



MUDDAPUR

(Unit : J.K. Cement Ltd)

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

No. JKCW / ENV. /E.C. / (PLANT)/11/15

Date- 15-05-2019

The Scientist-F Ministry of Environment & Forest Govt. of India, Indira Paryavaran Bhavan Aliganj, New Delhi- 110 003

Sub: Half Yearly Environmental Clearance Compliance report for the period from October-2018 to March-2019 for JK Cement Works, Village- Muddapur, Taluka- Mudhol, District- Bagalkot (Karnataka)

Ref: MoEF Letter F. No. J-11011 / 489 / 2006-1A.II (I) / dtd. 14-09-2007, MoEF Letter No. F.No. J-11011/263/2009-IA II (I) dated 21-06-2010, MoEF letter no. J-11011/263/2009-IA II (I) dated 26-09-2012 and MoEF office memorandum dated 06 April 2011

Dear Sir,

With reference to your above cited environmental clearance letter of our Cement Plant, We are sending here with enclosed point wise compliance report for the period from October-2018 to March-2019 for our JK Cement Works (Cement Plant -2.20 MTPA Clinker & 2.50 MTPA OPC and Captive Power Plant 2 x 25 MW, expanded Cement Grinding Unit i.e. Slag cement (2.50 MTPA to 3.5 MTPA) and manufacturing of cement based adhesive without increasing the production capacity at Village Muddapur, Taluka Mudhol, District Bagalkot, Karnataka for your kind information and record please.

Thanking you

Yours faithfully For J.K. Cement Works

Tw R.B.M. Tripathi (Unit Head)

> Encl. - Compliance report for both existing and expanded capacity, Compliance report of tile fixer adhesive, Socio-economic development report & six monthly manual AAQ monitoring, stack, fugitive emission, treated effluent monitoring, noise monitoring, continuous emission monitoring and CAAQM report CC:

1- The Addl. Principal Chief Conservator of Forest (C), Ministry of Environment & Forest, Regional Office (South Zone), 4th floor, E&F Wings, Kendriya Sadan, 17th Main Road, IInd Block, Koramangala, Bangalore

2- Chairman, Central Pollution Control Board, Parivesh Bhavan, East Arjun Nagar, New Delhi

3- Scientist 'D' & Incharge, Central Pollution Control Board, 1st & 2nd Floors, Nisarga Bhavan, A-Block, Thimmaiah, Main Road, 7th D Cross, Shivanagar, Opp. Pushpanjali Theatre, Bengaluru

4- Member Secretary, Karnataka Pollution Control Board, Church Street, Bangalore

5- The Environmental officer, Karnataka State Pollution Control Board, Sector no.07, by pass road, Navanagar Bagalkot - 587102

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Email: cmo.south@jkcement.com

Name of Project: M/s J.K. Cement Works, Muddapur (Karnataka)

EC to Cement Plant (2.20 MTPA) Clinker & 2.50 MTPA OPC and Captive Power Plant (2 x 25 MW) at Village- Lokapur, Mudhol, District Bagalkot, Karnataka

i. Electrostatic precipitator (ESP) to cooler, Bag House to Raw mill, Bag filter to coal kiln burner and pre calciner shall be provided. On line gas analyzer for O₂, CO, emission at kiln inlet and power House out let and on line dust monitor to kiln and cooler shall be provided. A closed clinker system shall be adopted to control fugitive emission. Water sprinkler shall be done in raw material stock yard and cement bag loading areas.

Complied. Electrostatic precipitator (ESP) to cooler, Bag House to Raw mill, Bag filter to coal kiln burner and pre calciner have been provided. On line gas analyzer for O₂, CO, emission at kiln inlet and on line dust monitor to kiln and cooler have been provided. A closed clinker system has been adopted to control fugitive emission. Water sprinkler is done in raw material stock yard and cement bag loading areas.

ii. The total water requirement from Ghatprabha River source shall not exceed 1046.4 m³/day. The treated waste water shall be recycled and reused in the process and or for dust suppression, green belt development and other plant related activities etc. The Effluent generated by CPP be used in the cement manufacturing process. No process waste water shall be discharged outside the factory premises and zero discharge shall be adopted. Domestic effluent treated in sewage treatment plant (STP) shall be used for green belt development within the plant and colony areas.

Complied. We are not abstracting water more than 1046.4 m³/day from Ghatprabha River. Dry manufacturing process has been adopted for cement manufacturing so no waste water is generated in cement plant. The treated waste water, generated in CPP, is being used for dust suppression, green belt development, other plant related activities /process. So, no process waste water is being discharged outside the factory premises and zero discharge is being adopted. Domestic effluent treated in sewage treatment plant (STP) is used for green belt development within the plant and colony areas.

iii. The fly ash and bottom ash generated from the power plant shall be used in the process itself for manufacturing PPC. All the cement dust collected from the pollution control devices shall be recycled and reuse in the process and used for cement manufacturing. The fly ash utilization shall be as per the provision stipulated in the fly

Complied, The fly ash and bottom ash generated from the power plant are being used in the process itself manufacturing PPC. All the cement dust collected from the pollution control devices is recycled and reused in the process and used for cement manufacturing. The fly ash utilization is as

	ash notification of September, 1999 and amended in august, 2003. STP sludge shall be used as manure for green belt development. Used oil shall be sold to authorized recycler / re processor only.	notification of September, 1999 and amended in august, 2003. Quarterly
iv.	High calorific hazardous waste shall be utilized in the cement plant.	Complying. We have obtained the permission from KSPCB for co-processing various hazardous wastes and Non-Hazardous wastes vide KSPCB authorization letter no. PCB/WMC/293/HWM /2016 / 2883 dated 31 August 2018 and PCB/WMC/293/HWM/2017-18/4734 dated 30 November 2017 respectively. We are co-processing various hazardous and Non-Hazardous wastes in our kiln.
V.	As proposed in EIA / EMP, green belt shall be developed in 80 ha. (30%) out of total 256.3 Acres. As per the CPCB Guidelines to mitigate the effect of air emission in consultation with local DFO.	As a part of green belt development, We have received a certificate from forest department via. Letter no. B2.GFL/Mines/2007-08/597 dated 30-08-2007 regarding availability of local Flora and Fauna in Mudhol Taluka. We have planted a number of plants in and around cement plant and colony. We have covered more than 33% area of total land area from plantation.
Gene	eral Condition :	
i.	The project authorities shall adhere to the stipulation made by Karnataka State Pollution Control Board and State Government.	Agreed
ii.	No further Expansion or modification of the	Agreed. We have obtained environmental

plant shall be carried out without prior clearance for expansion of Cement approval of Ministry or rules made there Grinding Unit (2.50 MTPA to 3.5 MTPA) under. via. MoEF Letter No. F.No. 11011/263/2009-IA II (I) dated 21-06-2010 also obtained permission manufacturing the cement based adhesive without increasing the production capacity from MoEF via F. No. J 11011/263/2009- IA II (I) dated 26 September 2012. gaseous and particulate matter Complying, we have provided online emission from various units shall confirm to monitoring instruments at major stacks the standards prescribed by the KSPCB. and the gaseous and particulate matter Interlocking facilities shall be provided in emissions from various units are within the pollution control so that in the event of standard prescribed by the pollution control equipment not KSPCB/CPCB/MoEF. Interlocking facilities working, the respective unit(s) is shutdown have been provided in pollution control automatically. equipment. iv. One Ambient Air Quality Monitoring station Complied, we have installed total 4 Nos. shall be installed in down wind direction. of monitoring station in cement plant. Ambient air quality including Ambient Noise Ambient air quality including ambient Level shall not exceed the standard Noise level is not exceeding the standard stipulated under EPA or by the state stipulated under EPA or by the state authorities. Monitoring of Ambient air authorities. Monitoring of Ambient air quality and stack emission shall be carried quality and stack emission are being out regularly in consultation with KSPCB and carried out regularly in consultation with report submitted to the KSPCB quarterly KSPCB and reports are being submitted to and to the Ministry Regional Office at the KSPCB monthly/quarterly and to the Bangalore Half Yearly. Ministry Regional Office at Bangalore Half Yearly. The Company shall install adequate dust Complied, we have installed adequate collection and extraction system to control dust collection and extraction system to fugitive dust handling (Unloading, control fugitive dust handling. Asphalting conveying, transporting, and stacking) / concreting of roads and water spray all vehicular movement, bagging and packing around the stock yard and loading / areas etc. Asphalting / concreting of roads unloading areas are being carried out to and water spray all around the stock yard control fugitive emission. Covered sheds and loading / unloading areas shall be for storage of raw materials and fully carried out to control fugitive emission. covered conveyors for transportation of

