

INDIAN BUREAU OF MINES
MINERALS DEVELOPMENT AND REGULATION DIVISION
MCDR REPORT
Dehradun regional office

Minecode: 39UPR04001

(i)	Name of the Inspecting Officer	Deepak Sharma
(ii)	Designation	Senior Mining Geologist
(iii)	Accompanying mine official with designation	Mine Official
(iv)	Date of Inspection	04.01.2024
(v)	Prev. Inspection date	-

PART-I: GENERAL INFORMATION

1	(a)	Mine Name	Jhiroli Magnesite Mine
	(b)	Registration No.	
	(c)	Category	A-Category
	(d)	Type of Working	Opencast
	(e)	Postal Address	
		State	Uttarakhand
		District	Bageshwar
		Village	Jhiroli
		Taluka/Tehsil	Kafligair
		Post Office	Jhiroli
		Pin Code	263601
		FAX No.	NA
		E-mail	almoramegnesite@gmail.com
		Phone	NA
	(f)	Police Station	Jhiroli
	(g)	First Opening Date	NA
	(h)	Weekly day of rest	-
2		Address for Correspondence	Almora Magnesite Ltd
			Magnesite House
			Almora
			District-Almora
			Uttarakhand 263601
3	(a)	Lease Number	-
	(b)	Lease Area	165.086 hect
	(c)	Period of Lease	50 Years
4		Mineral Worked	Magnesite

PART-II: OBSERVATION / COMMENT OF INSPECTING OFFICER

1. Exploration:

S.N.	Item	Proposals	Actual Work	Remarks
1a	Backlog of previous year	07 nos. of pits were proposed to be done in the year reporting year 2022-23	No pitting work was done in the reporting year	
1b	Exploration over lease area for Geological axis 1 or 2.	Potential mineralized area is explored up to G1 & G2 level	G1-35.6913 hect G2-34.4194 hect G3-94.9753 hect	
1c	Exploration Agency & Expenditure in Lakh Rupees during the year	Not Mentioned	Nil	No exploration work was carried out in the reporting year 2022-23
1d	Balance area to be explored to bring Geological axis in 1 or 2.	Potential Mineralized area is explored upto G1 & G2 level	G1-35.6913 hect G2-34.4194 hect G3-94.9753 hect	
1e	Balance reserves & Resources	111-7337202 122-1445253 221-3032756 222-2339190	111-7279068.22 122-1445253 221-3032756 222-2339190	Reserve and resources updated after depletion of production reported.
1f	General remarks of Inspecting officer on geology, exploration etc.	07 nos of pits were proposed in the reporting year which is not done till the date of inspection. Reserve and resources has been updated after depletion of previous year's production.		

2. Development:

S.N.	Item	Proposals	Actual Work	Remarks
2a	Location of Development w.r.t. lease area	Development working was proposed for magnesite from Pit-1A from MRL 1532 - 1508 and in Pit-1B from MRL 1596-1588 and in PIT-2 1709-1704 and for limestone in PIT-2 1760-1756 MRL	Working was as per proposed location. But development working was lagging behind the proposal. Depth does not reach to the proposed MRL.	Working was in proposed location but rate of development was slower than the given proposal.
2b	Separate benches in topsoil overburden and mineral (Rule 15)	Proposed	Separate benches are prepared in the Mineral benches only.	No soil cover in the proposed working location.
2c	Stripping ratio or ore to OB ratio	1:6.3	1:2.59	
2d	Quantity of topsoil generation in m ³	Not proposed	No soil generated in	No soil generated in

			the reporting year	the RY as the working was proposed in the mineral benches only.
2e	Quantity of overburden generation in m ³	380000	84875 cu m	Less OB generated as compare to proposal.
2f	General remarks of Inspecting officer on development of pit w.r.t type of deposit etc.	There is no deviation in working location, however rate of development and OB generation is slower than the proposal. No soil was generated during the RY as working was proposed in the mineral benches only.		

3. Exploitation:

S.N.	Item	Proposals	Actual Work	Remarks
3a	Number of pits proposed for production	3	3 (Pit-1A, Pit-1B & Pit 2)	
3b	Quantity of ROM mineral production proposed	55000 magnesite & 5000 Limestone	Magnesite-32706.39 & Limestone-0	As per submitted annual return
3c	Recovery of Salable/usable mineral from ROM production	100%	80-90%	
3d	Quantity of mineral reject generation	0	0	
3e	Grade of mineral reject generation and threshold value declared	Not Available	Nil	
3f	Quantity of sub-grade mineral generation	Not Available	Nil	
3g	Grade of sub-grade mineral generation	Not Available	Nil	
3h	Manual/Mechanized method adopted for segregation from ROM	Use of HEMM is proposed for development, production and transportation of ROM mineral	HEMM is being used for development, production and transportation of ROM mineral	
3i	Any analysis or beneficiation study proposed & carried out for sub-grade mineral and reject	Not proposed	Nil	
3j	Provision of drilling & blasting in mineral benches	Proposed	As per proposal	
3k	Provision of mining machineries in mineral benches	Proposed	Use of HEMM is being used in mineral benches	
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	Proposed Bench height - 8m Bench width-8m	Bench height and width are suitable for the proposed opencast mining	
3m	Total area covered under excavation /pits	37.6647	35.6900	
3n	Ore to OB ratio for the pit/mine during the year	1:6.3	1:2.53	
3o	Total area put in use under different heads at the end of year	47.9947	46.9541	

