

MCDR INSPECTION REPORT

File No: CHG/RAP/LST-40/RPR VOL-II

General

S.N.	Particulars	Details
1	Name of the Mine Date of Inspection: Name of Inspecting Officer Accompany with Mine Officials	Sonadih Limestone Mine 10/11/2020 Rudra N. Mishra (Senior Mining Geologist) Shri Ashok Kumar Singh GM, Mines.
2	Last Date of Inspection	03/12/2019
3	Total Lease Area (Ha) with breakup of Non-forest and forest land	Forest land : NIL Non forest Land : 444.763 ha Total lease area: 444.763 Ha
4	Mine code	38MPR28010
5	IBM Registration Number under rule 45 of MCDR,1988	IBM/378/2011
6	Name of the Lease, Address, Phone, email and fax number	Sonadih Cement Plant Nuvoco Vistas Corp. Limited PO-Raseda, Tehsil-Balodabazar District-Balodabazar-Bhatapara State-Chhattisgarh, Pin code- 493332 Phone- 07727-72226 Fax-07727-72227 Email-ramesh.warke@nuvoco.in
7	Village	Sonadih
8	Taluka/Mandal	Balodabazar
9	District	Balodabazar- Bhatapara
10	Pin code	Raseda & 493332
11	State	Chhattisgarh
12	Post Office	Balodabazar
13	Nearest Police Station	Balodabazar
14	Nearest Railway Station	Bhatapara
15	Date of Grant of Mining Lease	20 Dec 1985
16	Date of Execution	15 Jan 1986
17	Date of opening of Mine	12 Dec 1989
18	Date of First Renewal, if applicable and its period & expiry	23 June 2010 For the period 15.01.2006 to 14.01.2026 (20 years)
19	Date of Second Renewal, if applicable and its period & expiry	17 April 2017 For the period 15.01.2026 to 14.01.2036 (10 years)
20	Date of submission of renewal application if Mining Operations are continuing under deemed extension	Initially Mining lease has been granted to M/S Tata Iron & Steel Co Limited dated 15/01/1986. Later on, Mining Lease has been transferred from M/s Tata Iron & Steel Co Ltd to M/S Lafarge India Limited on 23/09/1999 (Form-O). After that Addendum to mining lease from M/S

		Lafarge India Limited to M/S Nuvoco Vistas crop Ltd has been made on 7/11/2017.
21	Name of the Nominated Owner with Address, phone, email, fax number and date of appointment	Shri Jayakumar Krishnaswamy, Managing Director Date of appointment: 01.11.2018 Address: Equinox Business Park (Peninsula Techno Park), Tower 3, East Wing, 4th Floor, Off Bandra-Kurla Complex, LBS Marg, Kurla-West, Mumbai, Maharashtra-400070. Email: jayakumar.krishnaswamy@nuvoco.in Phone: +91 (0) 22 61202628
22	Name of the Mine Agent with Address, phone, email, fax number and date of appointment	Mr Ramesh Warke (Sr. Vice President) Date of appointment: 01.01.2018 Address: Sonadih Limestone Mines PO-Raseda Distt: Balodabazar-Bhatapra Chhattisgarh-493332. Email: ramesh.warke@nuvoco.in Phone: +91-7727272226
23	Name of the Mine Manager with Address, phone, email, fax number and date of appointment in mines	Shri Ashok Kumar Singh, GM Mines Date of appointment: 22.07.2019 Work Experience :25+ years Address: Sonadih Limestone Mines, PO-Raseda, Distt: Balodabazar-Bhatapra, Chhattisgarh-493332 Phone: +91-9893497184 Email: ashokkumar.singh@nuvoco.in
24	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 Sr. Manager Qualification: M. Tech Mining Date of appointment: 01.06.2020 Work Experience :10+ years Address: Sonadih Limestone Mines PO-Raseda, Distt: Balodabazar-Bhatapra, Chhattisgarh-493332 Phone: +91-7389949550
25	Whether Geologist and Mining Engineer appointment in mines satisfy the rule 55 & carrying out their duties as per rule 56 & 57.	Mr Rajesh Singh (DGM) Qualification: M. Tech (Applied Geology) Date of appointment: 01.09.2017 Work Experience: 20+ Years Address: Sonadih Limestone Mine PO-Raseda, Distt: Balodabazar-Bhatapra, Chhattisgarh-493332 Phone: +91-9163323296
26	Date of Approval of Mine Plan/Modified Mine Plan with five- year period and specific condition in approval letter, if any.	Modified Mining Plan approval letter no: BBZ/Lst/MPLN-1130/2017-Raipur. Dated: 05.01.2018 For the period up to 31-March-2021
27	Date of Approval of Scheme of Mining/Modified Scheme of Mining with five- year period and specific condition in approval letter, if any.	Approved Mining scheme: For the period 1-Dec''2017 to 31-March-2021 Date of Approval: 05.01.2018
28	Mineral(s) granted in lease and approved for Mining	Limestone

29	Method of Mining (Opencast, Underground)	Opencast
30	Category (Fully Mechanized, Others or Manual)	Fully mechanised
31	Captive/Non-Captive	Captive mine
32	Environmental Clearance	5.5 Million tonnes