	Covered sheds for storage of raw materials and fully covered conveyors for transportation of materials shall be provided besides coal, cement, fly ash and clinker shall be stored in silos.	materials have been provided besides coal. Cement, fly ash and clinker are stored in silos.
vi.	Prior permission from the State Ground water Board, Central Ground Water Authority (SGWB / CGWA) regarding drawl of ground water shall be obtained.	Ground water abstract permission has been obtained from Central / State ground water Authority via. letter No. 21-4 SWR/ CGWA/ 2008/ 1568 dtd. 11.12.2008 and It was valid upto 28-11-2010 so it had been renewed via letter no. 21-4 (70) / SWR /CGWA / 2008 - 1489 dated 10/10/2011 by CGWA.
vii.	The company must harvest the rain water from the roof tops and storm water drains recharge the ground water and use the same water for the various activities of the project to conserve fresh water.	Complying, We are harvesting the rain water from roof tops. Storm water drains are recharging the ground water in colony and cement plant.
viii.	The company shall undertake eco- development measures including community welfare measures in the project areas.	Complying, We are undertaking eco- development measures like energy saving, hazardous wastes, Manufacturing of PPC/Slag cement and other wastes disposing etc. including community welfare measures.
ix.	The overall noise levels in and around the plant area shall be kept well within the standards (85 dBA) by providing noise control measures including acoustic hoods, silencers, enclosures etc. on all sources of noise generation. The ambient noise levels shall confirm to the standards prescribed under Environments (Protection) Act, 1986 Rules 1989 viz 75 dBA (Day Time) and 70 dBA at (Night Time).	Complying, The overall noise levels in and around the plant area is well within the standards (85 dBA) by providing noise control measures including acoustic hoods, silencers, enclosures etc. on all sources of noise generation. The ambient noise levels are well within the standard prescribed under Environments (Protection) Act, 1986 Rules 1989 viz 75 dBA (Day Time) and 70 dBA at (Night Time).
x.	All recommendations made in the Corporate Responsibilities for Protection (CREP) for cement plants shall be	the charter on Corporate Responsibility

	implemented.	cement plants are being implemented.
xi.	Proper housekeeping and adequate occupational health program shall be taken up.	Complying, Proper housekeeping and adequate occupational health programmes are being taken up.
xii.	A separate Environmental Management cell to carry out various management and monitoring function shall be set up under control of Sr. Executive.	Complied, A separate Environmental Management cell to carry out various management and monitoring function has been set up under control of Sr. Executive.
xiii.	Rs. 8.70 crores earmarked for environmental pollution measures shall be suitable used to implement the condition stipulated by the Ministry of Environment and Forest as well as the State Government. The fund so provided shall not be diverted for any other purpose.	Complied, As a part of environmental pollution control measures, we have invested above earmarked amount. The fund so provided has not been diverted for any other purpose.
xiv.	The Regional of this Ministry at Bangalore / CPCB / KSPCB shall monitor the stipulated condition. A six monthly compliance report and monitor data along with statistical interpretation shall be submitted to them regularly.	Agreed, A six monthly compliance report and monitor data along with statistical interpretation is being submitted to The Regional of this Ministry at Bangalore / CPCB / KSPCB regularly.
XV.	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 concerned authorities and the date of commencing the land development work.	Complied, Project has been completed. We had informed the Regional office as well as the Ministry, the date of financial closure and final approval of the project by concerned authorities and the date of commencing the land development work.
xvi.	The project proponent shall inform the public that the project has been accorded environmental clearance by Ministry and copies of the clearance letter are available with the Karnataka Pollution Control Board / committee and may be seen at website of the Ministry of Environment and Forests at http: www.envfor.nic.in. This should be advertised within seven days from the date of issues of clearance letter at least in two	Board / committee and may be seen at website of the Ministry of Environment and Forests at http: www.envfor.nic.in.

	local newspapers that are widely circulated in the region of which one shall be in the vernacular language of the locality concerned and a copy of the same shall be forwarded to the regional office at Bangalore.	letter in two local newspapers that are widely circulated in the region of which one was in the vernacular language of the locality concerned and a copy of the same has been forwarded to the regional office at Bangalore.
6.0	The Ministry or any other competent authority may stipulate any further condition(s) on receiving reports from the project authorities. The above conditions shall be monitored by the Regional offices of this Ministry located of Bangalore.	We are agreeing.
7.0	The Ministry may revoke or suspend the clearance if implementation of any of the above condition is not satisfactory.	We are agreeing.
8.0	Any other condition or alteration in the above conditions shall to be implemented by the project authorities in a time bound manner.	Complying
9.0	The above conditions shall be enforced, inter-alia under the provisions of The Water (Prevention and control of pollution) Act, 1974, the Air Act. 1981, The Environment Protection Act 1986 and The Public Liability Insurance Act, 1991 along with their amendments and rules.	

Thanking you,

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

R.B.M. Tripathi (Unit Head)

Environmental Clearance Compliance Report for the period from October, 2018 to March, 2019

Name of Project: J.K. Cement Works (Unit: J.K. Cement Ltd.), Muddapur (Karnataka)

EC to expansion of Cement Grinding Unit (2.50 MTPA to 3.5 MTPA) at Village Muddapur, Taluka Mudhol, District Bagalkot, Karnataka

A. SPECIFIC CONDITIONS:

S.N.	CONDITION	DEDY V
i)	All other necessary statutory clearances from	REPLY
	the concerned departments including No Objection Certificate from the Karnataka State Pollution Control Board (KSPCB) shall be obtained prior to commencement of construction and / or operation.	Complied, We have obtained all other necessary statutory clearances from concerned departments including No Objection Certificate from the Karnataka State Pollution Control Board (KSPCB) prior to commencement of construction and / or operation. We are renewing consent to operate from Karnataka Pollution Control Board every year. KSPCB has granted Consent to Operate vide Combined Consent Order No. AWH-301684 dated 19-12-2016 and it is valid up to 30-06-2021.
ii)	Compliance to all the specific and general conditions stipulated for the existing plant by the Central/State Govt. shall be ensured and regular reports submitted to the Ministry and its regional Office at Bangalore.	Complying, We are ensuring that we are complying with all the specific and general conditions stipulated for the existing plant by the Central/State Govt. and six monthly compliance reports are being submitted to the Ministry and its Paris and 165
iii)	Adequate pollution control measures viz. bag filters shall be provided to control emissions from various sources within 50 mg/Nm³. At no time, particulate emissions from the grinding unit shall exceed 50 mg/Nm³. Interlocking facility shall be provided in the pollution control equipments so that in the event of the pollution control equipment not working, the respective unit (s) is shut down automatically.	Ministry and its Regional office at Bangalore. Complied, Adequate pollution control measures viz. bag filters have been provided to control emission from various sources within 30 mg/Nm³ and at no time, particulate emissions from the grinding unit is being exceeded 30 mg/Nm³ and interlocking facility has been provided in the pollution control equipment.
iv)	Cement grinding shall be carried out in closed circuit and shall have highly efficient reverse pulse jet type bag filters.	Complied, Cement grinding is being carried out in closed circuit and highly efficient pulse jet type bag filters have been installed.
v)	Ambient air quality monitoring stations (AAQMS) shall be set up as per statutory requirement in consultation with the Karnataka Pollution Control Board (KSPCB). Ambient air quality including ambient noise levels shall not exceed the standards stipulated under EPA or by the State authorities. Monitoring of ambient air quality shall be carried out regularly in	Complied, Ambient air quality monitoring stations (AAQMS) have been set up in consultation with the Karnataka Pollution Control Board (KSPCB). Ambient air quality including ambient noise levels is not exceeding the standards stipulated under EPA or by the State authorities. Ambient air quality is being carried out regularly in consultation with KSPCB and results are not

	consultation with KSPCB and must not	exceeding the NAAQM standards, 2009.
547	exceed the standards stipulated under EPA or by the State Authorities. Monitoring reports for ambient air, stack and fugitive emissions shall be submitted to the Ministry's regional Office at Bangalore, Central Pollution Control Board (CPCB) and KSPCB half- yearly. The instrument used for ambient air quality monitoring shall be calibrated time to time.	Ambient air, stack and fugitive emission monitoring reports are being submitted to Ministry's regional Office at Bangalore, Central Pollution Control Board (CPCB) and KSPCB half-yearly. The Instruments, used for ambient air quality/stack/noise/fugitive monitoring are being calibrated time to time.
vi)	The company shall install adequate dust collection and extraction system to control fugitive dust emissions at loading/unloading points and all the transfer points. Dust extraction system with bag filters at raw material handling areas shall be provided, collected in bag filters and recycled back to the process. Storage of raw material shall be in closed roof sheds. Water sprinkling arrangement shall be made in the raw material stock yard and cement bag loading areas.	Complied, We have installed adequate dust collection and extraction system to control fugitive dust emissions at loading/unloading points and all the transfer points. The dust, collected in bag filters is recycled back to the process. Raw material is being stored in closed roof sheds. We are sprinkling the water in raw material stock yard and cement bag loading areas through water tankers. We have two no. dust sweeping machines also to sweep the dust from paved floors.
vii)	Secondary fugitive emissions shall be controlled and shall be within the prescribed limits and regularly monitored. Guidelines / Code of Practice issued by the CPCB in this regard shall be followed. Transportation of raw materials shall be covered means.	Complying, Secondary fugitive emissions have been controlled and it is well within the prescribed limits and regularly monitored. CPCB guidelines regarding control of fugitive emission is being followed. Raw materials are being transported through covered means.
viii)	Total ground water requirement shall not exceed 200 m ³ /day. No waste water shall be generated from the cement grinding unit.	Complying, ground water is not abstracting more than 200 m ³ /day. No waste water is being generated from the cement grinding unit.
ix)	All the solid waste viz. fly ash and dust etc. should be properly recycled and reutilized in the process itself.	Complying, All the solid wastes viz. fly ash and dust etc. are being properly recycled and re-utilized in the process itself. 100% fly ash, generated in Captive power plant, is used in the own cement plant in manufacturing of cement.
x)	As proposed, green belt shall be developed in at least 34.5 ha of land area to land area to mitigate the impact of fugitive emissions in and around the expansion project as per the CPCB guidelines in consultation with the local DFO.	Complying, we have covered more than 33% area of total land area from plantation to mitigate the impact of fugitive emissions. We are continuously developing the green belt in and surrounding the area as per the CPCB guidelines in consultation with the local DFO.
xi)	Proper housekeeping and adequate occupational health programmes shall be taken up.	Complying, Proper housekeeping and adequate occupational health programmes are being taken up time to time. Our plant has been

