

**INDIAN BUREAU OF MINES
MINES CONTROL AND CONSERVATION OF MINERAL DIVISION**

MCDR INSPECTION REPORT

Goa regional office

Mine file No : MAH/SDG/FE-28/GOA

Mine code : 30MSH28002

- (i) Name of the Inspecting : **J003**) **JANGID G K**
Officer and ID No.
- (ii) Designation : Deputy Controller Mines
- (iii) Accompanying mine : Shri Sushil Charpe, Mines Manager
Official with
Designation
- (iv) Date of Inspection : 19/05/2014
- (v) Prev.inspection date : 15/09/2005

PART-I : GENERAL INFORMATION

1. (a) **Mine Name** : **MAULI**
- (b) Category : A Mechanised
- (c) Type of Working : Opencast
- (d) Postal address
State : MAHARASHTRA
District : SINDHUDURG
Village : REDI
Taluka : VENGURLA
Post office : REDI
Pin Code : 416517
FAX No. : 91-22-2854417
E-mail : srivasta@bom5.vsnl.net.in
Phone : 2025893
- (e) Police Station : REDI
- (f) First opening date : 01/01/1954
2. Address for : NEW INDIA MINING CORPN. (P) LTD.
correspondance Nirmal, 16th Floor, Nariman Point
Mumbai 400021
3. (a) Lease Number : MSH0055
(b) Lease area : 32.83
(c) Period of lease : 20
(d) Date of Expiry : 22/04/2020
4. Mineral worked : IRON ORE Main

5. Name and Address of the

Lessee : NEW INDIA MINING CORPN. (P) LTD.
 "NIRMAL", 16TH FLOOR,
 NARIMAN POINT, MUMBAI.
 GREATER BOMBAY MAHARASHTRA
 Phone:EPABX 2025893
 FAX :022-2854417

Owner : SANDEEP SRIVASTAVA
 NIRMAL, 16th Floor NARIMAN
 POINT GREATER BOMBAY
 MAHARASHTRA
 Phone: 022-22025893, 2
 FAX : 022-22854417

Mining Engineer

Name : RAJNI KANT SAHOO, Full Time
 Qualification : AMIE with FCC
 Appointment/ : 10/02/2014
 Termination date

Manager

Name : SUSHIL CHARPE
 Qualification : B.E. (Mining) with FCC
 Appointment/ : 01/04/2013
 Termination date

6. Date of approval of Mining : 07/05/2014
 Plan/Scheme of Mining

PART - II : TECHNICAL DETAILS/COMMENTS

1. Details about Average employment :

Maximum number of persons employed on any day during the year

Employment category	No.of employment	Av. yearly working days
DIRECT		
Managerial	4	299
Supervisory	25	299
Others	0	0
Ministrial	7	299
Plant	0	0
CONTRACT		
Workers	64	299

2. Community Development Plan (in and around the mines) : Proposed action and expenditure towards socio-economic development.

Action during the year	Expenditure in Rs. Lakhs for				Remarks
	previous year		current year		
	Proposed	Incurred	Proposed	Incurred	
General					
Water supply	0.00	0.15	0.00	0.59	
Housing	0.00	1.03	0.00	2.04	
Sanitation	0.00	0.00	0.00	0.00	
Medical facility	0.00	0.00	0.00	0.00	
Safety	0.00	0.00	0.00	0.00	
Health	0.00	3.19	0.00	4.74	
Sub total	0.00	4.37	0.00	7.37	
Infrastructure					
Roads	0.00	0.00	0.00	0.00	
Communication	0.00	0.00	0.00	0.00	
Electricity	0.00	0.00	15.00	155.00	
Public transport	0.00	0.00	0.48	6.11	
Sub total	0.00	0.00	4.37	161.11	
Environment management	0.00	0.00	5.00	75.00	
Others	0.00	0.00	0.00	0.00	
Sports activities	0.00	0.00	0.00	0.00	
Training	0.00	0.00	0.00	0.00	
Employment	0.00	0.00	36.34	305.00	
Recreation	0.00	0.00	0.00	0.00	
Total	0.00	0.00	61.19	548.48	

3. Status of compliance of MCDR, 1988, including therewith the rectification of the outstanding violation of rules.

Mine was last inspected on 15.02.2013 under MCDR SIS and violation of rules 13(1) & 47 was issued. Both these rules found complied. Violation of rule 13(1) was issued after current inspection.

