JK Cement WORKS
MUDDAPUR
(Unit : J.K. Cement Ltd.)
CIN : L17229UP1994PLC017199

Phone : +91-8350-289000
Fax : +91-8350-289001
E-mail : factory.muddapur@jkcement.com

Works : P.O. Muddapur - 587 122
Dist. Bagalkot (Karnataka) India

No. - JKCW/ENV./CFO (Plant)/60/10 **Date: 01-09-2017**

To
The Member Secretary
Karnataka State Pollution Control Board,
"Parisar Bhavan" 4th & 5th Floor,
49, Church Street, Bangalore- 560 001

Subject- Environmental Statement Report for the financial year April-2016 to March-2017

Ref: 1- Notification no. G.S.R. 329(E), dated 13.03.92. and G.S.R. 386(E), dated 22.4.93
2- Combined Consent Order No. AWH-301684 dated 19-12-2016

Dear Sir

With reference to the above, please find herewith enclosed Environmental Statement Report (Form-V) of J.K. Cement Works, Village- Muddapur, Dist. - Bagalkot (Karnataka) for the financial year **2016-2017**.

Thanking you,

Yours faithfully,
J.K. Cement Works, Muddapur (Karnataka)

R.B.M. Tripathi
(Unit Head)

Encl:

1- Environmental Statement in duly filled Form-V
2- Treated waste water of Captive Power Plant analysis report as per annexure-1
3- Treated STP waste water analysis report as per annexure-2
4- Ambient air quality monitoring report as per annexure-3
5- Stack emission monitoring report as per annexure-4
6- Fugitive emission monitoring report as per annexure-5
7- Noise monitoring report as per annexure-6

CC:

1- The Addl. Principle Chief Conservator of Forest (C), Ministry of Environment & Forests, Regional Office (South Zone), Bangalore- 560034
2- Scientist 'E' & In-charge, Central Pollution Control Board, 1st & 2nd Floors, Nisarga Bhavan, A-Block, Thimmaiah Main Road, 7th D Cross, Shivanagar, Bengaluru –560 079
3- Environment Officer, Karnataka State Pollution Control Board, Bagalkot- 587 102

FORM – V

ENVIRONMENTAL STATEMENT REPORT FOR THE FINANCIAL YEAR 2016-17

PART – A

(I)	Name & Address of the Owner / Occupier of the Industry Operation or Process	Mr. R.B.M. Tripathi (Unit Head) J.K. Cement Works (Unit: J. K. Cement Limited) Village- Muddapur, Taluka- Mudhol, District-Bagalkot (Karnataka)- 587122
(II)	Industry Category Primary (STC CODE) Secondary (SIC CODE)	 Large Scale Red Category
(III)	Production Capacity	3.5 MTPA (Cement)
(IV)	Year of Establishment	Year 2009
(V)	Date of last Environmental Statement Submitted	23-08-2016

PART – B

Water & Raw Material Consumption and Cement Production

A. Water

(i) Over All Consumption - N.A. (As plant is based on dry Process Technology)
(ii) Process - Nil
(iii) Cooling and power plant - 86770 KL
(iv) Domestic - 31239 KL

Consumption per unit of production

Name of the Product	Process Water Consumption per unit of Product Output	
	During the Previous Financial Year (2015-16)	During the Current Financial Year (2016-17)
Cement (OPC, PPC, Slag) and Tile fixer adhesive	0.0604 m3/mt. of cement	0.0521 m3/mt. of cement

B. Raw Material Consumption in Cement production

Name of the **Raw Material**	**Name of Product**	**Consumption of Raw Material per Unit Product Output (MT/MT of Cement)**	
		During the Previous Financial Year (2015-16)	During the Current Financial Year (2016-17)
Lime Stone	Cement	1.215	1.191
Iron-ore		0.025	0.023
Coal/Pet coke		0.079	0.077
Gypsum		0.013	0.015
Dry fly ash		0.092	0.113
Pond ash		0.196	0.172
Slag		0.531	0.464
		Consumption of Raw Material per Unit Product Output (MT/KWH of Power)	
Coal/Petcoke (CPP)	Power	0.000664	0.000656

C. Total cement (OPC, PPC and Slag cement) production (MT):

During the Previous Financial Year (2015-16)	During the Current Financial Year (2016-17)
OPC & PPC- 1516226 PSC- 308159	OPC & PPC- 1270247 PSC- 395249

D. Total Tile fixer production (MT):

During the Previous Financial Year (2015-16)	During the Current Financial Year (2016-17)
1251.60	432.75

E. Raw Material Consumption in Tile fixer production

Name of the **Raw Material**	**Name of Product**	**Consumption of Raw Material per Unit Product Output (MT/MT of Cement)**	
		During the Previous Financial Year (2015-16)	During the Current Financial Year (2016-17)
Cement Consumption	Tile fixer adhesive	0.500	0.478
Ground stone powder		0.499	0.425
Polymer and product performance enhance		0.001	0.001

F. Total Power production from Captive Power Plant (KWH):

During the Previous Financial Year (2015-16)	During the Current Financial Year (2016-17)
238354520	158444110

G. Total Power consumption in Cement plant (KWH/Ton of Cement):

During the Previous Financial Year (2015-16)	During the Current Financial Year (2016-17)
77.38	84.74

H. Total Power consumption in Tile fixer adhesive production (KWH/Ton of Tile fixer adhesive):

During the Previous Financial Year (2015-16)	During the Current Financial Year (2016-17)
6.49	6.36

I- Total Power consumption in Captive Power Plant (KWH/ KWH of power production):

During the Previous Financial Year (2015-16)	During the Current Financial Year (2016-17)
0.0897	0.0899

PART - C

Pollutant Discharged to Environment / Unit of Output

(Parameters as specified in the consent issued)

S. No.	**Pollutants**	**Quantity of Pollutants Discharged (Mass / day) (tonne/day)**	**Concentrations of Pollutants in discharged (Mass / Volume) (kg/m^3)**	**Percentage of variation from prescribed standard with reasons**
(a)	Water	As the plant is being operated on dry process technology, no liquid effluent is generated from the cement plant process. Waste water generated from Captive power plant is treated in neutralization pit and after neutralization, it is used for dust suppression, gardening and cooling purpose. Report of treated water is attached as **Annexure-1**		

		Domestic waste water generated from residential colony is treated in STP and treated water is used in existing cement plant for cooling purpose and gardening. Report of treated waste water of STP is attached as **Annexure-2**
(b)	Air	Please refer **Annexure- 3** (Ambient air quality monitoring), **Annexure- 4** (Stack emission monitoring), **Annexure- 5** (Fugitive emission monitoring) and **Annexure- 6** (Noise monitoring)

PART – D

(As specified under Hazardous waste / Management and Handling rules, 1989 as Amended - 2000)

Hazardous Waste		**Total Quantity (KL)**	
		During the Previous Financial Year (2015-16)	During the Current Financial Year (2016-17)
(a) From Process	(a) Category 5.1- Used Oil	Total generated Quantity 12.776 KL including last year's balance qty. quantity 2.062 KL, Out of 12.776 KL, Qty. 10.506 KL was self-used for lubrication in our own cement plant and 2.27 KL was in balance.	Generated Quantity in 2016-17 = 9.77 KL including balance qty. of 2015-16 i.e. 2.27 KL. Out of 9.77 KL, Qty. 4.20 KL Used oil used in the plant for lubrication purpose and Qty. 5.57 KL was in balance.
	(b) Category 5.2- Oil soaked cotton waste	Total generated oil soaked cotton waste was 03 kg and it was disposed of in own cement plant's kiln.	Total generated oil soaked cotton waste was 24 kg and it was disposed of in own cement plant's kiln.
	(b) Category 5.2- Oil Filter	Total generated oil filters - NIL.	Total generated oil filters was 6 nos. and these were disposed of in own cement plant's kiln.
	(c) Category 34.3- ETP's sludge of M/s BASF India Ltd. (Karnataka)	Received ETP's sludge of M/s BASF India Ltd. (Karnataka) was 20.34 MT and disposal was 376.105 MT (Including last year's generated quantity 355.765 MT).	➢ Received, disposed and balance qty. of ETP's sludge was 499.85, 383.88 and 115.97 MT respectively. ➢ Received, disposed and balance qty. of GEIPL's waste mix (Liquid & Solid) was 19.42, 0.0 and 19.42 MT respectively.
	(d) Old Batteries	NIL	72 Nos.
	(e) E-Waste-	NIL	875 kg
(b) From Pollution Control	Nil	Nil	

Facilities			

PART – E

Solid Wastes

Solid Waste		Total Quantity	
		During the Previous Financial Year (2015-16)	During the Current Financial Year (2016-17)
1 (a)	From Process (Fly ash from Captive Thermal Power plant)	NIL from Cement Plant Ash generated at our CPP (in MT)-33915.626 Disposal of Fly ash which was generated at our CPP (in MT) - 33915.626 and balance qty. was NIL.	NIL from Cement Plant Ash generated at our CPP (in MT)-14520.45 Disposal of Fly ash which was generated at our CPP (in MT) - 14520.45 and balance qty. was NIL.
1 (b)	Fly ash from other Thermal Power plant/KPCL	Ash procured from RTPS or outside source (in MT)-113695.199. Disposal of Fly ash which was procured from RTPS or outside source (in MT)- 95302.37 and balance qty. was 36514.17 MT.	Ash procured from RTPS or outside source (in MT)-123201.15. Disposal of Fly ash which was procured from RTPS or outside source (in MT)- 145494.51 and balance qty. was 14220.81 MT.
2	From Pollution Control facilities	Dust collected in ESP, Bag House and Bag Filters are recycled back into the process.	Dust collected in ESP, Bag House and Bag Filters are recycled back into the process.
3	(i) Qty. recycled or reused within the unit. (ii) Sold (iii) Disposed	Fly ash generated in JK Cement Plant's Captive power plant and dust collected in APCD were re-used 100% in cement manufacturing and Fly ash from other Thermal Power plant/RTPS was used 72.30 %. Nil Nil	Fly ash generated in JK Cement Plant's Captive power plant and dust collected in APCD were re-used 100% in cement manufacturing and Fly ash from other Thermal Power plant/RTPS was used 91.09 %. Nil Nil

PART – F

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

Hazardous waste: Hazardous waste i.e. used oil is drained from Machineries / Equipments of the different sections of plant. It is collected in empty drums and barrels and stored at hazardous waste storage site. It is disposed of either to sell to authorize recycler or self-reused in cement plant for lubrication.

