

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

MCDR INSPECTION REPORT

Bhubaneshwar regional office

Mine file No : ORI/CR/JJP/MCDR-15/BBS

Mine code : 11ORI19017

- (i) Name of the Inspecting : **SRM**) **SHRI SUDIP RANJAN MAZUMDAR**
Officer and ID No.
- (ii) Designation : Senior Mining Geologist
- (iii) Accompanying mine : Shri S Patni, Agent
Official with
Designation
- (iv) Date of Inspection : 11/12/2018
- (v) Prev.inspection date : 03/08/2018

PART-I : GENERAL INFORMATION

1. (a) **Mine Name** : **MAHAGIRI**
- (b) **Registration NO.** : **IBM/4200/2011**
- (c) Category : A Fully Mechanised
- (d) Type of Working : Opencast
- (e) Postal address
- State : ORISSA
- District : JAJPUR
- Village : KALIAPANI
- Taluka : SUKINDA
- Post office : KALIPANI
- Pin Code : 755047
- FAX No. : 06742580020
- E-mail : mineplanningcell@imfa.in
- Phone : 06742580100
- (f) Police Station : TOMKA
- (g) First opening date : 16/01/2006
- (h) Weekly day of rest : SUN
2. Address for : AT/ PO: KALIAPANI,
correspondance DIST: JAJPUR
ORISSA
3. (a) Lease Number : ORI0693
- (b) Lease area : 116.76
- (c) Period of lease : 30
- (d) Date of Expiry : 03/09/2029
4. Mineral worked : CHROMITE Main

5. Name and Address of the

Lessee : INDIAN CHARGE CHROME LIMITED.
 BOMIKAL PO RASULGARH
 BHUBNESHWAR ORISSA
 Phone:580100,580125
 FAX :580145/580020

Owner : C R RAY
 IMFA BUILDIND, BOMIKHAL
 RASULGARH, BHUBANESWAR
 ODISHA JAJPUR ORISSA
 Phone: 06742580100
 FAX :

Agent : SUDHANSHU PATNI
 M/S IMFA LIMITED, KALIAPANI
 JAJPUR ODISHA JAJPUR ORISSA
 Phone: 9937299495
 FAX :

Mining Engineer

Name : SHRI JALANDHAR PATRA,Full Time
 Qualification : M TECH MINING
 Appointment/ : 26/10/2017
 Termination date

Geologist

Name : KHIROD KUMAR MOHAPATRA,Full Time
 Qualification : MSC (GEOLOGY)
 Appointment/ : 02/03/2015
 Termination date

Manager

Name : SHRI LALATENDU MAHAPATRA
 Qualification : AMIE MINING
 Appointment/ : 25/10/2017
 Termination date

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|---|---|--------------------------------|------------|
| 6. Date of approval of Mining Plan/Scheme of Mining | : | Modif.of approved Mining Plan | 29/11/2007 |
| | | Mining Scheme rule 12 MCDR1988 | 22/03/2010 |
| | | Modif.approved Mining Scheme | 11/11/2011 |
| | | Mining Scheme rule 12 MCDR1988 | 06/04/2015 |
| | | Modif.of approved Mining Plan | 10/03/2017 |

PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

Exploration :

| Sl.No. | Item | Proposals | Actual work | Remarks |
|--------|---|---|--|--|
| 1a | Backlog of previous year | Proposal in 2017-18: 1 No of Boreholes with total meterage of 105 meter. | Actual number of boreholes done in 2017-18 was 17 boreholes with meterage of 1033 meter | There is no backlog in exploration |
| 1b | Exploration over lease area for geological axis 1 or 2 | The balance area shall be explored by geophysical and geochemical prospecting during 2017-18. Based on the result of anomalies for chrome zone the boreholes shall be proposed. | Lease area explored as on 01.01.2017 under G1 was 27.73 Ha and remaining 46.047 Ha area was unexplored. Geophysical exploration has been done over unexplored area and two dTH holes have been drilled on anomalous zone. | Lease area explored as on 01.01.2017 under G1 was 27.73 Ha and remaining 46.047 Ha area was unexplored. |
| 1c | Exploration Agencies and Expenditure in lakh rupees during the year | Not Proposed | Agencies: M/s Maheswari Mining (P) Ltd for U/G Core drilling, M/s Drill King India Pvt Ltd for Surface Core drilling, M/s Coronation India Pvt Ltd for Surface non-core drilling and ISM Dhanbad for Geophysical prospecting. Expenditure: Rs. 4882463.00 | Agencies: M/s Maheswari Mining (P) Ltd for U/G Core drilling, M/s Drill King India Pvt Ltd for Surface Core drilling, M/s Coronation India Pvt Ltd for Surface non-core drilling and ISM Dhanbad for Geophysical prospecting. Expenditure: Rs. 4882463.00 |
| 1d | Balance area to be explored to bring Geological axis in 1 or 2 | Not Proposed | Balance lease area of 46.047 Ha as on 01.01.2017 is to be explored under G1/G2 as per UNFC norms. | Balance lease area of 46.047 Ha as on 01.01.2017 is to be explored under G1/G2 as per UNFC norms. |

