

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

MCDR INSPECTION REPORT

Nagpur regional office

Mine file No : MAH/NAG/MN--2/NGP

Mine code : 40MSH14002

- (i) Name of the Inspecting : M017) ASHISH MISHRA
Officer and ID No.
- (ii) Designation : Sr. Asst. Contrl. Mines
- (iii) Accompanying mine : SHRI A. V. MASADE, AGENT AND SHRI SHANKARAIYYA, MINES
Official with
Designation
- (iv) Date of Inspection : 13/10/2018
- (v) Prev.inspection date : 14/09/2017

PART-I : GENERAL INFORMATION

1. (a) **Mine Name** : BELDONGRI
- (b) **Registration NO.** : IBM/5711/2011
- (c) **Category** : A Other than Fully Mech.
- (d) **Type of Working** : Underground
- (e) **Postal address**
- State : MAHARASHTRA
- District : NAGPUR
- Village : BELDONGRI
- Taluka : PARSEONI
- Post office : SATUK
- Pin Code : 441106
- FAX No. : N.A.
- E-mail : N.A.
- Phone : 07102 - 246160
- (f) **Police Station** : RAMTEK
- (g) **First opening date** : 01/07/1962
- (h) **Weekly day of rest** : SAT
2. **Address for** : 3, MOUNT ROAD EXTENSION
correspondance NAGPUR
3. (a) **Lease Number** : MSH0076
- (b) **Lease area** : 26.66
- (c) **Period of lease** : 60
- (d) **Date of Expiry** : 30/06/2022

MSH0077
12.99
47
31/03/2020

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 : SH.G.P.KUNDARGI
M/S MANGANESE ORE INDIA
LTD. MOIL BHAVAN, 1A, KATOL
ROAD, NAGPUR-440013 NAGPUR
MAHARASHTRA
Phone: 0712-2532252
FAX : 0712-252499

Agent : SH.V.N.CHANDRAKAR
M/S MANGANESE ORE INDIA
LTD. MOIL BHAVAN, 1A, KATOL
ROAD NAGPUR. NAGPUR
MAHARASHTRA
Phone: -
FAX : -

Mining Engineer
Name : SUDHIR PATHAK, Full Time
Qualification : AMIE
Appointment/ : 23/06/2008
Termination date

Geologist
Name : M BHANSE, Full Time
Qualification : M.SC.
Appointment/ : 06/09/2005
Termination date

Manager
Name : R.P.CHOUDHARY
Qualification : DIPLOMA IN MINING
Appointment/ : 17/04/2008
Termination date

6. Date of approval of Mining Plan/Scheme of Mining	:	Renewal under rule 22 MCR1960	29/04/2003
		Mining Scheme rule 12 MCDR1988	24/09/2003
		Mining Scheme rule 12 MCDR1988	23/07/2008
		Mining Scheme rule 12 MCDR1988	24/07/2013
		Renewal under rule 24 MCR1960	21/10/2013
		MP review under 17(1) MCR 2016	04/07/2017
		MP review under 17(1) MCR 2016	24/08/2017

PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	2 boreholes (underground) for the year 2016-17	Nil for the year 2017-18	It was proposed in earlier SOM for exploration through drilling 2 Nos. bore holes but due to limitations of underground work place constraints 2 Nos. vertical winzes of at ch. 00 & ch.150 is proposed in the approved Review of Mining Plan approved on 04/07/2017 for 2017-18 to 2021-22. In the said document, 1 exploratory winze is proposed in 2018-19 and 2019-20 each.
1b	Exploration over lease area for geological axis 1 or 2	G-1	G-1	Ore Zone upto 135 mRL is proved by 15 boreholes at 50 m grid interval. Ore zone below 148 mRL is proposed to be proved through exploratory mining by winzes and ore drives.
1c	Exploration Agencies and Expenditure in lakh rupees during the year	Not applicable	Nil	
1d	Balance area to be explored to bring Geological axis in 1 or 2	Nil	Nil	Complete strike length has been proved upto G-1 level. Depth persistancy is proposed to be explored through winzes and ore drives.
1e	Balance reserve as on 01/04/20		Balance reserves as on 01/04/2018: 111- 94263 T 121- 47250 T 221- 54960 T Total- 196473 T	

1f	General remarks of inspecting officers on geology, exploration etc	The ore zone at beldongri mine occurs in the form of lenticular shape, central portion being the thickest (upto 35) and trending NE-SW. the dip is towards south ranging between 45 to 70 degree. The ore body is plunging in south west direction at an avg angle of 21 deg.	The area has already been explored at G-1 level for the complete strike length.
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Development :

Sl.No.	Item	Propasals	Actual work	Remarks
2a	Location of development w.r.t.lease area	Exploratory development is propsed at 148 mRL	As per the proposals.	Against the horizontal and vertical development proposed at 148 MRL of 302 cum , actual achievement is 125 cum.
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	Not applicable as underground mining is being carried out in the lease area.	Not Applicable	
2c	Stripping ratio or ore to OB ratio	Not applicable as underground mining is being carried out in the lease area.	Not Applicable	
2d	Quantity of topsoil generation in m3	Not applicable as underground mining is being carried out in the lease area.	Not Applicable	
2e	Quantity of overburden generation in m3	Not applicable as underground mining is being carried out in the lease area.	Nil	