Solid waste: Dust collected in pollution control equipment is recycled back in cement manufacturing process and fly ash generated in Captive Thermal Power Plant which contains Silica, Alumina, Iron, Sulphur tri oxide etc., is used in cement manufacturing in own cement plant. Besides it, Sewage Treatment Plant Sludge is used as manure in gardening. Hence, there is no solid waste generated during the process of cement manufacturing and others.

PART – G

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

Following measures have been adopted for abatement of pollution, conservation of natural resources:-

Conservation of limestone-

Limestone is being used for the manufacturing of cement by the proper blending of different grade of limestone for preparation of proper raw mix design which can be produced a good quality of cement. The raw mix design has been prepared in such a way that it reduces the limestone stone saturation factor by which substantial quality of limestone has been conserved. In the same manner as per the Regulation of Bureau of Indian Standard we are also using the fly ash in grinding of cement manufacturing up to 30% of the total cement manufactured which ultimately reduces the raising of limestone from mines. By reduction of consumption of limestone in cement manufacturing process it also leads to the reduce the consumption of fossil fuel and it ultimately reduce the quantity of generation of different pollutant like suspended particulate matter, emission of SO_2 and NO_x, fugitive emission from various stages of handling of limestone (Drilling to Grinding stages). Substantial quantity of electrical and thermal energy has been also saved.

Utilization of fly ash for the manufacturing of cement-

We have a Captive Power Plant having capacity of 25 MW X 2. The fly ash generated from it, is stored in hopper and from there, it is conveyed to cement plant through completely covered truck. In cement plant, it is being stored in closed silos. From Truck to Silo, Fly ash is conveyed through pneumatic system and from silo, it is directly fed in cement mill for the cement grinding process.

Use of STP treated water for the gardening purpose-

We have latest and advance technology based Sewage Treatment Plant. A sewage treatment plant has been envisaged on the basis of flow rate- 75 KL per day. The total quantity of treated water is being used in gardening and dust suppression.

Extensive plantation in and around the plant-

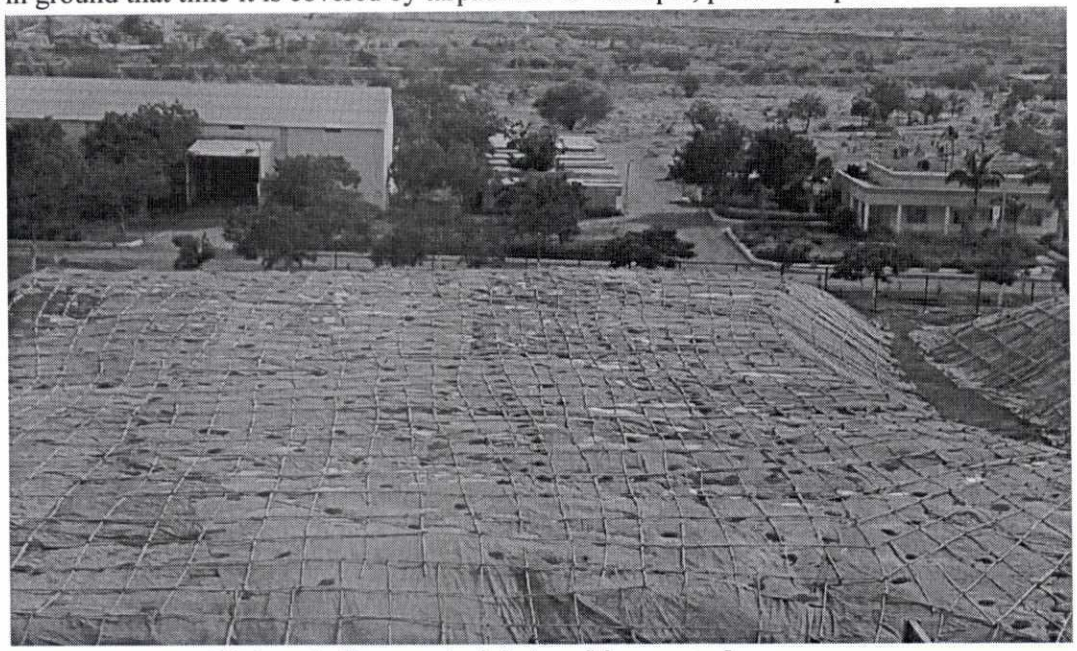
We have a horticulture officer for the forestation and greenery development program at our plant and mines under the supervision of senior experienced person.

Financial Year	No. of Plantation in Cement plant and Colony area
2007-2008	500
2008-2009	2242
2009-10	2317
2010-11	5040
2011-12	5483
2012-13	26687
2013-14	41808
2014-15	10104

2015-16	11739
2016-17	1394

Covering of raw materials-

i- All the raw material is being stored in the covered yards if in case any raw material stored in ground that time it is covered by tarpaulin. For example, please see picture. 1.



Picture 1- Raw material stored in covered manner

ii- The conveyor belts are fully covered. For example, please see picture. 2.

Picture 2- Covered raw material belt conveyor

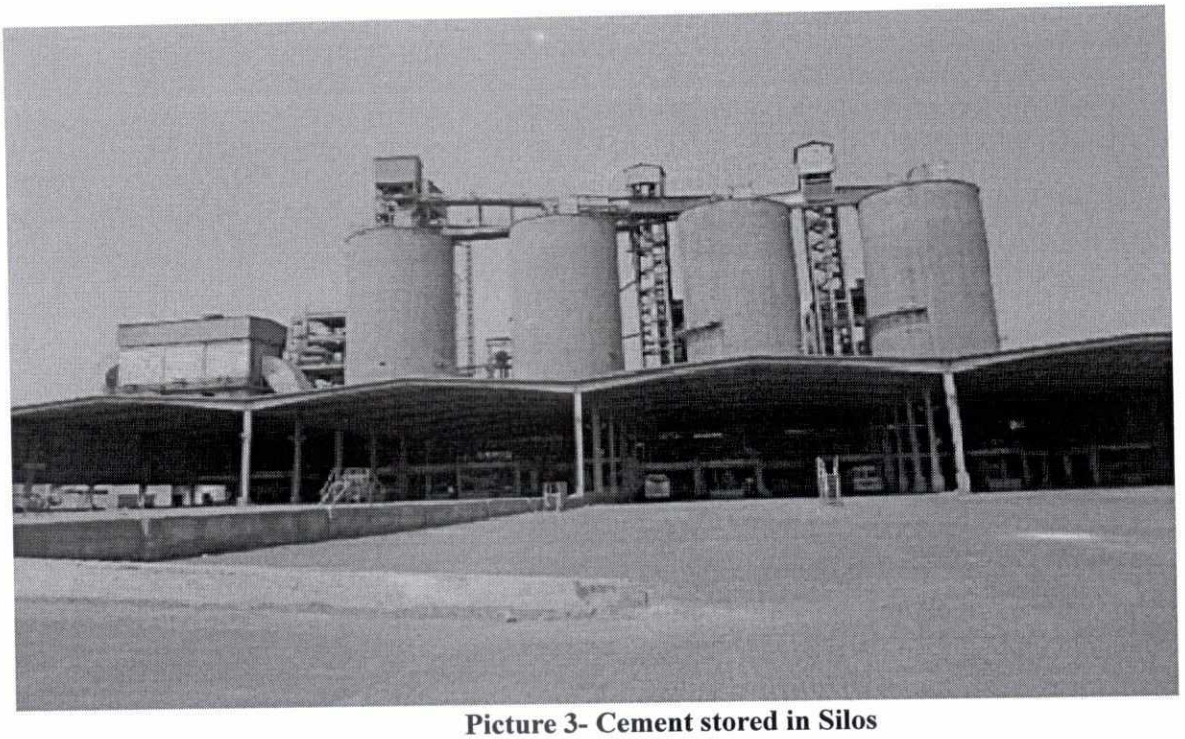
iii- Clinker and cement is being stored in the covered silos. For example, please see picture. 3.

iv- CPPs treated water is being utilized for the regular road water spraying.

Concreting of Kachcha roads/floor-

Maximum roads of plant and colony are being concreted / paved as well as flowers and plantation is being done side by the roads for the beautification. Development of plantation and greenery

along the road and unused areas. Cemented flooring work is being done in kiln and raw mill section.



Picture 3- Cement stored in Silos

Scheduled maintenance and monitoring of Pollution Control Devices-

All the Pollution Control Devices have been maintained as per scheduled maintenance by dedicated environmental management team which is comprises of mechanical, electrical and environmental officers and monitoring of all these have been done regularly as per PCB Norms.

