

**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 : **DJ03**) **DILIP JAIN**
Officer and ID No.
- (ii) Designation : Junior Mining Geologist
- (iii) Accompanying mine : Sri R.N. Mandal, Mine Manager. Sri Amiya Kumar Naik,
Official with
Designation
- (iv) Date of Inspection : 10/01/2018
- (v) Prev.inspection date : 28/08/2016

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 |

PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

Exploration :

| Sl.No. | Item | Proposals | Actual work | Remarks |
|--------|---|--|--|---|
| 1a | Backlog of previous year | FY 2016-17: 42 | FY 2016-17: 26 | 17 Nos of core type and 9 numbers of RC. The Balance hole was not completed due to steep hilly slope and un-diverted forest area. |
| 1b | Exploration over lease area for geological axis 1 or 2 | Proposal of BH as per approved document vide file number MPM/FM/14-ORI/2016-17 dated 04/11/2016 for the period from 2017-18 to 2019-2020: 2017-18=24, 2018-19=26, 2019-20=15 | 2017-18=35 | NIL. |
| 1c | Exploration Agencies and Expenditure in lakh rupees during the year | No Specific Proposal | 1) M/s Thriveni Exploration Agency Pvt.Ltd Total expenditure Rs68 ,52,895 and 2) Gemco Kati Exploration Pvt.Ltd , Total Expenditure Rs.11,07,795 | As reported by Mine Manager. |
| 1d | Balance area to be explored to bring Geological axis in 1 or 2 | 169.15 | 101.23 | Balance area as per approved document dated 04/11/2016. |

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| 1e | Balance reserve as on 01/04/20 | In the approved Modification of the MP dated 04/11/2016, the Reserve and Resource of the Iron Ore furnished was 65.195 and 6.603 million tonnes respectively. | Reserve : 61.33 Million tonnes Resource: 6.603 million tonnes | NIL. |
| 1f | General remarks of inspecting officers on geology, exploration etc | -- | Geologically the Iron Ore deposit of the lease area is of high grade. Proposal of exploration has been given for entire lease area. However, due non-diversion of the forestland proposal of exploration for the year 2016-17 could not be completed. | NIL. |

Development :

| Sl.No. | Item | Propasals | Actual work | Remarks |
|--------|--|--|--|------------------------|
| 2a | Location of development w.r.t.lease area | RL 840 to 780 (Lucky Pit) RL 700 to 630Bottom Pit RL 680 to 650 (D.N Pit) | RL 840 to 780 (Lucky Pit) RL 700 to 630 (Bottom Pit) RL 680 to 650 (D.N Pit)) | No deviation observed. |
| 2b | Separate benches in topsoil, overburden and minerals (Rule 15) | No proposal of top soil generation. Separated benches of OB and MR was proposed. | Top soil: NIL, Most of the area is mineralized, however, separate benches have been observed in OB and MR at places. | NIL. |
| 2c | Stripping ratio or ore to OB ratio | 1: 0.074 T/CuM | 1:0.092 T/CuM | NIL. |

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| 2d | Quantity of topsoil generation in m3 | No proposal. | NIL. | NIL. |
| 2e | Quantity of overburden generation in m3 | 411047 CuM | 507600 Cum | More OB generation due to encounter of Shale patch intermittently. |
| 2f | General remarks of inspecting officers on development of pit w.r.t. type of deposit etc | -- | Development was found within the approved limit. OB generation is slightly higher side due to encounter of Shale patch.. | NIL. |

Exploitation:

| Sl.No. | Item | Propasals | Actual work | Remarks |
|--------|---|-----------------|-----------------|--|
| 3a | Number of pit proposed for production | 3 | 3 | NIL. |
| 3b | Quantity of ROM mineral production proposed | 5500106 Tonnes. | 5481286 Tonnes. | NIL. |
| 3c | Recovery of sailable/usable mineral from ROM production | 5256738 tonnes. | 5481286 Tonnes. | NIL. |
| 3d | Quantity of mineral reject generation | NIL. | NIL. | NIL. |
| 3e | Grade of mineral rejects generation and threshold value declared. | NIL. | NIL. | NIL. |
| 3f | Quantity of sub grade mineral generation. | 243367.5 Tonnes | NIL. | It was anticipated around 5% intercalated Subgrade Ore of ROM excavation. However, no subgrade patch encounter during excavation for the reporting year. |

