

I/30481/2024

Review and updation of Mining Plan REPORT

Goa regional office

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

Mine code : 30MSH28029

- (i) Name of the Inspecting : K07) KRISHNENDU CHATTERJEE
Officer and ID No.
- (ii) Designation : Senior Mining Geologist
- (iii) Accompanying mine : S/SHRI. AMIT KAISUKAR, MM, KIRAN GAD, ME AND V.P.NAVA
Official with
Designation
- (iv) Date of Inspection : 07-DEC-23
- (v) Prev.inspection date : 02-JAN-19

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 : 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

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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

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PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	No proposal	Nil	
1b	Exploration over lease area for geological axis 1 or 2	Proposed for G1	G1 area: 25.30 Ha. Proved non-mineralized: 6.95 Ha.	
1c	Exploration Agencies and Expenditure in lakh rupees during the year	No proposal	Nil	
1d	Balance area to be explored to bring Geological axis in 1 or 2	Proposed for G1.	G1 achieved.	
1e	Balance reserve as on 01/04/20		0.939 million tonnes of Iron Ore. Quality: +45 to 58% Fe.	As on 01.04.2023
1f	General remarks of inspecting officers on geology, exploration etc			So far, 107 nos. of boreholes are drilled in the ML area with cumulative meterage of 5153.50 m. Entire mineralized area explored by the lessee under G1 level.

Development :

Sl.No.	Item	Proposals	Actual work	Remarks
2a	Location of development w.r.t.lease area	From section T-T' to N-N' during 2022-23	No change.	
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	Separately proposed in ore and OB/waste.	Separate benches in ore and OB are maintained.	
2c	Stripping ratio or ore to OB ratio	1: 1.38	1:1.57	
2d	Quantity of topsoil generation in m3	No proposal	Nil	

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2e	Quantity of overburden generation in m3	137,450 m3	157,959 m3	Tonnage factor: 2.0 tonnes/m3
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc			Part of the top-most benches, located at center of the mine pit were observed collapsed and extending beyond the mining lease area between Boundary Pillars from BP-A2 to BP-A3 and from BP-A3 to BP-A4; 7.5m safety barrier zone in that areas were not maintained and mined out. Violation of Rule 11(1) issued on 28.12.2023.

Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	Single pit proposed.	Single pit.	
3b	Quantity of ROM mineral production proposed	200,000 tonnes insitu ROM & 50,000 tonnes from dump workings proposed.	200,000 tonnes insitu ROM & 50,000 tonnes dump working reported in F.Y 2022-23.	Achieved
3c	Recovery of sailable/usable mineral from ROM production	100% proposed	100% recovery from insitu ROM	
3d	Quantity of mineral reject generation	No proposal	Nil	
3e	Grade of mineral rejects generation and threshold value declared.	No proposal	Not applicable.	
3f	Quantity of sub grade mineral generation.	No proposal	No proposal	

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3g	Grade of sub grade mineral generation	No proposal	Not applicable.	
3h	Manual / Mechanised method adopted for segregating from ROM	Mechanized mining proposed.	Mechanized	
3i	Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects.	No such proposal given	Nil	
3j	Provision of drilling and blasting in mineral benches	Not proposed	Nil.	
3k	Provision of mining machineries in mineral benches	HEMM Proposed.	HEMM deployed in mineral benches.	
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	6m bench height proposed	Average height 6m maintained at working pit areas.	
3m	Total area covered under excavation/pits	26.64 Ha. at the end of F.Y 2023-24	25.00 Ha.	Including backfilled area of 10.37 Ha.
3n	Ore to OB ratio for the pit/mine during the year.	1: 1.38	1:1.57	
3o	Total area put in use under different heads at the end of year	Area under mining: 15.08 Ha Backfilling: 11.56 Ha. Mineral Storage: 1.97 Ha. Infrastructure s & Road: 0.19 Ha.	Area under mining: 14.63 Ha Backfilling: 10.37 Ha. Mineral Storage: 0.60 Ha. Infrastructures & Road: 0.65 Ha.	Actual excavation area furnished as per the submitted Annual Return of F.Y 2022-23.

