



JK Cement LTD.

CIN : L17229UP1994PLC017199

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

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

Our Ref. No.: MGR-PC-21/ 3067

Date: 28.11.2017

To,

➔ The Joint Director,
Indira Paryavaran Bhavan,
JOR Bagh Road,
Near JOR bagh Metro station
New Delhi

Sub: Environmental Clearance Compliance report for Expansion of Clinker and Cement production of M/s J.K. Cement Works, Mangrol at Village- Mangrol, District-Chittorgarh, Rajasthan.

Ref.: Environmental Clearance letter No. J-11011/1273/2007-IA (II) dated. 20.03.2009

Dear Sir,

We are enclosing herewith the compliance report of Environmental Clearance conditions for Expansion of Clinker (0.75 MMTPA to 2.90 MMTPA) and Cement (0.95 MMTPA to 3.45 MMTPA) production along with **Stack monitoring, Ambient air monitoring and Fugitive monitoring report from the month of April 2017 to September' 2017 in hard copy as well as mail as soft copy** for your kind reference and record. We trust you will find the same in order.

Thanking you,

Grey

Yours Faithfully
For J.K. Cement WORKS, MANGROL

S.K. Acharya
S.K. Acharya
Asth. Vice President (E & I)

Encl: a/a
Copy to:

- 1.The Director,**Ministry of Environment, Forests & Climate Change,Regional office (Central Region), Kendriya Bhawan, 5th Floor, Sector 'H' , ALIGANJ, **LUCKNOW- 226020 (U.P.)**
- 2.The Chairman,** Central Pollution Control Board ,Parivesh Bhawan, CBD-CUM office complex, East Arjun Nagar, Maharaja Surajmal Marg, Vishwas Nagar Extension, Viswas nagar Shahdara- Behind Karkarduma high court New Delhi 11032
- 3. Member Secretary,** Rajasthan State Pollution Control Board, 4, Institutional Area, Jhalana Doongri, JAIPUR - 302004 (RAJASTHAN)

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



J.K. CEMENT WORKS, MANGROL (RAJ.)**Dated 28.11.2017**

Compliance report of Environment Clearance for Mangrol Cement Plant

Reference Letter from MOEF, New Delhi - J-11011/1273/2007-1A (II) dated 20.03.2009

(for the period from April' 2017 to September' 2017)

A.) SPECIFIC CONDITIONS:

Sr.No	Condition	Status
(i)	The company shall install Electrostatic Precipitator (ESP) to raw mill, kiln and cooler, bag house to cement mill and bag filter to crusher to control particulate emissions within 50mg/Nm ³ . The company shall provide air pollution monitoring arrangements with stacks and vents. Regular monitoring reports shall be submitted to the Rajasthan Pollution Control Board, CPCB and Ministry's Regional Office at Lucknow.	Bag house has been installed at raw mill, kiln, Coal mill & Cement mill. ESP at cooler and Bag filters at crusher to control particulate emission within the prescribed limits of RSPCB/CPCB. The unit had already installed online air pollution monitoring instruments to monitor various emissions parameters as per CPCB directives.
(ii)	Data on ambient air quality stack emission and fugitive emissions shall be regularly submitted online to Ministry's Regional Office at Lucknow, Rajasthan Pollution Control Board and Central Pollution Control Board as well as hard copy once in six months. Data on SPM, SO ₂ and NO _x shall also be displayed prominently outside the premises at the appropriate place for the information of general public.	Ambient air quality, stack emissions level and fugitive emissions are being regularly monitored. Six monthly compliance report is being regularly submitted to statutory authorities. Data on SPM, SO ₂ and NO _x are continuously displayed outside the premises of plant.
(iii)	Bag house/filters shall be provided to control the fugitive emissions generated during material transfer, packing loading and unloading. The project authorities shall store all the raw materials except limestone in the covered sheds to control fugitive emissions.	Bag house/ Bag filter have been installed to control fugitive emissions during material transport, loading/unloading. Also, raw material is being stored in the covered shed except for limestone.
(iv)	The locations of ambient air quality monitoring stations shall be set up as per statutory requirement in consultation with the Rajasthan Pollution Control Board (RPCB) and additional stations shall be installed, if required, in the downwind direction as well as where maximum ground level concentrations are anticipated.	Locations of AAQ monitoring stations have been installed as per RSPCB/CPCB guidelines. Weather monitoring stations and online ambient monitoring system has also been installed as per statutory requirement

(v)	The water requirement shall not exceed 1500KLD. The copy of the permission letter for drawl of River/dam water/ground water shall be submitted to the Ministry's Regional Office at Lucknow within 3 months from date of issue of this letter. The company shall prepare plan for conservation of water and reduction of consumption of fresh water from the ground water or Gambhiri Dam.	The permission for extraction of 2300 KLD water had already been obtained from CGWA and copy of the same has already been submitted to Regional Office, Lucknow vide our letter no. MGR/PC-05/09 dated 10th May, 2009. The company has already taken steps for conservation of water and reduction in fresh water consumption.
(vi)	The company shall develop rainwater harvesting structures to harvest the run off water for recharge of ground water.	The company had developed rainwater harvesting structures to capture runoff water for recharge of ground water.
(vii)	Green belt shall be developed at least in 33% of plant area to mitigate the effect of fugitive emissions all around the plant as per the guidelines of Central Pollution Control Board.	Green belt development has already been developed as per CPCB guidelines to mitigate the effect of fugitive emissions all around the plant.
(viii)	The project authorities shall transport the raw materials and cement in covered means to avoid fugitive emission during transport.	The transportation of raw materials and cement are being done in covered manner to control fugitive emissions.
(ix)	All the recommendations mentioned in the CREP guidelines for the cement plants shall be followed and complied.	Point noted and complied.
(x)	The company shall comply with all the commitment made during public hearing/public consultation held on 25 th July, 2008 for the project.	Point noted and complied. The current status towards compliance of the commitment made during Public Hearing towards community and social welfare.
(xi)	Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, Safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.	Since the plant is in operational phase at present, therefore this point is not applicable. However, all necessary facilities were provided at the time of construction.

B.) GENERAL CONDITIONS:

Sr.No	Condition	Status
(i)	The project authorities shall strictly adhere to the stipulations of the SPCB/State Government or any statutory body.	Point noted and complied.
(ii)	No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment and Forests. In case of deviations or alterations in the project proposal from those submitted to this Ministry for	The unit has obtained Environment Clearance for expansion of existing clinker production from 2.9 MMTPA to 5.65

