

**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 : **AKP**) **ASHOK KUMAR PANY**
Officer and ID No.
- (ii) Designation : Assistant Mining Engineer
- (iii) Accompanying mine : **SHRI KAILASH KUMAR PRADHAN, MINES MANAGER**
Official with
Designation
- (iv) Date of Inspection : 23/09/2021
- (v) Prev.inspection date : 01/01/2021

PART-I : GENERAL INFORMATION

1. (a) **Mine Name** : **RAIKELA**
- (b) **Registration NO.** : **IBM/6072/2011**
- (c) Category : A Fully Mechanised
- (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 : gapl_sponge@yahoo.co.in
- Phone : 06767-275686
- (f) Police Station : Koira
- (g) First opening date : 21/12/1983
- (h) Weekly day of rest : SUN
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 : 50
- (d) Date of Expiry : 20/12/2033
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:06767-275686
 FAX :06767-275631

Owner : NATIONAL ENTERPRISES
 PO BOX :44 BARBIL KEONJHAR
 ORISSA
 Phone: 06767-275686
 FAX : 06767-275631

Mining Engineer

Name : SHRI RUDRA MOHAN NAYAK,Full Time
 Qualification : DEGREE IN MINING (AMIE)
 Appointment/ : 14/08/2021
 Termination date

Geologist

Name : SHRI ADITYA KUMAR MOHANTA,Full Time
 Qualification : M TECH APPLIED GEOLOGY
 Appointment/ : 18/10/2020
 Termination date

Manager

Name : SHRI KAILASH KUMAR PRADHAN
 Qualification : AMIE (MINING) & FCC
 Appointment/ : 01/09/2014
 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
		MP review under 17(1) MCR 2016	10/11/2017
		Modif.approved Mining Scheme	07/01/2020

PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	During previous year i.e 2019-20 no boreholes proposed	Nil	
1b	Exploration over lease area for geological axis 1 or 2	During the year 2020-21, 3 Nos. of Boreholes proposed	3 Nos.	
1c	Exploration Agencies and Expenditure in lakh rupees during the year	Not specified	M/s Geomining Service and expenditure 2.92 Lakh	
1d	Balance area to be explored to bring Geological axis in 1 or 2	NA	As per Mod. Review of MP approved on 07.01.2020 the unexplored area is 13.565 ha	
1e	Balance reserve as on 01/04/20	As per the approved Mod. Rev the Reserve and resource position as on 01.11.2019 is:- Reserve-10114108 tonne Resource-3592002 tonne	The updated reserve and resource as on 31.03.2021 after depleting production:- Reserve-9292118 tonne Resource-3592002 tonne	
1f	General remarks of inspecting officers on geology, exploration etc			Exploration carried out as per proposal

Development :

Sl.No.	Item	Proposals	Actual work	Remarks
2a	Location of development w.r.t.lease area	Top A quarry and Bottom-B quarry	Top A quarry and Bottom-B quarry	

2c	Stripping ratio or ore to OB ratio	1:0.51	1:0.16	
2d	Quantity of topsoil generation in m3	Nil	Nil	
2e	Quantity of overburden generation in m3	170226 Cum	111500 Cum	
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc			The mining operation was carried out by opencast method.

Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	Two pit - Top-A quarry & Bottom-B quarry	Two pit - Top-A quarry & Bottom-B quarry	
3b	Quantity of ROM mineral production proposed	1000000 Tonne	499260 Tonne	Less production due to unavailability of EC for enhance quantity
3c	Recovery of sailable/usable mineral from ROM production	900000 Tonne	185600 Tonne	
3d	Quantity of mineral reject generation	100000 Tonne	313660 tonne	Violation letter issued to lessee for variation vide letter dated 30.09.2021.
3e	Grade of mineral rejects generation and threshold value declared.	Iron ore having Fe% below 55% and threshold value 45%	Iron ore having Fe% below 55% and threshold value 45%	
3f	Quantity of sub grade mineral generation.	The same includes in mineral reject	NA	

