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

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

No. - JKCW/ENV./CFO (Plant)/5/14 **Date: 06-08-2014**

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

Subject- **Environmental Statement Report of J.K. Cement Works, Village- Muddapur, Dist.- Bagalkot (Karnataka) for the financial year April-2013 to March-2014**

Ref: 1- Notification no. G.S.R. 329(E), dated 13.03.92. and G.S.R. 386(E), dated 22.4.93
2- KSPCB Combined consent order no. PCB/HPI/021/JK Cement/2013-2014/907 dated 07 September 2013

Dear Sir

With reference to the above, please find herewith enclosed Environmental Statement Report for J.K. Cement Works, Village- Muddapur, Dist.- Bagalkot (Karnataka) in form V for the financial year **2013-2014** for your kind information and record, please.

Thanking you,

Yours faithfully,
J.K. Cement Works, Muddapur

S.K. Jain
Head (O & M)

Encl:

1- Environmental Statement Report (Duly filled Form-V) of J.K. Cement Works, Muddapur (Karnataka)
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- Environment Officer, Karnataka State Pollution Control Board, BAGALKOT- 587 102

Registered Office :
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FORM – V

ENVIRONMENTAL STATEMENT REPORT FOR THE FINANCIAL YEAR 2013-14

PART – A

(I)	Name & Address of the Owner / Occupier of the Industry Operation or Process	**S.K. Jain (Head- O & M) J.K. Cement Works (Unit: J. K. Cement Limited) Muddapur, Bagalkot (Karnataka)**
(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	30-07-2013

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)
Process - Nil
Cooling and power plant - 86020.0 KL
Domestic - 34608.0 KL

(ii) Consumption per unit of production

Name of the Product	Process Water Consumption per unit of Product Output	
	During the Previous Financial Year (2012-13)	During the Current Financial Year (2013-14)
Cement (OPC, PPC and Slag)	0.0411004 m^3/mt. of cement	0.05730 m^3/mt. of cement

B. Raw Material Consumption

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 (2012-13)	During the Current Financial Year (2013-14)
Lime Stone	Cement	1.308	1.295
Iron-ore		0.017	0.021
Coal		0.091	0.090
Gypsum		0.008	0.007
Dry fly ash		0.043	0.032

Pond ash		0.070	0.061
Slag		0.046	0.059
		Consumption of Raw Material per Unit Product Output (MT/KWH of Power)	
Coal (Captive Power Plant)	Power	0.000928	0.000842

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

During the Previous Financial Year (2012-13)	During the Current Financial Year (2013-14)
1825772	1501223

d- Total Power production from Captive Power Plant (KWH):

During the Previous Financial Year (2012-13)	During the Current Financial Year (2013-14)
177077730	147403730

e- Total Power consumption in Cement plant (KWH/Ton of Cement):

During the Previous Financial Year (2012-13)	During the Current Financial Year (2013-14)
82.57	78.10

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

During the Previous Financial Year (2012-13)	During the Current Financial Year (2013-14)
0.1019	0.0998

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) and **Annexure-** 5 (Fugitive emission 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 (2012-13)	**During the Current Financial Year (2013-14)**
(a) From Process	**(b) Category 5.1-** Used Oil	Total generated 16.203 KL, Out of 13.281 KL, 13.053 KL was self-used for lubrication in cement plant and 3.15 KL were sold out to authorized recycler and nothing was in balance.	Total generated 11.772 KL, Out of 11.772 KL, 2.296 KL was self-used for lubrication in cement plant and 9.4 KL was sold out to authorized recycler and 0.076 was in balance.
	(b) Category 5.2- Oil soaked cotton waste	NIL	Total generated oil soaked cotton waste was 36 kg and it was disposed of in own cement plant's kiln.
	(c) Category 5.2- Oil Filters	NIL	NIL
	(d) Old Batteries	Total generated 43 Nos. and it had been returned to authorize dealer.	NIL
	(e) E-Waste-	NIL	NIL
(b) From Pollution Control Facilities	Nil	Nil	Nil

PART – E

Solid Wastes

Solid Waste		Total Quantity	
		During the Previous Financial Year (2012-13)	**During the Current Financial Year (2013-14)**
1 (a)	From Process (Fly ash from Captive Thermal Power plant)	NIL from Cement Plant 51230.894 MT	NIL from Cement Plant 46375.874 MT
1 (b)	Fly ash from other Thermal Power plant/KPCL	155650.106 MT	69299.369 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.	100%	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/KPCL was used 98.50 %.
	(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 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 then is sent to store deptt. for proper handling and storage. The store department stores all collected hazardous waste at specified location as per HWMSH Rule, 1989 amendment 2008 and sold out to authorized recycler/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:-

1. 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 upto 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_x 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.

2. 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 Silos and from there, it is conveyed by completely covered truck to cement plant where it is being stored in closed silos which is pneumatically conveyed to silos and directly to the cement mill for the cement grinding process.

3. Use of STP treated water for the gardening purpose.

We have latest and advance technology based Sewage Treatment Plant.

The capacity of sewage treatment plant is 200 KL per day. The total quantity of treated water is being used in gardening and dust suppression.

4. 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.

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

5. Good house keeping

Following measures have been taken for good housekeeping at J.K. Cement Works, Muddapur (Karnataka):-

a. 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.
b. The conveyor belts are fully covered.
c. Clinker and cement is being stored in the covered silos.
d. CPPs treated water is being utilized for the regular road water spraying.

- Concreting of kachcha roads

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

6. 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

7. Covering of raw materials

Raw materials have been stored in the covered shed to mitigate the fugitive emission by handling of raw material.

