

## MCDR INSPECTION REPORT

### General

S.N.	Particulars	Details
1	Name of the Mine Date of Inspection: Name of Inspecting Officer	Arasmeta Limestone Mine (Lease 1&2) 30/11/2018 Shri B. L. Gujar (RCOM)
2	Total Lease Area (Ha) with breakup of Non-forest and forest land	Private land: 364.917 hectare, Govt land: 135.04 Hectare Forest Land: 0.00 Hect
3	Mine code	38MPR28010
4	IBM Registration Number under rule 45 of MCDR,1988	IBM/378/2011
5	Name of the Lease, Address, Phone, email and fax number	M/s Nuvoco vistas corporation limited (formerly Lafarge India Limited) Equinox Business Park Tower 3, East Wing 4th Floor, off Bandra -Kurla Complex, LBX road, Kurla West Mumbai-400070, India. Tel: 022-66306511, Fax: 02266306510 Website-www.nuvoco.in
6	Village	Arasmeta
7	Taluka/Mandal	Akaltra
8	District	Janjgir Champa
9	Pin code	495663
10	State	Chhattisgarh
11	Post Office	Gopalnagar
12	Nearest Police Station	Mulmula
13	Nearest Railway Station	Akaltra
14	Date of Grant of Mining Lease	24/05/1979
15	Date of Execution	31/05/1979
16	Date of opening of Mine	17/09/1979
17	Date of First Renewal, if applicable and its period & expiry	15/01/2001 from 31/05/1999 for the period of twenty year
18	Date of Second Renewal, if applicable and its period & expiry	13.04.2017 from 31.05.2019 to 31/03/2030
19	Date of submission of renewal application if Mining Operations are continuing under deemed extension	NA
20	Name of the Nominated Owner with Address, phone, email, fax number	Nominated owner: Mr. Jayakumar Krishnaswamy M/s Nuvoco vistas Corporation limited (Formerly

	and date of appointment	Lafarge India Limited) Equinox Business Park Tower 3, East Wing 4th Floor, off Bandra -Kurla Complex, LBX road, Kurla West Mumbai-400070, India. phone no 022-66306511, email-jayakumar.krishnaswamy@nuvoco.in Date of appointment-01/11/2018
21	Name of the Mine Agent with Address, phone, email, fax number and date of appointment	Mr. Sanjay Tyagi, Agent & Plant Head Arasmeta Cement Plant M/s Nuvoco vistas corporation limited (formerly Lafarge India Limited), P.O-Gopalnagar, Tehsil- Akaltra, District- Janjgir Champa, Chhattisgarh, Phone no- 07817-233234, Fax No -07817-234237,234286 Mail ID: sanjay.tyagi@ nuvoco.in Date of appointment- 01/08/2017
22	Name of the Mine Manager with Address, phone, email, fax number and date of appointment in mines	Mr. Ritesh Kaimal, Arasmeta Cement Plant M/s Nuvoco vistas corporation limited (formerly Lafarge India Limited), P.O-Gopalnagar, Tehsil- Akaltra, District- Janjgir Champa, Chhattisgarh, Phone no- 9893019619 Fax No -07817-234237,234286 Mail ID- ritesh.kaimal@ nuvoco.in Date of appointment-16/05/2016
23	Name of the Mining Engineer, Qualification and total experience with address, phone, email, fax number and date of appointment in the mine	Mr. Rajesh Kumar Rathore, Arasmeta Cement Plant of M/s Nuvoco vistas corporation limited (formerly Lafarge India Limited), P.O-Gopalnagar, Tehsil- Akaltra, District- Janjgir Champa, Chhattisgarh, Phone no- 7389949550 Fax No -07817-234237,234286 Mail ID- <a href="mailto:rajeshkumar.rathore@nuvoco.in">rajeshkumar.rathore@nuvoco.in</a> Date of appointment-16/05/2016
24	Whether Geologist and Mining Engineer appointment in mines satisfy the rule 55 & carrying out their duties as per rule 56 & 57.	Mr. Ajay Pratap Singh, Arasmeta Cement Plant of M/s Nuvoco vistas corporation limited (formerly Lafarge India Limited), P.O-Gopalnagar, Tehsil- Akaltra, District- Janjgir Champa, Chhattisgarh, Phone no 7898900524 Mail ID- <a href="mailto:ajay01.singh@nuvoco.in">ajay01.singh@nuvoco.in</a> , Date of appointment- 02/01/2012
25	Date of Approval of Mine Plan/Modified Mine Plan with five-year period and specific condition in approval letter, if any.	Bilas/Chup/Khayo-80/Nag/2015/22, Raipur dated19/08/2016
26	Date of Approval of Scheme of Mining/Modified Scheme of Mining with five- year period and specific condition in approval letter, if any.	NA

