

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

**MCDR inspection REPORT**

**Goa regional office**

**Mine file No :** MAH/SDG/Fe-46/GOA

**Mine code :** 30MSH28029

- (i) Name of the Inspecting : **P02** ) **PREM PRAKASH**  
Officer and ID No.
- (ii) Designation : Regional Controller Mines
- (iii) Accompanying mine : S/SHRI. AMIT KAISUKAR, MM & KIRAN GAD, ME  
Official with  
Designation
- (iv) Date of Inspection : 25-AUG-22
- (v) Prev.inspection date : 01-FEB-22

**PART-I : GENERAL INFORMATION**

1. (a) **Mine Name** : **KALANE IRON & MANGANESE O**
- (b) **Registration NO.** : **IBM/6114/2011**
- (c) **Category** : **A Fully Mechanised**
- (d) **Type of Working** : **Opencast**
- (e) **Postal address**
- State : **MAHARASHTRA**
- District : **SINDHUDURG**
- Village : **KALANE**
- Taluka : **DODAMARG**
- Post office : **KALANE**
- Pin Code : **416511**
- FAX No. : **022-23630045**
- E-mail : **Shrivastra@Boms5.vsnl.in.**
- Phone : **022-23630045**
- (f) **Police Station** : **DODAMARG**
- (g) **First opening date** : **10-MAR-09**
- (h) **Weekly day of rest** : **SUN**
2. **Address for** : **Minerals & Metals AT-KALANE**  
**correspondance** : **TQ-DODAMARG, DIST- SINDHDURG**  
: **MAHARASHTRA**
3. (a) **Lease Number** : **MSH0372**
- (b) **Lease area** : **32.25**
- (c) **Period of lease** : **50**
- (d) **Date of Expiry** : **15-MAR-59**
4. **Mineral worked** : **MANGANESE ORE** Associated  
: **IRON ORE** Main

## 5. Name and Address of the

Lessee : MINERALS AND METALS  
 32, ASHUTOSH, NEPEAN SEA  
 ROAD, MUMBAI GREATER BOMBAY  
 MAHARASHTRA  
 Phone:  
 FAX :

Owner : SANDEEP SRIVASTAVA  
 NIRMAL, 16th Floor NARIMAN  
 POINT GREATER BOMBAY  
 MAHARASHTRA  
 Phone: 022-22025893, 2  
 FAX : 022-22854417

Agent : MANOJ THAKUR  
 WSH 4,W BLOCK,SUNSET  
 BOULVARD, ALTO DHULER,  
 MAPUSA-GOA SINDHUDURG  
 MAHARASHTRA  
 Phone: 0832-2253864, 9769111533  
 FAX : 832-2253863

## Mining Engineer

Name : KIRAN GAD,Full Time  
 Qualification : BE (MINING ENGINEERING)  
 Appointment/ : 01-DEC-17  
 Termination date

## Geologist

Name : SUSHANT NIKAM,Full Time  
 Qualification : MSc. Geology  
 Appointment/ : 01-OCT-19  
 Termination date

## Manager

Name : AMIT KAISUKAR  
 Qualification : FCC (RESTRICTED)  
 Appointment/ : 22-FEB-17  
 Termination date

|                               |   |                                |           |
|-------------------------------|---|--------------------------------|-----------|
| 6. Date of approval of Mining | : | Fresh under rule 22 MCR1960    | 20-OCT-00 |
| Plan/Scheme of Mining         |   | Modif.of approved Mining Plan  | 11-DEC-08 |
|                               |   | Modif.of approved Mining Plan  | 03-FEB-11 |
|                               |   | Mining Scheme rule 12 MCDR1988 | 20-MAR-14 |
|                               |   | MP review under 17(1) MCR 2016 | 01-APR-19 |
|                               |   | MP modif under 17(3) MCR 2016  | 31-MAR-20 |
|                               |   | MP modif under 17(3) MCR 2016  | 27-NOV-20 |
|                               |   | MP modif under 17(3) MCR 2016  | 11-MAR-21 |

## PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

## Exploration :

| Sl.No. | Item  | Proposals | Actual work         | Remarks   |
|--------|---|-----------|---------------------|---|
| 1a     | Backlog of previous year  | Nil       | Nil                 | -   |
| 1b     | Exploration over lease area for geological axis 1 or 2              | Nil       | Nil                 | -   |
| 1c     | Exploration Agencies and Expenditure in lakh rupees during the year | NA        | NA                  | -   |
| 1d     | Balance area to be explored to bring Geological axis in 1 or 2      | Nil       | Nil                 | As reported in approved MMP; Whole ML area is explored at G-1 level |
| 1e     | Balance reserve as on 01/04/20                                      | -         | (111)= 1.14 Mill.Te | Given as per Annual Return submitted for FY 2021-22                 |
| 1f     | General remarks of inspecting officers on geology, exploration etc  | -         | -                   | Whole lease area has been covered under G-1 level exploration       |

