

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

**MCDR INSPECTION REPORT**

**Gandhinagar regional office**

**Mine file No :** RAJ/CHT/LST-12

**Mine code :** 38RAJ09011

- (i) Name of the Inspecting : **T001** ) **K. K. TARDIA**  
Officer and ID No.
- (ii) Designation : Deputy Controller Mines
- (iii) Accompanying mine : Sh Somnath Banarjee, Mine Manager  
Official with  
Designation
- (iv) Date of Inspection : 10-MAR-17
- (v) Prev.inspection date : 28-FEB-16

**PART-I : GENERAL INFORMATION**

1. (a) **Mine Name** : **ARNIYA JOSHI**
- (b) **Registration NO.** : **IBM/378/20111**
- (c) Category : A Mechanised
- (d) Type of Working : Opencast
- (e) Postal address
- State : RAJASTHAN
- District : CHITTORGARH
- Village : ARNIYA JOSHI
- Taluka : NIMBAHERA
- Post office : ARNIYA JOSHI
- Pin Code : 312617
- FAX No. : 022-66306510 (F)
- E-mail : somnath.banerjee@nuvoco.in
- Phone : 01477-225155
- (f) Police Station : Nimbaheda
- (g) First opening date : 14-MAY-10
- (h) Weekly day of rest : SUN
2. Address for : VILLAGE ARNIYA JOSHI  
correspondance : TEHSIL NIMBAHERA  
DIST. CHITTORGARH
3. (a) Lease Number : RAJ3940
- (b) Lease area : 1476.43
- (c) Period of lease : 50
- (d) Date of Expiry : 13-MAY-60
4. Mineral worked : LIMESTONE Main

## 5. Name and Address of the

Lessee : LAFARGE INDIA PVT. LTD.  
 VILLAGE BHAVLIYA TAHSIL  
 NIMBAHERA DIST.  
 CHITTORGARH(RAJ.)  
 CHITTORGARH RAJASTHAN  
 Phone:  
 FAX :

Owner : UJJWAL BATTRIA  
 UDB CORPORATE TOWER, A-  
 1,4TH FLOOR J.L.N. MARG  
 JAIPUR JAIPUR RAJASTHAN  
 Phone: 0141-2740484  
 FAX :

Agent : Ramesh Warke  
 Nuvoco Vistas Corp Ltd  
 (formerly Lafarge),Village  
 - Bhawaliya Tehsil -  
 Nimbahera CHITTORGARH  
 RAJASTHAN  
 Phone: 09771496196,  
 FAX :

Mining Engineer  
 Name : ROHIT SOLANKI,Full Time  
 Qualification : B.E. (MIN)  
 Appointment/ : 23-MAR-12  
 Termination date

Geologist  
 Name : Rajesh Singh,Full Time  
 Qualification : M.Tech.(Geo.)  
 Appointment/ : 23-MAR-12  
 Termination date

Manager  
 Name : Somnath Banerjee  
 Qualification : B.E.(MIN)  
 Appointment/ : 10-AUG-15  
 Termination date

6. Date of approval of Mining : Mining Scheme rule 12 MCDR1988 24-APR-15  
 Plan/Scheme of Mining

## PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

## Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	22 drill holes	37 holes	
1b	Exploration over lease area for geological axis 1 or 2	22 drill holes	22 drill holes	As per proposal
1c	Exploration Agencies and Expenditure in lakh rupees during the year	20 Lakhs	25.02 Lakhs	
1d	Balance area to be explored to bring Geological axis in 1 or 2	54 Boreholes, each of 50m depth (total meterage 2700) were proposed during the year 2015-16 & 2016-17.	Total 37 Boreholes drilled (1390m) during the year 2015-16.	Violation letter has been issued.
1e	Balance reserve as on 01/04/20	68.21 Million tonnes	68.21 Million tonnes	
1f	General remarks of inspecting officers on geology, exploration etc		Exploration is not done as per proposal o given in mining plan. Hence violation of rule 11(2) has been pointed out.	