3g	Grade of sub grade mineral generation	The same includes in mineral reject	NA
3h	Manual / Mechanised method adopted for segregating from ROM	Mechanized	Mechanised
3i	Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects.	Nil	Nil
3j	Provision of drilling and blasting in mineral benches	Deep hole drilling and blasting	Deep hole drilling and blasting
3k	Provision of mining machineries in mineral benches	Rock Drill 100mm, Excavator-1.4Cum, Dumper-25tonne	Rock Drill 100mm, Excavator-1.4Cum, Dumper-25tonne
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	The bench height and width are proposed as 6 m and 8 m respectively	The bench designed as machineris deployed.
3m	Total area covered under excavation/pits	The total area put to use during the plan period is 21.42 ha.	19.56 ha
3n	Ore to OB ratio for the pit/mine during the year.	1:0.51	1:0.22
3o	Total area put in use under different heads at the end of year	The total area put to use during the plan period is 30.550 ha	28.112 ha

3p	Production of ROM mineral during the last five year period as applicable	2016-17:500049 Tonne 2017-18:500040 Tonne 2018-19: 500000 Tonne 2019-20: 500000 Tonne 2020-21:1000000 Tonne	2016-17:499500 Tonne 2017-18:499550Tonne 2018-19: 50000 Tonne 2019-20: 499961 Tonne 2020-21:499260Tonne	
3q	General remarks of inspecting officers on method of mining etc.			The mining operation has been carried out by opencast method.

Solid Waste Management - Dumping:

Sl.No.	Item	Propasals	Actual work	Remarks
4a	Separate dumping of topsoil, OB and mineral rejects (Rule 32,33)	Separate dumping of Ob and mineral reject proposed. No proposal of generation of top soil.	Separate dumping carried out	
4b	Location of topsoil, OB and mineral reject dumps	OB Dump- North eastern part of the ML area Mineral reject- South part of lease area	OB Dump- North eastern part of the ML area Mineral reject- South part of lease area	
4c	Number of dumps within lease area and outside of lease area	One dump within lease area and no dumps outside	One dump within lease area and no dumps outside	
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	E31282 to E312901 N2420836 to N2420971	E31282 to E312901 N2420836 to N2420971	
4e	Number of active and alive dumps.	One	One	
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.	Proposed	constructed	
4i	Length of Retaining wall or garland drain all along dumps	526 m	266 m	
4j	Number of settling ponds	01 settling pond proposed for maintenance and de-silting	carried out	
4k	Specific comments of inspecting officer on waste dump management			The terrace height of waste dump-A is not maintained as per proposal in the north side near boundary pillar BP-8 for which violation issued vide letter dated 30.09.2021

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.	Nil	Nil	No area matured for backfilling
5b	Area under backfilling of mined out area	Nil	Nil	No area matured for backfilling
5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	Nil	Nil	No area matured for backfilling

5d	Total area fully reclaimed and rehabilitated	Nil	Nil	No area matured for rehabilitation
5e	General remarks of inspecting officers on backfilling and reclamation etc.			No area matured for backfilling/reclamation.

Progressive Mine Closure Plan:

Sl.No.	Item	Proposals	Actual work	Remarks
6a	Whether Annual report on PMCP submitted on time and correctly. Rule 23 E(2).	To be submitted on or before 1st July	Submitted	
6b	Area available for rehabilitation (ha) .	Nil	Nil	No area matured
6c	afforestation done (ha).	0.5 ha	0.5 ha	
6d	No. of saplings planted during the year	1250 Nos.	5000 Nos.	
6e	Cumulative no .of plants	NA	29748 Nos.	
6f	Any other method of rehabilitation	NA	NA	
6g	Cost incurred on watch and care during the year	1 Lakh	3.5 Lakh	
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (Lx B x D	Nil	Nil	Area not mature for backfilling