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| 3g | Grade of sub grade mineral generation | 45% to 55% Fe | NIL. | NIL. |
| 3h | Manual / Mechanised method adopted for segregating from ROM | Mechanical. | Mechanical. | NIL. |
| 3i | Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects. | No proposal. | NIL. | NIL. |
| 3j | Provision of drilling and blasting in mineral benches | Yes | Yes | NIL. |
| 3k | Provision of mining machineries in mineral benches | Yes | Yes | NIL. |
| 3l | Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM | Yes, Height =10mtr. Width:-15mtr | At places the width has been found less than the proposal. | Violation issued 12/01/2018. |
| 3m | Total area covered under excavation/pits | 51.39 Ha | 51.300 Ha | NIL. |
| 3n | Ore to OB ratio for the pit/mine during the year. | 1: 0.074 T/CuM | 1:0.092 T/CuM | NIL. |
| 3o | Total area put in use under different heads at the end of year | 77.195 Ha area at the end of the plan period. | 77.235 Ha (as per approved documet dated 04/11/2016) | NIL. |

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| 3p | Production of ROM mineral during the last five year period as applicable | 2012-13=3054709 MT 2013-14=3647806 MT 2014-15=3891510 MT 2015-16=5288993MT 2016-17=5500106MT | 2012-13=103975MT 2013-14=285 MT 2014-15=158235MT 2015-16=2994070MT 2016-17=5481286MT | NIL. |
| 3q | General remarks of inspecting officers on method of mining etc. | -- | The Iron Ore being mine out with opencast method of Mining. As the ore is occur at shallow level, the method is suitable. | NIL. |

Solid Waste Management - Dumping:

| Sl.No. | Item | Propasals | Actual work | Remarks |
|--------|--|--|---|---------|
| 4a | Separate dumping of topsoil, OB and mineral rejects (Rule 32,33) | No proposal of top soil generation. Proposed separate benches in OB and Ore. | As per proposal. | NIL. |
| 4b | Location of topsoil, OB and mineral reject dumps | Over the existing OB Dump-3. | As per proposal. | NIL. |
| 4c | Number of dumps within lease area and outside of lease area | Within Lease area-5 Out side lease area= Nil | Within Lease area-5 Out side lease area= Nil | NIL. |
| 4d | Location of dumps w.r.t. ultimate pit limit (Rule 16) | Out side UPL. | Out side UPL. | NIL. |
| 4e | Number of active and alive dumps. | 1 | 1 | NIL. |
| 4f | Number of dead dumps. | 3 | 3 | NIL. |
| 4g | Number of dumps established. | 1 | 1 | NIL. |

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| 4h | Whether Retaining wall or garland drain all along dumps are there. | Retaining Wall length =700mtr. and Garland grain =1880mtr. | Retaining Wall length along the dump No -3 is 140mtr but total Retaining wall constructed during the year 710.00mtr and Garland grain =1891mtr | NIL. |
| 4j | Number of settling ponds | 3 | 3 | NIL. |
| 4k | Specific comments of inspecting officer on waste dump management | -- | At present only one dump i.e. OB dump 03 is active and OB is being dumping over the same dump. Other dumps are old ones and dead in nature. Planation has been carried out over the dumps. Retaining wall and garland drain has been provided. | NIL. |

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. | No proposal of backfilling. | NIL. | NIL. |
| 5b | Area under backfilling of mined out area | No proposal of backfilling. | NIL. | NIL. |
| 5c | Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32) | No proposal of top soil generation during 2016-17. | NIL. | NIL. |
| 5d | Total area fully reclaimed and rehabilitated | No Proposal of reclamation and rehabilitation during reporting year 2016-17. | NIL. | NIL. |