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| 1e | Balance reserve as on 01/04/20 | Reserves as on 01.04.2017 under 111 category of UNFC is 2699000 tonnes and under 122 category is 5609000 tonnes. Resources under 221 category os 2463000 tonnes and under 222 category is 1339000 tonnes. | Reserves as on 01.04.2018 under 111 category of UNFC is 2499500 tonnes and under 122 category is 5609000 tonnes. Resources under 221 category os 2463000 tonnes and under 222 category is 1339000 tonnes. | Reserves as on 01.04.2018 under 111 category of UNFC is 2499500 tonnes and under 122 category is 5609000 tonnes. Resources under 221 category os 2463000 tonnes and under 222 category is 1339000 tonnes. |
| 1f | General remarks of inspecting officers on geology, exploration etc | Not Proposed | There is no backlog in the exploration as proposed in the approved modification to the mining plan. Area explored under G1 as on 01.01.2017 is 27.73 Ha. | There is no backlog in the exploration as proposed in the approved modification to the mining plan. Area explored under G1 as on 01.01.2017 is 27.73 Ha. |

Development :

| Sl.No. | Item | Propasals | Actual work | Remarks |
|--------|--|---|---|---------|
| 2a | Location of development w.r.t.lease area | Development is proposed in both opencast mining with overall direction of advancement East-West | Development carried out in opencast quarry and underground mining by decline, vertical shafts, slot raise, vent raise and x-cuts etc. | Nil |

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|----|--|--|---|--|
| 2b | Separate benches in topsoil, overburden and minerals (Rule 15) | There is no proposal of top soil generation. There is no specific proposal of separate benches in overburden and minerals. | No top soil generated during 2017-18. Separate benches in ore and overburden is maintained. | Nil |
| 2c | Stripping ratio or ore to OB ratio | 1:1.4t/cum for the year 2017-18 | 1:0.62 t/cum for the year 2017-18 | Excavation from O/C is less due to failure in H/W benches. |
| 2d | Quantity of topsoil generation in m3 | Not Proposed | Nil | Nil |
| 2e | Quantity of overburden generation in m3 | 34000 cum for the year 2017-18 | 5331.2 cum for the year 2017-18. Excavation from O/C is less due to failure in H/W benches. | In the letter ref no. IMFA/MPC/17/94 dated 04.12.2017 addressed to RCOM, IBM Bhubaneswar it has been mentioned that the collapse in hangwall side occurred again on 01.10.2017 due to high rainfall as a result quarry bottom got filled up and it was apprehended that expansion of the quarry may result in further collapse on the hangwall side.. It was decided to cease the opencast mining in order to prevent further collapse of hangwall side. |

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| 2f | General remarks of inspecting officers on development of pit w.r.t. type of deposit etc | Not Proposed | There was no generation of top soil. Opencast development was less due to collapse of hanging wall side resulting in cessation of opencast development. Underground mining is by blasthole stoping method carried out with access of decline and shafts. | In the letter ref no. IMFA/MPC/17/94 dated 04.12.2017 addressed to RCOM, IBM Bhubaneswar it has been mentioned that the collapse in hangwall side occurred again on 01.10.2017 due to high rainfall as a result quarry bottom got filled up and it was apprehended that expansion of the quarry may result in further collapse on the hangwall side..It was decided to cease the opencast mining in order to prevent further collapse of hangwall side. |
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Exploitation:

| Sl.No. | Item | Propasals | Actual work | Remarks |
|--------|---------------------------------------|---|---|---------|
| 3a | Number of pit proposed for production | One, Opencast mining in quarry-1 and under ground mining is by blasthole stoping method | One, Opencast mining in quarry-1 and under ground mining is by blasthole stoping method | Nil |

