JK Cement Works, Muddapur
(Unit : J.K. Cement Ltd)
CIN : L17229UP1994PLC017199
Works : P.O. Muddapur - 587 122 Distt. Bagalkot (Karnataka) India
+91-8350-289607 factory.muddapur@jkcement.com
www.jkcement.com

No.JKCW/ENV/2022/ EC Compliance/1st Half(PLANT)/89/17 Date- 19-11-2022

To
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 Apl-2022 to Sept-2022 (1nd Half) 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**

★★★★★

Dear Sir,

With reference to aforesaid subject and reference matter, we are here by sending the enclosed pointwise environmental clearance compliance report for the period **Apl-2022 to Sept-2022 (1st Half)** of JK Cement Works, Muddapur, (Unit: JK Cement Ltd) (Cement Plant -2.20 MTPA Clinker & 2.50 MTPA OPC and Captive Power Plant 2 x 25 MW, for JK Cement Works, Village-Muddapur, Taluka-Mudhol, District-Bagalkot, Karnataka, along with **Annexure-1 to 8.**

This for your kind perusal and acknowledge the receipt

Thanking you

Yours faithfully
For J.K. Cement Works

Umashankar Choudhary
(Unit Head)

JK Cement Works, Muddapur (Unit: JK Cement Ltd.)

Enclosures as above:

1. EC Compliance Report **Annexure-1**
2. AAQ Monitoring **Annexure -2**
3. Stack Emission Monitoring -**Annexure -3**
4. Noise Level Monitoring- **Annexure -4**
5. Fugitive emission Monitoring - **Annexure -5**
6. Water Quality Monitoring - **Annexure 6**
7. Environmental expenditures **Annexure-7**
8. CSR Report **Annexure-8**

CC:

1- The Addl. Principal Chief Conservator of Forest (C), Ministry of Environment & Forest, Regional Office (South Zone), 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, 7thD 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, Bagalkot – 587102

Subject: EC to Cement Plant (2.20 MTPA) Clinker & 2.50 MTPA OPC and Captive Power Plant (2x25 MW) at Village- Lokapur`, Mudhol, District Bagalkot, Karnataka by M/s J.K. Cement Works (Unit: JK Cement Ltd).

Reference: - MoEF vide Letter F. No. J-11011 / 489 / 2006-1A. II (I) / dated. 14th September 2007

EC Compliance Report for the period April - 2022 to Sept- 2022

A. Specific Conditions: **Annexure-1**

i.	Electrostatic precipitator (ESP) to cooler, Bag House to Raw mill, Bag filter to coal kiln burner and pre-calciner shall be provided. Online gas analyzer for O_2, 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. Online gas analyzer for O_2, 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 m^3/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 will also 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 the water requirement from Ghataprabha river is not exceeding the specified quantity. 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 ash notification of September, 1999 and amended in august, 2003. STP sludge shall be	Complied. The fly ash and bottom ash generated from the power plant is being used in the manufacturing of PPC. The cement dust collected from the pollution control devices is recycled back in the cement manufacturing. The fly ash utilization is as per the provision stipulated in the fly ash notification of September,

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	used as manure for green belt development. Used oil shall be sold to authorized recycler / re processor only.	1999 and amended in august, 2003. Quarterly & Annual report on fly ash utilization is being submitted to SPCB/MoEF/CEA. STP sludge is utilizing as manure for green belt development. Used oil/waste oil in our kiln is being handed over to authorized recycler/re-processor only.
iv.	High calorific hazardous waste shall be utilized in the cement plant.	Complying. We obtained permission from KSPCB for co-processing various Hazardous and Non-Hazardous wastes vide KSPCB authorization no. 327139 dated 29th September 2021, for co-processing in our kiln and the same is practiced.
v.	As proposed in EIA / EMP, green belt shall be developed in 80 ha. (66%) out of total 120 ha. 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. Green belt has been developed in phased manner so far we have covered 46.03% of green cover @ 118.94 acres out of 258.37 Acres in plant and colony. As 66% is misprinted and it is corrected in the amendment taken on 2010 EC.
General Condition :		
i.	The project authorities shall adhere to the stipulation made by Karnataka State Pollution Control Board and State Government.	Noted.
ii.	No further Expansion or modification of the plant shall be carried out without prior approval of Ministry or rules made there under.	Agreed. We have obtained environmental clearance for expansion of Cement Grinding Unit (2.50 MTPA to 3.5 MTPA) via. MoEF

