

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

MCDR INSPECTION REPORT

Nagpur regional office

Mine file No : MAH/BHD/MN-42/NGP L-4

Mine code : 40MSH05007

- (i) Name of the Inspecting : **M017**) **ASHISH MISHRA**
Officer and ID No.
- (ii) Designation : Sr. Asst. Contrl. Mines
- (iii) Accompanying mine : Shri Rajesh Bhattacharya & Others
Official with
Designation
- (iv) Date of Inspection : 09/01/2020
- (v) Prev.inspection date :

PART-I : GENERAL INFORMATION

1. (a) **Mine Name** : **BALAPUR,HAMESHA (4.07 HA)**
- (b) **Registration NO.** : **5711**
- (c) Category : A Fully Mechanised
- (d) Type of Working : Opencast
- (e) Postal address :
State : MAHARASHTRA
District : BHANDARA
Village :
Taluka :
Post office :
Pin Code :
FAX No. :
E-mail :
Phone :
- (f) Police Station :
- (g) First opening date : 28/09/2014
- (h) Weekly day of rest :
2. Address for :
correspondance :
3. (a) Lease Number :
(b) Lease area :
(c) Period of lease :
(d) Date of Expiry :
4. Mineral worked : MANGANESE ORE Main

5. Name and Address of the

Lessee : M/S MOIL LIMITED
MOIL BHAWAN, 1-A, KATOL
ROAD CHHAONI NAGPUR NAGPUR
MAHARASHTRA
Phone:
FAX :

Owner : DEEPANKAR SHOME
1-A, MOIL BHAVAN KATOL ROAD
NAGPUR NAGPUR MAHARASHTRA
Phone:
FAX :

Agent : RAJESH BHATTACHARYA
DONGRI BUZURG MINE BHANDARA
BHANDARA BHANDARA
MAHARASHTRA
Phone:
FAX :

6. Date of approval of Mining :
Plan/Scheme of Mining

PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	Mining Plan document for the period 2016-17 to 2020-21 was approved on 07/06/2017. As per the proposals, total 4 boreholes were proposed to be drilled in the area out of which 3 boreholes were required to be drilled till 2018-19.	Drilling of 3 boreholes is completed. details are as below:- MDB-44 (Vertical) at CH-42, Borehole depth 273 m, Collar RL 347 m MDB-50 (Vertical) at CH-45, Borehole depth 262 m, Collar RL 351 m MDB-55 (Vertical) at CH-42, Borehole depth 223 m, Collar RL 340 m	
1b	Exploration over lease area for geological axis 1 or 2	G-1 & G-2	Lease area is explored laterally under G-1 & G-2 upto 184 mRL. G1: 0.111 ha G2: 1.23 ha Non-mineralized: 2.729 ha Total: 4.07 ha	
1c	Exploration Agencies and Expenditure in lakh rupees during the year	Exploration is proposed to be carried out by MOIL itself. Expenditure is proposed @ Rs 6500/- per m of drilling.	Exploration was carried out by MOIL. Actual expenditure in the exploration upto 2018-19 (3 boreholes) was around Rs 49 Lakhs.	
1d	Balance area to be explored to bring Geological axis in 1 or 2	Nil	Nil	
1e	Balance reserve as on 01/04/20	Balance reserves/resources as on 01.04.2019 are as given in the actual work details:	121- 389375 T 332- 1190704 T Total: 1580079 T	Optimization of pit with present techno economic conditions is limited to 200MRL. hence, reserves below this level have been considered under 332 category of UNFC.