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| 3b | Quantity of ROM mineral production proposed | In 2017-18, ROM production proposed from opencast working was 23000 tonnes and 277000 tonnes from underground mining. | In 2017-18, ROM production from opencast working was 6525 tonnes and 180088.46 tonnes from underground mining. | 1. The proposed excavation could not been achieved due to collapse in the H/W side of O/C quarry. 2. Due to revocation of CTO by SPCB, Odisha, mining operation was stopped from 11th April to 22nd June 2017 resulting less development. |
| 3c | Recovery of sailable/usable mineral from ROM production | 300000 tonnes of ROM production of +10% Cr2O3 | 186613.46 tonnes of ROM production of +10% Cr2O3 | Due to revocation of CTO by SPCB, ODISHA, mining operation was stopped from 11th April to 22nd June 2017 and also due to collapse in hang wall side of opencast quarry, opencast mining operation has been stopped resulting less production. |
| 3d | Quantity of mineral reject generation | Not Proposed | Nil | Nil |
| 3e | Grade of mineral rejects generation and threshold value declared. | Grade of mineral reject is not proposed and threshold value declared is +10% Cr2O3 | Nil and threshold value +10% Cr2O3 | Nil |
| 3f | Quantity of sub grade mineral generation. | Not Proposed | Nil | Nil |
| 3g | Grade of sub grade mineral generation | Not proposed | Nil | Nil |
| 3h | Manual / Mechanised method adopted for segregating from ROM | Mechanized | Mechanized | Nil |

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| 3i | Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects. | Not proposed | Nil | Nil |
| 3j | Provision of drilling and blasting in mineral benches | In opencast deep hole drilling. Blasting is rarely required. In development faces Burn cut drilling pattern shall be followed. In development faces slurry explosive of 25mm & 40mm size of cartridge shall be used for effective blasting. In Stope drilling, 57mm dia. long hole and 115mm dia. DTH combination shall be used. The holes shall be drilled in ring pattern. Blasting shall be carried out by the explosive in cartridge form with electric delay detonators/Non el. | In development faces Burn cut drilling pattern has been followed. In development faces slurry explosive of 25mm & 40mm size of cartridge is used for effective blasting. In Stope drilling, 57mm dia. long hole and 115mm dia. DTH combination is used. The holes has been drilled in ring pattern. Blasting has been carried out by the explosive in cartridge form with electric delay detonators/ Nonel. | Nil |

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| 3k | Provision of mining machineries in mineral benches | Excavation of overburden and ore is carried out with the combination of hydraulic excavator, dumper, rock breaker and dozer. | Front end loader: 1.7 cum; dumper 14.5cum etc. | Data as furnished in annual return for 2017-18. |
| 3l | Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM | Proposed with 6m bench height | Height of the benches is suitable for opencast method of mining. | Nil |
| 3m | Total area covered under excavation/pits | Total area covered under mining is 9.6 ha till the end of modification to the mining plan 2019-2020. Life of the opencast mining is up to 2017-18. Thereafter, opencast mining shall cease. | 9.34 ha covered till 2017-18 | Nil |
| 3n | Ore to OB ratio for the pit/mine during the year. | 1:1.4 t/cum | 1:0.62 t/cum | Excavation from O/C is less due to failure in H/W benches. |

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| 3o | Total area put in use under different heads at the end of year | Total area at the end of 2019-20 will 47.874 ha; area under mining:9.6 Ha, storage for top soil:0.25Ha, overburden dump:5.09 Ha, mineral & subgrade ore storage, processing plant:17.166ha | Land Use Area in Hect. 1. Area under Mining- 9.34 2. Reclaimed /Rehabilitated - 6.21 3. Used for waste disposal -4.70 4. Occupied by plant ,building residential, welfare buildings, roads - 6.73 5. Other purpose - 5.46 6. Work done under Progressive mine closure plan during the year. - 0.45 , infrastructure : 9.837 ha, roads: 2.851ha, safety zone: 3.08ha | Nil |
| 3p | Production of ROM mineral during the last five year period as applicable | 2013-14=192518 MT 2014-15=377866 MT 2015-16=170656 MT 2016-17=232000 MT 2017-18=300000 MT | 2013-14= 73795.35 MT 2014-15= 83581MT 2015-16= 74441 MT 2016-17=207695.64 MT 2017-18 = 186613.46 MT | Nil |
| 3q | General remarks of inspecting officers on method of mining etc. | Not Proposed | Opencast mining carried by opencast method and underground mining by blasthole stoping method. Quantity of ROM production for 2017-18 was less than the proposal. Drilling and blasting carried out as per proposal. | Opencast mining carried by opencast method and underground mining by blasthole stoping method. Quantity of ROM production for 2017-18 was less than the proposal. Drilling and blasting carried out as per proposal. |

