

MCDR-MIFLOFE/25/2023-BBS-IBM_RO_BBS
INDIAN BUREAU OF MINES
MINERALS DEVELOPEMMENT AND REGULATION DIVISION

I/22736/2024

MCDR INSPECTION REPORT

Bhubaneshwar regional office

Mine file No : ORI/IRON/SNG/MCDR-7/BBS

Mine code : 30ORI13028

- (i) Name of the Inspecting : SKM1) SANJIB KUMAR MOHAPATRA
Officer and ID No.
- (ii) Designation : Senior Mining Geologist
- (iii) Accompanying mine : Sri Kamala Kanta Nanda(Agent), Sri Abhimanyu Samal (M
Official with
Designation
- (iv) Date of Inspection : 01/11/2023
- (v) Prev.inspection date : 17/08/2022

PART-I : GENERAL INFORMATION

1. (a) Mine Name : TANTRA, RAIKELA & BANDHAL
- (b) Registration NO. : IBM/4355/2011
- (c) Category : A Mechanised
- (d) Type of Working : Opencast
- (e) Postal address
- State : ORISSA
- District : SUNDARGARH
- Village : TANTRA
- Taluka : BONAI
- Post office : TENSA
- Pin Code : 770042
- FAX No. : 95-6625-236023
- E-mail : trbmine@jindalsteel.net
- Phone : 95-6625-236023,236024
- (f) Police Station : Lahunipara
- (g) First opening date : 17/02/1990
- (h) Weekly day of rest : SUN
2. Address for : T.R.B IRON MINES
correspondance PO-TENSA
DIST-SUNDERGARH
3. (a) Lease Number : ORI0652
- (b) Lease area : 207.11
- (c) Period of lease : 50
- (d) Date of Expiry : 24/05/2035
4. Mineral worked : IRON ORE Main

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5. Name and Address of the

Lessee : m/s Jindal Steel and Power Ltd
 TRB Iron Ore Mines At
 P.O.Tensa SUNDARGARH
 ORISSA
 Phone:06625 - 82023, 82024
 FAX :

Owner : Jindal steel & power ltd
 Barbil KEONJHAR ORISSA
 Phone: 06767 30158
 FAX :

Agent : SHRI P K PATRA
 SUNDARGARH ORISSA
 Phone:
 FAX :

Mining Engineer

Name : B D SAHOO,Full Time
 Qualification : BE-MINING AND FCC
 Appointment/ : 17/09/2014
 Termination date

Geologist

Name : R K CHATURVEDI,Full Time
 Qualification : M TECH IN APPLIED GEOLOGY
 Appointment/ : 17/09/2014
 Termination date

Manager

Name : PANCHANAN SINGH
 Qualification : BE-MINING AND FCC
 Appointment/ : 26/12/2016
 Termination date

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| 6. Date of approval of Mining | : | Mining Scheme rule 12 MCDR1988 | 25/08/2000 |
| Plan/Scheme of Mining | : | Renewal under rule 22 MCR1960 | 09/10/2003 |
| | : | Modif.of approved Mining Plan | 19/12/2007 |
| | : | Mining Scheme rule 12 MCDR1988 | 22/03/2010 |
| | : | FMCP under 23C(1) | 29/07/2010 |
| | : | Modif.approved Mining Scheme | 11/08/2010 |
| | : | Modif.approved Mining Scheme | 23/04/2012 |
| | : | Mining Scheme rule 12 MCDR1988 | 27/03/2015 |
| | : | MP modif under MCR 1960 | 27/03/2015 |
| | : | MP review under 17(1) MCR 2016 | 18/10/2017 |
| | : | MP modif under 17(3) MCR 2016 | 05/12/2018 |
| | : | MP review under 17(1) MCR 2016 | 18/11/2019 |
| | : | MP modif under 17(3) MCR 2016 | 19/04/2022 |

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PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

