INDIAN BUREAU OF MINES
MINES CONTROL AND CONSERVATION OF MINERAL DIVISION

MCDR INSPECTION REPORT

Bhubaneshwar regional office

Mine file No : ORI/IRON/KJR/MCDR-9/BBS **Mine code : 30ORI08003**

(i) Name of the Inspecting Officer and ID No. : **S024) DR. M K SOMANI**

(ii) Designation : Senior Mining Geologist

(iii) Accompaning mine Official with Designation : P. K. Dehury, Mines Manager, A. K. Sahoo, Mining Engi

(iv) Date of Inspection : 26/06/2014

(v) Prev.inspection date : 15/09/2013

PART-I : GENERAL INFORMATION

1. (a) **Mine Name** : **BALDA BLOCK**

(b) Category : A Other than Fully Mech.

(c) Type of Working : Opencast

(d) Postal address

State : ORISSA
District : KEONJHAR
Village : BALDA
Taluka : BARBIL
Post office : BALDA
Pin Code : 758034
FAX No. :
E-mail :
Phone : 06767-73452

(e) Police Station :

(f) First opening date : 02/06/1962

2. Address for correspondance : BALDA BLOCK IRON MINE. AT: BALDA
PO: PALSA, DIST; KEONJHAR
PIN: 758034

3. (a) Lease Number : ORI0096
(b) Lease area : 335.84
(c) Period of lease : 20
(d) Date of Expiry : 02/12/2017

4. Mineral worked : MANGANESE ORE Associated
IRON ORE Main

5. Name and Address of the

Lessee : M/S.Serajuddin & Co
At/po.Joda, KEONJHAR
ORISSA
Phone:
FAX :

Owner : M/S SERAJUDDIN & CO.
19/A, BRITISH INDIAN STRE
CALCUTTA-69 KOLKATA WEST
BENGAL
Phone:
FAX :

Mining Engineer
Name : P.K. DEHURY,Full Time
Qualification : A.M.I.E. (MINING)
Appointment/ Termination date : 21/10/1993

Manager
Name : A.C. MAHANTA
Qualification : DIPLOMA IN MINING, A.M.I.E. (MINING)
Appointment/ Termination date : 17/08/1996

6. Date of approval of Mining 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		
Supervisory	**38**	**361**
Workers	**55**	**361**
Managerial	**5**	**361**
CONTRACT		
Plant	**86**	**361**
Supervisory	**140**	**361**
Workers	**498**	**361**
Managerial	**30**	**361**

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

Action during the year	Expenditure in Rs. Lakhs for previous year		Expenditure in Rs. Lakhs for current year		Remarks
	Proposed	Incurred	Proposed	Incurred	
General					
Water supply		39.00		45.50	500 PERSONS
Health		26.07		32.10	2000 PERSONS
Housing		84.00		84.00	7 FAMILIES
Sub total		**149.07**		**161.60**	
Infrastructure					
Public transport			5.58	7.48	200 PERSONS
Electricity			40.74	44.67	2800 PERSONS
Sub total			**149.07**	**52.15**	
Others			**76.03**	**103.86**	2800 PERSONS
Recreation			**0.30**	**0.30**	103 PERSONS
Training			**9.92**	**11.54**	400 PERSONS
Employment			**106.59**	**126.59**	103 PERSONS
Total			**388.23**	**456.04**	

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

NO VIOLATIONS WERE OBSERVED.