	clearance, a fresh reference shall be made to the Ministry to assess the adequacy of conditions imposed and to add additional environmental protection measures required, if any.	MMTPA and cement from 3.45 MMTPA to 7.05 MMTPA and one additional CPP of 35 MW and WHRB of 10 MW vide letter no. F. No. J-11011/267/2013-IA II (I) on dated 8 th September, 2016.
(iii)	At no time, the emissions shall exceed the prescribed limits. In the event of failure of any pollution control system adopted by the unit, the unit shall be immediately put out of operation and shall not be restarted until the desired efficiency has been achieved.	Interlocking system between pollution control devices and operation section has been installed to comply the conditions.
(iv)	The gaseous emissions (SO ₂ , NO _x) and particulate matter along with RSPM levels from various process units shall conform to the standards prescribed by the concerned authorities from time to time.	The monitoring reports of gaseous emissions and particulate matter along with RSPM levels shows that the level of pollutants are within the prescribed limits.
(v)	The company shall undertake following Waste Minimization measures. ➤ Reuse of by-products from the process as raw materials or as raw material substitute in other processes. ➤ Use of “Close pneumatic” system for transport of fine material. ➤ All venting systems shall be connected with dust arresting equipments ➤ Dust collect in pollution control equipment shall be reused.	By-products produced from the process are being reused in other processes as raw materials. The dust from venting systems is being collected in Bag house/Bag filter and the same is being reused in the process.
(vi)	Fugitive emissions in the work zone environment, product, and raw materials storage area shall be regularly monitored. The emissions shall conform to the limits imposed by the State Pollution Control Boards/ Central Pollution Control Board.	Fugitive emission in the work zone are being regularly monitored and maintained within prescribed limit of CPCB/RSPCB.
(vii)	The overall noise levels in an around the plant area shall be kept well within the standards by providing noise control measures including acoustic hoods, silencers, enclosures etc. on all sources of noise generation. The ambient noise levels shall conform to the standards prescribed under Environment (Protection) Act, 1986 Rules, 1989 viz. 75 dBA (day time) and 70 dBA (night time).	Noise levels in and around the plant area is being maintained within the standards by providing noise control equipment like acoustic hoods, silencers, enclosures
(viii)	Occupational health and safety measures shall be undertaken. Periodic monitorial for exposure to dust on the workers should be conducted and records maintained including health records of the workers. The company shall engage a doctor who is trained in occupational health.	All Occupational health and safety measures are being taken by the management. Health Record of the workers is being maintained. The company has dispensary and sufficient medical staff for the existing unit to monitor the health of the employees/workers.

(ix)	The company shall undertake eco-developmental measures including community welfare measures in the project area for the overall improvement of the environment. The eco-development plan should be submitted to the SPCB within three months of receipt of this letter for approval.	The company has undertaken various measures for community welfare.
(x)	A separate Environmental Management Cell equipped with full fledged laboratory facilities shall be set up to carry out the Environmental Management and Monitoring functions.	The company has a separate Environmental Management Cell to carry out the Environmental Management and Monitoring functions.
(xi)	The project authorities shall earmark adequate fund to implement the conditions stipulated by the Ministry of Environment and Forests as well as the State Government.	Being complied.
(xii)	The implementation of the project vis-à-vis environmental action plans shall be monitored by the concerned Regional Office of the Ministry/SPCB/CPCB. A six monthly compliance status report shall be submitted to monitoring agencies and shall be posted on the website of the Company.	Point noted. Six monthly compliance reports is being regularly submitting to monitored agencies and same was also posted on the website of the Company.
(xiii)	The project proponent shall inform the public that the project has been accorded environmental clearance by the Ministry and copies of the clearance letter are available with the SPCB and may also be seen at Website of the Ministry at http://envfor.nic.in . This shall be advertised within seven days from the date of issue of the clearance letter, at least in two local newspapers that are widely circulated in the regional of which one shall be in the vernacular language of the locality concerned and a copy of the same shall be forwarded to the concerned Regional Office of the Ministry.	We have already done the same.
(xiv)	The project authorities shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities and the date of start of the project.	Point noted. Confirm and Complied.

J.K. Cement WORKS, MANGROL (RAJ) (Unit-1)
DATA SHEET FOR PARTICULATE MATTER EMISSION FROM POINT SOURCE
April' 2017 - September' 2017

DATE	NAME OF THE STACK / DUCT ATTACHED WITH UNIT AND MONTH	CROSS SECTI ONAL AREA OF DUCT (M2)	STAC K GASE S TEMP . (⁰ K)	STACK GASES VELO CITY (M / Sec.)	FLOW OF GASES IN STACK (NM ³ /Sec .)	DUST CONC. (Mg/N M ³)	MEAN DUST CONC. (Mg/NM ³)	EMISSIO N RATE (Ts/DAY)	REMARK
	April' 2017								
04.04.2017	KILN + RAW MILL -1 (B.H.)	Under Maintenance							
11.04.2017	KILN + RAW MILL -1 (B.H.)								
18.04.2017	KILN + RAW MILL -1 (B.H.)								
30.04.2017	KILN + RAW MILL -1 (B.H.)								
	May' 2017								
05.05.2017	KILN + RAW MILL -1 (B.H.)	Under Maintenance					14.2		
12.05.2017	KILN + RAW MILL -1 (B.H.)								
19.05.2017	KILN + RAW MILL -1 (B.H.)	5.23	406	15.86	60.88	15.6		0.082	
26.05.2017	KILN + RAW MILL -1 (B.H.)	5.23	405	15.30	58.88	12.7		0.065	
	June' 2017								

01.06.2017	KILN + RAW MILL -1 (B.H.)	5.23	404	15.58	60.10	13.40	12.6	0.018	
08.06.2017	KILN + RAW MILL -1 (B.H.)	5.23	407	15.23	58.32	17.60		0.023	
15.06.2017	KILN + RAW MILL -1 (B.H.)	5.23	402	14.62	56.68	11.10		0.054	
22.06.2017	KILN + RAW MILL -1 (B.H.)	5.23	399	15.77	61.60	8.10		0.043	
	July' 2017								
04.07.2017	KILN + RAW MILL -1 (B.H.)	5.23	402	14.85	57.57	14.70	13.6	0.019	
11.07.2017	KILN + RAW MILL -1 (B.H.)	5.23	405	14.37	55.30	11.00		0.014	
18.07.2017	KILN + RAW MILL -1 (B.H.)	5.23	406	14.05	53.93	16.10		0.020	
25.07.2017	KILN + RAW MILL -1 (B.H.)	5.23	403	15.43	59.67	12.70		0.017	
	August' 2017								
01.08.2017	KILN + RAW MILL -1 (B.H.)	5.23	407	14.73	56.41	12.60	15.4	0.061	
08.08.2017	KILN + RAW MILL -1 (B.H.)	5.23	403	15.28	59.09	16.10		0.082	
16.08.2017	KILN + RAW MILL -1 (B.H.)	5.23	402	14.85	57.57	18.30		0.091	
23.08.2017	KILN + RAW MILL -1 (B.H.)	5.23	405	14.20	54.65	14.70		0.069	
	September' 2017								
01.09.2017	KILN + RAW MILL -1 (B.H.)	5.23	415	13.57	50.96	14.10	17.2	0.017	
08.09.2017	KILN + RAW MILL -1 (B.H.)	5.23	410	14.12	53.67	20.90		0.025	
15.09.2017	KILN + RAW MILL -1 (B.H.)	5.23	409	14.82	56.47	18.30		0.054	
22.09.2017	KILN + RAW MILL -1 (B.H.)	5.23	412.0	13.35	50.50	15.40		0.043	