Exploration :

| Sl.No. | Item | Proposals | Actual work | Remarks |
|--------|---|---|--|--|
| 1a | Backlog of previous year | 02 nos of boreholes | 02 nos of boreholes | The lessee has carried out the exploration as per the proposal during the reporting year. |
| 1b | Exploration over lease area for geological axis 1 or 2 | Entire lease area of 207.113 Ha has been explored under G1. | Entire lease area of 207.113 Ha has already been explored under G1. | Entire lease area of 207.113 Ha has already been explored under G1. However the lessee has carried out 02 nos of bore hole (DTH) in FY 2022-23 as per the proposal for deliantion of nature of the ore body further. |
| 1c | Exploration Agencies and Expenditure in lakh rupees during the year | Nil | The exploration was carried out in house. Hence separte expenses has not been established. | The exploration was carried out in house. Hence separte expenses has not been established. |
| 1d | Balance area to be explored to bring Geological axis in 1 or 2 | Nil | Nil | Entire lease area of 207.113 Ha has already been explored under G1. |
| 1e | Balance reserve as on 01/04/20 | | Mineable Reserve - 11.519 Million Tonnes (as on 01.04.2023) | Mineable Reserve - 11.519 Million Tonnes (as on 01.04.2023) as per AR 2023. |
| 1f | General remarks of inspecting officers on geology, exploration etc | | Entire lease area of 207.113 Ha has already been explored under G1. However the lessee has drilled 02 nos of bore hole (DTH) in FY 2022-23 as per the proposal for further deliantion of nature of the ore body. | Entire lease area of 207.113 Ha has already been explored under G1. However the lessee has drilled 02 nos of bore hole (DTH) in FY 2022-23 as per the proposal for further deliantion of nature of the ore body. |

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Development :

| Sl.No. | Item | Propasals | Actual work | Remarks |
|--------|---|---|---|---|
| 2a | Location of development w.r.t.lease area | Patch 1 - N2421032 - N2421724 / E311820 - E312552 | Patch 1 - N2421032 - N2421724 / E311820 - E312552 | Patch 1 - N2421032 - N2421724 / E311820 - E312552 Carried out inaccordance to the proposal. |
| 2b | Separate benches in topsoil, overburden and minerals (Rule 15) | 03 benches in Ore. 18 benches in Over Burden | 02 benches in Ore. 19 benches in Over Burden. | 02 benches in Ore. 19 benches in Over Burden. were carried out during the reporting year. |
| 2c | Stripping ratio or ore to OB ratio | 1:1.232 | 1:1.241 | Much volume of overburden encountered during development, hence stripping ratio is at higher side than the proposal. |
| 2d | Quantity of topsoil generation in m3 | Incidental occurence proposed. | 16 Cum genereted during the reporting year. | 16 Cum genereted during the reporting year. |
| 2e | Quantity of overburden generation in m3 | 3080100 Cum. | 3103265.10 Cum generated during the reporting year. | 3103265.10 Cum generated during the reporting year. |
| 2f | General remarks of inspecting officers on development of pit w.r.t. type of deposit etc | | Generation of waste is higher than the proposal during the reporting year. Accordingly the stripping ratio is at higher side than the proposal. | Generation of waste is higher than the proposal during the reporting year. Accordingly the stripping ratio is at higher side than the proposal. |

Exploitation:

| Sl.No. | Item | Propasals | Actual work | Remarks |
|--------|---------------------------------------|--------------|--------------|--------------|
| 3a | Number of pit proposed for production | One, Patch-1 | One, Patch-1 | One, Patch-1 |

