

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

MCDR INSPECTION REPORT

Bhubaneshwar regional office

Mine file No : ORI/IRON/KJR/MCDR-54/BBS

Mine code : 30ORI08050

- (i) Name of the Inspecting : **RAM**) **RAMKISHAN R**
Officer and ID No.
- (ii) Designation : Sr. Asst. Contrl. Mines
- (iii) Accompanying mine : Shri R.N.Mondal, Mine Manager
Official with
Designation
- (iv) Date of Inspection : 27/12/2019
- (v) Prev.inspection date : 22/08/2019

PART-I : GENERAL INFORMATION

1. (a) **Mine Name** : **THAKURANI**
- (b) **Registration NO.** : **IBM/5546/2011**
- (c) Category : A Mechanised
- (d) Type of Working : Opencast
- (e) Postal address
- State : ORISSA
- District : KEONJHAR
- Village : DALKI
- Taluka : BARBIL
- Post office : THAKURANI
- Pin Code : 758035
- FAX No. : 06767 270049
- E-mail : kjsahluwalia@rediffmail.cor
- Phone : 06767-270048
- (f) Police Station : Joda
- (g) First opening date : 15/12/1953
- (h) Weekly day of rest : SUN
2. Address for : AT/PO: THAKURANI
correspondance VIA BARBIL, DIST: KEONJHAR
ORISSA PIN: 758035
3. (a) Lease Number : ORI0072
- (b) Lease area : 228.04
- (c) Period of lease :
- (d) Date of Expiry : 31/03/2020
4. Mineral worked : IRON ORE Main

5. Name and Address of the

Lessee : M/S KAY PEE ENTERPRISES
 PO BOX No : 3 AT/PO:
 BARBIL, KEONJHAR ORISSA
 Phone:06767- 75348,75659
 FAX :

Owner : P.K.AHLUWALIA
 P.K.AHLUWALIA, MINE OWNER
 P.B.NO.3, POST:BARBIL
 KEONJHAR ORISSA
 Phone:
 FAX :

Mining Engineer

Name : Sri Suresh Choudhary,Full Time
 Qualification : BE Mining.
 Appointment/ : 21/11/2011
 Termination date

Geologist

Name : AMIYA KUMAR NAIK,Full Time
 Qualification : MSC GEOLOGY
 Appointment/ : 01/02/2011
 Termination date

Manager

Name : RABINDRANATH MONDAL
 Qualification : DIPLOMA MINING WITH 1ST CLASS CERTIFICATE
 Appointment/ : 01/08/2011
 Termination date

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|-------------------------------|---|--------------------------------|------------|
| 6. Date of approval of Mining | : | Renewal under rule 22 MCR1960 | 30/05/2003 |
| Plan/Scheme of Mining | | Mining Scheme rule 12 MCDR1988 | 06/02/2008 |
| | | Modif.approved Mining Scheme | 16/10/2015 |
| | | MP modif under 17(3) MCR 2016 | 04/11/2016 |
| | | MP review under 17(1) MCR 2016 | 04/06/2018 |
| | | FMCP under 23C(1) | 16/11/2018 |

PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

Exploration :

| Sl.No. | Item | Proposals | Actual work | Remarks |
|--------|---|--|---|--|
| 1a | Backlog of previous year | No such specific proposal. | 26 nos of boreholes were drilled during the year 2018-19 | |
| 1b | Exploration over lease area for geological axis 1 or 2 | 44 nos of boreholes were proposed during the year 2018-19 to brought area under G1/G2 level. | 26 nos of boreholes were drilled during the year. | the remaining 18 nos were drilled during the year 2019-20 by June 2019 because of delay in getting forest clearance. |
| 1c | Exploration Agencies and Expenditure in lakh rupees during the year | | M/s Gemco Kati Exploration is the agency and expenditure incurred is Rs. 9054022. | |
| 1d | Balance area to be explored to bring Geological axis in 1 or 2 | 44 nos of boreholes were proposed during the year 2018-19 to brought area under G1/G2 level. | 26 nos of boreholes were drilled during the year. | |
| 1e | Balance reserve as on 01/04/20 | As per the approved document on 04.06.2018, the iron ore reserves are 88.406 mil.t. and resources are 8.744 mil.t. | due to addition and depletion of reserves/resources over the period the iron ore reserves as on 01.04.2019 are 82.9 mil.t. and resources are 8.744 mil.t. | |
| 1f | General remarks of inspecting officers on geology, exploration etc | | 26 nos of boreholes were drilled during the year.the remaining 18 nos were drilled during the year 2019-20 by June 2019 because of delay in getting forest clearance. | |