	April' 2017								
04.04.2017	FOLAX COOLER (E.S.P)	Kiln Under Maintenance							
11.04.2017	FOLAX COOLER (E.S.P)								
18.04.2017	FOLAX COOLER (E.S.P)								
30.04.2017	FOLAX COOLER (E.S.P)								
	May' 2017								
05.05.2017	FOLAX COOLER (E.S.P)	Under Maintenance					44.25		
12.05.2017	FOLAX COOLER (E.S.P)								
19.05.2017	FOLAX COOLER (E.S.P)	7.07	425.0	7.09	35.15	46.60		0.142	
26.05.2017	FOLAX COOLER (E.S.P)	7.07	427.0	7.90	38.98	41.90		0.141	
	June' 2017								
01.06.2017	FOLAX COOLER (E.S.P)	7.1	432.0	6.9	33.5	19.5	24.3	0.056	
08.06.2017	FOLAX COOLER (E.S.P)	7.1	428.0	7.3	35.7	25.8		0.080	
15.06.2017	FOLAX COOLER (E.S.P)	7.1	425.0	8.3	40.9	28.8		0.102	
22.06.2017	FOLAX COOLER (E.S.P)	7.1	430.0	8.1	39.7	23.2		0.080	
	July' 2017								
04.07.2017	FOLAX COOLER (E.S.P)	7.07	428	6.64	32.69	22.60	22.1	0.013	
11.07.2017	FOLAX COOLER (E.S.P)	7.07	425	7.52	37.28	18.30		0.012	
18.07.2017	FOLAX COOLER (E.S.P)	7.07	420	8.26	41.43	25.90		0.018	

25.07.2017	FOLAX COOLER (E.S.P)	7.07	421	8.07	40.39	21.50		0.015	
	August' 2017								
01.08.2017	FOLAX COOLER (E.S.P)	7.07	427	6.18	30.49	34.50	35.2	0.091	
08.08.2017	FOLAX COOLER (E.S.P)	7.07	421	8.07	40.39	32.10		0.112	
16.08.2017	FOLAX COOLER (E.S.P)	7.07	425	7.74	38.37	38.40		0.127	
23.08.2017	FOLAX COOLER (E.S.P)	7.07	426	6.89	34.08	35.60		0.105	
	September' 2017								
01.09.2017	FOLAX COOLER (E.S.P)	7.07	430	7.29	35.72	28.60	33.2	0.088	
08.09.2017	FOLAX COOLER (E.S.P)	7.07	428	6.80	33.47	37.00		0.107	
15.09.2017	FOLAX COOLER (E.S.P)	7.07	435	6.72	32.55	34.80		0.098	
22.09.2017	FOLAX COOLER (E.S.P)	7.07	426.0 0	7.80	38.58	32.20		0.107	
	April' 2017								
04.04.2017	COAL MILL (B.F.)	Mill under Maintenance							
11.04.2017	COAL MILL (B.F.)								
18.04.2017	COAL MILL (B.F.)								
30.04.2017	COAL MILL (B.F.)								
	May' 2017								
05.05.2017	COAL MILL (B.F.)	Mill under Maintenance					13.70		
12.05.2017	COAL MILL (B.F.)								

19.05.2017	COAL MILL (B.F.)	0.45	340.0	26.38	10.40	15.70		0.014	
26.05.2017	COAL MILL (B.F.)	0.45	338.0	26.74	10.61	11.70		0.011	
	June' 2017								
01.06.2017	COAL MILL (B.F.)	0.45	337	27.09	10.78	17.50	15.4	0.041	
08.06.2017	COAL MILL (B.F.)	0.45	342	26.63	10.44	22.50		0.052	
15.06.2017	COAL MILL (B.F.)	0.45	343	26.94	10.53	10.00		0.009	
22.06.2017	COAL MILL (B.F.)	0.45	335	26.01	10.41	11.40		0.010	
	July' 2017			-					
04.07.2017	COAL MILL (B.F.)	0.45	338	26.02	10.32	15.20	18.5	0.034	
11.07.2017	COAL MILL (B.F.)	0.45	337	25.25	10.05	21.50		0.047	
18.07.2017	COAL MILL (B.F.)	0.45	341	26.44	10.40	12.40		0.028	
25.07.2017	COAL MILL (B.F.)	0.45	336	25.45	10.16	24.80		0.055	
	August' 2017								
01.08.2017	COAL MILL (B.F.)	0.45	335	25.58	10.24	10.90	14.4	0.010	
08.08.2017	COAL MILL (B.F.)	0.45	338	24.97	9.91	15.40		0.013	
16.08.2017	COAL MILL (B.F.)	0.45	342	25.70	10.08	18.80		0.016	
23.08.2017	COAL MILL (B.F.)	0.45	340	26.00	10.25	12.40		0.011	
	September' 2017								
01.09.2017	COAL MILL (B.F.)	0.45	332	25.06	10.12	9.40	12.7	0.020	

08.09.2017	COAL MILL (B.F.)	0.45	339	25.75	10.19	13.80		0.031	
15.09.2017	COAL MILL (B.F.)	0.45	343	25.15	9.83	16.20		0.035	
22.09.2017	COAL MILL (B.F.)	0.45	335.0	26.07	10.44	11.30		0.025	
	April' 2017								
04.04.2017	CEMENT MILL No.-1 (B.F.)	Mill Under Maintenance							
11.04.2017	CEMENT MILL No.-1 (B.F.)								
18.04.2017	CEMENT MILL No.-1 (B.F.)								
30.04.2017	CEMENT MILL No.-1 (B.F.)								
	May' 2017								
04.05.2017	CEMENT MILL - 1 (B.F.)	Mill Under Maintenance							
11.05.2017	CEMENT MILL - 1 (B.F.)								
18.05.2017	CEMENT MILL - 1 (B.F.)								
31.05.2017	CEMENT MILL - 1 (B.F.)								
	June' 2017								
05.06.2017	CEMENT MILL No.-1 (B.F.)	Mill Under Maintenance							
12.06.2017	CEMENT MILL No.-1 (B.F.)								
19.06.2017	CEMENT MILL No.-1 (B.F.)								
30.06.2017	CEMENT MILL No.-1 (B.F.)								
	July' 2017			-					

04.07.2017	CEMENT MILL - 1 (B.F.)	Under Major Shutdown							
11.07.2017	CEMENT MILL - 1 (B.F.)								
18.07.2017	CEMENT MILL - 1 (B.F.)								
31.07.2017	CEMENT MILL - 1 (B.F.)								
	August' 2017			-					
01.08.2017	CEMENT MILL No.-1 (B.F.)	Under Major Shutdown							
08.08.2017	CEMENT MILL No.-1 (B.F.)								
16.08.2017	CEMENT MILL No.-1 (B.F.)								
31.08.2017	CEMENT MILL No.-1 (B.F.)								
	September' 2017								
01.09.2017	CEMENT MILL - 1 (B.F.)	Under Major Shutdown							
08.09.2017	CEMENT MILL - 1 (B.F.)								
15.09.2017	CEMENT MILL - 1 (B.F.)								
30.09.2017	CEMENT MILL - 1 (B.F.)								
	April' 2017								
05.04.2017	CEMENT MILL - 2 (E.S.P)	0.50	373	10.14	4.05	40.90	42.3	0.014	
12.04.2017	CEMENT MILL - 2 (E.S.P)	Under Maintenance							
20.04.2017	CEMENT MILL - 2 (E.S.P)	0.50	369	9.68	3.91	49.10		0.017	
27.04.2017	CEMENT MILL - 2 (E.S.P)	0.50	375	9.51	3.78	36.90		0.012	

