

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

MCDR INSPECTION REPORT

Bhubaneshwar regional office

Mine file No : ORI/IRON-DOL/KJR/MCDR-34/BBS

Mine code : 30ORI08033

- (i) Name of the Inspecting : **S024**) **DR. M K SOMANI**
Officer and ID No.
- (ii) Designation : Senior Mining Geologist
- (iii) Accompanying mine : Prafulla Kumar Parida, Sr.Manager (Geology)
Official with
Designation
- (iv) Date of Inspection : 18/07/2014
- (v) Prev.inspection date : 23/10/2013

PART-I : GENERAL INFORMATION

1. (a) **Mine Name** : **KASIA**
- (b) Category : A Mechanised
- (c) Type of Working : Opencast
- (d) Postal address
- State : ORISSA
- District : KEONJHAR
- Village : KASIA
- Taluka : BARBIL
- Post office : KASIA
- Pin Code : 758035
- FAX No. : 06767-75367
- E-mail : kjr_emilbbi@sancharnet.in
- Phone : 06767-75224,75489(O),75095
- (e) Police Station :
- (f) First opening date : 14/09/1955
2. Address for : KASIA IRON DOLOMITE MINE
correspondance PO-KASIA DIST-KEONJHAR,PIN-758035
ORISSA
3. (a) Lease Number : ORI0094
- (b) Lease area : 134.73
- (c) Period of lease : 30
- (d) Date of Expiry : 13/09/1985
4. Mineral worked : DOLOMITE Associated
IRON ORE Main

5. Name and Address of the

Lessee : ESSEL MINING& INDUSTRIES LTD.
 AT/PO: BARBIL KEONJHAR
 ORISSA
 Phone:06767-30437
 FAX :06767-75367

Owner : Essel mining & Industries Ltd
 Barbil KEONJHAR ORISSA
 Phone: 06767-30437, 30
 FAX : 06767-30367

Agent : RAVINDRA GAJANAN SATHE
 KASIA IRON & DOLOMITE MINES
 M/S ESSEL MINING &
 INDUSTRIES LTD KASIA, PO-
 BARBIL, KEONJHAR KEONJHAR
 ORISSA
 Phone:
 FAX : 06767 275367

Mining Engineer

Name : Rajesh Kumar Patel, Full Time
 Qualification : B E Mining, FCC
 Appointment/ : 09/07/2013
 Termination date

Geologist

Name : Subbaraya Sarma Chilumuru, Full Time
 Qualification : M Sc GEOLOGY
 Appointment/ : 10/12/2011
 Termination date

6. Date of approval of Mining : 14/03/2012
 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	18	305
Supervisory	5	305
Others	26	305
Ministrial	13	305
CONTRACT		
Others	40	305
Ministrial	154	305

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		63.65		0.00	1800 BENEFICIARI
Health		60.59		1.22	600
Sanitation		48.90		17.05	1500
Sub total		173.14		18.27	
Infrastructure					
Public transport			60.34	0.00	
Sub total			173.14	0.00	
Others					
			22.91	8.97	200
Training					
			68.59	1.48	700
Environment management					
			35.14	23.31	500
Total			360.12	52.03	

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

The following provision of MCDR'1988 were found violated in the mine during inspection on 18.07.2014:

Rule 27 (4): The copies of plans and sections as required under Rule 28 have not been updated within three month.

Rule 29: The copies of plans and sections as required under Rule 28 have not been submitted for the year 2013-14 so far to the RCOM, IBM, Bhubaneswar.

Rule 45: The annual return for the year 2013-14 submitted to the RCOM, IBM, Bhubaneswar was scrutinized and found that:

I. Name of Mine/Lessee is not given correctly.

II. Source of finance not given.

III. Reserve figure are not reported correctly.

IV. Average depth of pit not matching with the number of benches and height.

V. PMV not mentioned.

VI. Details of beneficiation not given.

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, 19888, if recommended.

Not recommended.