4. A note on the justification in case of suspension of mining operation under rule 13(2) or prohibition of deployment of any person under rule 56 of MCDR, 1988, if recommended.

Suspension of mining operations under rule 13(2) or prohibition of deployment of any person under rule 56 of MCDR, 1988 is not recommended. However, if lessee failed to comply rule 13(1) within stipulated time, followup action will be initiated for logical end.

5. Scientific Mining

Items	Proposal	Actual work done	Remarks
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A. Exploration (Rule 13)

- a.Type of prospecting and exploration i.e. pitting, drilling : Ten boreholes were proposed during 2013-14 to convert resources into reserves. Lessee has drilled 11 boreholes during 2013-14.
- b.Total area covered : Total lease area is degraded and drilling was within pit for total 362m drilling. Drilling was carried out inside the pit to know grade, quality and depth-wise persistence of mineral.

B. Working (Rule 13)

- a.Number and size of each pit (LxWxH) : There is one pit of 1050m X 250-450m X 85m dimension and proposal was to work in lower benches upto - 32mRL. There is one pit of 1050m X 250-450m X 85m dimension and working was carried out in lower benches upto - 28mRL.
- b.Bench size(LxWxH)length can be defined as regular/irregular : Regular benches of 8m height & 12m width in OB and 6m height & 8m width in mineral were proposed. Regular benches of 8m height & 12m width in OB and 6m height & 8m width in mineral are maintained. There are 12 benches in OB and 2 benches in mineral. Upper benches in OB towards SE corner were found collapsed and silt accumulated at pit bottom.
- c.Ore to waste ratio pit wise if possible otherwise for mine : Proposed ore to waste ratio pit wise was 1:2.0. Actual ore to waste ratio pit wise is 1:1.5 for the year 2013-14.
- d.Total area covered under excavation/pits : The area covered under pit is around 28ha and further development inside pit was proposed. The area covered under pit is around 28ha.

C. Waste disposal (Rule 13)

- a.Location of dumps : Proposal was there to backfill western part of Pit. Backfilling in western part of Pit is in progress.
- e.Yearly generation of waste quantity. : Waste generation of 714549t was proposed during the year 2013-14. Waste generated during the year was 363004t.
- b.Method of dumping whether advancing/retreat : Backfilling in pit was proposed. Backfilling in pit is in progress.
- c.Total area covered under waste dump. : Backfilling was proposed inside the pit from western faces. Backfilling was carried out during the year 2013-14 and it is over 6.5ha area.

d.No.and size of each : Old dumps are
waste dump with No of located outside
steps/lift/bench the lease area.
Backfilling was
proposed.

Backfilling was carried
out during the year
2013-14.

D. Production

b.Year wise
production of last
five year.

: Last five-year
proposals for
production were
267057, 230064t,
204375t, 166751t
and 267303t.

Last five-year actual
production were 97898t,
149861t, 181699t,
251248t and 201334t from
2009-10 to 2013-14.
There was excess
production in 2012-13 by
more than 50% and
modified scheme of
mining was approved on
07.02.2014 for balance
period of 2013-14.

D. Reserve

a.Reserve position as : Mineral Reserve -
per latest MP/MS and 1.125 million
at the time of tonnes and Mineral
inspection. Resource - 2.283
million tonnes as
on 01.04.2013.

Balance reserves as on
date of inspection are
0.90 million tonnes and
Mineral Resource - 2.283
million tonnes.

