

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

MCDR INSPECTION REPORT

Ajmer regional office

Mine file No : RAJ/KOTA-1/LST-1

Mine code : 38RAJ19001

- (i) Name of the Inspecting : **G021**) **D R GURJAR**
Officer and ID No.
- (ii) Designation : Sr. Asst. Contrl. Mines
- (iii) Accompanying mine : Sh. Vivek Rawat, DGM(Geology & Mining)
Official with
Designation
- (iv) Date of Inspection : 16-SEP-21
- (v) Prev.inspection date : 29-OCT-20

PART-I : GENERAL INFORMATION

1. (a) **Mine Name** : **MCL**
- (b) **Registration NO.** : **IBM/7378/2011**
- (c) Category : A Mechanised
- (d) Type of Working : Opencast
- (e) Postal address
- State : RAJASTHAN
- District : KOTA
- Village : MORAK
- Taluka : RAMGANJ MANDI
- Post office : ADITYA NAGAR
- Pin Code : 326520
- FAX No. : 07459232231
- E-mail : mines@mangalamcement.com
- Phone : 07459232146
- (f) Police Station : Morak
- (g) First opening date : 21-DEC-77
- (h) Weekly day of rest : SUN
2. Address for : MANGALAM CEMENT LTD, ADITYA NAGAR,
correspondance PO MORAK, TEHSIL RAMGANJMANDI
DISTT- KOTA 326520
3. (a) Lease Number : RAJ0013
- (b) Lease area : 895
- (c) Period of lease : 20
- (d) Date of Expiry : 21-FEB-97
4. Mineral worked : LIMESTONE Main

5. Name and Address of the

Lessee : MANGLAM CEMENTS LIMITED
 ADITYA NAGER -326517 PO-
 MORAK DISTT-KOTA KOTA
 RAJASTHAN
 Phone:)7459)44237,44262
 FAX :

Owner : K. C. Jain
 Mangalam Cement Ltd. P. O.
 Adityanagar, Morak, Distt.
 Kota KOTA RAJASTHAN
 Phone:
 FAX : 07459232156

Agent : S.B.Sharma
 Mangalam cement Ltd Aditya
 Nagar Morak KOTA RAJASTHAN
 Phone: 07459232262
 FAX : 07459232231

Mining Engineer

Name : S. B. Sharma, Full Time
 Qualification : B. E. (Mining)
 Appointment/ : 08-MAR-91
 Termination date

Geologist

Name : Vivek Rawat, Full Time
 Qualification : M Tech(Applied Geology), FCC(R)
 Appointment/ : 13-JAN-95
 Termination date

Manager

Name : Ramesh Chaudhry
 Qualification : B. E. (Mining), FCC (R)
 Appointment/ : 31-MAR-15
 Termination date

6. Date of approval of Mining	:	Existing rule 11 MCDR1988	03-FEB-93
Plan/Scheme of Mining		Existing rule 11 MCDR1988	18-AUG-97
		Mining Scheme rule 12 MCDR1988	22-FEB-99
		Mining Scheme rule 12 MCDR1988	25-SEP-03
		Modif.of approved Mining Plan	18-AUG-06
		Mining Scheme rule 12 MCDR1988	04-NOV-11
		Modif.approved Mining Scheme	13-FEB-13
		MP modif under MCR 1960	10-JUN-16
		MP review under 17(1) MCR 2016	07-DEC-20

PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	No proposal during the previous year.	Not applicable as no proposal.	Nil
1b	Exploration over lease area for geological axis 1 or 2	No proposal during the year 2020-21.	Not applicable as no proposal.	Entire mineralised area has already been explored under G1 level.
1c	Exploration Agencies and Expenditure in lakh rupees during the year	No proposal during the year 2020-21.	Not applicable.	Nil
1d	Balance area to be explored to bring Geological axis in 1 or 2	No proposal during the year 2020-21.	Not applicable as no proposal.	Entire mineralised area has already been explored under G1 level.
1e	Balance reserve as on 01/04/20	No proposal specified in thsi regard.	Balance reserves as on 01.04.2021 88.7796 million Tonnes	Nil
1f	General remarks of inspecting officers on geology, exploration etc			Entire mineralised area has been explored up to G1 level. No issue observed related to geology & exploration.