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| 3b | Quantity of ROM mineral production proposed | 2501037 MT | 2500000 MT | 2500000 MT produced during the reporting year 2022-23. |
| 3c | Recovery of saleable/usable mineral from ROM production | 2371477 MT | 2370555.76 MT | 2370555.76 MT saleable ore produced during the reporting year 2022-23. |
| 3d | Quantity of mineral reject generation | 129560 MT | 129444.24 MT | 129444.24 MT mineral reject produced during the reporting year 2022-23. |
| 3e | Grade of mineral rejects generation and threshold value declared. | >45-<58 % Fe | >45-<58 % Fe | >45-<58 % Fe |
| 3f | Quantity of sub grade mineral generation. | Nil | Nil | Nil |
| 3g | Grade of sub grade mineral generation | NA | NA | NA |
| 3h | Manual / Mechanised method adopted for segregating from ROM | Mechanized | Mechanized | Mechanized |
| 3i | Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects. | Nil | Nil | Nil |
| 3j | Provision of drilling and blasting in mineral benches | 9.9m drill holes with 100-105mm dia and blasting by using class - 2 and class - 6 explosives. NONEL system of initiation is used. | 9.9m drill holes with 100mm dia and blasting by using class - 2 and class - 6 explosives. NONEL system of initiation is used. | 9.9m drill holes with 100mm dia and blasting by using class - 2 and class - 6 explosives. NONEL system of initiation is used. |

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| 3k | Provision of mining machineries in mineral benches | Excavator and Dumper combination. | Excavator and Dumper combination. | Excavator and Dumper combination. |
| 3l | Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM | Yes, it is proposed to keep the bench height up to 9mtr for both Ore & OB benches. | Yes. The bench height has been kept upto 9m for both Ore & OB benches. | Yes. The bench height has been kept upto 9m for both Ore & OB benches. |
| 3m | Total area covered under excavation/pits | 108.038 Ha | 108.038 Ha | 108.038 Ha |
| 3n | Ore to OB ratio for the pit/mine during the year. | 1:1.232 | 1:1.241 | 1:1.241 |
| 3o | Total area put in use under different heads at the end of year | 180.99 Ha | 180.99 Ha | 180.99 Ha |
| 3p | Production of ROM mineral during the last five year period as applicable | 2016-17 - 3109302 MT 2017-18 - 3100917 MT 2018-19 - 3100337 MT 2019-20 - 3100644 MT 2020-21 - 3100863 MT 2021-22 - 3100798 MT | 2016-17-2722384 MT 2017-18 - 2578777 MT 2018-19 - 2765369 MT 2019-20 - 2575673 MT 2020-21 - 2506870 MT 2021-22 - 2854350 MT | 2016-17-2722384 MT 2017-18 - 2578777 MT 2018-19 - 2765369 MT 2019-20 - 2575673 MT 2020-21 - 2506870 MT 2021-22 - 2854350 MT |

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| 3q | General remarks of inspecting officers on method of mining etc. | The lesee has carried out the exploitation work within the proposed location during the reporting year and almost achieved the proposed target production during the reporting year. However a violation under rule 11(1) has been issued vide letter dated 17.11.2023 to the lessee for irregular bench parameter and wash out and merged benches in the proposed Patch-1 quarry. | The lesee has carried out the exploitation work within the proposed location during the reporting year and almost achieved the proposed target production during the reporting year. However a violation under rule 11(1) has been issued vide letter dated 17.11.2023 to the lessee for irregular bench parameter and wash out and merged benches in the proposed Patch-1 quarry. |
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Solid Waste Management - Dumping:

| Sl.No. | Item | Proposals | Actual work | Remarks |
|--------|--|---|---|---|
| 4a | Separate dumping of topsoil, OB and mineral rejects (Rule 32,33) | Separate dumping for topsoil, OB & mineral reject proposed. | Separate dumping for topsoil, OB & mineral reject were carried out during the reporting year. | Separate dumping for topsoil, OB & mineral reject were carried out during the reporting year. |