RESERVE POSITION AS ON 01/04/2014

IRON ORE		
Category	Quantity in Tonnes	Grade
Proved	1125386	Fe -55% and +58% Fe
Probable	0	Fe -55%
Possible	2283411	Fe -55%
Total	3408797	Fe -55%

PRODUCTION FOR THE PREVIOUS YEAR 2013 - 2014

Mineral	Production	Unit
IRON ORE	201334.68	TON

6. Conservation of Mineral - both quantitative and qualitative**Beneficiation (Rule 20 and 26)**

- Efforts for improving low grade and sub grade mineral. : All efforts are made for recovering low grade and sub grade mineral. Recovery is 100% from ROM material. Silt accumulated from collapsed overburden benches at the pit bottom during monsoon is not handled & removed and allowed to get mixed with ROM material during excavation of ROM production. The grade of mineral production reported in 2013-14 is far below than previous year grade-wise production.
- Efforts for improving percentage of recovery of ore. : Recovery of mineral is almost 100% without reporting any reject generation.

Mineral Rule 15

- Percentage of recovery of ore pitwise w.r.t. ROM and total material : Percentage of recovery of ore pitwise w.r.t. ROM and total material is 100% & 55% respectively.
- Number of benches in ore and waste. : There are twelve benches in waste & two benches in ore.

Sub/grd mineral/fines (Rule16)

- Qty of yearly generation and total qty available during inspection with grade : Production of ROM was 201334.68t and grade-wise stock position was nil of -55% (Fines). Gradewise production of +58% to -60% Fe of lumps & fines is not reported during 2013-14 in comparison to previous years. Every thing is shown below 55% Fe.
- Number and size of each stack : Two mechanical screen are there and mineral stacks are there near screen having different grades. Grade-wise closing stock position was nil of -55% (Fines).
- Location of stacking. : Mineral stacks were found towards north-west and south-east side of lease area. Mineral production was achieved from float ore also from SE corner hillock.
- Separate stacking from waste : Mineral is separately stacked at surface level for screening & grade-wise stacking. However, salable mineral is reported below 55% Fe only.
- Total area covered for stacking : Area covered under mineral stacks is 2.0ha over backfilled area.

Exploration data as on 31/03/ 2014

No. of Boreholes	No. of Pits	No. of Trenches
11	0	0

OVERBURDEN HANDLED DURING PREVIOUS YEAR 2013 - 2014

Overburden/waste removed (in m3) :	181502
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Utilisation of Sub Grade Mineral and Mineral Rejects

Generated	Utilised	Stacked	(In Ton.)

7. Environment Management - both quantitative and qualitativ

A. Land environment

- a. Landscape. : Maximum RL 50 and Minimum RL 23.
- b. Aesthetic environment : Area is having undulating topography and mining is carried out on slope of hillock.
- c. Soil and land use pattern : The major Land Use pattern of the area includes pits, old dumps, backfilled area, office, workshop, dry lands etc. Topsoil is not there. An area of 29.0ha under pit , 2.5ha under dumps, 1.28ha under office, workshop, roads etc.
- d. Agriculture : Agriculture is seasonal during monsoon period and Cashew is the main cultivation in surrounding area.
- e. Forest(flora and fauna) : No forest area within lease and surrounding area. CRZ safety line of 500m is passing through lease area and therefore, south-western part of pit is backfilled.
- f. Vegetation : Paddy Fields are there in the surrounding area.
- h. Public building, places and monuments (protected, historical), placec of worship and places of tourist : Mauli temple is there at 0.50km distance from lease. Southern boundary of lease is touching 500m CRZ coastal line. Redi port is at 1.5km distance from lease.

B Water environment.

- a. Surface water : The surface waters were monitored with neutral pH in the range 7.52-7.82, agreeable colour, taste and odour. The surface waters were having DO levels in the range 4.05-5.15 mg/l.
- b. Ground water : The general ground water table is around 10mts RL.This area receives copious amount of rainfall,hence the ground levels shows rise in their levels after monsoon.
- c. Quality of water : The ground water in the bore wells and dug wells, nearby ponds or lakes, were found to be good. pH values were around 7 & within limits.

C. Air environment

- a. Noise : It is within permissible limit. Workzone day noise levels was found to be 65.25 dB(A) and night noise level was found to be 61.7 dB(A).
- b. Air : Air quality is monitored through Sadekar Enviro Engineers Pvt Ltd twice a week & found within limits.
- c. Climatic condition : The predominant winds were from NW to SE, wind velocity readings were recorded in the range 5.30-5.90 kmph with a mean value of 5.6 kmph; temperature readings were ranging from 24 deg C to 36 deg C and the mean temperature value was 31.9 C; the relative humidity values were ranging in between 59.00-80.00%.