		certified with ISO 14001:2015, ISO 9001:2015, OHSAS 18001:2007 and ISO 50001:2011 also.
xii)	All the recommendations made in the charter on Corporate Responsibility for Environment Protection (CREP) for the cement plants shall be implemented.	Complying, Recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the cement plants are being implemented.
xiii)	Rainwater harvesting measures shall be adopted. The company must also harvest the rainwater from the roof tops and storm water drains to recharge the ground water and use the same water for the various activities of the project to conserve fresh water.	Complied, Rainwater harvesting measures in cement plant and residential colony have been adopted. We are harvesting the rainwater from the roof tops and storm water drains to recharge the ground water.
xiv)	At least 5% of the total cost of the project should be earmarked towards the corporate social responsibility and item-wise details along with time bound action plan should be prepared and submitted to the Ministry's Regional Office at Bangalore. Implementation of such program should be ensured accordingly in a time bound manner.	Complying, item-wise details along with time bound action plan has been prepared and submitted to the Ministry's Regional Office at Bangalore.
xv)	The company shall provide housing for 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, creche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.	The project has been completed but during project, all facilities had been provided to labour.
B. G	ENERAL CONDITION:	
i)	The project authorities must strictly adhere to the stipulations made by the Karnataka State Pollution Control Board and the State Government.	Agreed, We are adhering to the stipulations made by the Karnataka State Pollution Control Board and the State Government.
ii)	No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment and Forests.	Agreed, No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment and Forests.
iii)	The gaseous emissions from various process units shall conform to the load/mass based standards notified by this Ministry on 19th may, 1993 and standard prescribed from time to time. The State Board may specify more stringent standards for the relevant parameters keeping in view the nature of the industry and its size and location.	Agreed, The gaseous emissions from various process units are well within the load/mass based standards notified by this Ministry on 19th may, 1993 and standard prescribed from time to time.
iv)	At least four ambient air quality monitoring stations should be established in the	Complied, We have established four (AAQMS) monitoring stations and monitored

	downward direction as well as where maximum ground level concentration of PM10, SO ₂ and NOx are anticipated in consultation with the SPCB. Data on ambient air quality and stack emission shall be regularly submitted to this Ministry including its regional Office at Bangalore and the SPCB/CPCB once in six Months.	data of ambient air quality and stack emission are being regularly submitted to the Ministry including its regional Office at Bangalore and the SPCB/CPCB once in six Months. Six monthly report of ambient air quality, fugitive and stack emission has been enclosed as per Annexure-1
v)	Industrial wastewater shall be properly collected, treated so as to conform to the standards prescribed under GSR 422 (E) dated 19th May, 1993 and 31st December, 1993 or as amended form time to time. The treated wastewater shall be utilized for plantation purpose.	Complying, No waste water is generated from cement plant and the waste water, generated in captive power plant, is collected and treated properly and treated waste water is being used in process itself.
vi)	The overall noise levels in and around the plant area shall be kept well within the standards (85 dBA) by providing noise control measures including acoustic hoods, silencers, enclosures etc. on all sources of noise generation. The ambient noise levels should conform to the standards prescribed under EPA Rules, 1989 viz. 75 dBA (daytime) and 70 dBA (nighttime).	Complying, The noise levels in and around plant are well within the standards (85 dBA) by providing noise control measures including acoustic hoods, silencers, enclosures etc. on all sources of noise generation. The ambient noise levels are also within the standards prescribed under EPA Rules, 1989 viz. 75 dBA (daytime) and 70 dBA (nighttime) as per Annexure- 2
Vii)	Occupational health surveillance of the workers should be done on a regular basis and records maintained as per the Factory Act.	Complying, Occupational health surveillance of the workers is being done on a regular basis and records are being maintained as per the Factory Act.
viii)	The company shall develop surface water harvesting structures to harvest the rain water for utilization in the lean season besides recharging the ground water table.	Complied, Surface water harvesting structures has been developed to harvest the rain water for utilization in the lean season besides recharging the ground water table.
ix)	The Project proponent shall also comply with all the environmental protection measures and safeguards recommended in the EIA/EMP report. Further, the company must undertake socio-economic development activities in the surrounding villages like community development programme, educational programmes, drinking water supply and health care etc.	Complying, We are also complying with all environmental protection measures and safeguards recommended in the EIA/EMP report. Socio-economic development activities for the period October-2018 to March-2019 are as per Annexure-3.
X)	As proposed, Rs 431 lakhs and Rs. 117.95 lakhs shall be earmarked towards capital cost and recurring cost/annum for environment pollution control measures to implement the conditions stipulated by the Ministry of Environment and Forests as well as the State Government. An implementation schedule	Complied. We are spending more than recurring cost/annum for environment pollution control measures. An implementation schedule for implementing all the conditions stipulated herein has been submitted to the regional Office of the Ministry at Bangalore.

	for implementing all the conditions stipulated herein shall be submitted to the regional Office of the Ministry at Bangalore. The funds so provided shall not be diverted for any other purpose.	
xi)	A copy of clearance letter shall be sent by the proponent to concerned Panchayat, Zila Parishad/Municipal Corporation, Urban Local Body and the local NGO, if any, from whom suggestions/representations, if any were received while processing the proposal. The clearance letter shall also be put on the web site of the company by the proponent.	Complied, A copy of clearance letter had been sent by us to concern recommended by MoEF, No suggestions and representation received. The clearance letter has been put on the web site of the company.
xii)	The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the regional Office of the MoEF at Bangalore, The respective Zonal Office of CPCB and the CECB. The criteria pollutant levels namely; PM ₁₀ , SO ₂ , NO _x (ambient for the projects shall be monitored and displayed at a convenient location near the main gate of the company in the public domain.	Complying, Status of compliance of the stipulated environment clearance conditions and results of monitored data are being uploaded on company website and it is updated periodically. It is simultaneously being sent to the regional Office of the MoEF at Bangalore, The respective Zonal Office of CPCB and the CECB. The pollutants levels namely; PM ₁₀ , SO ₂ , NO _x are being displayed at a convenient location near the main gate of the company in the public domain.
xiii)	The project proponent shall also submit six monthly reports on the status of the compliance of the stipulated environmental conditions including results of monitored data (both in hard copies as well as by email) to the Regional Office of this Ministry at Bangalore/CPCB/SPCB shall monitor the stipulated conditions.	Complying, we are also submitting six monthly reports on the status of the compliance of the stipulated environmental conditions including results of monitored data (both in hard copies as well as by e-mail) to the Regional Office of this Ministry at Bangalore/CPCB/SPCB and concerned authority monitor the stipulated conditions.
xiv)	The environmental statement for each financial year ending 31 st March in Form-V as is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environment (protection) Rules, 19086, as amended subsequently, shall also be put on the website of the company along with the status of compliance of environmental conditions and shall also be sent to the respective regional Office of the MoEF at	Complying, The environmental statement for each financial year ending 31 st March in Form-V is being submitted by us to the concerned State Pollution Control Board and is also sent to the respective regional office of the MoEF at Bangalore by e mail. Environmental Statement Report (Form-V) for F.Y. 2017-18 was submitted to regulatory authority via. letter no. JKCW/ENV./CFO (Plant)/60/11 dated 22/09/2018.

Environmental Clearance Compliance Report for the period from October, 2018 to March, 2019

	Bangalore by e mail.	
xv)	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 of Environment and Forests 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 region of which one shall be in the vernacular language of the locality concerned and a copy of the same should be forwarded to the regional office at Bangalore.	Complied, we had informed 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 of Environment and Forests at http://envfor.nic.in. This had been advertised within seven days from the date of issue of the clearance letter, in two local newspapers that are widely circulated in the region of which one was in the vernacular language of the locality concerned and a copy of the same had been forwarded to the regional office at Bangalore.
xvi)	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 commencing the land development work.	Complied, we had informed 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 commencing the land development work.

We hope, you will find our reply in order.

With best regards,

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

R.B.M. Tripathi (Unit Head)

Name of Project: M/s J.K. Cement Works, Muddapur (Karnataka)

Conditions

EC to expansion of Cement Grinding Unit (2.50 MTPA to 3.5 MTPA) at Village Muddapur, Taluka-Mudhol, District Bagalkot, Karnataka by M/s Jaykaycem Limited. Reg Change in product mix to manufacture cement based adhesive without increasing the production capacity.

The overall capacity of the plant shall Agreed and complying.

Reply

Conditions are following.