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3p	Production of ROM mineral during the last five year period as applicable	2018-19: 257,355 2019-20: 500,000 2020-21: 700,000 2021- 22:550,000 2022-23: 250,000 (in tonnes)	2018-19: Nil 2019-20: 500,000 2020-21: 700,000 2021-22: 550,000 2022-23: 250,000 (in tonnes)	Mechanized Opencast mining operation followed with Excavator and Dumper combination.
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3q General remarks of inspecting officers on method of mining etc.

Solid Waste Management - Dumping:

Sl.No.	Item	Proposals	Actual work	Remarks
4a	Separate dumping of topsoil, OB and mineral rejects (Rule 32,33)	Generation of top soil and mineral reject are not proposed in 2022-23. Disposal of waste by backfilling from 120 mRL to 110 mRL proposed at Eastern side of the ML area.	No generation of top soil and mineral. Disposal of waste by backfilling of mined out pit was carried out from 116 mRL to 98 mRL in 2022-23 at Eastern side.	
4b	Location of topsoil, OB and mineral reject dumps	No proposal	Nil	OB/Waste disposal by backfilling of mined out pit.
4c	Number of dumps within lease area and outside of lease area	No surface dumping proposal	Nil	01 old dump located near mine office
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	No proposal	Not Applicable	
4e	Number of active and alive dumps.	No proposal	Nil	
4f	Number of dead dumps.	No proposal	01 no.	

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4g	Number of dumps established.	No proposal	Nil	
4h	Whether Retaining wall or garland drain all along dumps are there.	Proposed.	Retaining wall and garland drain constructed.	
4i	Length of Retaining wall or garland drain all along dumps	600m Proposed along the periphery of the backfilled area.	780m of retaining wall and 400m of garland drain constructed along the periphery of the backfilled area so far.	
4j	Number of settling ponds	No proposal	3 nos. constructed so far.	
4k	Specific comments of inspecting officer on waste dump management			OB/waste disposal by stage wise backfilling of mined out pit, located at North Eastern side of the ML area, was carried out during 2022-23 as per the approved proposal. Retaining wall and garland drains were constructed along the downslope periphery of the backfilled areas (BP-A9 to BP-A11).

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.	Proposed within mineral exhausted part of the pit located at North Eastern side of the ML area.	Mineral completely excavated from the areas of backfilling.	
5b	Area under backfilling of mined out area	11.56 Ha.	10.37 Ha.	Backfilling extent up to 31.03.2023.
5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	No proposal.	No top soil generation	

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5d	Total area fully reclaimed and rehabilitated	No proposal	Nil	
5e	General remarks of inspecting officers on backfilling and reclamation etc.			OB/waste disposal by backfilling of mined out part of the pit was carried out during 2022-23 as per proposal.

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).	Proposed.	Submitted for F.Y. 2022-23	
6b	Area available for rehabilitation (ha) .	11.56 Ha.	10.37 Ha.	By backfilling of mined out pit.
6c	afforestation done (ha).	No proposal	1.93 Ha.	
6d	No. of saplings planted during the year	No proposal	5500 nos. within ML area	
6e	Cumulative no .of plants	Not specified	Apprx. 10,000 nos. within ML area along backfilled area and the safety barrier.	
6f	Any other method of rehabilitation	No proposal	Nil	
6g	Cost incurred on watch and care during the year	No proposal	Nil	
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (Lx B x D	11.56 Ha.	10.37 Ha. area backfilled upto F.Y 2022-23.	Reclamation by backfilling

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6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	No proposal	10.37 Ha.
6j	Compliance on reclamation and rehabilitation by backfilling (iii) Afforestation on backfilled area	No proposal	Not applicable
6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	No proposal	Not applicable
6l	Compliance on reclamation and rehabilitation by backfilling (v) any other specific means.	No proposal	Not applicable
6m	Compliance of rehabilitation of waste land within lease (i) afforestation	No proposal	Not applicable
6n	Compliance of rehabilitation of waste land within lease (ii) Area rehabilitation (ha)	No proposal	Not applicable
6o	Compliance of rehabilitation of waste land within lease (iii) Method of rehabilitation	No proposal	Not applicable
6p	Compliance of environmental monitoring (core zone and buffer zone)	Proposed to be carried out on quarterly basis.	Carried out on quarterly basis and parameters are found within permissible limit.