D. Socio economic environment

- a. Social and demographic profile. : The nature of work in adjoining vilages is mainly agricultural and fishing. Persons are engaged in trucks for transportation of mineral to port.
- b. Recommending health and safety. : The noise and dust fall is within range. The quality of the water is within permissible limit, hence there is no any hazard to health. Environmental friendly Mining Machinery are maintained without any hazard.

Effective dust suppressive inbuilt water sprinkling arrangement is there.

- c. Human settlement : The lease area is surrounded by two villages. The house types found are both concrete and huts. The population is around 625 at Redi village, 1249 at Nonos and 2875 at Ajgaon.
- d. Recreational facility. : There is no recreational facility available at mines. Nearby towns Siroda, Vengurla, Banda, Mapusa etc are having all facilities. Dish TV is available in nearby villages.

7.1 Comments on the steps taken by the lessee towards maintaining environment and monitoring of environmental parameters to ensure the qualitative improvement in the environment and ecology.

<u>Water Management</u>					
Season	Station type	Station name	Parameter	Value	
				Actual	Excess

<u>Air data for excess parameters</u>					
Season	Station name	Type of area	Parameter	Value	
				Actual	Excess

<u>PLANTATION DURING THE PREVIOUS YEAR</u>						<u>2013 - 2014</u>		Area in Hect.	
Within lease area			Outside lease area						
Area	Trees planted	Survival rate	Area	Trees planted	Survival rate				
	3635	62	0	0	0				

<u>TOP SOIL MANAGEMENT</u>		
<u>Quantity as on 31/03/2014</u>		
Cumulative quantity in tonne		
Generated	Utilised	Balance
.01	.01	0

8. Scrutiny of annual returns on cost of production, reserve, production, pit mouth value, stock, land use pattern and fixed assets.

- a) Land use pattern: 1. Exploited & abandoned by O/C mines-6.5 Ha, 2) Covered under O/C working - 21.46 Ha, 3) Reclaimed & Rehabilitated-0Ha, 4) Waste Disposal - 1.5Ha
5) Plants, blds, roads-2.63Ha
b) Reserves: It is as per latest approved SOM and area 348797t.
c) Quantity of overburden / waste rock generation: 363004t and used for backfilling
d) Cost of production was Rs. 1348/-

PART - III : PERFORMANCE OF MINE OWNER

(In case of lease expiring within 2 years - as per guidelines)

a. Compliance of terms and conditions of lease deed.

Mining lease was renewed over 32.83 Ha in Non-forest area for 20 Years and date of expiry is 22/04/2020. Execution of renewal of lease was made on 29/10/2002. All the boundary pillars for the lease area wer found intact during inspection of mine.

b. Compliance of the provisions of MCDR, 88 and advise given.

Mining Plan for renewal was approved on 11.07.1997 vide letter No. MP/MECH-31(MAH)/GOA-95/SZ .
 Scheme of mining from 2009-10 to 2013-14 was approved vide letter No.MS/SDG/GOA-80/2013-14 Dated 23.04.2010.
 A modified Scheme of mining for 2013-14 was approved vide letter No.MS/SIND/GOA(MAH)Fe-47-SZ Dated 07.02.2014.
 Next scheme of mining for the period 2014-15 to 2018-19 was approved vide letter No MSH/MECH-58(MAH)/GOA/2013-14 dated 07.05.2014.

PART - IV : PROPOSALS FOR FURTHER ACTION FOR :

Indian Bureau of Mines (any issue related to CGPB, SGPB, Assistance, Consultancy, Annual Programme and studies, etc.)

None at present.

State Government (Illegal mining, mining dispute, infrastructure, Mineral based industry, Mineral policy, etc.)

None at present.

The Central Government (Infrastructure, Development, Mineral policy and Legislation, Mineral based industry, etc.)

None at present.

Date :

(JANGID G K)

Indian Bureau of Mines