Development :

| Sl.No. | Item | Propasals | Actual work | Remarks |
|--------|---|---|---|---------|
| 2a | Location of development w.r.t.lease area | 2 nos of pits called Lucky pit and DN pit are proposed for development during the year 2018-19. | development is carried out in Lucky pit and DN pit. | |
| 2b | Separate benches in topsoil, overburden and minerals (Rule 15) | seperate benches in OB and mineral are proposed. | maintained. | |
| 2c | Stripping ratio or ore to OB ratio | 1:0.18 t/cu.m | 1:0.07 t/cu.m | |
| 2d | Quantity of topsoil generation in m3 | Not applicable | Nil | |
| 2e | Quantity of overburden generation in m3 | 1488502 cu.m. | 389395 cu.m. | |
| 2f | General remarks of inspecting officers on development of pit w.r.t. type of deposit etc | | development is carried out in 2 nos of pits by opencast mining method | |

Exploitation:

| Sl.No. | Item | Propasals | Actual work | Remarks |
|--------|---|-------------------------------------|--------------------------|--|
| 3a | Number of pit proposed for production | 2 | 2 | |
| 3b | Quantity of ROM mineral production proposed | 7.99 mil.t. during the year 2018-19 | 5.49 mil.t. | due to non avaiability of EC for the proposed quantity the production could not be achieved. |
| 3c | Recovery of sailable/usable mineral from ROM production | saleable ore 7.64 mil.t. | saleable ore 5.49 mil.t. | |

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|----|--|---|--|--|
| 3d | Quantity of mineral reject generation | 353982 t. | Nil | the generated mineral rejects are blended with saleable ore. |
| 3e | Grade of mineral rejects generation and threshold value declared. | +45%-55% Fe | +45%-55% Fe | |
| 3f | Quantity of sub grade mineral generation. | addressed in mineral rejects coloumn | Nil | |
| 3g | Grade of sub grade mineral generation | NA | Nil | |
| 3h | Manual / Mechanised method adopted for segregating from ROM | Mechanised. | Mechanised | |
| 3i | Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects. | Not proposed. | Nil | |
| 3j | Provision of drilling and blasting in mineral benches | deep hole drilling and blasting is proposed.. | carried out | |
| 3k | Provision of mining machineries in mineral benches | shovel and dumper combination is proposed for excavation of material. | excavtion of material is carried out by shovel and dumper combination. | |
| 3l | Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM | 10 m | maintained. | |

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|----|--|--|---|
| 3m | Total area covered under excavation/pits | 79.25 ha till the end of plan period i.e. year 2019-20. | 70 ha. |
| 3n | Ore to OB ratio for the pit/mine during the year. | 1:0.18 t/cu.m | 1:0.07 t/cu.m |
| 3o | Total area put in use under different heads at the end of year | (i) Covered under current (O/C) Workings 79.25 ha (ii) Used for waste disposal 17.5 ha (iii) Occupied by plant, buildings, residential, welfare buildings & roads 7.5 ha at the end of plan period i.e. 2019-20. | (i) Covered under current (O/C) Workings 70 ha (ii) Used for waste disposal 13.0 ha (iii) Occupied by plant, buildings, residential, welfare buildings & roads 7.5 ha |
| 3p | Production of ROM mineral during the last five year period as applicable | 2014-15: 3891510 t 2015-16: 5288993 t 2016-17: 5500106 t 2017-18: 5500049 t 2018-19: 7999998 t | 2014-15: 158235 t 2015-16: 2994070 t 2016-17: 5481286 t 2017-18: 5499506 t 2018-19: 5499050 t |
| 3q | General remarks of inspecting officers on method of mining etc. | | production is carried out from 2 nos of pits as proposed. |