	May' 2017								
04.05.2017	CEMENT MILL - 2 (E.S.P)	0.50	376	10.35	4.10	45.00	40.2	0.016	
18.05.2017	CEMENT MILL - 2 (E.S.P)	0.50	372	10.51	4.21	41.20		0.015	
27.05.2017	CEMENT MILL - 2 (E.S.P)	0.50	374	9.74	3.88	39.00		0.013	
30.05.2017	CEMENT MILL - 2 (E.S.P)	0.50	373	10.19	4.07	35.70		0.013	
	June' 2017								
05.06.2017	CEMENT MILL - 2 (E.S.P)	0.50	381	10.42	4.08	28.40	26.3	0.010	
12.06.2017	CEMENT MILL - 2 (E.S.P)	Under Maintenance							
19.06.2017	CEMENT MILL - 2 (E.S.P)	0.50	378	10.20	4.02	27.50		0.010	
26.06.2017	CEMENT MILL - 2 (E.S.P)	0.50	374	9.80	3.90	23.10		0.008	
	July' 2017			-					
05.07.2017	CEMENT MILL - 2 (E.S.P)	0.50	379	9.69	3.81	21.90	25.3	0.007	
11.07.2017	CEMENT MILL - 2 (E.S.P)	0.50	375	10.13	4.02	28.50		0.010	
18.07.2017	CEMENT MILL - 2 (E.S.P)	0.50	381	9.49	3.71	23.80		0.008	
26.07.2017	CEMENT MILL - 2 (E.S.P)	0.50	376	9.25	3.67	27.10		0.009	
	August' 2017			-					
01.08.2017	CEMENT MILL - 2 (E.S.P)	0.50	374	9.68	3.86	19.40	23.7	0.006	
14.08.2017	CEMENT MILL - 2 (E.S.P)	0.50	371	10.13	4.07	28.10		0.010	
21.08.2017	CEMENT MILL - 2 (E.S.P)	0.50	368	9.88	4.00	24.60		0.009	

28.08.2017	CEMENT MILL - 2 (E.S.P)	0.50	377	9.61	3.80	22.80		0.007	
	September' 2017			-					
06.09.2017	CEMENT MILL - 2 (E.S.P)	0.50	372	8.91	3.57	23.80	21.6	0.007	
13.09.2017	CEMENT MILL - 2 (E.S.P)	0.50	375	9.81	3.90	19.50		0.007	
21.09.2017	CEMENT MILL - 2 (E.S.P)	0.50	370	10.06	4.05	26.10		0.009	
30.09.2017	CEMENT MILL - 2 (E.S.P)	0.50	378	9.28	3.66	17.00		0.005	
	April' 2017								
04.04.2017	CRUSHER-1 (B.F.)	Mill Under Maintenance					21.30		
11.04.2017	CRUSHER-1 (B.F.)								
24.04.2017	CRUSHER-1 (B.F.)	0.38	315.0 0	12.61	4.53	21.30		0.01	
30.04.2017	CRUSHER-1 (B.F.)	Mill Under Maintenance							
	May' 2017								
04.05.2017	CRUSHER-1 (B.F.)	Under Maintenance					21.3		
11.05.2017	CRUSHER-1 (B.F.)								
18.05.2017	CRUSHER-1 (B.F.)	0.38	321.0	13.39	4.72	19.50		0.008	
25.05.2017	CRUSHER-1 (B.F.)	0.38	325.0	13.93	4.85	23.10		0.010	
	June' 2017								
05.06.2017	CRUSHER-1 (B.F.)	0.38	323	14.15	4.96	18.90	19.6	0.008	
12.06.2017	CRUSHER-1 (B.F.)	0.38	320	13.42	4.75	24.70		0.010	

19.06.2017	CRUSHER-1 (B.F.)	0.38	317	12.36	4.42	19.60		0.007	
26.06.2017	CRUSHER-1 (B.F.)	0.38	315	13.53	4.86	15.10		0.006	
	July' 2017								
04.07.2017	CRUSHER-1 (B.F.)	0.38	317	14.18	5.07	17.40	20.9	0.008	
11.07.2017	CRUSHER-1 (B.F.)	0.38	312	17.09	6.20	19.60		0.011	
20.07.2017	CRUSHER-1 (B.F.)	0.38	315	13.41	4.82	21.70		0.009	
27.07.2017	CRUSHER-1 (B.F.)	0.38	314	15.92	5.74	24.90		0.012	
	August' 2017								
03.08.2017	CRUSHER-1 (B.F.)	0.38	318	17.39	6.19	23.50	24.8	0.013	
10.08.2017	CRUSHER-1 (B.F.)	0.38	315	16.22	5.83	28.70		0.014	
17.08.2017	CRUSHER-1 (B.F.)	0.38	317	13.52	4.83	25.10		0.010	
25.08.2017	CRUSHER-1 (B.F.)	0.38	314	16.75	6.04	21.90		0.011	
	September' 2017								
01.09.2017	CRUSHER-1 (B.F.)	0.38	321	17.47	6.16	27.40	28.1	0.015	
08.09.2017	CRUSHER-1 (B.F.)	0.38	318	15.73	5.60	28.80		0.014	
15.09.2017	CRUSHER-1 (B.F.)	0.38	323	14.95	5.24	26.80		0.012	
23.09.2017	CRUSHER-1 (B.F.)	0.38	315	17.82	6.41	29.40		0.016	

J.K. Cement WORKS, MANGROL (RAJ) (Unit-2)
DATA SHEET FOR PARTICULATE MATTER EMISSION FROM POINT SOURCE
April' 2017 - September' 2017

DATE	NAME OF THE STACK / DUCT ATTACHED WITH UNIT AND MONTH	CROSS SECTIO NAL AREA OF DUCT (M2)	STACK GASE S TEMP. (⁰ K)	STACK GASES VELOCIT Y (M / Sec.)	FLOW OF GASES IN STACK (NM ³ /Sec .)	DUST CONC. (Mg/NM ³)	MEAN DUST CONC. (Mg/NM ³)	EMISSION RATE (Ts/DAY)	REMARK
	April' 2017			-					
03.04.2017	KILN + RAW MILL (Bag House)	14.18	422	14.21	142.29	19.80	17.4	0.243	
10.04.2017	KILN + RAW MILL (Bag House)	14.18	420	15.11	152.02	18.30		0.240	
17.04.2017	KILN + RAW MILL (Bag House)	14.18	419	14.71	148.35	14.20		0.182	
24.04.2017	KILN + RAW MILL (Bag House)	14.18	421	13.90	139.52	17.30		0.209	
	May' 2017								
03.05.2017	KILN + RAW MILL (Bag House)	14.18	425	14.87	147.85	12.40	15.7	0.158	
15.05.2017	KILN + RAW MILL (Bag House)	14.18	423.0	14.39	143.75	20.20		0.25	