1f	General remarks of inspecting officers on geology, exploration etc	The area has already been explored through 2 boreholes at earlier stages. Further, 4 boreholes were proposed in the area during the period 2016-17 to 2020-21, out of which 3 have already been drilled. Orebody is occurring at deeper levels in the area and presently, the lease is under development phase so as to expose the orebody in the area.
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Development :

Sl.No.	Item	Propasals	Actual work	Remarks
2a	Location of development w.r.t.lease area	2018-19: N2383150 to N2383250 & E363600 to E364000 from 290 MRL to 330 MRL between CH-30- CH-42	2018-19: Development as per the location given in the proposals	
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	Only overburden/was te removal is proposed in the year 2018-19.	There is no top soil in the proposed working area. Further, Dongri Buzurg mine has 4 leases out of which, this lease is on the hangwall side and orebody is occurring at 244 mRL. Thus, presently only development activities are proposed in the area.	
2c	Stripping ratio or ore to OB ratio	Not applicable as no ROM production is proposed	Not applicable	
2d	Quantity of topsoil generation in m3	Nil	Nil	

2e	Quantity of overburden generation in m3	2018-19: 94125 cum	2018-19: Total development from all 4 leases was proposed as 4406289 cum and actual OB/ waste removed was 9007338 T (return for all 4 leases is common). Applying B.D. as 2.5 Tpercum for waste as considered for the mine, actual development was 3602935 cum from all 4 leases.	Proposed development was lower than the proposals due to heavy rainfall in the year 2018-19 which caused water accumulation at lower benches (290 mRL to 310 mRL).
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc			Pit development work is being carried out in the lease area which is satisfactory. Working was proposed in 290 mRL, 300 mRL, 310 mRL, 320 mRL & 330 mRL out of which lower benches could not be worked during the monsoon period due to accumulation of water. The deposit is mainly occurring in the contiguous 46.25ha lease area for which hangwall development work is being done in the instant lease area.

Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	Existing pit (One) is proposed for development work only. no production is proposed from the lease area.	As per the proposals.	
3b	Quantity of ROM mineral production proposed	2018-19: Nil	2018-19: Nil	

3c	Recovery of sailable/usable mineral from ROM production	2018-19: Not Applicable as no ROM production is proposed	2018-19: Nil
3d	Quantity of mineral reject generation	2018-19: Not Applicable as no ROM production is proposed	2018-19: Nil
3e	Grade of mineral rejects generation and threshold value declared.	2018-19: Not Applicable as no ROM production is proposed	2018-19: Nil
3f	Quantity of sub grade mineral generation.	2018-19: Not Applicable as no ROM production is proposed	2018-19: Nil
3g	Grade of sub grade mineral generation	2018-19: Not Applicable as no ROM production is proposed	2018-19: Nil
3h	Manual / Mechanised method adopted for segregating from ROM	2018-19: Not Applicable as no ROM production is proposed	2018-19: Nil
3i	Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects.	2018-19: Not Applicable as no ROM production is proposed	2018-19: Nil
3j	Provision of drilling and blasting in mineral benches	2018-19: Not Applicable as no ROM production is proposed, however, for development work, drilling and blasting is proposed.	2018-19: Drilling and blasting were carried out only for development activities. Drilling is done by 110 mm dia drills and blasting is being done by detonating fuse initiation with cord relay delay detonators and NONEL's using mainly slurry explosive.

3k	Provision of mining machineries in mineral benches	2018-19: Not Applicable as no ROM production is proposed, however, for development work, mechanization is proposed.	2018-19: Being a Category A (Highly Mechanized) Mine, mechanization is proposed for development work in form of DTH drills of 110 mm dia, Dumpers of 35 T and 60 T capacity, Hydraulic excavators of 0.9 cum, 2.5 cum, 3 cum, 4.5 cum & 5.6 cum, Front end loader of 2 cum, Dozer of 335 HP, Water tanker of 28000 ltr capacity alongwith other auxilliary equipments.
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	Bench Height proposed for OB/waste is 10 m	As the Category of the mine is 'A' (highly mechanized mine), bench height proposed is as per the deployment of excavators. Height of bench which is kept at 10 m (maximum) is suitable for highly mechanized working as proposed in the mining plan document.
3m	Total area covered under excavation/pits	As per the approved mining plan document for the period 2016-17 to 2020-21, Existing area under excavation: 1.0 ha Additional area requirements during the plan period: 1.36 ha Total area at the end of plan period: 2.36 ha	As on 31.03.2019, total area under excavation is around 1.5 ha
3n	Ore to OB ratio for the pit/mine during the year.	Not applicable as no ROM production is proposed	Not applicable as no ROM production is proposed

