

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

MCDR INSPECTION REPORT

Bhubaneshwar regional office

Mine file No : ORI/IRON/SNG/MCDR-9/BBS

Mine code : 30ORI13019

- (i) Name of the Inspecting : **RAM**) **RAMKISHAN R**
Officer and ID No.
- (ii) Designation : Sr. Asst. Contrl. Mines
- (iii) Accompanying mine : Shri Kailash Kumar Pradhan, Manager, Shri B N Mohanty
Official with
Designation
- (iv) Date of Inspection : 07/10/2017
- (v) Prev.inspection date : 04/03/2016

PART-I : GENERAL INFORMATION

1. (a) **Mine Name** : **RAIKELA**
- (b) **Registration NO.** : **IBM/6072/2011**
- (c) Category : A Other than Fully Mech.
- (d) Type of Working : Opencast
- (e) Postal address
- State : ORISSA
- District : SUNDARGARH
- Village : RAIKELA
- Taluka : BONAI
- Post office : DENGULA
- Pin Code :
- FAX No. : 06767-275631
- E-mail : neraikelamines@yahoo.com
- Phone : 06767-275321
- (f) Police Station : Koira
- (g) First opening date : 21/12/1983
- (h) Weekly day of rest : SAT
2. Address for : VILL. RAIKELA, PO. DENGULA
correspondance VIA. KOIRA, DIST. SUNDARGARH
ORISSA, PIN-770048
3. (a) Lease Number : ORI0136
- (b) Lease area : 45.93
- (c) Period of lease : 20
- (d) Date of Expiry : 20/12/2023
4. Mineral worked : IRON ORE Main

5. Name and Address of the

Lessee : M/S NATIONAL ENTERPRISES
 PO.BOX 44 BARBIL- 758035
 KEONJHAR ORISSA
 Phone:75321
 FAX :75631

Owner : NATIONAL ENTERPRISES
 PO BOX :44 BARBIL KEONJHAR
 ORISSA
 Phone: 06767-75321
 FAX : 06767-75631

Mining Engineer

Name : SHI SOUVIK MISHRA,Full Time
 Qualification : B TECH MINING
 Appointment/ : 10/11/2017
 Termination date

Geologist

Name : SHRI BINOD MOHANTY,Full Time
 Qualification : M.Sc.(Geology)
 Appointment/ : 18/11/2002
 Termination date

Manager

Name : SHRI KAILASH KUMAR PRADHAN
 Qualification : Diploma (Mining)
 Appointment/ : 02/05/2015
 Termination date

6. Date of approval of Mining	:	Renewal under rule 22 MCR1960	26/05/2005
Plan/Scheme of Mining		Modif.of approved Mining Plan	15/02/2008
		Mining Scheme rule 12 MCDR1988	04/01/2010
		Mining Scheme rule 12 MCDR1988	12/04/2013
		Modif.approved Mining Scheme	02/06/2015

PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	No such proposal in the approved documnet, however 5 boreholes were proposed for the year 2016-17.	7 boreholes were drilled.	boreholes drilled more than proposal.
1b	Exploration over lease area for geological axis 1 or 2	No such proposal.	8 nos of boreholes were drilled for the year 2016-17.	Nil.
1c	Exploration Agencies and Expenditure in lakh rupees during the year	M/s Geo exploration India Ltd.	Rs 47,42,000.00 inccurred.	Nil.
1d	Balance area to be explored to bring Geological axis in 1 or 2	No such proposal in the approved documnet.	31.655 ha is explored under G1 level.	total lease area is short by 13.565 ha in the field.
1e	Balance reserve as on 01/04/20	as per pparoved document on 02.06.2015 the iron ore reserves are 2.488 million tonnes, and resources are 4.17 million tonnes as on 01.04.2015.	After depletion and addition of reserves over period of time the remaining reserves of iron ore are 1.488 million tonnes and resources are 4.17 million tonnes as on 01.04.2017.	Total reserves and resources of iron ore area 5.658 million tonnes.
1f	General remarks of inspecting officers on geology, exploration etc	No coomets to offer.	complete area under surface right acquired explored under G1 level.	

Development :

Sl.No.	Item	Proposals	Actual work	Remarks
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2a	Location of development w.r.t.lease area	One pit called Top pit-A, 2420946 N & 2420746N	One pit called Top pit-A, 2420946 N & 2420746N	Nil.
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	No top soil generation. seperate benches in over burden and mineral proposed of 6 m height.	No top soil generated. seperate benches in overburden and mineral are maintained of 6 m height.	Nil.
2c	Stripping ratio or ore to OB ratio	1:0.07 t:cu.m	1:0.04 t:cu.m.	Variation in stripping ratio is due to irregular nature of ore deposit.
2d	Quantity of topsoil generation in m3	No proposal	Nil	
2e	Quantity of overburden generation in m3	38655 cu.m.	20790 cu.m.	variation is due to irregular nature of ore deposit.
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc	No comments to offer.	Development is carried out in Top pit-A which is proposed for the year 2016-17.	Nil.

Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	1 pit called Top Pit-A	exploiation is from Top pit-A	Nil.
3b	Quantity of ROM mineral production proposed	0.5 million tonnes.	0.499 million tonnes	Nil.
3c	Recovery of sailable/usable mineral from ROM production	90%	90%	Nil.
3d	Quantity of mineral reject generation	No proposal	Nil	

3e	Grade of mineral rejects generation and threshold value declared.	Nil.	Nil.	
3f	Quantity of sub grade mineral generation.	106605 tonnes	12991 tonnes	blended with ROM
3g	Grade of sub grade mineral generation	+45-55% Fe	+45-55% Fe	As per proposal.
3h	Manual / Mechanised method adopted for segregating from ROM	Mechanised	Mechanised	As per proposal.
3i	Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects.	No proposal.	Nil	
3j	Provision of drilling and blasting in mineral benches	drilling is propped by 110 mm dia holes and blasting is propped by electric delay detonators.	drilling is carried out by 110 mm dia holes and blasting is carried out by electric delay detonators.	Nil.
3k	Provision of mining machineries in mineral benches	Excavator: 1.8 cu.m. tipper: 35 tonnes, drill machine: 110 mm dia.	Excavator: 1.8 cu.m. tipper: 35 tonnes, drill machine: 110 mm dia.	Nil
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	6 m height benches in overburden and mineral	6 m height benches in overburden and mineral maintained.	Nil.

3m	Total area covered under excavation/pits	Toatal area covered under excvaton till end of the review period i.e. upto 2017-18 is 19.67 ha	Total area covered under excvaton for the year 2016-17 is 19.42 ha	Nil.
3n	Ore to OB ratio for the pit/mine during the year.	1:0.07 t:cu.m.	1:0.04 t:cu.m.	variation is due to irregular nature of deposit.
3o	Total area put in use under different heads at the end of year	Total area put under different heads till the end of the review period i.e. 2017-18 is : 28.222 ha, excavation: 19.67 ha, dumps: 1.96 ha, roads&infra: 1.03 ha, others: 5.562 ha	Total area utilised for the year 2016-17 is : 27.472 ha, excavation: 19.42 ha, dumps: 1.96 ha, roads&infra: 1.03 ha, others: 5.062 ha	Nil.
3p	Production of ROM mineral during the last five year period as applicable	2012-13: 502200 tonnes 2013-14: 499860 tonnes 2014-15: 499770 tonnes 2015-16: 500040 tonnes 2016-17: 500049 tonnes	2012-13: 497112 tonnes 2013-14: 439646 tonnes 2014-15: 499700 tonnes 2015-16: 499500 tonnes 2016-17: 499550 tonnes	Nil.
3q	General remarks of inspecting officers on method of mining etc.	No cooments to offer	production is carried out from Top Pit-A for the year 2016-17.	Nil.

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)	No top soil generation is proposed. one waste dump and one mineral reject dump is proposed.	No top soil is generated. one waste dump and one mineral reject dump is maintained.	Nil.
4b	Location of topsoil, OB and mineral reject dumps	One waste dump and mineral reject dump (subgrade) is proposed in the eastern side of lease area.	One waste dump and mineral reject dump(subgrade) is maintained in the eastern side of lease area.	Nil.
4c	Number of dumps within lease area and outside of lease area	one dump within lease area	one dump within lease area is maintained	Nil.
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	outside of UPL	outside of UPL	Nil.
4e	Number of active and alive dumps.	one waste dump is proposed	One waste dump is maintained.	Nil.
4f	Number of dead dumps.	No proposal.	Nil	Nil.
4g	Number of dumps established.	No proposal	Nil	
4h	Whether Retaining wall or garland drain all along dumps are there.	No such proposal for the year 2016-17.	Maintained.	Nil.
4i	Length of Retaining wall or garland drain all along dumps	No such proposal for the year 2016-17.	All around the dumps retaining wall and garlandr drain maintained.	Nil.
4j	Number of settling ponds	No such proposal.	One settling pond maintained.	Nil.
4k	Specific comments of inspecting officer on waste dump management	No coomets to offer.	retaining wall constrcutued around the dump needs to be maintained from damages.	Nil.