Exploration

S.N.	Item	Proposals (2019-20)	Actual Work (2019-20)	Remarks
1a	Backlog of previous year	NA	NA	Entire lease area converted in G1 Category
1b	Exploration over lease area for Geological axis 1 or 2.	NA	NA	
1c	Exploration Agency & Expenditure in Lakh Rupees during the year	NA	NA	
1d	Balance area to be explored to bring Geological axis in 1 or 2.	58.3 Ha.	58.3 Ha.	
1e	Balance reserves as on 01.04.2020	Under 111 Category: 22.35 Million Tonnes		
1f	General remarks of Inspecting officer on geology, exploration etc.	The Limestone deposit of Sonadih mines belongs to Chandi Limestone Formation of Raipur group of Chhattisgarh supergroup. The Limestone strata have a general strike of NE-SW with a gentle dip of 5° to 6° 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. At the north-west part of the area dolomites occurs in several distinct patches. These appear to be the part of major dolomitic body occurring at the sonadih village and its surrounding N-W position of the lease. Thickness of limestone increases from SE towards NW direction in the direction of dip. The deposit is structurally undisturbed since basin deposition. The limestone of the area is fine grained, massive hard and compact in nature. Entire lease area converted in G1 Category		

Development

S.N.	Item	Proposals (2019-20)	Actual Work (2019-20)	Remarks
2a	Location of Development w.r.t. lease area	Western Part	Western part	As per the plan
2b	Separate benches in topsoil overburden and mineral (Rule 15)	Yes	Yes	
2c	Stripping ratio or ore to OB ratio	1:0.013	1:0.026	
2d	Quantity of topsoil generation in m ³	Nil	Nil	

2e	Quantity of overburden generation in m ³	51000	74233	
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 (2019-20)	Actual Work (2019-20)	Remarks
3a	Number of pits proposed for production	1	1	
3b	Quantity of Limestone mineral production proposed (2019-20)	5.5 Million tonnes	3.96 Million tonnes	
3c	Recovery of Salable/usable mineral from ROM production	100%	100%	
3d	Quantity of mineral reject generation	Dolomite and High MgO Limestone 236400 Tonnes	Dolomite & High MgO Limestone 48660 Tonnes	
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	Not Proposed in approved document	NIL	
3g	Grade of sub-grade mineral generation	NA	NA	
3h	Manual/Mechanized method adopted for segregation from ROM	Single stage Crusher	Single stage Crusher	
3i	Any analysis or beneficiation study proposed & carried out for sub-grade mineral and reject	NA	NA	
3j	Provision of drilling & blasting in mineral benches	Yes Spacing x Burden 4.5(m) x 3.5(m) Blasting – Non-Electrical Sequential firing with SME	Yes Spacing x Burden 4.5(m) x 3.5(m) Blasting – Non-Electrical Sequential firing with SME	
3k	Provision of mining machineries in mineral benches	Shovel – 4 Nos. Dumper- 12 Nos.	Shovel – 4 Nos. Dumper- 12 Nos.	
3l	Whether height of benches in overburden & mineral suitable for method of mining proposed in MP/SOM	Yes, Ore benches Proposed – 8-10 M	Yes, Ore benches Proposed – 8-10 M	
3m	Total area covered under excavation /pits	166.66 ha at the end of the Review of Mining Plan	126.716 Hect	
3n	Ore to OB ratio for the pit/mine during the year	1:0.013	1:0.026	
3o	Total area put in use under different heads at the end of year	349.897 Ha (Upto 31.03.2021)	309.493 Ha (Upto 31.03.2020)	
3p	Production of Limestone mineral	2015-16	5500000	3973931

	during last five-years period, as Applicable (in tons)	2016-17	5500000	3416172
		2017-18	4200000	3793870
		2018-19	5500000	4302100
		2019-20	5500000	3960813
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 (2019-20)	Actual Work (2019-20)	Remarks
4a	Separate dumping of topsoil, OB & mineral reject (Rule 32,33)	Within the lease area	OB Dump: E 624700-624500 N 2406350 – 2406100 Waste Dump: E 624520-624679 N 2406121- 2406331	
4b	Location of topsoil, OB & mineral reject dumps	NW	NW	
4c	Number of Dumps within lease area and outside lease area	Inside – 2 Outside - 0	Inside – 2 Outside - 0	
4d	Location of Dumps w.r.t. ultimate pit limit (Rule 16)	Proposed outside ultimate pit limit	OB Dump: E 624700-624500 N 2406350 – 2406100 Waste Dump: E 624520-624679 N 2406121- 2406331	
4e	Number of Active & Alive dumps	OB - 1 Sub Grade - 1	OB - 1 Sub Grade - 1	
4f	Number of deed dumps	0	0	
4g	Number of dumps established	Dumps have not been matured for stabilisation	Dumps have not been matured for stabilisation	
4h	Whether Retaining wall or garland drain all along dumps are there	Not Proposed in approved document	NA	
4i	Length of Retaining wall or garland drain all along dump	Not Proposed in approved document	NA	
4j	Number of settling ponds	NA	NA	
4k	Specific commends of inspecting officer on waste dump management	Waste is being dump at designated place as per approved documents. Additional retaining wall provided along river side of 4.1 km length.		

