

## MCDR INSPECTION REPORT

### 1.0 GENERAL

SN	Particulars	Details
1	Name of the Mine, Name of Inspecting officer with designation and date of inspection	<b>JK Lakshmi Cement Limestone Mine, Rajesh Kumar Das, Senior Assistant Controller of Mines, 16.01.2018</b>
2	Total Lease Area (Ha) with breakup of Non-forest and forest land	<b>267.695 hect. (All Non-forest)</b>
3	Mine Code	<b>38CHG05017</b>
4	IBM Registration Number under rule 45 of MCDR, 1988	<b>IBM/4816/2011</b>
5	Name of the lessee, Address, phone, email and fax number	<b>Name-JK Lakshmi Cement Ltd. Address-Nehru House ,4<sup>th</sup> floor - Bahadur Shah Zafar Marg, New Delhi-110002, Phone- 01123311113, Email- blbhati@durg.jkmail.com</b>
6	Village	<b>Semariya, Nandini-Khundini, Ghikuria.</b>
7	Taluka/Mandal	<b>Dhamdha</b>
8	District	<b>Durg</b>
9	Pincode	<b>490036</b>
10	State	<b>Chhattisgarh</b>
11	Post office	<b>Ahiwara</b>
12	Nearest police station	<b>Nandini Nagar</b>
13	Nearest Railway station	<b>Durg</b>
14	Date of Grant of Mining Lease	<b>17/11/93</b>
15	Date of Execution	<b>19/07/94</b>
16	Date of opening of Mine	<b>01/07/11</b>
17	Date of first Renewal, if applicable and its period & expiry	<b>Date of Renewal :- 04/03/2015, Period :- 19/07/2014 to 18/07/2044.</b>
18	Date of second Renewal, if applicable and its period & expiry	<b>Not Applicable</b>
19	Date of submission of renewal application if Mining Operations are continuing under deemed extension	<b>Not Applicable</b>

20	Name of the Nominated Owner with Address, phone, email, fax number and date of appointment	<p><b>Shri Sushil Kumar Wali</b>  <b>Address-Nehru House 4 , Bahadur Shah Zafar Marg, New Delhi-110002,</b>  <b>Phone- 01123311112,</b>  <b>Email- blbhati@durg.jkmail.com</b></p> <p>Date of Appointment :-06/11/2008</p>
21	Name of the Mine Agent with Address, phone, email, fax number and date of appointment	<p><b>Shri D K Mehta</b>  Address :- JK Lakshmi Cement Ltd.  Vill- Malpuri Khurd, Khasadih,  PO- Ahiwara, Dist- Durg.  Chhattisgarh-490036.</p> <p>Phone : 9752094049.  Email : blbhati@durg.jkmail.com</p> <p>Date of Appointment :-01/02/12</p>
22	Name of the Mines Manager with Address, phone, email, fax number and date of appointment in mines	<p>Shri B L Bhati  Address :- JK Lakshmi Cement Ltd.  Vill- Malpuri Khurd, Khasadih,  PO- Ahiwara, Dist- Durg.  Chhattisgarh-490036.</p> <p>Phone : 9752094049.  Email : blbhati@durg.jkmail.com</p> <p>Date of Appointment :- 15/06/2009</p>
23	Name of the Mining Engineer, Qualification and total experience with Address, phone, email, fax number and date of appointment in mine	<p>Shri B L Bhati  Address :- JK Lakshmi Cement Ltd.  Vill- Malpuri Khurd, Khasadih,  PO- Ahiwara, Dist- Durg.  Chhattisgarh-490036.</p> <p>Phone : 9752094049.  Email : blbhati@durg.jkmail.com</p> <p>Date of Appointment :- 15/06/2009</p>
24	Whether Geologist and Mining Engineer appointed in mines satisfy the rule 42 & carrying out their duties as per rule 43 & 44.	Shri Sanjay arora appointed as geologist and shri B L Bhati appointed as Mining Engineer under rule 42 Duties carried out as per rule 43,44.
25	Date of Approval of Mining Plan/Modified Mining Plan with five-	Date of Modified Mining Plan :- 21/07/2016

	year period and specific condition in approval letter, if any.	
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 proved for mining	Limestone
28	Method of Mining(Open cast, Underground)	Open cast
29	Category (Fully Mechanised, Others or Manual)	Mechanised
30	Captive/Non Captive	Captive

Scientific Mining: Compliance of proposals of approved mining plan/scheme of mining. –