3p	Production of ROM mineral during last five-years period, as Applicable	2018-19=59990 2019-20=59996 2020-21=60000 2021-22=60000 2022-23=55000	2018-19=33420 2019-20=32758 2020-21=24437 2021-22=25427 2022-23=32706	Units are in tonnes
3q	General remarks of inspecting officer on method of mining etc.	Working was in the proposed location, rate of development and production was slower than the proposal.		

4. Solid Waste Management-Dumping:

S.N.	Item	Proposals	Actual Work	Remarks
4a	Separate dumping of topsoil, OB & mineral reject (Rule 32,33)	Proposed	Separate dumping of OB was done within the ML	
4b	Location of topsoil, OB & mineral reject dumps	Proposed	Within the ML area in the northern-west & South-Eastern part of the ML area	Location of OB dumps are as per proposal
4c	Number of Dumps within lease area and outside lease area	Proposed	5-OB Dumps	
4d	Location of Dumps w.r.t. ultimate pit limit (Rule 16)	Proposed	Within the UPL	
4e	Number of Active & Alive dumps	Proposed	5 (3-OB dump & 2-Sub grade dump)	
4f	Number of deed dumps	Proposed	5	
4g	Number of dumps established	Proposed	5	
4h	Whether Retaining wall or garland drain all along dumps are there	Proposed	Retaining wall & garland drain prepared all along the dump	
4i	Length of Retaining wall or garland drain all along dump	Not Proposed	550-600 m	
4j	Number of settling ponds	Not proposed	0	
4k	Specific comments of inspecting officer on waste dump management	Parapet walls are also prepared in the ML area.		

5. Solid Waste Management-Backfilling:

S.N.	Item	Proposals	Actual Work	Remarks
5a	Status on part or full extraction of mineral from mined out area before starting backfilling	Proposed	Full extraction of mineral is not done yet mineral is the pits mineral is still continue in the depth	
5b	Area under backfilling of	Not	No area	

	mined out area	available	fully mature for backfilling	
5c	Concurrent use of topsoil for restoration or rehabilitation of mined out area (Rule 32)	Not proposed	No soil was generated during the reporting year	
5d	Total area fully reclaimed & rehabilitated	proposed	28.420	As per AR
5e	General remarks of inspecting officer on backfilling, reclamation etc.	No area is fully mature enough for reclaimed & rehabilitated program the reclaimed dumps are of historic era.		

6. Progressive Mine Closer Plan:

S.N	Item	Proposals	Actual Work	Remarks
6a	Whether Annual report on PMCP submitted on time and correctly-Rule 23E (2). Details should be given in the format as given in Annexure-20	Proposed	Submitted	
6b	Management of worked/mined out benches			
	i) Area available for rehabilitation (Ha)	Not Proposed	Nil	
	ii) Afforestation done (ha)	Not Proposed	Nil	
	iii) No. of saplings planted during the year	2500	2600 approx	
	iv) Cumulative no. of plants	8900	9020	
	v) Any other specific method of rehabilitation	Not proposed	Nil	
	vi) Cost incurred on watch & care during the year	Not mentioned	Not available	
6c	Compliance on reclamation and rehabilitation by backfilling			
	i) Voids available for backfilling (L*B*D)	Not proposed	Nil	
	ii) Void filled by waste/tailings	Not proposed	Nil	
	iii) Afforestation on the backfilling	Not proposed	Nil	
	iv) Rehabilitation by making water reservoir	Not proposed	Nil	
	v) Any other specific means	not proposed	Nil	
6d	Compliance of Rehabilitation of waste land within lease			
	i) Afforestation	Proposed	Done, within the ML and outside the ML area also	
	ii) Area rehabilitation	0.5	0.5 hect	
	iii) Method of rehabilitation	Proposed	Plantation	

6e	Compliance of Environment monitoring (core zone & buffer zone)	Proposed	As per approved mining plan	
6f	General remarks of inspecting officer on PMCP compliance & progressive closer operations	Plantation was done within and out side the ML area		

7. Mineral Conservation:

S.N.	Item	Proposals	Actual Work	Remarks
7a	ROM mineral dispatch or grade wise sorting within lease area	ROM dispatched was proposed	ROM magnesite is being processed before dispatch	
7b	Method of grade-wise mineral sorting i.e. manual or mechanical	Not proposed	Nil	
7c	Different grade of mineral sort out at mine	Not proposed	Nil	
7d	Any beneficiation process at mines	Not proposed	Nil	
7e	General remarks of inspecting officer on Mineral conservation & beneficiation issues	Magnesite is being processed to DBM and domestic sale is also being done in the year 2022-23 mentioned in annual returns.		