8. Modifications for the year 2013-14 for energy conservation and better environment

I. Cement Mill No.1 optimized. Earlier the cement mill was running at 120 TPH with power consumption of 42-43 units/ton. The following actions have been initiated to bring-down the power consumption in Cement mill.

- Separation of Bag Filter: - All the bags of Bag filter were replaced with new set. This has reduced the DP from 200 to 150, which has ultimately been improved the performance of the Separator.

- Rotary Airlock was replaced with bigger size to reduce the jamming of the bag filter.

- The false air of the circuit was arrested, damper position, separator speed various pressures were calibrated

- Grinding media has been re-graded.

- Opening of diaphragm of first and second chamber were adjusted to improve the blain and optimize the Mill. Now the mill is running on 145 TPH with 36/37 units/ton

- The air slide was replaced with screw conveyor to avoid the frequent air slide jamming problem.

- Installed the phola phone (sound level sensor) at second chamber to control the filling of second chamber for better optimization of mill.

II. The water distribution circuit were studied and optimized. In past 135 KW water pumps were running to supply the water in Cement mills and packing plant. Many times all the cement mills stopped due to power cut and Silo full. In this situation very small quantity of water was required. A new 11 KW pump especially for packing plant was installed to cater the water requirement. This has given substantial power saving.

III. Monitored the actual requirement of compressed air at different places and modified the pressure setting and compressed air line distribution accordingly. Optimum air program developed in plant PLC as per site requirement. Solenoid valve provided in main compressed air line for cut off the air whenever the section is not running i. e. Packer- 1, 2, 3, 4, CM-1, CM-2, Flyash silo section etc. Slag mill bag house compressed air pressure reduced from 7 bar to 4 bar. Packer nozzle aeration compressed air pressure reduced from 6 bar to 3.5 bar. By implementation of these points we have achieved lot of power saving.

IV. To avoid transformer no load losses, we switch off the complete section power whenever the any cement mill stopped for long time.

V. Operation of the plant was studied in respect of idle running of the equipment's and it was found that numbers of aux. equipment were running even though main sections were stopped. Interlocking were modified in such a way that equipment's should get stopped whenever main section / motor stopped for more than a defined time. This also given considerable power saving.

VI. 48 nos. bag filters have been installed for controlling the fugitive dust throughout the plant. A team was engaged to study the performance of the bag filters. While studying, it was found that numbers of bag filters were running with very low efficiency. One-by-one bag filters were modified and optimized. This also given considerable power saving.

VII. Cement Mill No.3 was optimized. Earlier the mill was running at 174 TPH with power consumption of 36-38 units/ton. After calibration & optimization of

- Dam ring height
- Nozzle ring area and velocity
- Positioning of material dropping over the table
- Rebuilt of table and rollers
- Arresting of false air
- Re-alignment of pressure frame
- Increased the o/p of cement mill-3.

VIII. The RBC-610 clinker feeding belt, earlier the motor was of 75 KW, where the load was only 30 KW. Now the motor is replaced with 55 KW motor.

IX. Increased the utilization of SPRS in HT motors. Earlier the running hours were 10 hours/day, which has been increased to 15 hours/day. Now Up to 95% of speed the SPRS works while previously it was running only up to 90%.

X. Power factors have been improved from 0.90 to 0.94 by adding the HT capacitors.

XI. Total run factor of the entire plant has been improved from 0.47 to 0.53.

XII. Coal mill output increased due to coal mill dam ring height increased by 20mm.

XIII. Replacement of halogen and CFL lamp with LED lights are continuing in phase manner.

Suggestion Received From Employees for Energy Conservation and Implemented

Following suggestions were received by employees through suggestion scheme of engineer's forum for energy saving.

1- Reduction of idle run hrs. for all transport conveyors, bag filters & aux. drives of sections.
2- Stacker – reclaimer transport idle run stop.
3- Conversion of motor connection from delta to star for all bag house rotary air lock.
4- Replacement of oversize motor with optimum rating motor
5- Shifting of lightly loaded transformer load to another transformer and switch off the no load transformer.
6- Saving of energy by permanent stopping the slag mill roller lub. Pump.
7- Interlocking in all bag filters for auto stop in case of section stops.
8- Selling power in bilateral market instead of power import from third party to increase the utilization factor of both plants.
9- Water spray in pre-heater top cyclones to reduce the power consumption of preheater fan.
10- Installations of VFD drive for condensate extraction pump in thermal power plant.

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.

2- Replacement of Laterite yard vibro feeder with weigh feeder for online mixing of laterite with reclaiming lime stone to reduce the stoppage of raw mill.

3- Shifting of roots blower of packing plant to outside the silo for reduction of power. Since it will reduce the choking of filter due to dust accumulation.

4- Optimisation of compressed air consumption of Raw mill, Coal mill and Kiln section.

5- Installation of VFD panel for coal mill water spray system to optimise the water & power.

PART – I

ANY OTHER PARTICULARS FOR IMPROVING THE QUALITY OF ENVIRONMENT.

- 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.
- Monitoring of stack emission, ambient air and water quality is being done regularly.
- Maintenance deptt. is doing regular checking and scheduled maintenance of all the pollution control devices.
- Domestic waste water is treated in STP and treated waste water is used for gardening.
- Horticulture Department is taking care of tree plantation and green belt development.
- 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. These committees work to improve the environment in different ways.
- Industry is taking Energy conservation measures.
- Company publishes its magazine i.e JK Spotlight. Environmental messages also printed in it.
- Company helps the engineering and management students to carry out their project works.
- Fugitive dust, ambient air and Noise are being monitored regularly.

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

S.K. Jain
Head (O & M)

ANNEXURE-I

J.K. Cement WORKS, MUDDAPUR (KARNATAKA)

(Unit: J.K. Cement Ltd.)