Development :

Sl.No.	Item	Proposals	Actual work	Remarks
2a	Location of development w.r.t.lease area	Block-I, Block-II &Block-III	Block-I, Block-II &Block-III	Nil
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	Separate benches in top soil, OB and Mineral was proposed	As per proposal at most of places, however not maintained at Blcok III.	Mine Benches have not been maintained as per approved proposal in Pit No.2 of Block III.Hence Violation under rule 11(1) of MCDR 2017 issued vide letter dated 23.09.2021.
2c	Stripping ratio or ore to OB ratio	1:1.003	1: 0.69	Nil

2d	Quantity of topsoil generation in m3	1,65,147m3	15,955m3	Nil
2e	Quantity of overburden generation in m3	50,29,200m3	11,92,976m3	Nil
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc			Mine development has been carried out as per proposal however mine benches have not been maintained as per approved proposal in Pit No.2 of Block III.Hence Violation under rule 11(1) of MCDR 2017 has been issued vide letter dated 23.09.2021.

Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	Block-I, Block-II & Bloock- III	Block-I, Block-II & Bloock- III	Nil
3b	Quantity of ROM mineral production proposed	80,15,265 Ton.	27,59,894 Ton.	Nil
3c	Recovery of sailable/usable mineral from ROM production	90% Recovery	87.64% Recovery	Nil
3d	Quantity of mineral reject generation	8,01,526Ton	2,36,062Ton	Crusher Reject.
3e	Grade of mineral rejects generation and threshold value declared.	CaO =33%, MgCO3 = 1.6 - 2.1%	CaO =33% MgCO3 = 1.6 - 2.1%	Nil
3f	Quantity of sub grade mineral generation.	20,11,680 Ton.	1,87,788 Ton.	Nil
3g	Grade of sub grade mineral generation	CaO = 34 - 41.5%	CaO = 34 - 41.5%	Nil

3h	Manual / Mechanised method adopted for segregating from ROM	Dry beneficiation by two stage double deck vibrating screen.	As per proposal.	Nil
3i	Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects.	No proposal	None	Nil
3j	Provision of drilling and blasting in mineral benches	Deep hole drilling & blasting with deck charging was proposed.	Deep hole drilling & blasting with deck charging was carried out as per proposal.	Nil
3k	Provision of mining machineries in mineral benches	HEMM shovel & dumpers combination proposed	HEMM shovel & dumpers combination deployed.	Nil
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	Yes	Height of benches in overburden and mineral suitable for method of mining proposed in Mining plan.	However, mine benches have not been maintained as per approved proposal in Pit No.2 of Block III.Hence Violation under rule 11(1) of MCDR 2017 has been issued vide letter dated 23.09.2021.
3m	Total area covered under excavation/pits	320.51 hect	303.09 hect	Nil
3n	Ore to OB ratio for the pit/mine during the year.	1:1.003	1:0.69	Nil
3o	Total area put in use under different heads at the end of year	Working Pit= 320.51 hect O/B Dump=30.15hect . Plant, Building, roads etc.- 20.10 hect.	Working Pit=303.09 hect O/B Dump =22.79 hect. Plant, Building, roads etc.-20.10 hect.	Area excluding plantation.

3p	Production of ROM mineral during the last five year period as applicable	2016-17 = 45,00,895 T 2017-18 = 44,57,370 T 2018-19 = 60,09,005 T 2019-20 = 81,22,430 T 2020-21 = 80,15,265 T	2016-17 = 25,15,416 T 2017-18 = 28,57,453 T 2018-19 = 25,60,228 T 2019-20 = 25,62,308 T 2020-21 = 27,59,894 T	Nil
3q	General remarks of inspecting officers on method of mining etc.	Opencast Mining Method was proposed using HEMM.	Mechanised mining method is being used along with HEMM as per proposal.	Method of Mining is suitable to the type of deposit.