Solid Waste Management - Dumping:

| Sl.No. | Item | Propasals | Actual work | Remarks |
|--------|--|---|-------------|---------|
| 4a | Separate dumping of topsoil, OB and mineral rejects (Rule 32,33) | seperate dumping for OB and mineral rejects are proposed. | carried out | |

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|----|--|--|---|
| 4b | Location of topsoil, OB and mineral reject dumps | Mineral rejects dump N-2446650 to 2446882 E-338310 to 338500 and OB material on dump-3. E-338650 to 338775 | dumping of waste was done over dump-3 and the mineral rejects generated were blended with saleable ore. |
| 4c | Number of dumps within lease area and outside of lease area | one dump proposed during the year 2018-19. | one dump |
| 4d | Location of dumps w.r.t. ultimate pit limit (Rule 16) | outside UPL | outside UPL |
| 4e | Number of active and alive dumps. | one | one |
| 4f | Number of dead dumps. | Not applicable | Nil |
| 4g | Number of dumps established. | Not applicable | Nil |
| 4h | Whether Retaining wall or garland drain all along dumps are there. | retaining wall and garland drain were proposed. | garland drain was not constructed. |
| 4i | Length of Retaining wall or garland drain all along dumps | 1340 m length retaining wall and 2650 m of garland drain has been proposed during the year 2018-19. | 1400 m length retaining wall and No garland drain has been constructed during the year 2018-19. |
| 4j | Number of settling ponds | 2 | 2 |
| 4k | Specific comments of inspecting officer on waste dump management | | waste dumping is carried out as proposed. |

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. | area not matured for backfilling. | NA | |
| 5b | Area under backfilling of mined out area | NA | Nil | |
| 5c | Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32) | NA | Nil | |
| 5d | Total area fully reclaimed and rehabilitated | NA | Nil | |
| 5e | General remarks of inspecting officers on backfilling and reclamation etc. | | area not matured for backfilling. | |

Progressive Mine Clousre Plan:

| Sl.No. | Item | Propasals | Actual work | Remarks |
|--------|--|--|-------------------------------|---------|
| 6a | Whether Annual report on PMCP submitted on time and correctly. Rule 23 E(2). | PMCP report to be submitted before 1 st July | | |
| 6b | Area available for rehabilitation (ha) . | Not applicable | | |
| 6c | afforestation done (ha). | 6.29 ha during the year 2018-19. | 3 ha during the year 2018-19. | |
| 6d | No. of saplings planted during the year | 11916 nos. | 13700 nos. | |
| 6e | Cumulative no .of plants | | 13700 nos. | |

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|----|---|----------------|-----------|
| 6f | Any other method of rehabilitation | NA | Nil |
| 6g | Cost incurred on watch and care during the year | | Rs 838920 |
| 6h | Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (Lx B x D | Not applicable | Nil |
| 6i | Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings | Not applicable | Nil |
| 6j | Compliance on reclamation and rehabilitation by backfilling (iii) Afforestation on on backfilled area | Not applicable | Nil |
| 6k | Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir | Not applicable | Nil |
| 6l | Compliance on reclamation and rehabilitation by backfilling (v) any other specific means. | Not applicable | Nil |
| 6m | Compliance of rehabilitation of waste land within lease (i) afforestation | 1 ha | 1 ha |

| | | | |
|----|---|---|--|
| 6n | Compliance of rehabilitation of waste land within lease (ii)Area rehabilitation (ha) | 1 ha | 1 ha |
| 6o | Compliance of rehabilitation of waste land within lease (iii)Method of rehabilitation | plantation | plantation |
| 6p | Compliance of environmental monitoring (core zone and buffer zone) | Periodical Monitoring as stipulated in Environment Clearance granted by MoEF & CC and Consent to Operate granted by SPCB. | Periodical Monitoring as stipulated in Environment Clearance granted by MoEF & CC and Consent to Operate granted by SPCB is carried out. |
| 6q | General remarks of inspecting officers on PMCP compliance and progressive closure operations etc. | | Periodical Monitoring as stipulated in Environment Clearance granted by MoEF & CC and Consent to Operate granted by SPCB is carried out. |