22.05.2017	KILN + RAW MILL (Bag House)	14.18	420	15.11	152.02	16.00		0.210	
29.05.2017	KILN + RAW MILL (Bag House)	14.18	422	14.98	150.00	14.10		0.183	
	June' 2017								
02.06.2017	KILN + RAW MILL (Bag House)	14.18	421	14.02	140.72	16.80	17.6	0.204	
09.06.2017	KILN + RAW MILL (Bag House)	14.18	424	15.39	153.38	24.30		0.322	
17.06.2017	KILN + RAW MILL (Bag House)	14.18	427	14.85	146.96	14.00		0.178	
24.06.2017	KILN + RAW MILL (Bag House)	14.18	422	14.32	143.39	15.40		0.191	
	July' 2017								
05.07.2017	KILN + RAW MILL (Bag House)	14.18	418	14.60	147.59	18.40	19.4	0.235	
12.07.2017	KILN + RAW MILL (Bag House)	14.18	415	14.87	151.41	22.10		0.289	
19.07.2017	KILN + RAW MILL (Bag House)	14.18	417	15.12	153.22	19.40		0.257	
26.07.2017	KILN + RAW MILL (Bag House)	14.18	413	14.23	145.60	17.70		0.223	
	August' 2017								
03.08.2017	KILN + RAW MILL (Bag House)	14.18	412	15.03	154.15	11.30	14.2	0.150	
10.08.2017	KILN + RAW MILL (Bag House)	14.18	418	14.76	149.21	14.00		0.180	
17.08.2017	KILN + RAW MILL (Bag House)	14.18	415	14.32	145.81	17.40		0.219	

31.08.2017	KILN + RAW MILL (Bag House)	Kiln Under Maintenance							
	September' 2017								
04.09.2017	KILN + RAW MILL (Bag House)	Kiln Under Maintenance					12.3		
12.09.2017	KILN + RAW MILL (Bag House)	14.18	416	14.78	150.13	15.00		0.195	
19.09.2017	KILN + RAW MILL (Bag House)	14.18	413	15.36	157.16	12.70		0.172	
26.09.2017	KILN + RAW MILL (Bag House)	14.18	417	14.41	146.02	9.30		0.117	
	April' 2017								
03.04.2017	FOLAX COOLER (E.S.P)	8.8	407	7.5	48.3	24.2	25.3	0.101	
10.04.2017	FOLAX COOLER (E.S.P)	8.8	409	9.1	58.0	28.0		0.140	
17.04.2017	FOLAX COOLER (E.S.P)	8.8	405	8.5	55.3	26.0		0.124	
24.04.2017	FOLAX COOLER (E.S.P)	8.8	403	9.3	60.2	22.9		0.119	
	May' 2017								
03.05.2017	FOLAX COOLER (E.S.P)	8.80	409	6.62	42.45	25.60	27.3	0.094	
15.05.2017	FOLAX COOLER (E.S.P)	8.80	405.0	5.08	32.89	27.20		0.077	
22.05.2017	FOLAX COOLER (E.S.P)	8.80	407	7.22	46.52	26.50		0.107	
29.05.2017	FOLAX COOLER (E.S.P)	8.80	404	5.97	38.75	29.70		0.099	
	June' 2017								
02.06.2017	FOLAX COOLER (E.S.P)	8.80	412	5.89	37.49	20.20	22.9	0.065	

09.06.2017	FOLAX COOLER (E.S.P)	8.80	409	5.56	35.65	27.00		0.083	
17.06.2017	FOLAX COOLER (E.S.P)	8.80	413	8.33	52.89	18.90		0.086	
24.06.2017	FOLAX COOLER (E.S.P)	8.80	410	7.36	47.08	25.40		0.103	
	July' 2017								
05.07.2017	FOLAX COOLER (E.S.P)	8.80	405	7.07	45.78	24.50	24.6	0.097	
12.07.2017	FOLAX COOLER (E.S.P)	8.80	407	8.22	52.96	28.30		0.129	
19.07.2017	FOLAX COOLER (E.S.P)	8.80	403	7.69	50.04	22.20		0.096	
26.07.2017	FOLAX COOLER (E.S.P)	8.80	406	8.85	57.16	23.50		0.116	
	August' 2017								
03.08.2017	FOLAX COOLER (E.S.P)	8.80	401	8.06	52.71	18.40	21.0	0.084	
10.08.2017	FOLAX COOLER (E.S.P)	8.80	405	7.07	45.78	23.50		0.093	
17.08.2017	FOLAX COOLER (E.S.P)	8.80	402	7.68	50.10	21.10		0.091	
31.08.2017	FOLAX COOLER (E.S.P)	Under Maintenance							
	September' 2017								
04.09.2017	FOLAX COOLER (E.S.P)	Under Maintenance					19.7		
12.09.2017	FOLAX COOLER (E.S.P)	8.80	415	6.82	43.10	22.60		0.084	
19.09.2017	FOLAX COOLER (E.S.P)	8.80	410	7.12	45.54	16.6		0.065	
26.09.2017	FOLAX COOLER (E.S.P)	8.80	408	8.23	47.08	19.9		0.091	
	April' 2017								

03.04.2017	COAL MILL (B.F.)	2.00	340	14.56	25.52	12.60	15.3	0.028	
10.04.2017	COAL MILL (B.F.)	2.00	338	12.61	22.24	16.10		0.031	
17.04.2017	COAL MILL (B.F.)	2.00	336	13.65	24.21	18.40		0.038	
24.04.2017	COAL MILL (B.F.)	2.00	343	14.31	24.87	14.00		0.030	
	May' 2017								
03.05.2017	COAL MILL (B.F.)	2.00	342	13.14	22.90	17.80	17.1	0.035	
15.05.2017	COAL MILL (B.F.)	2.00	339.0	14.22	25.00	12.40		0.027	
22.05.2017	COAL MILL (B.F.)	2.00	340	12.65	22.17	21.40		0.041	
29.05.2017	COAL MILL (B.F.)	2.00	341	13.90	24.29	16.70		0.035	
	June' 2017								
02.06.2017	COAL MILL (B.F.)	2.00	343	13.65	23.72	20.00	14.6	0.041	
09.06.2017	COAL MILL (B.F.)	2.00	341	12.97	22.67	15.90		0.031	
17.06.2017	COAL MILL (B.F.)	2.00	339	12.21	21.47	10.50		0.019	
24.06.2017	COAL MILL (B.F.)	2.00	342	13.34	23.25	12.10		0.024	
	July' 2017								
05.07.2017	COAL MILL (B.F.)	2.00	337	13.29	23.50	15.20	16.5	0.031	
12.07.2017	COAL MILL (B.F.)	2.00	335	15.09	26.85	18.70		0.043	
19.07.2017	COAL MILL (B.F.)	2.00	340	14.03	24.59	17.60		0.037	
26.07.2017	COAL MILL (B.F.)	2.00	338	12.68	22.36	14.30		0.028	

	August' 2017								
03.08.2017	COAL MILL (B.F.)	2.00	341	14.80	25.87	11.80	13.6	0.026	
10.08.2017	COAL MILL (B.F.)	2.00	338	15.79	27.84	15.80		0.038	
17.08.2017	COAL MILL (B.F.)	2.00	335	17.02	30.28	13.20		0.035	
31.08.2017	COAL MILL (B.F.)	Under Maintenance							
	September' 2017								
04.09.2017	COAL MILL (B.F.)	Under Maintenance					14.8		
12.09.2017	COAL MILL (B.F.)	2.00	338	15.06	26.56	14.30		0.033	
19.09.2017	COAL MILL (B.F.)	2.00	336	17.10	30.33	11.90		0.031	
26.09.2017	COAL MILL (B.F.)	2.00	332	16.51	29.64	18.10		0.046	
	April' 2017								
04.04.2017	CEMENT MILL - 3 (Bag filter)	6.60	370	13.20	70.17	28.60	26.6	0.173	
11.04.2017	CEMENT MILL - 3 (Bag filter)	6.60	376	12.46	65.18	23.90		0.135	
18.04.2017	CEMENT MILL - 3 (Bag filter)	6.60	373	12.64	66.65	26.00		0.150	
26.04.2017	CEMENT MILL - 3 (Bag filter)	6.60	371	13.84	73.37	27.70		0.176	
	May' 2017								
04.05.2017	CEMENT MILL - 3 (Bag filter)	6.60	373	12.87	67.86	20.20	24.8	0.118	
11.05.2017	CEMENT MILL - 3 (Bag filter)	6.60	380	13.85	71.68	23.90		0.148	

