

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

**MCDR inspection REPORT**

**Bangalore regional office**

**Mine file No :** KNT/BLR/FE/331/BNG

**Mine code :** 30KAR03011

- (i) Name of the Inspecting : **P005** ) **C.PARAMESHWARAN**  
Officer and ID No.
- (ii) Designation : Deputy Controller Mines
- (iii) Accompanying mine : SK. JAIN.JGM, RANA GEOLOGIST,  
Official with  
Designation
- (iv) Date of Inspection : 05/09/2017
- (v) Prev.inspection date : 14/11/2014

**PART-I : GENERAL INFORMATION**

1. (a) **Mine Name** : **DONIMALAI**
- (b) **Registration NO.** : **IBM/270/2011**
- (c) Category : A Fully Mechanised
- (d) Type of Working : Opencast
- (e) Postal address :  
State : KARNATAKA  
District : BELLARY  
Village : DONIMALA TOWNSHIP  
Taluka : SANDUR  
Post office : DONIMALAI TOWNSHIP  
Pin Code : 583118  
FAX No. : 08395-274687  
E-mail : diommining@nmdc.co.in, kior  
Phone : 08395-274649,274624, 94498'
- (f) Police Station : SANDUR
- (g) First opening date : 18/10/1972
- (h) Weekly day of rest : SUN
2. Address for : SRI.SATPATHY, DIRECTOR(PRODUCTION)  
correspondance : NMDC LTD, MASAB TANK, HYDERABAD,  
ANDHRAPRADESH - 500028. P-040- 23538711
3. (a) Lease Number : KAR0211
- (b) Lease area : 608
- (c) Period of lease : 20
- (d) Date of Expiry : 03/11/2008
4. Mineral worked : IRON ORE Main

## 5. Name and Address of the

Lessee : NATIONAL MINERAL DEV. CORPN. LTD  
 10-3-311/A, CASTLE HILLS,  
 MASAB TANK, HYDERABAD  
 TELANGANA  
 Phone:3538706  
 FAX :3538705

Owner : SATPATHY  
 10-3-311/A, KHANIJ BHAVAN,  
 CASTLE HILLS, MASAB TANK,  
 HYDERABAD HYDERABAD ANDHRA  
 PRADESH  
 Phone: 04023538752  
 FAX : 08395274649

Agent : B SAHOO  
 NMDC LIMITED PO DONIMALAI  
 BELLARY KARNATAKA  
 Phone:  
 FAX : 08395274624

## Mining Engineer

Name : S.K.JAIN,Full Time  
 Qualification : BE MINING  
 Appointment/ :  
 Termination date

## Mining Engineer

Name : C.B.P.SINHA,Full Time  
 Qualification : B.E.MINING  
 Appointment/ :  
 Termination date

## Geologist

Name : D.N.SHIVASHANKARAPPA,,Full Time  
 Qualification : M.SC GEOLOGY  
 Appointment/ : 01/12/2008  
 Termination date

6. Date of approval of Mining Plan/Scheme of Mining	:	Renewal under rule 22 MCR1960	05/06/1989
		Mining Scheme rule 12 MCDR1988	25/07/1995
		Renewal under rule 22 MCR1960	29/05/2000
		Mining Scheme rule 12 MCDR1988	20/10/2004
		Modif.approved Mining Scheme	16/03/2007
		Renewal under rule 22 MCR1960	18/08/2008
		Mining Scheme rule 12 MCDR1988	18/09/2012
		MS modif under MCR 1960	17/02/2014
		MP modif under 17(3) MCR 2016	08/09/2016
		MP modif under 17(3) MCR 2016	16/05/2017

## PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

## Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	It was proposed to drill 26 nos of bore holes during the year 2016-17.	Against which 34 nos. of bore holes were drilled to a depth of 1926m respectively.	More than the proposed one.
1b	Exploration over lease area for geological axis 1 or 2	To under take as per G1 axis.	Undertaken as per G1 axis.	Completed.
1c	Exploration Agencies and Expenditure in lakh rupees during the year	By NMDC itself.	2.01 crores to undertake the year 2016-17 exploration.	For the year 2016-17 only.
1d	Balance area to be explored to bring Geological axis in 1 or 2	proposed along the strike length.	So for explored and proved under G1 detailed exploration, 103.44 million tonnes of 65.83%Fe, G2-General exploration -32.63 Mill.tonnes- & G3 - prospecting 14.20 mill.tonnes of resources.	As the deposit running from N-S & dipping downwards, the deposit is established on the lateral extent within the lease area, but the deposits at the depth need to be continued as the deposits are getting depleted.
1e	Balance reserve as on 01/04/20	No proposals.	150.27 Million reserves & resources @ +45%Fe as on 1/4/2017.	After undertaking the exploration lessee added the reserves/ resources.
1f	General remarks of inspecting officers on geology, exploration etc	No proposals.	The deposit is continuing from N-S and dipping E-W at depth.	The exploration is undertaken in the ML area as required to be undertaken and assessing the reserves/ resources to the satisfactory extent.