Solid Waste Management-Backfilling

S.N.	Item	Proposals (2019-20)	Actual Work (2019-20)	Remarks
5a	Status on part or full extraction of mineral from mined out area before starting backfilling	Not Proposed in approved document	Area not matured for backfilling	
5b	Area under backfilling of mined out area	At location E 624810-624878 N 2405013-2405127	0.5 Ha	
5c	Concurrent use of topsoil for restoration or rehabilitation of mined out area (Rule 32)	No Top soil within existing quarry	NA	
5d	Total area fully reclaimed & rehabilitated	Not Proposed in approved document	12.300 Hec. (Protective Bund Along the River)	
5e	General remarks of inspecting officer on backfilling, reclamation etc	Area not matured for backfilling and reclamation & rehabilitation. 12.300 Hec. (Protective Bund Along the River)		

Progressive Mine Closer Plan

S. N.	Item	Proposals (2019-20)	Actual Work (2019-20)	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 Plantation - 3000,	yes, Plantation -3000, outside lease: 2000	
6b	Management of worked/mined out benches	NIL 81.67ha 3000 nos of saplings	NIL 86.1ha 3000 nos of saplings 364655nos	
	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	Not given in approved document	Rs 6.25 lakhs		

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	i) 200x300x16 ii) 150x150x4 iii) 86.1 Ha iv) NA	i) NA ii) 200x150x16 iii) 88.1 Ha iv) NA	
6d	Compliance of Rehabilitation of waste land within lease i) Afforestation ii) Area rehabilitation iii) Method of rehabilitation	Not Proposed in approved document	NA	
6e	Compliance of Environment monitoring (core zone & buffer zone)	Air wet Drilling, water check Dams, Noise 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 (2019-20)	Actual Work (2019-20)	Remarks
7a	ROM mineral dispatch or grade wise sorting within lease area	Single stage crushing	Single stage crushing	
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	
7d	Any beneficiation process at mines	Not Proposed in approved document	NA	
7e	General remarks of inspecting officer on Mineral conservation & beneficiation issues	Single Stage of Crushing and grade sorting by mechanical. The top bench material is mixed with clay is separated at the face itself. Machines(excavator) deployed in two or three faces for blending of sub grade		

Environment

S.N.	Item	Proposals (2019-20)	Actual Work (2019-20)	Remarks
8a	Separate removal and utilization of topsoil (Rule32)	Yes Plan –51000 m ³ (Top Soil + OB)	Yes Actual – 74233m ³ (Top Soil + OB)	
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 dump for restoring the land to its original use	Not Proposed in approved document	NA	
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	Not Proposed in approved document	NA	
8f	Baseline information on existence of plantation & additional plantation done (Rule 44 of MCDR 2017)	Plantation within lease area: 3000 nos	Within Lease area: 3000 nos Outside Lease area: 2000nos	
8g	Survival rate	75%	78%	
8h	Water sprinkling on roads to control airborne dust	Proposed	Centralised water sprinkling system on haul road and crusher	
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 -2020	
		A.R. submitted upto- 2019-20	
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 Pit: 126.716 ha Reclaimed area: 12.300 ha Use for waste disposal:6.627ha Occupied by plant, building residential, welfare building & roads:61.450ha Other purpose: 84.10ha	

9d	Scrutiny of Annual return on afforestation	Within Lease area: 3000 nos Outside Lease area: 2000nos Survival Rate: 78%		
9e	Scrutiny of Annual return on mineral reject generation (Grade & Quantity)	Mineral Reject generation:0.00 t Grade: less than 34%		
9f	Scrutiny of Annual return on ROM stock and/or grade ore	Opening Stock: Nil Limestone Production: 3960813.00 tones Closing Stock: Nil		
9g	Scrutiny of Annual return on sale value, Ex. Mine price & production costs	Cost of Production: Rs: 245.88 Captive Purpose only		
9i	Scrutiny of Annual return on Fixed assets	Fixed Assets: Rs 13781917159.00		Mentioned in Annual Return
9k	Scrutiny of Annual return on mining Machineries	Type of Machinery	Nos. of Unit	Capacity
Scrutiny of Annual return on mining Machineries		Shovel (Hydraulic)	3	5.100CUM
		Dumper	12	35.00t
		Blast Host Drill	2	112.00MM
		Dozer	1	450.00Hp
		Motor Grader	1	112.00Hp
		Pumps (Elect)	4	100.00L/MN
		Explosive Van	1	1.910t

10. Details of Violations observed during current inspection and compliance position of earlier violation pointed out: - No Serious Violation observed. Star rating of mines also evaluated.

Last Inspection Details: Shri S Kartikeya (Jr. Mining Geologist) on dated 03/12/2019.

Violations pointed out during last inspections have been complied.

Date: 14/12/2020

Name: Rudra Narayan Mishra

Designation: Senior Mining Geologist,

Indian Bureau of Mines, Raipur.