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		Letter No. F.No. J-11011/263/2009-IA II (I) dated 21-06-2010 and also obtained permission for 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.
iii.	The gaseous and particulate matter emission from various units shall confirm to the standards prescribed by the KSPCB. Interlocking facilities shall be provided in the pollution control so that in the event of the pollution control equipment not working, the respective unit(s) is shutdown automatically.	Complying, we have provided online monitoring instruments at all major stacks and the gaseous and particulate matter emissions from within the standards as prescribed by the Ministry/KSPCB. Interlocking facilities have been provided in pollution control equipment.
iv.	One Ambient Air Quality Monitoring station shall be installed in down wind direction. Ambient air quality including Ambient Noise Level shall not exceed the standard stipulated under EPA or by the state authorities. Monitoring of Ambient air quality and stack emission shall be carried out regularly in consultation with KSPCB and report submitted to the KSPCB quarterly and to the Ministry Regional Office at Bangalore Half Yearly.	Complied, 4 No's of AAQ stations are installed to monitor Ambient air quality including ambient Noise level is not exceeding the standard stipulated under EPA or by the state authorities. In consultation with KSPCB Environmental Monitoring of Ambient Air Quality and Stack Emission are being carried out. The reports are being submitted to the KSPCB Monthly, Quarterly & Half Yearly and Regional Office of Ministry at Bangalore on Half Yearly.
v.	The Company shall install adequate dust collection and extraction system to control fugitive dust handling (Unloading, conveying, transporting, and stacking) vehicular movement, bagging and packing areas etc. Asphalting / concreting of roads and water spray all around the stock yard and loading / unloading areas shall be carried out to control fugitive emission. Covered sheds for storage of raw materials and	Complied, we have installed adequate dust collection and extraction system to control fugitive dust handling. Asphalting / concreting of roads and water spray all around the stock yard and loading / unloading areas are being carried out to control fugitive emission. Covered sheds for storage of raw

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	fully covered conveyors for transportation of materials shall be provided besides coal, cement, fly ash and clinker shall be stored in silos.	materials and fully covered conveyors for transportation of 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.	Permission to abstract Ground water is obtained from Karnataka Ground Water Authority, Bangalore via. Letter no. KGWA/GW/NOC/32/2020-21/4323 dated 30.03.2021.
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, rain water harvesting structures have been adopted from roof tops. Storm water drains are paved for 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 under CSR, the expenditure incurred from April-22 to Sept-22 for community welfare is enclosed as Annexure-8. Additionally, RDF/Plastic from nearby ULB's and Hazardous wastes, non Hazardous wastes is being used for Manufacturing of PPC/Slag cement
ix.	The overall noise levels in and around the plant area shall be kept well within the standards (85dBA) 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 (85dBA) 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 (Night Time). Ambient noise level monitoring report for the Period April-2022 to Sept-2022 is enclosed as Annexure-4

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x.	All recommendations made in the Corporate Responsibilities for Protection (CREP) for 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.
1.	Cement Plants, which are not complying with notified standards, shall do the following to meet the standards: • Augmentation of existing Air Pollution Control Devices -by July 2003 • Replacement of existing Air Pollution Control Devices -by July 2004	Complying
2	Cement Plants located in critically polluted or urban areas (including 5-km distance outside urban boundary) will meet 100 mg/Nm3 limit of particulate matter by December 2004 and continue working to reduce the emission of particulate matter to 50 mg/Nm3	We are maintaining the emission level below 30 mg/Nm^3 for particulate matter as per MoEF Notification Vide GSR 612(E) dated 25.08.2014.
3	The new cement kilns to be accorded NOC/Environmental Clearance w.e.f. 01.04.2003 will meet the limit of 50 mg/Nm^3 for particulate matter emissions	The emission level of particulate matter is maintaining below 30 mg/Nm^3 for kiln/raw mill as per the prescribed standards.
4	CPCB will evolve load based standards by December 2003	MoEF & CC has released notification on load based standards on 10th May 2016, for cement plants with co-processing for rotary kiln (Raw mill, kiln and precalciner system put together) not exceeding 0.125kg/tonne of clinker and complying the same
5	CPCB and NCBM will evolve SO2 and NOx emission standards by June 2004	Emission standards (for SO_2 & NO_x) are notified by MoEF&CC vide notifications G.S.R. 612(E) dt. 25/08/2014, G.S.R. 496(E) dt. 09/05/2016 and G.S.R. 497(E) dt. 10/05/2016 are complying. Additionally We have installed DeNOx system (SNCR) to control NOx emissions
6	The Cement industries will control fugitive	The fugitive dust emissions are

