



JK Cement LTD.

CIN : L17229UP1994PLC017199

ISO 9001:2008, ISO 14001:2004 & OHSAS 18001 : 2007 CERTIFIED COMPANY

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J.K. Cement Works, Mangrol  
C/o. Kailash Nagar-312617, Nimbahera  
Distt. Chittorgarh (Raj.) INDIA

Ref. No.: MGR-PC -13/ 2249

16.09.2017

To,

➔ The Member Secretary

Rajasthan State Pollution Control Board  
4, Industrial Area  
Jhalana Doongri  
**JAIPUR** – 302004 (Raj)


SUBJECT: **Environmental Statement for the year 2016-2017 (02 Copies)**

Dear Sir,

Kindly find herewith enclosed **Environment Statement Report** of **Tilakhara Limestone Mine** for the **year 2016-2017** for your reference and record. We trust you will find the same in order.

Thanking You.

Yours Faithfully  
For J.K. Cement Works, Mangrol

  
S.K. Acharya  
Asth. V.P. (E & I)

Encl. : a / a

Copy to -

**The Regional Officer**, Rajasthan State Pollution Control Board, Near FCI Godown,  
Chandaria, Distt.- CHITTORGARH (RAJ)

**The Director**, Ministry of Environment and Forests, Regional office (Central Region),  
Kendriya Bhawan, 5th Floor, Sector 'H', ALIGANJ, LUCKNOW- 226020 (U.P.)

**Corporate & Registered Office** : Kamla Tower, Kanpur-208001, (U. P.) INDIA  
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J. K. Cement Works, Nimbahera  
J. K. Cement Works Mangrol  
J. K. Cement Works, Gotan  
J. K. Cement Works, Jharli

J. K. Power, Bamania  
J. K. Cement Works, Muddapur  
J. K. White Cement Works, Gotan  
J. K. White, Katni



Government of India  
Ministry of Environment and Forest  
**" FORM – V "**  
( See rule 14 )

ENVIRONMENTAL STATEMENT FOR THE FINANCIAL YEAR ENDING THE  
31<sup>ST</sup> MARCH 2017

**Mangrol-Tilakhera Mine of M/s J.K. Cement works, MANGROL (Raj.)**

**PART – A**

(I)	Name & Address of the Owner / Occupier of the Industry Operation or Process	<b>S.K. Rathore</b> <b>Unit Head</b> J.K. Cement Works, <b>MANGROL</b> Kailash Nagar : 312 617 NIMBAHERA, Chittorgarh (Raj.)
(II)	Industry Category Primary ( STC CODE ) Secondary ( SIC CODE )	Polluting (Non – Hazardous) PRIMARY STC Category
(III)	Production Capacity	1.6 MMTPA
(IV)	Year of Establishment	Year 1979
(V)	Date of last Environmental Statement Submitted	September, 2016

**PART – B**

**Water & Raw Material Consumption**

**A. Water**

(i)	Over All Consumption	-	KLD
	Process	-	47.0 (Spray on Road / Mining , Drilling etc.)
	Cooling:	-	Nil
	<u>Domestic</u>	-	<u>3.0</u>
	<b><u>Total</u></b>	-	<b><u>50.0</u></b>

(ii) Consumption per unit of production

Name of the Product	Process Water Consumption per unit of Product Output	
	During the Previous Financial Year	During the Current Financial Year
Limestone	16.38 Ltrs / Unit	10.73 Ltrs / Unit

**B. Raw Material Consumption**

Name of the Raw Material	Name of Product	Consumption of Raw Material per Unit Product Output	
		During the Previous Financial Year	During the Current Financial Year
HSD	Limestone	0.4213 Ltrs. Per Ton	0.484 Ltrs. Per Ton

**PART - C****Pollutant Discharge To Environment / Unit of Output**

(Parameters as specified in the consent issued)

