retaining wall or garland drain all along dumps are there.	No	No	
4i	Length of Retaining wall or garland drain all along dumps	No	No	
4j	Number of settling ponds	1	1	
4k	Specific comments of inspecting officer on waste dump management			OLD DUMPS HAVE PLANTATION.

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.	OLD PITS	OLD PITS	OLD USED PITS
5b	Area under backfilling of mined out area	1,00,000m3	1,20,000 m3	
5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	NA	NA	
5d	Total area fully reclaimed and rehabilitated	NIL	3.2 HA	TOTAL TILL DATE
5e	General remarks of inspecting officers on backfilling and reclamation etc.			BACKFILLING DONE IN OLD MINEDOUT PITS

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).	Yes	Report not given.	
6b	Area available for rehabilitation (ha) .	NIL	NIL	
6c	afforestation done (ha) .	2Ha.	2Ha.	ON DUMPS
6d	No. of saplings planted during the year	2500	3000	
6e	Cumulative no .of plants		326416	

6f	Any other method of rehabilitation	NA	NA	
6g	Cost incurred on watch and care during the year	NA	NA	
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	100000M3	120000M3	
6j	Compliance on reclamation and rehabilitation by backfilling (iii) Afforestation on backfilled area	NA	NA	
6l	Compliance on reclamation and rehabilitation by backfilling (v) any other specific means.	NA	NA	
6m	Compliance of rehabilitation of waste land within lease (i) afforestation	NA	NA	
6n	Compliance of rehabilitation of waste land within lease (ii) Area rehabilitation (ha)	NA	NA	PLANTATION PLANNED ON DUMPS.GIVEN IN 6ATO G.
6p	Compliance of environmental monitoring (core zone and buffer zone)	Quarterly	Quarterly Implemented	

6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.	PLANTATIONS HAVE BEEN DUMPS.OLD PITS ARE BEING BACKFILLED TO RECLAIM.
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Mineral Conservation:

Sl.No.	Item	Propasals	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	SORTING IN VARIOUS GRADES	SORTING IN VARIOUS GRADES	
7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	MANUAL	MANUAL	
7c	Different grade of mineral sorted out at mines.	Graded ore : <25%Mn-, ,25-35%Mn-, 35-46%mn-	Graded ore : <25%Mn-, ,25-35%Mn-, 35-46%mn-	
7d	Any beneficiation process at mines .	NONE	NONE	
7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues			Mineral is sorted in various grades.subfrade is stored for future use.there is winning of ore from old dumps.

Environment:

Sl.No.	Item	Propasals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	NA	NA	

8b	Concurrent use or storage of topsoil	NA	NA	
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	Waste & Mineral dump, SUBGRADE STOCK	Waste & Mineral dump, SUBGRADE STOCK ARE MAINTAINED.	
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	YES	DONE	
8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	2500 ON DUMPS	3000 ON DUMPS	
8g	Survival rate	80%	75%	
8h	Water sprinkling on roads to control airborne dust	YES	DONE	
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area			LOT OF PLANTATION CAN BE SEEN IN MINES AREA, DUMPS.

Compliance of Rule 45:

Sl.No.	Item	Propasals	Actual work	Remarks
9a	Status of submission of Monthly and Annual returns	Submitted..	Submitted..	

- 9b Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager Given Mr shiv gade/shri Mr Baise. APPOINTED.
- 9c Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc. Pit- 59.240, reclaimed- 27.24hect, waste dumps- 41.288, infra- 5.455 hect. WITHIN FA LIMITS
- 9d Scrutiny of Annual return on afforestation 4000 nos. within lease.
- 9e Scrutiny of Annual return on mineral reject generation (Grade and quantity) 20%, 3177.t FINES.
- 9f Scrutiny of Annual return on ROM stock and/or graded ore Graded ore stock: <25%Mn- 1420.30t, 25-35%Mn- 33.750t, 35-46%mn-59.540 tn STOCK IS GIVEN.
- 9g Scrutiny of Annual return on sale value, Ex. Mine price and production cost <25%Mn- 2000Rs/T, 25-35%Mn- 6594Rs/T, 35-46%mn- 11,971.52Rs/T, cost of prod- 5943Rs/T
- 9h Scrutiny of Annual return on fixed assets FA=3,91,69,167 1 THE FIXED ASSETS ARE GIVEN

9k Scrutiny of WHEEL LOADER LIST OF MACHINERY USED
Annual return on 1000.000 CUM 1 IS GIVEN.
mining , SHOVEL
machineries (HYDRAULIC)
2200.000 CUM 1
, SHOVEL
(HYDRAULIC)
1570.000 CUM 1
Non Electrical
Opencast
DUMPER
25000.000
TONNE 10 ,
SHOVEL
(HYDRAULIC)
2500.000 CUM 1
, DOZER
385.000 HP 1,
DOZER 230.000
HP 1
, GENERATOR
(DIESEL)
500.000 KWH 1
, ROCK DRILL
(NONELEC.)
169.000 MM
2Opencast ROCK
DRILL
(NONELEC.)

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
MCDR17 Rule 46(a)	13-MAY-20				
MCDR17 Rule 26(2)	13-MAY-20				

Date :

(SANDEEP KUMAR SINGH)

Indian Bureau of Mines