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|----|--|-----|--|------|
| 5e | General remarks of inspecting officers on backfilling and reclamation etc. | --- | None of the quarry is exhausted completely. No Proposal of reclamation and rehabilitation during reporting year 2016-17. | NIL. |
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Progressive Mine Closure Plan:

| Sl.No. | Item | Proposals | Actual work | Remarks |
|--------|--|--|---------------------------------------|--|
| 6a | Whether Annual report on PMCP submitted on time and correctly. Rule 23 E(2). | Yearly report of PMCP for the year 2016-17 has been submitted by party under rule 26(2) of MCDR, 2017. | Submitted for reporting year 2016-17. | NIL. |
| 6b | Area available for rehabilitation (ha) . | No Proposal. | NIL. | NIL. |
| 6c | afforestation done (ha). | 2.15 Ha. | As per proposal. | NIL. |
| 6d | No. of saplings planted during the year | 20000 numbers of saplings. | 4900 saplings only. | Bench Plantation not done due to hard and massive nature of the bench surface. |
| 6e | Cumulative no .of plants | 27200 number of saplings at the end of plan period. | 5400 number of saplings only. | Bench Plantation not done due to hard and massive nature of the bench surface. |
| 6f | Any other method of rehabilitation | No Proposal. | NIL. | NIL. |
| 6g | Cost incurred on watch and care during the year | No specific proposal. | NIL. | NIL. |
| 6h | Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (Lx B x D | No Proposal. | NIL. | NIL. |

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|----|---|--------------|------|------|
| 6i | Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings | No Proposal. | NIL. | NIL. |
| 6j | Compliance on reclamation and rehabilitation by backfilling (iii) Afforestation on backfilled area | No Proposal. | NIL. | NIL. |
| 6k | Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir | No Proposal. | NIL. | NIL. |
| 6l | Compliance on reclamation and rehabilitation by backfilling (v) any other specific means. | No Proposal. | NIL. | NIL. |
| 6m | Compliance of rehabilitation of waste land within lease (i) afforestation | No Proposal. | NIL. | NIL. |
| 6n | Compliance of rehabilitation of waste land within lease (ii) Area rehabilitation (ha) | No Proposal. | NIL. | NIL. |
| 6o | Compliance of rehabilitation of waste land within lease (iii) Method of rehabilitation | No Proposal. | NIL. | NIL. |

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| 6p | Compliance of environmental monitoring (core zone and buffer zone) | Proposed to monitor of environmental parameter like water quality, noise quality, air quality etc . | Regular monitoring of environmental parameter like water quality, noise quality, air quality etc . | NIL. |
| 6q | General remarks of inspecting officers on PMCP compliance and progressive closure operations etc. | --- | None of the quarry is exhausted completely. No Proposal of reclamation and rehabilitation during reporting year 2016-17. However, plantation has been carried out in safety zone and dump area. | NIL. |

Mineral Conservation:

| Sl.No. | Item | Propasals | Actual work | Remarks |
|--------|--|--|---|---------|
| 7a | ROM Mineral dispatch or grade-wise sorting within lease area | Grade wise sorting proposed in the lease area. | As per proposal. | NIL. |
| 7b | Method of grade-wise mineral sorting i.e. manual or mechanical. | Mechanical | Mechanical | NIL. |
| 7c | Different grade of mineral sorted out at mines. | >55% Fe & 45 to 55% Fe | As per proposal. | NIL. |
| 7d | Any beneficiation process at mines . | Non Proposal. | NIL. | NIL. |
| 7e | General remarks of inspecting officer on Mineral conservation and beneficiation issues | -- | No sub-grade material generation during the reporting year 2016-17. | NIL. |

