

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

MCDR INSPECTION REPORT

Nagpur regional office

Mine file No : MAH/NAG/MN-312/NGP

Mine code : 40MSH14036

- (i) Name of the Inspecting : **M017**) **ASHISH MISHRA**
Officer and ID No.
- (ii) Designation : Sr. Asst. Contrl. Mines
- (iii) Accompanying mine : Shri Arun Deoras, Agent
Official with
Designation
- (iv) Date of Inspection : 29/08/2019
- (v) Prev.inspection date : 17/02/2011

PART-I : GENERAL INFORMATION

1. (a) **Mine Name** : **WADEGAON (2.49H)**
- (b) **Registration NO.** : **IBM/5319/2011**
- (c) Category : B Manual
- (d) Type of Working : Opencast
- (e) Postal address :
State : MAHARASHTRA
District : NAGPUR
Village :
Taluka :
Post office :
Pin Code :
FAX No. :
E-mail :
Phone :
- (f) Police Station :
- (g) First opening date : 10/01/2008
- (h) Weekly day of rest :
2. Address for : LAKKADSHAH BUILDING
correspondance : ITWARI
NAGPUR
3. (a) Lease Number : MSH0349
- (b) Lease area : 2.49
- (c) Period of lease : 20
- (d) Date of Expiry : 18/01/2027
4. Mineral worked : MANGANESE ORE Main

5. Name and Address of the

Lessee : SHRI SHAKEEL AHMED AQUEEL HUSSAIN
NAGPUR MAHARASHTRA
Phone:
FAX :

Owner : SHRI SHAKEEL AHMED AQUEEL HUSSAIN
NAGPUR MAHARASHTRA
Phone:
FAX :

6. Date of approval of Mining	:	Fresh under rule 22 MCR1960	11/12/2006
Plan/Scheme of Mining	:	Mining Scheme rule 12 MCDR1988	15/07/2015
	:	MP modif under 17(3) MCR 2016	05/12/2017

PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	Nil	Nil	The area has been explored through one pit, two trial pits (6 m X 3 m X 1 m) and 3 core boreholes (drilled in 2013-14). Afterwards, proposals are for exploratory mining (underground) and drilling 2 boreholes from ore drive. In the year 2018-19, mining started after stoppage of operations in the year 2010-11. Mine has worked for 58 days. As per the proposals, after the sinking of shaft and ore drives, exploration shall be taken up.

1b	Exploration over G-1 & lease area for Unexplored geological axis 1 area or 2	G-1 area is approximately 1.3989 ha Unexplored area is 1.0977 ha	Unexplored area is mainly in the footwall side of the presently explored orebody in the northern part of the lease area in between N2359400 to N2359500 & E334500 to E334650, and in the eastern part of the lease area in between N2359380 to N2359420 & E334650 to E334800 where width is too low for systematic development. Both the areas have float ore as exposed in the old working pit. Exploration in form of trial pit has been done. Apart from this, southern unexplored part is blocked due to Canal.
1c	Exploration Agencies and Expenditure in lakh rupees during the year	No such proposals till underground workings are commenced, hence, Nil.	Nil
1d	Balance area to be explored to bring Geological axis in 1 or 2	Unexplored area: 1.0911 ha	1.0911 ha area is yet to be explored in detail under G-1.
1e	Balance reserve as on 01/04/20	Baqlance reserves/resources as on 01.04.2019 are given under Actual Work details.	111-22145 T 221-12005 T

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

Mining has commenced almost after 9 years of closure due to not having EC and lack of demand. Exploration in form of one large pit, two trial pits (for float) and 3 core boreholes has already been done in the past. Occurrence of orebody of 3 m thickness is proved in the southern part of the lease area with having southerly dip, due to which most of the area is only in the footwall and having float ore only. Also, extreme southern part is under the influence zone of canal (blocked resources).

Development :

Sl.No.	Item	Propasals	Actual work	Remarks
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2a	Location of development w.r.t.lease area	As per the approved proposals furnished in the Modification in the Approved mining Plan for a period of 2017-18 to 2021-22, for the year 2018-19, development and production was proposed in between N2359300 to N2359400 & E334500 to E334600 in the already developed old pit.	Development as per the proposals, but lagging.	In the Mining Plan document, proposals were given for 2017-18 to 2021-22, however, mining operations commenced in January 2018. hence, development operations are going on as per the proposals but with a lag due to delay in getting EC and other consents prior to commencement of mining operations.
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	Thickness of orebody is approximately 3 m and it is dipping due south at around 45 degree dip. Hence, making separate benches in ore and shall not be possible for the category of mine which is mechanised (bench height=6 m). However, manual sorting of ROM and separate dumping of waste is proposed. No top soil shall be generated as working is proposed within the pit as well as in the float ore zone.	As per the proposals.	