## Development :

| Sl.No. | Item   | Proposals                           | Actual work  | Remarks   |
|--------|--|-------------------------------------|--|---|
| 2a     | Location of development w.r.t.lease area                       | Proposed in western part of ML area | Development/excavation has been carried out in western part of the ML area | -   |
| 2b     | Separate benches in topsoil, overburden and minerals (Rule 15) | yes                                 | yes  | -   |
| 2c     | Stripping ratio or ore to OB ratio                             | 2.01                                | 3.33   | As reported, Backlog waste (OB) of Previous Financial year 2020-21 of 7,26,232 Tonnes covered/removed in the Financial year 2021-22 |

|    |   |                |                  |  |
|----|---|----------------|------------------|--|
| 2d | Quantity of topsoil generation in m3  | Nil            | Nil              | -  |
| 2e | Quantity of overburden generation in m3   | 1110354 Tonnes | 18,36,586 Tonnes | As per Annual Return submitted for FY 2021-22  |
| 2f | General remarks of inspecting officers on development of pit w.r.t. type of deposit etc | -              | -                | Development works was lagging behind as less waste/OB removal was carried out in the year 2020-21 than proposed, Hence, the same has been reported covered in the Financial year 2021-22 |

#### Exploitation:

| Sl.No. | Item  | Propasals     | Actual work   | Remarks                                       |
|--------|---|---------------|---------------|---|
| 3a     | Number of pit proposed for production                             | One (01)      | One (01)      | -   |
| 3b     | Quantity of ROM mineral production proposed                       | 550000 Tonnes | 550000 Tonnes | As per Annual Return submitted for FY 2021-22 |
| 3c     | Recovery of sailable/usable mineral from ROM production           | 100 %         | 100 %         | -   |
| 3d     | Quantity of mineral reject generation                             | Nil           | Nil           | -   |
| 3e     | Grade of mineral rejects generation and threshold value declared. | NA            | NA            | -   |
| 3f     | Quantity of sub grade mineral generation.                         | Nil           | Nil           | -   |
| 3g     | Grade of sub grade mineral generation                             | Nil           | 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.      | Nil  | Nil  | -  |
| 3j | Provision of drilling and blasting in mineral benches  | Not Proposed   | NA   | -  |
| 3k | Provision of mining machineries in mineral benches   | HEMMs proposed   | Yes, deployed  | -  |
| 3l | Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM | YES  | YES  | -  |
| 3m | Total area covered under excavation/pits   | 26.64 Ha. Area put to use proposed at the end of approved 05 years Mining Plan Period.                                 | About 23.07 ha. (Covered under O/C Working = 13.20, Reclaimed = 9.87)  | As per Annual Return submitted for FY 2021-22  |
| 3n | Ore to OB ratio for the pit/mine during the year.  | 1: 2.01  | 1: 3.33  | Te :Te   |
| 3o | Total area put in use under different heads at the end of year                                       | 28.80 Ha. Area put to use proposed at the end of approved 05 years Mining Plan Period.                                 | About 27.97 ha. (Covered under O/C Working = 13.20, Reclaimed = 9.87, Others=4.90)                             | -  |
| 3p | Production of ROM mineral during the last five year period as applicable                             | 2017-18= 417487Tons<br>2018-19= 257355 Tons<br>2019-20 = 500000 Tons<br>2020-21 = 700000 Tons<br>2021-22 = 550000 Tons | 2017-18= 127635Tons<br>2018-19= Nil<br>2019-20 = 500000 Tons<br>2020-21 = 700000 Tons<br>2021-22 = 550000 Tons | -  |
| 3q | General remarks of inspecting officers on method of mining etc.                                      | -  | -  | Mechanized open cast mining method being followed with Excavator & dumper combination. |