EFFLUENT WATER ANALYSIS REPORT (Monthly Average) FOR THE MONTH OF APRIL-2013 TO MARCH-2014

Sr. No.	Constituents	Permissible limit	Months											
			Apr-13	May-13	Jun-13	Jul-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13	Jan-14	Feb-14	Mar-14
1	Colour (Hazen)	5	-	-	-	-	1.7	1.7	1.2	1.0	1.2	1.3	1.7	1.9
2	Odour	Unobjectionable	-	-	-	-	U.O.	U.O.	U.O.	U.O.	U.O.	U.O.	U.O.	U.O.
3	Suspended Solids (mg/L)	100	44.324	42.56	49.54	41.2	32.4	33.5	64.9	54.1	54.7	53.2	65.7	58.8
4	Particle of Suspended Solids(mg/L)	Shall pass 850µ IS Sieve	-	-	-	-	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
5	Dissolved Solids (mg/L)	2100	724.132	591.87	633.1	595.8	1303.8	778.8	1239.0	1034.5	1215.4	1243.4	1428.3	1616.8
6	Temperature (°C) max	Not < 5 °C than intake	-	-	-	-	1.3	1.8	1.1	1.0	1.1	1.4	1.5	1.3
7	pH value	5.5 to 9	7.868	7.91	7.94	8.0	7.8	8.3	8.0	8.4	8.2	8.2	8.1	8.0
8	Oils and Grease (mg/L)	10	-	-	-	-	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
9	Total Residual Chlorine (mg/L)	0.5	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
10	Biochemical Oxygen Demand (mg/L)	30	-	-	-	-	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
11	Chemical Oxygen Demand (mg/L)	250	-	-	-	-	Nil	5.8	5.0	4.0	4.4	4.0	Nil	Nil
12	Percent Sodium (mg/L)	2	-	-	-	-	0.4	0.4	0.4	0.5	0.5	0.4	0.5	0.5
13	Chloride as Cl (mg/L)	1000	264.064	264.62	319.29	303.7	545.6	630.0	459.4	366.6	483.9	495.0	527.3	508.4
14	Dissolved Phosphates as(P) (mg/L)	5	-	-	-	-	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
15	Sulphate as SO_4 (mg/L)	1000	285.688	265.36	311.72	338.9	149.2	67.0	56.4	56.1	56.9	50.6	63.1	56.2
16	Sodium Absorption Ratio	18	-	-	-	-	3.0	3.6	3.8	4.4	4.7	4.7	4.8	5.3
17	Residual Na^+ Carbonate milli eq.liter	2.5	-	-	-	-	-0.3	-10.5	-12.6	-12.0	-13.1	-12.3	-11.9	-12.0

Note- U.O. mean unobjectionable

Vinit Kr. Sharma
Analysed by

Dr. Saurabh Kumar
Asstt. Mgr. (Env.)

ANNEXURE-II

J.K. *Cement* WORKS, MUDDAPUR (KARNATAKA)

(Unit: J.K. Cement Ltd.)

STP water Analysis Report (Monthly Average) for the Month of April-2013 to March-2014

Sl.No.	Month	pH	Total suspended solids	BOD
1	Apr-13	8.0	19.4	12.7
2	May-13	8.0	18.2	12.6
3	Jun-13	8.0	16.5	12.1
4	Jul-13	8.0	17.5	11.8
5	Aug-13	8.0	17.0	11.8
6	Sep-13	8.0	16.6	12.6
7	Oct-13	8.1	16.9	12.9
8	Nov-13	8.1	18.1	13.1
9	Dec-13	7.7	17.9	12.7
10	Jan-14	8.0	14.5	9.5
11	Feb-14	8.0	20.4	11.1
12	Mar-14	8.04	19.1	11.15
Yearly Min.		7.7	14.5	9.5
Yearly Max.		8.1	20.4	13.1
Yearly Avg.		8.0	17.7	12.0

Vinit Kr. Sharma
Analysed by

Dr. Saurabh Kumar
Asstt. Mgr. (Env.)

ANNEXURE-III

J.K. Cement WORKS, MUDDAPUR (KARNATAKA)

CEMENT PLANT & 2X25 CPP MW

YEARLY AAQM REPORT (SO_2, NOx, PM_{10}, SPM), FOR THE MONTH OF APRIL-2013 TO MARCH-2014

(ALL VALUES IN MICROGRAMS / CUBIC METER)