## Development :

Sl.No.	Item	Proposals	Actual work	Remarks
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2a	Location of development w.r.t. lease area	Proposed in the surface plan and also in the development plan & sections.	Whatever the proposals drawn in the plan and in section are being followed systematically.	Developments are within the ML area as per the locations proposed in the approved document.
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	Separate benches proposed for developing.	Benches being developed, wherever applicable.	Yes it is being undertaken.
2c	Stripping ratio or ore to OB ratio	1:3.81	Proposed one is being maintained.	yes it is being maintained.
2d	Quantity of topsoil generation in m3	nil	negligible quantity would have mixed with the waste development.	At times negligible quantity will be dumped together in the waste dump.
2e	Quantity of overburden generation in m3	6679487 m3/17500000 t	38.304 lakhs tonnes.	reported wrongly in the Data sheet.
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc	SB, BMMX, 2W, 2E, 3W & 3E.	Carrying out as proposed in the approved document.	Work is in progress as proposed.

### Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	Six pits namely SB, BMMX, 2W, 2E, 3W & 3E	Above proposed pits are in operation.	Some location
3b	Quantity of ROM mineral production proposed	6000000t	27.62 LT	within the limit of 6million tonnes.
3c	Recovery of sailable/usable mineral from ROM production	100	100	Yes complete saleable.
3d	Quantity of mineral reject generation	No proposals.	Nil	No rejection.

3e	Grade of mineral rejects generation and threshold value declared.	No proposals.	Nil	NIL
3f	Quantity of sub grade mineral generation.	Proposed for blending with high grade ore.	6748 t at 44.90%Fe.	yes blending procedure is being followed.
3g	Grade of sub grade mineral generation	44.90%Fe.	44.90%Fe.	same as above.
3h	Manual / Mechanised method adopted for segregating from ROM	Mechanized method	As above	Yes mechanized.
3i	Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects.	No proposals.	Nil	Dry process system of beneficiation is being carried out.
3j	Provision of drilling and blasting in mineral benches	Proposed for drilling & blasting.	Drilling & blasting operation are being carried out in the mine for excavation and production.	Yes drill machines are used to drill the holes and high explosives are used to blast the holes.
3k	Provision of mining machineries in mineral benches	yes provisions given.	Machineries are used in mineral benches.	Used in mineral benches.
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	12m bench height & 12 to 15m width in hard and soft strata.	Proposed height & width are being maintained, except in BMMX pit, where it is unsystematic.	In BMMX pit it is found unsystematic.
3m	Total area covered under excavation/pits	214.90 ha.	214.90 ha.	same as above.
3n	Ore to OB ratio for the pit/mine during the year.	1:2.74	1:1.44	It is reduced from 2.74 to 1.44, not matching at present, still six months production left over to get the actual value.

3o	Total area put in use under different heads at the end of year	462.65 ha	462.65 ha during the year 2017-18.	As above.
3p	Production of ROM mineral during the last five year period as applicable	2012-13:4800000 , 2013-14: 5000000, 2014-15: 5000000, 2015-16:4500000, 2016-17:6000000 ( in tonnes)	2012-13: 4330000, 2013-14: 5313000, 2014-15: 5249000, 2015-16:6031000, 2016-17:6009206 ( in tonnes)	Indicated as above as per the document.
3q	General remarks of inspecting officers on method of mining etc.	Proposed for systematic mining.	Working all the pits, but the one indicated as BMMX not systematic.	yes as indicated, violation will be issued.

## Solid Waste Management - Dumping:

Sl.No.	Item	Propasals	Actual work	Remarks
4a	Separate dumping of topsoil, OB and mineral rejects (Rule 32,33)	yes proposals drawn	yes it is being followed in the mine	yes it is followed.
4b	Location of topsoil, OB and mineral reject dumps	No proposal for top soil, OB waste for north block on the south of 3E deposits, for south block on the east of south workings.	As proposed in the approved document is being followed.	Yes it is being followed.
4c	Number of dumps within lease area and outside of lease area	within the ML there are 08 active & inactive dumps and outside, two extension of inactive dumps from the ML areas and not exclusively outside the ML areas.	Three active dumps within the ML areas. and five inactive dumps within the ML areas. No outside the ML areas.	As stated above is appropriate.