S.N.

i.

	remain 3.5 MTPA.	Agreed and complying.
ii.	There shall be no increase in the water consumption and land requirement.	Agreed, we are not consuming more than permitted water consumption and land requirement has not been increased.
iii.	The company shall comply with all the conditions stipulated vide Ministry's letter of even number dated 21 st June, 2010.	Complying. We are complying with all the
iv.	In case of change in the scope of the project, fresh proposal for environmental clearance shall be submitted to the Ministry.	Noted and agreed.
Subjec	ct- Stipulation of additional conditions in re	espect of Mega projects already granted
Citalic	onmental clearance ence- MoEF office memorandum dated 06 Apr	
ì	Continuous monitoring of stack emissions as well as ambient air quality (as per notified standards) shall be carried out and continuous records maintained. Based on the monitored data, necessary corrective measures as may be required from time to time shall be taken to ensure that the levels are within permissible limits. The results of monitoring shall also be submitted to the respective Regional Office of MoEF regularly. Besides, the results of monitoring will also put on the website of the company in the public domain.	Complied. Continuous monitoring systems for main stacks emissions and ambient air have been installed and continuous records maintained. All the monitored data are well within the standard. We are submitting monthly report to Regional Office of MoEF and Regional office of KSPCB. Online data is uploading at CPCB website also and monitoring reports along with compliance report are uploaded at website of the company.
ii	The six monthly monitoring report as well as the monitored data on various parameters as stipulated in the	Complied. The six monthly monitoring report as well as the monitored data on various parameters as stipulated in the

	environmental clearance conditions shall	environmental clearance conditions is put
	be put on the website of the company and	
	also regularly updated. The monitored data	regularly updated. The monitored data is
	shall also be submitted to respective State	also submitted to respective State
	Pollution Control Board/UTPCCs and the	Pollution Control Board/UTPCCs and the
	Regional Office of MoEF.	Regional Office of MoEF.
ii	The ambient air quality data as well as the	Complied. The ambient air quality data as
i	stack emission data will also be displayed in	well as the stack emission data is
	public domain at some prominent place	displayed in public domain near the main
	near the main gate of the company and	gate of the company and updated in real
	updated in real time.	time

Thanking you,

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

R.B.M. Tripathi (Unit Head)

CEMENT PLANT & 2X25 CPP MW

HALF YEARIY AAQM REPORT (SO2, NO2, PM10, PM2.5), FOR THE MONTH OF OCTOBER-2018 TO MARCH-2019 (ALL VALUES IN MICROGRAMS / CUBIC METER)

					SC	2			N	O ₂			PM	10			PM	12.5	
Month	Sl.No.	Date	Week		Locat	ions			Loc	ations			Locat	ions			Loca	tions	
				Adm	D-Block	weigh bridge	Guest House	Adm	D-Block	weigh bridge	Guest House	Adm	D-Block	weigh bridge	Guest	Adm	D-Block	weigh	Gues
	1	2.10.2018	7.4	4.2	4.5	4.5	5.8	6.3	5.3	8.2	8.2	86.5	29.2	58.2	House 55.8	16.7	20.8	bridge 29.2	House 37.5
0	2	5.10.2018	1st	5.5	6.5	6.7	6.5	7.2	7.2	7.5	7.8	78.3	27.7	62.3	59.7	33.3	12.5	20.8	12.5
C	3	9.10.2018	2.1	7.5	7.5	5.5	5,5	8.5	8.2	8.2	8.7	71.5	59.5	49.6	45.9	25.0	16.7	16.7	20.8
T	4	12.10.2018	2nd	4.5	6.5	6.2	4.7	5.8	8.2	8.5	8.2	90.2	35.0	40.3	50.5	37.9	25.0	16.7	25.0
0	5	16.10.2018	2-1	6.5	7.5	5.3	6.7	8.3	8.3	8.5	8.7	53.5	57.1	58.1	66.1	16.7	12.5	20.8	20.8
В	6	19.10.2018	3rd	7.5	3.5	5.3	8.0	8.3	7.5	6.7	10.0	85.3	45.5	66.6	56.5	12.5	16.7	20.8	41.7
E	7	23.10.2018		7.5	5.5	4.5	7.5	10.3	6.8	8.0	8.3	56.2	54.7	80.3	58.0	8.3	20.8	29.2	33.3
R	8	26.10.2018	4th	7.5	4.5	6.3	6.5	8.3	7,5	8.5	8.7	58.1	64.0	60.7	60.4	8.3	16.7	20.8	33.3
	9	30.10.2018	1	6.5	5.5	3.5	5.5	9.5	4.5	7.5	8.0	42.1	60.2	87.4	63.3	20.8	25.0	33.3	29.7
N	1	3.11.2018	lst	1.8	5.8	6.2	5.8	8.7	6.5	7.5	6.8	59.5	67.7	53.8	59.8	12.5	25.0	16.7	20.8
0	2	7.11.2018	150	2.8	7.7	7.7	7.0	7.3	13.3	15.8	9.0	54.3	82.3	60.1	48.3	37.9	33.3	45.8	12.5
V	3	10.11.2018	2nd	2.0	4.2	4.2	6.2	4.5	8.5	8.5	7.5	60.9	74.7	48.5	39.7	29.2	20.8	37.5	16.7
ER	4	14.11.2018	2110	2.5	7.5	7.2	7.5	4.8	8.2	8.0	9.3	68.5	55.0	56.3	50.9	45.8	12.5	41.7	20.8
M	5	17.11.2018	3rd	5.2	6.5	6.5	3.5	7.5	8.0	7.0	5.0	58.3	68.3	66.9	60.2	33.3	29.2	29.2	12.5
В	6	21.11.2018		1.8	5.3	5.5	4.7	5.7	3.3	6.7	7.5	41.7	65.5	59.6	48.4	16.7	33.3	37.5	33.3
E	7	24.11.2018	4th	2.2	3.5	6.0	5.3	3.2	5,5	8.0	7.0	55.3	87.8	86.7	57.9	41.7	45.8	45.8	20.8
***	8	28.11.2018	CSSTREET	3.8	6.7	4.8	5.0	4.8	7.5	7.5	7.7	58.1	76.1	62.7	42.8	37.9	33.3	41.7	37.9
D	1	1.12.2018	1st	1.3	4.5	3.7	4,5	15.2	5.8	6.7	6.2	56.2	54.6	63.7	46.7	20.8	41.7	45.8	50.0
E	2	5.12.2018	5.55.	7.0	5.5	5.5	5.5	19.8	6.2	7.7	7.2	55.2	37.1	58.3	58.1	33.3	33.3	41.7	33.3
C	3	8.12.2018	2nd	3.5	4.7	6.2	3.7	18.7	7.3	9.7	6.5	48.5	42.7	51.5	50.7	41.2	37.5	33.3	41.
E	4	12.12.2018		7.2	7.5	6.5	4.5	8.3	9.2	10.0	6.7	56.5	52,7	41.4	61.2	54.2	41.7	20.8	37.
M	5	15.12.2018 19.12.2018	3rd	6.7 9.8	4.5	2.7	5.0	10.7	6.0	8.5	7.0	59.7	70.1	45.5	42.3	20.8	45.8	29.2	33.
В	7	22.12.2018		24.3	6.5	3.2	7.8	16.3	8.7	15.3	9.7	48.5	68.0	61.3	59.1	29.2	37.5	41.7	50.
E	8	26.12.2018	4th	12.5	7.5	5.0	5.5	25.2	8.5 8.3	22.2 32.7	9.2	62.1	42.6	59.8	51.7	29.2	16.7	50.0	45.
R	9	29.12.2018	7	42.0	6.0	4.5	5.5	29.5	11.0	39.3	8.0 8.5	70.5	91.3	69.2 43.6	57.4	33.3	33.3	41.7	29.
	1	2.1.2019		3.2	1.7	7.5	1.3	4.2	2.8	8.0	3.5	67.5	98.0	57.8	62.1	45.8 50.0	33.3	29.2 37.5	33.3
J	2	5.1.2019	1st	2.2	2.2	6.0	2.7	3.7	3.7	7.0	4.5	51.2	93.8	51.8	51.9	16.7	37.5	33.3	41.
A	3	9.1.2019	2nd	2.8	2.5	7.2	2.2	3.5	4.8	8.5	3.5	52.4	49.9	40.8	71.0	45.8	33.3	24.2	20.
N	4	12.1.2019	Ziid	3.2	2.0	7.5	3.5	4.5	4.5	9.0	4.5	60.2	56.7	63.0	48.9	33.3	29.2	37.5	29.
U	5	16.1.2019	3rd	4.5	2.2	8.5	2,2	6.0	3.2	9.2	3.5	57.5	69.6	52.3	58.8	16.7	37.5	29.2	41.
A	6	19.1.2019	1 (350,00)	3.0	3.5	5,5	3.0	4.0	5.2	9.2	4.2	53.2	58.2	45.2	62.5	20.8	33.3	29.2	29.3
R	7	23.1.2019		2.3	2.2	6,0	3.2	4.7	3.3	9.0	4.5	56.2	95.2	58.8	55.5	37.5	41.7	41.7	20.
Y	8 9	26.1.2019 30.1.2019	4th	3.5	1.7	5.8	2,5	5.8	2,8	7.5	4.5	60.7	50.2	62.7	68.9	20.8	45.8	20.8	41.
**	1	2.2.2019		1.5	2.8	8.5 10.2	2.5	3.5	3.0	10.5	4.5	62.5	36.2	56.7	49.1	20.8	25.0	33,3	48.9
F	2	6.2.2019	lst	5.7	3.5	10.0	7.3 6.5	6.7	6.8 7.0	9.3	8.2	42.9	63.7	57.2	36.1	37.5	45.8	25.8	41.
E	3	9.2.2019		1.5	5.3	5.8	7.3	14.3	6.7	8.5	7.0 8.7	56.8	55.4	68.9	72.7	50.0	33.3	45.8	37.
B R Y	4	13.2.2019	2nd	14.7	4.3	5.7	6.7	3.2	7.5	6.7	7.5	62.2 45.4	47.7 59.1	54.9 71.8	61.4	29.2	37.5	41.7	41.
	5	16.2.2019	4000	7.8	3.0	9.5	7.2	3.5	8.8	11.8	8.5	43.1	69.2	61.9	51.0	25.0	33.3	54.2	48.
U A	6	20.2.2019	3rd	1.2	3.8	8.3	7.0	2.8	4.0	12.0	8.2	57.8	68.4	84.3	45.9 62.8	29.2 33.3	41.7 29.2	37.5	33. 50.
	7	23.2.2019	4th	0.8	7.0	10.7	5.8	2.8	8.3	12.5	6.7	60.1	56.0	68.7	57.4	37.5	37.5	45.8	41.
R	8	27.2.2019	901	0,8	6.3	11.5	6.5	3.5	7.5	11.0	7.5	58.4	66.4	72.0	69.6	20.8	45.8	44.6	37.
	1	2.3.2019	1st	1.5	2.7	6.0	4.2	13.8	1.2	7.5	5.5	56.6	43.1	46.8	61.3	16.7	20.8	25.0	29.3
1.4	2	6.3.2019	. 31	2.0	1.8	7.0	2.8	8.5	2.8	8.0	6.5	50.3	53.0	51.0	57.2	20.8	25.0	29.2	45.8
M	3	9.3.2019	2nd	2.7	0.8	3.0	6.0	3.5	1.7	5,0	7.8	62.2	58.1	67.5	68.7	37.5	20.8	50.0	33.3
A R	4	13.3.2019	COLUMN .	2.2	1.2	2.8	3.5	5.8	2.8	6.3	5.3	60.8	40.0	59.9	61.5	16.7	16.7	37.5	54.3
C	5	16.3.2019	3rd	1.5	1.7	7.2	5.8	4.7	3.5	8.0	6.8	54.6	32.0	25.5	74.9	12.5	20.8	33,3	37.
Н	7	20.3.2019		2.0	7.8	5.7	7.0	3.2	2.2	6.3	9.0	56.7	52.2	47.6	69.5	16.7	16,7	41.7	29.3
п	8	27.3.2019	4th	1.5	11.2	5.8	2.7	6.7	4.7	6.3	3.5	63.4	67.0	40.4	57.7	20.8	20.8	37.5	50.0
	9	30.3.2019	- au	2.7	12.2	5.5	6.5	3.5	2.7	7.5	7.5	65.8	63.5	54.6	62.4	29.2	25.0	29.2	37.
		niumum		0.8			4.5	4.5	1.8	6.5	7.0	58.7	57.7	73.0	67.3	25.0	20.8	33,3	45.
		aximum			0.8	2.7	1.3	2.8	1.2	5.0	3,5	41.7	27.7	25.5	36.1	8.3	12.5	16.7	12.
		107.700/		42.0	12.2	11.5	8.8	29.5	13.3	39.3	10.0	90.2	98.0	87.4	74.9	54.2	45.8	54.2	54.
		verage		5.2	5.0	6.1	5.2	8.2	5.9	9,8	7.0	59.1	59.5	58.6	57.4	28.1	29.3	34.0	34.
	Standa	rd deviation		6.6	2.6	2.0	1.8	6.4	2.6	6.0	1.8	10.1	16.5	12.2	8.7	11.6	9.9	9.6	10.

