

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

MCDR inspection REPORT

Bangalore regional office

Mine file No : KNT/BLR/FE/160/BNG

Mine code : 30KAR03110

- (i) Name of the Inspecting : **S47**) **DR. Sudhakara T.L**
Officer and ID No.
- (ii) Designation : Senior Mining Geologist
- (iii) Accompanying mine : Mr. P.R.V.Prasad, Manager-Mine Mr. B.Sananda, Mining
Official with
Designation
- (iv) Date of Inspection : 16/03/2023
- (v) Prev.inspection date : 20/08/2022

PART-I : GENERAL INFORMATION

1. (a) **Mine Name** : **KARADIKOLLA**
- (b) **Registration NO.** : **IBM/197/2011**
- (c) Category : A Fully Mechanised
- (d) Type of Working : Opencast
- (e) Postal address :
State : KARNATAKA
District : BELLARY
Village : BAVIHALLI
Taluka : SANDUR
Post office : BAVIHALLI
Pin Code :
FAX No. : 0832-2521012 (F),
E-mail : mines@chowgule.co.in
Phone : 0832-2525000 (O), 888886:
- (f) Police Station : SANDUR
- (g) First opening date : 31/05/1968
- (h) Weekly day of rest : SUN
2. Address for : M/s Chowgule & Co. Pvt. Ltd
correspondance # 264, COLLEGE ROAD,
WARD III,HOSPET, BELLARY, KARNATAKA-583201.
3. (a) Lease Number : KAR0170
- (b) Lease area : 459.73
- (c) Period of lease : 20
- (d) Date of Expiry : 22/09/1983
4. Mineral worked : IRON ORE Main

5. Name and Address of the

Lessee : CHOWGULE AND CO LTD
 Chowgule House, Mormugao
 Harbour Goa-403 803 SOUTH
 GOA GOA
 Phone:0832-2521010
 FAX :0832-2521011 /12

Owner : Shri. Arjun A. Chowgule Nominated Owner
 Chowgule House, Mormugao
 Harbour, Goa - 403 803.
 BELLARY KARNATAKA
 Phone:
 FAX :

Agent : Sanjay R. Chakraborty
 C/o Chowgule & Company Pvt.
 Ltd. Chowgule House,
 Mormugao Harbour Goa SOUTH
 GOA GOA
 Phone: 0832-2521010
 FAX : 0832-2521011 /1

Mining Engineer
 Name : B.Sanand,Full Time
 Qualification : B.E &2nd Class
 Appointment/ : 09/11/2015
 Termination date

Geologist
 Name : S.M.HEGDE,Full Time
 Qualification : M TECH APPLIED GEOLOGY
 Appointment/ : 11/08/2018
 Termination date

Manager
 Name : PRV Prasad
 Qualification : DIP.IN.MINING&1st class
 Appointment/ : 12/11/2015
 Termination date

6. Date of approval of Mining Plan/Scheme of Mining : Renewal under rule 22 MCR1960 17/02/1993
 Renewal under rule 22 MCR1960 05/11/2003
 Mining Scheme rule 12 MCDR1988 06/12/2013
 MP review under 17(1) MCR 2016 07/12/2017
 MP modif under 17(3) MCR 2016 07/02/2019
 Modif.approved Mining Scheme 24/12/2021
 MP review under 17(1) MCR 2016 24/12/2021
 FMCP under 23C(1) 02/02/2022

PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	No proposal	NIL	NIL
1b	Exploration over lease area for geological axis 1 or 2	No proposal	NIL	NIL
1c	Exploration Agencies and Expenditure in lakh rupees during the year	No proposal	NIL	NIL
1d	Balance area to be explored to bring Geological axis in 1 or 2	G-1-35.112 ha, G-2-1.788 ha Non mineralized area-66.78 ha	G-1-35.112 ha, G-2-1.788 ha Non mineralized area-66.78 ha	In the approved document, during the year 2022-23, there is a proposal for 30 nos bore holes proposed (non core 1190m & Core 485m total 1675m). During the inspection, it is observed that lessee has completed 40 nos. of bore holes with a total meterage of 1675m, the entire mineralized area explored under G-1.
1e	Balance reserve as on 01/04/20	11,876,721 tonnes as on 1.04.2021 with avg grade 60.5 % Fe	11,387,460 tonnes as on 01.04.2022.	After depleting production for the year 2021-22, as reported in AR 2021-22.