4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	Considering the UPL, waste dumps were started and is being carried out in the M1 area.	For the present it is found to be appropriate, but in the future mining, things may not be suitable, possible to change.	In future, the waste dumps in the northern side may be required to be moved away from the UPL.
4e	Number of active and alive dumps.	Three active and alive dumps.	Same as above.	yes stated above.
4f	Number of dead dumps.	Five inactive and dead dumps.	yes five inactive dead dump present in the area.	Out of which in two dumps, some portion of the waste is gone outside the lease.
4g	Number of dumps established.	Dead dumps are (five) which are established	Above five dumps are stabilized and partly some part it is broken.	yes stabilized and some small portion broken.
4h	Whether Retaining wall or garland drain all along dumps are there.	yes retaining wall and the garland drain is provided around the waste dumps.	some portion of the dumps are not given with retaining wall & the garland..	Some portion not given, violation should be issued.
4i	Length of Retaining wall or garland drain all along dumps	4400 + 1465 m of retaining wall and 5520m garland drain	3608+234m of retaining wall as per the report and 4692m of garland drain undertaken as on date.	As reported by the lessee company.
4j	Number of settling ponds	six nos.	Nil as on date.	Nil only.
4k	Specific comments of inspecting officer on waste dump management	Proposals drawn for systematic waste dump management	The lessee company undertaken terracing method of waste dumping, but not maintained, things are getting disturbed, leading to erosions.	Yes as observed in the site inspection has been given.

#### Solid Waste Management - Backfilling:

Sl.No.	Item	Proposals	Actual work	Remarks
5a	Status of part or full extraction of mineral from mined out area before starting backfilling.	No proposals drawn.	No back filling in the mine, since there is no proposals.	Yes no proposals in the approved mining plan.
5b	Area under backfilling of mined out area	No proposals.	nil	Yes no work in back filling.

5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	No proposals in the current financial period.	Yes no work in the back filling.	No work in back filling.
5d	Total area fully reclaimed and rehabilitated	No proposals.	8.03 ha in the centre portion of the ML area as per the surface plan.	As reported.
5e	General remarks of inspecting officers on backfilling and reclamation etc.	No proposals for the current year.	Other than the area indicated above , no other work in back filling.	Presently no back filling in the mined out area.

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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).	yes submitted	yes submitted correctly.	yes appropriate.
6b	Area available for rehabilitation (ha) .	No area is available.	Yes as above.	No change.
6c	afforestation done (ha).	No proposals	Nil	nil
6d	No. of saplings planted during the year	No Proposals	Nil	None.
6e	Cumulative no .of plants	No proposals	nil	none
6f	Any other method of rehabilitation	No proposals.	nil	nil
6g	Cost incurred on watch and care during the year	no proposals.	nil	nil
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling ( Lx B x D	No proposals.	nil	nil



6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	No proposals	Nil	nil
6j	Compliance on reclamation and rehabilitation by backfilling (iii) Afforestation on backfilled area	No proposals	Nil	Nil
6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	No proposals	Nil	Nil
6l	Compliance on reclamation and rehabilitation by backfilling (v) any other specific means.	No proposals	Nil	None.
6m	Compliance of rehabilitation of waste land within lease (i) afforestation	No proposals	Nil	Nil
6n	Compliance of rehabilitation of waste land within lease (ii) Area rehabilitation (ha)	No proposals.	Nil	Nil
6o	Compliance of rehabilitation of waste land within lease (iii) Method of rehabilitation	No proposals	Nil	Nil
6p	Compliance of environmental monitoring (core zone and buffer zone)	No proposals.	Nil	Nil

6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.	No proposals.	Yes the mine is having still potential and the reserves/ resources to produce and the PMCP stage is not appropriate at this stage.	Need to carry out systematically to understand the deposits and plan for future operations & consider the PMCP.
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### Mineral Conservation:

Sl.No.	Item	Proposals	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	No proposals.	No sorting of any sort of minerals.	Whatever is produced from the mine is being sent to the plant for crushing, except the waste materials.
7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	Sorting mainly on segregating the waste through mechanical means. also fines and the lumps.	yes it is followed.	yes mechanical means of sorting of waste is followed.
7c	Different grade of mineral sorted out at mines.	Lump Ore : Fe 60.00 - 65.50 % Fine Ore : Fe =56 -62 %	Lump Ore : Fe 60.00 - 65.50 % Fine Ore : Fe =56 -62 %	As above.
7d	Any beneficiation process at mines .	Yes proposed for wet screening in the plant.	yes it is followed in the screening plant.	It is followed in the plant.
7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues	Proposals made for systematic operations, including the beneficiation.	It is followed, but in the pit, selective mining is being adopted which is not proposed.	as above.