Month	Sl.No.	Date	Week	SO_2				NOx				PM_{10}				SPM			
				Locations				Locations				Locations				Locations			
				A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D
APRIL	1	1/4/2013	1st	11.2	10.2	11.5	11.0	13.0	11.2	13.3	12.0	61.0	67.2	64.8	59.8	126.3	139.6	133.5	123.9
	2	4/4/2013		12.5	11.5	10.7	13.0	14.0	12.5	12.3	14.5	64.2	70.0	67.1	62.1	132.3	144.5	138.4	129.3
	3	8/4/2013	2nd	12.7	11.8	11.7	13.5	13.2	13.0	13.0	15.8	67.0	69.0	63.4	65.7	138.3	141.9	131.7	135.2
	4	12/4/2013		11.7	11.3	11.0	13.0	13.0	12.3	12.8	14.5	70.2	65.4	67.0	61.4	143.4	134.7	138.3	126.8
	5	16/4/2013	3rd	10.8	13.8	13.0	12.0	13.7	15.0	14.8	15.7	65.7	70.1	71.2	64.2	135.0	144.5	146.5	132.2
	6	19/4/2013		13.0	11.2	12.0	12.5	14.8	13.0	13.5	13.8	62.7	64.2	65.4	60.3	130.0	131.9	134.7	125.9
	7	23/4/2013	4th	11.7	12.0	13.8	13.0	13.7	13.3	15.8	14.3	59.4	60.8	67.0	63.3	122.7	125.4	137.6	130.3
	8	26/4/2013		11.7	11.0	12.5	13.7	13.5	12.0	14.0	15.7	63.3	66.3	69.0	59.8	130.2	136.3	141.8	124.7
MAY	1	2/5/2013	1st	11.0	11.8	12.5	14.0	14.2	14.0	14.8	15.8	68.2	64.5	65.7	63.9	141.4	133.0	136.1	131.9
	2	6/5/2013		11.7	10.7	10.8	12.2	14.2	13.3	13.0	14.8	72.1	68.5	69.9	66.8	150.5	142.8	144.3	138.3
	3	9/5/2013	2nd	9.8	13.8	13.2	15.0	11.0	15.3	14.7	17.5	68.8	65.4	72.7	62.5	142.1	135.6	149.9	129.3
	4	13/5/2013		11.8	11.7	14.3	12.8	13.0	13.7	16.2	14.8	65.1	70.1	75.3	65.3	135.1	144.6	155.1	136.6
	5	16/5/2013	3rd	10.5	13.0	13.0	14.0	12.2	15.0	16.5	15.8	61.1	73.0	70.7	69.3	126.8	150.3	146.1	143.5
	6	20/5/2013		12.8	12.3	13.0	11.7	13.8	14.3	14.8	13.7	64.1	69.5	73.6	64.7	132.3	143.5	151.3	134.6
	7	23/5/2013	4th	13.7	12.2	11.7	14.7	15.3	13.8	13.3	16.7	68.0	73.8	70.1	62.6	143.0	153.1	146.6	131.1
	8	27/5/2013		11.3	10.7	13.7	12.2	13.2	13.2	15.7	13.3	63.6	67.0	65.5	59.5	132.0	139.2	136.2	124.1
JUNE	1	1/6/2013	1st	11.5	10.5	11.8	11.7	13.2	12.8	12.8	14.0	61.6	70.1	64.3	68.1	129.1	144.9	134.1	142.2
	2	5/6/2013		12.7	11.0	13.0	12.0	14.7	11.8	14.5	13.8	65.8	66.9	59.7	70.8	136.3	138.1	124.3	146.6
	3	8/6/2013	2nd	10.5	11.2	12.2	13.3	12.7	13.3	13.7	15.5	60.8	63.3	67.0	62.5	126.8	132.2	139.7	130.9
	4	12/6/2013		12.0	12.2	11.8	12.5	13.8	14.0	14.5	15.2	58.3	67.6	71.5	59.4	122.5	140.8	148.5	126.7
	5	15/6/2013	3rd	13.0	10.2	13.3	11.2	15.0	12.7	15.8	12.8	62.5	72.3	65.6	63.5	130.2	150.1	139.4	131.4
	6	19/6/2013		11.3	12.3	11.2	13.7	13.2	13.7	13.2	16.2	66.0	76.1	69.1	61.0	138.1	158.0	143.6	126.5
	7	22/6/2013	4th	12.2	11.2	12.7	11.5	14.7	13.3	15.5	13.5	61.1	67.5	63.5	58.1	127.7	140.4	132.0	120.2
	8	26/6/2013		11.3	14.0	14.5	13.7	13.2	15.3	17.7	15.8	58.6	71.8	59.8	61.3	122.1	148.5	124.8	128.5
JULY	1	2/7/2013	1st	11.2	13.2	13.8	12.2	13.7	15.3	16.2	14.8	67.3	70.9	75.3	62.6	141.3	151.5	157.0	134.2
	2	5/7/2013		9.7	11.2	10.7	13.3	11.7	13.0	11.7	15.2	62.8	59.7	62.3	55.2	128.6	124.7	129.4	115.0
	3	9/7/2013	2nd	12.0	10.3	11.7	12.0	14.2	13.3	13.2	13.0	68.0	55.3	66.1	59.5	140.7	116.1	137.0	123.8