Mineral Conservation:

| Sl.No. | Item | Propasals | Actual work | Remarks |
|--------|---|--|------------------------|---------|
| 7a | ROM Mineral dispatch or grade-wise sorting within lease area | grade wise sorting with in lease area is proposed. | carried out | |
| 7b | Method of grade-wise mineral sorting i.e. manual or mechanical. | Mechanical | Mechanical | |
| 7c | Different grade of mineral sorted out at mines. | +45-55% Fe and +55% Fe | +45-55% Fe and +55% Fe | |

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|----|--|---------------|---|
| 7d | Any beneficiation process at mines . | Not proposed. | Nil |
| 7e | General remarks of inspecting officer on Mineral conservation and beneficiation issues | | different garde wise sorting of mineral is carried out. |

Environment :

| Sl.No. | Item | Propasals | Actual work | Remarks |
|--------|---|--|-------------|---------|
| 8a | Separate removal and utilization of topsoil (Rule 32) | Not applicable | Nil | |
| 8b | Concurrent use or storage of topsoil | Not applicable | Nil | |
| 8c | Separate dumps for overburden, waste rock, rejects and fines (Rule 33) | seperate dumps maintained for OB and rejects are proposed. | | |
| 8d | Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use | Not applicable | Nil | |
| 8e | Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc) | Not applicable | Nil | |

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|----|--|---|--|
| 8f | Baseline information on existence of plantation and additional plantation done (Rule 41) | 11916 nos during the year 2018-19. | 13700 nos |
| 8g | Survival rate | | 70% |
| 8h | Water sprinkling on roads to control airborne dust | water sprinkling on haul road for dust suppression. | mobile water sprinklers are deployed for water sprikling on haul road for dust supression. |
| 8i | General remarks of inspecting officer on aesthetic beauty in and around mines area | | aesthetic beauty in and around mines area mainatined. |

Compliance of Rule 45:

| Sl.No. | Item | Propasals | Actual work | Remarks |
|--------|---|--|--|---------|
| 9a | Status of submission of Monthly and Annual returns | Monthly and annual returns are to be submitted as per rule 45 of MCDR, 2017 | submitted. | |
| 9b | Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager | (i) Graduate Mining Engineer 3 nos (ii) Diploma Mining Engineer 11 nos (iii) Geologist 1 no. | (i) Graduate Mining Engineer 3 nos (ii) Diploma Mining Engineer 11 nos (iii) Geologist 1 no. | |

| | | | |
|----|---|--|--|
| 9c | Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc. | (i) Covered under current (O/C) Workings 70.000 ha (ii) Used for waste disposal 9.000 ha (iii) Occupied by plant, buildings, residential, welfare buildings & roads 0.025 ha (iv) Other Purpose (MINES ROAD) 7.090 ha | area used for waste disposal is not in line with the approved mining plan. |
| 9d | Scrutiny of Annual return on afforestation | 13700 nos | 13700 nos |
| 9e | Scrutiny of Annual return on mineral reject generation (Grade and quantity) | Nil | Nil |
| 9f | Scrutiny of Annual return on ROM stock and/or graded ore | ROM closing stock is Nil | ROM closing stock is Nil |
| 9g | Scrutiny of Annual return on sale value, Ex. Mine price and production cost | production cost is Rs.1291.88/t | production cost is Rs.1291.88/t |
| 9h | Scrutiny of Annual return on fixed assets | fixed assests Rs.407275986 | fixed assests Rs.407275986 |

9k Scrutiny of BLAST HOST found to be in order.
Annual return on DRILL 115.000
mining MM 1 no.
machineries AIR COMPRESSOR
 450.000 CUM/MN
 1 no.
 SHOVEL
 (HYDRAULIC)
 4.300 CUM 1
 no.
 SHOVEL
 (HYDRAULIC)
 2.500 CUM 2
 nos.
 SHOVEL
 (HYDRAULIC)
 1.700 CUM 3
 nos.
 SHOVEL
 (HYDRAULIC)
 1.600 CUM 1
 no. etc.,

Details of violations observed during current inspection and compliance position of violation pointed out

| Violation observed | | Show couse position | |
|--------------------|-------------------------|---------------------|-------------------------|
| Rule NO. | Issued on Compliance on | Rule NO. | Issued on Compliance on |

Date :

(RAMKISHAN R)

Indian Bureau of Mines