### Environment:

Sl.No.	Item	Proposals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	No top soil proposals.	No top soil encountered to remove.	Nothing to preserve.

8b	Concurrent use or storage of topsoil	No proposals.	Nil	nil
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	Proposed for separate dumps.	yes it is followed as and when required.	As reported above.
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	No proposals.	Not arisen such situations.	nil
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	No pit and dump is proposed for stabilization	No pit and dump is proposed for stabilization	yes as above.
8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	yes proposed.	Within lease area=184236 Outside lease area=247500	as above.
8g	Survival rate	proposals made.	Within lease 65 % and outside lease area =50 %	as above.
8h	Water sprinkling on roads to control airborne dust	yes proposed for water sprinkling.	water sprinkling adopted.	yes adopted.
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area	proposals made.	Within the lease need to improve, compared to outside lease.	Inside lease is required to improve.

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Compliance of Rule 45:

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Sl.No.	Item	Proposals	Actual work	Remarks
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9a	Status of submission of Monthly and Annual returns	Submitted monthly and the annual returns for the year 2016-17 as per the format.	All the entries and the information were furnished appropriately.	yes all the information furnished in the format are found to be correct.
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	S/Shri. B. Sahoo GM, S.K. Jain, JGM-DIOM, Suraj Kumar Sr. Mgr, Gurucharan Singh JGM(geology), DIOM.	S/Shri. B. Sahoo GM, S.K. Jain, JGM-DIOM, Suraj Kumar Sr. Mgr, Gurucharan Singh JGM(geology), DIOM. all were present.	As per the returns information, all were present & working in their respective mine.
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Covered under current OC working=206.87 ha, Recl & reha=8.03ha, waste disposal=116.01 ha, plant, buildings residential buidings etc.,=27.50ha & other purpose like afforestation=62.12 ha, , green belt=13.42 ha, tailings dam =13.15 ha, & unused area=150.44 ha.	The above land use pattern are present in the ML area and are found to be correct.	Indicated area found to be correct.
9d	Scrutiny of Annual return on afforestation	62.12 ha area is allotted for afforestation.	It is reported that during the year 2016-17=18236 nos of plantation done within the lease area, outside is 247500 nos. and survival rate is 65 % & 50% respectively.	the reported plantation within & outside ML area are found to be present in the colony, mining areas, dumps etc.
9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	Nil generation of mineral rejects and the grade is indicated as Fe=23.25%, Sio2=44.56% & Al2O3=5.73%	The above graded rejects are being dumped in the waste dump only.	No such mineral rejects are stacked, all such materails are being dumped in the waste.

9f	Scrutiny of Annual return on ROM stock and/or graded ore	6009206 tonnes of ore	whatever the ore is getting from the mine as ROM are taken to the crusher plant for crushing and screening and for further operations.	That is the method adopted in the mine.
9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	Rs.2326/t of +62-<65%Fe lumps, Rs. 2635/t & Rs. 2541/t of +65%Fe to & above lumps, Rs. 1925.50/t of 60% to <62%Fe. Fines of 60% to <62%Fe=Rs. 1879/t, Fines of 58 to <60%Fe=Rs. 1754/t. Fines 55 to <58%Fe=Rs. 1550/t. 62-<65%Fe=Rs. 1558.90/t. 55-58%Fe=Rs. 1433/t, <55%Fe=Rs. 1550/t. +65%fe>=no	Different grades of fines and the lumps are varies in price, which is reported accordingly.	Things reported by the lessee company is final.
9h	Scrutiny of Annual return on fixed assets	Value of fixed assets is in rs. 3373950709, in respect, beneficiation plant, mine workshop, power & water installation. depreciation on fixed assets= in rRs. 292588461/-	Under the value of the FA, combined name of the mine is taken, including Kumaraswamy.	none.

9k	Scrutiny of Annual return on mining machineries	All the machineries details furnished in the column, Shovel Hydraulic, front end loader, back hoe, blast host drill, air compressor, dumper, water tanker, dozer, motor grader, crane & other non electric machineries.	All the machineries are under use in the mine and in the other plant area for different purposes.	Yes as above the machineries are underuse.
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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)	04/06/2018			

**Date :**

**(C.PARAMESHWARAN)**

Indian Bureau of Mines