	4	12/7/2013		11.3	12.3	12.2	12.7	13.2	14.8	14.2	15.0	58.4	53.0	62.6	55.4	120.0	112.2	129.0	116.9
	5	16/7/2013	3rd	13.2	11.2	10.5	14.3	15.2	13.0	12.3	16.7	63.1	60.5	67.8	60.9	132.1	127.4	142.0	128.4
	6	19/7/2013		11.8	10.8	12.7	13.8	14.2	12.7	15.3	17.0	59.4	52.4	71.0	60.2	123.6	114.0	147.9	120.4
	7	23/7/2013	4th	10.7	9.8	11.5	11.0	11.8	11.0	13.7	12.7	54.2	56.8	65.5	50.2	115.5	120.1	137.0	106.6
	8	26/7/2013		12.2	11.8	10.3	11.3	14.0	13.0	11.7	12.7	46.7	52.0	60.5	43.1	99.5	108.9	126.2	96.2
AUGUST	1	1/8/2013	1st	12.0	14.0	12.5	13.5	13.8	16.7	13.7	16.0	55.1	61.9	60.0	51.5	116.0	129.3	126.5	107.8
	2	5/8/2013		13.0	12.2	11.2	14.3	15.5	13.8	12.7	15.8	52.2	57.7	64.6	47.2	110.2	122.3	134.6	100.1
	3	8/8/2013	2nd	11.0	13.0	10.3	11.8	13.0	15.8	12.7	14.8	46.3	61.6	68.1	50.8	98.3	128.9	142.3	108.8
	4	12/8/2013		11.8	10.5	14.2	11.3	15.2	12.2	17.7	14.7	42.8	55.0	60.9	53.6	92.4	117.5	127.9	113.1
	5	16/8/2013	3rd	13.0	11.2	11.2	11.2	16.0	13.3	14.2	13.3	47.1	50.3	54.9	60.6	100.0	107.2	117.3	130.4
	6	20/8/2013		10.8	12.3	9.8	12.7	12.8	14.5	11.7	14.8	50.7	54.7	59.0	46.7	108.2	115.0	124.9	100.6
	7	23/8/2013	4th	12.3	10.0	13.0	14.8	14.3	13.0	16.2	18.0	54.8	58.7	63.4	51.0	117.9	123.3	132.1	108.4
	8	27/8/2013		10.8	12.0	13.0	13.8	13.0	14.0	17.0	16.0	60.0	63.1	66.9	55.2	126.6	132.2	140.1	117.3
SEPTEMBER	1	2/9/2013	1st	10.8	12.8	9.8	13.7	12.3	15.2	11.7	16.8	56.7	76.5	84.0	72.3	151.9	196.9	200.7	220.1
	2	5/9/2013		11.8	14.2	12.5	11.8	13.5	16.5	15.0	14.7	47.8	78.2	66.3	64.7	182.5	206.3	190.9	172.4
	3	10/9/2013	2nd	9.7	11.8	11.0	14.0	11.7	14.2	13.0	16.7	37.3	50.6	47.0	41.5	106.6	167.1	146.6	123.1
	4	13/9/2013		9.5	11.2	13.7	10.7	12.0	13.8	16.5	12.7	43.3	65.9	58.6	52.9	125.7	195.6	164.9	158.2
	5	17/9/2013	3rd	11.8	9.3	12.7	12.8	14.2	11.2	15.3	15.5	27.0	52.1	77.0	37.3	103.6	145.7	205.6	124.4
	6	20/9/2013		9.5	10.7	12.8	9.3	12.3	13.3	16.5	12.0	40.3	64.6	84.8	46.4	149.3	177.4	226.3	162.7
	7	24/9/2013	4th	11.2	12.0	10.7	14.5	13.5	15.5	12.8	17.8	51.2	70.5	77.1	57.8	169.3	196.7	195.4	187.6
	8	27/9/2013		12.0	9.7	9.7	12.5	15.0	12.0	12.2	14.7	34.5	58.3	48.4	31.0	108.7	137.5	141.2	88.0
OCTOBER	1	1/10/2013	1st	10.2	11.3	12.7	13.8	13.3	14.5	16.0	16.5	61.9	66.7	45.4	55.2	157.3	188.3	152.3	163.9
	2	5/10/2013		11.2	12.3	11.2	15.0	14.5	15.2	14.0	17.2	48.8	52.0	58.3	46.2	127.5	161.9	175.0	142.3
	3	9/10/2013	2nd	11.8	9.0	11.5	13.5	15.2	12.5	15.0	16.0	35.2	56.6	65.9	52.8	103.6	147.5	190.7	171.6
	4	12/10/2013		11.0	9.8	12.7	14.5	13.5	13.0	15.7	17.7	55.5	73.2	82.3	41.9	155.3	175.8	222.5	124.0
	5	16/10/2013	3rd	6.8	7.7	9.5	9.2	9.5	10.5	12.5	11.5	42.3	59.9	70.1	37.1	132.3	152.3	176.4	106.2
	6	19/10/2013		8.7	9.0	6.3	9.7	11.7	12.2	9.3	11.2	51.9	67.3	85.9	45.4	123.6	169.5	312.5	122.6
	7	23/10/2013	4th	8.0	7.3	7.5	9.3	10.0	9.3	10.2	12.0	62.9	75.2	69.1	57.9	177.6	191.2	177.7	174.2
	8	26/10/2013		9.2	8.3	8.2	10.2	11.2	10.3	9.7	12.7	46.6	64.5	48.2	40.5	140.7	162.9	133.5	110.2

