

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

MCDR INSPECTION REPORT

Bhubaneshwar regional office

Mine file No : ORI/IRON/KJR/MCDR-67/BBS

Mine code : 30ORI08081

- (i) Name of the Inspecting : **CHHA**) **SHRI L H CHHANGTE**
Officer and ID No.
- (ii) Designation : Deputy Controller Mines
- (iii) Accompanying mine : Sri VKS Rathore , Agent
Official with
Designation
- (iv) Date of Inspection : 13/10/2015
- (v) Prev.inspection date : 06/03/2015

PART-I : GENERAL INFORMATION

1. (a) **Mine Name** : **THAKURANI BLOCK-B**
- (b) **Registration NO.** :
- (c) Category : A Fully Mechanised
- (d) Type of Working : Opencast
- (e) Postal address
- State : ORISSA
- District : KEONJHAR
- Village : SAYABALI
- Taluka : BARBIL
- Post office : BARBIL
- Pin Code : 758035
- FAX No. : 06767-75624
- E-mail : slmlbarbil@hotmail.com
- Phone : 06767-262032/33/34
- (f) Police Station :
- (g) First opening date : 27/08/2001
- (h) Weekly day of rest : SUN
2. Address for : THAKURANI IRON ORE MINES BLOCK - B
correspondance VILL-SOYABALI,BALITA &-THAKURANI R F
PO-BARBIL,DIST-KEONJHAR,ORISSA
3. (a) Lease Number : ORI0688
- (b) Lease area : 2340.2
- (c) Period of lease : 30
- (d) Date of Expiry :
4. Mineral worked : IRON ORE Main

5. Name and Address of the

Lessee : M/S SARDA MINES (P) LTD
 KEONJHAR ORISSA
 Phone:
 FAX :

Owner : SHRI ARJUN SARASWAT, NOMINATED OWNER
 THAKURANI IRON MINE (B
 BLOCK) m/S SARDA MINES (P)
 LTD. PO BOX -85 BARBIL,
 DIST KEONJHAR ORISSA
 KEONJHAR ORISSA
 Phone: 06767-245003
 FAX : 06767-245017

Agent : D.N.PARIDA
 THAKURANI IRON ORE MINES
 BLOCK - B M/S S.L.SARDA &
 M.L.SARDA KEONJHAR ORISSA
 Phone: 06767-2620312/33/34
 FAX : 06767-275624

Mining Engineer

Name : S K SINGH, Full Time
 Qualification : BE , FCC
 Appointment/ : 27/06/2011
 Termination date

Manager

Name : H.N.SINGH
 Qualification : B E MINING, 1ST CLASS MANAGERS CERTIFICAT
 Appointment/ : 15/12/2001
 Termination date

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| 6. Date of approval of Mining | : | Mining Scheme rule 12 MCDR1988 | 19/10/2006 |
| Plan/Scheme of Mining | : | Modif.approved Mining Scheme | 18/05/2010 |
| | : | Mining Scheme rule 12 MCDR1988 | 02/03/2011 |
| | : | Modif.approved Mining Scheme | 09/08/2012 |

PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

Exploration :

| Sl.No. | Item | Proposals | Actual work | Remarks |
|--------|---|----------------|--|---|
| 1a | Backlog of previous year | 121 bore holes | Drilled 129 holes | Over achieved |
| 1b | Exploration over lease area for geological axis 1 or 2 | 178.36 ha | Altogether 178.36 ha has been covered under G 1 & 2 out of total Ml area of 947.046 ha | |
| 1c | Exploration Agencies and Expenditure in lakh rupees during the year | Non specified | Details not available | |
| 1d | Balance area to be explored to bring Geological axis in 1 or 2 | 768.686 ha | None | There has been FC problem and the mine has been suspended |
| 1e | Balance reserve as on 01/04/20 | 289.682 MMT | Same as calculated | |
| 1f | General remarks of inspecting officers on geology, exploration etc | | | The mine has been thorougly explored and edxploited |

Development :

| Sl.No. | Item | Proposals | Actual work | Remarks |
|--------|--|---|--|---------|
| 2a | Location of development w.r.t.lease area | Block 5 and 8 in the Central part of the ML | Development in areas as proposed | |
| 2b | Separate benches in topsoil, overburden and minerals (Rule 15) | Yes | Seperate benches in OB and Ores- | |
| 2c | Stripping ratio or ore to OB ratio | 1:0.04 | Actual 1:0.05 | |
| 2d | Quantity of topsoil generation in m3 | Non specified | A meagre 810 CuM was removed and used for plantation | |

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|----|---|------------|----------------------------------|---|
| 2e | Quantity of overburden generation in m3 | 446800 CuM | Actual OB removed was 393386 CuM | |
| 2f | General remarks of inspecting officers on development of pit w.r.t. type of deposit etc | | | The development was the mine was found to be in the most scientific way |

Exploitation:

| Sl.No. | Item | Propasals | Actual work | Remarks |
|--------|---|------------|---|---------|
| 3a | Number of pit proposed for production | 2 pits | 2 pits developed, 1 each in Block 5 and Block 8 | |
| 3c | Recovery of sailable/usable mineral from ROM production | 100% | Amost 100% in oractice also | |
| 3d | Quantity of mineral reject generation | Nil | There has been no minerl reject from the ROM . | |
| 3f | Quantity of sub grade mineral generation. | 888140 MT | Actual during the year 2014-15 was 296890 MT only | |
| 3h | Manual / Mechanised method adopted for segregating from ROM | mechanical | Mechanical | |
| 3i | Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects. | Yes | Both routine analysis and need base have been in vogue in this mine | |
| 3j | Provision of drilling and blasting in mineral benches | Yes | Scientific and controlled blsting in benches | |
| 3k | Provision of mining machineris in mineral benches | Yes | Adequate machineris have been deployed in this mine | |

