

**INDIAN BUREAU OF MINES  
MINES CONTROL AND CONSERVATION OF MINERAL DIVISION**

**MCDR INSPECTION REPORT**

**Goa regional office**

**Mine file No :** KNT/BJP/LST-62/GOA

**Mine code :** 38KAR26059

- (i) Name of the Inspecting : **J003** ) **JANGID G K**  
Officer and ID No.
- (ii) Designation : Deputy Controller Mines
- (iii) Accompanying mine : Shri M. Ramappa, Sr. GM(Mines) and Shri Pavan Deshmuk  
Official with  
Designation
- (iv) Date of Inspection : 06/09/2013
- (v) Prev.inspection date : 18/03/2013

**PART-I : GENERAL INFORMATION**

1. (a) **Mine Name** : **HALKI(2344)**
- (b) Category : A Fully Mechanised
- (c) Type of Working : Opencast
- (d) Postal address
- State : KARNATAKA
- District : BAGALKOT
- Village : HALKI
- Taluka : MUDHOL
- Post office : NINGAPUR
- Pin Code : 587313
- FAX No. : 08350-289001
- E-mail : factory.muddapur@jkcement.co
- Phone : 08350-289000
- (e) Police Station : LOKAPUR
- (f) First opening date : 01/12/2007
2. Address for : J.K.CEMENT WORKS, MUDDAPUR  
correspondance (UNIT: J.K.CEMENT LTD)  
Mudhol, Dist-Bagalkot, Karnataka
3. (a) Lease Number : KAR1525
- (b) Lease area : 124.24
- (c) Period of lease : 20
- (d) Date of Expiry : 21/11/2018
4. Mineral worked : LIMESTONE Main

## 5. Name and Address of the

Lessee : J.K.CEMENT LTD  
KAMLA TOWER KANPUR UP  
KANPUR UTTAR PRADESH  
Phone:0512-2371478  
FAX :0512-2399854

Owner : K. N. Khandelwal  
Kamla Tower KANPUR URBAN  
UTTAR PRADESH  
Phone:  
FAX : 05122399854

Agent : ANTRIKSHA KUMAR JAIN  
J. K. Cement Works,  
Village-Muddapur Taluka-  
Mudhol BAGALKOT KARNATAKA  
Phone: 08350-289104, 9686502250  
FAX : 08350-289001

## Mining Engineer

Name : Pavan Kumar Deshmukh, Full Time  
Qualification : BE. in Mining & 8 years experience  
Appointment/ : 01/02/2012  
Termination date

## Geologist

Name : Amit Kumar Dewangan, Full Time  
Qualification : M. Sc.(Geology) & 2 years experience  
Appointment/ : 20/12/2011  
Termination date

## Manager

Name : K.Venkateshwarlu  
Qualification : FCC Certificate  
Appointment/ : 01/05/2011  
Termination date

6. Date of approval of Mining : 22/08/2011  
Plan/Scheme of Mining

**PART - II : TECHNICAL DETAILS/COMMENTS****1. Details about Average employment :**

Maximum number of persons employed on any day during the year

Employment category	No.of employment	Av. yearly working days
<b>DIRECT</b>		
<b>Managerial</b>	1	306
<b>CONTRACT</b>		
<b>Others</b>	5	306
<b>Ministrial</b>	0	0
<b>Plant</b>	0	0
<b>Supervisory</b>	7	306
<b>Workers</b>	54	306

**2. Community Development Plan (in and around the mines) : Proposed action and expenditure towards socio-economic development.**

Action during the year	Expenditure in Rs. Lakhs for				Remarks
	previous year		current year		
	Proposed	Incurred	Proposed	Incurred	
<b>General</b>					
Safety	3.51	3.51	6.50	6.50	
Medical facility					
Health	0.00	3.75	6.50	8.50	
Sanitation	12.19	9.13	73.22		
Housing	0.00	20.08	74.85	20.08	
Water supply	14.27	14.27	0.00	14.27	
<b>Sub total</b>	<b>29.97</b>	<b>50.74</b>	<b>161.07</b>	<b>49.35</b>	
<b>Infrastructure</b>					
Public transport	1.50	0.00	1.50		
Communication	60.00	70.00	85.00		
Electricity					
Roads	6.00	0.00	6.00		
<b>Sub total</b>	<b>67.50</b>	<b>70.00</b>	<b>50.74</b>		
<b>Training</b>					
<b>Recreation</b>					
<b>Sports activities</b>					
Others	0.00	8.00	6.05	15.00	
<b>Employment</b>					
Environment management	94.45	19.32	28.46	94.45	
<b>Total</b>	<b>191.92</b>	<b>258.39</b>	<b>177.75</b>	<b>158.80</b>	

**3. Status of compliance of MCDR, 1988, including therewith the rectification of the outstanding violation of rules.**

Mine was last inspected on 18.03.2013 and no violation was observed of MCDR 1988. Violation for rule 13(1) was issued after current inspection. The discrepancy observed in Opening & Closing Stock in two different tables in Annual and Monthly return will be forwarded to MMS division for clarification, as it is as per their direction.