## Solid Waste Management - Dumping:

| Sl.No. | Item   | Propasals                         | Actual work              | Remarks  |
|--------|--|-----------------------------------|--------------------------|--|
| 4a     | Separate dumping of topsoil, OB and mineral rejects (Rule 32,33)   | yes                               | yes                      | Back-filling/ Reclamation of waste is proposed   |
| 4b     | Location of topsoil, OB and mineral reject dumps                   | NIL                               | NIL                      | -  |
| 4c     | Number of dumps within lease area and outside of lease area        | No surface waste dumping proposed | Nil                      | 1 No. old  |
| 4d     | Location of dumps w.r.t. ultimate pit limit (Rule 16)              | NIL                               | NIL                      | -  |
| 4e     | Number of active and alive dumps.                                  | NIL                               | NIL                      | -  |
| 4f     | Number of dead dumps.  | -                                 | one                      | -  |
| 4g     | Number of dumps established.                                       | NIL                               | NIL                      | -  |
| 4h     | Whether Retaining wall or garland drain all along dumps are there. | YES                               | YES                      | -  |
| 4i     | Length of Retaining wall or garland drain all along dumps          | 475 m                             | About 500 m (Maintained) | -  |
| 4j     | Number of settling ponds   | 2                                 | 7                        | -  |
| 4k     | Specific comments of inspecting officer on waste dump management   | -                                 | -                        | Protection measures i.e. Retaining wall/Bund in south side of old pit (between Boundary pillars BP-A9 to BP-A11) and Protection measures around the back-filling area i.e. Garland drain/Trenches have not been made/constructed of adequate length and width as proposed. Hence, Violation issued in this regard. |

## 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. | Mineral to be fully extracted | Mineral being fully extracted | -  |
| 5b     | Area under backfilling of mined out area  | 9.32 Ha.                      | 9.87 Ha                       | -  |
| 5c     | Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)     | nil                           | nil                           | -  |
| 5d     | Total area fully reclaimed and rehabilitated  | -                             | Nil                           | -  |
| 5e     | General remarks of inspecting officers on backfilling and reclamation etc.                    | -                             | -                             | Back-filling/Reclamation has been carried out as proposed. |

## 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). | Yes       | Yes         | -       |
| 6b     | Area available for rehabilitation (ha) .                                     | NIL       | NIL         | -       |
| 6c     | afforestation done (ha).   | NIL       | NIL         | -       |
| 6d     | No. of saplings planted during the year                                      | NIL       | NIL         | -       |
| 6e     | Cumulative no .of plants   | NIL       | NIL         | -       |
| 6f     | Any other method of rehabilitation   | NIL       | NIL         | -       |
| 6g     | Cost incurred on watch and care during the year                              | NIL       | NIL         | -       |

|    |  |              |                     |   |
|----|--|--------------|---------------------|---|
| 6h | Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling ( Lx B x D | 2.24 ha.     | -                   | - |
| 6i | Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings          | 9.32 ha.     | 9.87 ha. cumulative | - |
| 6j | Compliance on reclamation and rehabilitation by backfilling (iii)Afforestation on on backfilled area       | Nil          | 1000 plants         | - |
| 6k | Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir  | Nil          | Nil                 | - |
| 6l | Compliance on reclamation and rehabilitation by backfilling (v)any other specific means.                   | Nil          | Nil                 | - |
| 6m | Compliance of rehabilitation of waste land within lease (i)afforestation                                   | Not proposed | NA                  | - |
| 6n | Compliance of rehabilitation of waste land within lease (ii)Area rehabilitation (ha)                       | Not proposed | NA                  | - |
| 6o | Compliance of rehabilitation of waste land within lease (iii)Method of rehabilitation                      | Not proposed | NA                  | - |



|    |   |   |               |  |
|----|---|---|---------------|--|
| 6p | Compliance of environmental monitoring (core zone and buffer zone)                                | Regular Environment Monitoring Proposed | Complied with | -  |
| 6q | General remarks of inspecting officers on PMCP compliance and progressive closure operations etc. | -                                       | -             | Back-filling/Reclamation of mined out pit is under progress. |

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Mineral Conservation:

| Sl.No. | Item   | Propasals                            | Actual work                          | Remarks   |
|--------|--|--------------------------------------|--------------------------------------|---|
| 7a     | ROM Mineral dispatch or grade-wise sorting within lease area                           | Grade wise sorting within lease area | Grade wise sorting within lease area | -   |
| 7b     | Method of grade-wise mineral sorting i.e. manual or mechanical.                        | Mechanical                           | Mechanical                           | -   |
| 7c     | Different grade of mineral sorted out at mines.  | yes                                  | yes                                  | -   |
| 7d     | Any beneficiation process at mines   | Only Dry Crushing & Screening        | Only Dry Crushing & Screening        | -   |
| 7e     | General remarks of inspecting officer on Mineral conservation and beneficiation issues | -                                    | -                                    | Mineral processing by only Dry Crushing & Screening being carried out for Grade wise sorting of ore |