Solid Waste Management - Dumping:

| Sl.No. | Item | Propasals | Actual work | Remarks |
|--------|------|-----------|-------------|---------|
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| 4a | Separate dumping of topsoil, OB and mineral rejects (Rule 32,33) | There is no proposal for generation and stacking of top soil and mineral reject. Waste generated from opencast and underground development working shall be utilised for concurrent backfilling of the mined out areas of opencast working. | There was no generation of top soil and mineral rejects. Waste generated has been utilised for backfilling. | Nil |
| 4b | Location of topsoil, OB and mineral reject dumps | Top soil- NA, Overburden generated will be backfilled in the mined out part of the opencast quarry, Mineral Reject - NA | Top soil- NA, Overburden generated is backfilled in the mined out part of the opencast quarry, Mineral Reject - NA | Nil |
| 4c | Number of dumps within lease area and outside of lease area | Within Lease area- One number of dump Outside Lease area- Nil | Within Lease area - One; Number of dump outside Lease area- Nil | Nil |
| 4d | Location of dumps w.r.t. ultimate pit limit (Rule 16) | Outside UPL | Outside UPL | Nil |
| 4e | Number of active and alive dumps. | No Proposal | Nil | Nil |
| 4f | Number of dead dumps. | One waste dump | One waste dump | Nil |
| 4g | Number of dumps established. | One waste dump | One waste dump | Nil |
| 4h | Whether Retaining wall or garland drain all along dumps are there. | Provided | Provided | Nil |

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| 4i | Length of Retaining wall or garland drain all along dumps | Not Proposed | Nil | Only repair and maintenance of existing retaining wall and garland drain has been proposed which has been maintained. |
| 4j | Number of settling ponds | No Proposal | Nil | Only desiltation of settling ponds have been proposed and done. |
| 4k | Specific comments of inspecting officer on waste dump management | Not Proposed | There is one number of dump within the lease area. The waste generated during the year 2017-18 has been utilised for concurrent backfilling as per proposal. | 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. | Not Proposed | Not applicable | Nil |
| 5b | Area under backfilling of mined out area | 0.23 ha area for the year 2017-18 | 0.31 ha area for the year 2017-18 | Nil |
| 5c | Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32) | No Proposal | Nil | No generation of top soil |
| 5d | Total area fully reclaimed and rehabilitated | Reclaimed: 0.23Ha and Rehabilitated: 0.14 Ha | Reclaimed: 0.31Ha and Rehabilitated: 0.45 Ha | Nil |
| 5e | General remarks of inspecting officers on backfilling and reclamation etc. | Not Proposed | Backfilling/reclamation has been carried out in the mined out area of opencast quarry operation. | Nil |

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). | Not Proposed | The Annual report on PMCP for the F.Y. 2017-18 has been submitted | Nil |
| 6b | Area available for rehabilitation (ha) . | Rehabilitation of O/C backfilled area 0.14ha. | Rehabilitation of O/C back filled area 0.45ha. | Nil |
| 6c | afforestation done (ha). | 0.14 Ha | 0.45 Ha | Nil |
| 6d | No. of saplings planted during the year | 350 number of plants during the year 2017-18 | 1550 numbers of plants during the yaer 2017-18 | Nil |
| 6e | Cumulative no .of plants | No specific proposal | 25954 number of plants | Nil |
| 6f | Any other method of rehabilitation | No Proposal | Nil | Nil |
| 6g | Cost incurred on watch and care during the year | No proposal | Rs 570054.00 | Nil |
| 6h | Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (Lx B x D | 2 L Cum in (O/C) & 0.59 L Cum in (U/G) | 0.51 L Cum. (O/C) & 0.42 L Cum (U/G) | Due to Collapse of H/W benches of O/C quarry and revocation of CTO by SPCB ODISHA from 11th April to 22nd May, less void was created for back filling in O/C & U/G. Also, violation and subsequently showcause has been issued to lessee for noncompletion of backfilling in stope block 5. |