Monitored by

Dr.Saurabh Kumar Mgr(Env)

(Unit : J.K. Cement Limited)

Half Yearly Fugitive Emission Monitoring Report of Cement plant for the month of October-2018 to March-2019

		O SPM (1	SPM (microgram/m ³)			
SL. NO. MONTH/YEAR Gypsum Yard Slag Yard		Flyash Yard Cement mill	Lime stone unloading hopper	Lime stone crushing Site	Coal Yard	Packing Plant
712.0 811.1	1.1 767.0	510.4	585.2	677.7	609.2	633.5
768.3 648	648.4 612.0	863.1	800.1	947.6	924.5	838.1
.62 9:099	797.4 737.2	923.4	6296.9	855.2	841.3	965.2
	610.8 814.2	9.889	720.9	648.6	771.8	587.0
	591.0 627.3	510.4	844.6	917.0	924.5	652.6
		-	722.9	721.2	748.8	600.1
			585.24	648.61	609.21	587.04
			956.94	947.57	924.48	965.22
			771.78	794.54	803.34	712.77
704.38 700	700.54 679.83		771.78		794.54	

Dr.Sayrabh Kumar Mgr(Env)

> Vanipat I Nonitored by

(Unit : J.K. Cement Ltd.)

Half Yearly Stack monitoring report of Cement plant & 2x25 MW Thermal power plant for October-2018 to March-2019

							Stack locations	Sui				
	33	The	Thermal Power Plant	lant	K	Kiln / Raw Mill			S	SPM in mg/Nm3		
SI. No.	Sl. No. Month/Year	SPM in	SO2 in	NOx in	SPM in	SO2 in mg/Nm3	NOx in mg/Nm3	Coal Mill Bag Filter	Cooler	LSC	CM-1	CM-2
1	Oct-18	30.1	526.0	136.3	14.9	32.0	402.0	8.8	11.5	8.9	10.5	14.4
2	Nov-18	27.0	382.0	154.0	10.3	32.0	632.0	0.6	11.1	13.4	8.3	9.5
3	Dec-18	22.79	182	115	10.12	43	029	13.0	13.4	14.3	8.1	10.0
4	Jan-19	17.9	300.0	130.0	12.5	50.0	558.0	6.11	12.0	16.4	12.2	14.0
5	Feb-19	31.1	200.0	80.0	15.0	52.0	578.0	12.2	10.8	14.0	9.1	9.8
9	Mar-19	33.52	330	124	12.1	0.09	496.0	10.8	10.5	13.7	8.4	11.6

1	1	7						
		CM Sep-	14.4	9.5	10.0	14.0	9.8	11.6
		CM Sep-1 CM Sep-2	10.5	8.3	8.1	12.2	9.1	8.4
		Clinker Storage	12.2	11.72	13.0	15.1	14.2	14.90
		Clinker	14.6	12.38	12.9	14.0	11.3	15.12
ns	m3	RMT	12.2	12.5	11.4	11.5	11.5	13.2
Stack locations	SPM in mg/Nm3	Packing	16.1	12.49	13.48	11.6	17.0	12.16
		Packing Packing	12.4	14.04	10.34	12.6	13.93	14.26
		Packing	12.0	12.84	14.37	11.43	17.20	10.23
		Packing	13.2	11.86	10.8	13.17	14.26	12.41
		Slag mill Coal crusher	11.6	14.0	10.8	13.5	15.5	13.8
		Slag mill	9.5	20.4	11.5	13.4	13.4	14.9
	Section 1	Sl. No. Month/Year	Oct-18	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19
		SI. No.	-	2	т.	4	5	9



Dr.Saurabh Kumar Mgr(Env)

J.K. Cement WORKS, MUDDAPUR (KARNATAKA) (Unit: J.K. Cement Ltd.)

Half Yearly Noise monitoring report of Cement & Power Plant for the month of October 2018 to March-2019