Solid Waste Management - Dumping:

Sl.No.	Item	Propasals	Actual work	Remarks
4a	Separate dumping of topsoil, OB and mineral rejects (Rule 32,33)	Separate dumping of OB/IB & mineral reject were proposed.	Separate dumping of OB/IB & mineral reject were carried out as per proposal.	Nil
4b	Location of topsoil, OB and mineral reject dumps	Block-I Grid - 800/800 & 600/990 Block - II Grid- 5200/800 & 5100/990	Block-I Grid - 800/800 & 600/990 Block - II Grid- 5200/800 & 5100/990	OB & Mineral reject dumps.
4c	Number of dumps within lease area and outside of lease area	Three - within lease area.	Three - within lease area.	Nil
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	Out of ultimate pit limit.	Out of ultimate pit limit.	Nil
4e	Number of active and alive dumps.	Two	Two	Nil
4f	Number of dead dumps.	One	One	Nil
4g	Number of dumps established.	One	One	Nil
4h	Whether Retaining wall or garland drain all along dumps are there.	No proposal during the year	Garland drain made.	Nil

4i	Length of Retaining wall or garland drain all along dumps	No proposal during the year	90m during the year.	Nil
4j	Number of settling ponds	No proposal	None	Nil
4k	Specific comments of inspecting officer on waste dump management			Waste dump management is satisfactory.

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.	After full extraction of mineral backfilling proposed.	As per proposal.	Nil
5b	Area under backfilling of mined out area	15.95 Ha.	6.40 Ha.	During the year 2020-21 total backfilling was proposed over an area 15.95 hect. Whereas actual backfilling has been carried out over an area 6.4 hect. Hence, violation under rule 11(1) of MCDR 2017 has been issued vide letter dated 23.09.2021.
5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	For Plantation	For Plantation	Nil
5d	Total area fully reclaimed and rehabilitated	Reclaimed = 157.67 hect.	Reclaimed = 126.88 hect.	By Backfilling & Plantation.

5e	General remarks of inspecting officers on backfilling and reclamation etc.	During the year 2020-21 total backfilling was proposed over an area 15.95 hect. Whereas actual backfilling has been carried out over an area 6.4 hect. Hence, violation under rule 11(1) of MCDR 2017 has been issued vide letter dated 23.09.2021.
----	--	---

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).	As per rule 26(2) of MCDR,2017 holder of mining lease shall submit PMCP before 1st day of July every year.	PMCP report for the year 2020-21 has been submitted timely.	Nil
6b	Area available for rehabilitation (ha) .	15.28 Ha.	9.69 Ha.	Nil
6c	afforestation done (ha).	7.42 Ha.	6.64 Ha.	Afforestation done on Back filled area, Over waste dump & Non Mineralize area.
6d	No. of saplings planted during the year	5500 Nos	6075 Nos	As reported in AR 2020-21.
6e	Cumulative no .of plants	159317 Nos	160823 Nos	Up to year 2020-21.
6f	Any other method of rehabilitation	No specific proposal	None	Nil
6g	Cost incurred on watch and care during the year	Rs 11,00,000	Rs 12,15,000	Nil

6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (Lx B x D	63,31,565 m3	38,37,500 M3	Nil
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	41,90,045 m3	10,92,413 m3	Nil
6j	Compliance on reclamation and rehabilitation by backfilling (iii)Afforestation on on backfilled area	4000 Nos. (5.59Hect)	4885 Nos. (5.34hect)	Nil
6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	46.33 Hect.	44.39 Hect.	Nil
6l	Compliance on reclamation and rehabilitation by backfilling (v)any other specific means.	No proposal	None	Nil
6m	Compliance of rehabilitation of waste land within lease (i)afforestation	1000 nos of saplings	980 nos of saplings	Nil
6n	Compliance of rehabilitation of waste land within lease (ii)Area rehabilitation (ha)	1.28 Hect.	1.25 Hect.	Nil
6o	Compliance of rehabilitation of waste land within lease (iii)Method of rehabilitation	By Afforestation	By Afforestation	Nil

6p	Compliance of environmental monitoring (core zone and buffer zone)	Environmental monitoring proposed.	As per E.C. & Consent conditions, monitoring is being carried out.	Nil
6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.			PMCP compliance of the mine is satisfactory.