2c	Stripping ratio or ore to OB ratio	For 2018-19, 1:3	For 2018-19, actual Ore : OB is 1:4.53 (ROM= 1104 T, OB/Waste=5000 cum)	Higher Ore:OB ratio due to sludge and waste clearing from the area as working started after almost 9 years.
2d	Quantity of topsoil generation in m3	Nil	Nil	
2e	Quantity of overburden generation in m3	2018-19: 6000 cum	2018-19: 5000 cum	
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc			Mining operations are commenced in the area after a period of 9 years. Development of pit is proposed in form of deepening of existing old pit upto the economical depth and afterwards, underground workings are proposed to be undertaken for the extraction of entire mineable reserves available within the lease area. Float ore is also proposed for extraction where float occurs at approximate 1 m thick band with average recovery of 10-15%.

Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
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3a	Number of pit proposed for production	One pit	One old pit was proposed for expansion and deepening. Working is as per the scheme of production.	Float ore zone working at N2359400 to N2359450 & E334500 to E334550 was also proposed but couldn't be started in the year 2018-19 due to availability of short span of time of working in the year (58 days) and workings stand limited to the existing pit only.
3b	Quantity of ROM mineral production proposed	For 2018-19, ROM production proposed: 11438 T	For 2018-19, actual production of ROM ore is 1104 T	Production was lower as working in the area has started in January'18 after getting requisite clearances and consents from MoEF and SPCB. Number of days mine worked during the year were 58.
3c	Recovery of sailable/usable mineral from ROM production	Proposed recovery of cleaned ore from ROM is 90%.	Actual recovery is 84.23% (ROM production=1104 T, Graded Ore production=930 T)	
3d	Quantity of mineral reject generation	2018-19: 572 T	2018-19: 174 T	
3e	Grade of mineral rejects generation and threshold value declared.	Threshold value: +10% Mn Proposed Grade of Mineral Rejects: Below 8-10%	Mineral rejects have been considered that material which is having Mn content lower than threshold value.	It was advised during inspection that mineral rejects are below cut-off and above threshold containing material out of ROM that is required to be stacked separately for future usage. Thus, the section need to be addressed properly in future.
3f	Quantity of sub grade mineral generation.	2018-19: 572 T	2018-19: Nil	

3g	Grade of sub grade mineral generation	Grade of the sub-grade is +10%-17% Mn	Actual: nil	ROM was graded and blended such that stack of graded ore of below 25% was prepared. Rest of the material which was having below 8% Mn was discarded as rejects. hence, generation of sub-grade stood Nil.
3h	Manual / Mechanised method adopted for segregating from ROM	Manual Sorting and screening.	As per the proposals.	
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	Yes, drilling is proposed through Jack Hammer drills with 34 mm dia and 1.5 m drilling (bench is proposed to be developed for 6 m in 4 stages), blasting is proposed to carried out by licensed vendors.	As per the proposals.	
3k	Provision of mining machineries in mineral benches	Yes, after blasting, ROM is proposed to be manually sorted and loaded into tippers/dumper s of 10 T capacity for transportation .	As per the proposals.	

3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	Method of mining proposed is Category A Mechanised Mine. bench height proposed is 6 m.	Bench height proposed is 6 m that is being prepared in 4 stages of 1.5 m each. Bench height is suitable as per the category of mine proposed for working and as per the proposed machineries i.e. Jack Hammer (1.5 m drilling in each stage).
3m	Total area covered under excavation/pits	Area under pits at the start of mining plan proposal period is 0.5954 ha (As on 01.04.2017) Additional area proposed to be covered under pits upto 31.03.2022 is proposed as 0.0093 ha	Actual area under pits hasn't exceeded as present working in 2018-19 is limited within the existing pit.
3n	Ore to OB ratio for the pit/mine during the year.	For 2018-19, 1:3	For 2018-19, actual Ore : OB is 1:4.53 (ROM= 1104 T, OB/Waste=5000 cum)
3o	Total area put in use under different heads at the end of year	Total area put to use under different heads as on 31.03.2019 is given under actual work.	Area under: Excavation/Pits: 0.5954 ha Area under waste dumps: 0.3259 ha Area under roads: 0.0680 ha Total: 0.9893 ha
3p	Production of ROM mineral during the last five year period as applicable	2017-18: 3264 T 2016-17: 1440 cum 2015-16: 1440 cum 2014-15: No proposals 2013-14: No proposals	2017-18: Nil 2016-17: Nil 2015-16: Nil 2014-15: Nil 2013-14: Nil