1f	General remarks of inspecting officers on geology, exploration etc	For the Year 2021-22, there are no exploration proposals, During the year 2022-23, there is a proposal for 30 nos bore holes proposed (non core 1190m & Core 485m total 1675m) to explore the mineralized area under G1. During the inspection, it is observed that lessee has completed 40 nos. of bore holes with a total meterage of 1675m, the entire mineralized area explored under G-1. Geological Report to IBM & State Govt. yet to be submitted.
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Development :

Sl.No.	Item	Proposals	Actual work	Remarks
2a	Location of development w.r.t.lease area	Location of working: Central block- N 1676380 to 1676560 E 661945 to 662232	Location of working: Central block- N 1676380 to 1676560 E 661945 to 662232	As per the proposal.
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	Top soil -no proposal. Separate benches proposed in OB & mineral. (Bench height 5-7m proposed for both OB & Mineral)	Top soil - NIL Separate benches maintained for Both OB and Mineral. 7m Bench height maintained for both OB & mineral.	As per the proposal. Topmost- 1000 mRL Bottom most- 980 mRL. Benches in overburden-2 nos. Benches in Ore-4 nos.

2c	Stripping ratio or ore to OB ratio	1: 0.61 (in tons)	1:0.52 (in tons)	Ore- 489261 tons OB- 254313 tons. As reported in AR 2021-22.
2d	Quantity of topsoil generation in m3	No proposal	NIL.	Nil
2e	Quantity of overburden generation in m3	(59630+29796) Cu.m= 89426 Cu.m	104,655 Cu.m	B.D for OB-2.43
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc			Development carried out within the proposed extent as per the proposal.

Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	One (Central Block)	One (Central Block)	NIL
3b	Quantity of ROM mineral production proposed	500,000 tons	489,261 tons	NIL
3c	Recovery of sailable/usable mineral from ROM production	100% proposed	100% achieved	NIL
3d	Quantity of mineral reject generation	No proposal	NIL	NIL
3e	Grade of mineral rejects generation and threshold value declared.	No proposal	NIL	NIL
3f	Quantity of sub grade mineral generation.	No proposal	NIL	NIL
3g	Grade of sub grade mineral generation	No proposal	NIL	NIL

3h	Manual / Mechanised method adopted for segregating from ROM	Only Crushing & Screening proposed	Crushing & screening carried out.	Jaw Crusher-110 tons/hour Cone Crusher-90 tons/hour Product size- -0- 10mm & 10-40 mm
3i	Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects.	No proposal	NIL	NIL
3j	Provision of drilling and blasting in mineral benches	Drilling & blasting Proposed	Drilling & Blasting Carried out wherever hard formation encountered.	Drilling carried out with wagon drill 110 mm dia. Slurry Explosive used in conjunction with delay detonators.
3k	Provision of mining machineries in mineral benches	Excavator-2.5 Cum- 3 nos. Excavator-0.9 Cum- 4 nos. Excavator-1.6 Cum- 1no. Dumper-16 tons-13 nos. Drill-110 mm-1 no	Excavator-2.5 Cum-3nos. Excavator-0.9 Cum-3 nos. Excavator-1.6 Cum-2 nos. Excavator-1.1 Cum-1 no. Dumper- 16 tons-13 nos. Drill-110 mm-1 no.	As reported in AR 2021-22.
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	Bench Height of 5 to 7 m proposed for both mineral and OB.	Bench Height of 7 m maintained for both mineral and OB	No of benches in OB-2, No of Benches in Mineral-4
3m	Total area covered under excavation/pits	23.072 ha	23.072 ha	As reported in AR 2021-22.
3n	Ore to OB ratio for the pit/mine during the year.	1: 0.61 (in tons)	1:0.52 (in tons)	Ore- 489261 tons OB- 254313 tons. As reported in AR 2021-22.
3o	Total area put in use under different heads at the end of year	i)Mining- 23.072 ha ii)Waste dump- 14.588 ha iii)Infrastruc ture & roads & plants-4.78 ha	i)Mining-23.072 ha ii)Waste dump- 14.588 ha iii)Infrastructure & roads & plants-4.78 ha	As reported in AR 2021-22. Area under mining includes backfilled area.