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Environment:

| Sl.No. | Item  | Propasals | Actual work | Remarks |
|--------|---|-----------|-------------|---------|
| 8a     | Separate removal and utilization of topsoil (Rule 32) | NA        | NA          | -       |

|    |   |   |   |  |
|----|---|---|---|--|
| 8b | Concurrent use or storage of topsoil  | NA  | NA  | -  |
| 8c | Separate dumps for overburden, waste rock, rejects and fines (Rule 33)                                      | Yes   | Yes   | No surface waste dumping proposed  |
| 8d | Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use           | Back-filling/ Reclamation of waste is proposed        | Back-filling/ Reclamation of waste being carried out              | -  |
| 8e | Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc) | Mined out Pit reclamation by back filling is proposed | reclamation by back filling is in Progress                        | -  |
| 8f | Baseline information on existence of plantation and additional plantation done (Rule 41)                    | -   | Plantation carried out in year 2021-22 - 3000 Nos.                | (WML = 1000 Nos.)<br>(OML = 2000 Nos.)<br>As per Annual Return submitted for FY 2021-22                              |
| 8g | Survival rate   | -   | About 70%   | -  |
| 8h | Water sprinkling on roads to control airborne dust  | Water Sprinkling by Water Tankers on Mine Roads       | Water Sprinkling by Water Tankers on Mine Roads being carried out | -  |
| 8i | General remarks of inspecting officer on aesthetic beauty in and around mines area                          | -   | -   | Water tankers/sprinklers are deployed for dust suppression. Aesthetic beauty in and around mines appears to be good. |

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Compliance of Rule 45:

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| Sl.No. | Item | Propasals | Actual work | Remarks |
|--------|------|-----------|-------------|---------|
|--------|------|-----------|-------------|---------|

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|    |   |   |  |   |
|----|---|---|--|---|
| 9a | Status of submission of Monthly and Annual returns  | -   | MR Submitted up to = JULY 2022<br>AR Submitted up to = FY 2021-2022  | -   |
| 9b | Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager           | Mr. Kiran Gad - Mining Engineer<br>Mr.Sushant Nikam - Geologist<br>Mr. Amit Kaisukar- Mines Manager   | Employed   | -   |
| 9c | Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc. | Covered under O/C Working = 13.20<br>Reclaimed = 9.87<br>Used for Waste Disposal = 0.40<br>Road, Buildings, Infrastructure = 0.65<br>Mineral Storage = 1.70<br>Work done PMCP = 2.15 in Ha. | As per Annual Return submitted for FY 2021-22<br>Covered under O/C Working = 13.20<br>Reclaimed = 9.87<br>Used for Waste Disposal = 0.40<br>Road, Buildings, Infrastructure = 0.65<br>Mineral Storage = 1.70<br>Work done PMCP = 2.15 in Ha. | As per Annual Return submitted for FY 2021-22 |
| 9d | Scrutiny of Annual return on afforestation  | 3000 Nos. (WML = 1000 Nos.)<br>(OML = 2000 Nos.)  | 3000 Nos. (WML = 1000 Nos.)<br>(OML = 2000 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 Stock = Nil<br>Lumps <55% Fe = 31276.09 Tonnes<br>Fines <55% Fe = 466719.75 Tonnes  | ROM Stock = Nil<br>Lumps <55% Fe = 31276.09 Tonnes<br>Fines <55% Fe = 466719.75 Tonnes   | As per Annual Return submitted for FY 2021-22 |

|    |   |  |  |   |
|----|---|--|--|---|
| 9g | Scrutiny of Annual return on sale value, Ex. Mine price and production cost | Cost of Production = Rs 718.56/Tonne<br>EX Mine Price Lumps<55% Fe = Rs 2494.60/Tonne<br>Fines<55% Fe = Rs 906.74/Tonne              | Cost of Production = Rs 718.56/Tonne<br>EX Mine Price Lumps<55% Fe = Rs 2494.60/Tonne<br>Fines<55% Fe = Rs 906.74/ Tonne | As per Annual Return submitted for FY 2021-22 |
| 9h | Scrutiny of Annual return on fixed assets                                   | 110331729/-  | 110331729/-  | As per Annual Return submitted for FY 2021-22 |
| 9k | Scrutiny of Annual return on mining machineries                             | Hydraulic Shovel = 07 (1.7, 1.9 = 03, 2.3 = 03 CUM)<br>Wheel Loader = 02 ( 1.75CUM)<br>Dozer = 01 (380 HP)<br>Dumper = 21( 25Tonnes) | deployed   | -   |

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**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 |
| MCDR17             | Rule 11(1) | 08-SEP-22     |                     |           |               |
| MCDR17             | Rule 27(1) | 08-SEP-22     |                     |           |               |
| MCDR17             | Rule 27(2) | 08-SEP-22     |                     |           |               |

**Date :**

**(PREM PRAKASH)**

Indian Bureau of Mines