ght Day (6) 1. Leq				9	N	01	Doc	18	Isn-19	19	Feb-19	-19	Mai	Mar-19	Minimum	num	Maximum	mnm	Average	age
Parametery sides 141 142 142 143	SI	Location Name	Day (dB)	r-18 Night (dB)		Night		ight		Night	Day (dB)	Night	Day (dB)	Night	Day (dB)	Night (dB) Lea	Day (dB) Leq	Night (dB) Leq	Day (dB) Leq	Night (dB) Leq
Paymidistrictive Building 187 29.2 39.2 38.	.0	The control of the co	Leq	Leq	Leq	(dB) Leq		(dB) Leq		(dB) Leq	red	bar (gp)	barr	har (an)	harr barr	23.8	58.2	36.6	52.8	35.3
Administrative Building 45, 45, 72, 3, 45, 45, 50, 50, 20, 50, 40, 40, 40, 50, 50, 50, 50, 50, 50, 50, 50, 50, 5	-	Roundary side	54.2	35.2	52.6	33.8	55.7	34.6	58.2	36.4	48.4	36.6	67.5	4.00	2004	30.5	50.1	32.5	46.5	31.0
Limer States Graph	1 0	Administrative Building	48.7	32.5	46.7	30.5	49.2	29.5	50.1	30.4	40.2	31.5	45.9	51.8	40.7	41.6	57.9	50.6	54.9	47.0
Likilly Concert No. 2, 2, 3, 4, 5, 3, 5, 5, 5, 5, 5, 5, 5, 5, 5, 5, 5, 5, 5,	1 10	Lime Stone gate	52.6	47.5	57.4	48.2	57.9	9.05	56.7	48.7	27.8	43.0	52.4	41.0	46.2	34.5	54.6	41.7	51.2	37.7
New Figure Coderer Night Patcher Night Patcher Night Coderer Night Patcher Night Coderer Night Patcher Night Patch Night Patcher Night Patcher Night Patcher Night Patcher Nig	4	Lime Stone Crusher	46.2	34.5	50.2	36.7	52.4	35.9	54.6	36.7	50.3	75.4	40.6	30.5	49.6	35.4	62.7	46.5	57.7	42.8
Proper Planem 943 428 436 428 428 428 428 446 428 446 428 446	w	Kiln/ Cooler	58.6	44.2	60.4	45.5	62.7	46.5	60.3	8.04	0.4.0	4.00	603	808	53.7	40.3	65.3	52.6	58.1	45.1
Properties Pro	9	Kiln Platform	54.2	41.6	53.7	42.8	58.6	40.3	20.7	7.75	00.00	34.0	2,00	45.4	47.2	35.7	8.09	46.3	51.5	41.1
Departicipate 2,52 31,54	1	Power Plant	47.2	42.1	48.5	40.9	48.9	36.2	47.2	35.7	60.8	44.7	51.5	40.8	514	40.8	56.8	45.5	53.4	43.8
Near GCL LAN	00	Despatch gate	53.5	43.8	56.8	45.5	52.7	44.6	51.4	45.2	7.40	1.4	40.0	27.5	42.8	316	46.7	38.8	45.0	35.7
Suggrand 427 418 515 418 515 418 517 418 517 418 517 418 517 418 517 418 517 418 517 418 518 518 418 518 418 518 518 418 518 518 418 518 518 418 518 518 418 518	6	Near OC Lab.	45.2	32.5	44.2	31.6	45.7	37.1	46.7	38.8	45.6	0.00	0.74	416	503	37.6	56.7	42.8	53.6	41.2
Suggrand 415 318 308 642 342 342 474 412 312 312 412 312 312 312 312 312 312 312 312 312 3	10	Coal Yard	52.7	41.8	53.5	42.8	52.7	40.8	50.2	37.6	56.7	87.7	50.00	20 5	45.0	34.2	59.7	44.3	51.7	38.3
Neuroling pairs State St	=	Slag vard	45.2	35.6	46.2	34.2	57.4	43.2	59.7	44.3	50.5	24.7	50.7	27.0	2.04	37.6	57.5	42.8	52.6	38.8
Numerication State	12	Gypsum yard	51.8	39.8	55.8	40.2	54.8	42.8	42.5	32.6	55.4	104	077	27.6	44.7	30.5	54.6	36.5	50.7	33.3
Pignet main gate 496 399 309 327 437 328 364 443 382 364 445 382 364 445 382 364 445 382 364 445 382 346 348	2 2	Near Canteen	54.4	34.2	52.1	31.6	52.7	36.5	54.6	34.4	44.7	50.5	40.0	25.0	1115	30.0	603	36.8	51.6	34.2
Packing Plant 422 354 435 364 452 326 564 344 482 287 418 518 512 518	2 7	Plant main øate	49.6	30.9	50.8	32.7	54.7	32.8	60.2	36.8	44.5	36.2	1.60	55.5	40.0	79.7	56.4	36.4	46.1	32.9
Proceding Plant 52,8 42,7 50,5 43,6 53,8 59,6 50,2 56,8 55,7 44,8 50,7 59,8 50,2 50,8 55,7 44,8 54,6 50,0 50,2 50,8 50,7 50,8 50,7 50,8 50,7 50,8 50,7 50,8 50,7 50,8 50,7 50,8 50,7 50,8 50,7 50,8 50,7 50,8 50,8 50,7 50,8 50,8 50,8 50,7 50,8 50,	t V	Dispensary	42.2	35.4	43.5	36.4	45.2	32.6	56.4	34.4	48.2	28.7	40.8	9.67	40.0	1.07	100	44.0	573	41.2
Cement Store 435 374 448 385 428 301 437 326 467 302 421 428 301 542 385 460 DG House (L-meter distance) 623 605 605 615	3 3	Packing Plant	52.8	42.7	50.5	43.6	53.8	39.6	50.2	36.8	55.7	44.8	20.7	39.8	50.2	36.8	22.7	44.0	24.3	1
DCH charset clisameca Clisa Clis	9	Comment Store	43.5	37.4		38.5	42.8	30.1	43.7	32.6	46.7	30.2	54.2	32.7	42.8	30.1	54.2	38.5	46.0	33.6
DG House Claneter distance) DG House Claneter distance) DG House Claneter distance) DG House Claneter distance) Sa	17	a rought manage	3 63		\$ 09		62.8		60.5		61.5	1	62.5	Ĭ	5.09	0	62.8	0	61.7	#DIA/C
Poc House (2-meter distance) 504	90	DG House (1-meter distance)	0.20		1 10	Î	20.4	(57.4		60.7	1	9.19		56.4	0	9.19	0	58.5	#DIA/(
Near sile clinker loading point	6	DG House (2-meter distance)	56.4	i	20.4	1	1.00	1 0 /0	610	35.4	1 09	40.4	8 5 8	41.6	51.8	35.2	1.09	41.6	54.5	37.8
CM-I weight feeder 62.4 61.5 62.8 64.5 62.5 64.5 62.8 64.2 62.8 62.7 62.8 62.8 62.8 62.8 62.8 62.8 62.8 62.8	0	Raw mill proporting hopper	52.7	37.5	53.7	35.2	27.8	30.8	0.1.0	4.00	1.00		103	3 47 6	476	31.0	8 09	47.5	55.8	40.8
Neuralio clinker loading point 56.3 40.8 55.6 41.6 52.8 41.6 52.7 42.8 60.5 50.1 62.8 50.1 52.8 41.0 52.8 41.6 52.8 41.6 52.8 41.8 52.8 50.1 52.8 50.1 52.8 50.1 52.8 50.1 52.8 50.1 52.8 50.1 52.8 50.1 50.2 50	17	coal mill	60.2	43.5		44.3	48.5	32.2	47.6	31.9	2/.1	43.3	4.00	2 1	0.00	900	8 69	507	57.0	44.6
CM-1 weigh feeder 624 51.7 60.3 52.7 60.4 50.2 67.2 55.2 67.2 55.2 67.2 55.2 67.2 55.2 60.3 50.2 70.2	2	Near silo clinker loading point	56.3	40.8		41.6	52.8	41.6	53.7	42.8	60.5	50.1	97.9	20.7	0.20	0.04	200	675	63.0	53.0
Cement sile Packer-1 58.5 49.7 60.4 50.7 60.1 49.8 64.4 50.4 60.5 64.2 50.5 69.4 60.2	3 3	CM-1 weigh feeder	62.4	51.7	60.3	52.7	60.4	50.2	62.8	51.7	70.4	56.2	67.2	22.7	60.3	20.7	1.0.1	4:00	000	1 33
Cement silo Packer-1 58.5 49.7 60.4 50.7 61.6 50.7 60.1 49.8 64.4 50.4 66.1 52.8 58.5 49.7 66.1 52.8 61.9 61.9 Cement silo Packer-1 58.5 49.7 60.4 50.7 61.6 56.8 48.5 57.2 49.6 65.1 49.5 64.2 50.2 56.8 48.5 64.2 50.2 56.8 61.7 50.4 56.7 57.2 49.6 65.1 49.5 64.2 50.2 56.8 48.5 61.7 50.8 65.5 50.2 60.5 51.9 60.3 49.5 66.5 52.6 61.7 50.8 65.5 50.2 60.5 51.9 60.3 49.5 66.8 50.9 57.4 43.6 61.8 51.8 61.7 50.8 64.1 50.2 51.9 60.3 49.5 66.8 50.9 57.4 43.6 61.8 51.8 60.9 57.4 43.6 61.8 51.8 61.7 51.8 62.3 51.8 62.3 51.8 62.3 51.8 62.3 51.8 62.3 51.8 62.3 51.8 62.3 51.8 62.3 52.6 61.8 51.8 62.3 52.8 61.8 52.8 52.3 52.8 62.1 52.8 52.8 52.8 52.8 52.8 52.8 52.8 52.8	2	Contraction of the contraction o	647	53.8		54.8	65.5	52.8	64.2	50.5	68.2	58.4	69.4	60.5	64.2	50.5	69.4	60.5	60.3	23.1