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| 4b | Location of topsoil, OB and mineral reject dumps | OB Dump N2421760/ E311314 N2422025/ E311759 N2421940/ E312317 N2421398/ E311709 Top Soil E/W - 311836 - 311875E N/S - 2422025 - 2422035N MR/Subgrade Dump - E/W - 311957 - 312108E N/S - 2421960 - 2422023N | OB Dump N2421760/E311314 N2422025/E311759 N2421940/E312317 N2421398/E311709 Top Soil E/W - 311836 - 311872E N/S 2422025 - 2422032N MR/Subgrade Dump - E/W - 311957 - 312108E N/S - 2421960 - 2422023N | Carried out as per the proposal during the reporting year. |
| 4c | Number of dumps within lease area and outside of lease area | Within Lease Area - 01 Outside Lease Area - Nil | Within Lease Area - 01 Outside Lease Area - Nil | Within Lease Area - 01 Outside Lease Area - Nil |
| 4d | Location of dumps w.r.t. ultimate pit limit (Rule 16) | All proposals are beyond UPL. | All waste dumps are carried out outside UPL during the reporting year. | All waste dumps are carried out outside UPL during the reporting year. |
| 4e | Number of active and alive dumps. | One | One | One |
| 4f | Number of dead dumps. | Nil | Nil | Nil |
| 4g | Number of dumps established. | Nil | Nil | Phase wise carried out in one dump but completely not carried out. |
| 4h | Whether Retaining wall or garland drain all along dumps are there. | Retaining Wall - Heightening of existing retaining wall of 245m Garland Drain - 150m were proposed. | Retaining Wall - Heightening of existing retaining wall of 245m Garland Drain - 150m were carried out during the reporting year. | Retaining Wall - Heightening of existing retaining wall of 245m Garland Drain - 150m were carried out during the reporting year. |

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| 4i | Length of Retaining wall or garland drain all along dumps | Retaining Wall - Heightening of existing retaining wall of 245m Garland Drain - 150m were proposed. | Retaining Wall - Heightening of existing retaining wall of 245m Garland Drain - 150m were carried out during the reporting year. | Retaining Wall - Heightening of existing retaining wall of 245m Garland Drain - 150m were carried out during the reporting year. |
| 4j | Number of settling ponds | Nil | Maintenance and desilting of 03 nos of settling pond during the reporting year. | Maintenance and desilting of 03 nos of settling pond during the reporting year. |
| 4k | Specific comments of inspecting officer on waste dump management | | Waste dumps are carried out as per the proposal during the reporting year. Phase wise carried out in one dump but completely not carried out. Retaining wall and garland drains are constructed as per proposal during the reporting year. | Waste dumps are carried out as per the proposal during the reporting year. Phase wise carried out in one dump but completely not carried out. Retaining wall and garland drains are constructed as per proposal during the reporting year. |

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. | proposal for backfilling of 3.30 Ha in Patch-2 quarry area. | After full extraction of mineral from 3.30 Ha of mined out area started backfilling in Patch-2 quarry area and completed in the reporting year. | After full extraction of mineral from 3.30 Ha of mined out area started backfilling in Patch-2 quarry area and completed in the reporting year. |

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| 5b | Area under backfilling of mined out area | proposal for backfilling of 3.30 Ha in Patch-2 quarry area. | After full extraction of mineral from 3.30 Ha of mined out area started backfilling in Patch-2 quarry area and completed in the reporting year. | After full extraction of mineral from 3.30 Ha of mined out area started backfilling in Patch-2 quarry area and completed in the reporting year. |
| 5c | Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32) | Nil | Nil | Nil for the reporting year. |
| 5d | Total area fully reclaimed and rehabilitated | Proposal for backfilling of 3.30 Ha in Patch-2 quarry area. | After full extraction of mineral from 3.30 Ha of mined out area started backfilling in Patch-2 quarry area and completed in the reporting year. | After full extraction of mineral from 3.30 Ha of mined out area started backfilling in Patch-2 quarry area and completed in the reporting year. |
| 5e | General remarks of inspecting officers on backfilling and reclamation etc. | | After full extraction of mineral from 3.30 Ha of mined out area started backfilling in Patch-2 quarry area and completed in the reporting year and tops oil generation and its concurrent utalisation is nil during the reporting year. | After full extraction of mineral from 3.30 Ha of mined out area started backfilling in Patch-2 quarry area and completed in the reporting year and tops oil generation and its concurrent utalisation is nil during the reporting year. |