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6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.	Apprx. 10,000 nos. samples were planted within ML area within backfilled areas and along the safety barrier.
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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 ML area proposed.	Grade wise sorting of ROM.	
7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	Mechanical	Mechanical by crushing and dry screening of ROM using mobile screening plant.	
7c	Different grade of mineral sorted out at mines.	Proposed for all +45% Fe.	Low grade Iron Ore, 51% to below 55% Fe.	
7d	Any beneficiation process at mines	No proposal	Nil	
7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues			No wet beneficiation is involved for up-gradation of ore. ROM is being crushed and dry screened as per the buyers specification.

Environment:

Sl.No.	Item	Propasals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	No proposal	No top soil generation during 2022-23.	
8b	Concurrent use or storage of topsoil	No proposal	Nil	

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8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	Surface dumping of waste not proposed	Waste disposal by backfilling of mined out pit.	
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	Backfilling of mined out pit by OB/ waste proposed.	Backfilling of mined out pit is in progress.	
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	Phased reclamation of mined out pit by backfilling is proposed.	Phased reclamation of mined out pit by backfilling is in progress.	
8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	Proposed.	Apprx. 10,000 nos. samples were planted within ML area at backfilled areas and along the safety barrier.	
8g	Survival rate	Not specified.	Approx. 60%.	
8h	Water sprinkling on roads to control airborne dust	Proposed.	Water tanker sprinkling arrangement on mine road made.	
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area			Aesthetic beauty around the ML area is good. Most of the ML are has been degraded by mining and allied activities.

Compliance of Rule 45:

Sl.No.	Item	Propasals	Actual work	Remarks
9a	Status of submission of Monthly and Annual returns	M.R. Submitted up to March 2024 & A.R. Submitted up to 2022-23	Submitted within time limit.	

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9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Mining Engineer: Shri Kiran Gad Geologist: Shri Sushant Nikam Manager: Shri Amit Kaisukar	Mining Engineer: Shri Kiran Gad Geologist: Shri Sushant Nikam Manager: Shri Amit Kaisukar
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Area under mining: 14.63 Ha Backfilling: 10.37 Ha. Mineral Storage: 0.60 Ha. Infrastructure s & Road: 0.65 Ha.	No change.
9d	Scrutiny of Annual return on afforestation	5500 nos.	5500 nos. within ML area.
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 closing stock: Nil Graded ore closing Stock: 51% to below 55% Lumps: 11989.81 tonnes 51% to below 55% Fines: 331275.39 tonnes	Actual was also same at that time.
9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	Ex. Mine price: Rs. 2429/ tonne for 51% to below 55% Lumps; Rs. 1151 / tonne for 51% to below 55% Fines. Production cost: Rs. 797.36/ tonne	Some of the invoices were checked during inspection and sale value given was found correct.

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9h	Scrutiny of Annual return on fixed assets	Estimated market value is furnished as Rs. 1079,60,437/-	Closing balance of fixed assets and estimated market values are mentioned in the AR.
9k	Scrutiny of Annual return on mining machineries	Hydraulic Shovel: 3 nos. Wheel Loader: 1 no. Dozer: 1 no. Dumper: 15 nos.	HEMM details as furnished were deployed at mine.

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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)	28-DEC-23	MCDR17	Rule 11(1)	28-DEC-23

Date :**(KRISHNENDU CHATTERJEE)**

Indian Bureau of Mines