REPORT ON CHECK UP INSPECTION OF SONADIH LIMESTONE MINE OF NUVOCO VISTAS CORPORTATION LIMITED SITUATED IN VILLAGE - RASEDA,TEHSIL - BALODA BAZAR, DISTRICT- BALODA BAZAR - BHATAPARA,STATE – CHHATTISGARH

1	File No:	CG/BBR/LST/38CHG28010
2	Mine Code…	38MPR28010
3	Name & Designation of the Inspecting Officer:	Mr. B.L. GURJAR, RCOM
4	Date of inspection:	30-08-2019
5	Last inspection date	16/5/2019 by Shri R.K Das SrACOM

: **1. GENERAL INFORMATION ABOUT THE MINE**

I	Mine Name :	Sonadih Limestone Mines
Ii	Owner	Lessee- M/S Nuvoco Vistas Corporation Limited.
Iii	Nominated owner	Mr. Jayakumar Krishnaswamy, Managing Director, DOA- 1/11/2018
Iv	Mining Engineer	Mr. Ved Prakash Dewangan From 9/5/2016
V	Agent	Mr. Ramesh Warke, Sr Vice president from 1/1/2018
Vi	Mines Manager	Mr. Ashok Kumar Singh GM Mines- from - 22/7/2019
Vii	Lease Area	444.763 Ha
Viii	Location	Nuvoco Vistas Corp Ltd (Formerly Lafarge India Ltd) Sonadih Cement Plant Nuvoco Vistas Corp. Limited PO-Raseda, Tehsil-Balodabazar District-Balodabazar-Bhatapara State-Chhattisgarh, Pin code- 493332
Ix	Lease Period	50 years Executed 15/1/1986 for 20yearsto 14/1/2006 Renewal for 20 year upto 14/1/2026 Extended as per amended MMDR Act 2015 upto 14/1/2036 and supplementary lease deed executed on17/4/2017
X	Date of Expiry	14.01.2036
Xi	Date of Approval of mining Plan	Review of Mining Plan approved 0n 26/8/2016 for r the period 2016-17 to 2020-21
Xii	Date of Approval of Mining Review of Mining plan	Modified mining plan Approved - Balodabazar/chu.pa/kha yo-1130/2017-Raipur. Dated: 05.01.2018 For the period 1-Dec''2017 to 31-March-2021 Date of Approval : 05.01.2018
Xiii	Period of Mining plan	5 years

Xiv	Production (Last five years)(in MT)	Actual achieved
	Proposal as per Mining plan- Yr 2014-15: 52.00.000 tones Yr 2015-16: 55.00.000 tones Yr 2016-17: 55.00.000 tones Yr 2017-18: 42.00.000 tones Yr 2018-19: 52.00.000 tones Yr 2019-20: 55.00.000 tones	 -Yr 2014-15: 3414313 tones -Yr 2015-16: 3973931 tones -Yr 2016-17: 3416172 tones -Yr 2017-18: 3793870 tones -Yr 2018-19: 4302100 tones

2. a) Brief Description of the Mine

i)	Method of mining	Opencast Mechanized Mining with shovel and dumper combination. Initially development of area is being done by removing top soil to expose the limestone bed. Limestone extraction is done in benches. There are four production benches of 8 mts height are in operation. The bottom working is 210 mRL Run of Mine (ROM) is fed into stationary single impact crusher. Waste material generated during mining operation is dumped into earmarked location within the lease area. Bottom bench is also treated as sump in rainy season. Excess water is pumped out with the help of electrical driven dewatering pump.
ii)	Drilling & blasting	**Drilling** – Drilling is done by DTH drill machine of diameter 115 mm. Water injection system is installed in drill machine for dust suppression. Spacing x Burden = 4.5(m) x 3.5(m) 5-10% sub-drilling is done of bench height. **Blasting** – The Blast holes are charged with Site Mixed Emulsion with Cast booster and Non Electrical detonators are used in Down the Hole and for surface connector purpose. Initiation of Blast is done by electric detonator and firing is done from Blasting Shelter. The Blast induced Ground vibration is measured on regular basis by Seismograph. Cast Booster and Detonators are kept in the magazine and its transportation to the blast site is done in explosive van. SME trucks are called as and when required on day of blasting.
iii)	Excavation & Loading	Excavation for limestone is done with the help of 3 No. Bottom dump excavators of 80 ton class make of L&T Komatsu and excavated material is dumped into haulpak dumpers of 35 Ton capacity.
iv)	Transportation	The excavated limestone is transported with the help of haulpak dumper of 35 Ton capacity. Limestone is dumped into crusher for further resizing of limestone and subsequent stacking. Well maintained haul road is provided for limestone transportation

		with one way system. Continuous water spaying is done on haul roads to suppress the dust. For movement in dark hour street lights are provided in main haul road.
v)	Beneficiation	No beneficiation of limestone is carried out.

2. b) Description on deployment of mining machinery

Sl. No	Machinery	Capacity of Each Unit	No. of Unit	H.P. of Each Unit	Elect./Non-Elect.(Specify)	Used in O/C or U/G
1	SHOVEL(HYDRAULIC)	5.1 CUM	3	486 HP	Non Electrical	Opencast
2	DUMPER	35 TONNE	12	280 HP	Non Electrical	Opencast
3	BLAST HOLE DRILL	115 MM	2		Non Electrical	Opencast
4	DOZER		1	450 HP	Non Electrical	Opencast
5	MOTOR GRADER		1	112 HP	Non Electrical	Opencast
6	EXPLOSIVE VAN	1.91 TONNE	1		Non Electrical	Opencast
7	PUMPS (ELEC.)	105 L/MN	4	75 HP	Electrical	Opencast