(I)	Pollutants	Quantity of Pollutants Discharged ( Mass / day )	Concentrations of Pollutants in discharged ( Mass / volume )	Percentage of variation from prescribed standard with reasons
(a)	<b>Water</b>			
(i)	Colonial	NIL		
(ii)	Industrial	NIL		

**WATER ANALYSES RESULTS**

SAMPLE PARTICULAR	MINE PITWATER (Dated 04.11.2016)	HANDPUMP NEAR SHAHBAD (Dated 04.11.2016)	TUBEWELL WATER (Dated 11.11.2016)
COLOUR & ODOUR	Clear & Natural	Clear & Natural	Clear & Natural
Ph	7.58	7.8	7.92
TSS	26	22	6
TOTAL HARDNESS	200	180	284
Ca+ HARDNESS	158	140	102.4
Mg+ HARDNESS	42	40	6.72
CONDUTIVITY	414	360	767.73
TDS	248	216	482
CHLORIDES	24	20	48
TURBIDITY	4.97	4.2	0.06

**\*All the parameters are expressed in mg/ltr except PH.**

J.K.CEMENT WORKS, MANGROL

Tilakhera MINE

AMBIENT AIR QUALITY MONITORING DATA FOR SPM  
(Monthly Average In MICROGRAMS / CUBIC METER)

Year : 2016-17

Month	NEAR MINE OFFICE	NEAR RAVANA OFFICE
Apr-16	322.0	365.0
May-16	343.0	377.0
Jun-16	330.0	354.0
Jul-16	290.0	320.0
Aug-16	164.0	206.0
Sep-16	256.0	310.0
Oct-16	326.0	381.0
Nov-16	332.0	373.0
Dec-16	317.0	366.0
Jan-17	320.0	346.0
Feb-17	335.0	360.0
Mar-17	315.0	358.0

**PART – D**

(As specified under Hazardous Waste Management, Handling and Trans Boundary Movement rules-2008)

Hazardous Waste		Total Quantity (Kgs.)	
		During the Previous Financial Year	During the Current Financial Year
(a)	From Process	Nil.	Nil.
(b)	From Pollution Control Facilities.	N.A.	N.A.

## **PART - E**

### **SOLID WASTES**

		Total Quantity	
		During the Previous Financial Year	During the Current Financial Year
(a)	From Process	N.A.	N.A.
(b)	From Pollution Control facilities	N.A.	N.A.
(c )	( i ) Qty. recycled or reused with in the unit.	NIL	NIL
	( ii ) Sold	NIL	NIL
	(iii) Disposed	NIL	NIL

## **PART – F**

PLEASE SPECIFY THE CHARACTERISATIONS (IN TERMS OF COMPOSITION AND QUANTUM) OF HAZARDOUS AS WELL AS SOLID WASTES AND INDICATES DISPOSAL PRACTICE ADOPTED FOR BOTH THESE CATEGORIES OF WASTES.

**There is no hazardous as well as Solid Waste produced.**

## **PART – G**

IMPACT OF THE POLLUTION ABATEMENT MEASURES TAKEN ON CONSERVATION OF NATURAL RESOURCES AND ON THE COST OF PRODUCTION.

### **AIR**

Mining operation and related activities are designated as potential sources as under:

- Emissions from Diesel operated earth moving machinery e.g. Sulphur Dioxide (SO<sub>2</sub>), Oxides of Nitrogen (NO<sub>x</sub>), Suspended Particulate Matter (SPM), Respirable Particulate Matter (RPM) etc.
- Local air borne dust due to excavation, drilling and blasting operations.
- Air borne dust pollution due to loading, unloading, transportation etc.

From the base line study the Air Quality near on going mining activities, the pollutants level was observed very low or below the detection limit except SPM and RPM.

There is no impact observed on vegetation & water bodies in the surrounding areas, as it will be suppressed at its generating sources.

The following measures are taken to suppress the dust at the source as well as to prevent the same, spreading in the atmosphere:

- Wet drilling system is provided on all drill machines.
- Regular water sprinkling on haul road during operation.
- Optimize blasting parameters for proper fragmentation to reduce dust generation.
- Plantation and development of Green Belt along the Haul Roads and Working Pits.