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). | As per Rule 26(2) Annual PMCP report to be submitted before 1st day of July of Every Year. | Annual Report on PMCP for 2022-23 has been submitted on 06.06.2023. | Annual Report on PMCP for 2022-23 has been submitted on 06.06.2023. |
| 6b | Area available for rehabilitation (ha) . | Nil | Nil | Nil |
| 6c | afforestation done (ha). | 1.5 Ha with 3000 nos of sapplings. | 2.0 Ha with 3234 nos of sapplings have been planted during the reporting year. | 2.0 Ha with 3234 nos of sapplings have been planted during the reporting year. |
| 6d | No. of sapplings planted during the year | 1.5 Ha with 3000 nos of sapplings. | 2.0 Ha with 3234 nos of sapplings have been planted during the reporting year. | 2.0 Ha with 3234 nos of sapplings have been planted during the reporting year. |
| 6e | Cumulative no .of plants | | a) 213479 in Greenbelt, Lease Boundary (Safety Zone), Colony b) 44668 in Dump Management c) 78454 in Backfilled Area | a) 213479 in Greenbelt, Lease Boundary (Safety Zone), Colony b) 44668 in Dump Management c) 78454 in Backfilled Area |
| 6f | Any other method of rehabilitation | Nil | Nil | Nil |
| 6g | Cost incurred on watch and care during the year | Nil | Rs. 4.59 Lakhs during the reporting year. | Rs. 4.59 Lakhs during the reporting year. |
| 6h | Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (Lx B x D | 3.2936 Ha | 3.30 Ha, 3854704.09 MT of waste used in back filling during the reporting year. | 3.30 Ha, 3854704.09 MT of waste used in back filling during the reporting year. |

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| 6i | Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings | Nil | Nil | Nil |
| 6j | Compliance on reclamation and rehabilitation by backfilling (iii)Afforestation on on backfilled area | Nil | Nil | Nil |
| 6k | Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir | Nil | Nil | Nil |
| 6l | Compliance on reclamation and rehabilitation by backfilling (v)any other specific means. | Nil | Nil | Nil |
| 6m | Compliance of rehabilitation of waste land within lease (i)afforestation | 1.5 Ha with 3000 nos of sapplings. | 2.0 Ha with 3234 nos of sapplings have been planted during the reporting year. | 2.0 Ha with 3234 nos of sapplings have been planted during the reporting year. |
| 6n | Compliance of rehabilitation of waste land within lease (ii)Area rehabilitation (ha) | 1.5 Ha with 3000 nos of sapplings. | 2.0 Ha with 3234 nos of sapplings have been planted during the reporting year. | 2.0 Ha with 3234 nos of sapplings have been planted during the reporting year. |
| 6o | Compliance of rehabilitation of waste land within lease (iii)Method of rehabilitation | Afforestation. | Afforestation. | Afforestation. |

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| 6p | Compliance of environmental monitoring (core zone and buffer zone) | Air, Noise and Water quality monitoring will be done during the year within the lease area. | Air, Noise and Water quality monitoring is being carried out as per the proposal during the reporting year. | Air, Noise and Water quality monitoring is being carried out as per the proposal during the reporting year. |
| 6q | General remarks of inspecting officers on PMCP compliance and progressive closure operations etc. | | The lessee has carried out reclamation, rehabilitation, afforestation and environmental monitoring as per the proposal during the reporting year. | The lessee has carried out reclamation, rehabilitation, afforestation and environmental monitoring as per the proposal during the reporting year. |

Mineral Conservation:

| Sl.No. | Item | Propasals | Actual work | Remarks |
|--------|---|--|--|--|
| 7a | ROM Mineral dispatch or grade-wise sorting within lease area | Saleable Ore:+58 % Fe, Mineral Reject:- +45 to 58% Fe were proposed. | Saleable Ore:+58 % Fe, Mineral Reject:- +45 to 58% Fe are being carried out. | Saleable Ore:+58 % Fe, Mineral Reject:- +45 to 58% Fe are being carried out. |
| 7b | Method of grade-wise mineral sorting i.e. manual or mechanical. | Mechanical | Mechanical | Mechanical |
| 7c | Different grade of mineral sorted out at mines. | Saleable Ore:+58 % Fe, Mineral Reject:- +45 to 58% Fe were proposed. | Saleable Ore:+58 % Fe, Mineral Reject:- +45 to 58% Fe are being carried out. | Saleable Ore:+58 % Fe, Mineral Reject:- +45 to 58% Fe are being carried out. |
| 7d | Any beneficiation process at mines | Nil | Nil | No such proposal during the reporting year. |