The list of major Pollution Control Devices installed is as under:-

Sr. No.	Pollution Control Devices attached with	Pollution Control Devices installed
1	Limestone Crusher	Bag Filter
2	Raw Mill/Kiln	Bag House
3	Coal Mill	Bag Filter
4	Raw Material Transport System	Bag Filter
5	Cooler	Electro Static Precipitator
6	Clinker transport	Bag Filter
7	Clinker Storage	Bag Filter
8	Cement Mill, 2 Nos.	Bag Filter
9	Cement Mill Separator venting, 2 Nos.	Bag Filter
10	Packing Plant, 4 Nos.	Bag Filter
11	Coal crusher	Bag Filter
12	CPP	Electro Static Precipitator
13	Stack attached to slag grinding unit	Bag Filter

Modifications for the year 2016-17 for energy conservation and better environment-

1- Cooler modification by replacing control impact system to air blast control system inlet. Energy consumption load was reduced from 712 to 697 Kcal/Kg Clinker and removal of venturies of cooler fans with addition of K-31, fan 200 kW & replacement of K-11 fan from 160 kW to 200 kW. Annual energy is saved approx. 4448495 kWh.

2- Installation of VFD in PA fan1 & 2 (At a time only one operating). By this, Annual energy is saved approx. 71280 kWh.

3- Boiler feed pump one stage blinded in pump no. 1. Annual energy is saved approx. 190080 kWh.

4- Installation of VFD in new pump no.1. Annual energy is saved approx. 84480 kWh.

5- Boiler feed pump no. 2 & 3, One stage Blinded (One pump operating). Annual energy is saved approx. 72000 kWh.

6- Auxilary transformer kept off during shutdown period of power plant to reduce no load losses of transformers cap. 2X3.15MVA+5X2MVA (taken 0.2 % Losses) (Taking 34 kW losses/hr). Annual energy is saved approx. 17952 kWh.

7- Installation of VFD in diesel firing pump 431 FP 520A. Annual energy is saved approx. 3696 kWh.

8- Installation of VFD in rotary feeder hot dust bin 331 RF 620, cap 11kW. Annual energy is saved approx. 15840 kWh.

9- Replacement of lime stone stacker belt conveyor (211BC100) motor from 200 kW to 160 kW from spare stock). Annual energy is saved approx. 22176 kWh.

10- Replacement of main water tank pump no.2 motor from 67 kW to 55kW. Annual energy is saved approx. 22176 kWh.

11- Replacement of CM 1 & CM 2 motor 53 kW with 45 kW. Annual energy is saved approx. 2760 kWh.

12- Replacement of raw mill hopper reversable belt motor of 11 kW with 7.5 kW. Annual energy is saved approx. 1728 kWh.

13- Replacement of high mast Tower Light 20 MTR 288 Nos 400 Watt HPSV with 192 Nos LED flood sigma 150 Watt in 24 towers. Annual energy is saved approx. 62208 kWh.

14- Replacement of high mast tower 15 MTR, 44 nos. 400 Watt HPSV with 44 NOS. LED flood sigma 150 Watt in 11 towers. Annual energy is saved approx. 7920 kWh.

15- Replacement of 25 nos 125 W, HPSV lamp in to 25 Nos, LED retrofit sigma 20W in slag mill area. Annual energy is saved approx. 1260 kWh.

16- Replacement of 164 nos, 36 Watt conventional tuberod with 20 Watt LED tuberod in coal mill MCC, CCR, store office, Kiln office, slag mill Mech., office etc. Annual energy is saved approx. 1260 kWh.

17- Replacement of 6 nos (400 WattX2), HPSV light to 100 Watt LED flood light 100 Watt in dispatch gate parking area. Annual energy is saved approx. 1992 kWh.

18- Replacement of 6 nos HPMV 400 Watt in to LED flood sigma 120 Watt in main gate road & 2nos HPMV 125W in to 2 nos LED retrofit sigma 20W in preheater new side. Annual energy is saved approx. 390 kWh.

PART – H

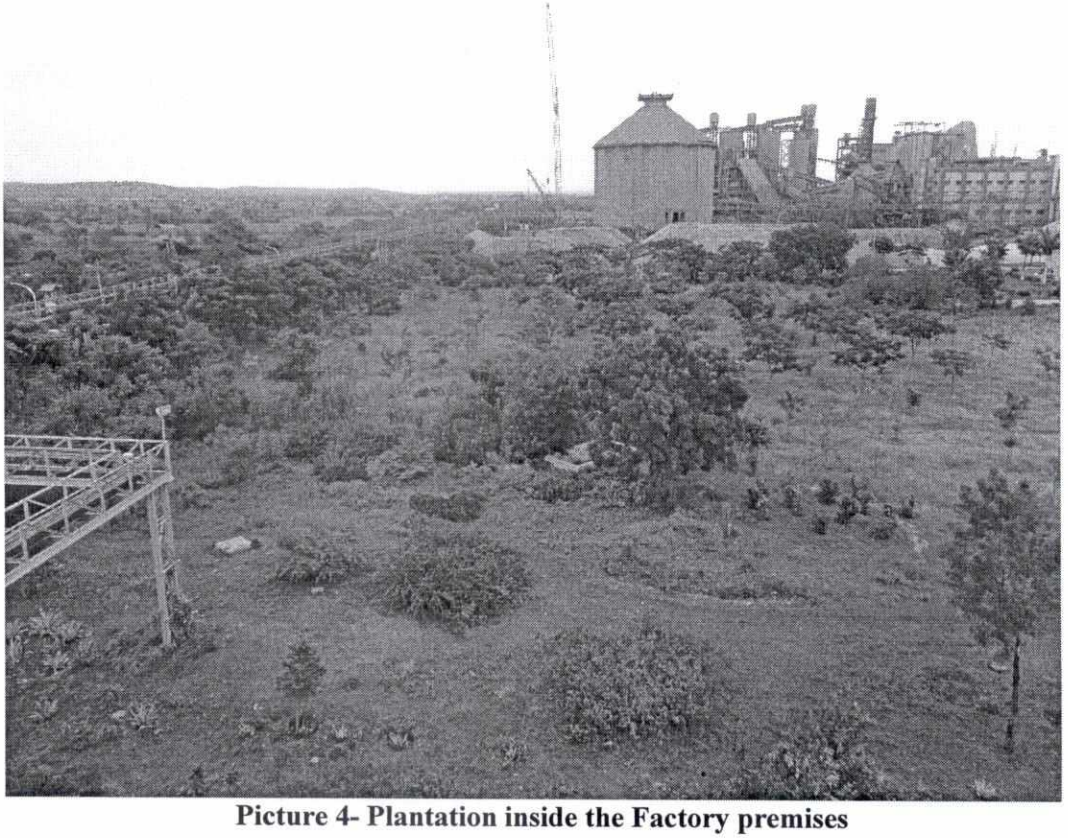
ADDITONAL MEASURES / INVESTMENT PROPOSALS FOR ENVIRONMENTAL PROTECTION INCLUDING ABATEMENT POLLUTION, PREVENTION OF POLLUTION.

1- Green belt development and tree plantation is our ongoing process. We are continuously doing the plantation in and around the cement plant, power plant, colony and mines area. For example, please see the pictures 4 & 5.

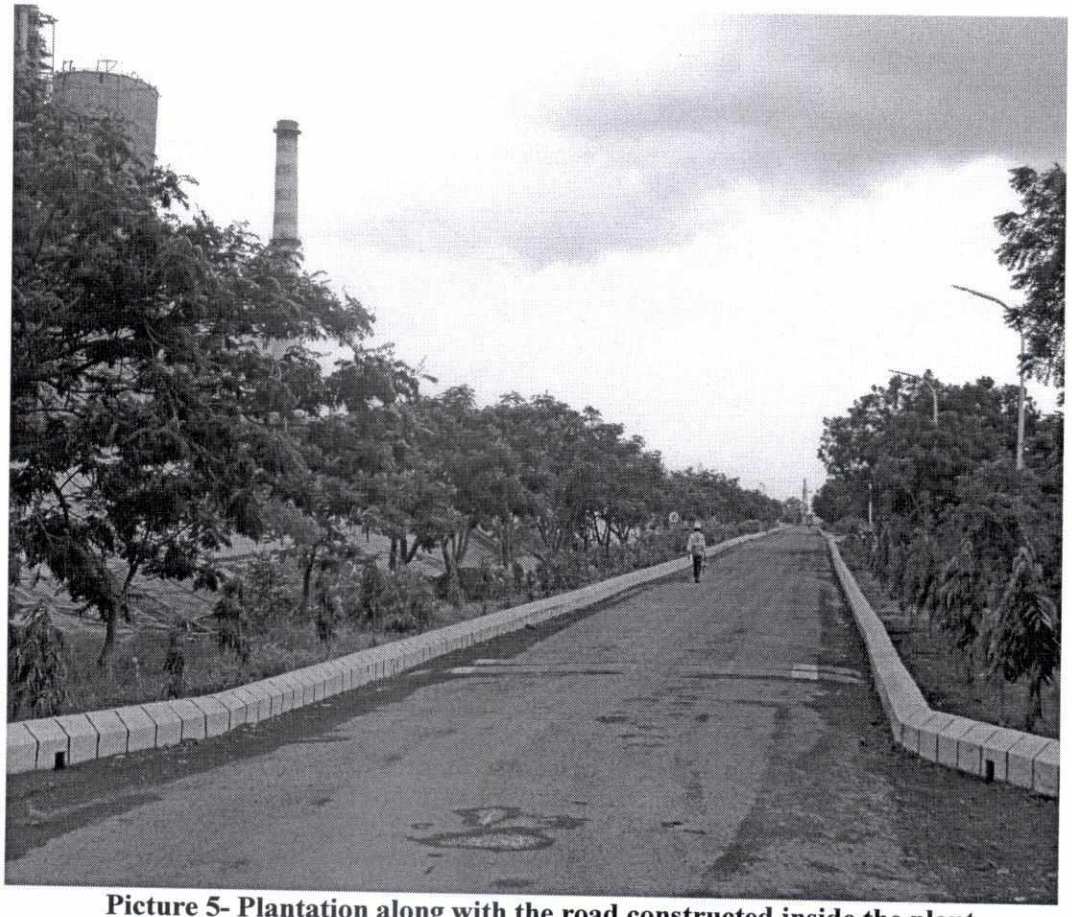
2- We have installed 2 Nos. continuous ambient air quality monitoring systems (CAAQMS). Please see the picture of one instrument in Picture 6.