#### Exploration

SN	Item	Proposals (2016-17)	Actual work	Remarks
1a	Backlog of previous year	13 Bore hole	20 bore holes drilled on 2017 - 2018	
1b	Exploration over lease area for Geological axis 1 or 2.	13 Holes for G1	20 Holes	787 Mtrs. Drilling completed against 650 mtr proposal. sampling & analysis is going on
1c	Exploration Agency & Expenditure in lakh Rupees during the year	Nil -	DSS Infra & Geotechno Services, Kolhapur (M.S.). 12.80 Lakh expenditure during current year 2017-18	
1d	Balance area to be explored to bring Geological axis in 1 or 2	Nil -	Nil	Total area covered under G1 category as per UNFC
1e	Balance reserves as on 01.01.2018	86.217 million	87.7053 Million tonnes.	Reason of less production: -

		tonnes		Limestone Production commensurate with Cement production as per Market condition.
1f	General remarks of inspecting officer on geology, exploration etc.	The lease area is almost covered under G1 area horizontally but depth wise area to be explored below 30 meter in some place to delineate ore body vertically.		

## 2.0 Development

SN	Item	Proposals (2016-17)	Actual work	Remarks
2a	Location of development w.r.t. lease area	As shown in plan	1) E-541920.05 N- 2367918.66 2) E-541907.23 N- 2368226.42 3) E- 541547.71 N- 236808.10 4) E- 541353.68 N- 2368118.8 5) E- 541365.38 N- 2367930.18	Broadly as per proposal
2b	Separate benches in topsoil, overburden and mineral (Rule 15)	yes	yes	
2c	Stripping ratio or ore to OB ratio	1:0.10	1:0.01	Mining started form outcrop.
2d	Quantity of topsoil generation in m3	57700 (Block-I - 5200 & Block-II-	8752 Due to single Block-I operation.	Less Generation of Top soil in 2 <sup>nd</sup> pit (Block –II got consent from CECB,

		52500)		Raipur on August ,2017
2e	Quantity of overburden generation in m3	Nil	Nil	
2f	General remarks of inspecting officer on development of pit w.r.t. type of deposit etc.	The mining was started just two years before and development is done broadly as per proposal with opencast method using shovel dumper combination.		

### **3.0 Exploitation**

	Item	Proposals (2016-17)	Actual work	Remarks
3a	Number of pits proposed for production	Two	One Pit	2 <sup>nd</sup> pit (Block –II )got consent from CECB, Raipur on August , 2017 and presently working is carried out in 2 pits.
3b	Quantity of ROM mineral production proposed	2.4 Mill.Tonn Yr. – 2017- 18 (2.4 Mill.tonn)	1699171 .08 tonnes 1526973.39 Tonnes till 31 <sup>st</sup> Dec. 2017	
3c	Recovery of saleable/usable mineral from ROM production	99.00%	99.00%	
3d	Quantity of mineral reject generation	88420 tonnes	126463.62 tonnes	Due to generation of High MgO, in actual Mining viz. a- viz. Planned.
3e	Grade of mineral reject generation and threshold value declared	CaO=37-38% MgO= +4%	CaO=37-38% MgO= +4%	
3f	Quantity of sub-grade mineral generation	Nil	Temp. Stacking of 7300 tonn sub grade is & when utilised.	100% utilised during the year.
3g	Grade of sub-grade mineral generation	Nil	CaO – 37%, MgO-3.5 to 4%	
3h	Manual / Mechanised method adopted for segregating from ROM	Mechanized Method	Mechanized Method	
3i	Any analysis or beneficiation study proposed & carried out for sub-grade mineral and reject	Chemical analysis of Blast holes sample	Chemical analysis done of Blast holes sample.	
3j	Provision of drilling & blasting in mineral benches	Deep hole Drilling & Blasting	Deep hole drilling & blasting is in practice. Spacing: 4/5mtrs. Burden: 3.0/4mtrs. Depth: 9.5 mtrs. Dia : 100 mm	

3k	Provision of mining machineries in mineral benches	Mechanized Mining	Mining is done with fully Mechanization with Back-hoe & Tipper combination.	
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3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	1 <sup>st</sup> Bench-OB/Limestone Avg. Ht. 4Mtrs. 2 <sup>nd</sup> & 3 <sup>rd</sup> bench - 9mtrs	Yes, as per Mining Plan the height of benches in Overburden & Mineral is suitable	
3m	Total area covered under excavation/pits	Approx 12 hect.(not mentioned specifically)	Broadly as per proposal	Variation in Quality of limestone is high in Lower Benches as compared to top bench in actual mining, & also single pit operation There by excavated area increased.
3n	Ore to OB ratio for the pit/mine during the year	1:0.10	1:0.01	
3o	Total area put in use under different heads at the end of year	Pit-12 ha. Waste/reject Others-	15 hect 4.310 hect .	
3p	Production of ROM mineral during last five-year period, as applicable	Yr- 2014-15 (1.74 Mill.Tonn ) Yr-2015-16 (2.4 Mill.Tonn) Yr. – 2016-17( 2.4 Mill.Tonn) Yr. – 2017- 18 (2.4 Mill.tonn)	2014-15:437418.65 tonnes 2015-16: 1448333.00 tonnes 2016-17: 1699171.08 Tonnes 2017-18:1526973.39 Tonnes (till Dec. 2017)	
3q	General remarks of inspecting officer on method of mining etc.	The method of mining is opencast with shovel-Dumper combination and deep hole drilling & blasting.		