## Development :

Sl.No.	Item	Proposals	Actual work	Remarks
2a	Location of development w.r.t.lease area	North side of the pit Pit A (North Pit): 1st Bench: N-2731403-2730845, E-469614-469690. 2nd Bench: N-2731000-2730870, E-469567-469585. Pit B (South Pit): 1st Bench: N-2729616-2729499, E-470157-470155.	Bench - 1 Latitude NW 469648.76 NE 469723.12 SW 469620.33 SE 469841.45 Bench - 2 NW 469621.22 NE 469765.31 SW 469645.61 SE 469815.36 Bench - 3 NW 469686.25 NE 469728.66 SW 469693.37 SE 469788.68	Total production was carried out form Pit "A" and Pit "B" has not been developed

2b	Separate benches in topsoil, overburden and minerals (Rule 15)	Only mineral benches in pit "A" from MRL 434 to 424 and MRL 424 to 414 Pit "B" MRL 435 to 425. Limestone is exposed in throughout the lease area and no waste rock overburden or side burden or top soil is present in the area chosen for mining for the first five years.	Same as per the proposal from Pit 'A' for mineral benches from MRL 434 to 424 and MRL 424 to 414, Pit "B" opened for 4m bench MRL 435 to 431 only but production could not be done	
2c	Stripping ratio or ore to OB ratio	Not Proposed	Overburden not generated	Overburden not generated
2d	Quantity of topsoil generation in m3	Not Proposed	No topsoil generate	No topsoil generate
2e	Quantity of overburden generation in m3	Not Proposed	No topsoil generate	No topsoil generate
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc		Limestone is exposed in throughout the lease area and no waste rock overburden or side burden or top soil is present in the area chosen for mining for the first five years.	

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**Exploitation:**

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	2	2	
3b	Quantity of ROM mineral production proposed	1036352 ton	601501	
3c	Recovery of sailable/usable mineral from ROM production	100%	100%	

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3d	Quantity of mineral reject generation	Not Proposed	na	Limestone is exposed in throughout the lease area and no mineral reject is present in the area chosen for mining for the first five years.
3e	Grade of mineral rejects generation and threshold value declared.	Not Proposed	na	
3f	Quantity of sub grade mineral generation.	Not Proposed	na	
3g	Grade of sub grade mineral generation	Not Proposed	na	
3h	Manual / Mechanised method adopted for segregating from ROM	ROM is directly dispatched to crusher for captive plant	ROM is directly dispatched to crusher for captive plant	
3i	Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects.	No processing is done in the lease area, the entire material is dispatched to the captive cement plant including fines.	No processing is done in the lease area, the entire material is dispatched to the captive cement plant including fines.	
3j	Provision of drilling and blasting in mineral benches	The drilling of blast holes is being done by down the hole drill machines of 115 mm. diameter operated by compressed air. For blasting slurry cap sensitive explosives are, ANFO and SME to be used	Drilling and blasting are done as per the proposal. ANFO is not used till now, as the license is received in the start of March 2017.	

3k	Provision of mining machineries in mineral benches	1. Drill machine 115 mm. dia 2 2. Air Compressor 450 cfm 2 3. Excavator 2.8 cum capacity 2 4. Excavator 1.8 cum capacity 2 5. Dumpers 16 T capacity 17 6. Dumpers 22 T capacity 15 7. Dozer 1 8. Rock Breaker 1	Same as proposal.
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	Yes	Yes
3m	Total area covered under excavation/pits	11.25	11.25
3n	Ore to OB ratio for the pit/mine during the year.	No OB was anticipated	No OB handled
3o	Total area put in use under different heads at the end of year	Pit-11.25 Waste/reject- Nil Others- Nil	Pit-11.25 Waste/reject- Nil Others- Nil
3p	Production of ROM mineral during the last five year period as applicable	2011-12=2.63 Mt 2012-13=2.63 Mt 2013-14=2.59 Mt 2014-15=2.61 Mt 2015-16=1.04 Mt	2011-12=Nil 2012-13=Nil 2013-14=0.78 Mt 2014-15=1.996 Mt 2015-16=0.60 Mt
3q	General remarks of inspecting officers on method of mining etc.		Opencast fully mechanised mining method.