3- We have installed 5 Nos. continuous emission monitoring systems (CEMS). Please see the picture of one instrument in picture 7.

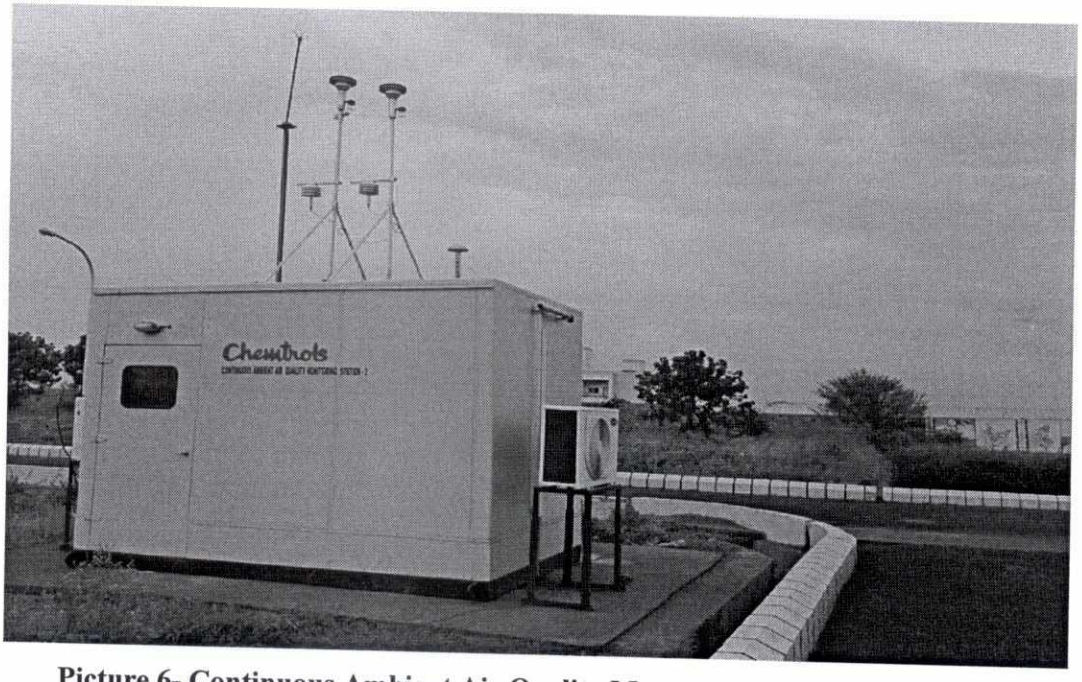
4- We have installed camera at captive power plant's waste water discharging point. Please see the picture of one instrument in picture 8.



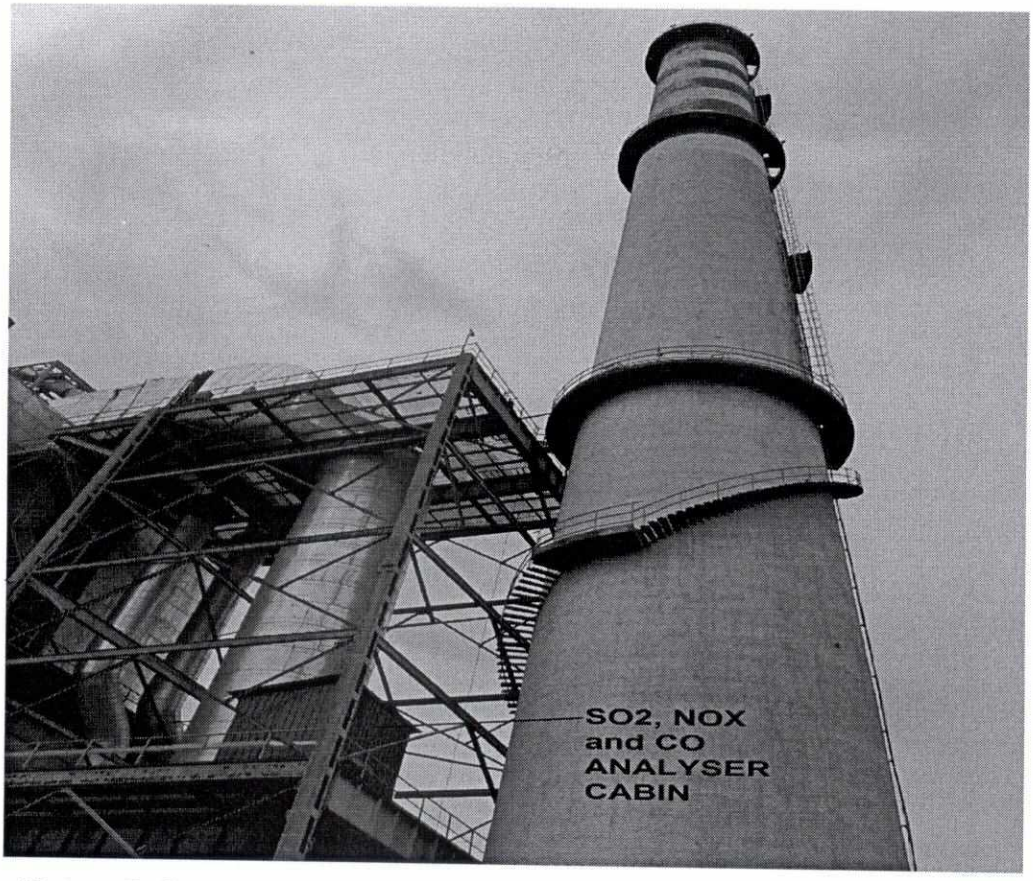
Picture 4- Plantation inside the Factory premises



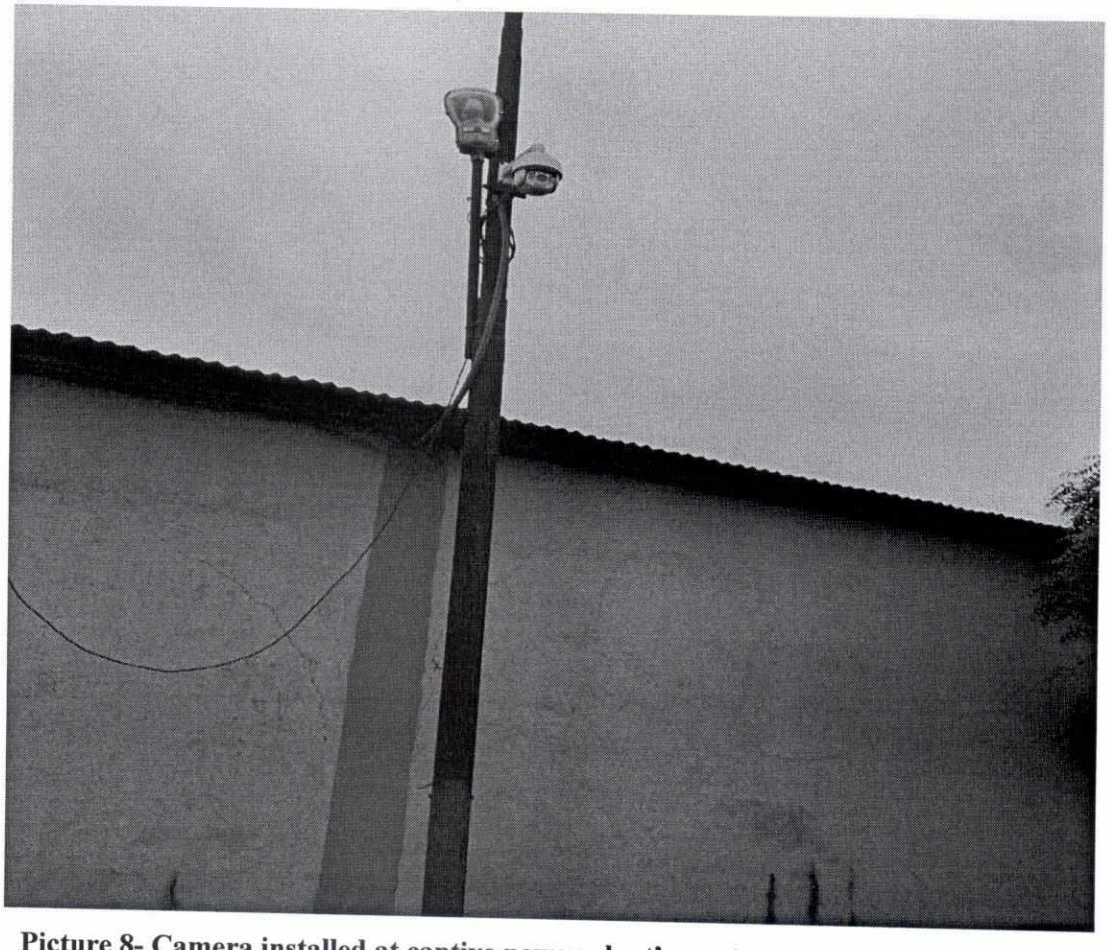
Picture 5- Plantation along with the road constructed inside the plant



Picture 6- Continuous Ambient Air Quality Monitoring Systems (CAAQMS) installed in Residential Colony



Picture 7- Continuous Emission Monitoring Systems (CEMS) installed at Raw mill/Kiln stack



Picture 8- Camera installed at captive power plant's waste water discharging point

PART – I
ANY OTHER PARTICULARS FOR IMPROVING THE QUALITY OF ENVIRONMENT.