27	Mineral(s) granted in lease and approved for Mining	Limestone
28	Method of Mining (Opencast, Underground)	Opencast
29	Category (Fully Mechanised, Others or Manual)	Fully mechanised
30	Captive/Non-Captive	Captive mine
31	Environmental Clearance	2.7 Million tonnes, Dated 18/07/2005

### Exploration

S.N.	Item	Proposals (2017-18)	Actual Work (2017-18)	Remarks
1a	Backlog of previous year	Nil	Nil	Area under G1- 360.35 hectare, (area under G3- 36.82Hectare and area under G4- 100.81 Hectare)
1b	Exploration over lease area for Geological axis 1 or 2.	No proposal	N/A	
1c	Exploration Agency & Expenditure in Lakh Rupees during the year	N/A	N/A	
1d	Balance area to be explored to bring Geological axis in 1 or 2.	360.35 hectare under G1 other balance 36.82 G3 category and 100.81 G4 non-mineralized area)		
1e	Balance reserves as on 01.04.2018	Category 111- 19.70 million tonnes and category 211- 11.2 million tonnes, Category 311 -1.18 million tonnes and in category 333-9.98 million tonnes		
1f	General remarks of Inspecting officer on geology, exploration etc.	The Limestone deposit of Arasmeta mines belongs to Chandi Limestone Formation of Raipur group of Chhattisgarh supergroup. The Limestone strata have a general strike of E-W with a gentle dip of 2° to 4° due NW. Generally grey limestone is found on the northern part of the area followed by purple grey limestone and purple shale successively towards south similarly the same sequence has been confirmed from the borehole drilled during the exploration. direction of dip. The deposit is structurally undisturbed since basin deposition. The limestone formation within the leasehold area represents an irregular sequence of calcareous and argillaceous sediments manifesting as dolomitic limestone, shaley limestone and limestone.		

### Development

S.N.	Item	Proposals (2017-18)	Actual Work (2017-18)	Remarks
2a	Location of Development w.r.t. lease area	SOIL 1-E637778 to E637925 and N2428776 to N2428443 2-E638174 to E638557 to N2429635 to N2429500	Within proposed area	

		B- LIMESTONE Total production proposed between E636750 to E 639901 and N 2929600 to N242900 and details point wise given in below 1-E637322 to E637570 and N2428971 to N2428800 2-E637019 To E637372 and N 2428477 to N 2428281 3-E 637293 to E E637683 and N 2428368 to N 2428701 4-E637768 to E637920 and N2428782 and 2428447 5-E638173 to E638913 to N2429637 to N2429382 6-E638892 to E638985 and N2429287 to N2429336 7-E63944 to E639643 and N2428468 to N2428574		
2b	Separate benches in topsoil overburden and mineral (Rule 15)	One bench soil and four limestone benches	One soil bench and four limestone	
2c	Stripping ratio or ore to OB ratio	1:0.38	1:0.15	
2d	Quantity of topsoil generation in m <sup>3</sup>	244956	64364.18	
2e	Quantity of overburden generation in m <sup>3</sup>	699590 MT	306599 Mt (soil 96546 and rock OB-210053)	
2f	General remarks of Inspecting officer on development of pit w.r.t type of deposit etc.	Development is in order.		

### Exploitation

S.N .	Item	Proposals (2017-18)	Actual Work (2017-18)	Remarks
3a	Number of pits proposed for production	Three	Three	Pit no 1, Pit no 1 ext and pit no2
3b	Quantity of ROM mineral production proposed (2017-18)	2011985 MT	2011532	
3c	Recovery of Salable/usable mineral from ROM production	83%	84.50	
3d	Quantity of mineral reject generation	332156MT	210053 MT	
3e	Grade of mineral reject generation and threshold value declared	CaO< 34% MgO> 4%	CaO< 34% MgO>4%	
3f	Quantity of sub-grade mineral generation	332156	210053 MT	