NOVEMBER	1	2.11.2013	1st	6.0	8.8	8.7	9.7	8.2	11.0	10.3	11.2	75.2	62.8	73.5	54.6	258.5	211.5	257.1	126.0
	2	7.11.2013		7.7	6.5	9.5	7.5	10.5	8.7	12.3	9.0	86.6	51.7	69.1	58.0	252.3	129.3	223.2	139.1
	3	11.11.2013	2nd	8.7	9.7	7.5	8.7	10.7	11.7	9.7	10.2	77.8	57.9	83.9	58.0	223.4	147.2	227.3	130.5
	4	14.11.2013		9.7	8.2	9.8	6.8	11.8	10.5	12.5	9.2	81.9	62.5	83.5	59.6	259.9	185.7	234.6	120.9
	5	18.11.2013	3rd	7.8	7.7	9.5	8.8	10.3	10.5	11.7	10.7	72.3	52.8	7.6	50.0	222.5	147.4	312.9	109.8
	6	21.11.2013		7.0	6.5	5.8	9.2	9.2	8.2	7.2	12.0	63.0	71.8	63.0	75.9	14.1	172.4	204.4	180.7
	7	25.11.2013	4th	6.7	5.8	6.5	10.0	8.2	7.7	8.7	12.5	76.7	45.7	64.0	58.5	238.8	156.3	164.6	173.6
	8	28.11.2013		5.8	7.5	7.7	8.7	8.5	9.2	10.7	11.2	84.7	87.0	45.8	68.4	257.7	275.9	126.9	167.9
DECEMBER	1	2.12.2013	1st	5.2	7.3	7.5	8.7	7.5	9.0	9.3	9.8	73.4	42.6	66.0	37.3	198.9	161.9	210.4	104.3
	2	5.12.2013		6.0	6.5	6.3	9.7	8.7	8.2	8.0	12.0	60.6	72.1	74.2	60.6	184.7	215.7	234.1	178.7
	3	9.12.2013	2nd	7.0	8.7	5.8	7.5	10.0	11.2	8.5	9.3	73.7	62.2	82.3	77.9	219.3	165.1	271.1	216.7
	4	12.12.2013		6.3	9.7	7.7	9.5	9.0	12.5	10.5	11.5	78.7	70.9	51.8	47.3	252.8	188.4	157.8	142.4
	5	16.12.2013	3rd	5.7	6.8	6.0	9.7	7.3	9.0	8.3	12.0	67.5	79.4	67.2	63.0	183.9	212.1	186.9	173.5
	6	19.12.2013		5.0	7.5	7.0	8.5	7.0	10.0	9.3	10.0	74.8	61.5	74.2	53.0	205.8	155.6	195.8	138.3
	7	23.12.2013	4th	6.0	7.0	8.0	9.2	8.0	9.7	10.5	10.7	73.4	69.4	73.6	60.6	234.5	180.7	192.1	157.1
	8	26.12.2013		7.0	9.5	6.5	10.3	10.0	11.7	9.0	12.7	47.8	75.4	86.1	79.8	146.7	239.7	236.5	216.3
JANUARY	1	02.01.2014	1st	5.5	6.8	5.8	8.0	7.0	9.2	8.0	10.7	72.5	64.2	37.1	57.1	191.7	165.3	103.4	198.4
	2	06.01.2014		5.0	6.3	7.0	8.5	6.7	8.0	9.0	11.7	68.8	71.6	82.9	62.6	212.7	247.4	246.0	180.5
	3	09.01.2014	2nd	4.5	5.0	7.7	9.7	7.0	7.7	11.0	13.0	42.4	62.8	73.2	87.5	124.3	166.9	202.6	217.4
	4	13.01.2014		5.8	7.0	9.0	6.8	7.7	8.7	11.7	8.2	68.4	55.5	81.7	72.6	185.3	179.0	239.1	164.0
	5	16.01.2014	3rd	4.7	6.3	8.0	9.7	6.2	8.7	9.7	12.7	75.2	85.1	74.2	88.7	235.2	233.1	214.0	191.3
	6	20.01.2014		7.0	7.2	9.3	8.0	9.0	9.8	11.7	11.0	81.3	57.1	66.3	85.2	217.1	169.7	186.0	208.1
	7	23.01.2014	4th	5.7	5.0	7.0	9.3	7.7	6.5	9.0	12.3	79.5	81.8	77.0	79.8	204.0	267.6	201.4	231.1
	8	27.01.2014		4.7	5.7	7.5	9.5	6.5	7.8	9.7	11.7	88.3	70.9	58.3	63.9	243.1	188.6	158.2	170.6
	9	31.01.2014		5.5	6.5	8.5	8.0	7.7	8.7	10.0	11.2	68.8	75.6	69.2	52.4	220.2	233.1	185.2	141.8
FEBRUARY	1	03.02.2014	1st	6.5	5.7	7.5	9.0	8.7	8.0	9.3	11.0	74.7	58.2	72.0	68.9	212.4	152.2	194.2	156.0
	2	06.02.2014		7.7	7.5	9.5	9.8	10.0	9.3	11.3	13.0	62.4	70.2	60.8	60.8	191.7	228.1	164.1	170.4
	3	10.02.2014	2nd	5.7	6.5	8.3	7.3	8.0	9.7	11.2	9.7	76.4	65.2	44.0	80.7	217.1	188.0	121.5	213.7
	4	13.02.2014		7.5	6.0	7.8	9.7	9.5	8.0	9.2	12.0	81.1	68.8	75.0	85.6	238.5	219.9	201.7	236.7
	5	17.02.2014	3rd	6.7	7.7	5.8	10.5	9.5	11.0	8.0	13.7	70.9	44.3	62.6	76.4	209.7	145.2	163.7	192.0
	6	20.02.2014		6.0	8.2	7.5	8.0	8.3	11.5	10.0	11.0	65.7	76.1	76.6	60.4	220.9	214.4	230.4	159.7
	7	24.02.2014	4th	6.8	7.5	8.7	11.3	9.0	10.5	11.3	14.0	80.7	66.1	57.4	47.9	254.1	182.4	182.1	198.7
	8	27.02.2014		7.7	9.5	7.0	10.0	10.0	12.0	10.7	13.3	77.7	48.4	84.9	67.2	206.3	148.1	250.3	214.4
MARCH	1	03.03.2014	1st	7.0	8.0	6.8	9.7	9.5	10.8	9.0	13.7	77.1	69.8	60.5	79.4	225.3	196.7	185.7	222.5
	2	06.03.2014		8.2	5.7	9.0	10.5	11.3	8.5	11.7	14.0	61.4	72.2	66.5	71.7	195.2	213.7	205.8	194.1
	3	10.03.2014	2nd	6.0	8.0	8.5	10.7	9.0	10.0	11.0	14.0	71.9	38.6	54.8	42.6	184.4	82.9	190.6	153.9
	4	13.03.2014		6.8	8.8	6.3	10.0	9.0	11.0	9.2	13.0	51.5	47.7	69.8	46.8	187.1	148.4	230.6	110.8
	5	18.03.2014	3rd	6.3	8.0	9.7	8.0	8.5	9.7	12.0	11.0	66.8	61.1	72.7	40.6	163.9	152.0	196.6	120.7
	6	21.03.2014		7.8	6.0	11.0	9.5	10.7	8.3	13.7	12.0	80.1	68.0	83.9	72.9	199.1	211.9	228.2	235.1
	7	25.03.2014	4th	-	6.8	8.5	9.0	-	9.7	11.3	11.5	-	60.7	67.0	53.0	-	176.5	178.8	147.5
	8	28.03.2014		-	8.8	9.8	12.5	-	11.0	12.0	15.0	-	73.2	57.2	64.6	-	202.2	155.8	176.5
	9	31.03.2014		-	7.8	6.5	10.5	-	10.5	9.0	13.0	-	51.8	69.1	77.4	-	163.5	227.2	193.3
Yearly Min.				**4.5**	**5.0**	**5.8**	**6.8**	**6.2**	**6.5**	**7.2**	**8.2**	**27.0**	**38.6**	**7.6**	**31.0**	**14.1**	**82.9**	**103.4**	**88.0**
Yearly Max.				**13.7**	**14.2**	**14.5**	**15.0**	**16.0**	**16.7**	**17.7**	**18.0**	**88.3**	**87.0**	**86.1**	**88.7**	**259.9**	**275.9**	**312.9**	**236.7**
Yearly Avg.				**9.3**	**9.6**	**10.1**	**11.1**	**11.5**	**11.8**	**12.4**	**13.5**	**63.0**	**64.1**	**66.7**	**59.9**	**161.8**	**162.6**	**173.4**	**149.0**