Mineral Conservation:

Sl.No.	Item	Propasals	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	After grade wise sorting usable limestone feed to captive cement plant.	As per proposal	No
7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	Mechanical	Mechanical	Nil
7c	Different grade of mineral sorted out at mines.	Cement grade & Sub Grade	Cement grade & Sub Grade	Nil
7d	Any beneficiation process at mines .	Dry Beneficiation through vibrating screens	Dry Beneficiation through vibrating screens	Nil
7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues			No issue were observed related to mineral conservation.

Environment:

Sl.No.	Item	Propasals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	Yes	Yes, as per proposal	Nil

8b	Concurrent use or storage of topsoil	Yes	Top soil removed seperately and simultaneously used for plantation.	Nil
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	Yes	Yes, as per proposal	Nil
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	Use of OB & crusher reject for back filling was proposed	Use of OB & crusher reject for back filling has been carried out.	Nil
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	Reclamation=15.95Hect Rehabilitation =5.59Hect	Reclamation=6.40Hect Rehabilitation=5.34Hect	Nil
8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	Plantation of 5500 saplings proposed during the year over an area of 7.42hects.	6075 nos. of sapling planted over an area of 6.64 Ha.	Nil
8g	Survival rate	Not specified	82.40%	As reported in AR 2020-21.
8h	Water sprinkling on roads to control airborne dust	Water sprinkling on roads was proposed.	Water sprinkling was observed.	Nil
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area			The general aesthetic beauty in and around mine area was satisfacotry.

Compliance of Rule 45:

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

9a	Status of submission of Monthly and Annual returns	As per rule 45 of MCDR, monthly and annual returns to be submitted.	Monthly returns upto August, 2021 and Annual returns for the year 2020-21 have been submitted timely.	Timely submission.
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Information of Mining Engineer, Geologist and Manager have been furnished.	Details found to be correct	Nil
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Area under Pit = 303.09 hect. Reclaimed Area =126.88 hect. Dump Area =22.79 hect. Occupied by Plant, Buildings, residential & Roads etc.- 20.10 hect.	The area mentioned under different heads found to be in order.	Nil
9d	Scrutiny of Annual return on afforestation	No. of Plants =6075 within lease area Survival = 82.40%	Found to be in order.	Nil
9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	Mineral Reject =1908762 Tonnes. having 59 to 70% CaCo ₃ , 18 to 27% SiO ₂	Details seems not to be correct.	Deviation in reported quantity of minerals reject was observed during inspection. Hence, Violation under rule 45(7) of MCDR 2017 was issued vide letter dated 23.09.2021.
9f	Scrutiny of Annual return on ROM stock and/or graded ore	ROM & Cement grade limestone Stock reported 275357 tonnes.	Details found not to be correct	Reported ROM stock and grade wise stock same hence Violation under rule 45(7) of MCDR 2017 was issued vide letter dated 23.09.2021.
9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	Ex- Mine price / production cost =Rs 249.44	Some discrepancies observed in cost of production reported in annual return.	Violation under rule 45(7) of MCDR 2017 was issued vide letter dated 23.09.2021.

9h	Scrutiny of Annual return on fixed assets	Fixed Assets =10003139/-	Details seems to be correct	Nil
9k	Scrutiny of Annual return on mining machineries	Details given in annual return.	Found to be correct.	Nil

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)	23-SEP-21			
MCDR17	Rule 45(7)(a)	23-SEP-21			

Date :

(D R GURJAR)

Indian Bureau of Mines