6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	Nil	Nil	No area matured for backfilling
6j	Compliance on reclamation and rehabilitation by backfilling (iii)Afforestation on backfilled area	Nil	Nil	No area matured for backfilling
6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	Nil	Nil	
6l	Compliance on reclamation and rehabilitation by backfilling (v)any other specific means.	NA	NA	
6m	Compliance of rehabilitation of waste land within lease (i)afforestation	NA	NA	
6n	Compliance of rehabilitation of waste land within lease (ii)Area rehabilitation (ha)	NA	NA	
6o	Compliance of rehabilitation of waste land within lease (iii)Method of rehabilitation	NA	NA	

6p	Compliance of environmental monitoring (core zone and buffer zone)	Monitoring of Air, water, noise etc proposed	Carried out	
6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.			The progressive closure operation has been carried out as per proposal.

Mineral Conservation:

Sl.No.	Item	Propasals	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	Grade wise sorting within lease area	Grade wise sorting within lease area	
7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	Mechanical	Mechanical	
7c	Different grade of mineral sorted out at mines.	Lump +58% Fines +45% to 58%	Lump +58% Fines +45% to 58%	
7d	Any beneficiation process at mines .	Nil	Nil	
7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues			No mineral beneficiation plant exists within lease area. Only crossing and screening of ore carried out.

Environment:

Sl.No.	Item	Propasals	Actual work	Remarks
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8a	Separate removal and utilization of topsoil (Rule 32)	No generation of top soil proposed	Nil	
8b	Concurrent use or storage of topsoil	NA	NA	
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	Separate dumping of OB/waste and mineral reject proposed.	Separate dumping of OB/waste and mineral reject carried out as per proposal	
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	No proposal	Nil	Area not matured.
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	NA	Nil	Area not matured
8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	1250 Nos. of additional plantation proposed.	5000 nos. of sapling plantaed during the year.	
8g	Survival rate	NA	50%	
8h	Water sprinkling on roads to control airborne dust	water sprinkiling on road proposed.	Carried out.	
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area			The aesthetic beauty maintained in mines.

Compliance of Rule 45:

Sl.No.	Item	Propasals	Actual work	Remarks
9a	Status of submission of Monthly and Annual returns	NA	The monthly and anual return submitted	
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Mining Engineer-01 Geologist-01 Manager-01	Mining Engineer, Manager and Geologist apointed in the mine.	
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	The area under mining-20.12 ha Reclaimed area- 0 ha Area under dump-1.96 ha	The area under mining-20.12 ha Reclaimed area- 0 ha Area under dump-1.96 ha	
9d	Scrutiny of Annual return on afforestation	5000 Nos.	5000 Nos.	
9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	Mineral reject is zero	Mineral reject is zero, However, 313660 tonne subgrade (-55%) ore fines generated.	Violation has been issued for excess generation of subgrade ore.
9f	Scrutiny of Annual return on ROM stock and/or graded ore	ROM stock is zero	ROM stock is zero	
9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	The cost of production is furnished as Rs 2557.00	On scrutiny of annual return submitted for the year 2020-21 it is observed that the overhead cost, depreciation, interest, royalty and taxes furnished in Part-VII is not matched with the figure furnished in Part-IIA & III.	Violation letter has been issued vide letter dated 30.09.2021
9h	Scrutiny of Annual return on fixed assets	Rs. 137528030.00	Rs. 137528030.00	

9k Scrutiny of Annual return on mining machineries

Back Hoe:	Back Hoe: 8Nos.
8Nos.	Crusher : 1 Nos.
Crusher : 1	Dumper: 6 Nos.
Nos.	Rock Drill: 1 Nos.
Dumper: 6 Nos.	Water Sprinkler:1 Nos.
Rock Drill: 1	
Nos.	
Water	
Sprinkler:1	
Nos.	

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)	30/09/2021			
MCDR17	Rule 35(2)	30/09/2021			
MCDR17	Rule 37(2)	30/09/2021			
MCDR17	Rule 45(7)(a)	30/09/2021			

Date :

(ASHOK KUMAR PANY)

Indian Bureau of Mines