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| 7e | General remarks of inspecting officer on Mineral conservation and beneficiation issues | Saleable Ore:+58 % Fe, Mineral Reject:- +45 to 58% Fe stocks are being practiced. Further no beneficiation process was proposed. Only crushing and screening are being carried out during the reporting year. | Saleable Ore:+58 % Fe, Mineral Reject:- +45 to 58% Fe stocks are being practiced. Further no beneficiation process was proposed. Only crushing and screening are being carried out during the reporting year. |
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Environment:

| Sl.No. | Item | Propasals | Actual work | Remarks |
|--------|---|---|--|--|
| 8a | Separate removal and utilization of topsoil (Rule 32) | Proposal of incidental occurence was proposed. | 16 Cum top soil generated during the reporting year 2022-23. | 16 Cum top soil generated during the reporting year 2022-23. |
| 8b | Concurrent use or storage of topsoil | Proposal of incidental occurence and subsequent utalization was proposed. | 16 Cum top soil generated during the reporting year 2022-23. | 16 Cum top soil generated during the reporting year 2022-23. |
| 8c | Separate dumps for overburden, waste rock, rejects and fines (Rule 33) | Proposed. | Carried out. | Carried out. |
| 8d | Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use | Nil | Nil | Nil during the reporting year. |

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| 8e | Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc) | Proposed. | About 3854704.09 tons of waste used in back filling during the reporting year 2022-23. | About 3854704.09 tons of waste used in back filling during the reporting year 2022-23. |
| 8f | Baseline information on existence of plantation and additional plantation done (Rule 41) | 3000 in Safety Zone, Green Belt, Colony, Office Premises | i) 3234 Gap Plantation at Safety Zone. ii) 11395 in Dump Management iii) 5551 in Backfilled Area | i) 3234 Gap Plantation at Safety Zone. ii) 11395 in Dump Management iii) 5551 in Backfilled Area planted during the reporting year 2022-23. |
| 8g | Survival rate | Nil | 80% | 80% survival rate |
| 8h | Water sprinkling on roads to control airborne dust | Water sprinkling by permanent water sprinkler and water tanker over haul roads were proposed. | Water sprinkling by permanent water sprinkler and water tanker over haul roads has been carried out during the reporting year to control the air borne dust particles. | Water sprinkling by permanent water sprinkler and water tanker over haul roads has been carried out during the reporting year to control the air borne dust particles. |

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| 8i | General remarks of inspecting officer on aesthetic beauty in and around mines area | Lessee has planted i) 3234 Gap Plantation at Safety Zone. ii) 11395 in Dump Management iii) 5551 in Backfilled Area of saplings within the lease area and water sprinkling by water tanker over haul roads. Stationary sprinkler system has been fixed along the haul roads to control the airborne dust and to minimize the fugitive dust emission. This sustains the aesthetic beauty of the mine area. | Lessee has planted i) 3234 Gap Plantation at Safety Zone. ii) 11395 in Dump Management iii) 5551 in Backfilled Area of saplings within the lease area and water sprinkling by water tanker over haul roads. Stationary sprinkler system has been fixed along the haul roads to control the airborne dust and to minimize the fugitive dust emission. This sustains the aesthetic beauty of the mine area. |
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Compliance of Rule 45:

| Sl.No. | Item | Propasals | Actual work | Remarks |
|--------|--|---|---|---|
| 9a | Status of submission of Monthly and Annual returns | Monthly returns and annual return for the reporting year have been submitted within the stipulated time period. | Monthly returns and annual return for the reporting year have been submitted within the stipulated time period. | Monthly returns and annual return for the reporting year have been submitted within the stipulated time period. |