1- Domestic waste is collected and disposed properly. Please see the picture 9.

Picture 9- Door to door collection of domestic waste

2- We have registered with Common Bio Medical Waste Disposal Facility, Bagalkot and disposing our Biomedical Waste with them. Please see the picture 10.

Picture 10- CBMWDF's Vehicle for collecting Bio Medical Waste

3- We have full-fledged Environment Department with three separate cells, one for monitoring and one for maintenance of pollution control equipment and one for Green Belt development.

4- Monitoring of stack emission, ambient air and water quality is being done regularly. Maintenance deptt. is regular checking and maintaining all the pollution control devices.

5- Domestic waste water is treated in STP and treated waste water is used for gardening.

6- Horticulture Department is taking care of tree plantation and green belt development.

7- Some committees have been formed by company i.e. Stoppage Analysis Committee, Spillage Study & Control Committee, Safety Committee, Task force committee for Scrap material and Committee of shining the plant area. These committees work to improve the environment in different ways.

8- Industry is taking energy conservation measures.

9- Company helps the engineering and management students to carry out their project works.

10- Fugitive dust, ambient air and Noise are being monitored regularly.

11- Surface water, treated waste water and ground water are being testing time to time.

12- Industry has been certified for standards ISO 9001: 2008, ISO 14001: 2004 and OHSAS 18001.

For J.K. Cement Works, Muddapur (Karnataka)
(Unit: J.K. Cement Limited)

R.B.M. Tripathi
(Unit Head)

Annexure – 1

J.K. Cement WORKS, MUDDAPUR (KARNATAKA)

(Unit: J.K. Cement Ltd.)

EFFLUENT WATER ANALYSIS REPORT (Monthly Average) FOR THE MONTH OF APRIL-2016 TO MARCH-2017

Constituents	Colour (Hazen)	Odour	Suspended Solids (mg/L)	pH value	Oils and Grease (mg/L)	Biochemical Oxygen Demand (mg/L)
Permissible limit	**5**	**Unobjectionable**	**100**	**5.5 to 9**	**10**	**30**
Apr-16	1.2	O.L.	59.88	8.0	Nil	Nil
May-16	1.2	O.L.	64.08	8.1	Nil	Nil
Jun-16	1.1	O.L.	56.65	8.1	Nil	Nil
Jul-16	1.2	O.L.	57.2	8.2	Nil	Nil
Aug-16	1.2	O.L.	51.4	8.1	Nil	Nil
Sep-16	1.1	O.L.	54.8	8.0	Nil	Nil
Oct-16	1.0	O.L.	52.5	8.1	Nil	Nil
Nov-16	1.4	O.L.	61.4	8.0	Nil	Nil
Dec-16	1.2	O.L.	67.9	7.7	Nil	Nil
Jan-17	1.2	O.L.	49.9	8.0	Nil	Nil
Feb-17	1.2	O.L.	49.9	8.0	Nil	Nil
Mar-17	1.3	O.L.	53.3	8.0	Nil	Nil
Yearly Avg	**1.2**	–	**56.6**	**8.0**	–	–
Yearly Minimum	**1.0**	**0.0**	**49.9**	**7.7**	**0.0**	**0.0**
YearlyMaximum	**1.4**	**0.0**	**67.9**	**8.2**	**0.0**	**0.0**

Vani Patil
Monitored By

Dr. Saurabh Kumar
Mgr (Env)

Annexure – 2

J.K. Cement WORKS, MUDDAPUR (KARNATAKA)

(Unit: J.K. Cement Ltd.)

STP water Analysis Report (Monthly Average) for the Month of April-2016 to March-2017

Sl.No.	Month	Total suspended solids	pH	BOD
Tolerance limit		**30**	**6 To 9**	**20**
1	**Apr-16**	22.75	7.01	14.01
2	**May-16**	24.60	7.17	15.22
3	**Jun-16**	22.44	7.00	14.87
4	**Jul-16**	22.87	7.30	15.34
5	**Aug-16**	23.25	7.42	14.56
6	**Sep-16**	23.25	7.42	14.56
7	**Oct-16**	22.12	7.36	15.61
8	**Nov-16**	23.29	7.34	15.21
9	**Dec-16**	22.50	7.31	16.01
10	**Jan-17**	21.60	7.18	14.68
11	**Feb-17**	22.79	10.39	19.03
12	**Mar-17**	22.56	7.60	15.57
Yearly Min.		**21.6**	**7.0**	**14.0**
Yearly Max.		**24.6**	**10.4**	**19.0**
Yearly Avg.		**22.8**	**7.5**	**15.4**

Vani patil
Analysed by

Dr. Saurabh Kumar
Mgr. (Env.)

Annexure- 3

J.K. Cement WORKS, MUDDAPUR (KARNATAKA)

CEMENT PLANT & 2X25 CPP MW

YEARLY AAQM REPORT (SO_2, NO_2, PM_{10}, $PM_{2.5}$), FOR THE MONTH OF APRIL-2016 TO MARCH-2017

(ALL VALUES IN MICROGRAMS / CUBIC METER)