**4. A note on the justification in case of suspension of mining operation under rule 13(2) or prohibition of deployment of any person under rule 56 of MCDR, 1988, if recommended.**

Suspension of mining operations under rule 13(2) or prohibition of deployment of any person under rule 56 of MCDR, 1988 is not recommended.

## 5. Scientific Mining

Items	Proposal	Actual work done	Remarks
-------	----------	------------------	---------

## A. Exploration (Rule 13)

a.Type of prospecting and exploration i.e. pitting, drilling	: Additional exploration was not proposed in 2012-13. Five boreholes were proposed in 2013-14.	Exploration as on date is having 43 Nos. DTH and boreholes of Max depth - 85 Mtr, Min depth - 5.6 Mtr & Total Meterage - 2282.64 Mtr. It includes 20DTH holes drilled in 2013-14 of 50m min depth and 80m max depth having 1210m total depths at 100m grid interval.
b.Total area covered	: Additional exploration was not proposed in 2012-13.	Exploration as on date is having 43 Nos. DTH and boreholes of Max depth - 85 Mtr, Min depth - 5.6 Mtr & Total Meterage - 2282.64 Mtr. It includes 20DTH holes drilled in 2013-14 of 50m min depth and 80m max depth having 1210m total depths at 100m grid interval.

## B. Working (Rule 13)

a.Number and size of each pit (LxWxH)	: It was proposed to develop Pit-1 over 870m X 400m X 11-16m in western part of lease area.	There is one working pit in mine located in western part of lease area. Actual size of pit-1 is 800m X 160-330m X 12-16m due to less demand & supply to cement plant.
b.Bench size(LxWxH)length can be defined as regular/irregular	: Regular benches of 8m height and width was proposed.	There are two working benches in pit of 7-8m height. Limestone is exposed from surface level having negligible topsoil cover.
c.Ore to waste ratio pit wise if possible otherwise for mine	: Ore to waste ratio pit wise was estimated as 1:0.18	Pit wise ore to waste ratio during the year was 1:0.57
d.Total area covered under excavation/pits	: The area proposed under pit was 870m X 400m at the end of 2012-13.	The area covered under pit is 800m X 160-330m and it is 16.62ha.

## C. Waste disposal (Rule 13)

a.Location of dumps	: Waste dump, dolomite stack and sub-grade stack was proposed in west, south-east and south-east	Waste dump is located in west side of pit as per proposal. Sub-grade generation was not reported during last three years. Separate
---------------------	--	--

direction of working pit. stack of dolomite is not made and it is dump with reject material on waste dump.

e. Yearly generation of waste quantity. : It was proposed to generate 88,000t topsoil, 267,000t reject and 338,000t sub-grade mineral during 2012-13. Actual quantity of 61,180t topsoil, 4,63,312t reject and nil sub-grade mineral was reported during 2012-13.

Year	Topsoil	Reject	Mineral
2012-13	88,000	61,180	
2011-12	91,000	1,10,791	
2010-11	53,070	4,163	
2009-10	37,165	2,51,689	
2008-09	67,814	5000	
2007-08	-	-	1200

b. Method of dumping whether advancing/retreat : Advancing method of dumping was proposed. Present dump is advancing towards west & south direction.

c. Total area covered under waste dump. : Area proposed under waste dump was 4ha. Area occupied under dump is 4.11ha. It is more due to combined waste and dolomite dump.

d. No. and size of each waste dump with No of steps/lift/bench : Three separate dumps/stacks were proposed for Waste dump, dolomite stack and sub-grade stack in west, south-east and south-east direction of working pit over 4ha, 2.5ha and 1ha respectively. Waste dump is located in west side of pit as per proposal over 4.11ha. Sub-grade generation was not reported during last three years. Separate stack of dolomite is not made and it is dump with reject material on waste dump. Size of waste dump is 200m X 210m X 6-10m.