SN	Proposal in the Approved MP/SOM	Observations regarding implementation of proposals given in Approved MP/SOM	Remarks
1. Conservation of Minerals			
a)	Exploration	44 no of exploratory holes were drilled during 2018-19	Complete lease area under G1
b)	Utilization of sub grade mineral.	Different benches are operated to blend 20 % of low grade limestone with high grade bench to achieve desired 100 LSF in clinker	none
c)	Any other proposal for monitoring	Optimization of top benches with lower benches.	-
2. Scientific Mining			
a)	Mine development & method of mining	Mine is well developed with four nos of benches. Beches hight is maintained 8- 9 mts with 15 to 20 mts width . Mechanized method of working for blending high grade and sub grade mineral using multiple excavators at different faces. During the year 2018-19 – proposal was for 55	-

		lakhs tones limestone with 72,800 tonnes OB removal. Actual production was 43.021 lakhs with removal of 164740 tonnes of OB removal and waste.	
b)	Handling of waste / sub grade material	164740 Tonnes per annum only waste handlded during 2018-19 against target of 237000 tonnes waste and overburden	-
c)	Area reclamation & restoration	0.25 ha backfilled and 12.3 ha waste dump reclaimed.	-
d)	Any other proposal for monitoring	Lube and diesel consumption monitoring, Mines Monitoring System, Cross belt analyzer for real time monitoring of limestone quality in stacking.	
3. Protection of Environment			
a)	Afforestation	3000 within lease area during 2018-19 2000 nos outside lease area during 2018-19 3000 within lease area during 2019-20 sofar 1000 nos outside lease area during 2019-20 sofar	-
b)	Quality of Air	Air quality is regularly monitored and corrective action is taken by water spraying on haul roads . July 2019 near mine office Ambient air Quality report reading are PM10-62 microgram/CUM Pm2.5- 20 SPM- 234 So2-10.89 NOx-12.04 Co-BDL	-
c)	Quality of Water	Mine water is not contaminated as no process is involved in mine. The mine pit water sample report 28/7/2019 are as under pH value-7.1 Suspended solid -8.4 Mg/L COD_ 54Mg/L BOD- BDL	-
d)	Noise Level	Noise are monitored	
e)	Vibration	Blast are monitored and blasting is being carried out by use of Nonel	
f)	Any other proposal for monitoring	Al along lease area green belt of afforestation is developed.	

3. History of violations after approval of SOM

SN	Date of Inspection	Name of Inspecting Officer	Violation of MCDR,1988 Observed & pointed out	Rectification of violation	Remarks
1	14.06.2019	R.K.Das SrACOM	Rule 37(1) & (2), 48	15.06.2019	Compliance of violation are found on ground during the inspection of

					mine.
	Benches in limestone and OB are developed separately and top soil and OB are stacked separately in two dumps. 44 nos of exploratory bore holes are drilled during the year 2018-19.				

4. Socio Economic Development Plan

SN	Proposed action plan towards socio economic development	Expenditure proposed (in Rs.)	Expenditure incurred (in Rs.)	Remarks
1.	**General development in the area**			
	i) Housing	-	-	
	ii)Water supply	3900000	3950000	To Sonadih village pond by lying water pipe line
	iii)Sanitation	150000	150000	
	iv)Health, Safety & medical facilities	150000	150000	
2.	Education & Training	4050000	4050000	
3.	Employment of local inhabitants	94500000	94500000	Present Average Local Deployment - 900 per day with average wage – 350 rs/day considering 25*12 = 300 working days per year
4.	Public Transportation & communication	3115000	3115000	
5.	Recreation & other sports activities	2088000	2088000	
6.	Expenditure for environment	5500000	5500000	Plantation (Rs. 10 L), Fencing in lease area for plantation (Rs. 5 L), Environment Monitoring(Rs. 10 L), Water Spraying (Rs. 30 L) etc.
7.	Others (religious activity)	-	-	
8.	Total	11,34,53,000	11,34,53,000	

5- Monthly and Annual return - From scrutiny of monthly returns of mines , it is observed that cost of production/Ex- mine price per tone is less than the cost of production/Ex- mine price reported in Annual return Rs 237.15/-. From analysis it is found that in monthly return"s cost of Production , depreciation Rs 33.84 and over head cost are not included resulting in lower reporting of cost of production.

6- STAR RATING-

Lessee submitted star rating of the year 2018-19 of mine online and self assessed five star rating. Same was validated during inspection and final validated score is four star .

7- Recommendation/Action-

1) Comment on earlier inspection- The earlier inspection report was scrutinized with field condition of mine and found broadly in order.
2) During this inspection following violation pointed out.

नियम	उल्लंघन के प्रकार का ब्यौरा
12	For conservation of limestone followings steps are suggested to be taken in mine- Washing of Limestone intermixed with clay- It is noticed that top bench having limestone intermixed with clay is excavated and material is dumped at earmarked location E624650 ,N-2406200. Since limestone from bottom most bench mRL 210 is being completely excavated and bottom is partly filled with water. It is suggested that top bench material with intermixed clay may be dumped on bottom most bench which is filled with water presently. Later on same material may be recovered by hydraulic Backhoe from water filled bench. In this way clayed material will get separated by water and only limestone boulder which are high in Cao may be recovered. Initially this may be tried for 5,000 to 10,000 quantity and if result are positive than practice may be followed for complete top bench where clay intermixed limestone material is existing.
45(5)(a)	From scrutiny of monthly returns of mines for the year 2019 , it is observed that cost of production/Ex- mine price per tone is less than the cost of production/Ex- mine price reported Rs 237.15/-. in Annual return of 2018-19 It is found that depreciation cost Rs 33.84 and over head cost are not included while reporting cost of production in monthly return.

Place : Raipur
Date :