

**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 : VT01) VIDYADHAR V.TARI
Officer and ID No.
- (ii) Designation : Assistant Mining Engineer
- (iii) Accompanying mine : S/SHRI. SURESH KULAL, V.P. (OPERATIONS), AMIT KAISUKA
Official with
Designation
- (iv) Date of Inspection : 01-FEB-22
- (v) Prev.inspection date : 12-JUL-21

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 : Shrivashtra@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 correspondance** : Minerals & Metals AT-KALANE
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 Plan/Scheme of Mining	:	Fresh under rule 22 MCR1960	20-OCT-00
		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	06 BHS proposed in FY 2020-21	Drilling of 06 BHS already completed in the FY 2019-20	-
1c	Exploration Agencies and Expenditure in lakh rupees during the year	-	-	-
1d	Balance area to be explored to bring Geological axis in 1 or 2	Nil	Nil	Whole ML area is explored at G-1 level
1e	Balance reserve as on 01/04/20	-	(111)= 1.44 Million Tons	Given as per Annual Return submitted for FY 2020-21
1f	General remarks of inspecting officers on geology, exploration etc	-	-	Whole lease area has been cover 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 ML area	-
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	yes	yes	-
2c	Stripping ratio or ore to OB ratio	1:2.63	1:1.59	-
2d	Quantity of topsoil generation in m3	Nil	Nil	-

2e	Quantity of overburden generation in m3	920650.5 (1841301 tonnes) proposed in FY 2020-21	11,15,069 Tonnes of waste generated/ disposed of in FY 2020-21 Subsequently, it is reported vide letter dated 21.01.2022 that the backlog of 7,26,232 tonnes of waste handling for the year 2020-21 has been achieved.	As per Annual Return submitted for FY 2020-21
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc	-	-	Development works observed lagging behind than proposed as less development/waste removal reported carried out in the year 2020-21 than proposed. Hence, Violation was issued in this regard on 26.07.2021 based on previous inspection dated 12.07.2021 and mining operations were suspended on 04.10.2022. Subsequently, it is reported vide letter dated 21.01.2022 that the backlog of 7,26,232 tonnes of waste handling for the year 2020-21 has been achieved, hence violation is complied with.

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	ROM mineral production proposed in FY 2020-21 : 700000 Tonnes (Insitu=500000 te & Dump working=200000 te)	ROM mineral production Achieved in FY 2020-21 : 700000 Tonnes (Insitu=500000 te & Dump working=200000 te) As per Annual Return submitted for FY 2020-21	ROM production proposal given as per Modified Review of Mining Plan Approval Letter No: RMP/MECH-07(MAH)/GOA/2018-19 Vol. III, Dated- 11/03/2021
3c	Recovery of sailable/usable mineral from ROM production	100 %	100 %	-
3d	Quantity of mineral reject generation	Nil	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	Mechanized	Mechanized	-
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	Excavation/dev elopment of pit is approved to be carried out by formation of regular benches of height 6 m and width more than its height.	It was observed during inspection on dated 12.07.2021 that benches in newly formed pit in western part of lease area are merged in irregular manner with height of benches up to about 10 to 12 m and width of benches less than its height at places. Subsequently, it is reported vide letter dated 21.01.2022 that the height and width of benches have been maintained properly.	Violation in this regard was issued on 26.07.2021 based on previous inspection dated 12.07.2021 and mining operations were suspended on 04.10.2022. Subsequently, it is reported vide letter dated 21.01.2022 that the height and width of benches have been maintained properly, hence violation is complied with.
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 24.5 ha. (Covered under O/C Working = 15.00 Reclaimed = 9.32)	As per Annual Return submitted for FY 2020-21
3n	Ore to OB ratio for the pit/mine during the year.	1:2.63	1:1.59	-
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, as per Modified Review of Mining Plan Approved on, Dated- 11/03/2021	About 28.0 ha. (Covered under O/C Working = 15.00 Reclaimed = 9.32 Used for Waste Disposal = 0.57 Road, Buildings, Infrastructure = 0.65 Mineral Storage = 1.97)	As per Annual Return submitted for FY 2020-21
3p	Production of ROM mineral during the last five year period as applicable	2016-17= 741874 Tons 2017-18= 417487 Tons 2018-19= 257355 Tons 2019-20 = 500000 Tons 2020-21 = 700000 Tons	2016-17=711857Tons 2017-18= 127635 Tons 2018-19= Nil 2019-20 = 500000 Tons 2020-21 = 700000 Tons	Production figure of ROM mineral during last five-year period is given as reported in Annual Returns & approved Mining Plans

3q	General remarks of inspecting officers on method of mining etc.	-	-	Mechanized open cast mining method being followed with Excavator & dumper combination.
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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	Surface waste dumping is not proposed in FY 2020-21	In FY 2020-21 surface waste dumping is 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	465 m	About 700M(Maintained)	-
4j	Number of settling ponds	1 no.	5 nos.	-

4k	Specific comments of inspecting officer on waste dump management	-	-	Back-filling/Reclamation is approved to be carried in stages in northern side of the existing back-filling pit (situated in eastern part of lease area) from X-section N-1743510 to N-1743745 in view of safe & systematic mining and scientific closure of mines. However, it is observed that back-filling being carried out in southern side of the existing back-filling pit from the X-section N-1743500 to N-1743425. Violation in this regard was issued on 26.07.2021 based on previous inspection dated 12
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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	Cumulative area of about 19 Ha of mined out pit to be back-filled at the end of approved 05 years Mining Plan Period, as per Modified Review of Mining Plan Approved on 11/03/2021	About 9.3 Ha has been backfilled till year 2020-21 As per Annual Return submitted for FY 2020-21	-
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.	-	-	Manner/sequence of Back-filling/Reclamation has not been followed as approved. Hence, Violation in this regard was issued on 26.07.2021 based on previous inspection dated 12.07.2021 and mining operations were suspended on 04.10.2022. Subsequently, it is reported vide letter dated 21.01.2022 that the waste material generated have been backfilled in sequence manner as per the safe and systematic mining and scientific closure of mine.