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| 9b | Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager | Shri U. P. Naik, Mining Engineer (B.Tech.Mining Engineering, SCC), appointed as full time mining engineer on 20.11.2021. Shri S. Kumar, Geologist (M.Sc in Earth Science), appointed as full time geologist on 15.03.2023 Shri A. Samal Mining Engineer (BE-Mining, FCC) appointed as mines manager on 20.11.2021. | Shri U. P. Naik, Mining Engineer (B.Tech.Mining Engineering, SCC), appointed as full time mining engineer on 20.11.2021. Shri S. Kumar, Geologist (M.Sc in Earth Science), appointed as full time geologist on 15.03.2023 Shri A. Samal Mining Engineer (BE-Mining, FCC) appointed as mines manager on 20.11.2021. were present during the mine inspection | Shri U. P. Naik, Mining Engineer (B.Tech.Mining Engineering, SCC), appointed as full time mining engineer on 20.11.2021. Shri S. Kumar, Geologist (M.Sc in Earth Science), appointed as full time geologist on 15.03.2023 Shri A. Samal Mining Engineer (BE-Mining, FCC) appointed as mines manager on 20.11.2021. were present during the mine inspection |
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| 9c | Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc. | i) Already exploited & abandoned by Open cast (O/C) mining - 21.814 Ha. (Reclaimed & Rehabilitated - 16.20 Ha.). (ii) Covered under current (O/C) Workings - 86.224 Ha. (iii) Used for waste disposal - 29.233 Ha. (iv) Occupied by plant, buildings, residential, welfare buildings & roads - 26.204 Ha. (v) Other Purpose (Mineral Storage, Top Soil, Tailing Pond, Green Belt, Safety Zone) - 43.638 Ha. | i) Already exploited & abandoned by Open cast (O/C) mining - 21.814 Ha. (Reclaimed & Rehabilitated - 16.20 Ha.). (ii) Covered under current (O/C) Workings - 86.224 Ha. (iii) Used for waste disposal - 29.233 Ha. (iv) Occupied by plant, buildings, residential, welfare buildings & roads - 26.204 Ha. (v) Other Purpose (Mineral Storage, Top Soil, Tailing Pond, Green Belt, Safety Zone) - 43.638 Ha. | i) Already exploited & abandoned by Open cast (O/C) mining - 21.814 Ha. (Reclaimed & Rehabilitated - 16.20 Ha.). (ii) Covered under current (O/C) Workings - 86.224 Ha. (iii) Used for waste disposal - 29.233 Ha. (iv) Occupied by plant, buildings, residential, welfare buildings & roads - 26.204 Ha. (v) Other Purpose (Mineral Storage, Top Soil, Tailing Pond, Green Belt, Safety Zone) - 43.638 Ha. |
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| 9d | Scrutiny of Annual return on afforestation | <p>Within Lease Area</p> <p>(i) No. of trees planted in 2022-23 - 20180</p> <p>(ii) Survival rate - 80%</p> <p>(iii) Total no. of trees at the end of the year - 16144</p> <p>Outside Lease Area</p> <p>(i) No. of trees planted in 2022-23 - Nil</p> <p>(ii) Survival rate - Nil</p> <p>(iii) Total no. of trees at the end of the year - Nil</p> | <p>Within Lease Area</p> <p>(i) No. of trees planted in 2022-23 - 20180</p> <p>(ii) Survival rate - 80%</p> <p>(iii) Total no. of trees at the end of the year - 16144</p> <p>Outside Lease Area</p> <p>(i) No. of trees planted in 2022-23 - Nil</p> <p>(ii) Survival rate - Nil</p> <p>(iii) Total no. of trees at the end of the year - Nil</p> | <p>Within Lease Area</p> <p>(i) No. of trees planted in 2022-23 - 20180</p> <p>(ii) Survival rate - 80%</p> <p>(iii) Total no. of trees at the end of the year - 16144</p> <p>Outside Lease Area</p> <p>(i) No. of trees planted in 2022-23 - Nil</p> <p>(ii) Survival rate - Nil</p> <p>(iii) Total no. of trees at the end of the year - Nil</p> |
| 9e | Scrutiny of Annual return on mineral reject generation (Grade and quantity) | 129444.24 MT (> 45% to <58% Fe) | 129444.24 MT (> 45% to <58% Fe) Stacked within the lease area. | 129444.24 MT (> 45% to <58% Fe) Stacked within the lease area. |
| 9f | Scrutiny of Annual return on ROM stock and/or graded ore | Opening stock- 40920 tons Production- 2500000 tons Closing stock- 40920 tons | Opening stock- 40920 tons Production-2500000 tons Closing stock-40920 tons | Opening stock- 40920 tons Production-2500000 tons Closing stock- 40920 tons |
| 9g | Scrutiny of Annual return on sale value, Ex. Mine price and production cost | Cost of production: Rs 1523.04/- furnished in Annual return. | Cost of production: Rs 1523.04/- furnished in Annual return. | Cost of production: Rs 1523.04/- furnished in Annual return. |