8. Environment:

S.N.	Item	Proposals	Actual Work	Remarks
8a	Separate removal and utilization of topsoil (Rule32)	Not proposed	No soil generated in the reporting year	
8b	Concurrent use or storage of topsoil	Not Proposed	Nil	
8c	Separate dumps for overburden waste rock, rejects and fines (Rule 33)	Proposed	Separate dumping for OB / waste is done within the ML area	
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	Not proposed	Not proposed in the reporting year	
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	Not proposed	Not proposed in the reporting year	

8f	Baseline information on existence of plantation & additional plantation done (Rule 41)	proposed	As per approved mining plan	
8g	Survival rate	100%	60%	
8h	Water sprinkling on roads to control airborne dust	Proposed	With use of water tanker	
8i	General remarks of inspecting officer on aesthetic beauty in and around mine area	Aesthetic beauty of the ML are nearby area is eye catching. More efforts are to be made for maintaining the beauty of the surrounding.		

9. Compliance of Rule 45:

S.N.	Item	Comments	Remarks
9a	Status of submission of monthly and Annual returns	AR and MR submitted	AR and MR submitted online
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Submitted	Manager-Mr.Rehal Jandial Mining Engineer-Mr. M.S.Karki Geologist-Mr. Jitendra Singh
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Submitted	12. Lease area (surface area) utilisation as at the end of year (hectares): Under forest Outside forest Total (i) Already exploited and abandoned by opencast (O-C) mining 0.000 0.000 0.000 (ii) Covered under current (O-C) Workings 0.000 35.690 35.690 (iii) Reclaimed-rehabilitated 0.000 28.420 28.420 (iv) Used for waste disposal 0.000 7.200 7.200 (v) Occupied by plant, buildings, residential, welfare buildings and roads 0.000 4.750 4.750 (vi) Used for any other purpose (specify) 0.000 0.000 0.000 (vii) Work done under progressive mine closure plan during the year 0.000 0.000 0.000
9d	Scrutiny of Annual return on afforestation	Submitted	Trees planted- survival rate Description Within lease area Outside lease area i) Number of trees planted during the year 3328 1250 ii) Survival rate in percentage 60 70 iii) Total no. of trees at the end of the year 89508 9020
9e	Scrutiny of Annual return on mineral reject generation (Grade & Quantity)	Submitted	Nil
9f	Scrutiny of Annual return on ROM stock and/or grade ore	Submitted	37206.390 ROM

9g	Scrutiny of Annual return on sale value, Ex. Mine price & production costs	Submitted	Ex Mine Price-1978.10 Cost per Tonne-1978.10 As per submitted return
9i	Scrutiny of Annual return on Fixed assets	Submitted	Value of Fixed Assets* (₹ 25503849)
9k	Scrutiny of Annual return on mining Machineries	Submitted	Type of Machinery: Give the following information for the types of machinery in use such as hoist, fans, drills, loaders, excavators, dumpers, haulages, conveyors, pumps, etc. Type of machinery Capacity of each type of machinery Unit (in which capacity is reported) No. of machinery Electrical Nonelectrical (specify) Used in opencast underground (specify) SHOVEL (HYDRAULIC) 0.900 CUM 2 Non Electrical Opencast WHEEL LOADER 2.100 CUM 1 Non Electrical Opencast WHEEL LOADER 1.100 CUM 2 Non Electrical Opencast AIR COMPRESSOR 12.700 CUM/MN 2 Non Electrical Opencast AIR COMPRESSOR 3.960 CUM/MN 3 Non Electrical Opencast ROCK DRILL (NON-ELEC.) 115.000 MM 1 Non Electrical Opencast GENERATOR (DIESEL) 125.000 KWH 1 Non Electrical Opencast DUMPER 9.000 TONNE 11 Non Electrical Opencast WATER TANKER 9000.000 LITRE 1 Non Electrical Opencast CRUSHER 100.000 T/H 1 Electrical Opencast CRUSHER 50.000 T/H 2 Electrical Opencast CRUSHER 6.000 T/H 1 Electrical Opencast ELEC. MOTOR 50.000 HP 3 Electrical Opencast ELEC. MOTOR 25.000 HP 4 Electrical Opencast ELEC. MOTOR 10.000 HP 2 Electrical Opencast ELEC. MOTOR 20.000 HP 2 Electrical Opencast ELEC. MOTOR 4.000 HP 1 Electrical Opencast ELEC. MOTOR 3.000 HP 1 Electrical Opencast ELEC. MOTOR 2.000 HP 1 Electrical Opencast ELEC. MOTOR 0.500 HP 1 Electrical Opencast CONVEYOR (ELEC.) 100.000 T/H 2 Electrical Opencast JEEP/TRACTOR 45.000 HP 3 Non Electrical Opencast