**D. Production**

b. Year wise production of last five year. : Target from 2012-13 to 2008-09 was 1,970,000t, 1,915,000t, 20,07,254t, 19,91,216t, 7,05,286t Actual production from 2012-13 to 2008-09 was 909269.02t, 953040.81t, 542335.3t, 359276.14t and 10216t

**D. Reserve**

a. Reserve position as : Reserves: Proved      Reserves: Proved -  
per latest MP/MS and      - 27.318 Million      25.360 Million Tones, &  
at the time of              Tones, & Probable      Probable - 20.926  
inspection.                  - 20.926 Million      Million Tones  
   Tones

**RESERVE POSITION AS ON 01/04/2013**

**LIMESTONE**

Category	Quantity in Tonnes	Grade
Proved	25360000	Cement Grade
Probable	20926000	
Possible		
Total	46286000	

**PRODUCTION FOR THE PREVIOUS YEAR    2012 - 2013**

Mineral	Production	Unit
LIMESTONE	909269	TON

**6. Conservation of Mineral - both quantitative and qualitative****Beneficiation (Rule 20 and 26)**

- Efforts for improving low grade and sub grade mineral. : Top soil or waste material is removed with Excavator & Dozer and whatever low grade limestone is separately Stacked as per pile requirement for blending.
- Efforts for improving percentage of recovery of ore. : There are two working mines i.e. Halki and Muddapur limestone mine. Limestone of Halki mine is of better grade and low grade of Muddapur is utilised fully.

**Mineral Rule 15**

- Percentage of recovery of ore pitwise w.r.t. ROM and total material : Percentage of recovery of ore pitwise w.r.t. ROM and total material is 63%.
- Number of benches in ore and waste. : There are two Mineral Benches of 8m height and 15m widths. Topsoil is scraped separately and its thickness varies from 0.2m to 1.0m.

**Sub/grd mineral/fines (Rule16)**

- Qty of yearly generation and total qty available during inspection with grade : ROM generation for the year 2012-13: 909269.02 Tones. Stack of Medium grade (+42/-45 Cao & Below 130 LSF) Qty- 95256.893 Tones
- Number and size of each stack : One stack is there over 110m X 56m area and height is 7m.
- Location of stacking. : Mineral is stacked in south side of pit.
- Separate stacking from waste :
- Total area covered for stacking : Mineral Stacking - 0.59 ha

**Exploration data as on 31/03/ 2013**

No. of Boreholes	No. of Pits	No. of Trenches
20	0	0

**OVERBURDEN HANDLED DURING PREVIOUS YEAR 2012 - 2013**

Overburden/waste removed (in m3) :	0
------------------------------------	---

**Utilisation of Sub Grade Mineral and Mineral Rejects**

	Generated	Utilised	Stacked	(In Ton.)
<b><u>LIMESTONE</u></b>				
Sub Grade Mineral ->	0	0	0	
Mineral Rejects ->	463312	0	463312	

## 7. Environment Management - both quantitative and qualitativ

### A. Land environment

- a. Landscape. : Maximum and minimum RLs are 601 m & 585 m. In general area is almost flat.
- b. Aesthetic environment : Area is general is having less vegetation and devoid of trees except bushes and shrubs. Topsoil from the most of lease arera is already removed and it was reported that villagers taken away the topsoil for cultivation purpose.
- c. Soil and land use pattern : Black Cotton Soil available in the lease area and it has been scapped by villagers for agriculture purpose. Land use pattern as on date is as follows  
Under pit - 15.45,  
Under dump - 2.45 ha,  
Under Mineral Stack - 0.59ha,  
Under Plant/office - 0.210 ha,  
Under Plantation - 8.89ha.
- d. Agriculture : Sugarcane, Cotton, Jawar etc. is the main crop in the area.
- e. Forest(flora and fauna) : There is no forest area falling around mining lease area and covered by Agricultural lands, cultivated for Sunflower, cotton, Jawar etc. Apart from the above natural vegetation, grass growth during the Monsoon season. Fauna like Crow, Monkey, Mongoose, Rats has been noticed.
- f. Vegetation : Types of plants - Gulmohar, Amaltars, Neem, Badam, Pepal, Spahodea, Ashok, Coconut, Rose & other flowers are available.
- h. Public building, places and monuments (protected, historical), place of worship and places of tourist : There are no monuments of either historical or archaeological importance in the core or buffer zone.

### B Water environment.

- a. Surface water : Limestone mining operation does not dispose off any effluent in the surrounding watercourses. Surface water is not going to be affected either qualitatively & quantitatively. The area does not receives normal rainfall & there is less possibility of siltation of the seasonal streams during the rainy seasons.
- b. Ground water : The limestone mining operations are confined to 30 to 40 m surface, which is above the ground water table. The limestone mining operations on the plateau does not have adverse impact on either yield or movement of ground water.
- c. Quality of water : The quality of mine discharged water does not contain any toxic elements.

