

Reg A.D.



JK Cement LTD.

CIN : L17229UP1994PLC017199

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

Phone : +91-1477-220098, 220087
Fax : +91-1477-220027, 220049
E-mail : jkc.nbh@jkcement.com
Web : www.jkcement.com

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

Ref. No.: MGR-PC -13/ 2250

16.09.2017

To,

➔ **The Member Secretary**

Rajasthan State Pollution Control Board

4, Industrial Area

Jhalana Doongri

JAIPUR – 302004 (Raj)

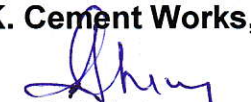
SUBJECT: Environmental Statement for the year 2016-2017 (02 Copies)

Dear Sir,

Kindly find herewith enclosed **Environment Statement Report of Mangrol 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
Astt. 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
Phone : +91-512-2371478 to 81 **Fax** : 2399854 **E-mail** : ho.grey@jkcement.com



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
31ST MARCH 2017

Mangrol 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	S.K.Rathore Unit Head J.K. Cement Works, MANGROL 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	1.5 MMTPA
(IV)	Year of Establishment	Year 2012
(V)	Date of last Environmental Statement Submitted	September-2016

PART – B

Water & Raw Material Consumption

A. Water

(i)	Over All Consumption	-	KLD
	Process	-	80.5 (Spray on Road / Mining , Drilling etc.)
	Cooling:	-	Nil
	<u>Domestic</u>	-	<u>0.5</u>
	Total	-	81.0

(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	32.65 Ltrs / Unit	26.58 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	0.591- Ltrs. Per Ton	0.508 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)	Water			
(i)	Colonial	NIL		
(ii)	Industrial	NIL		

WATER ANALYSES RESULTS

SAMPLE PARTICULAR	MINE PITWATER (Dated 04.11.2016)	TUBEWELL WATER-1 (Dated 04.11.2016)	TUBEWELL WATER-2 (Dated 11.11.2016)
COLOUR & ODOUR	Clear & Natural	Clear & Natural	Clear & Natural
Ph	7.50	7.05	7.54
TSS	16	6	6
TOTAL HARDNESS	280	36	308
Ca+ HARDNESS	220	20	102.4
Mg+ HARDNESS	60	16	12.48
CONDUTIVITY	553	76	754.2
TDS	332	46	462
CHLORIDES	42	17	46
TURBIDITY	2.4	0.11	0.05

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

W1 :--Tube well in Sh. Gopal ji Agricultural field

W2:-- Tube well in plantation area

J.K.CEMENT WORKS, MANGROL

Mangrol MINE

AMBIENT AIR QUALITY MONITORING DATA FOR SPM

(Monthly Average In MICROGRAMS / CUBIC METER)

Year : 2016-17

Month	NEAR RAVANA OFFICE	TOWARDS FACTORY GATE
Apr-16	320.0	367.0
May-16	329.0	382.0
Jun-16	302.0	362.0
Jul-16	260.0	295.0
Aug-16	156.0	196.0
Sep-16	242.0	284.0
Oct-16	309.0	354.0
Nov-16	342.0	384.0
Dec-16	324.0	368.0
Jan-17	314.0	352.0
Feb-17	338.0	372.0
Mar-17	320.0	365.0

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 (SO₂), Oxides of Nitrogen (NO_x), 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 81 KLD. The source of water is the accumulated rainwater of adjacent Tilakhera Mine and Ground water of Mangrol Mine .

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 (Nonels) 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
Mangrol MINE

NOISE LEVEL MONITORING DATA

Monthly Average In dB(A)

Year : 2016-17

Month	TOWARDS FACTORY GATE		NEAR RAVANA OFFICE	
	Day Time	Night Time	Day Time	Night Time
Apr-16	64.8	57.4	67.4	58.3
May-16	65.8	56.6	68.9	59.6
Jun-16	67.0	55.7	69.1	57.8
Jul-16	66.0	54.0	68.0	58.0
Aug-16	65.4	57.2	67.2	59.2
Sep-16	67.3	58.3	70.3	61.2
Oct-16	66.9	55.2	68.5	60.0
Nov-16	65.9	56.8	67.8	58.6
Dec-16	67.2	57.6	69.3	59.4
Jan-17	66.8	55.6	68.4	57.3
Feb-17	67.8	58.0	69.3	59.2
Mar-17	68.5	59.0	70.1	60.9

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 "Super Mini Graph".

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)	206010
2.	Pollution control expenses (Statutory)	-
3.	Gardening Expenses	35617
4.	CSR Expenses	2322409
Total (Rs.)		2564036/-

PART – I

ANY OTHER PARTICULARS FOR IMPROVING THE QUALITY OF ENVIRONMENT.

Mine has planted 870 plants with in mining lease and 260 plant outside mining lease.



For **JK CEMENT WORKS, MANGROL**