Environment:

| Sl.No. | Item | Propasals | Actual work | Remarks |
|--------|---|--|---|---------|
| 8a | Separate removal and utilization of topsoil (Rule 32) | No proposal of top soil generation. | NIL. | NIL. |
| 8b | Concurrent use or storage of topsoil | No proposal. | NIL. | NIL. |
| 8c | Separate dumps for overburden, waste rock, rejects and fines (Rule 33) | Separate dumping of overburden, waste rock, mineral reject has been proposed | As per proposal. | NIL. |
| 8d | Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use | No Proposal. | NIL. | NIL. |
| 8e | Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc) | Dump Plantation and bench Plantation. | Only dump plantation. Bench Plantation not done due to hard and massive nature of the bench surface. | NIL. |
| 8f | Baseline information on existence of plantation and additional plantation done (Rule 41) | No specific proposal or information on existence of plantation in approved document. Additional plantation proposed was 2016-17 =20000 saplings. | Plantation carried out during the year 2016-17 was 4900 only. Less number of plantations due to non-plantation over bench for the reason of hard and massive nature of the bench surface. | NIL. |
| 8g | Survival rate | No specific proposal. | 70% | NIL. |

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|----|--|--|--|------|
| 8h | Water sprinkling on roads to control airborne dust | To control the airborne dust water sprinkling is proposed on the road. | Observed as per proposal. | NIL. |
| 8i | General remarks of inspecting officer on aesthetic beauty in and around mines area | --- | The aesthetic beauty of the mine is moderate. None of the quarry is fully exhausted. Hence, reclamation could not be taken up. Matured slope of the dumps are planted. | NIL. |

Compliance of Rule 45:

| Sl.No. | Item | Propasals | Actual work | Remarks |
|--------|---|---|--|---------|
| 9a | Status of submission of Monthly and Annual returns | The aesthetic beauty of the mine is moderate. None of the quarry is fully exhausted. Hence, reclamation could not be taken up. Matured slope of the dump is planted | Submitted for reporting year. | NIL. |
| 9b | Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager | Graduate Mining engineer=06, Diploma Mining Engineer=14 , Deologist=01. | Found to be as per annual return for the reporting year. | NIL. |

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| 9c | Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc. | Covered under Current working=51.300 Reclaimed/Rehabilitation=4.29 0 Used for waste disposal=13.40 0 Occupied by plant, building=0.025 Mines Road=7.090 | The land use status furnished in the annual return 2016-17 is found to be in order. | NIL. |
| 9d | Scrutiny of Annual return on afforestation | Total 4900 saplings. | Found to be in order. | NIL. |
| 9e | Scrutiny of Annual return on mineral reject generation (Grade and quantity) | No mineral reject generation for reporting year. | The generation status of the SG furnished in annual return of the reporting year found to correct. | NIL. |
| 9f | Scrutiny of Annual return on ROM stock and/or graded ore | Lumps=375191.7 12 Fines=998097.1 18 | Found to be in order. | NIL. |
| 9g | Scrutiny of Annual return on sale value, Ex. Mine price and production cost | Lump 62-65%=Rs. 1918.92, Fines 58% to 60%= Rs. 687.67 and 62% to 65% =Rs. 1121.58 | The ex-mine price seems to be in order. | NIL. |
| 9h | Scrutiny of Annual return on fixed assets | Value of fixed asset furnished in annual return is Rs. 275185406.00 | The Value of fixed asset furnished in annual return seems to be in Rs. 275185406.0 | NIL. |

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|----|---|--|--|------|
| 9k | Scrutiny of Annual return on mining machineries | The machineries furnished in annual return is Hydraulic shovel, Wheel Loader, blast hole drill, Air compressor, Dumper, Dozer, water tanker etc. | The deployment status of the mining machineries & other machineries, equipment furnished in the annual return are appears to be correct. | NIL. |
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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 |
| MCDR17 | Rule 11(1) | 12/01/2018 | | | |
| Rule 54 | | 12/01/2018 | | | |

Date :**(DILIP JAIN)**

Indian Bureau of Mines