20.05.2017	CEMENT MILL - 3 (Bag filter)	6.60	378	13.50	70.24	26.20		0.159	
27.05.2017	CEMENT MILL - 3 (Bag filter)	6.60	372	13.01	68.79	28.80		0.171	
	June' 2017								
02.06.2017	CEMENT MILL - 3 (Bag filter)	6.60	373	13.36	70.45	23.20	23.4	0.141	
09.06.2017	CEMENT MILL - 3 (Bag filter)	6.60	378	13.06	67.95	19.40		0.114	
16.06.2017	CEMENT MILL - 3 (Bag filter)	6.60	376	12.52	65.49	26.60		0.151	
23.06.2017	CEMENT MILL - 3 (Bag filter)	6.60	374	13.74	72.26	24.20		0.151	
	July' 2017								
05.07.2017	CEMENT MILL - 3 (Bag filter)	6.60	378	13.12	68.27	23.00	21.4	0.136	
12.07.2017	CEMENT MILL - 3 (Bag filter)	6.60	380	11.99	62.06	17.40		0.093	
19.07.2017	CEMENT MILL - 3 (Bag filter)	6.60	375	12.45	65.30	24.70		0.139	
26.07.2017	CEMENT MILL - 3 (Bag filter)	6.60	392	13.81	69.29	20.60		0.123	
	August' 2017								
01.08.2017	CEMENT MILL - 3 (Bag filter)	6.6	374	12.31	64.74	23.1	22.8	0.129	
09.08.2017	CEMENT MILL - 3 (Bag filter)	6.6	377	13.4	69.8	21.3		0.128	
24.08.2017	CEMENT MILL - 3 (Bag filter)	6.6	373	12.98	68.44	27.1		0.160	

31.08.2017	CEMENT MILL - 3 (Bag filter)	6.6	371	12.44	65.95	19.6		0.112	
	September' 2017								
04.09.2017	CEMENT MILL - 3 (Bag filter)	6.60	371	12.89	68.33	24.90	20.6	0.147	
11.09.2017	CEMENT MILL - 3 (Bag filter)	6.60	376	13.63	71.30	17.20		0.106	
18.09.2017	CEMENT MILL - 3 (Bag filter)	6.60	374	13.91	73.15	21.20		0.134	
26.09.2017	CEMENT MILL - 3 (Bag filter)	6.60	370	12.59	66.92	18.90		0.109	
	April' 2017								
06.04.2017	CRUSHER (B.F.)	1.23	315.0	10.87	12.61	25.80	24.2	0.028	
13.04.2017	CRUSHER (B.F.)	1.23	318.0	11.46	13.17	19.10		0.022	
20.04.2017	CRUSHER (B.F.)	1.23	320.0	10.50	11.99	23.40		0.024	
27.04.2017	CRUSHER (B.F.)	1.23	317.0	11.12	12.82	28.30		0.031	
	May' 2017								
02.05.2017	CRUSHER (B.F.)	1.23	321	11.73	13.35	14.30	19.7	0.016	
12.05.2017	CRUSHER (B.F.)	1.23	319.0	11.32	12.96	21.70		0.024	
19.05.2017	CRUSHER (B.F.)	1.23	322.0	10.65	12.08	18.90		0.020	
26.05.2017	CRUSHER (B.F.)	1.23	320	11.45	13.07	24.00		0.027	
	June' 2017								
03.06.2017	CRUSHER (B.F.)	1.23	325	12.32	13.85	26.2	21.6	0.031	

10.06.2017	CRUSHER (B.F.)	1.23	322	11.53	13.08	20.8		0.024	
17.06.2017	CRUSHER (B.F.)	1.23	325	12.01	13.50	16.1		0.019	
24.06.2017	CRUSHER (B.F.)	1.23	320	11.01	12.57	23.1		0.025	
	July' 2017								
04.07.2017	CRUSHER (B.F.)	1.23	317	10.08	11.62	20.70	17.4	0.021	
11.07.2017	CRUSHER (B.F.)	1.23	315	10.44	12.11	16		0.017	
18.07.2017	CRUSHER (B.F.)	1.23	312	10.71	12.54	19.3		0.021	
28.07.2017	CRUSHER (B.F.)	1.23	313	10.07	11.75	13.6		0.014	
	August' 2017								
01.08.2017	CRUSHER (B.F.)	1.23	312	10.50	12.30	23.40	20.4	0.025	
10.08.2017	CRUSHER (B.F.)	1.23	314	10.9	12.68	17.7		0.019	
17.08.2017	CRUSHER (B.F.)	1.23	317	9.97	11.49	20.1		0.020	
31.08.2017	CRUSHER (B.F.)	Under Maintenance							
	September' 2017								
04.09.2017	CRUSHER (B.F.)	Under Maintenance					18.5		
11.09.2017	CRUSHER (B.F.)	1.23	318	10.27	11.8	19.0		0.019	
18.09.2017	CRUSHER (B.F.)	1.23	312	10.92	12.79	22.5		0.025	
25.09.2017	CRUSHER (B.F.)	1.23	317	10.08	11.62	14		0.014	
	April' 2017								

05.04.2017	PACKER-1 (B.F.)	0.785	318	12.23	9.00	12.1	14.7	0.009	
12.04.2017	PACKER-1 (B.F.)	0.785	320	11.55	8.44	17.8		0.013	
19.04.2017	PACKER-1 (B.F.)	0.785	317	12.8	9.45	15.5		0.013	
26.04.2017	PACKER-1 (B.F.)	0.785	322	11.95	8.68	13.4		0.010	
	May' 2017								
05.05.2017	PACKER-1 (B.F.)	0.785	323	12.77	9.25	23.7	18.2	0.019	
12.05.2017	PACKER-1 (B.F.)	0.785	321	12.04	8.77	12.7		0.010	
20.05.2017	PACKER-1 (B.F.)	0.785	319	12.4	9.09	18.6		0.015	
27.05.2017	PACKER-1 (B.F.)	0.785	320	11.01	8.05	17.6		0.012	
	June' 2017								
02.06.2017	PACKER-1 (B.F.)	0.785	312	12.07	9.05	16.3	17.4	0.013	
09.06.2017	PACKER-1 (B.F.)	0.785	317	11.5	8.49	23.5		0.017	
16.06.2017	PACKER-1 (B.F.)	0.785	313	11.79	8.81	17.2		0.013	
23.06.2017	PACKER-1 (B.F.)	0.785	314	11.07	8.25	12.4		0.009	
	July' 2017								
06.07.2017	PACKER-1 (B.F.)	0.785	320	11.61	8.49	21.7	26.3	0.016	
13.07.2017	PACKER-1 (B.F.)	0.785	317	12.3	9.08	25.5		0.020	
20.07.2017	PACKER-1 (B.F.)	0.785	315	11.98	8.9	28.3		0.022	
27.07.2017	PACKER-1 (B.F.)	0.785	318	11.22	8.25	29.6		0.021	