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
A. Exploration (Rule 13)			
a.Type of prospecting and exploration i.e. pitting, drilling	: NIL	NIL	
b.Total area covered	: NA	NA	
B. Working (Rule 13)			
a.Number and size of each pit (LxWxH)	: Pit-1 530x250x50 Pit-2&5 680x500x120 Pit-4 426x297x60	Pit-1 449x157x50 Pit-2&5 640x490x110 Pit-4 302x267x60	
b.Bench size(LxWxH)length can be defined as regular/irregular	: L-50-100m B - 15-30m H- 10m	L-50-100m B - 15-30m H- 8-10m	
c.Ore to waste ratio pit wise if possible otherwise for mine	: 1 : 0.04	1 : 0.04	
d.Total area covered under excavation/pits	: 89.072 HA	89.072 HA	
C. Waste disposal (Rule 13)			
a.Location of dumps	:	Dump-1 SGM Mineralized 335287-335043 2421018-2421249 Dump-2 SGM Mineralized 334848-335012 2420341-2420427 Dump-3 SGM Mineralized 335205-335494 2419982-2420746 Dump-4 SGM Mineralized 335202-335377 2419789-2419968 Dump-5 OB Mineralized 335464-335307 2419501-2419714 Dump-6 SGM Non-Mineralized 335871-336150 2419011-2419470 Dump-5A OB Non-Mineralized 334536-334716 2420802-2421039 Block-F1 OB Non-Mineralized 335999-336045 2420263-2420461 Q4,T.stock SGM Mineralized 335120-	

		334980 2420053-2419853
e.Yearly generation of waste quantity.	: 1075442 MT	782316MT
b.Method of dumping whether advancing/retreat	: Advanced	Advanced
c.Total area covered under waste dump.	: 75440.79 Sqm	53986.00Sqm
d.No.and size of each waste dump with No of steps/lift/bench	:	

D. Production

b.Year wise production of last five year.	: 2009-10 2.64811 2010-11 3.37150 2011-12 4.05143 2012-13 10.51955 2013-14 11.76456	2009-101.14079 2010-111.47893 2011-12 1.45647 2012-13 4.49800 2013-14 8.27009

D. Reserve

a.Reserve position as per latest MP/MS and at the time of inspection.	:	AS ON 1.4.14 308.599 Million Tons o Proved (111) - 191.756 o Proved (121) - 28.68 o Probable (122) - 45.368 o (211+222)- 42.795

RESERVE POSITION AS ON 01/04/2014

IRON ORE

Category	Quantity in Tonnes	Grade
Proved	169100000	+58 %
Probable	26240000	+45-58%
Possible	41253000	+45 %
Total	236593000	+45 %

PRODUCTION FOR THE PREVIOUS YEAR 2013 - 2014

Mineral	Production	Unit
IRON ORE	8270092	TON

6. Conservation of Mineral - both quantitative and qualitative

Beneficiation (Rule 20 and 26)

Efforts for improving low grade and sub grade mineral. : Blending, Screening.

Efforts for improving percentage of recovery of ore. : By reducing the Screening speed.

Minearl Rule 15

Percentage of recovery of ore pitwise w.r.t. ROM and total material :
Pit-1 - 60%
Pit-2&5 - 70%
Pit-4 - 75%

Number of benches in ore and waste. :

Sl.No	Pit	Pit Size (m)	No. OB Benches	No. Ore Benches
1	Pit-1	449 x 157	1	5
2	Pit-2&5	640 x 490	1	11
3	Pit-4	302 x 267	2	6
4	Kalimati	Pit 522 x 225	1	4
5	Pit 6	233 x 118	2	6
6	Pit-9	276 x 172	1	6
7	Block F1	450x185	1	4

Sub/grd mineral/fines (Rule16)

Qty of yearly generation and total qty available during inspection with grade : 2328739.66 MT.
(Mineral Reject:- 1862991.728,- Sub Grade-465747.932)

Number and size of each stack :
1. 1337370 Cum
2. 385014 Cum
3. 1922496 Cum
4. 193200 Cum
5. 1067400 Cum
6. 443003 Cum

Location of stacking. :
1. 335287-335043 to 2421018-2421249,
2. 334848-335012 to 2420341-2420427,
3. 335205-335494 to 2419982-2420746,
4. 335202-335377 to 2419789-2419968,
5. 335871-336150 to 2419011-2419470,
6. 335120-334980 to 2420053-2419853.

Separate stacking from waste : Temporary Stacking in Pit-1,Pit-5,5A, Block F1,Pit-6

Total area covered for stacking : 236746Sq.M

No. of Boreholes	No. of Pits	No. of Trenches
150		

OVERBURDEN HANDLED DURING PREVIOUS YEAR 2013 - 2014

Overbuden/waste removed (in m3) : 391158

Utilisation of Sub Grade Mineral and Mineral Rejects

	Generated	Utilised	Stacked

(In Ton.)