Cement silo Packer-1 Jos. J. 49.5 56.8 48.5 57.2 49.6 63.1 49.5 64.2 50.2 56.8 48.5 57.2 49.6 63.1 49.5 64.2 50.2 56.8 48.5 56.8 37.2 49.6 63.1 49.5 66.8 50.9 57.4 49.5 66.8 50.2 60.5 51.9 60.3 49.5 66.8 50.9 60.7 50.0 60.7 49.5 66.8 50.9 50.7 60.7 50.2 60.3 51.9 60.3 49.5 66.8 50.9 60.7 50.0 60.7 49.5 66.8 50.9 50.7 60.7 50.2 60.3 50.2 60.5 50.9 50.4 40.5 60.6 60.9 50.7 40.5 60.2 50.1 60.5 50.2 60.5 50.2 60.5 50.2 60.5 50.2 60.5 50.7 60.5 50.2 60.5 50.2 60.5 50.2 60.5 50.5 <	54	CM-2 weign reder	3 03	40.7	60.4	50.7	919	50.7	1.09	49.8	64.4	50.4	1.99	52.8	58.5	49.7	1.99	52.8	6.19	50.7
Cement silo Packer-2 66.2 49.5 58.6 90.1 50.8 40.5 57.2 47.7 67.8 66.5 50.2 60.3 49.5 66.5 57.2 47.7 60.3 49.5 66.8 50.9 60.6 60.9 49.5 66.8 50.9 66.8 50.9 60.6 60.9 49.5 66.8 50.9 66.8 50.9 66.8 50.9 66.8 50.9 50.9 60.6 60.9 50.4 43.6 66.8 50.9 60.6 40.9<	53	Cement silo Packer-1	20.0	47.1	-00		0 / 0	201	673	401	63.1	49.5	64.2	50.2	56.8	48.5	64.2	50.2	60.4	49.6
Cement silo Packer-3 60.7 52.6 60.7 49.5 60.3 51.8 61.7 50.8 60.3 50.2 50.2 50.2 50.2 50.2 50.2 50.2 50.2 50.2 50.2 66.8 50.9 57.4 43.6 66.8 50.9 66.8 50.9 57.4 43.6 66.8 50.9 66.8 50.9 60.6 60.8 50.9 60.6 60.8 50.9 60.6 60.9 57.4 43.6 66.8 50.9 60.6 60.9 57.4 43.6 66.8 50.9 60.6 60.9 57.4 43.6 66.8 50.9 60.6 60.9 57.4 43.6 66.9 50.9 60.9 57.4 43.6 66.9 50.9 60.9 57.4 43.6 60.9 57.4 43.6 60.9 57.4 43.6 60.9 57.4 43.6 60.9 57.4 43.6 60.2 57.4 43.7 60.2 57.4 60.7 52.4 61.2<	97	Cement silo Packer-2	62.2	49.5	98.6	20.1	20.0	10.04	4.10	0.00	277	603	\$ 09	619	603	49.5	66.5	52.6	61.7	51.1
Cement silo Packer 4 62.8 47.5 57.6 45.4 45.4 45.5 45.1 60.3 49.5 50.5 50.5 50.5 50.5 50.5 50.5 50.5 50.5 50.5 50.5 45.6 64.1 51.8 60.9 Truck Loading point-2 62.7 52.6 58.5 48.5 56.2 46.3 55.7 60.2 51.1 64.7 55.8 55.7 55.8 59.7 Truck Loading point-3 60.2 42.8 60.3 56.7 48.9 49.7 62.2 49.5 56.4 53.6 66.4 53.6 66.4 53.6 66.4 53.6 66.4 53.6 66.4 53.6 66.4 53.6 66.4 53.6 66.4 53.6 66.4 53.6 66.4 53.6 66.4 53.6 66.4 53.6 66.4 53.6 66.4 53.6 66.4 53.6 66.8 47.2 66.8 47.2 56.8 47.2 56.8 47.2 <td< td=""><th>12</th><td>Cement silo Packer-3</td><td>60.7</td><td>52.6</td><td>2.09</td><td>49.5</td><td>60.3</td><td>51.8</td><td>/T9</td><td>20.8</td><td>6.00</td><td>2006</td><td>0 97</td><td>000</td><td>57.4</td><td>43.6</td><td>8 99</td><td>50.9</td><td>9.09</td><td>47.0</td></td<>	12	Cement silo Packer-3	60.7	52.6	2.09	49.5	60.3	51.8	/T9	20.8	6.00	2006	0 97	000	57.4	43.6	8 99	50.9	9.09	47.0
Truck Loading point-1 55.6 45.6 61.5 51.2 61.2 51.8 62.3 50.8 64.1 50.2 60.5 49.5 53.0 45.0 04.1 51.8 62.3 50.8 1	00	Cement silo Packer-4	62.8	47.5		45.4	57.4	43.6	58.5	45.1	60.3	49.3	0.00	200		757	1 177	815	6 09	49.9
Truck Loading point-2 62.7 52.6 58.5 48.5 56.2 46.3 55.7 45.2 60.2 51.1 64.7 52.8 52.7 42.8 66.4 53.5 64.1 53.6 61.6 Truck Loading point-3 60.2 42.8 60.3 53.6 60.3 50.7 58.9 49.7 63.2 49.5 66.4 53.2 58.9 42.8 66.4 53.6 61.6 51.8 Truck Loading point-4 56.5 47.5 62.2 54.5 61.6 56.8 57.4 60.7 52.4 61.2 50.8 56.5 47.5 62.8 57.4 60.8 51.1	9	Truck Loading point- 1	55.6	45.6		51.2	61.2	51.8	62.3	50.8	64.1	50.2	60.5	49.5	55.7	45.0	64.7	55.8	59.7	49.9
Truck Loading point-3 60.2 42.8 60.5 53.6 60.3 50.7 58.9 49.7 63.2 49.5 50.4 53.2 49.5 56.8 47.2 62.8 57.4 60.8 Truck Loading point-4 56.5 47.5 62.2 54.5 61.6 56.4 62.8 57.4 60.7 52.4 61.2 50.5 65.5 49.5 56.8 47.2 65.5 61.1 Slag mill weigh feeder 62.7 52.5 59.8 49.8 56.8 47.2 57.5 48.3 64.2 50.5 65.5 49.5 56.8 47.2 65.5 52.5 61.1 Monthand by Maritemal Weight Annal Maritemat Research 40.2 40.2 40.2 40.2 40.2 40.2 40.2 40.2 40.2 40.2 Maritemat Research 40.2 40.2 40.2 40.2 40.2 40.2 40.2 40.2 40.2 Maritemat Research 40.2 40.2 40.2 40.2 40.2 40.2 40.2 40.2 Maritemat Research 40.2 40.2 40.2 40.2 40.2 40.2 40.2 Maritemat Research 40.2 40.2 40.2 40.2 40.2 40.2 40.2 Maritemat Research 40.2 40.2 40.2 40.2 40.2 40.2 40.2 Maritematical Research 40.2 40.2 40.2 40.2 40.2 Maritematical Research 40.2 40.2 40.2 40.2 40.2 40.2 40.2 Maritematical Research 40.2 40.2 40.2 40.2 40.2 40.2 40.2 Maritematical Research 40.2 40.2 40.2 40.2 40.2 40.2 40.2 Maritematical Research 40.2 40.2 40.2 40.2 40.2 40.2 40.2 Maritematical Research 40.2 40.2 40.2 40.2 40.2 40.2 40.2 Maritematical Research 40.2 40.2 40.2 40.2 40.2 40.2 40.2 40.2 Maritematical Research 40.2 40.2 40.2 40.2 40.2 40.2 40.2 40.2 40.2 Maritematical Research 40.2 40.2 40.2 40.2 40.2 40.2 40.2 40.2 Maritematical Research 40.2 40.2 40.2 40.2 40.2 40.2 40.2 40.2 40.2 Maritematical Research 40.2 40.2 40.2 40.2 40.2 40.2 40.2 40.2 40.2 40.2 Maritematical Research 40.2	2	Truck Loading noint- 2	62.7	52.6	58.5	48.5	56.2	46.3	55.7	45.2	60.2	51.1	04.7	53.0	500	42.CA	66.4	53.6	919	49.9
Truck Loading point-4 56.5 47.5 62.2 54.5 61.6 56.4 62.8 57.5 48.3 64.2 50.5 65.5 49.5 56.8 47.2 65.5 61.1	=	Truck Loading point- 3	60.2	42.8	60.5	53.6	60.3	50.7	58.9	49.7	63.2	49.5	61.3	50.8	56.5	47.5	62.8	57.4	8.09	53.2
Slag mill weigh feeder 62.7 52.5 59.8 49.8 56.8 47.2 57.5 48.3 64.2 50.3 47.2 50.5 60.5 47.2 50.5 60.5 47.5 60.5 60.5 60.5 60.5 60.5 60.5 60.5 60	32	Truck Loading point- 4	56.5	47.5	62.2	54.5	9.19	56.4	62.8	57.4	7.00	50.5	7.10	40.5	8 95	47.2	65.5	52.5	61.1	49.6
	33	Slag mill weigh feeder	62.7	52.5	8.65	49.8	56.8	47.2	57.5	48.3	64.2	50.0	03.3	47.5	0.00	2:12			_	
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		10.																_	MA	
		A KNOCK I																Dr.Saurab	h Kumar	
		Value patient																Mgr(Env)		