## **WATER**

Being Mechanised Limestone mine, it requires water mainly for Wet Drilling, Road Spraying, Green Belt Development, and Machineries Washing. Water consumption is around 50 KLD. The source of water is the accumulated rainwater in the lower most benches. There is no liquid effluent / waste water .

## **NOISE**

Noise is generated in the mine due to following mining activities:

- Excavation, drilling, blasting and operations of HEMM.
- Transportation and handling of material.

The results of base line noise level survey are well below the permissible limit except near machinery while operating. The noise generating sources are scattered within the whole mining area. All the sources will not generate the noise simultaneously hence; the noise level would not alter the noise environment significantly. The noise level reduces with increase in distance from the source.

The following measures are taken to reduce the noise level at the source as well as to prevent the same, spreading in the atmosphere:

1. Providing enclosures for noise sources to reduce dispersion of noise like cabin in HEMM.
2. Proper maintenance and lubrication of machinery rotating parts.
3. Use of non electric delay detonator (Nonel) on surface in place of detonating fuse.
4. Use of low quantity detonating fuse (8gm/m in place of 10gm/m).

5. By covering the detonating fuse as well as detonators under drill cutting or the fine material.
6. By providing earmuffs and earplugs to eligible miners.
7. Blasting between 12.00 noon to 3.00 PM when air density is low.
8. Use of Air Decking & sufficient column stemming in the blast holes.
9. Use of NONEL.

**J.K.CEMENT WORKS, MANGROL**

**Tilakhera MINE**

**NOISE LEVEL MONITORING DATA**

Monthly Average In dB(A)

Year : 2016-17

Month	NEAR MINE OFFICE		NEAR RAVANA OFFICE	
	Day Time	Night Time	Day Time	Night Time
Apr-16	65.8	56.8	67.4	58.2
May-16	64.5	55.1	68.6	59.3
Jun-16	66.2	54.1	69.1	57.1
Jul-16	67.4	55.6	70.2	58.6
Aug-16	66.2	56.3	68.2	58.5
Sep-16	67.0	57.0	69.6	59.0
Oct-16	68.0	55.3	70.6	57.6
Nov-16	67.2	56.7	68.5	59.2
Dec-16	69.3	60.0	71.4	58.3
Jan-17	68.5	61.2	69.8	60.3
Feb-17	69.0	60.5	70.8	61.3
Mar-17	67.1	57.0	68.3	58.5

## **GROUND VIBRATION**

M/s IDL and CIMFR (CSIR) had carried out vibration study & recommended safe charge per delay at various distances for keeping the parameters of blasting well within the limit.

The following steps are taken to control ground vibration:

1. Optimize drilling parameters like spacing, burden and sub-grade drilling.

2. Optimize maximum charge per delay.
3. Use of Non Electric Detonator with delay-blasting technique.
4. Monitoring of ground vibration by "Mini-mate".

#### **PART – H**

**ADDITIONAL MEASURES / INVESTMENT PROPOSALS FOR ENVIRONMENTAL PROTECTION INCLUDING ABATEMENT POLLUTION, PREVENTION OF POLLUTION.**

#### **EXPENDITURE INCURRED ON ENVIRONMENTAL PROTECTION MEASURES DURING YEAR 2016-2017**

S. No.	Activity	Recurring Cost per Annum (Rs.)
1.	Pollution control expenses (Others)	82425
2.	Pollution control expenses (Statutory)	7988
3.	Gardening Expenses	56003
4.	CSR Expenses	1663144
<b>Total (Rs.)</b>		<b>1809560/-</b>

#### **PART – I**

**ANY OTHER PARTICULARS FOR IMPROVING THE QUALITY OF ENVIRONMENT.**

Mine has planted 1563 plants in and around mining area during the period under review.



For JK CEMENT WORKS, MANGROL