7. Environment Management - both quantitative and qualitativ

A. Land environment

d. Agriculture	:	The agriculture land does not exist in our lease area but to prevent the agriculture land Contamination in and around we ensuring the mines runoff water quality are de-silted through check dams and retaining wall and etc.
a. Landscape.	:	The area is highly undulating and mountainous the altitudes vary from 526mts. to 672mts. above MSL. There is no soil inside the ML area. Total area is full of Iron ore mineralized area.
e. Forest(flora and fauna)	:	The existing working area has got approval from MoEF and the remaining area (flora & Fauna) is taken care through safety zone plantation, fencing, forest fire prevention preparation, wild life awareness , controlled blasting are being followed. Beside these a site specific wild life conservation plan got prepared & submitted for approval of PCCF wild life.
f. Vegetation	:	Forest vegetation is below 0.3 density.
h. Public building, places and monuments (protected, historical), placec of worship and places of tourist	:	No. such historical monuments situated.

B Water environment.

b. Ground water	:	9 numbers of Ground water sampling station have been demarcated in core & buffer zone area.
a. Surface water	:	" Sub grade stack has been leveled and compacted regularly with the help of dozers. No loose sediments will be kept on the working benches. " Garland drain and sedimentation tanks will be provided to allow the water to settle down in sedimentation tanks before being pumped out. " Water samples will be analyzed for their pollutant levels. Total 6 nos of water sampling station have been demarcated for Surface water monitoring in both Core & Buffer zone area
c. Quality of water	:	Within permissible limit.

C. Air environment

a. Noise	:	Various measures have implemented to prevent noise pollution " Provision of ear plugs and ear muffs to reduce noise level exposure. " Use of silencers/mufflers in HEMM, noise insulating

enclosures/acoustic cabins.
" Control of ground movement due to blasting vibration is achieved by avoiding over-charging, use of delays and improved control blasting technology

b. Air : Proper maintenance by compacting the road surface and by spraying water periodically will be ensured. Using sharp cutting tools, providing dust respirators and plantation will minimize air pollution.
Besides AAQ monitoring is also being carried or regularly in core and buffer zone. Total 7 nos of Air sampling station have been demarcated.

c. Climatic condition : The climate of the study area in general is hot and humid. Average annual maximum temperature is 38.40C. April is the hottest month mean daily maximum temperature is 43.20C. The precipitation in the monsoon season ranges between 700-993 mm. Very often the bay depressions and cyclones cross over this area affecting weather and causing wide spread rains. The annual average relative humidity is 65% but it shoots up to 90% during the monsoon period. Wind speed is generally light in monsoon seasons.

D. Socio economic environment

a. Social and demographic profile. : Mostly tribal population.

b. Recommending health and safety. : A health centre is being provided to near villagers, where free medical checkup and medicine has been provided to all villagers.

c. Human settlement : No human settlement inside the ML area

d. Recreational facility. : Sports materials distribute to local school, Cricket bats and kits, volley ball distribute to local youth club. Arranging local sports tournaments through the youth club.

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.

Water Management

Season	Station type	Station name	Parameter	Value	
				Actual	Excess

Air data for excess parameters

Season	Station name	Type of area	Parameter	Value	
				Actual	Excess

PLANTATION DURING THE PREVIOUS YEAR 2013 - 2014

Area in Hect.

TOP SOIL MANAGEMENT

Quantity as on 31/03/2014

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

1) Cost of operation 1492.65 per MT(2012-13)
2)Reserve as on 1st April 14 308.599 Million Tons
o Proved (111) - 191.756
o Proved (121) - 28.68
o Probable (122) - 45.368
o (211+222)- 42.795
3)Production 8270092.52 MT
4)Pit's Mouth Value o Lumps= 4196.073/-
o Fines=62% - 65% Rs1686/-
o Fines=58% - 60% Rs 631.778/-
o Fines=55% Rs 887/-
5)Stock 5689066.720 MT
6)Land use pattern Same as serial number 3 of TMIS Data sheet
7)Fixed assets 67853773/- (2012-13)

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