5. Scientific Mining

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

a.Type of prospecting : Nil and exploration i.e. pitting, drilling		Nil	Exploration over total leasehold area of 194.196 ha. completed in year 2009-10
b.Total area covered : Nil		Nil	Exploration over total leasehold area of 194.196 ha. completed in year 2009-10

B. Working (Rule 13)

a.Number and size of : 2 No's of pit each pit (LxWxH)	North Block: 610 x 568 x 81 South Block: 370 x 300 x 92	2 No's of pit North Block:610 x 522 x 81 South Block:370 x 255x 36	
b.Bench : North Block:15-20 size(LxWxH)length can W X 9H be defined as South Block:15-20 regular/irregular W X 9H		North Block:15-20 W X 9H South Block:15-20 W X 9H	
c.Ore to waste ratio : 1 : 0.70 pit wise if possible otherwise for mine		Nil, MINE IS CLOSED	
d.Total area covered : 79.443 Ha under excavation/pits		70.943 Ha	

C. Waste disposal (Rule 13)

a.Location of dumps : Out side of Mining lease		Nil	
e.Yearly generation : 5279840 MT of waste quantity.		NIL	
b.Method of dumping : Retreat whether advancing/retreat		Retreat	
c.Total area covered : Proposal for waste under waste dump. dump has been given out side of Mining lease in the approved SOM.		NIL	
d.No.and size of each : One Dump waste dump with No of steps/lift/bench		NIL	

D. Production

b. Year wise production of last five year.	:	Approved mining plan/ scheme	Production achieved (In Tonne)
		ROM Saleable Ore	ROM
		2013-14 7500236	Processed Ore
		64811401	
		2012-13 5500921	2013-14 0 0
		4798144	2012-13 936881
		2011-12 4806154	956968
		4761196	2011-12 1674688
		2010-11 7500000	1674684
		7500000	2010-11 556659
		2009-10 4800000	556659
		4800000	2009-10 3195050
		2008-09 4800000	3195050
		4800000	2008-09 3326789
			3326790

D. Reserve

a. Reserve position as :	Iron Ore 145 Million
per latest MP/MS and	Tonnes (111 & 122) as on
at the time of	31.03.2014.
inspection.	

RESERVE POSITION AS ON 01/04/2014

IRON ORE		
Category	Quantity in Tonnes	Grade
Proved	145000000	54% Fe & Above
Probable		
Possible	84000000	45% Fe & Above
Total	229000000	45% Fe & Above

PRODUCTION FOR THE PREVIOUS YEAR 2013 - 2014

Mineral	Production	Unit
IRON ORE	0	TON

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

- Efforts for improving low grade and sub grade mineral. : There is plan for 0.7 MTPA throughput capacity. Plant at Kasia which will help upgrading the low/sub grade iron ore.
- Efforts for improving percentage of recovery of ore. : At present beneficiation process using crushing and screening plants. In which the total concentrate is saleable whose average grade is coming around 62.5% Fe.

Mineral Rule 15

Percentage of recovery of ore : 90%
pitwise w.r.t. ROM and total material

Number of benches in ore and waste. : North Block : 10 nos. in Ore & 02 nos. in OB.
South Block : 04 nos. in Ore & 01 nos. in OB.

Sub/grd mineral/fines (Rule16)

Qty of yearly generation and total qty available during inspection with grade : The quantity of sub grade available as on date = 6.47 million tones and from stack No-5 minerals used for blending purpose.

Number and size of each stack	Stack Name	Location	Area
	Quantity (MT) Grade (Fe %)		
	Stack No-1	South Block 49600 872960	56.30
	Stack No-2	North Block 36984 2196850	54.48
	Stack No-3	South Block 36376 1600544	56.60
	Stack No-4	North Block 30269 1598203	52.75
	Stack No-5	North Block 17690 201401	57.00

Location of stacking.	Stack Name	Location	Area	Quantity (MT)	Grade (Fe %)
	Stack No-1	South Block 49600	872960	56.30	
	Stack No-2	North Block 36984	2196850	54.48	
	Stack No-3	South Block 36376	1600544	56.60	
	Stack No-4	North Block 30269	1598203	52.75	
	Stack No-5	North Block 17690	201401	57.00	

Separate stacking from waste : Yes

Total area covered for stacking	Stack Name	Location	Area	Quantity (MT)	Grade (Fe %)
	Stack No-1	South Block 49600	872960	56.30	
	Stack No-2	North Block 36984	2196850	54.48	
	Stack No-3	South Block 36376	1600544	56.60	
	Stack No-4	North Block 30269	1598203	52.75	
	Stack No-5	North Block 17690	201401	57.00	

