J.K. Cement Works, Mangrol (Raj.)

Ref. No.: MGR-PC-13/ 2999

Date: 22.09.2014

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

SUBJECT: **Environmental Statement for the year 2013-2014 (02 Copies)**

Dear Sir,

In accordance to the Notification in the Gazette of India dated 13 March, 1992 under the provision of Sec. (6) of Environment Protection Act, 1986 wherein certain processes require consent under section 21 of Air (Prevention & Control) Act, 1981 & under section 25 of water (Prevention & Control) Act, 1974 or both or Authorization under the Hazardous Waste (Management, Handling and Transboundary Movement) Rule 2008 issued under the (Environment Protection) Act 1986.

We are enclosing herewith **Environment Statement Report** of **Karunda Limestone Mine for the year 2013-2014** for your kind 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, Chanderia
Distt. - CHITTORGARH (RAJ)

➲Pollution Control deptt.

Government of India
Ministry of Environment and Forest

" FORM – V "

(See rule 14)

ENVIRONMENTAL STATEMENT FOR THE FINANCIAL YEAR ENDING THE 31ST MARCH 2014

Karunda 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	**K.K. Jalori** **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	2.00 MMTPA (Limestone)
(IV)	Year of Establishment	Year 2001
(V)	Date of last Environmental Statement Submitted	September, 2013

PART – B

Water & Raw Material Cnsumption

A. **Water**

(i)	Over All Consumption	-	M^3/day
	Process	-	91.0 (Spray on Road / Mining, Drilling etc.)
	Cooling:	-	Nil
	Domestic	-	1.0
	Total	-	**92.0**

(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	2.99 Ltrs / Unit	18.87Ltrs / 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	0.79 Ltrs. Per Ton	0.74195 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

(Post Monsoon dated 02.11.2013)

SAMPLE PARTICULAR	MINE PIT WATER	MINE TUBE WELL WATER	CHARLIA HANDPUMP WATER
COLOUR & ODOUR	Clear & Natural	Clear & Natural	Clear & Natural
PH	7.24	7.61	7.21
TSS	49	48	44
TOTAL HARDNESS	152	188	340
Ca+ HARDNESS	128	120	280
Mg+ HARDNESS	24	68	60
CONDUCTIVITY	380	444	666
TDS	229	266	399
CHLORIDES	24	36	24
TURBIDITY	0.99	1.0	2.50

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

AMBIENT AIR QUALITY MONITORING DATA

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

J.K.CEMENT WORKS, MANGROL

KARUNDA MINE

Year : 2013-14

Month	NEAR MINE OFFICE	NEAR RAVANA OFFICE
Apr-13	312	326
May-13	322	350
Jun-13	311	357
Jul-13	303	316
Aug-13	295	309.1
Sep-13	386	372
Oct-13	319.7	366.5
Nov-13	344	364
Dec-13	334.2	371.9
Jan-14	332	350
Feb-14	330	360
Mar-14	322.5	349.5

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_2), 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 92 M^3/day. 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. By providing earmuffs and earplugs to eligible miners.

4. Blasting between 12.00 noon to 3.00 PM when air density is low.
5. Use of Air Decking & sufficient column stemming in the blast holes.
6. Use of Non Electric Detonator / Bottom Initiation System.

NOISE LEVEL DATA

J.K.CEMENT WORKS, MANGROL

KARUNDA MINE

Monthly Average In dB(A)

Year : 2013-14

Month	NEAR MINE OFFICE		NEAR RAVANA OFFICE	
	Day Time	Night Time	Day Time	Night Time
Apr-13	71	61.3	71.6	62.1
May-13	70.2	60.1	71.1	61.7
Jun-13	69.3	59.2	70.4	60.8
Jul-13	70.3	60.5	71.3	61.5
Aug-13	69.8	59.7	70.2	60.4
Sep-13	68.5	58.4	69.4	59.6
Oct-13	70.2	60.7	71.2	61.6
Nov-13	69.5	59	70.6	60.5
Dec-13	68.8	58.6	71.5	61.3
Jan-14	69.4	59.5	70.9	60.9
Feb-14	68.4	59	69.3	58
Mar-14	68	58.5	69	59

GROUND VIBRATION

M/s CIMFR(Central Institute of Mining and fuel research) 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

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(2013-14) (Rs in Lacs)
1.	Plantation a) Green belt development around the mines out area, by way of aforestation & developing the patched of grass land . b) Avenue plantation c) Barren lands	5.02 - -
2.	Dust control & suppression	1.61
3.	Compaction of Haul Roads, boulder pitching of bench edges, etc.	3.90
4.	Monitoring of environmental parameters	1.00
5.	Organisational Set-up	4.80
6.	Socio-Economic Development	43.36
	Total Expenditure	59.69

PART – I

ANY OTHER PARTICULARS FOR IMPROVING THE QUALITY OF ENVIRONMENT.

Mine has planted 2550 plants in and around mining area during the period under review.

For JK CEMENT WORKS, NIMBAHERA