Social Development Expenses for the period from October 2018 to March 2019

S.No.	Subject	Amount (Rs.)
1	BALAJI SUPER BAZAR BILL ADJUSTE AGST SCHOOL ANNUAL	4,645.00
2	SCHOOL FILTER EXPENSES	9,550.00
3	Sir Padampat Primary School Salary oct 2018	2,00,000.00
4	Sir Padampat Primary School Salary December 2018	1,50,000.00
5	Sir Padampat Primary School Balance Misc.	50,000.00
6	Sir Padampat Primary School Balance Misc.	50,000.00
7	Sir Padampat Primary School RO REPAIRS EXP MISC	9,550.00
8	Sir Padampat Primary School Balance Misc.	1,00,000.00
9	School Annual Day Celebration Expensess	1,025.00
10	EXCAVATION IN ORDINARY SOIL LOKAPUR MALLIKARJUN TEMPLE	7,803.51
11	EXCAVATION IN ORDINARY SOIL LOKAPUR MALLIKARJUN TEMPLE	5,239.20
12	EXCAVATION IN ORDINARY SOIL LOKAPUR MALLIKARJUN TEMPLE	9,142.35
13	EXCAVATION IN ORDINARY SOIL LOKAPUR MALLIKARJUN TEMPLE	29,736.00
14	EXCAVATION IN ORDINARY SOIL LOKAPUR MALLIKARJUN TEMPLE	10,638.88
15	EXCAVATION IN ORDINARY SOIL LOKAPUR MALLIKARJUN TEMPLE	12,043.08
16	EXCAVATION IN ORDINARY SOIL LOKAPUR MALLIKARJUN TEMPLE	36,428.81
17	EXCAVATION IN ORDINARY SOIL LOKAPUR MALLIKARJUN TEMPLE	14,755.90
18	EXCAVATION IN ORDINARY SOIL LOKAPUR MALLIKARJUN TEMPLE	5,78,200.00
19	EXCAVATION IN HARD ROCK(BY CONTRACTOR)	1,12,156.45
20	EARTH FILLING(AVAILABLE EARTH)	4,130.00
21	PLY SHUTTERING SLAB, FOUNDATION	10,195.20
22	FABRICATION OF STRUCTURE	1,28,030.00
23	ERECTION WORK	27,435.00
24	RCC 1:1.5:3 RAFT, FOUNDATION	2,03,023.37
25	STONE SOLING	6,950.20
26	BRICK MASONARY 1:4	29,379.17
27	RCC 1:1.5:3 RAFT, FOUNDATION	40,155.40
28	RCC GROUTING	1,484.25
29	FABRICATION OF STRUCTURE	1,28,856.00
30	ERECTION WORK	1,51,512.00
31	GI/PRECOATED SHEET FIXING	2,36,720.98
32	FIXING OF FLASHING	35,329.20
33	RIGID PVC PIPE 110 MM	20,756.67
34	COMPUTER TABLE, CHAIR FOR NINGAPUR GOVT SCHOOL	32,000.00
35	SELF CONS CMT LKPR TEMPL-3.50 MTs-1018	8,463.00
36	HALKI GOVT. SCHOOL TOILET CONSTRUCTION.	1,00,000.00
37	SELF CONS OF CEMENT 4.00 MTS-MAR-2019 FR	9,312.00
38	construction of shri shambhulinganand math lokapur	40,000.00
39	'Traditional Garba Nights' Sannedo Programe 2018	25,000.00
40	Education helf to mr.Rahul hosamani puc 2 86.17%	5,000.00
41	Shree Durgadevi pooja at colony.	15,000.00
42	karnataka rakshana vedike.help to poor patients	30,000.00
43	karnataka rakshana vedike Ningapur.kabaddi players	30,000.00
44	SHRI PANDURANG DEVASTAN COMMITTE.KAMAKERI	5,000.00
45	Lord Anjaneya Temple Hebbal Function 16.12.2018	5,000.00
46	Koti Japyatna Programme & Vedant Mahotsav	50,000.00

		36,49,646.62
58	Shri Durgadevi jhatra petlur on 04.04.2019	1,00,000.00
57	Shri Revayya shivayogi math.Hebbal puran pravachan	15,000.00
56	Sri muranal siddeshwar metgud Anna Prasad misc	20,000.00
55	SHRI YAMANURESHWAR JHATRA ON 24/3/19 TO 27/3/2019	2,00,000.00
54	SHRI PANDURANG RUKMINI DEVASTHAN PETLUR.DINDI UTSA	30,000.00
53	Rashtriya Republican Sena Samiti Woman Security	15,000.00
52	Girls & women affected by hiv medical help misc	25,000.00
51	Karnataka Dalit Sangharsh Samiti Mass Marriage	1,50,000.00
50	Sri Kariyammadevi Temple Construction Bommanbudni	1,00,000.00
49	Hawan & Annaprashad Murthi Pratishtha Metgud Templ	25,000.00
48	Main Welcome Door at Petlur Constructions	50,000.00
47	Mudhol Mahila Credit Souhard Sahakari Ltd. Program	1,50,000.00

J.K. Cement WORKS, MUDDAPUR (KARNATAKA) (Unit: J.K. Cement Ltd.)

STP water Analysis Report (Monthly Average) for the Month of October-2018 to March-2019

PO4-P,	2	99.0	0.61	0.65	0.59	0.77	0.76	9.0	8.0	0.7
Fecal Coliform	<,230	Nil	īg	Ϊ́Ζ	Ē	Z	Ϊ́Ζ	Ē	Ē	Nil
N-total	01	6.82	6.53	6.65	6.48	6.49	7.02	6.48	7.02	6.67
NH4-N	5	5.17	4.72	4.13	5.33	5.88	3.85	3.85	5.88	4.85
COD	50	29.18	22.68	30.68	32.94	26.79	25.55	22.68	32.94	27.97
BOD	10	6.25	6.13	5.95	6.50	6.13	09:9	5.95	09.9	6.26
Hd	6 to 9	6.42	6.10	6.78	6.50	7.07	6.82	6.10	7.07	6.61
Suspended Solids	10	7.66	7.40	7.86	8.01	7.54	7.60	7.40	8.01	7.68
Month	Tolerance limit	Oct-18	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Half Yearly Min.	Half Yearly Max.	Half Yearly Avg.
SI.No.	Toler	-	2	3	4	S	9	HalfY	Half Y	Half Y



Validation of Monitored by

(Unit: J.K. Cement Ltd.)

TEET ITENT WATER ANALYSIS REPORT (Manthly Average) FOR THE MONTH OF OCTOBER-2018 TO MARCH-2019

Constituents	Suspended Solids (mg/L) Temperature (°C) max	Temperature (°C) max	pH value	Oils and Grease (mg/L)
Permissible limit	100	Unobjectionable	5.5 to 9	10
Oct-18	39.7	0.42	8.12	Nii
Nov-18	37.0	0.39	8.12	Nil
Dec-18	34.6	0.33	8.18	Nil
Jan-19	37.1	0.36	8.19	Nil
Feb-19	37.2	0.35	8.18	Nii
Mar-19	40.3	0.41	8.17	Niil
Half Yearly Avg	37.6	0.38	8.16	Nii
Half Yearly Minimum	34.6	0.33	8.12	Nii
Half YearlyMaximum	40.3	0.42	8.19	Nil

Dr.Saurabh Kumar Mgr(Env)

Monitored by

Station: AAQMS1 Periodically: October 2018 - March 2019 Type: AVG Monthly [1 Hr.]

00	µg/m3	0.4	0.2	0.4	8.0	9.0	0.4	0.2	8.0	0.47
NO2	µg/m3	30.9	20.6	19.8	20.1	35.0	30.0	19.84	35	26.07
S02	µg/m2	4.00	7.70	17.90	15.00	25.90	28.00	4	28.00	16.42
PM2.5	µg/m3	33	43	36	. 33	30	31	30	43	34.33
PM10	µg/m3	08	94	78	71	70	58	58	94	75.17
	Date & Time	Oct-18	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Minimum	Maximum	Average

Station: AAQMS2 Periodically: October 2018 - March 2019 Type: AVG Monthly [1 Hr.]

	_		_	_	_		_	-		_
00	µg/m3	0.7	0.7	0.7	0.7	9.0	0.5	0.5	0.7	0.65
NO2	µg/m3	12.50	12.60	20.20	34.00	26.00	28.00	12.5	34	22.22
SO2	µg/m3	4.60	5.40	4.00	2.50	2.90	4.10	2.5	5.4	3.92
PM2.5	µg/m3	24	43	34	34	32	33	24	43	33.33
PM10	µg/m3	38	55	58	78	92	77	38	78	63.67
Ē	Date & 1 me	Oct-18	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Minimum	Maximum	Average

Station: CEMS Periodically: October 2018 - March 2019 Type: AVG Monthly [1 Hr.]

Date & Time	KILN & RM Stack SPM	KILN & RM Stack SO2 KILN & RM Stack NOx	KILN & RM Stack NOx	CPP/ESP SPM	CPP/ESP SO2	CPP/ESP NOX	CEMENT MILL Stack SPM	Cooler ESP SPM	Coal Mill SPM	CEMENT MILL 1 SPM	CEMENTMILL 2 SPM
	mg/m3	mg/m3	mg/m3	mg/m3	mg/m3	mg/m3	mg/m3	mg/m3	ma/m3	ma/m3	ma/m3
October 2018	12	47	661	35	460	9	7.4	6.7	5.8	4.82	5.2
November 2018	6.34	29.47	642	35	219	164	9.2	4.3	3.2	4	3.2
December 2018	8,42	63	577	23	205	170	80	14.3	12.1	3.2	4.6
January 2019	10.05	54	536	20.65	222	29	4	10.3	5.3	4.4	4.4
February 2019	Ξ	45	651	32	199	86	7.8	=	1.7	9	4.8
March 2019	11	09	661	34	312	262	12.4	15.6	9.4	4.6	8.7
Minimum	6.34	29.47	536	20.65	199	09	4	4.3	3.2	3.2	3.2
Maximum	12	63	661	35	460	262	12.4	15.6	12.1	9	8.7
Avg	9.80	49.75	621.33	29.94	269.52	134.84	8 (3)	10.37	7 15	4 50	r r