Exploration data as on 31/03/ 2014

No. of Boreholes	No. of Pits	No. of Trenches
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108		
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OVERBURDEN HANDLED DURING PREVIOUS YEAR 2013 - 2014

Overburden/waste removed (in m3) : 0

Utilisation of Sub Grade Mineral and Mineral Rejects

Generated	Utilised	Stacked	(In Ton.)
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7. Environment Management - both quantitative and qualitativ

A. Land environment

- a. Landscape. : However the post mining land use pattern involves restoration of the original landscape through exhaustive reclamation & rehabilitation of land including creation of recreational facilities. All efforts will be made for better land use of the area.
- b. Aesthetic environment : In order to obscure the scar in the environment due to mining operation, green belt developed all around the mining lease; gardens & lawns developed in government waste land; waste dumps have been covered under afforestation programme for a soothing vision. Avenue plantations taken up along the haul roads.
- c. Soil and land use pattern : The existing land use pattern is as under.
- Pattern of Utilization Area Covered (Ha)
- Mining 70.943
- Storing of Mineral 5.940
- Dumping of OB 9.574
- Township/Colony 12.486
- Road, railways 7.609
- Magazine 0.053
- Safety zone 30.621
- Reclaimed area 7.099
- Virgin Area 44.321
- Land use for Public purpose 1.582
- Private Land 3.968
- Total 194.196
- d. Agriculture : Nil
- e. Forest(flora and fauna) : Flora Fauna
- Trees Grasses Mammals
- Amla Khara grass Bilua
- Asan Shrubs/Herbs Thekua
- Bahada Arakha Kutura
- Bel Basang Neula
- Bana Bhalia Dhatki Birds
- Bheru Kurei Kapta
- Char Climbers Koili
- CVhhatian Atundi Kumbhatua
- Dhaura Baidanka Gunduri
- Harida Bichhuati Reptiles
- Jamun Satabari Rat Snake
- Kendu Yellow monitor
- Kusum
- Sal
- f. Vegetation : The canopy density has been estimated to be 0.3.
- h. Public building, places and monuments (protected, historical), place of worship and places of

tourist

B Water environment.

- a. Surface water : No surface water is available within leasehold area.
- b. Ground water : Seasonal monitoring of environmental parameters w.r.t. ground water is carried out as per the guidelines of CPCB, OSPCB, & MoEF.
- c. Quality of water : within permissible limits.

C. Air environment

- a. Noise : within permissible limits.
- b. Air : within permissible limits.
- c. Climatic condition : Maximum temperature = 400
Minimum temperature = 50
Average Relative Humidity = 58%-67%
Annual Rainfall = 1534.5 mm

D. Socio economic environment

- a. Social and demographic profile. : Not Applicable
- b. Recommending health and safety. : Medical Dispensary with full facilities has been developed in mining lease premises with ambulance and full time MBBS Doctor and compounder also appointed. Regular medical camp and other facilities provided in nearby villages.
- c. Human settlement : nil
- d. Recreational facility. : Following recreational facilities have been provided to the employees & nearby villagers such one Gym, table tennis boards, carom boards and other indoor game facilities. Football, volleyball, badminton, ring ball etc. outdoor games and various socio-cultural programmes conducted for recreation of the employees and local population.

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.

<u>TOP SOIL MANAGEMENT</u>
Quantity as on 31/03/ Page 9 of 12

2014

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

2013-14

(1) Cost of operation Nil
 (2) Reserve: Iron Ore 145 Million Tonnes (111 & 122) as on 31.03.2014
 (3) Production : Nil
 (4) Pit's Mouth Value: Nil
 (5) Land use patternPattern of Utilization Area Covered (Ha)

Mining	70.943
Storing of Mineral	5.940
Dumping of OB	9.574
Township/Colony	12.486
Road, railways	7.609
Magazine	0.053
Safety zone	30.621
Reclaimed area	7.099
Virgin Area	44.321
Land use for Public purpose	1.582
Private Land	3.968
Total	194.196

(6) Fixed assets Rs. 287471000/-

PART - III : PERFORMANCE OF MINE OWNER

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

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

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

None

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

None

Date :

(DR. M K SOMANI)

Indian Bureau of Mines