### C. Air environment

- a. Noise : Presently the noise level in the area is the range of 41.8 to 48.1 dB (A) and noise level in the working area would be 55 to 75 dB (A). There are no major structures/ human settlements in the radius of 1 km around the mining area. Impact of mining on the ambient noise level was hardly noticeable.
- b. Air : In Core zone the SPM values varied between 99 to 115



: microgram/cu. m, RPM values are 59.4 to 69 microgram/cu. m, where as SO<sub>x</sub> and NO<sub>x</sub> varied between 9.1 to 11.0 microgram/cu. m, and 10.5 to 12.5 microgram/cu. m, respectively.  
 In Buffer zone the SPM values varies between 101 to 132 microgram/cu. m, whereas SO<sub>x</sub> and NO<sub>x</sub> is less than 14.5 microgram/cu. m. Occasionally high SPM was recorded due to unmetalled roads.

c. Climatic condition : The climatic condition of the area is semi-arid. The area gets rainfall of 400 to 600 mm per annum & exhibits variations of temperature with summer & moderate winter. The temperature recorded indicates the highest temperature as 44° C & lowest 22°C with the onset of South-West monsoon during July.

**D. Socio economic environment**

a. Social and demographic profile. : The mine is situated in the remote place area, where the socio- economic level of the people is not satisfactory. The main occupation of the people is rain depended farming. Due to uneven topographic condition & low fertility of the soil the agricultural output is comparatively low & there are no major industries in the area. This might have forced the local people to migrate towards the cities. The mining operations is providing direct & indirect employment to more than 120 persons.

b. Recommending health and safety. : Limestone does not contain any toxic elements. Hence the possibility of any health hazards is minimum.

c. Human settlement : There is no human settlement within 0.8 km. radius of the mine. Halki village is there is south side of lease area. Village road and a small canal is passing within lease area. Safety distance of 50m in both side of canal is to be kept intact.

d. Recreational facility. : Area is devoid of any industrial development and no recreational facilities are available. Lokapur is neares town at 6kms and Bagalkot is at 40kms distance. Cable TV is available in Colony with recreation club having indoor games.

**7.1 Comments on the steps taken by the lessee towards maintaining environment and monitoring of environmental parameters to ensure the qualitative improvement in the environment and ecology.**

<u>Water Management</u>					
Season	Station type	Station name	Parameter	Value	
				Actual	Excess

<u>Air data for excess parameters</u>					
Season	Station name	Type of area	Parameter	Value	
				Actual	Excess

<u>PLANTATION DURING THE PREVIOUS YEAR</u>			<u>2012 - 2013</u>			Area in Hect.
Within lease area			Outside lease area			
Area	Trees planted	Survival rate	Area	Trees planted	Survival rate	
4.74	10750	80	.44	1090	83	

**TOP SOIL MANAGEMENT**  
Quantity as on 31/03/2013

Cumulative quantity in tonne

Generated	Utilised	Balance
150000	120000	30000

**8. Scrutiny of annual returns on cost of production, reserve, production, pit mouth value, stock, land use pattern and fixed assets.**

The annual return submitted for 2012-13 is found in order. However, following observation may be discussed with MMS division.

Opening & closing stock is showing nil in table 'Production & Stocks of ROM at mine head of AR 2012-13 ', whereas in subsequent table 'Grade wise production, despatch, stocks and Ex-mine price' opening & closing stock are 155661t & 95257t of cement grade limestone. It was reported by Mines Manager that they are doing this after revert back of AR-2012-13 from MMS division. Lessee is not doing sorting of mineral at faces or surface level and opening & closing stock must match in both the tables. This change started after July 2012 monthly return.

**PART - III : PERFORMANCE OF MINE OWNER**

(In case of lease expiring within 2 years - as per guidelines)

**a. Compliance of terms and conditions of lease deed.**

ML Number 2344 (A) Total lease Area is 124.24 ha. and it is Non -forest area. The period of lease is for 20 years and date of Expiry is 20.11.2018.

**b. Compliance of the provisions of MCDR, 88 and advise given.**

Letter Number and Date of approval of Mining Plan is MP/BGK/GOA/92-SZ & 01.12.2006  
Letter Number and Date of approval of Scheme of Mining is MS/BGK/GOA(KNT)/LST-53-SZ & 22.08.2011. The five-year period of approved SOM is 2011-12 to 2015-16.

**PART - IV : PROPOSALS FOR FURTHER ACTION FOR :**

**Indian Bureau of Mines (any issue related to CGPB, SGPB, Assistance, Consultancy, Annual Programme and studies, etc.)**

AR 2012-13 is showing Opening & closing stock nil in table 'Production & Stocks of ROM at mine head', whereas in table 'Grade wise production, despatch, stocks and Ex-mine price' Opening & closing stock are 155661t & 95257t. Mines Manager reported that they are doing this after revert back of AR-2012-13 from MMS division.

**State Government (Illegal mining, mining dispute, infrastructure, Mineral based industry, Mineral policy, etc.)**

None at present.

**The Central Government (Infrastructure, Development, Mineral policy and Legislation, Mineral based industry, etc.)**

None at present.

**Date :**

(JANGID G K)

Indian Bureau of Mines