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| 6i | Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings | 0.55 L Cum (O/C) and 0.67 L Cum (U/G) waste | 0.30 L Cum (O/C) and 0.022 L Cum. Waste | Due to revocation of CTO by SPCB ODISHA from 11th April to 22nd May 2018 , only 0.30LCum of OB & waste was generated from O/C and U/G respectively and was utilised for back filling of O/c Quarry. Less achievement in U/G void filling was due to delay in installation of the back filling plant. |
| 6j | Compliance on reclamation and rehabilitation by backfilling (iii)Afforestation on backfilled area | 350 nos. | 1550 nos. | Nil |
| 6k | Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir | Not proposed | Nil | Nil |
| 6l | Compliance on reclamation and rehabilitation by backfilling (v)any other specific means. | Not proposed | Nil | Nil |
| 6m | Compliance of rehabilitation of waste land within lease (i)afforestation | Not proposed | Nil | Nil |

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|----|---|--|--|-----|
| 6n | Compliance of rehabilitation of waste land within lease (ii)Area rehabilitation (ha) | Not proposed | Nil | Nil |
| 6o | Compliance of rehabilitation of waste land within lease (iii)Method of rehabilitation | Not proposed | Nil | Nil |
| 6p | Compliance of environmental monitoring (core zone and buffer zone) | Quarterly monitoring of air, water and noise levels are proposed | Carried out | Nil |
| 6q | General remarks of inspecting officers on PMCP compliance and progressive closure operations etc. | Not Proposed | Backfilling of Stope block 5 have not been completed as proposed to be completed in 2017-18 and violation and subsequently showcause letter has been issued to lessee. | Nil |

Mineral Conservation:

| Sl.No. | Item | Propasals | Actual work | Remarks |
|--------|------|-----------|-------------|---------|
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| 7a | ROM Mineral dispatch or grade-wise sorting within lease area | The ROM is crushed/screened to different size specification before being dispatched to captive ferro chrome plants. The cut off grade of ore stipulated by captive ferro chrome plant is 30% Cr ₂ O ₃ %. However, in case of generation of chrome ore between 10% to below 30% Cr ₂ O ₃ , the same shall be stored and suitably beneficiated before being dispatched to plants. | Grade wise production and dispatch of lump and fines at (a) below 40% Cr ₂ O ₃ % and (b) 40% to below 52% Cr ₂ O ₃ % | 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. | Expected ROM Grade +10% Cr ₂ O ₃ and cut off grade of ore stipulated by captive ferro chrome plants is 30% Cr ₂ O ₃ %. | Grade wise production and dispatch of lump and fines at (a) below 40% Cr ₂ O ₃ % and (b) 40% to below 52% Cr ₂ O ₃ % | Nil |
| 7d | Any beneficiation process at mines . | Not Proposed, Only crushing and screening is proposed | Nil. Only crushing and screening carried out. | Nil |

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|----|--|--------------|--|-----|
| 7e | General remarks of inspecting officer on Mineral conservation and beneficiation issues | Not Proposed | The ROM is crushed and screened. Grade wise production and dispatch of lump and fines at (a) below 40% Cr ₂ O ₃ and (b) 40% to below 52% Cr ₂ O ₃ . No beneficiation is carried out. | Nil |
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Environment:

| Sl.No. | Item | Propasals | Actual work | Remarks |
|--------|---|--|--|---------|
| 8a | Separate removal and utilization of topsoil (Rule 32) | Not Proposed | Nil | Nil |
| 8b | Concurrent use or storage of topsoil | Not Proposed | Nil | Nil |
| 8c | Separate dumps for overburden, waste rock, rejects and fines (Rule 33) | Generated waste is proposed to be backfilled in the mined out area of the quarry. No dumps proposed | Generated waste is backfilled in the mined out area in the quarry. | Nil |
| 8d | Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use | Generated waste is proposed to be backfilled in the mined out area of the quarry. No dumps proposed. | Generated waste is backfilled in the mined out area in the quarry. | Nil |
| 8e | Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc) | Reclamation of Pits- 0.23 ha. and Rehabilitation of Pit - 0.14 | Reclamation of Pits- 0.31ha and Rehabilitation of Pit - 0.45ha. | Nil |