Note- There was RDS motor problem in the month of March-2014, so that only six monitoring has been carried out at Adm building site.

Vinit Kr. Sharma
Monitored by

Dr. Saurabh Kumar
Asstt. Mgr. (Env.)

ANNEXURE- IV

J.K. *Cement* WORKS, MUDDAPUR (KARNATAKA)

(Unit : J.K. Cement Ltd.)

Yearly Stack monitoring report of Cement plant & 2x25 MW Thermal power plant for the Month of April-2013 to- March-2014

Sl. No.	Month/Year	Stack locations																	
		Thermal Power Plant	Kiln / Raw Mill	Coal Mill Bag Filter	Cooler ESP	LSC	CM-1	CM-2	Slag mill	Coal crusher	Packing plant No-1	Packing plant No-2	Packing plant No-3	Packing plant No-4	RMT System	Clinker Transport	Clinker Storage	CM Sep-1	CM Sep-2
1	Apr-13	36.9	9.0	26.8	12.1	22.5	24.2	33.6	23.4	28.5	25.2	30.6	17.7	15.8	29.1	20.9	27.8	30.6	24.9
2	May-13	38.6	10.2	25.6	11.8	27.4	19.2	26.2	33.1	31.0	22.6	28.2	23.7	26.7	27.6	35.8	29.4	20.4	17.1
3	Jun-13	42.1	12.8	26.3	14.2	30.4	32.9	20.3	23.5	28.0	25.1	21.6	33.9	24.6	28.2	33.4	41.6	24.1	30.3
4	Jul-13	39.6	8.0	23.2	15.7	28.0	21.8	26.9	29.8	32.3	29.2	16.4	21.9	17.3	26.2	26.9	18.0	19.3	28.9
5	Aug-13	44.3	11.2	23.5	14.6	21.4	22.9	26.4	42.2	28.0	26.9	20.5	29.6	24.6	19.8	34.7	23.8	19.5	30.6
6	Sep-13	38.1	11.7	30.1	15.9	23.7	28.4	34.9	32.1	32.2	23.8	29.3	30.9	19.5	32.8	34.5	44.3	38.0	23.3
7	Oct-13	43.8	13.0	23.5	16.8	23.7	33.5	38.3	37.0	31.1	21.6	28.4	34.8	17.7	30.4	28.1	41.8	33.5	33.0
8	Nov-13	35.6	14.9	23.8	13.9	27.4	26.5	35.5	28.4	35.7	26.9	32.7	23.1	29.5	27.9	32.7	24.4	26.5	35.5
9	Dec-13	38.8	11.5	36.1	14.5	27.1	33.4	20.7	30.4	29.9	21.9	33.1	37.3	22.4	30.2	23.7	35.9	33.4	20.7
10	Jan-14	35.6	14.3	32.3	18.1	28.3	29.2	24.2	44.8	20.8	22.6	17.7	33.5	26.1	36.1	30.3	27.6	29.2	24.2
11	Feb-14	30.5	11.8	29.1	11.6	41.5	21.1	31.0	34.8	30.3	31.9	38.3	23.9	15.8	26.0	26.9	32.5	21.1	31.0
12	Mar-14	39.6	13.6	31.9	16.4	27.5	25.2	19.1	42.3	28.4	23.1	30.6	15.3	28.2	22.4	32.7	33.5	25.2	19.1

Note- All the values in mg/Nm^3

Vinit Kr. Sharma
Monitored by

Dr. Saurabh Kumar
Asstt. Mgr. (Env.)