3o	Total area put in use under different heads at the end of year	Total area put to use under different heads at the end of the year 2018-19 is furnished in actual work details:	Area under excavation/pits: 1.50 ha Area under waste dump: 0.60 ha Total area: 2.10 ha	
3p	Production of ROM mineral during the last five year period as applicable	2017-18: Nil 2016-17: Nil 2015-16: Nil 2014-15: Nil 2013-14: Nil	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 Category A mechanized and extent of mechanization is suitable as required for handling the development work that is required to exploit the orebody available in the area at deeper levels (around 244 mRL).

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 available in the proposed working area. No ROM production or generation of mineral rejects is proposed. Only generation and dumping of OB/waste is proposed.	As per the proposals, only OB/Waste was generated which was dumped at non-mineralized land.	

4b	Location of topsoil, OB and mineral reject dumps	One waste dump at location N2383100 to N2383200 & E363600 to E364000 Top Soil: No proposals Mineral rejects: No proposals	One OB/waste dump is available at the proposed location. The land is non-mineralized as per the exploration carried out in the area.
4c	Number of dumps within lease area and outside of lease area	One waste dump within the lease area.	One waste dump within the lease area.
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	Dump was proposed over non-mineralized land outside the pit limits.	As per the proposals.
4e	Number of active and alive dumps.	One OB/Waste dump is active and alive.	As per the proposals.
4f	Number of dead dumps.	Nil	Nil
4g	Number of dumps established.	Nil	Nil
4h	Whether Retaining wall or garland drain all along dumps are there.	No such proposals now as this is a fresh dump proposed in the area.	No
4i	Length of Retaining wall or garland drain all along dumps	Nil	Nil
4j	Number of settling ponds	No such proposals	Nil

4k	Specific comments of inspecting officer on waste dump management	At earlier stages, waste generated was being dumped in the contiguous lease areas due to lease space constraints. thus, no waste dump was available in the area. In the present plan period, new waste dump is proposed and dumping was done within the lease area. Protective measures in form of bunds were made along the toe and garland drain alongwith retaining wall shall be constructed in subsequent proposal periods. Under management of waste dump, 3 terraces at 15 m, 25 m and 30 m are proposed.
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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 backfilling is proposed	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.	The composite lease area (4 leases) is having restrictions due to Railway and residential buildings. Thus, mining from deeper levels beyond 200 mRL shall not be possible through opencast workings. At conceptual stage, the area is proposed for working by underground methods after suitable studies and no backfilling or conversion of pit into water reservoir is proposed.
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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).	To be submitted on or before 30th June every year depicting work done under PMCP in the preceding year	Yes, the report was submitted for the composite lease area (4 leases)	
6b	Area available for rehabilitation (ha) .	No working area is available for reclamation or rehabilitation activities. Only available area is 7.5 m non-mining zone in the southern and eastern part of the lease area having 0.56 ha land over which 2000 saplings are proposed to be planted.	Plantation carried out in the southern part of the area under 7.5 m non-mining zone over 0.1 ha area with 200 saplings.	As the area is under active mining, reclamation or rehabilitation is quite limited. Suitable plantation shall be taken up after maturity of dump or terraces as proposed.