Sl.No.	Item	Propasals	Actual work	Remarks
5a	Status of part or full extraction of mineral from mined out area before starting backfilling.	No proposal	Nil	Nil.
5b	Area under backfilling of mined out area	No proposal	Nil	
5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	No proposal	Nil	
5d	Total area fully reclaimed and rehabilitated	No proposal	Nil	
5e	General remarks of inspecting officers on backfilling and reclamation etc.	No cooments to offer.	Area not matured for backfilling	Nil.

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).	submitted	submitted	submitted within stipulated time period.
6b	Area available for rehabilitation (ha) .	1.7 Ha	0.835 ha proposed during the year 2016-17 for planation and carried out.	Nil.
6c	afforestation done (ha).	0.835 ha proposed during the year 2016-17.	0.835 ha carried out.	Nil.
6d	No. of saplings planted during the year	1156 nos.	1156 nos	As per proposal.

6e	Cumulative no .of plants	No such proposal.	39750 nos.	Nil
6f	Any other method of rehabilitation	No proposal	Nil	
6g	Cost incurred on watch and care during the year	Rs.10000	Rs.10000	
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (Lx B x D	No proposal	Nil	
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	No proposal	Nil	
6j	Compliance on reclamation and rehabilitation by backfilling (iii)Afforestati on on backfilled area	No proposal	Nil	
6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	No proposal	Nil	
6l	Compliance on reclamation and rehabilitation by backfilling (v)any other specific means.	No proposal	Nil	
6m	Compliance of rehabilitation of waste land within lease (i)afforestation	800 nos plantation	800 nos plantation carried out.	

6n	Compliance of rehabilitation of waste land within lease (ii)Area rehabilitation (ha)	0.5 ha	0.5 ha	
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)	quarterly monitoring of environmental parameters is proposed.	quarterly monitoring of environmental parameters is carried out.	Nil.
6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.	No comments to offer.	Area not matured for reclamation and rehabilitation.	Nil.

Mineral Conservation:

Sl.No.	Item	Propasals	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	Yes proposed	carried out.	Nil.
7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	Mechanical	mechanical	
7c	Different grade of mineral sorted out at mines.	+45-55%, +55-58%, +58-60%, +60-62%, 62-65% Fe	+45-55%, +55-58%, +58-60%, +60-62%, 62-65% Fe	Nil.
7d	Any beneficiation process at mines	No proposal	Nil	Only dry screening is carried out.

7e General remarks of inspecting officer on Mineral conservation and beneficiation issues

No comments to offer.

dry screening is carried out to segregate lumps and fines from ROM.

Environment:

Sl.No.	Item	Propasals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	No top soil generation is proposed.	No top soil is generated.	Nil.
8b	Concurrent use or storage of topsoil	No porposal.	Nil	No generation of top soil.
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	seperate dumps for over burden, mineral rejects and fines proposed.	seperate dumps for over burden, mineral rejects and fines proposed.	Nil.
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	No proposal	Nil	Area not matured for reclamation and rehabilitation.
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	No proposal.	Nil	

8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	No such proposal.	39750 nos of planation carried out	
8g	Survival rate	No proposal.	60%	
8h	Water sprinkling on roads to control airborne dust	Water sprinkling is prosed.	water sprinkling is carried out to reduce airborne dust.	
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area	No comments to offer.	plantation may needs to be improved along safety zone.	Nil.

Compliance of Rule 45:

Sl.No.	Item	Propasals	Actual work	Remarks
9a	Status of submission of Monthly and Annual returns	Submitted	Submitted	Submitted with in stipulated time period.
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Graduate Mining Engineer: 2, Geologist: 1, Surveyor: 1	Graduate Mining Engineer: 1, Geologist: 1, Surveyor: 1	
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	pits: 19.42 ha, dumps: 1.96 ha, infrastructure : 1.030 ha, others: 5.062 ha	found to be in order.	
9d	Scrutiny of Annual return on afforestation	5000 nos	1156 nos	

9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	0 tonnes.	found to be in order.	
9f	Scrutiny of Annual return on ROM stock and/or graded ore	ROM production: 499550 tonnes, stock: 0 tonnes.	found to be in order.	
9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	Ex mine price is Rs: 1873.37 +60-62% Fe	Found to be in order.	Nil.
9h	Scrutiny of Annual return on fixed assets	fixed assets: Rs. 167580243	Found to be in order.	Nil.
9k	Scrutiny of Annual return on mining machineries	Excavator: 0.9 cu.m. 4 nos, dumpers: 15 tonnes, 6 nos. front end loader: 1.9 cu.m 2 nos.	All mining machineries furnished in the AR are in order.	Nil.

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
Rule 11(1)	17/10/2017		
MCDR17 Rule 54(b)	17/10/2017		
MCDR17 Rule 55(1)(3)	17/10/2017		

Date :

(RAMKISHAN R)

Indian Bureau of Mines