3q General remarks
of inspecting
officers on
method of mining
etc.

Method of mining
is semi-mechanised
as transportation
is proposed
through tipper
dumpers. Loading
operations are
manual. Mine is
being worked
through deepening
of pit. Flaut ore
working is also
proposed so as to
extract float ore
available within
the lease area.
due to lease
limitations,
furture workings
are proposed to be
carried out
through
underground, after
attaining
economical depth
through opencast.

Solid Waste Management - Dumping:

Sl.No.	Item	Propasals	Actual work	Remarks
4a	Separate dumping of topsoil, OB and mineral rejects (Rule 32,33)	No top soil in the proposed working area. Separate dumping of waste and stacking of mineral is proposed. Sub- grade mineral generated is proposed to be blended with ROM as and when required. Mineral rejects are proposed to be stacked separately.	Mineral rejects generated during the year 2018-19 were 174 T and are stacked separately at earmarked location. No top soil is available. Sub-grade mineral was blended with graded ore and stack of below 25% Mn containg material has been prepared.	

4b	Location of topsoil, OB and mineral reject dumps	<p>Top Soil: Nil Waste Dump: N2359350 to N2359450 & E334550 to E334650 Mineral rejects: In NW side boundary (BP-9) of the lease area at N2359400 to N2359450 & E334500 to E334550 Sub-grade: In NW side boundary (BP-9) of the lease area at N2359400 to N2359450 & E334500 to E334550 adjacent to mineral rejects stack</p>	<p>Top Soil: Nil Waste Dump: Old Waste Dump is available within the lease area at N2359350 to N2359400 & E334550 to E334600. New dump was proposed adjacent to this location. Waste is being dumped as per the proposals. Mineral Rejects: 174 T rejects have been stacked at the location as per the proposals.</p>
4c	Number of dumps within lease area and outside of lease area	<p>One waste Dump existing, one additional (extension of old dump) is proposed. No top soil dump available or proposed. One Mineral reject stack. One sub-grade stack and one ROM/Graded mineral stock.</p>	<p>No top soil dump is available. One mineral rejects dump is available. One Graded Ore stack is available at N2359450 to N2359500 & E334550 to E334650 in the northern part of the lease area. No sub-grade mineral stack is available as sub-grade has been blended with graded ore.</p>
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	<p>All the dumps are proposed in footwall side of the explored orebody in the area. Hence, dumps location is proposed outside the pit limits.</p>	<p>As per the proposals.</p>
4e	Number of active and alive dumps.	<p>One waste dump is active. One mineral rejects stack is active.</p>	<p>As per the proposals.</p>

4f	Number of dead dumps.	Nil	Nil	The area was having one old waste dump. This dump has been extended after the start of mining operations. After reaching the economical depth through opencast, the dump is proposed to be re-handled and waste is proposed to be backfilled in the NW side of the pit. Thus, no dead dump is available in the area.
4g	Number of dumps established.	Not applicable	Nil	
4h	Whether Retaining wall or garland drain all along dumps are there.	No such proposals as at the end of the approved proposal period of 2017-18 to 2021-22, mine is proposed to be worked through underground workings only and the waste is proposed to be backfilled in the excavated part (NW side).	No.	
4i	Length of Retaining wall or garland drain all along dumps	Nil	Nil	
4j	Number of settling ponds	One settling pond is proposed to be constructed in the proposal period 2017-18 to 2021-22 in Eastern part of the lease area at approximate location N2359420 & E334650.	Nil for the year 2018-19.	