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

SN	Item	Proposals (2016-17)	Actual work	Remarks
4a	Separate dumping of topsoil, OB & mineral reject (Rule 32, 33)	88420 Tonns	126463.62 Tonns	Due to generation of High MgO, in actual Mining viz. a- viz. Planned.



b	Location of topsoil, OB & mineral reject dumps	Shown in Plan	Shown on in plan	
4c	Number of dumps within lease area and outside lease area	One dump for Reject.& one dump for OB	One dump for Reject. one dump for OB & 3 temp. Dump for High Grade LST.	Temp dump for Blending
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	Nil	Nil	
4e	Number of active & alive dumps	2	5	3 temp dump for blending
4f	Number of dead dumps	Nil	Nil	
4g	Number of dumps stabilised	Nil	Nil	
4h	Whether Retaining wall or garland drain all along dumps are there	Nil	Garland drain made all along dumps.	
4i	Length of Retaining wall or garland drain all along dump	Nil	2400 mtrs. Garland drain to divert the rain water from working area.	
4j	Number of settling ponds	Nil	2	
4k	Specific comments of inspecting officer on waste Dump management	As the mine started working from 2014-15 and the dump are not major dump and height is ranging from 1.5 meter to 4 meter in which 3 dumps are temporary dumps and all dumps are active and small dump.		

### 5.0 Solid Waste Management-Backfilling

SN	Item	Proposals (2016-17)	Actual work	Remarks
5a	Status on part or full extraction of mineral from mined out area before starting backfilling	No Proposal	NA	Newly Opened Mines and are not matured for backfilling.
5b	Area under backfilling of mined out area	N/A	NA	
5c	Concurrent use of topsoil for restoration or rehabilitation of mined out area (Rule 32)		7.5Mtr top soil part dump in Lease boundary for plantation & safety	

			uses.	
5d	Total area fully reclaimed & rehabilitated		NA	
5e	General remarks of inspecting officer on backfilling, reclamation etc			

### 6.0 Progressive Mine Closure Plan

SN	Item	Proposals (2016-17)	Actual work	Remarks
6a	Whether Annual report on PMCP submitted on time and correctly - Rule 23E(2). Details should be given in the format as given in Annexure-20.	yes	Yes, Annual report submitted on PMCP as given Format in Annexure-20.	.
6b	Management of worked/mined out benches  i) Area available for rehabilitation (ha)  ii) Afforestation done (ha)  iii) No. of saplings planted during the year  iv) Cumulative no. of plants  v) Any other specific method of rehabilitation  vi) Cost incurred on watch & care during the year	Nil	Nil	
6c	Compliance on reclamation and rehabilitation by backfilling  i) Voids available for backfilling (L X B X D)  ii) Void filled by waste/tailings	Nil	NA  NA  NA	

	iii) Afforestation on the backfilled area iv) Rehabilitation by making water reservoir v) Any other specific means		NA  NA  NA	
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6d	Compliance of Rehabilitation of waste land within lease i) Afforestation ii) Area rehabilitated (ha) iii) Method of rehabilitation	3217 by afforestation by Plantation	3217 1 Hect.	
6e	Compliance of Environmental monitoring (core zone & buffer zone)	Sapling station fixed in core zone and buffer zone.	Complied <b>Core Zone:-</b> Near Mines office. <b>Buffer Zone:-</b> 1. Hardi Village 2. Ghikuria Village 3. Nandini-Khundini 4. Pitora Village.	
6f	General remarks of inspecting officer on PMCP compliance & progressive	The PMCP compliance is broadly as per proposal		

### **7.0 Mineral Conservation**

SN	Item	Proposals (2016-17)	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	ROM Mineral grade-wise sorting within lease area.	ROM Mineral grade-wise sorting within lease area.	
7b	Method of grade-wise mineral sorting i.e. manual or mechanical	Mechanized	Mechanized	
7c	Different grade of mineral sorted out at mines	N/A	N/A.	
7d	Any beneficiation process at mines	Not Any	Not Any	
7e	General remarks of inspecting officer on Mineral conservation & beneficiation issues	There is no beneficiation process done for limestone only sizing is done through crusher and low grade (high MgO) material blended with high grade (low MgO).		