2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc	Method of mining is underground and considering the type of deposit and workings, development is satisfactory as only underground exploratory development is proposed in form of Winzes and ore-drives.
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Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	Not applicable as underground mining is being carried out in the lease area.	Nil	
3b	Quantity of ROM mineral production proposed	2017-18: 32000 T	2017-18: 25270 T	
3c	Recovery of sailable/usable mineral from ROM production	75% of the ROM is cleaned saleable ore, 15% is proposed as rejects and 10% as sub-grade	100% as complete ROM has been considered for grade-wise production as per the AR 2017-18.	The data furnished in this regard in the AR was advised to be reviewed and corrections may be, if any, as mineral rejects are being generated and stacked at the mine.
3d	Quantity of mineral reject generation	2017-18: 3200 T of sub-grade and 4800 T of rejects are proposed to be generated	Nil	
3e	Grade of mineral rejects generation and threshold value declared.	+10% Mn containing material including fines which is approximately 10% of the ROM shall be stacked separately.	Nil	

3f	Quantity of sub grade mineral generation.	Nil	Nil	
3g	Grade of sub grade mineral generation	Not applicable	Not applicable	
3h	Manual / Mechanised method adopted for segregating from ROM	Manual	Manual sorting of ROM	
3i	Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects.	No such proposals	Nil	
3j	Provision of drilling and blasting in mineral benches	Not applicable being an underground mine.	Not applicable	Drilling and blasting is being carried out underground for development and production. The jack hammer drills are used for drilling the shot holes with drill steel of varying length (800 mm, 1200 mm, 1600 mm) and 33 mm dia. The total number of holes is blasted with electric delay detonators and small dia explosives (25 mm dia, 125 gm). There are 15 jack hammer drills for drilling purpose in the underground development and mining faces.

3k	Provision of mining machineries in mineral benches	Not applicable being an underground mine.	Not applicable	Mechanization in form of electrical winding, pumps and drilling/blasting is deployed in the mine. At surface, front end loader of 1.2 cum bucket capacity and dumpers of 10 T capacity are being used for material handling.
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	Not applicable being an underground mine.	Not applicable	
3m	Total area covered under excavation/pits	4.075 ha	4.075 ha	It is old working area which was under opencast working in the past.
3n	Ore to OB ratio for the pit/mine during the year.	Not applicable being an underground mine.	Nil	
3o	Total area put in use under different heads at the end of year		Area under: Mining/Pits: 4.075 ha Mineral Storage: 0.08 ha OB/ Waste Dumps: 10.779 ha Infrastructure: 2.045 ha Roads: 0.894 ha Township: 3.64 ha Total: 21.513 ha	Out of the total area, 6.663 ha area covered under OB/Waste Dumps has already been reclaimed through plantation.
3p	Production of ROM mineral during the last five year period as applicable	UG ROM 2013-14-32000 T 2014-15-32000 T 2015-16-32000 T 2016-17-32000 T 2017-18-32000 T	UG ROM 2013-14-31719 T 2014-15-30939 T 2015-16-30056 T 2016-17-32401 T 2017-18- 25270T	

3q	General remarks of inspecting officers on method of mining etc.	Method of mining is underground and method of stoping is cut and fill which is suitable as per the occurrence of orebody in the area and capital investments.
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Solid Waste Management - Dumping:

Sl.No.	Item	Propasals	Actual work	Remarks
4a	Separate dumping of topsoil, OB and mineral rejects (Rule 32,33)	Yes	Yes (Not applicable for top soil)	
4b	Location of topsoil, OB and mineral reject dumps	As per the Mining Plan	As per the Mining Plan	
4c	Number of dumps within lease area and outside of lease area	2 Mineral rejects Dumps and 7 Waste dumps	As per the proposals. All dumps are within the lease area.	
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	Not applicable	Not applicable	
4e	Number of active and alive dumps.	2 mineral rejects dumps are active and 1 waste dump is active	As per the proposals	
4f	Number of dead dumps.	3 waste dumps are dead	As per the proposals	
4g	Number of dumps established.	3 dead dumps are already reclaimed and rehabilitated	As per the proposals	
4h	Whether Retaining wall or garland drain all along dumps are there.	Yes	Yes	
4i	Length of Retaining wall or garland drain all along dumps	Approximately 1000 m	Approximately 875 m	
4j	Number of settling ponds	Nil	Nil	

4k	Specific comments of inspecting officer on waste dump management			Major waste dumps that are available over 6.63 ha area in the western part of the lease area are already reclaimed and rehabilitated through plantation. Garland drains and retaining walls are available at the toe of the dumps in form of protective measures. Thus waste dump management aspect is satisfactory at mine level.
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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.	No such proposals	Nil	
5b	Area under backfilling of mined out area	No such proposals	Nil	
5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	No such proposals	Nil	
5d	Total area fully reclaimed and rehabilitated	No such proposals	Nil	
5e	General remarks of inspecting officers on backfilling and reclamation etc.			No comments as no proposals are there pertaining to backfilling.