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).	-	Yes	-
6b	Area available for rehabilitation (ha) .	Not proposed	NA	-
6c	afforestation done (ha).	Not proposed	NA	-
6d	No. of saplings planted during the year	Not proposed	Plantation carried out in 2020-21-1000Nos.	As per Annual Return submitted for 2020-21
6e	Cumulative no .of plants	Not proposed	NA	-
6f	Any other method of rehabilitation	Not proposed	NA	-
6g	Cost incurred on watch and care during the year			-
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (L x B x D	Cumulative area of about 19 Ha of mined out pit to be back-filled at the end of approved 05 years Mining Plan Period, as per Modified Review of Mining Plan Approved on 11/03/2021.	About 9.3 Ha has been backfilled till year 2020-21,	As per Annual Return submitted for FY 2020-21
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	NIL	About 9.3 Ha has been backfilled till year 2020-21. As per Annual Return submitted for 2020-21	-
6j	Compliance on reclamation and rehabilitation by backfilling (iii)Afforestation on backfilled area	NIL	NIL	-

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	Nil	Nil	-
6n	Compliance of rehabilitation of waste land within lease (ii)Area rehabilitation (ha)	Nil	Nil	-
6o	Compliance of rehabilitation of waste land within lease (iii)Method of rehabilitation	Nil	Nil	-
6p	Compliance of environmental monitoring (core zone and buffer zone)	Regular Environment Monitoring Proposed	Regular Environment Monitoring being carried out in periodic basis.	-
6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.	-	-	Back-filling/Reclamation of mined out pit is under progress.

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

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 is proposed
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	Back-filling/ Reclamation by waste is proposed	Back-filling/ Reclamation by waste is 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)	-	As reported, total Plantation carried out in year 2020-21 - 1500 Nos. with 70% survival rate	(WML = 1000 Nos.) (OML = 500 Nos.) As per Annual Return submitted for FY 2020-21 with 70% survival rate.
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.

Compliance of Rule 45:

Sl.No.	Item	Propasals	Actual work	Remarks
9a	Status of submission of Monthly and Annual returns	-	Returns being submitted regularly (MR Submitted up to = January 2022), AR Submitted for FY 2020-2021	-
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Mr. Kiran Gad - Mining Engineer Mr.Sushant Nikam - Geologist Mr. Amit Kaisukar-Mine Manager	Mr. Kiran Gad - Mining Engineer Mr.Sushant Nikam - Geologist Mr. Amit Kaisukar-Mine Manager	As per Annual Return submitted for FY 2020-21

9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Covered under O/C Working = 15.00 Reclaimed = 9.32 Used for Waste Disposal = 0.57 Road, Buildings, Infrastructure = 0.65 Mineral Storage = 1.97 Work done under PMCP = 1.97	Covered under O/C Working = 15.00 Reclaimed = 9.32 Used for Waste Disposal = 0.57 Road, Buildings, Infrastructure = 0.65 Mineral Storage = 1.97 Work done under PMCP = 1.97	As per Annual Return submitted for FY 2020-21
9d	Scrutiny of Annual return on afforestation	1500 Nos. (WML = 1000 Nos.) (OML = 500 Nos.)	1500 Nos. (WML = 1000 Nos.) (OML = 500 Nos.)	As per Annual Return submitted for FY 2020-21
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 Lumps <55% Fe = 3675.53 Tonnes & Fines <55% Fe = 103582.61 Tonnes	ROM Stock = Nil Lumps <55% Fe = 3675.53 Tonnes Fines <55% Fe = 103582.61 Tonnes	As per Annual Return submitted for FY 2020-21

9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	EX Mine Price : Lumps <55% Fe = Rs 2367.12/Tonne Fines <55% Fe = Rs 918.24/Tonne; Cost of Production = Rs 921.28/Tonne	Cost of production seems that reported more in the Annual Return submitted for the Year 2020-21.	Violation in this regard was issued on 26.07.2021 based on previous inspection dated 12.07.2021. subsequently, Lessee has submitted revised AR for FY 2020-21 wherein cost of production reported is Rs.785.28 which is less than the Ex Mine Price. Accordingly violation of Rule 45(7) was considered as rectified.
9h	Scrutiny of Annual return on fixed assets	Value of Fixed Assets (in Rs)= 112763824/-	Value of Fixed Assets (in Rs)= 112763824/	As per Annual Return submitted for FY 2020-21
9k	Scrutiny of Annual return on mining machineries	Hydraulic Shovel = 05 (1.7, 1.9, 2.3,2.3,3.8 CUM) Wheel Loader = 02 (1.75CUM) Dozer = 01 (380 HP) Dumper = 15(25Tonnes) etc.	HEMMs detail as furnished are deployed	As per Annual Return submitted for FY 2020-21

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 27(1)	15-FEB-22			
MCDR17	Rule 27(2)	15-FEB-22			

Date :

(VIDYADHAR V.TARI)

Indian Bureau of Mines