Month	Sl. No.	Date	Week	SO_2 Locations				NO_2 Locations				PM_{10} Locations				$PM_{2.5}$ Locations			
				A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D
APRIL	1	01.04.2016	1st	5.3	6.2	5.7	6.0	6.7	7.2	6.3	7.2	59.1	58.7	59.6	59.4	16.7	33.3	29.2	41.7
	2	02.04.2016		6.5	5.8	6.5	5.5	7.0	6.8	7.2	6.5	57.6	57.3	57.3	58.0	45.8	33.3	45.8	33.3
	3	04.04.2016	2nd	5.7	5.8	5.7	6.5	6.8	6.2	6.3	7.5	59.2	58.3	59.4	59.6	16.7	33.3	37.5	33.3
	4	08.04.2016		6.2	6.5	5.8	6.0	7.2	7.5	6.2	7.0	59.5	59.6	60.8	58.4	50.0	25.0	37.5	33.3
	5	09.04.2016	3rd	5.5	6.2	5.5	6.5	6.8	7.0	6.3	7.2	57.4	57.5	59.8	57.1	33.3	16.7	37.5	54.2
	6	12.04.2016		6.0	6.5	6.2	6.2	7.0	7.5	7.0	7.0	58.0	58.0	56.8	58.9	25.0	50.0	33.3	41.7
	7	13.04.2016	4th	6.2	6.8	6.2	6.7	7.5	7.5	7.3	7.2	57.6	57.9	59.0	58.5	45.8	25.0	45.8	33.3
	8	15.04.2016		6.0	6.7	6.0	6.0	7.0	7.2	7.5	7.0	59.2	58.5	58.2	59.5	16.7	50.0	37.5	41.7
MAY	1	02.05.2016	1st	6.5	5.8	5.7	6.7	7.7	7.8	6.7	7.5	59.8	59.3	59.3	58.9	29.2	33.3	37.5	41.7
	2	03.05.2016		5.8	6.0	6.0	6.0	6.7	7.0	7.5	7.7	58.8	59.9	58.8	57.7	25.0	33.3	37.5	29.2
	3	04.05.2016	2nd	5.8	5.5	6.0	5.5	6.7	7.3	7.5	7.5	59.8	59.4	59.0	58.4	45.8	33.3	37.5	41.7
	4	09.05.2016		6.5	6.5	6.5	6.7	7.2	7.0	7.7	7.5	59.3	58.5	57.9	59.1	50.0	25.0	29.2	50.0
	5	11.05.2016	3rd	6.8	5.3	6.3	6.8	7.2	7.0	7.5	7.2	57.9	57.0	59.2	59.0	16.7	33.3	33.3	45.8
	6	14.05.2016		6.2	6.0	6.3	5.7	7.3	7.5	7.5	7.5	58.6	58.9	57.8	59.6	29.2	25.0	37.5	29.2
	7	16.05.2016	4th	6.8	5.2	5.7	5.7	7.5	7.2	6.7	7.7	56.3	58.0	58.3	58.4	16.7	29.2	37.5	45.8
	8	17.05.2016		5.5	6.5	6.0	6.5	7.0	7.0	7.2	7.5	56.1	59.4	59.2	59.3	16.7	33.3	37.5	33.3
	9	18.05.2016		5.5	5.5	6.5	5.5	7.5	7.8	7.5	6.5	56.3	58.0	58.3	58.4	33.3	33.3	45.8	54.2
JUNE	1	01.06.2016	1st	5.5	6.0	6.2	5.5	6.8	7.2	7.3	6.8	60.2	56.3	57.1	59.1	16.7	33.3	25.0	45.8
	2	03.06.2016		5.2	6.2	5.5	6.2	6.0	7.5	6.3	7.5	57.9	59.0	60.9	57.0	29.2	37.5	45.8	25.0
	3	04.06.2016	2nd	5.0	5.5	6.2	6.2	6.2	6.5	7.2	7.2	58.3	58.1	60.6	55.9	45.8	29.2	33.3	33.3
	4	06.06.2016		6.3	6.2	5.3	5.5	7.5	7.5	6.7	6.3	57.7	57.9	59.5	56.5	58.3	37.5	29.2	37.5
	5	07.06.2016	3rd	6.2	6.2	6.3	6.2	7.5	7.0	7.7	7.2	60.6	61.2	60.0	61.3	33.3	20.8	33.3	25.0
	6	09.06.2016		5.5	6.0	6.5	6.0	6.5	7.5	7.5	7.0	61.7	59.5	59.4	61.0	45.8	33.3	29.2	54.2
	7	13.06.2016	4th	6.3	5.5	5.8	5.2	7.3	6.8	6.5	6.0	58.2	60.8	60.6	60.2	45.8	29.2	25.0	50.0
	8	14.06.2016		6.3	6.3	5.8	5.0	7.5	7.0	6.3	6.8	58.5	58.4	57.2	57.5	45.8	37.5	25.0	33.3
JULY	1	02.07.2016	1st	5.8	6.2	6.0	6.5	6.5	7.0	7.2	7.5	57.5	56.8	61.0	58.1	16.7	54.2	29.2	25.0
	2	04.07.2016		6.5	5.8	6.8	6.2	7.5	7.5	7.5	7.2	59.3	57.1	60.1	58.2	16.7	33.3	45.8	33.3
	3	05.07.2016	2nd	6.2	6.3	6.8	5.5	7.2	7.2	7.2	6.2	58.3	59.8	59.1	58.7	25.0	25.0	33.3	29.2
	4	07.07.2016		6.3	6.7	5.3	6.2	7.2	7.5	6.7	7.5	61.2	60.9	58.5	60.1	16.7	25.0	25.0	41.7
	5	08.07.2016	3rd	6.0	6.0	6.2	5.5	7.5	7.5	7.5	6.3	60.1	59.3	60.2	59.7	33.3	29.2	37.5	41.7
	6	11.07.2016		5.8	6.5	6.0	5.2	6.7	7.5	7.5	6.7	59.8	58.4	57.8	59.0	50.0	29.2	37.5	45.8
	7	12.07.2016	4th	5.8	6.8	6.5	6.7	6.5	7.5	7.5	7.0	58.3	60.2	59.0	59.3	16.7	33.3	33.3	54.2
	8	13.07.2016		6.0	6.0	6.2	5.8	7.8	7.3	7.5	6.2	59.5	57.9	59.9	60.5	45.8	54.2	37.5	29.2
	9	14.07.2016		5.5	5.5	5.5	6.5	7.5	6.5	6.5	7.0	59.9	60.0	60.3	58.2	25.0	33.3	41.7	25.0
AUGUST	1	02.08.2016	1st	5.2	6.7	5.7	5.7	6.2	7.5	6.5	6.7	44.2	48.1	47.4	48.0	16.7	16.4	16.5	12.5
	2	03.08.2016		6.0	5.5	6.0	6.5	7.5	6.7	7.0	7.2	45.5	47.4	49.9	49.4	20.8	29.6	29.7	16.7
	3	09.08.2016	2nd	5.5	6.3	6.5	5.7	6.3	7.5	7.5	6.8	49.6	50.6	51.0	51.9	20.8	20.7	20.7	20.8
	4	10.08.2016		6.5	6.0	6.2	6.7	7.5	7.0	7.0	7.2	51.7	52.6	50.4	52.5	25.0	29.4	29.0	20.8
	5	11.08.2016	3rd	6.7	6.2	6.5	5.8	7.5	7.5	7.2	6.7	54.2	55.6	53.3	54.3	20.8	20.0	16.7	16.7
	6	12.08.2016		5.5	5.8	6.5	5.5	6.5	6.8	7.3	7.0	55.0	54.3	54.8	55.3	16.7	16.5	16.5	16.7
	7	13.08.2016	4th	5.2	6.5	5.7	5.3	6.8	7.5	6.7	6.7	53.1	55.3	54.8	55.1	20.8	16.8	16.8	20.8
	8	15.08.2016		5.5	6.5	6.0	6.5	6.7	7.0	7.5	7.7	44.8	50.1	51.5	53.2	20.8	25.0	20.8	16.7
	9	16.08.2016		5.5	5.5	5.3	5.5	7.5	6.5	6.5	6.5	54.1	56.4	51.9	54.7	20.8	16.7	16.7	12.5
SEPTEMBER	1	02.09.2016	1st	5.0	5.5	5.8	6.2	6.2	6.8	6.7	7.0	59.7	54.7	57.1	57.6	16.7	25.0	20.8	16.7
	2	03.09.2016		6.2	5.3	6.5	5.7	7.2	6.2	7.0	6.8	55.7	57.0	56.0	56.3	20.8	16.7	16.7	20.8
	3	05.09.2016	2nd	5.2	5.5	5.5	5.7	6.8	6.2	6.8	6.5	57.2	54.9	55.8	55.8	33.3	20.8	25.0	25.0
	4	06.09.2016		6.0	6.2	6.2	6.7	7.3	7.3	7.0	7.0	55.2	56.8	56.5	56.4	25.0	16.7	20.8	20.8
	5	07.09.2016	3rd	6.2	6.3	5.7	5.5	7.2	7.8	7.5	6.5	50.9	55.2	56.4	55.0	20.8	16.7	25.0	25.0
	6	09.09.2016		6.5	5.7	5.8	6.2	7.3	6.2	6.3	7.5	54.2	58.0	57.1	56.2	20.8	25.0	25.0	20.8
	7	12.09.2016	4th	6.0	6.5	6.3	5.5	7.5	7.2	7.3	6.5	56.3	55.1	54.9	54.1	16.7	12.5	25.0	12.5
	8	13.09.2016		6.2	6.0	6.0	6.2	7.5	7.5	7.7	7.0	57.2	56.6	56.2	57.0	20.8	20.8	16.7	16.7
	9	14.09.2016		5.5	5.5	6.3	5.5	7.5	6.5	7.0	6.5	56.9	57.5	57.5	57.7	20.8	29.2	20.8	29.2
OCTOBER	1	4.10.2016	1st	6.2	5.5	6.0	6.0	7.0	6.2	7.5	7.3	52.3	53.5	55.3	51.4	16.7	20.8	16.7	20.8
	2	7.10.2016		5.7	6.2	5.8	5.7	6.7	7.3	6.5	6.5	54.3	56.4	57.5	55.1	20.8	16.7	16.7	29.2
	3	12.10.2016	2nd	6.3	5.8	6.7	6.0	7.3	6.7	7.0	7.5	55.8	57.3	56.9	56.3	20.8	20.8	37.5	16.7
	4	15.10.2016		5.5	6.3	6.7	6.5	6.8	7.0	7.5	7.5	57.1	56.9	57.9	57.7	20.8	25.0	25.0	25.0
	5	19.10.2016	3rd	6.3	6.7	6.5	6.0	5.8	7.0	7.7	7.0	56.9	57.3	56.1	57.0	16.7	20.8	20.8	20.8
	6	22.10.2016		5.5	5.7	6.3	5.5	6.5	6.2	7.5	6.2	57.9	57.9	56.1	58.0	20.8	20.8	25.0	33.3
	7	26.10.2016	4th	5.8	6.3	5.0	6.0	7.0	7.2	6.0	7.5	56.4	56.5	57.2	57.2	16.7	25.0	20.8	16.7
	8	29.10.2016		6.2	5.7	5.8	5.8	7.0	6.5	6.7	6.7	57.8	56.3	57.8	56.5	25.0	16.7	25.0	20.8