## 8.0 Environment

SN	Item	Proposals (2016-17)	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	yes	yes	Utilised for plantation along the lease boundary.
8b	Concurrent use or storage of topsoil	yes	yes	As per plan
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	yes	yes	As per plan
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	Nil	Nil	
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	Nil	Nil	
8f	Baseline information on existence of plantation & additional plantation done (Rule 41)	A few number of plant existed before mining operation started.	A few number of plant existed before mining operation started.  All plantations are done within starting of Mining operation. 3217 plants in this year	Total 54461 saplings planted within lease and outside lease area.
8g	Survival rate	70.00%	65%	
8h	Water sprinkling on roads to control airborne dust	To be Done with 01 Water Tanker.	Done with 02 nos Water Tanker.	
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area	The mine is newly opened and excavation started on 2014-15 and there is no major dump. During inspection it was observed that water tanker is used for dust suppression and no adverse impact observed on aesthetic beauty in and around mine area.		

### 9.0 Compliance of Rule 45

S. N.	Item	COMMENTS	Remarks
	Status of submission of Monthly and Annual returns	<b>M.R. Submitted upto – DEC ,2017</b> <b>A.R. submitted upto- Year-2016-17.</b>	

S. N.	Item	Details GIVEN in A.R.	Observation of I/Officer	Remarks
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	<b>yes</b>	Manager & Mining Engineer : Shri B L Bhati & Geologist : Shri Sanjay Arora	
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	<b>Yes</b>	Covered under o/c mining- 15.296 ha. Waste disposal-0.649 ha., Occupied by infrastructure- 3.310 ha., Mineral Stock- 2.867 ha.	
9d	Scrutiny of Annual return on afforestation	<b>yes</b>	3217 nos saplings inside lease & 7680 nos saplings outside lease.	
9e	Scrutiny of Annual return on mineral reject generation (Grade & quantity)	<b>yes</b>	126464 tonns mineral reject generated,CaO below 38% & MgO +5%	
9f	Scrutiny of Annual return on ROM stock and/or graded ore	<b>yes</b>	Nil	
9g	Scrutiny of Annual return on sale value, Ex. Mine price & production cost	<b>yes</b>	Ex-mine price & cost of Production-237 Rs	
9i	Scrutiny of Annual return on fixed assets	<b>yes</b>	588427016 Rs	
9k	Scrutiny of Annual return on mining machineries	<b>yes</b>	Back hoe 1.4 cum capacity 4 nos,Dozer- 240 HP i nos, Drill 100	

			mm 2 nos, Tipper 16 cum 15 nos, Water tanker 7 Kl 2 nos.	
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10- Details of violations observed during current inspection and compliance position of earlier violation pointed out:- Last inspection done by Shri R.N.Mishra ,SMG dated 23.05.2017 and Rule 11(1) found violated for done exploration(13 holes) as per proposal.

During present inspection was found that lessee has drilled 20 nos bore holes and complied earlier pointed violation. But few violation pointed out given below-

<b>Rule</b>	<b>Nature of Violation observed</b>
11(1)	<p>Mining operations should have been undertaken in accordance with the approved Mining Plan.</p> <p>The Mining Plan was approved vide letter no.DRG/LST/MPLN-355/NGP dated 23.01.2015 and following deviation was observed during inspection</p> <ol style="list-style-type: none"> <li>1. It was proposed to produce 2.4 million tons in 2016-17 but achievement is 1.699 million tons.</li> <li>2. In last approved document the mineral reject generation proposed 88420 tonnes against which 126463.62 tonnes generated in 2016-17 which is nearly 1.5 times the proposal.</li> <li>3. In the approved document one dump is proposed for OB and one for high MgO material but during the mine visit it was observed that material is not dump as per proposal and it was dumped haphazardly in 4-5 different small dumps with height of 2-4 meter near eastern boundary of ML.</li> </ol>
Rule 45	<p>While scrutiny of the Annual return submitted for 2016-17 it is observed that mining machineries details, Ex-mine price and cost of production is same for both the mine J K lakshmi limestone mine (Area 267.695 ha.) &amp; Semeria limestone mine (Area 3.096 ha.) of M/s J K Lakshmi Cement Ltd. whereas production in one mine is 1.699 million tons and in other only 1943 tons in 2016-17.</p>

Date: 15/01/2018

Name- Rajesh Kumar Das,  
Designation -Senior Assistant Controller of Mines,  
IBM, RAIPUR