	August' 2017								
02.08.2017	PACKER-1 (B.F.)	0.785	318	11.98	8.81	20.5	19.6	0.016	
09.08.2017	PACKER-1 (B.F.)	0.785	315	12.58	9.34	23.1		0.019	
23.08.2017	PACKER-1 (B.F.)	0.785	317	11.33	8.36	18.2		0.013	
30.08.2017	PACKER-1 (B.F.)	0.785	320	12.25	8.96	16.6		0.013	
	September' 2017								
05.09.2017	PACKER-1 (B.F.)	0.785	320	11.36	8.3	23.3	22.2	0.017	
12.09.2017	PACKER-1 (B.F.)	0.785	322	12.09	8.78	25.2		0.019	
19.09.2017	PACKER-1 (B.F.)	0.785	317	12.55	9.26	18.8		0.015	
26.09.2017	PACKER-1 (B.F.)	0.785	319	11.79	8.65	21.4		0.016	
	April' 2017								
05.04.2017	PACKER-2 (B.F.)	0.785	320	12.71	9.29	14.1	19.2	0.011	
12.04.2017	PACKER-2 (B.F.)	0.785	319	11.69	8.57	21.4		0.016	
19.04.2017	PACKER-2 (B.F.)	0.785	322	11.43	8.3	17.7		0.013	
26.04.2017	PACKER-2 (B.F.)	0.785	318	12.43	9.14	23.4		0.018	
	May' 2017								
05.05.2017	PACKER-2 (B.F.)	0.785	325	11.21	8.07	25.3	21.5	0.018	
12.05.2017	PACKER-2 (B.F.)	0.785	324	12.5	9.03	19.9		0.016	
20.05.2017	PACKER-2 (B.F.)	0.785	323	12.92	9.36	17.5		0.014	

27.05.2017	PACKER-2 (B.F.)	0.785	320	11.55	8.4	23.3		0.017	
	June' 2017								
02.06.2017	PACKER-2 (B.F.)	0.785	319	12.69	9.31	19.4	20.4	0.016	
09.06.2017	PACKER-2 (B.F.)	0.785	321	12.04	8.77	27.8		0.021	
16.06.2017	PACKER-2 (B.F.)	0.785	315	12.13	9.01	13.8		0.011	
23.06.2017	PACKER-2 (B.F.)	0.785	318	11.3	8.31	20.6		0.015	
	July' 2017								
06.07.2017	PACKER-2 (B.F.)	0.785	321	12.02	8.76	19.7	23.4	0.015	
13.07.2017	PACKER-2 (B.F.)	0.785	318	11.12	8.18	27.4		0.019	
20.07.2017	PACKER-2 (B.F.)	0.785	320	12.52	9.15	21.2		0.017	
27.07.2017	PACKER-2 (B.F.)	0.785	319	11.34	8.32	25.2		0.018	
	August' 2017								
02.08.2017	PACKER-2 (B.F.)	0.785	320	11.51	8.41	17.4	18.7	0.013	
09.08.2017	PACKER-2 (B.F.)	0.785	319	11.99	8.79	23.4		0.018	
23.08.2017	PACKER-2 (B.F.)	0.785	321	12.35	9	19.7		0.015	
30.08.2017	PACKER-2 (B.F.)	0.785	318	11.17	8.22	14.3		0.010	
	September' 2017								
05.09.2017	PACKER-2 (B.F.)	0.785	317	12.04	8.88	16.6	16.5	0.013	
12.09.2017	PACKER-2 (B.F.)	0.785	320	12.52	9.15	15.1		0.012	

19.09.2017	PACKER-2 (B.F.)	0.785	319	12.77	9.36	20.4		0.017	
26.09.2017	PACKER-2 (B.F.)	0.785	321	11.43	8.33	13.8		0.010	
	April' 2017								
05.04.2017	PACKER-3 (B.F.)	0.785	319	12.69	9.31	18.6	22.3	0.015	
12.04.2017	PACKER-3 (B.F.)	0.785	321	12.24	8.92	26.3		0.020	
19.04.2017	PACKER-3 (B.F.)	0.785	318	11.52	8.47	23.4		0.017	
26.04.2017	PACKER-3 (B.F.)	0.785	320	11.87	8.68	20.9		0.016	
	May' 2017								
05.05.2017	PACKER-3(B.F.)	0.785	323	13.39	9.7	28.8	23.7	0.024	
12.05.2017	PACKER-3(B.F.)	0.785	320	12.71	9.29	19.9		0.016	
23.05.2017	PACKER-3(B.F.)	0.785	321	12.04	8.8	24.7		0.019	
29.05.2017	PACKER-3(B.F.)	0.785	324	12.35	8.92	21.4		0.016	
	June' 2017								
02.06.2017	PACKER-3(B.F.)	0.785	321	12.88	9.39	21.9	25.4	0.018	
09.06.2017	PACKER-3(B.F.)	0.785	324	12.6	9.1	24		0.019	
16.06.2017	PACKER-3(B.F.)	0.785	322	11.43	8.3	29.3		0.021	
23.06.2017	PACKER-3(B.F.)	0.785	320	12.02	8.79	26.4		0.020	
	July' 2017								
06.07.2017	PACKER-3 (B.F.)	0.785	318	11.63	8.56	21.6	24.8	0.016	

13.07.2017	PACKER-3 (B.F.)	0.785	315	10.92	8.11	29.2		0.020	
20.07.2017	PACKER-3 (B.F.)	0.785	320	12.05	8.81	25.6		0.019	
27.07.2017	PACKER-3 (B.F.)	0.785	317	10.52	7.76	22.6		0.015	
	August' 2017								
02.08.2017	PACKER-3(B.F.)	0.785	317	10.95	8.08	25.2	21.8	0.018	
09.08.2017	PACKER-3(B.F.)	0.785	319	11.34	8.32	20.1		0.014	
23.08.2017	PACKER-3(B.F.)	0.785	321	11.88	8.66	18.4		0.014	
30.08.2017	PACKER-3(B.F.)	0.785	316	10.78	7.98	23.5		0.016	
	September' 2017								
05.09.2017	PACKER-3(B.F.)	0.785	320	11.56	8.45	19.2	23.2	0.014	
12.09.2017	PACKER-3(B.F.)	0.785	318	12.11	8.91	21.9		0.017	
19.09.2017	PACKER-3(B.F.)	0.785	323	10.96	7.94	27.8		0.019	
26.09.2017	PACKER-3(B.F.)	0.785	321	10.74	7.83	23.7		0.016	
	April' 2017								
05.04.2017	PACKER-4 (B.F.)	0.785	320	11.17	8.17	24.4	21.2	0.017	
12.04.2017	PACKER-4 (B.F.)	0.785	319	12.69	9.31	19.5		0.016	
19.04.2017	PACKER-4 (B.F.)	0.785	317	12.01	8.86	22.8		0.017	
26.04.2017	PACKER-4 (B.F.)	0.785	321	12.29	8.96	17.9		0.014	
	May' 2017								

