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

CIN : L17229UP1994PLC017199 ISO 9001:2008, ISO 14001:2004 & OHSAS 18001 : 2007 CERTIFIED COMPANY

Ref. No. : NBH-PC-13/ 3792

Date: 20.09.2016

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

SUBJECT: Environmental Statement for the year 2015 - 2016 (02 Copies)

Dear Sir,

Kindly find herewith enclosed **Environment Statement Report** of **Nimbahera Limestone Mine (Ahirpura & Murlia Block) for the year 2015-2016** 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, Chanderia, 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 2016

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 Polluting (Non - Hazardous) (STC CODE) Primary PRIMARY STC Category (SIC CODE) Secondary

(III) **Production Capacity**

Year of Establishment (IV)

(V) Date of last Environmental Statement Submitted

2.0 MMTPA (Limestone)

Year 1971

September, 2015

PART-B

Water & Raw Material Cnsumption

A.V	Vater		
(i)	Over All Consumption	-	KLD
	Process	-	18.5 (Spray on Road / Mining, Drilling etc.)
	Cooling:	-	Nil
	Domestic	-	1.5
	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	07.97 Ltrs / Unit	06.28 Ltrs / Unit	

B. Raw Material Consumption

Name of the Raw Material	Name of Product	Consumption of Raw Material per Unit Product Output		
ſ		During the Previous Du Financial Year	uring the Current Financial Year	
HSD	Limestone	0.6265 Ltrs. Per Ton 0.60	70 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			4
(I)	Colonial	NIL		
(ii)	Industrial	NIL	ч. ¹	

WATER ANALYSES RESULTS

Post Monsoon dated 02.11.2015 (Ahirpura Block)

SAMPLE PARTICULAR	MINE PIT WATER	MINE CRUSHER TUBEWELL	SHARDA CRUSHER TUBEWELL
COLOUR & ODOUR	Clear & Natural	Clear & Natural	Clear & Natural
Ph	7.97	7.36	7.49
TSS	18	28	26
TOTAL HARDNESS	110	376	340
Ca+ HARDNESS	84	340	232
Mg+ HARDNESS	26	36	108
CONDUTIVITY	375	936	982
TDS	225	562	589
CHLORIDES	26	65	108
TURBIDITY	1.68	2.36	2.16

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

WATER ANALYSES RESULTS

Post Monsoon dated 02.11.2015 (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	7.55	7.09	7.9
TSS	28	20	22
TOTAL HARDNESS	300	436	196
Ca+ HARDNESS	248	380	140
Mg+ HARDNESS	52	56	56
CONDUTIVITY	796	1176	460
TDS	478	706	276
CHLORIDES	80	65	30
TURBIDITY	4.19	1.66	1.71

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

AMBIENT AIR QUALITY MONITORING DATA

(SPM Monthly Average in µg/M³)

J.K.CEMENT WORKS, NIMBAHERA

J.K. Cement Limestone Mine (Ahirpura Block)

Year : 2015-16

Month	NEAR MINE GATE	NEAR MINE WATER PUMP HOUSE
Apr-15	357.0	378.0
May-15	329.9	357.0
Jun-15	317.7	345.0
Jul-15	297.3	332.0
Aug-15	338.3	353.0
Sep-15	311.2	341.0
Oct-15	317.7	361.0
Nov-15	347.6	356.0
Dec-15	364.2	384.0
Jan-16	361.5	378.0
Feb-16	353.8	369.0
Mar-16	346.3	372.0

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)

Voar		20	11	F	1	C
rear	•	20	JΤ	. - -	Т	O

Month	Near Mine Gate	Near Ravana
Apr-15	315.0	350.0
May-15	322.0	341.0
Jun-15	310.0	330.0
Jul-15	302.0	325.0
Aug-15	307.0	337.0
Sep-15	312.0	348.0
Oct-15	354.0	327.0
Nov-15	362.0	333.0
Dec-15	356.0	321.0
Jan-16	348.0	318.0
Feb-16	360.0	329.0
Mar-16	371.0	337.0

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	N A	NL A		
Facilities.	N.A.	N.A.		

	and a second		
		Total Quantit	у
		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
5	(ii) Sold	NIL	NIL
	(iii) Disposed	NIL	NIL

SOLID WASTES

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 biasting 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 (Ahirpura Block) NOISE LEVEL MONITORING DATA Monthly Average In dB(A) Year : 2015-16

Month	NEAR MINE HC	WATER PUMP DUSE	NEAR MINE GATE		
	Day Time	Night Time	Day Time	Night Time	
Apr-15	67.2	56.1	68.1	58.3	
May-15	68.2	57.4	69.2	59.3	
Jun-15	66.2	55.6	64.3	57.2	
Jul-15	68.5	56.9	65.8	54.7	
Aug-15	67.8	57.1	69.5	60.0	
Sep-15	66.8	54.9	68.6	55.8	
Oct-15	68.9	58.2	69.0	59.6	
Nov-15	66.4	56.3	67.9	58.0	
Dec-15	68.0	57.0	66.0	55.0	
Jan-16	68.9	56.2	67.5	57.6	
Feb-16	69.7	60.1	68.4	58.3	
Mar-16	67.4	58.1	65.9	59.4	

J.K.CEMENT WORKS, NIMBAHERA J.K. Cement Limestone Mine (Murlia Block) NOISE LEVEL MONITORING DATA Monthly Average In dB(A) Year : 2015-16

1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -	NEAR MINE GATE		Near Ravana	
Month	Day Time	Night Time	Day Time	Night Time
Apr-15	64.2	53.1	66.2	57.0
May-15	65.3	54.6	67.2	58.2
Jun-15	65.0	56.3	64.7	52.6
Jul-15	66.6	54.3	65.5	53.3
Aug-15	66.7	56.3	67.8	55.3
Sep-15	65.6	57.6	64.3	52.8
Oct-15	68.6	59.3	67.5	58.6
Nov-15	67.2	56.5	65.8	54.1
Dec-15	68.0	58.0	65.0	54.0
Jan-16	67.0	58	69	59
Feb-16	66.4	55	68.2	57.9
Mar-16	68.4	56.2	70.2	55.1

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".

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

EXPENDITURE INCURRED ON POLLUTION CONTROL SYSTEM

S. No.	Activity	Recurring Cost per Annum (2015-16) (Rs in Lacs)
1.	Plantation	
14	a) Green belt development arcund the mines	4.86
	out area, by way of aforestation & developing	
	the patched of grass land .	
	b) Avenue plantation	-
-	c) Barren lands	0.27
2.	Dust control & suppression	4.18
3.	Compaction of Haul Roads, boulder pitching of	2.27
	bench edges, etc.	
4.	Monitoring of environmental parameters	0.839
5.	Organisational Set-up	7.12
6.	Socio-Economic Development	114.48
	Total Expenditure	134.019

PART – I

ANY OTHER PARTICULARS FOR IMPROVING THE QUALITY OF ENVIRONMENT.

Mine has planted 3548 plants in and around mining area during the period under review.

For JK CEMENT WORKS, NIMBAHERA

TWORKS NIMBAHERA Distt. CHITTORGARH (Raj.)