Sl.No.	Item	Propasals	Actual work	Remarks
4a	Separate dumping of topsoil, OB and mineral rejects (Rule 32,33)	Not Proposed	na	Limestone is exposed in throughout the lease area and no waste rock overburden or side burden or top soil is present in the area chosen for mining for the five years of scheme of mining.
4b	Location of topsoil, OB and mineral reject dumps	Not Proposed	na	
4c	Number of dumps within lease area and outside of lease area	Not Proposed	na	
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	Not Proposed	na	
4e	Number of active and alive dumps.	Not Proposed	na	
4f	Number of dead dumps.	Not Proposed	na	
4g	Number of dumps established.	Not Proposed	na	
4h	Whether Retaining wall or garland drain all along dumps are there.	Not Proposed	na	
4i	Length of Retaining wall or garland drain all along dumps	Not Proposed	na	
4j	Number of settling ponds	Not Proposed	na	
4k	Specific comments of inspecting officer on waste dump management			Limestone is exposed in throughout the lease area and no waste rock overburden or side burden or top soil is present in the area chosen for mining for the five years of scheme of mining.

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Solid Waste Management - Backfilling:

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Sl.No.	Item	Propasals	Actual work	Remarks
5a	Status of part or full extraction of mineral from mined out area before starting backfilling.	Not proposed	Topsoil handled during mining is simultaneously used for plantation. Mineral is continue at the bottom most part so backfilling will be done after exhausting the mineral.	
5b	Area under backfilling of mined out area	Not Proposed	na	
5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	Not Proposed	na	
5d	Total area fully reclaimed and rehabilitated	Not Proposed	na	
5e	General remarks of inspecting officers on backfilling and reclamation etc.		Topsoil handled during mining is simultaneously used for plantation. Mineral is continue at the bottom most part so backfilling will be done after exhausting the mineral.	

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).	Annual report on PMCP submitted on time	Not submitted	Violation of rule 26(2) has been pointed out.

Mineral Conservation:

Sl.No.	Item	Propasals	Actual work	Remarks
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7a	ROM Mineral dispatch or grade-wise sorting within lease area	Zero waste mining is proposed in the approved scheme of mining for these 5 years started 2015-2016	Zero waste mining is done in view of mineral conservation	Marginal grade of limestone is used by blending with sweetener grade limestone purchased and screen arrangement in the crusher so that all the mineral is being consumed by captive cement plant
7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	Not Proposed	na	
7c	Different grade of mineral sorted out at mines.	Not Proposed	na	
7d	Any beneficiation process at mines	Not Proposed	na	
7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues		Total mineral excavated is used by captive cement plant	

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Environment :

Sl.No.	Item	Propasals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	The soil over the deposit is found in patches. The average soil cover over the limestone is 0.05 m. Only 1706 cum of soil to be generated in this planning year 2015-16 of scheme of mining.	No top soil generated.	

8b	Concurrent use or storage of topsoil	Soil was proposed to be temporarily stacked at earmarked site in Northern side of area considered for mining but will generally be used immediately for plantation.	Stacking of soil is not required. Used for plantation.
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	It has been proposed in scheme that the waste generated during mining will be used in making bundh around the pit.	Bundh is made all around the pit from the waste handled during working till date
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	There is a little generation of waste (5%) which will not be filled in the worked out pits as the mineral is continuing in depth.	Mined out land is to be used as water reservoir
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	Fencing around the pit and plantation.	Fencing is being done and plantation is being done on yearly basis.
8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	About 5.0 hectare area will be covered by plantation during the first 5 years planning	11140 trees have been planted on 11.73 hectare.
8g	Survival rate	80 %	80 %

8h	Water sprinkling on roads to control airborne dust	Regularly during transportation of limestone.	Regular water spraying is being done.
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area		aesthetic beauty in and around mines are are good.

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Compliance of Rule 45:

Sl.No.	Item	Propasals	Actual work	Remarks
9a	Status of submission of Monthly and Annual returns	M.R. Submitted upto - Jan'2017 A.R. submitted upto- Year 2015-16	Its found OK	
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Given	Its found OK	
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Given	Given	
9d	Scrutiny of Annual return on afforestation	Given	Given	
9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	Given	Given	
9f	Scrutiny of Annual return on ROM stock and/or graded ore	Given	Given	
9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	Given	Given	

9h	Scrutiny of Annual return on fixed assets	Given	Given
9k	Scrutiny of Annual return on mining machineries	Given	Given

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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

**Date :**

**(K. K. TARDIA)**

Indian Bureau of Mines