3p	Production of ROM mineral during the last five year period as applicable	2017-18: 3,80,000 2018-19: 500,000 2019-20: 500,000 2020-21: 500,000 2021-22: 500,000 (in tons)	2017-18: 379,969.69 2018-19: 499,930.57 2019-20: 499,967.46 2020-21: 499,965.81 2021-22: 489,261 (in tons)	NIL
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3q	General remarks of inspecting officers on method of mining etc.		The Mine is a fully mechanized mine and machineries(drilling, Loading, Hauling, segregation of ore etc.) as proposed are engaged for development, Production and segregation of ore.
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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)	Top soil-NIL Over Burden-Separate dumping proposed Mineral reject-not proposed	Top soil -Nil OB is backfilled at earmarked area at North Block No mineral reject generated.	No Top soil/Mineral reject generated.
4b	Location of topsoil, OB and mineral reject dumps	For the year 2021-22 backfilling proposed in the exhausted portion of the mine pit - North block.	For the year 2021-22 the OB generated was backfilled as per the proposal in the exhausted portion of the mine pit-North block.	No topsoil, mineral reject generation. For backfilling North pit Top mRL-915 & Bottom mRL-910
4c	Number of dumps within lease area and outside of lease area	5 nos. of dumps within Lease [ID1, ID2, ID3, AD5 & AD6]	5 nos. of dumps within Lease [ID1, ID2, ID3, AD5 & AD6]	5 nos. dumps within Lease are dead & inactive dumps.

4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	3 dumps within UPL (ID-1, ID-2 & AD-5). ID-3 & AD-6 outside UPL.	3 dumps within UPL (ID-1, ID-2 & AD-5). ID-3 & AD-6 outside UPL.	As per the existing geological exploration data.
4e	Number of active and alive dumps.	No Active dump	NIL	NIL
4f	Number of dead dumps.	Within lease - Dead dumps - 5nos. ID-1, ID-2, ID-3, AD-5 & AD-6.	Within lease - Dead dumps - 5nos. ID-1, ID-2, ID-3, AD-5 & AD-6.	All 05 in-active dumps stabilized
4g	Number of dumps established.	No proposal	Nil	All 05 in-active dumps stabilized
4h	Whether Retaining wall or garland drain all along dumps are there.	No proposal	NIL	NIL
4i	Length of Retaining wall or garland drain all along dumps	No proposal	NIL	Adequate retaining wall and garland drainage arrangement provided along the Waste dumps.
4j	Number of settling ponds	No proposal	NIL	NIL
4k	Specific comments of inspecting officer on waste dump management			Adequate retaining wall and garland drainage arrangement provided along the Waste dumps. All the 05 inactive dumps are stabilized by plantation.

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.	Backfilling proposed during the year 2021-22 at North block exhausted part.	Backfilling carried out during the year 2021-22 at North block exhausted part.	As per the proposal.

5b	Area under backfilling of mined out area	2.67 ha proposed (Cumulative). Top mRL-915.	2.67 ha achieved(Cumulative). Top mRL- 915 ,254,313 Tonnes of OB generated used for backfilling.	Backfilling is under progress
5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	No proposal for generation of top soil.	NIL	Workings under broken-up area.
5d	Total area fully reclaimed and rehabilitated	No proposal	NIL	Backfilling of the north block exhausted pit is currently in progress. Full reclamation & rehabilitation will be carried out after backfilling is completed.
5e	General remarks of inspecting officers on backfilling and reclamation etc.			Backfilling carried out in the exhausted Northern pit within the proposed extent as per the proposal. During the inspection systematic backfilling observed in the proposed area, backfilling is not fully done to reclaim the area by plantation.