4k	Specific comments of inspecting officer on waste dump management	Waste generated is being dumped at the site proposed which is located in footwall side of the explored orebody. The dump is located away from the lease boundary presently and is being maintained regularly to check any wash-off. the material is proposed to be re-handled and backfilled in the pit exhausted through opencast mining at the end of mining plan proposal period. Hence, waste dump management aspect has been dealt satisfactorily.
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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.	The mined out pit is proposed to be backfilled after full exhaustion as it is proposed to backfill NW part of the pit which is having only float ore and lies in footwall side of the explored ore body.	As per the proposals.	

5b	Area under backfilling of mined out area	For 2018-19: Nil No backfilling is proposed.		Backfilling is mainly proposed in 4th and 5th year of approved proposal period of 2017-18 to 2021-22, i.e., in the years 2020-21 & 2021-22 after exhaustion of mineral being worked through opencast.
5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	No top soil is available in the area. However, it is proposed that top soil, if any, generated during the course of mining in the area shall be used for capping over the backfilled area to support the plantation in future.	Nil	
5d	Total area fully reclaimed and rehabilitated	No such proposals till 2018-19.	Nil	
5e	General remarks of inspecting officers on backfilling and reclamation etc.			NW part of the existing pit mainly contains a band of float ore of approximate 1 m thickness spread over 3-4 m depth having overburden and waste. After exhaustion of mineral from this part of the pit, it is proposed to be backfilled in the years 2020-21 and 2021-22.

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).	The report is required to be submitted on or before 30th June every year for the works carried out under PMCP during preceeding year.	No such report submitted.	The report was obtained during inspection of the mine.
6b	Area available for rehabilitation (ha) .	Nil	Nil	
6c	afforestation done (ha).	0.01 Ha in the western part of Non-mining Zone	Nil	Violation of Rule 11(2) of MCDR'17
6d	No. of saplings planted during the year	25 saplings	Nil	Violation of Rule 11(2) of MCDR'17
6e	Cumulative no .of plants	50 Saplings	Nil	Working in the mine has started in the year 2018-19 however, proposals were from 2017-18 to plant 25 saplings each year. For not carrying out plantation in the year 2018-19 as per the proposals, violation has been served under Rule 11(2) of MCDR'17.
6f	Any other method of rehabilitation	No such proposals till 2018-19.	Nil	
6g	Cost incurred on watch and care during the year	Approximately Rs 25000/- for plantation and environmental monitoring	Nil	
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	Proposals for backfilling have been given in the approved Mining Plan document in the year 2020-21 and 2021-22.
6j	Compliance on reclamation and rehabilitation by backfilling (iii) Afforestation 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	It is proposed to plant 25 saplings each year in the non-mining zone (available waste land within the lease area). in 2018-19, it was proposed to cover approximately 0.01 ha area in the Western part of the lease area.	Nil	
6n	Compliance of rehabilitation of waste land within lease (ii) Area rehabilitation (ha)	0.01 ha for 2018-19	Nil	

6o	Compliance of rehabilitation of waste land within lease (iii)Method of rehabilitation	Plantation and green belt development	Nil	
6p	Compliance of environmental monitoring (core zone and buffer zone)	It is proposed to monitor various environmental parameters in the core and buffer zone at 5 prominent locations within and outside the lease area as per the guidelines of MoEF.	No such activity has taken place for 2018-19.	As on the date of inspection, environment monitoring is being carried out and sample reports have been seen for analysis of air and water quality.
6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.			PMCP compliance and PMCP operations are required to be looked into more thoroughly. Backlog plantation is required to be covered in future proposal period. Actual works under PMCP shall start at the end of the proposal period of 2017-18 to 2021-22 after backfilling when area for rehabilitation is available. Violation for not carrying out plantation as per the proposals is issued.

Mineral Conservation:

Sl.No.	Item	Propasals	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	Grade-wise sorting and graded ore dispatch is proposed.	Graded ore stack has been prepared. No dispatch in the year 2018-19.	

7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	Manual sorting of ROM	As per the proposals.	
7c	Different grade of mineral sorted out at mines.	Below 25% Mn	Below 25% Mn	56.74 T of old graded stock which was earlier reported under 'Below 25% Mn' grade has been reported under '25% to below 35% Mn' in the Annual Return for 2018-19. Violation of rule 45(7) is being issued for the same.
7d	Any beneficiation process at mines .	No such proposals	Nil	
7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues			Mineral conservation aspect is being dealt satisfactorily as sub-grade is being blended with graded ore and mineral rejects are being stacked separately for future considerations. Float ore is also proposed to be recovered. Due to lease limitations, entire area cannot be worked through opencast and thus, underground workings are proposed to extract entire mineable reserves available in the area.

