

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
Kailash Nagar - 312617, Nimbahera
Distt. Chittorgarh (Raj.) INDIA

Ref. No. : NBH-PC-13/ 3050

Date: 16.09.2017

To,

➔ **The Member Secretary**

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

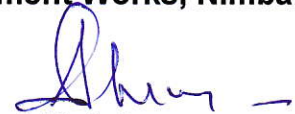
SUBJECT: Environmental Statement for the year 2016 – 2017 (02 Copies)

Dear Sir,

Kindly find herewith enclosed **Environment Statement Report of Nimbahera Limestone Mine (Ahirpura & Murlia Block) 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, Nimbahera


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

Nimbahera - Ahirpura Mine of M/s J.K. Cement works, NIMBAHERA (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, NIMBAHERA 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	2.0 MMTPA (Limestone)
(IV)	Year of Establishment	Year 1971
(V)	Date of last Environmental Statement Submitted	September, 2016

PART – B

Water & Raw Material Consumption

A. Water

(i)	Over All Consumption	-	KLD
	Process	-	18.5 (Spray on Road / Mining , Drilling etc.)
	Cooling:	-	Nil
	<u>Domestic</u>	-	<u>1.5</u>
	Total	-	20.0

(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	06.28 Ltrs / Unit	04.55 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	0.6070 Ltrs. Per Ton	0.5179 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 PIT WATER (Dated 04.11.2016)	MINE CRUSHER TUBEWELL (Dated 04.11.2016)	SHARDA CRUSHER TUBEWELL (Dated 11.11.2016)
COLOUR & ODOUR	Clear & Natural	Clear & Natural	Clear & Natural
Ph	7.84	7.1	7.84
TSS	22	18	-
TOTAL HARDNESS	156	364	192
Ca+ HARDNESS	120	310	51.2
Mg+ HARDNESS	36	54	15.36
CONDUTIVITY	354	841	388.29
TDS	212.4	504.6	248
CHLORIDES	31	65	24
TURBIDITY	2.14	1.6	0.0

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

WATER ANALYSES RESULTS

Post Monsoon dated 04.11.2016 (Murlia Block)

SAMPLE PARTICULAR	W-1 HANDPUMP(Near Hut)	W-2 TUBEWELL(Near Mangrol Chouraha)	W3-Pit Water Sample
COLOUR & ODOUR	Clear & Natural	Clear & Natural	Clear & Natural
Ph	7.8	7.1	7.76
TSS	14	10	12
TOTAL HARDNESS	292	464	204
Ca+ HARDNESS	260	388	160
Mg+ HARDNESS	32	76	44
CONDUTIVITY	797	1148	524
TDS	478.2	688.8	314.4
CHLORIDES	39	64	28
TURBIDITY	1.12	0.96	0.31

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

AMBIENT AIR QUALITY MONITORING DATA

(SPM Monthly Average in $\mu\text{g}/\text{M}^3$)

J.K.CEMENT WORKS, NIMBAHERA

J.K. Cement Limestone Mine (Ahipura Block)

Year : 2016-17

Month	NEAR MINE GATE	NEAR MINE WATER PUMP HOUSE
Apr-16	342.8	381.0
May-16	330.3	379.0
Jun-16	321.8	360.0
Jul-16	333.1	352.0
Aug-16	174.5	201.0
Sep-16	291.9	336.0
Oct-16	333.6	374.0
Nov-16	354.9	382.0
Dec-16	376.5	394.0
Jan-17	332.3	368.0
Feb-17	334.2	379.0
Mar-17	384.9	400.0

J.K.CEMENT WORKS, NIMBAHERA

J.K. Cement Limestone Mine (Murlia Block)

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

Year : 2016-17

Month	Near Mine Gate	Near Ravana
Apr-16	323.0	363.0
May-16	334.0	375.0
Jun-16	312.0	352.0
Jul-16	280.0	312.0
Aug-16	184.0	202.0
Sep-16	262.0	308.0
Oct-16	295.0	335.0
Nov-16	315.0	342.0
Dec-16	329.0	356.0
Jan-17	340.0	372.0
Feb-17	325.0	352.0
Mar-17	318.0	363.0

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 is 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 Working Pits / mineable limits.

WATER

Being Mechanised Limestone mine, it requires water mainly for Wet Drilling, Road Spraying, Green Belt Development, and Machineries Washing. Water consumption is around 20 KLD. The source of water is the accumulated rainwater in the lower most benches. No effluent / Waste water is there.

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. By Using NONEL (Non Electric initiation system).
4. By minimizing use of detonating fuse.
5. By providing earmuffs and earplugs to eligible miners.

6. Blasting between 12.00 noon to 3.00 PM when air density is low.
7. Use of Air Decking & sufficient column stemming in the blast holes.

J.K.CEMENT WORKS, NIMBAHERA
J.K. Cement Limestone Mine (Ahipura Block)

NOISE LEVEL MONITORING DATA

Monthly Average In dB(A)

Year : 2016-17

Month	NEAR MINE WATER PUMP HOUSE		NEAR MINE GATE	
	Day Time	Night Time	Day Time	Night Time
Apr-16	66.0	57.0	68.0	59.0
May-16	68.3	59.6	69.3	61.2
Jun-16	67.5	58.4	68.8	60.3
Jul-16	67.0	58.0	68.3	59.8
Aug-16	65.3	57.4	67.6	58.5
Sep-16	70.0	58.8	69.5	61.5
Oct-16	68.6	59.0	70.2	58.2
Nov-16	66.8	58.2	68.5	60.5
Dec-16	69.6	60.2	71.6	62.3
Jan-17	67.8	62.3	69.8	61.5
Feb-17	68.4	59.7	70.0	61.0
Mar-17	67.0	58.0	69.0	60.0

J.K.CEMENT WORKS, NIMBAHERA
J.K. Cement Limestone Mine (Murlia Block)

NOISE LEVEL MONITORING DATA

Monthly Average In dB(A)

Year : 2016-17

Month	NEAR MINE GATE		Near Ravana	
	Day Time	Night Time	Day Time	Night Time
Apr-16	65.4	57.2	68.8	58.2
May-16	67.3	58.3	69.7	60.4
Jun-16	68.5	56.7	70.1	59.7
Jul-16	67	55.2	69.0	58.5
Aug-16	66.5	57.6	68.7	60.2
Sep-16	68.2	58.5	69.3	59.4
Oct-16	67.5	55.9	70.3	60.5
Nov-16	67.2	57.4	69.2	59.6
Dec-16	68.9	58.2	69.9	59.0
Jan-17	67.4	56.3	68.5	58
Feb-17	66.1	55.3	68	57
Mar-17	65.2	54.3	67.2	56.3

GROUND VIBRATION

M/s IDL 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. Use of Sequential Blasting Machine.
5. 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)	67350
2.	Pollution control expenses (Statutory)	10328
3.	Gardening Expenses	104873
4.	CSR Expenses	3221972
Total (Rs.)		3404523/-

PART – I

ANY OTHER PARTICULARS FOR IMPROVING THE QUALITY OF ENVIRONMENT.

Mine has planted 2783 plants in and around mining area during the period under review.



For JK CEMENT WORKS, NIMBAHERA