3g	Grade of sub-grade mineral generation	CaO between 39-34% and MgO more than 4%	CaO between 38-34% and Mgo more than 4%	
3h	Manual/Mechanized method adopted for segregation from ROM	Mechanized sorting of limestone from shale and soil by machine	Mechanized sorting of limestone from shale and soil by machine	
3i	Any analysis or beneficiation study proposed & carried out for sub-grade mineral and reject	By blending	By blending	
3j	Provision of drilling & blasting in mineral benches	yes	As per mining plan	
3k	Provision of mining machineries in mineral benches	Yes, HEMM	As per proposal	
3l	Whether height of benches in overburden & mineral suitable for method of mining proposed in MP/SOM	Yes- for soil 5 meter average ( RL 242 and above) and for mineral 24 meter (RL242 to 218)	As per proposal	
3m	Total area covered under excavation /pits	176.63 hectare	176.63Hectare	
3n	Ore to OB ratio for the pit/mine during the year	1:0.38	1:0.15	
3o	Total area put in use under different heads at the end of year	6.5 hectare	6.2 hectare	
3p	Production of Limestone ineral during last five-years period, as Applicable (in tons)	2013-14	2174995	1666149
		2014-15	2182850	1887597
		2015-16	2209080	1691857
		2016-17	2043985	1813006
		2017-18	2011985	2011532
3q	General remarks of inspecting officer on method of mining etc	Method of mining is Open cast mechanized mining with shovel dumper combination		

### **Solid Waste Management-Dumping**

S.N.	Item	Proposals (2017-18)	Actual Work (2017-18)	Remarks
4a	Separate dumping of topsoil, OB & mineral reject (Rule 32,33)	Yes	As per proposal	
4b	Location of topsoil, OB & mineral reject dumps	E637800 to E638800 and N242900 to 2429200	As per proposal	
4c	Number of Dumps within lease area and outside lease area	Within lease area 4	Within lease area 4	Nos proposal of dump
4d	Location of Dumps w.r.t.	No proposal of dump,	As per	

	ultimate pit limit (Rule 16)	dumping in backfilled area	proposal	location of old and dead dump-
4e	Number of Active & Alive dumps	0	0	E638480 to
4f	Number of deed dumps	4	4	E638851 to
4g	Number of dumps established	4	4	N2429780 to N2429524 E638220 to E688480 and N2429643 to N2429520 E638049 to E637790 and N2429629 to N2429405 E639401 to E639636 and N2429299 to N2429421
4h	Whether Retaining wall or garland drain all along dumps are there	Yes	yes	
4i	Length of Retaining wall or garland drain all along dump	3.5	3.5	
4j	Number of settling ponds	4	4	
4k	Specific commends of inspecting officer on waste dump management	Waste is being dump at designated place as per approved documents.		

**Solid Waste Management-Backfilling**

S.N.	Item	Proposals (2017-18)	Actual Work (2017-18)	Remarks
5a	Status on part or full extraction of mineral from mined out area before starting backfilling	In pit no1 and pit no 2-area marked in second year development plan	As per proposal	
5b	Area under backfilling of mined out area	Additional 1.27hect, and proposed to increase further height of existing backfilling area (FY2017-18)	Additional area 0.4 hectare increase further height of backfilling area as per proposal	
5c	Concurrent use of topsoil for restoration or rehabilitation of mined out area (Rule 32)	plantation	plantation	
5d	Total area fully reclaimed & rehabilitated	37.76	37.76	
5e	General remarks of inspecting officer on backfilling, reclamation etc	Simultaneous back filling is carried out in the worked-out area. Plantation is being done.		

### Progressive Mine Closer Plan

S. N.	Item	Proposals (2017-18)	Actual Work (2017-18)	Remarks
6a	Whether Annual report on PMCP submitted on time and correctly-Rule 26 (2) of MCDR 2017. Details should be given in the format as given in Annexure-20	Yes	yes	
6b	Management of worked/mined out benches	yes	Rehabilitated area 37.76 hectare, 8056 saplings during year2017-18, cumulative nos of plants -614525 nos and survived - 430973 nos	
	Area available for rehabilitation (Ha)			
	Afforestation done (ha)			
	No. of saplings planted during the year			
	Cumulative no. of plants			
	Any other specific method of rehabilitation			
	Cost incurred on watch & care during the year			
6c	Compliance on reclamation and rehabilitation by backfilling i) Voids available for backfilling (L*B*D) ii) Void filled by waste/tailings iii) Afforestation on the backfilling iv) Rehabilitation by making water reservoir v) Any other specific means	yes	37.76 ha area back filled	
6d	Compliance of Rehabilitation of waste land within lease i) Afforestation ii) Area rehabilitation iii) Method of rehabilitation	By backfilling and plantation	By backfilling and plantation	
6e	Compliance of Environment monitoring (core zone & buffer zone)	Air wet Drilling, water check Dams, Noice control Blasting, In house environment monitoring cell	Air within Permissible limit, Water - within Permissible limit, Noise- within Permissible limit	
6f	General remarks of inspecting officer on PMCP compliance & progressive closer operations	PMCP proposal are implemented		