ANNEXURE - V

J.K. *Cement* WORKS, MUDDAPUR (KARNATAKA)

(Unit : J.K. Cement)

Yearly Fugitive Emission Monitoring Report of Cement plant for the month of April-2013 to March-2014

SL. NO.	MONTH/YEAR	SPM (microgram/m^3)					
		Gypsum Yard	Slag Yard	Flyash Yard	Cement mill	Lime stone unloading hopper	Lime stone crushing Site
1	Apr-13	1467.5	1538.5	1431.3	1593.7	1745.2	1353.3
2	May-13	1583.9	1606.8	1373.4	1491.1	1503.3	1231.9
3	Jun-13	1649.5	1565.8	1161.2	1296.0	1322.0	1329.9
4	Jul-13	1188.2	1424.8	1408.2	1669.6	1568.8	1239.6
5	Aug-13	980.5	1194.4	1042.0	822.2	897.3	894.4
6	Sep-13	1117.3	1105.2	1593.4	1369.1	755.2	1264.7
7	Oct-13	1253.9	990.1	1529.6	1290.3	1001.3	1413.8
8	Nov-13	1374.2	1046.5	1323.8	998.1	910.6	873.7
9	Dec-13	1208.5	964.9	1461.3	743.2	1015.0	956.8
10	Jan-14	1084.7	700.6	1005.5	1015.8	621.8	800.9
11	Feb-14	990.8	898.7	865.7	1183.7	753.8	1009.9
12	Mar-14	1040.0	978.2	683.8	846.5	826.8	1141.8
Yearly Average		**1244.9**	**1167.9**	**1239.9**	**1193.3**	**1076.8**	**1125.9**

Vinit Kr. Sharma
Monitored by

Dr. Saurabh Kumar
Asstt Mgr. (Env.)

ANNEXURE-VI

J.K. Cement WORKS, MUDDAPUR (KARNATAKA)

(Unit: J.K. Cement Ltd.)

Yearly Noise monitoring report of Cement & Power Plant for the month of April-2013 to March-2014

Sl. No.	Location Name	Apr-13		May-13		Jun-13		Jul-13		Aug-13		Sep-13		Oct-13		Nov-13		Dec-13		Jan-14		Feb-14		Mar-14	
		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	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	62.3	47.6	56.8	48.6	61.5	50.6	57.5	48.6	60.5	43.2	58.6	44.5	60.8	45.6	62.3	51.6	58.5	48.5	55.3	46.3	56.3	45.3	54.3	43.6
2	Administrative Building	60.4	46.8	58.4	47.2	64.2	48.7	62.4	45.6	63.4	46.1	61.8	43.6	65.3	41.3	60.7	48.7	56.7	49.7	58.6	45.5	54.2	48.7	52.8	45.1
3	Lime Stone Crusher	65.8	59.4	61.5	53.2	58.6	50.6	55.9	47.3	58.2	50.4	62.3	51.2	57.4	48.4	67.4	54.4	60.3	55.6	59.4	50.4	60	53.2	58.6	50.9
4	Kiln/ Cooler Office	68.4	61.3	64.3	57.4	56.2	49.7	62.3	53.1	61.9	54.9	64.3	55.9	70.6	60.3	72.8	68.2	70.4	66.9	71.3	63.8	72.5	64.3	60.7	51.6
5	Power Plant	55.3	50.3	63.7	49.5	65.7	48.7	59.4	50.7	64.5	48.6	65.2	50.7	68.2	52.5	59.9	53.2	63.5	54.3	58.5	52.5	59.4	48.6	64.9	53.1
6	Despatch weigh bridge	61.2	48.4	58.4	50.7	57.9	49.2	53.7	43.8	55.8	40.8	58.2	44.6	57.2	46.9	63.4	57.4	60.2	46.5	54.4	47.8	55.2	46.8	56.8	52.3
7	Near QC Lab.	53.8	44.3	55.8	48.6	53.6	47.3	50.9	42.7	54.3	43.6	54.9	43.7	62.8	39.5	58.7	46.7	57.7	45.3	52.9	44.6	53.8	46.3	55.2	43.8
8	Coal Yard	55.9	42.8	54.9	43.5	51.8	42.9	54.8	39.5	53.7	38.8	50.4	39.8	52.3	38.4	60.2	44.8	55.4	43.8	53.8	40.8	50.6	41.8	52.4	39.9
9	Near Canteen	60.7	44.9	56.2	45.1	59.5	44.9	55.6	41.7	61.9	42.7	63.7	45.1	65.2	42.1	68.4	52.1	58.9	48.2	59.3	46.3	58.1	47.8	60.7	45.2
10	Plant main gate	55.8	47.6	60.2	43.8	55.8	46.2	50.8	44.2	52.7	40.5	54.8	39.7	53.1	38.5	56.6	47.3	56.8	45.8	55.2	42.5	53.9	40.5	54.9	42.8
11	Dispensary	51.7	40.8	52.7	40.9	53.7	43.8	49.9	40.9	50.9	39.6	51.9	40.5	55.9	41.6	57.3	46.5	52.9	41.9	50.6	39.9	52.5	38.8	51.3	40.7
12	Packing Plant	64.3	58.3	61.7	53.6	65.6	54.3	63.4	54.6	64.2	54.9	65.2	47.3	63.7	50.7	69.5	53.5	67.5	56.8	66.7	55.2	64.1	56.3	65.2	51.3
13	General Store	55.9	47.3	57.6	44.8	58.7	45.2	57.1	39.7	58.5	40.3	59.7	41.5	60.8	43.2	58.3	47.1	60.3	44.8	62.1	46.8	60.8	44.7	62.7	42.9
14	DG House (1-meter distance)	DG set is not in function.		70.5	-	74.1	-	73.6	-	71.6	-	70.6	-	71.2	-	72.5	-	70.6	-	71.3	-	72.6	-	71.5	-
15	DG House (2-meter distance)			68.4	-	71.8	-	70.1	-	69.5	-	68.9	-	68.4	-	70.4	-	69.4	-	69.8	-	69.3	-	68.3	-
	Yearly Avg.	59.3	49.2	60.1	48.2	60.6	47.9	58.5	45.6	60.1	45.0	60.7	45.2	62.2	45.3	63.9	51.7	61.3	49.9	59.9	47.9	59.6	47.9	59.4	46.4

Vinit Kr. Sharma
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Asstt. Mgr. (Env.)