NOVEMBER	1	4.11.2016	1st	6.8	6.3	6.7	6.5	7.0	7.0	7.5	7.0	57.2	55.7	57.1	56.9	20.8	16.7	33.3	16.7
	2	8.11.2016		6.0	6.5	6.2	5.8	7.5	7.0	7.5	6.7	56.2	57.0	55.9	57.3	16.7	20.8	29.2	20.8
	3	11.11.2016	2nd	6.0	6.2	5.5	6.5	7.0	7.3	6.3	7.0	57.2	57.2	56.0	56.0	20.8	20.8	16.7	25.0
	4	15.11.2016		6.8	5.8	6.2	6.3	7.2	6.7	7.5	7.0	58.8	57.9	57.7	57.2	16.7	25.0	16.7	16.7
	5	18.11.2016	3rd	5.8	6.0	5.8	5.5	6.8	7.0	6.8	6.5	57.1	57.8	59.0	57.8	20.8	16.7	25.0	20.8
	6	22.11.2016		6.2	6.2	6.8	5.7	7.0	7.5	7.0	6.3	56.7	55.8	56.5	56.7	16.7	20.8	25.0	25.0
	7	25.11.2016	4th	5.8	6.5	6.2	6.2	7.0	7.0	7.0	7.3	56.2	56.1	55.7	57.1	20.8	20.8	29.2	16.7
	8	29.11.2016		5.5	5.8	5.0	5.5	6.8	6.2	6.8	6.7	55.6	55.3	56.5	58.4	25.0	29.2	20.8	20.8
DECEMBER	1	2.12.2016	1st	6.2	7.0	6.3	6.5	7.5	8.2	7.5	7.5	55.5	56.2	56.9	54.4	20.8	20.8	20.8	16.7
	2	6.12.2016		6.8	5.8	7.0	6.8	7.2	6.7	8.3	7.5	57.0	57.3	56.0	56.9	25.0	25.0	25.0	16.7
	3	9.12.2016	2nd	6.5	7.0	7.0	7.0	7.5	8.0	8.0	8.3	55.1	56.8	55.3	55.2	12.5	29.2	25.0	20.8
	4	13.12.2016		7.2	6.5	5.5	7.0	8.3	7.5	6.5	8.2	56.3	55.6	56.1	56.6	20.8	20.8	29.2	25.0
	5	16.12.2016	3rd	5.8	6.0	6.0	6.5	6.5	7.5	7.2	7.5	55.2	57.9	57.3	56.0	25.0	37.5	33.3	16.7
	6	20.12.2016		6.5	7.0	6.3	7.0	7.2	8.0	7.5	8.0	56.2	56.3	56.8	56.6	20.8	20.8	25.0	20.8
	7	23.12.2016	4th	6.5	7.5	6.3	7.5	8.0	8.0	7.7	8.2	55.1	56.9	56.5	57.5	33.3	29.2	25.0	25.0
	8	27.12.2016		6.8	6.2	6.3	6.0	7.5	7.0	7.5	7.0	56.3	56.7	57.2	58.0	20.8	37.5	20.8	25.0
	9	30.12.2016		5.5	5.5	6.5	5.5	7.5	6.5	7.5	6.5	58.4	59.5	57.5	57.5	16.7	20.8	25.0	33.3
JANUARY	1	03.01.2017	1st	5.8	6.2	6.8	7.2	6.8	7.0	7.5	8.2	55.6	57.9	57.5	59.8	15.8	25.0	29.2	20.8
	2	06.01.2017		6.5	6.5	6.5	6.2	7.5	7.5	7.5	8.3	57.6	56.7	56.7	57.0	24.2	25.0	20.8	25.0
	3	10.01.2017	2nd	5.8	6.3	6.0	6.0	6.5	7.5	7.0	7.0	58.3	59.0	57.1	58.3	25.8	20.8	16.7	29.2
	4	13.01.2017		6.3	6.5	7.2	6.8	7.0	8.0	8.0	8.0	55.7	57.6	58.7	55.8	20.0	20.8	25.0	16.7
	5	17.01.2017	3rd	6.7	6.5	6.3	6.8	8.0	8.7	7.5	7.8	56.4	58.0	56.4	57.6	23.3	20.8	16.7	20.8
	6	20.01.2017		7.5	7.2	7.5	7.0	9.0	9.5	8.8	8.5	57.5	57.3	57.1	58.5	20.8	20.8	16.7	16.7
	7	24.01.2017	4th	6.7	6.5	7.5	7.5	9.5	8.7	8.7	9.5	56.0	58.6	56.8	58.5	33.3	16.7	20.8	20.8
	8	28.01.2017		6.7	7.0	7.5	6.7	8.8	8.0	8.3	8.0	57.3	57.1	57.5	57.3	16.7	20.8	16.7	20.8
FEBRUARY	1	01.02.2017	1st	7.2	6.8	7.5	7.5	8.5	8.2	8.3	8.2	56.0	56.8	58.7	57.4	37.5	37.5	25.0	25.0
	2	04.02.2017		6.5	7.5	7.5	6.8	7.5	8.5	8.5	7.5	55.7	56.8	57.1	58.4	29.2	41.7	37.5	29.2
	3	08.02.2017	2nd	7.5	7.5	6.5	7.5	6.8	8.2	7.5	8.2	57.9	57.3	58.1	57.5	25.0	37.5	33.3	33.3
	4	11.02.2017		7.5	7.5	6.8	6.5	8.5	8.5	7.5	8.2	58.3	58.1	57.7	59.9	20.8	25.0	29.2	20.8
	5	15.02.2017	3rd	6.7	6.5	7.5	7.8	7.5	7.5	8.5	8.2	59.3	57.1	61.6	60.1	79.2	37.5	37.5	33.3
	6	18.02.2017		7.5	7.5	7.5	7.5	8.5	8.5	8.5	8.5	57.9	58.9	58.9	58.0	20.8	29.2	25.0	37.5
	7	22.02.2017	4th	6.5	7.5	7.3	6.5	8.0	8.5	8.2	7.5	58.7	56.7	60.0	56.5	25.0	20.8	20.8	45.8
	8	25.02.2017		7.5	6.5	7.5	7.5	9.0	7.8	8.2	8.2	57.1	57.1	58.9	59.2	29.2	25.0	41.7	25.0
MARCH	1	01.03.2017	1st	7.5	6.5	6.5	7.5	7.8	7.2	6.9	7.9	58.2	57.3	57.5	57.5	29.2	16.7	39.6	34.4
	2	04.03.2017		7.5	7.5	7.2	7.1	7.9	7.8	7.5	7.8	57.7	58.8	57.5	59.1	37.5	25.0	33.3	37.5
	3	08.03.2017	2nd	6.5	6.9	7.5	7.4	7.5	7.5	7.8	7.5	59.6	57.7	58.5	58.2	45.8	33.3	25.0	41.7
	4	11.03.2017		7.5	7.3	6.8	7.5	7.7	7.5	7.0	7.9	59.0	59.7	56.0	57.8	29.2	44.6	33.4	18.8
	5	15.03.2017	3rd	7.4	7.4	7.3	7.4	7.8	7.5	7.5	7.8	57.3	58.6	57.9	59.4	40.8	12.5	28.5	50.0
	6	18.03.2017		7.8	7.5	7.4	7.0	7.9	7.9	8.1	7.5	57.8	59.5	59.0	58.4	40.0	16.7	33.1	33.3
	7	22.03.2017	4th	6.5	7.6	7.5	7.2	7.4	8.0	7.9	7.8	58.8	59.4	58.5	57.0	27.5	25.0	41.7	24.0
	8	25.03.2017		6.8	7.8	6.8	7.5	7.5	8.1	7.5	8.1	57.7	59.8	59.2	58.5	19.2	20.8	37.5	35.2
	9	30.03.2017		7.5	7.9	6.5	7.6	7.9	8.2	7.0	8.0	58.4	59.9	59.2	57.1	15.0	25.0	33.3	11.5
Avg.				**6.2**	**6.3**	**6.3**	**6.3**	**7.3**	**7.3**	**7.3**	**7.3**	**56.9**	**57.3**	**57.4**	**57.3**	**26.5**	**26.7**	**28.6**	**28.5**
Min.				**5.0**	**5.2**	**5.0**	**5.0**	**5.8**	**6.2**	**6.0**	**6.0**	**44.2**	**47.4**	**47.4**	**48.0**	**12.5**	**12.5**	**16.5**	**11.5**
Max.				**7.8**	**7.9**	**7.5**	**7.8**	**9.5**	**9.5**	**8.8**	**9.5**	**61.7**	**61.2**	**61.6**	**61.3**	**79.2**	**54.2**	**45.8**	**54.2**

Monitored By

Dr. Saurabh Kumar
Mgr (Env)

Annexure – 4

J.K. Cement WORKS, MUDDAPUR (KARNATAKA)

(Unit : J.K. Cement Ltd.)

Yearly Stack monitoring report of Cement plant & 2x25 MW Thermal power plant for April-2016 to March-2017

Sl. No.	Month/ Year	Thermal Power	Kiln / Raw Mill			Coal Mill	Cooler ESP	LSC	CM-1	CM-2	Slag mill	Coal crusher	Packing plant	Packing plant	Packing plant	Packing plant No-4	RMT System	Clinker Transport	Clinker Storage	CM Sep-1	CM Sep-2
		SPM	SPM	Sox (mg\Nm3)	Nox (mg/Nm3)	SPM	SPM	SPM	SPM	SPM	SPM	SPM	SPM	SPM	SPM	SPM	SPM	SPM	SPM	SPM	SPM
1	Apr-16	18.8	11.4	0.0	0.0	17.3	10.6	10.8	13.0	11.4	18.0	11.9	12.1	13.6	11.7	11.4	13.2	12.3	11.3	13.0	11.4
2	May-16	17.0	12.0	0.0	0.0	16.2	11.9	11.4	11.3	11.5	18.5	12.4	11.3	11.5	12.6	11.3	13.3	11.9	12.3	11.3	11.5
3	Jun-16	16.3	11.2	0.0	0.0	15.2	12.6	11.3	12.5	11.5	17.4	12.3	11.5	12.5	12.4	13.6	13.7	12.2	11.2	12.5	11.5
4	Jul-16	15.6	11.3	0.0	0.0	14.0	12.5	11.2	12.7	13.0	17.1	11.8	11.6	11.9	13.8	12.0	12.8	13.4	11.2	12.7	13.0
5	Aug-16	14.9	10.7	0.0	0.0	12.5	11.2	10.6	11.8	12.7	Shutdown	12.6	12.3	11.7	11.3	12.6	12.7	12.9	11.8	11.8	12.7
6	Sep-16	14.0	12.0	0.0	0.0	13.4	12.8	11.7	12.3	13.2	Shutdown	13.4	11.5	12.4	11.3	12.1	11.9	12.1	12.1	12.3	13.2
7	Oct-16	14.2	11.1	25.6	695.8	12.8	12.2	11.3	12.3	12.6	16.7	11.1	11.5	12.4	12.0	11.3	11.7	10.5	13.0	12.3	12.6
8	Nov-16	14.7	10.6	37.4	545.6	12.7	11.2	11.8	13.0	13.5	16.7	11.6	12.2	12.4	11.8	11.0	10.0	12.2	11.1	13.5	13.5
9	Dec-16	13.3	11.8	42.1	582.4	11.4	10.0	11.7	12.1	14.9	15.5	12.6	12.4	11.5	13.9	11.5	10.3	12.1	12.4	12.1	14.9
10	Jan-17	14.3	10.3	40.5	574.7	10.7	11.3	11.6	12.3	11.1	15.8	11.0	11.5	10.7	12.1	Shutdown	12.0	11.1	10.2	12.3	11.1
11	Feb-17	15.3	11.3	42.5	592.4	10.1	12.3	11.0	10.1	11.1	Shutdown	11.4	11.8	10.6	11.8	Shutdown	12.8	12.8	11.2	10.1	11.1
12	Mar-17	13.9	12.3	41.5	593.5	10.01	13.4	11.7	11.4	10.9	15.8	11.5	11.1	11.3	10.3	Shutdown	12.3	12.0	10.3	11.3	11.4
Avg		**15.2**	**11.3**	**19.1**	**298.7**	**13.0**	**11.8**	**11.3**	**12.1**	**12.3**	**16.8**	**12.0**	**11.7**	**11.9**	**12.1**	**11.9**	**12.2**	**12.1**	**11.5**	**12.1**	**12.3**
Min		**13.3**	**10.3**	**0.0**	**0.0**	**10.0**	**10.0**	**10.6**	**10.1**	**10.9**	**15.5**	**11.0**	**11.1**	**10.6**	**10.3**	**11.0**	**10.0**	**10.5**	**10.2**	**10.1**	**11.1**
Max		**18.8**	**12.3**	**42.5**	**695.8**	**17.3**	**13.4**	**11.8**	**13.0**	**14.9**	**18.5**	**13.4**	**12.4**	**13.6**	**13.9**	**13.6**	**13.7**	**13.4**	**13.0**	**13.5**	**14.9**