### Mineral Conservation

S.N.	Item	Proposals (2017-18)	Actual Work (2017-18)	Remarks
7a	ROM mineral dispatch or grade wise sorting within lease area	Different faces for blending purpose	Grade wise production-cement grade 1206919 MT Blendable grade-603460MT, sub grade-201153 MT	
7b	Method of grade-wise mineral sorting, i.e. manual or mechanical	Mechanical	Mechanical	
7c	Different grade of mineral sort out at mine	Above 34% CaO grade Limestone	Above 34% CaO grade Limestone and blended with high grade.	
7d	Any beneficiation process at mines	By blending	By blending	
7e	General remarks of inspecting officer on Mineral conservation & beneficiation issues	Excavators are deployed in two or three faces for blending of sub grade		

### Environment

S.N.	Item	Proposals (2017-18)	Actual Work (2017-18)	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	Yes	yes	
8b	Concurrent use or storage of topsoil	Use for Plantation	Use for Plantation	
8c	Separate dumps for overburden waste rock, rejects and fines (Rule 33)	Proposal has been given for separate dumps for overburden, waste and rejects.	Dumping has been carried out as per proposal.	
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	N/A	N/A	
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	yes	Rehabilitated area 37.76 hectare, 8056 saplings during year 2017-18, cumulative nos of plants -	



			614525 nos and survived -430973 nos	
8f	Baseline information on existence of plantation & additional plantation done (Rule 44 of MCDR 2017)	5000 Plantation	8056 Plantation	
8g	Survival rate	70%	80%	
8h	Water sprinkling on roads to control airborne dust	Yes	By water tanker	
8i	General remarks of inspecting officer on aesthetic beauty in and around mine area	EMP parameters are regularly being monitored. Well developed thick plantation within and outside the lease area. Due to plantation around the mining area aesthetic beauty increased.		

### Compliance of Rule 45

S. N.	Item	Comments		Remarks
9a	Status of submission of monthly and Annual returns	M.R. Submitted upto– Nov-2018		
		A.R. submitted upto- 2017-18		
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Yes		
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Area Under current Pit: 176.630ha Use for waste disposal:27.50ha Reclaimed/Rehabilitated: 37.760 Occupied by plant, building residential, welfare building & roads:13.500ha Other purpose: 48.60ha		
9d	Scrutiny of Annual return on afforestation	Within Lease area: 8056nos, Survival Rate: 80% Outside Lease area: 7500nos Survival Rate: 70%		
9e	Scrutiny of Annual return on mineral reject generation (Grade & Quantity)	Mineral Reject generation:210053t Grade: less than 34%		
9f	Scrutiny of Annual return on ROM stock and/or grade ore	Opening Stock: Nil ROM Production: 2011532.00tones Closing Stock: Nil		
9g	Scrutiny of Annual return on sale value, Ex. Mine price & production costs	Cost of Production: Rs: 266.42 Ex-Mine Price: 226.42 Captive Purpose only		Violation Pointed out
9i	Scrutiny of Annual return on Fixed assets	Fixed Assets: Rs 540587993		Mentioned in Annual Return
9k	Scrutiny of Annual return on mining Machineries	Type of Machinery	Nos. of Unit	Capacity
		Shovel (Hydraulic)	3	4.000CUM
		Back Hoe	2	0.900CUM

Scrutiny of Annual return on mining Machineries	Dumper	9	31.750t
	Water Tanker	1	20000 Lt
	Rock Drill	3	115.00MM
	Dozer	2222	360.00Hp
	Explosive Van	1	9500t
	Explosive Van	1	3000t

10. Details of Violations observed during current inspection

नियम	उल्लंघन के प्रकार का ब्यौरा
45(7)	On scrutiny of annual and monthly return of mine it is noticed that cost of production per tones of limestone Rs 266.42 is higher than Ex mine price (Rs 226.42) of mineral. In case of captive mine Ex mine price is considered equal to cost of Production. Needs to be rectified.

Last Inspection Details: Shri R. K. Das (Sr ACOM) Inspection held on dated 10/05/2018. No Serious Violation observed during last inspections.

Date: 10/12/2018

Name: Shri B. L. Gujar

Designation: Regional controller of Mines,  
Indian Bureau of Mines, Raipur.