05.05.2017	PACKER-4(B.F.)	0.785	323	11.97	8.67	23.6	22.6	0.018	
12.05.2017	PACKER-4(B.F.)	0.785	324	12.6	9.1	21.2		0.017	
20.05.2017	PACKER-4(B.F.)	0.785	320	12.62	9.23	27.3		0.022	
27.05.2017	PACKER-4(B.F.)	0.785	322	12.11	8.8	18.3		0.014	
	June' 2017								
02.06.2017	PACKER-4(B.F.)	0.785	320	12.42	9.08	26.4	26.7	0.021	
09.06.2017	PACKER-4(B.F.)	0.785	323	11.92	8.63	21.5		0.016	
16.06.2017	PACKER-4(B.F.)	0.785	319	12.1	8.87	29.9		0.023	
23.06.2017	PACKER-4(B.F.)	0.785	321	11.57	8.43	28.9		0.021	
	July' 2017								
06.07.2017	PACKER-4 (B.F.)	0.785	322	11.55	8.39	22.6	20.5	0.016	
13.07.2017	PACKER-4 (B.F.)	0.785	318	11.02	8.11	18.9		0.013	
20.07.2017	PACKER-4 (B.F.)	0.785	320	12.47	9.12	24.2		0.019	
27.07.2017	PACKER-4 (B.F.)	0.785	319	12.13	8.9	16.2		0.012	
	August' 2017								
02.08.2017	PACKER-4(B.F.)	0.785	320	11.51	8.41	14.0	17.7	0.010	
09.08.2017	PACKER-4(B.F.)	0.785	319	11.04	8.1	22.3		0.016	
23.08.2017	PACKER-4(B.F.)	0.785	321	12.49	9.1	18.1		0.014	
30.08.2017	PACKER-4(B.F.)	0.785	318	12.11	8.91	16.2		0.012	

	September' 2017								
05.09.2017	PACKER-4(B.F.)	0.785	318	11.82	8.7	12.0	15.8	0.009	
12.09.2017	PACKER-4(B.F.)	0.785	321	12.49	9.1	17.7		0.014	
19.09.2017	PACKER-4(B.F.)	0.785	320	11.56	8.45	20.1		0.015	
26.09.2017	PACKER-4(B.F.)	0.785	317	11.16	8.24	13.4		0.010	

J.K. Cement WORKS, MANGROL (RAJ)
AMBIENT AIR QUALITY AVERAGE RESULTS (SPM) COMMON FOR UNIT-1 & UNIT-2
(ALL VALUES IN MICROGRAMS / CUBIC METER)
April' 2017 - September' 2017

S.No. & Month	LOCATION / PERAMETER	NEAR TIME OFFICE	NEAR THERMAL POWER PLANT	NEAR RAW MATERIAL GATE	NEAR PACKING PLANT GATE	Remarks
April' 2017						
1	SPM	346.3	388.0	355.0	323.5	
2	SO2	12.9	16.4	13.5	10.4	
3	NOX	25.9	32.4	28.9	21.0	
4	CO	572.5	744.3	687.0	472.3	
May' 2017						
1	SPM	379.0	397.5	366.8	349.8	
2	SO2	15.4	16.8	14.2	11.5	
3	NOX	28.9	31.7	25.0	22.6	
4	CO	572.5	744.3	687.0	472.3	
June' 2017						
1	SPM	347.2	377.7	350.2	350.3	
2	SO2	14.2	16.8	14.9	13.8	

3	NOX	26.4	32.2	29.4	26.4	
4	CO	458.0	715.6	615.4	486.6	
July' 2017						
1	SPM	295.8	315.2	295.8	275.0	
2	SO2	8.4	9.7	7.4	6.5	
3	NOX	16.8	18.5	14.7	13.4	
4	CO	443.7	472.3	486.6	415.1	
August' 2017						
1	SPM	296.3	342.2	312.3	282.0	
2	SO2	8.7	12.0	10.2	7.0	
3	NOX	17.6	23.4	20.0	15.0	
4	CO	500.9	615.4	453	429.4	
September' 2017						
1	SPM	328.3	379.3	355.5	311.7	
2	SO2	13.0	15.9	12.0	10.1	
3	NOX	25.0	31.0	23.0	19.9	
4	CO	444	615.4	558.2	372.1	
Six monthly Average						

1	SPM	332.1	366.7	339.3	315.4	
2	SO2	12.1	14.6	12.0	9.9	
3	NOX	23.4	28.2	23.5	19.7	
4	CO	498.6	651.2	581.2	441.3	

Fugitive Emission Monitoring Report
April' 2017 - September' 2017

S.No.	Month/Year	SPM ($\mu\text{g}/\text{m}^3$)			
		NEAR COAL YARD-1	NEAR LIMESTONE CRUSHING SITE-1	NEAR STACKER RECLAIMER- 1	NEAR GYPSUM YARD-1
1	Apr-17	1758.5	UM	UM	2121.5
2	May-17	1838.2	2378.5	2909.8	1451.5
3	Jun-17	1380.9	2041.0	2392.0	1383.1
4	Jul-17	1113.4	1794.1	1802.2	1212.1
5	Aug-17	1036.5	1743.7	1724.7	1302.1
6	Sep-17	1312.5	2017.9	2010.4	1586.1

J.K. Cement Works, Mangrol (Unit-2)
Fugitive Emission Monitoring Report
(April' 2017 -September ' 2017)

S.No.	Month/Year	SPM ($\mu\text{g}/\text{m}^3$)			
		NEAR COAL YARD-2	NEAR LIMESTONE CRUSHING SITE-2	NEAR STACKER RECLAIMER-2	NEAR GYPSUM YARD-2
1	Apr-17	1757.7	1892.4	1842.3	2214.2
2	May-17	1590.3	1776.1	1618.1	1871.6
3	Jun-17	1352.5	1683.9	1449.7	1722.2
4	Jul-17	1036.5	1349.0	1206.0	1189.0
5	Aug-17	989.6	1191.5	1110.0	1118.1
6	Sep-17	1474.1	1836.2	1411.8	1526.6

J.K. *Cement* WORKS, Mangrol (RAJ)
Treated Domestic Effluent Analysis Report

April' 2017 - September' 2017

S.No.	PARAMETER	Standards	April-17	May-17	June-17	July-17	August-17	September-17
1	pH	Between 5.5 to 9.0	7.72	7.78	7.3	7.44	7.19	7.57
2	Chlorides as Cl	Not to exceed 1000 mg/l	96.84	98.5	127.82	110.14	113.75	105.97
3	Total Suspended solids	Not to exceed 100 mg/l	20.9	19.8	8	12.6	8	8
4	Biological Oxygen Demand (3 days at 27 Degree C)	Not to exceed 30 mg/l	18.8	20	14.8	16.2	12.6	11.4
5	Chemical Oxygen Demand	Not to exceed 250 mg/l	94.6	98.8	66.4	92.8	76.2	68.6
6	Oil & Grease	Not to exceed 10 mg/l	9.2	7.5	4.8	6.4	3.9	3
7	Ammonical Nitrogen (as N)	Not to exceed 50 mg/l	1.2	1.36	0.9	1.14	<0.1	<0.1
8	Sulphide (as S)	Not to exceed 2.0 mg/l	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
9	Total Residual Chlorine	Not to exceed 1.0 mg/l	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1