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).	To be submitted before 1st of July every year.	Not submitted in time.	In the previous inspection, inspecting officer has pointed out violation, later on 06/09/2022 lessee has submitted the PMCP report.

6b	Area available for rehabilitation (ha) .	0.80 ha proposed for afforestation on waste dump (AD-6)	Afforestation carried out in 1.48 ha of AD-6 waste dump	NIL
6c	afforestation done (ha).	0.80 ha proposed for afforestation on waste dump (AD-6)	Afforestation carried out in 1.48 ha of AD-6 waste dump	NIL
6d	No. of saplings planted during the year	2125 nos. of saplings to be planted in 0.80 ha of waste dump-AD-6	3661 nos. of saplings planted in 1.48 ha of waste dump-AD-6	Includes gap plantation at AD-6.
6e	Cumulative no .of plants	4086(existing) +2125(proposed)=6211 nos. of plants cumulative till 31.03.2022 proposed	4086(existing) +3611(2021-22) =7697 nos. of plants cumulative till 31.03.2022.	As reported in AR 2021-22.
6f	Any other method of rehabilitation	No proposal	NIL	NIL
6g	Cost incurred on watch and care during the year	Rs 3.19 lakhs proposed. for afforestation on dump.	Rs 3.92 lakhs incurred for afforestation on dump.	As reported by the Lessee during inspection.
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (Lx B x D	Void proposed for backfilling (225X110X20) Cumulative 2.67 ha proposed	Void proposed for backfilling (125X83X15) Cumulative 2.67 ha achieved	North block.
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	89,426 Cum proposed for backfilling.	104,655 Cum of waste/OB generated used for backfilling.	North block.
6j	Compliance on reclamation and rehabilitation by backfilling (iii)Afforestation on on backfilled area	No proposal	NIL	NIL

6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	No proposal	NIL	NIL
6l	Compliance on reclamation and rehabilitation by backfilling (v)any other specific means.	No proposal	NIL	NIL
6m	Compliance of rehabilitation of waste land within lease (i)afforestation	No proposal	NIL	NIL
6n	Compliance of rehabilitation of waste land within lease (ii)Area rehabilitation (ha)	No proposal	NIL	NIL
6o	Compliance of rehabilitation of waste land within lease (iii)Method of rehabilitation	No proposal	NIL	NIL
6p	Compliance of environmental monitoring (core zone and buffer zone)	Environmental monitoring proposed for both core & buffer zone.	Monitoring for air, water & noise carried out in both core & buffer zone. Environmental regularly. Monitoring Report of Dec - 22 to Jan-23 available during inspection.	All parameters within limit.
6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.			The proposed PMCP activities completed. However, proposed fencing around the pit, silt settling pond etc. not completed. During the inspection advised lessee to complete the same at the earliest.

Mineral Conservation:

Sl.No.	Item	Propasals	Actual work	Remarks
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7a	ROM Mineral dispatch or grade-wise sorting within lease area	Only dry Crushing & Screening proposed	Dry Crushing & screening carried out.	Jaw Crusher-110 tons/hour Cone Crusher-90 tons/hour
7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	No grade wise sorting proposed	NIL	NIL
7c	Different grade of mineral sorted out at mines.	No grade wise sorting proposed	Lumps 58-60%Fe 60-62% Fe, 62-65% Fe. Fines 58-60% Fe 60-62% Fe	As reported in AR 2021-22
7d	Any beneficiation process at mines	No proposal	NIL	NIL
7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues			The mineral conservation activities are carried out inside mine as per the proposal.