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| 3l | Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM | 9-12 m high and 18-22 m wide benches proposed | Bench dimensions have been maintained as proposed | |
| 3m | Total area covered under excavation/pits | 165 ha | Actual was 163.159 ha | |
| 3n | Ore to OB ratio for the pit/mine during the year. | 1:0.03 | 1:0.05 | |
| 3o | Total area put in use under different heads at the end of year | Details given in their MP | Land use pattern was : Pits - 203.5355 ha, Dumps- 11.9925, Roads- 15.700 ha, Plants/ Township- 39.157 ha | |
| 3q | General remarks of inspecting officers on method of mining etc. | | | Most scientific method of mining |

Solid Waste Management - Dumping:

| Sl.No. | Item | Propasals | Actual work | Remarks |
|--------|--|--|---|---------|
| 4a | Separate dumping of topsoil, OB and mineral rejects (Rule 32,33) | Yes | OB and Fines dumps maintained seperately | |
| 4b | Location of topsoil, OB and mineral reject dumps | 2 nos of Waste dumps and 2 Sub Grade dumps | Block -5 and Block- 8 has 1 dump each for OB and SG | |
| 4d | Location of dumps w.r.t. ultimate pit limit (Rule 16) | Yes | Dumps have been made well outside the UPL | |
| 4e | Number of active and alive dumps. | 4 dumps active | 2 active dumps of OB and another 2 active dumps of SG | |

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| 4h | Whether Retaining wall or garland drain all along dumps are there. | Yes | Reatining walls have been made all around the dumps | |
| 4i | Length of Retaining wall or garland drain all along dumps | Specifics given | Approximately 2500 m all around the base of the 4 dumps | |
| 4k | Specific comments of inspecting officer on waste dump management | | | No problem with waste dump management here |

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 | No area has been matured for the same . Hence no reclamation as on date | |
| 5b | Area under backfilling of mined out area | NIL | None | |
| 5c | Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32) | Yes | In vogue when ever possible | |
| 5d | Total area fully reclaimed and rehabilitated | NIL | None | |
| 5e | General remarks of inspecting officers on backfilling and reclamation etc. | | | No concreete work in this regard as on date |

Progressive Mine Clousre Plan:

| Sl.No. | Item | Propasals | Actual work | Remarks |
|--------|------|-----------|-------------|---------|
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|----|---|---|---|---|
| 6a | Whether Annual report on PMCP submitted on time and correctly. Rule 23 E(2). | Yes | PMCP submitted regularly | |
| 6e | Cumulative no .of plants | 45000 within ML and another 200000 outside ML | Cummulative plantations are 396740 covering an area of 34.005 ha with 71% survival rate and another 195439 plants outside the ML covering an area of 41.979 with survival rate of 69% | |
| 6f | Any other method of rehabilitation | NIL | Except stabilisation by natural growth of plants | |
| 6p | Compliance of environmental monitoring (core zone and buffer zone) | Yes | Regular monitoring of environmental parameters | |
| 6q | General remarks of inspecting officers on PMCP compliance and progressive closure operations etc. | | | All proposals made in their PMCP have been complied with satisfactorily |

Mineral Conservation:

| Sl.No. | Item | Propasals | Actual work | Remarks |
|--------|---|----------------------------|--|---------|
| 7a | ROM Mineral dispatch or grade-wise sorting within lease area | Details given | During the year 2013-14 a total of 6719312.400 MT (55-65% Fe) have been sold to Local consumers | |
| 7b | Method of grade-wise mineral sorting i.e. manual or mechanical. | Both manual and mechanical | Mostly mechanical | |
| 7d | Any beneficiation process at mines | Yes | Dry process of mechanical beneficiation | |

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| 7e | General remarks of inspecting officer on Mineral conservation and beneficiation issues | No problem with mineral conservation here |
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Environment:

| Sl.No. | Item | Propasals | Actual work | Remarks |
|--------|---|-----------|---|---|
| 8b | Concurrent use or storage of topsoil | NIL | No top soil genrated practically | |
| 8d | Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use | Given | Phase reclalmation when ever possible | |
| 8h | Water sprinkling on roads to control airborne dust | Yes | Both water tanker and fixed line sprinkling method in vogue | |
| 8i | General remarks of inspecting officer on aesthetic beauty in and around mines area | | | The aesthetic beauty of the area has not been unduly affected |

Compliance of Rule 45:

| Sl.No. | Item | Propasals | Actual work | Remarks |
|--------|---|-----------|---|---------|
| 9a | Status of submission of Monthly and Annual returns | Yes | M/R and A/R have been submitted to IBM on a regular basis | |
| 9b | Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager | Yes | All statutory employment have been made | |

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|----|---|-------|--|
| 9c | Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc. | Yes | Proposed land use pattern have been followed judiciously |
| 9f | Scrutiny of Annual return on ROM stock and/or graded ore | Yes | Production of ROM was 7029110 MT (6732220 MT saleable ores + 296890 MT Sub grade ores) with closing stock of 1764098.840 MT (Saleable - 644058.840 + Subgrade - 1120040.00 MT) |
| 9g | Scrutiny of Annual return on sale value, Ex. Mine price and production cost | Given | PMV Rs 1647.88/MT |
| 9h | Scrutiny of Annual return on fixed assets | Yes | Adequate investment seem to have been invested in this mine |

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 |

Date :

(SHRI L H CHHANGTE)

Indian Bureau of Mines