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| 8f | Baseline information on existence of plantation and additional plantation done (Rule 41) | No specific proposal | During the year 2017-18, 1550 nos of saplings planted within the lease area and 350 nos of saplings planted outside lease area | Data as furnished in annual return for the year 2017-18 |
| 8g | Survival rate | Not Proposed | Within Lease area-92.7% and outside Lease area- 90.57% | Data as furnished in annual return for the year 2017-18 |
| 8h | Water sprinkling on roads to control airborne dust | Water sprinkling on haul roads | Water sprinkling is being done | Nil |
| 8i | General remarks of inspecting officer on aesthetic beauty in and around mines area | Not Proposed | Aesthetic beauty is maintained. | Nil |

Compliance of Rule 45:

| Sl.No. | Item | Proposals | Actual work | Remarks |
|--------|---|---|---|--|
| 9a | Status of submission of Monthly and Annual returns | Annual and monthly returns for the year 2017-18 has been submitted. | Annual and monthly returns for the year 2017-18 has been submitted. | Nil |
| 9b | Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager | Graduate Mining Engineer: 14 Diploma Mining Engineer: 21 Geologist: 6 | Graduate Mining Engineer: 14 Diploma Mining Engineer: 21 Geologist: 6 | Mining Engineer and Geologist are appointed. |

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| 9c | Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc. | Utilization of surface area (in ha.) A) O/C working -9.34 B) Reclaimed /Rehabilitated -6.21 C) Used for waste disposal - 4.7 D) Occupied by plant, buildings, residential, welfare buildings and roads - 6.73 E) Other purpose - 5.46 F) Work done under Progressive mine closure plan during the year -0.45 | Information as submitted in annual return for 2017-18. | Information as submitted in annual return for 2017-18. |
| 9d | Scrutiny of Annual return on afforestation | 1550 nos of trees planted within the lease area. | Data as furnished in annual return 2017-18. | Data as furnished in annual return 2017-18. |
| 9e | Scrutiny of Annual return on mineral reject generation (Grade and quantity) | Nil | Nil | Nil |

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| 9f | Scrutiny of Annual return on ROM stock and/or graded ore | 1. Closing stock of ROM as per annual return is 8049.966 tonnes. 2. Closing stock of lumps at mine head (in tonnes): a. Below 40% Cr2O3: 11301.18 b. 40% to below 52% Cr2O3: 5642.19 3. Closing stock of fines at mine head (in tonnes): a. Below 40% Cr2O3: 39428.11 b. 40% to below 52% Cr2O3: 1426.724 | 1. Closing stock of ROM as per annual return is 8049.966 tonnes. 2. Closing stock of lumps at mine head (in tonnes): a. Below 40% Cr2O3: 11301.18 b. 40% to below 52% Cr2O3: 5642.19 3. Closing stock of fines at mine head (in tonnes): a. Below 40% Cr2O3: 39428.11 b. 40% to below 52% Cr2O3: 1426.724 | Data as furnished in annual return for 2017-18. |
| 9g | Scrutiny of Annual return on sale value, Ex. Mine price and production cost | 1. Ex-mine price of lumps (in Rs per tonne): a. Below 40% Cr2O3: 4252.83 b. 40% to below 52% Cr2O3: 4252.83 2. Ex-mine price of fines (in Rs per tonne): a. Below 40% Cr2O3: 4252.83 b. 40% to below 52% Cr2O3: 4252.83 | Data as furnished in annual return for 2017-18. | Data as furnished in annual return for 2017- 18. |

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| 9h | Scrutiny of Annual return on fixed assets | Value of fixed assets: Rs 56668730 (in respect of mine, beneficiation plant, mine work shop, power and water installation) | Data as furnished in annual return for 2017-18 | Data as furnished in annual return for 2017-18 |
| 9k | Scrutiny of Annual return on mining machineries | Front end loader (1.7 cum capacity):2nos. Backhoe (1.0 cum capacity):2nos. Dumper (14.5 tonne capacity): 3nos. . Dumper (14.5 tonne capacity): 3nos. Load haul dumper (2 .0 cum capacity): 4 nos. Load haul dumper (4 .0 cum capacity): 2 nos Load haul dumper (3 .0 cum capacity): 1 no etc. | Front end loader (1.7 cum capacity):2nos. Backhoe (1.0 cum capacity):2nos. Dumper (14.5 tonne capacity): 3nos. | Data as furnished in annual return for 2017-18 |

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 SUDIP RANJAN MAZUMDAR)

Indian Bureau of Mines