Environment:

Sl.No.	Item	Propasals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	No proposal	NIL	NIL
8b	Concurrent use or storage of topsoil	No proposal	NIL	NIL
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	Backfilling of waste proposed at North Pit.	Backfilling of waste carried at North pit as per the proposal.	No mineral reject generation
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	2.67 ha proposed (Cumulative) backfilling of North pit. Top mRL-915.	2.67 ha achieved (Cumulative) backfilling of North pit. Top mRL- 915, 254,313 Tonnes of OB generated used for backfilling.	During the inspection, progress of back filling work observed.

8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	2.67 ha proposed (Cumulative) backfilling of North pit. Top mRL-915.	2.67 ha achieved (Cumulative) backfilling of North pit. Top mRL- 915, 254,313 Tonnes of OB generated used for backfilling.	Backfilling of waste carried at North pit.
8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	4086(existing) +2125(proposed)=6211 nos. of plants cumulative till 31.03.2022 proposed	4086(existing) +3611(2021-22) =7697 nos. of plants cumulative till 31.03.2022.	As reported in AR 2021-22.
8g	Survival rate	85% proposed (WML)	90% achieved (WML)	As reported in AR 2021-22.
8h	Water sprinkling on roads to control airborne dust	Water sprinkling proposed to Control airborne dust inside the mines.	Water sprinkling carried out to control airborne dust with 4nos. of Water tankers with 8 KL capacity	NIL
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area			The aesthetic beauty in and around the mines looks good.

Compliance of Rule 45:

Sl.No.	Item	Proposals	Actual work	Remarks
9a	Status of submission of Monthly and Annual returns	Annual Return submitted up to 2021-2022 on 25.06.2022		Returns for month of October 2021 has been submitted on 10th November, 2021 which is submitted 01 day late from the due date of submission. Show cause notice issued asked lessee to pay 01 day penalty

9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Mines Manager - Shri. P.R.V Prasad Mining Engineer Shri B. Sananda Geologist-Shri	Appears to be correct.	NIL
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	i)Covered under current o/c working- 23.072 ha ii)Used for waste disposal- 14.588 ha iii) Occupied by plant, buildings, residential, welfare buildings & roads -4.78 ha	Appears to be correct.	NIL
9d	Scrutiny of Annual return on afforestation	3661 nos. of saplings within ML area with 90% survival rate	Appears to be correct.	NIL
9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	NIL	Appears to be correct.	NIL

9f	Scrutiny of Annual return on ROM stock and/or graded ore	ROM O/s- 180906 tons Production- 489,261 tons C/s- 104235 tons. Graded Ore O/s- 162,392.12 tons Production- 565,932.55 tons Despatch- 651,966 tons C/s- 76358.67 tons. (Includes both lumps & fines)	Appears to be correct.	NIL
9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	Cost of Production- 1706.75 Rs/ton Ex-mine price(Rs/ton): Lumps 55-58%- Rs. 4334. 58-60%- Rs. 6179.68 60-62%- Rs. 6158.05. 62-65%- Rs. 6432.09 Above 65 %- Rs. 4958. Fines: Below 55%- Rs. 2551. 55-58% - Rs. 2854. 58-60%- Rs. 4012.20. 60-62%- Rs. 4422.80. 62-65%- Rs. 4363 Above 65%- Rs. 6311.	Appears to be correct.	NIL
9h	Scrutiny of Annual return on fixed assets	Rs. 17512887 including Land, industrial & plant, and machinery.	Appears to be correct.	NIL

9k	Scrutiny of Annual return on mining machineries	Excavator-2.5 Cum-3nos. Excavator-0.9 Cum-3 nos. Excavator-1.6 Cum-2 nos. Excavator-1.1 Cum-1 no. Dumper- 16 tons-13 nos. Drill-110 mm-1 no. etc.	Appears to be correct.	NIL
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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 45(7)(a)	05/04/2023		MCDR17 Rule 45(7)	05/04/2023	

Date :

(DR. Sudhakara T.L)

Indian Bureau of Mines