6c	afforestation done (ha).	Afforestation is proposed over 0.56 ha of land with 2000 Nos. of saplings during 5 years proposal period of 2016-17 to 2020-21.	2018-19: 0.1 ha
6d	No. of saplings planted during the year	Afforestation is proposed over 0.56 ha of land with 2000 Nos. of saplings during 5 years proposal period of 2016-17 to 2020-21.	2018-19: 200 saplings
6e	Cumulative no .of plants	2000 saplings upto 2020-21	200 saplings as on 2018-19
6f	Any other method of rehabilitation	No such proposals	Nil
6g	Cost incurred on watch and care during the year	Rs 55000/- for the year 2018-19	Actual expenditure was around Rs 1 Lakh
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	Afforestation is proposed over 0.56 ha of land with 2000 Nos. of saplings during 5 years proposal period of 2016-17 to 2020-21.	For 2018-19: 200 saplings planted over 0.1 ha area in the southern part of the lease area within 7.5 m non-mining zone.
6n	Compliance of rehabilitation of waste land within lease (ii)Area rehabilitation (ha)	Afforestation is proposed over 0.56 ha of land with 2000 Nos. of saplings during 5 years proposal period of 2016-17 to 2020-21.	For 2018-19: 200 saplings planted over 0.1 ha area in the southern part of the lease area within 7.5 m non-mining zone.
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)	Environment monitoring is proposed to be carried out in the core and buffer zone of the composite lease area having 4 leases (one mine of Dongri Buzurg)	Environment monitoring carried out for air, water, noise and ground vibration as per the guidelines. The reports of the environment monitoring were checked and found that all the parameters are within the permissible limits. Hydrological studies have also been carried out in the area.

6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.	PMCP operations for the lease area are satisfactory considering the lease constraints. Plantation was carried out in the southern part of the lease area with 200 saplings over 0.1 ha area. Further plantation is underway to cover entire 7.5 m non-mining zone in the southern and eastern part of the lease area. plantation over dump is proposed to be carried out after maturity. Environment monitoring is also being carried out as per MOEF and CPCB guidelines in this regard.
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Mineral Conservation:

Sl.No.	Item	Propasals	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	2018-19: Not Applicable as no ROM production is proposed	Nil	
7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	2018-19: Not Applicable as no ROM production is proposed	Nil	
7c	Different grade of mineral sorted out at mines.	2018-19: Not Applicable as no ROM production is proposed	Nil	
7d	Any beneficiation process at mines .	2018-19: Not Applicable as no ROM production is proposed	Nil	

7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues	The orebody available in the area at deeper levels (around 244 mRL) and thus, present working in the area is in form of development only to facilitate the production in adjoining lease areas as well as to develop the mineral deposit so as to expose the orebody within the lease area.
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Environment:

Sl.No.	Item	Propasals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	No such proposals	Nil, as no top soil available in the proposed working area	
8b	Concurrent use or storage of topsoil	No such proposals	Nil, as no top soil available in the proposed working area	
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	No top soil available in the proposed working area. No ROM production or generation of mineral rejects is proposed. Only generation and dumping of OB/waste is proposed.	As per the proposals, only OB/Waste was generated which was dumped at non-mineralized land.	
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	
8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	Baseline information given in the mining plan for the area. Additional plantation is proposed as 2000 saplings over 0.56 ha area.	Baseline Information for the land within 10 km radius (1991): Total Area of the Land: 16649.11 ha Forest: 3782.56 ha Irrigated: 4072.5 ha Non-irrigated: 2666.24 Ha Cultivable waste land: 2512.97 ha Area not available for cultivation: 3498.29 Additional plantation carried out: 0.1 ha within the lease area with 200 saplings	
8g	Survival rate	80%	~95%	
8h	Water sprinkling on roads to control airborne dust	Yes	Yes, water sprinkling is being done through 28000 L water tanker deployed in the mine	
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area			Apart from normal degradation due to mining, aesthetic beauty is good in the area. Lessee has done remarkable plantation work for the composite lease area having 4 leases. In the adjoining leases, retaining walls, garland drains are there all along the dumps to avoid any degradation of land due to wash off.