Environment:

Sl.No.	Item	Propasals	Actual work	Remarks
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8a	Separate removal and utilization of topsoil (Rule 32)	Not applicable as no top soil is available.	Nil
8b	Concurrent use or storage of topsoil	Not applicable	Nil
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	Yes	Yes
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	Yes, Overburden/waste is proposed to be backfilled into mined out pit in NW part of the lease area in the years 2020-21 and 2021-22.	Nil for the year 2018-19.
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	No such proposals for the year 2018-19	Nil
8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	Baseline information on existence of plantation has been done in the Mining Plan. The area is having a few trees only. Additionally, 25 saplings are proposed to be planted in the area in each year.	Additional plantation has not been carried out.
8g	Survival rate	80%	No plantation carried out.
8h	Water sprinkling on roads to control airborne dust	Yes.	Yes

8i	General remarks of inspecting officer on aesthetic beauty in and around mines area	Aesthetic beauty in and around the lease area is satisfactory apart from normal degradations due to mining operations. the area is having an old 'D'Costa Pit' in the adjacent abandoned area which was having an old mine. This pit is filled with water and it is being used by the local people for irrigation. Apart from this pit, the area is having agricultural fields in the vicinity.
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Compliance of Rule 45:

Sl.No.	Item	Propasals	Actual work	Remarks
9a	Status of submission of Monthly and Annual returns	Annual returns are required to be submitted online before 1st july each year for the preceeding year Monthly returns are required to be submitted online on or before 10th of every month for preceeding month	Annual return submitted online upto 2018-19 monthly return submitted online upto July'19	
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Mining Engineer: Arun Deoras Geologist: Shri V. N. Sant Manager: Nil	Statutory persons appointed as per Rule 55 of MCDR'17. Appointment of manager was done as on the date of inspection.	

9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Area under pits: 0.24 ha Area under waste dump: 0.1 ha Area under infrastructure : 0.012 ha	Area under: Excavation/Pits: 0.5954 ha Area under waste dumps: 0.3259 ha Area under roads: 0.0680 ha Total: 0.9893 ha	Violation of Rule 45 (7)
9d	Scrutiny of Annual return on afforestation	Afforestation: Nil	Correct information furnished.	
9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	Mineral rejects: 1000 T Grade: Below 8% Mn	ROM production: 1104 T Graded Ore production: 930 T Hence, mineral rejects shall be 174 T.	Violation of Rule 45(7)
9f	Scrutiny of Annual return on ROM stock and/or graded ore	ROM: Opening Stock 435 T, Production: 1104 T, Closing Stock: Nil Graded Ore: (a) Below 25% Mn: Opening Stock-0, Production-930 T, Dispatch-0, Closing Stock-930 T (b) 25% to below 35% Mn: Opening Stock-56.74 T, Production-0, Dispatch-0, Closing Stock-56.74 T	For ROM, opening stock has been mentioned incorrect, it should be zero. For graded ore, 56.74 T was reported in below 25% Mn grade in the AR for 2017-18, whereas it is reported in 25% to below 35% in the monthly returns. hence, correct information hasn't been furnished.	Violation of rule 45(7)
9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	Sale Value: 0 (no dispatch) Ex-Mine price: Rs 3600/- per T Cost of production: 0	As no sale has occurred, sale value reported as Nil is correct. Ex-mine price should be reported as latest available ASP published by IBM. Cost of production should have been furnished as production is reported.	Violation of rule 45(7)
9h	Scrutiny of Annual return on fixed assets	Value of fixed Assets: Rs 3/- Apart from this, valuation of land is given as Rs 18 Lakh	incorrect information has been furnished	Violation of rule 45(7)

9k	Scrutiny of Annual return on mining machineries	Dumper: 10 T	Correct information furnished as per the proposals given in the approved Mining plan document.
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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 11(1)	25/11/2019	20/02/2020			
MCDR17	Rule 29	25/11/2019	20/02/2020			
MCDR17	Rule 45(7)(a)	25/11/2019				

Date :

(ASHISH MISHRA)

Indian Bureau of Mines