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	emissions from all the raw material and products storage and transfer points by December 2003. However, the feasibility for the control of fugitive emissions from limestone and coal storage areas will be decided by the National Task Force (NTF). The NTF shall submit its recommendations within three months	controlling by implementing the below practices. • Raw materials, product sheds, transfer points and belt conveyors are fully covered. • Bag filters are installed at all transfer points. • Concreted Roads are paved to suppress the dust emissions.
7	CPCB, NCBM, BIS and Oil refineries will jointly prepare the policy on use of petroleum coke as fuel in cement kiln by July 2003	Complied. We are using petroleum coke as a fuel in cement kiln after obtaining permission from KSPCB.
8	After performance evaluation of various types of continuous monitoring equipment and feedback from the industries and equipment manufacturers, NTF will decide feasible unit operations/sections for installation of continuous monitoring equipment. The industry will install the Continuous Monitoring Systems (CMS) by December 2003	Complied. We have already installed online continuous emission monitoring stations (OCEMS) at all major stacks and the data is connected to CPCB and KSPCB servers.
9	Trippings in kiln ESP to be minimized by July 2003 as per the recommendation of NTF	Reverse Air Bag House has been installed at Raw Mill/kiln in place of ESP for minimization of Kiln tripping.
10	Industries will submit the target date to enhance the utilization of waste material by April 2003	Complied, utilization of various wastes in kiln as a supplementary fuel.
11	NCBM will carry out a study on hazardous waste utilization in cement kiln by December 2003	Complied. Hazardous and other waste from various industries is being co processed in cement kiln.
12	Cement industries will carry out feasibility study and submit target dates to CPCB for co-generation of power by July 2003	Captive power plant of 50 MW has been installed to cater our plant and colony requirements .
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 has been established headed by Unit Head to carry out Environmental monitoring

		and various management function.
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, expenditure incurred on environmental pollution control measures taken up on environment management plan and the details of expenditure are enclosed as **Annexure-7.**
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.	Complying, six monthly compliance report along with statistical interpretation of environmental monitoring data is submitting regularly to The Regional office of Ministry at Bangalore, CPCB & KSPCB.
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, The Project has been successfully commissioned and informed to the Regional office of Ministry.
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 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.	Complied, we had informed to 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.
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	Noted.

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	Bangalore.	
7.0	The Ministry may revoke or suspend the clearance if implementation of any of the above condition is not satisfactory.	Noted.
8.0	Any other condition or alteration in the above conditions shall to be implemented by the project authorities in a time bound manner.	Noted.
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.	Noted.

Thanking you,

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

Uma Shankar Choudhary
(Unit Head)

Annexure-2

J.K. Cement WORKS, MUDDAPUR (KARNATAKA)

CEMENT PLANT & 2X25 CPP MW

QUARTERLY AAQM REPORT (SO_2, NO_2, PM_{10}, $PM_{2.5}$), FOR THE MONTH OF APRIL-2022 TO SEPTEMBER-2022

(ALL VALUES IN MICROGRAMS / CUBIC METER)