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|----|---|--|--|--|
| 9h | Scrutiny of Annual return on fixed assets | Fixed Asset: Rs. 427278392/-, furnished in annual return of the reporting year. | Fixed Asset: Rs. 427278392/-, furnished in annual return of the reporting year. | Fixed Asset: Rs. 427278392/-, furnished in annual return of the reporting year. |
| 9k | Scrutiny of Annual return on mining machineries | Bach Hoe - 1.8 Cum: 1 No Bach Hoe - 2.1 Cum: 2 Nos Bach Hoe - 2.8 Cum: 1 No Bach Hoe - 3.3 Cum: 2 Nos Bach Hoe -0.9 Cum: 2 Nos Dumper- 35 tonne: 2 Nos Dumper- 31 tonne: 18 Nos Dumper- 25 tonne: 24 Nos Dozer- 2 Nos Motor Grader-1 No Explosive van- 1 No Tractor- 1 No Crane-:4 Nos Water tanker- 5 Nos Wheel Loader- 5 No Crusher- 250TPH- 1 Nos Screen Plant- 350TPH- 1 Nos Drill- 2 Nos Air Compressor- 2 Nos Generator (Diesel)- 8 Nos | Bach Hoe - 1.8 Cum: 2 Bach Hoe - 2.8 Cum: 1 No Bach Hoe - 3.3 Cum: 2 Bach Hoe -0.9 Cum: 2 Nos Dumper- 35 tonne: 2 Nos Dumper- 31 tonne: 18 Nos Dumper- 25 tonne: 24 Nos Dozer- 2 Nos Motor Grader-1 No Explosive van- 1 No Tractor- 1 No Crane-:4 Nos Water tanker- 5 Nos Wheel Loader- 5 No Crusher- 250TPH- 1 Nos Screen Plant- 350TPH- 1 Nos Drill- 2 Nos Air Compressor- 2 Nos Generator (Diesel)- 8 Nos | Bach Hoe - 1.8 Cum: 1 No Bach Hoe - 2.1 Cum: 2 Bach Hoe - 2.8 Cum: 1 No Bach Hoe - 2.8 Cum: 1 No Bach Hoe - 3.3 Cum: 2 Nos Bach Hoe -0.9 Cum: 2 Nos Dumper- 35 tonne: 2 Nos Dumper- 31 tonne: 18 Nos Dumper- 25 tonne: 24 Nos Dozer- 2 Nos Motor Grader-1 No Explosive van- 1 No Tractor- 1 No Crane-:4 Nos Water tanker- 5 Nos Wheel Loader- 5 No Crusher- 250TPH- 1 Nos Screen Plant- 350TPH- 1 Nos Drill- 2 Nos Air Compressor- 2 Nos Generator (Diesel)- 8 Nos |

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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) | 17/11/2023 | | | |

Date :**(SANJIB KUMAR MOHAPATRA)**

Indian Bureau of Mines