Vani Patil
Monitored By

Dr. Saurabh Kumar
Mgr(Env)

Annexure – 5

J.K. Cement WORKS, MUDDAPUR (KARNATAKA)

(Unit : J.K. Cement Ltd)

Yearly Fugitive Emission Monitoring Report of Cement plant for the Period from April-2016 to March-2017

SL. NO.	MONTH/YEAR	SPM (microgram/m3)						
		Gypsum Yard	Slag Yard	Flyash Yard	Cement mill	Lime stone unloading hopper	Lime stone crushing Site	Coal Yard
1	Apr-16	543.1	555.0	547.9	503.7	500.7	560.6	813.0
2	May-16	555.6	524.1	478.3	494.3	495.4	555.9	917.0
3	Jun-16	495.5	517.4	516.8	513.7	456.6	586.6	836.3
4	Jul-16	668.5	579.3	482.9	584.3	488.1	540.3	948.8
5	Aug-16	575.6	543.9	472.6	509.4	468.5	512.3	970.3
6	Sep-16	483.2	575.9	502.0	543.9	517.5	452.5	958.0
7	Oct-16	499.7	572.6	509.2	516.4	526.6	467.4	832.1
8	Nov-16	504.5	591.6	518.7	540.1	538.8	470.1	836.5
9	Dec-16	519.5	540.8	533.5	542.7	524.3	464.2	851.3
10	Jan-17	506.3	525.0	601.9	564.6	437.0	564.1	891.6
11	Feb-17	531.2	514.5	538.9	418.0	536.0	522.6	853.9
12	Mar-17	430.8	512.6	490.8	421.5	388.4	468.3	862.7
Average		**498.7**	**542.8**	**532.2**	**500.5**	**491.8**	**492.8**	**854.7**
Minimum		**430.8**	**512.6**	**490.8**	**418.0**	**388.4**	**464.2**	**832.1**
Maximum		**531.2**	**591.6**	**601.9**	**564.6**	**538.8**	**564.1**	**891.6**

Vani Patil
Monitored By

Dr.Saurabh Kumar
Mgr(Env)

ANNEXURE-6

J.K. Cement WORKS, MUDDAPUR (KARNATAKA)

(Unit: J.K. Cement Ltd.)

Yearly Noise monitoring report of Cement & Power Plant for the month of April-2016 to March-2017

Sl. No.	Location Name	Apr-16		May-16		Jun-16		Jul-16		Aug-16		Sep-16		Oct-16	
		Day (dB) Leq	Night (dB) Leq	Day (dB) Leq	Night (dB) Leq	Day (dB) Leq	Night (dB) Leq	Day (dB) Leq	Night (dB) Leq	Day (dB) Leq	Night (dB) Leq	Day (dB) Leq	Night (dB) Leq	Day (dB) Leq	Night (dB) Leq
1	Boundary side	50.4	38.5	51.4	42.5	50.6	41.5	50.6	41.2	51.2	42.1	51.2	42.5	52.40	42.60
2	Administrative Building	51.6	36.4	52.5	41.4	51.4	40.2	51.2	40.6	50.6	39.5	50.8	40.4	55.60	43.50
3	Lime Stone Crusher	53.4	39.6	55.8	46.5	54.6	45.2	52.2	43.5	51.2	42.5	52.5	43.6	72.40	55.90
4	Kiln/ Cooler Office	60.2	49.6	63.2	53.4	62.2	52.8	60.2	50.4	59.5	48.6	61.4	51.5	71.50	62.50
5	Power Plant	57.2	44.5	62.4	51.4	61.8	50.8	60.4	51.2	59.4	50.2	62.2	51.6	58.40	52.10
6	Despatch weigh bridge	54.5	45.7	56.4	51.6	56.7	52.4	54.2	46.5	53.6	47.8	53.2	47.8	57.50	52.60
7	Near QC Lab.	57.4	43.6	60.7	51.2	59.7	50.2	60.2	51.2	57.6	50.2	48.2	39.7	54.60	50.20
8	Coal Yard	55.8	40.2	55.6	41.5	54.6	40.2	55.6	41.5	56.4	40.8	53.2	40.8	56.80	46.20
9	Near Canteen	50.2	39.6	53.8	43.5	52.4	44.2	50.3	40.2	48.2	39.5	50.6	42.8	58.40	47.60
10	Plant main gate	48.2	37.4	50.1	41.6	51.2	40.3	50.2	31.6	49.6	32.8	52.1	42.9	53.60	40.50
11	Dispensary	46.2	34.5	50.8	41.8	49.8	40.6	48.5	38.2	50.2	40.5	48.6	39.8	52.90	41.50
12	Packing Plant	46.7	35.6	53.2	42.7	52.6	41.7	51.6	41.6	49.5	40.8	53.7	41.8	55.20	49.50
13	General Store	50.2	40.2	50.6	40.8	51.2	39.6	50.2	39.6	51.4	40.5	50.4	38.5	60.50	48.90
14	DG House (1-meter distance)	63.8	_	65.4	_	64.5	_	63.5	_	62.5	_	63.2	_	72.50	-
15	DG House (2-meter distance)	62.7	_	62.2	_	61.2	_	62.4	_	60.2	_	60.4	_	70.40	-

Sl. No.	Location Name	Nov-16		Dec-16		Jan-17		Feb-17		Mar-17		Minimum		Maximum		Average	
		Day (dB) Leq	Night (dB) Leq	Day (dB) Leq	Night (dB) Leq	Day (dB) Leq	Night (dB) Leq	Day (dB) Leq	Night (dB) Leq	Day (dB) Leq	Night (dB) Leq	Day (dB) Leq	Night (dB) Leq	Day (dB) Leq	Night (dB) Leq	Day (dB) Leq	Night (dB) Leq
1	Boundary side	58.60	44.50	54.80	44.60	46.20	37.80	45.80	38.60	45.60	37.90	45.60	37.80	58.60	44.60	50.73	41.19
2	Administrative Building	60.30	46.40	56.40	42.80	44.40	32.40	45.70	31.50	45.50	32.50	44.40	31.50	60.30	46.40	51.33	38.97
3	Lime Stone Crusher	64.20	48.50	60.20	55.40	49.80	39.60	50.20	42.80	50.40	43.10	49.80	39.60	72.40	55.90	55.58	45.52
4	Kiln/ Cooler Office	68.50	52.60	68.50	60.50	57.60	41.80	58.50	44.50	57.60	43.50	57.60	41.80	71.50	62.50	62.41	50.98
5	Power Plant	65.20	48.50	66.20	54.60	55.80	42.60	56.70	43.70	54.80	42.80	54.80	42.60	66.20	54.60	60.04	48.67
6	Despatch weigh bridge	61.80	51.40	58.60	42.20	50.60	41.80	49.60	40.20	48.90	39.90	48.90	39.90	61.80	52.60	54.63	46.66
7	Near QC Lab.	60.40	49.50	64.80	50.80	46.40	37.50	47.50	38.70	46.50	38.50	46.40	37.50	64.80	51.20	55.33	45.94
8	Coal Yard	56.40	46.20	58.80	44.30	47.80	36.60	48.40	35.40	49.20	35.60	47.80	35.40	58.80	46.20	54.05	40.78
9	Near Canteen	58.30	46.80	58.60	46.20	44.20	31.40	45.70	30.80	46.20	31.30	44.20	30.80	58.60	47.60	51.41	40.33
10	Plant main gate	55.60	42.80	52.80	42.60	47.50	35.50	46.80	31.60	47.30	31.80	46.80	31.60	55.60	42.90	50.42	37.62
11	Dispensary	57.50	42.60	54.40	43.80	42.50	32.60	41.70	32.70	42.10	33.50	41.70	32.60	57.50	43.80	48.77	38.51
12	Packing Plant	66.50	55.40	52.80	41.40	51.40	41.80	50.20	40.90	51.30	41.20	46.70	35.60	66.50	55.40	52.89	42.87
13	General Store	62.70	43.50	50.40	40.50	47.50	36.40	46.80	37.80	47.10	38.40	46.80	36.40	62.70	48.90	51.58	40.39
14	DG House (1-meter distance)	72.60	-	70.10	-	60.00	-	59.60	-	58.60	-	58.60	0.00	72.60	0.00	64.69	-
15	DG House (2-meter distance)	68.50	-	71.50	-	58.90	-	57.40	-	56.90	-	56.90	0.00	71.50	0.00	62.73	-

Vani Patil
Monitored By

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Mgr (Env)