Progressive Mine Clousre Plan:

Sl.No.	Item	Propasals	Actual work	Remarks
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6a	Whether Annual report on PMCP submitted on time and correctly. Rule 23 E(2).	Yes	Yes	
6b	Area available for rehabilitation (ha) .	Nil	Nil	6.63 ha area of waste dumps already reclaimed through plantation.
6c	afforestation done (ha).	Nil	Nil	Afforestation through 1000 saplings in form of in-filling plantation has been done.
6d	No. of saplings planted during the year	Nil	1000 saplings	
6e	Cumulative no .of plants	Not available	Approximately 30000 saplings	
6f	Any other method of rehabilitation	No such proposals	Nil	
6g	Cost incurred on watch and care during the year	Approximately Rs 12.50 Lakhs	As per the proposals	
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (Lx B x D	No such proposals	Nil	
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	No such proposals	Nil	
6j	Compliance on reclamation and rehabilitation by backfilling (iii)Afforestation on on backfilled area	No such proposals	Nil	

6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	No such proposals	Nil	
6l	Compliance on reclamation and rehabilitation by backfilling (v) any other specific means.	No such proposals	Nil	
6m	Compliance of rehabilitation of waste land within lease (i) afforestation	No such proposals	Nil	
6n	Compliance of rehabilitation of waste land within lease (ii) Area rehabilitation (ha)	No such proposals	Nil	
6o	Compliance of rehabilitation of waste land within lease (iii) Method of rehabilitation	No such proposals	Nil	
6p	Compliance of environmental monitoring (core zone and buffer zone)	Yes	Yes	
6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.			PMCP work done in the year is in form of in-filling plantation through 1000 saplings and Environment Monitoring. Dead dumps have already been stabilized and reclaimed.

Mineral Conservation:

Sl.No.	Item	Propasals	Actual work	Remarks
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7a	ROM Mineral dispatch or grade-wise sorting within lease area	Grade-wise sorting within lease area	As per the proposals	
7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	Manual sorting	Manual sorting	
7c	Different grade of mineral sorted out at mines.		Below 25% Mn, 25% Mn to below 35% Mn and 35% Mn to below 46% Mn (as per the annual returns).	
7d	Any beneficiation process at mines .	No	Nil	
7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues			Mineral rejects part of the ROM having approximate grade 10-22% Mn is proposed for separate stacking and shall be used as per the requirements. Mineralized dumps are being exploited and mineral contents are being extracted from the dumps. Thus mineral conservational aspect is satisfactory.

Environment:

Sl.No.	Item	Propasals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	No such proposals	Nil	
8b	Concurrent use or storage of topsoil	No such proposals	Nil	

8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	Yes	Yes, separate dumps for waste and mineral rejects are available.	
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	No such proposals	Nil	
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	No such proposals	Nil	Earlier, 6.63 ha of waste dump area has been reclaimed through plantation.
8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	Yes	Yes	
8g	Survival rate		Approximately 90%	
8h	Water sprinkling on roads to control airborne dust	Yes	Yes, water sprinkling is practiced in the area where dump working and sorting is being done.	
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area			Mainly, working is through underground means in the area (apart from dump workings). Hence apart from normal degradation due to mining, aesthetic beauty is satisfactory in the area .

Compliance of Rule 45:

Sl.No.	Item	Propasals	Actual work	Remarks
9a	Status of submission of Monthly and Annual returns		Annual Returns submitted online upto 2017-18 Monthly return submitted online upto Nov'2018	

9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Mining Engineer: Shri Bhubaneshwer Tung Geologist: Shri Anil Singh Rajput Manager: Shri Manoj Kumar	Correct information has been furnished.
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Land use details are given	Area was observed to be reported in the category 'already exploited and abandoned' which was advised to be corrected.
9d	Scrutiny of Annual return on afforestation	1000 saplings with 90% survival	Correct information has been furnished.
9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	Nil	Nil
9f	Scrutiny of Annual return on ROM stock and/or graded ore	ROM: Opening Stock-5690 T, Production-25270 T, Closing Stock-1690 T Graded ore: details given for various grades sorted at the mine.	Complete information has been given.
9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	Sale Value: Rs 375801840/- Ex-Mine price: For below 25% Mn- Rs 2357.50/- per T 25% Mn to below 35% Mn- Rs 4882.88/- per T 35% Mn to below 46% Mn- Rs 13278.04/- per T Cost of Production: Rs 5790.49/- per T	Complete information furnished. It is under examination with MMS Div. as well as Regional Office separately and suitable actions shall be initiated in case of any discrepancy.

9h	Scrutiny of Annual return on fixed assets	Value of Fixed Assets is mentioned as Nil. Details for depreciation for plant, machineries etc furnished.	It was advised to provide correct information in Part-II A of the AR.
9k	Scrutiny of Annual return on mining machineries	Complete information furnished as per the extent of mechanization.	Complete information furnished as per the extent of mechanization.

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 :
(ASHISH MISHRA)

Indian Bureau of Mines