Compliance of Rule 45:

Sl.No.	Item	Propasals	Actual work	Remarks
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9a	Status of submission of Monthly and Annual returns	Annual Returns are required to be submitted online before 1st July of every year for preceding year Monthly returns are required to be submitted online before 10th of every month for preceding month	AR for the composite lease area of 4 leases was submitted online upto 2018-19 MR for the composite lease area of 4 leases was submitted online upto Nov'19	It was advised to file separate returns for all the leases so as to enable evaluation on individual basis.
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Mining Engineer: Shri D. R. Pantawane Geologist: Shri Sudhanshu Chauhan Manager: Shri U. M. Bhujade	Complete information provided	
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Land use details are furnished for composite lease area (4 leases) as Covered under Excavation/Pit s: 35.907 ha Reclaimed/Rehabilitated: 22.365 ha Used for Waste Disposal: 29.581 ha Occupied by plant, building, infrastructure etc: 24.103 ha Other Purposes (BDC/OCG): 11.91 ha	Complete and correct information provided over land use. However, for the lease area, land use is as below: Area under excavation/pits: 1.50 ha Area under waste dump: 0.60 ha Total area: 2.10 ha	
9d	Scrutiny of Annual return on afforestation	Number of saplings planted during the year: 21600 Survival rate: 70%	Complete and correct information furnished for the composite area. For the lease area of 4.07 ha, Plantation carried out is in the southern part of the area under 7.5 m non-mining zone over 0.1 ha area with 200 saplings.	

9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	For the composite area (4 leases): Mineral Rejects generated: 45000 T Grade: 17-18% Mn	Complete and correct information furnished for composite area. For the lease area of 4.07 ha, the section is not applicable as no ROM production was proposed or carried out.
9f	Scrutiny of Annual return on ROM stock and/or graded ore	ROM: Opening and Closing Stocks- Nil, Production: 409049 T Graded Ore: Opening & Closing Stocks, Production, Dispatches for various grades dispatched from the mine have been furnished for composite lease area	Complete and correct information furnished. However, for the lease area of 4.07 ha, the information is Nil as no ROM/graded ore production is proposed or carried out.

- 9g Scrutiny of Annual return on sale value, Ex. Mine price and production cost
- Sale Value: Complete information provided for composite leases (4 leases).
 For grade below 25% Mn- Rs 71518854/-, However, for the lease area of 4.07 ha, the information is Nil as no ROM/graded ore production is proposed or carried out.
 For 25-35% Mn- Rs 1092800621/-,
 For 35-46% Mn- Rs 1142168337/-,
 For Mn 46% and above-Rs 23357338.83/-
 &
 For Dioxide Grade-Rs 456410107/-
 Ex mine Price per T:
 For grade below 25% Mn- Rs 2200/-,
 For 25-35% Mn- Rs 5526.72/-,
 For 35-46% Mn- Rs 15581.45/-,
 For Mn 46% and above-Rs 22820.15/- &
 For Dioxide Grade-Rs 28922.14/-
 Cost of Prod. per T: Rs 3894.23/-
- 9h Scrutiny of Annual return on fixed assets
- Value of fixed assets: Rs 756946970/-
 Apart from this, value of land, machineries, plant and buildings etc. have been furnished alongwith depreciation.
- Complete and correct information has been furnished for composite lease area (4 leases).

9k	Scrutiny of Annual return on mining machineries	Hydraulic Excavators: 0.9 cuM capacity-2 Nos., 4.5 cuM capacity-2 Nos., 3.0 cuM capacity-1No., 2.5 cuM capacity-2 Nos., 5.6 cuM capacity-2 Nos. Dozers: 3 dozers with 335 HP Drill machine: 110 mm dia, 6 Nos. Dumpers: 60 T- 7Nos., 35 T-13 Nos. Water Tanker: 28000 Ltr-1 No. and Explosive Vans and Jeep/Tractor	Complete information furnished as per the extent of mechanization. the machineries are common to all 4 lease areas, hence correct information has been furnished.
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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

Date :

(ASHISH MISHRA)

Indian Bureau of Mines