Month	Sl. No.	Date	Week	SO_2				NO_2				PM_{10}				$PM_{2.5}$			
				Locations				Locations				Locations				Locations			
				A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D
April	1	01.4.2022	1st	7.5	8.0	7.2	6.8	17.0	18.0	17.8	18.2	59.3	59.9	32.5	30.6	20.8	25.8	22.8	25.3
	2	05.4.2022		8.0	8.2	8.0	7.8	18.0	18.0	18.0	16.8	66.2	63.4	40.8	42.5	33.3	28.3	25.6	23.5
	3	08.4.2022	2nd	6.8	6.3	7.6	7.2	16.8	16.7	16.7	17.8	70.1	68.8	35.6	33.2	29.2	22.1	20.5	22.7
	4	12.4.2022		6.7	7.0	8.0	7.0	16.7	17.7	18.2	17.6	68.8	72.7	38.7	35.6	37.5	33.3	23.7	20.5
	5	15.4.2022	3rd	6.2	6.3	6.3	7.2	17.3	17.5	16.5	17.8	72.8	61.1	45.3	42.8	25.0	20.8	18.8	22.8
	6	19.4.2022		8.0	7.0	7.5	8.0	18.0	17.0	19.5	18.5	61.9	58.0	36.5	34.4	37.5	29.2	25.8	20.6
	7	22.4.2022	4th	6.8	8.0	6.8	6.5	16.7	18.0	17.6	17.2	68.6	65.8	43.6	41.8	25.0	31.3	22.4	18.4
	8	26.4.2022		8.0	6.7	7.3	7.0	18.0	16.7	16.8	16.5	72.3	60.8	47.5	43.5	29.2	25.0	23.0	20.8
	9	29.4.2022		8.5	8.2	8.3	8.0	18.0	18.2	18.2	18.0	77.1	72.0	42.8	40.6	37.5	37.5	21.8	19.0
May	1	3.5.2022	1st	7.2	7.0	6.3	7.8	19.0	18.3	17.3	18.6	68.3	76.7	68.6	65.5	29.2	33.3	30.6	35.4
	2	6.5.2022		8.3	6.8	7.7	8.0	17.7	17.7	18.5	18.2	71.4	64.2	65.8	70.6	37.5	37.5	28.5	33.3
	3	10.5.2022	2nd	6.2	6.0	6.7	7.6	16.5	16.5	17.7	17.5	79.1	69.1	70.4	68.5	20.8	25.0	25.0	29.2
	4	13.5.2022		7.5	7.7	7.7	8.2	17.5	17.7	17.8	16.9	81.6	77.3	73.5	70.2	25.0	29.0	30.0	28.0
	5	17.5.2022	3rd	8.0	6.7	8.0	7.5	18.0	17.2	18.0	18.4	74.1	60.3	64.5	72.8	29.2	32.0	28.0	30.0
	6	20.5.2022		7.3	7.7	7.5	7.7	19.2	17.8	18.8	17.2	86.5	65.2	68.5	74.6	34.6	33.0	25.2	28.5
	7	24.5.2022	4th	7.8	8.0	7.3	8.1	17.5	18.0	17.7	17.8	77.6	69.8	72.3	76.1	32.8	30.0	27.0	36.0
	8	27.5.2022		6.7	8.0	6.8	7.6	18.8	17.0	18.0	16.6	70.7	74.4	70.2	71.6	33.3	28.0	32.0	32.0
	9	31.5.2022		7.7	7.7	7.5	7.4	17.2	17.7	17.3	18.6	75.1	62.7	60.2	67.2	30.0	32.0	30.0	30.5
June	1	3.6.2022	1st	7.8	7.5	8.5	8.0	18.0	17.8	19.5	18.0	81.5	77.6	40.3	45.5	20.8	20.8	25.0	16.7
	2	7.6.2022		8.0	8.3	9.2	8.2	19.0	18.0	18.5	18.8	73.5	80.7	37.9	56.8	18.7	16.7	20.8	20.8
	3	10.6.2022	2nd	7.2	8.5	8.0	7.8	17.7	19.0	18.0	17.0	29.1	18.7	45.2	47.7	8.3	14.6	17.5	25.0
	4	14.6.2022		8.0	8.0	9.0	7.5	18.0	18.3	19.0	17.8	45.9	44.5	47.0	52.7	6.2	8.3	23.3	27.1
	5	17.6.2022	3rd	8.5	8.2	8.2	9.0	18.0	18.0	18.2	19.0	59.5	47.2	35.3	57.4	10.4	12.5	18.8	20.8
	6	21.6.2022		8.2	8.7	7.5	8.8	19.0	19.5	17.5	18.8	43.6	16.8	30.9	48.8	12.5	19.2	25.0	12.5
	7	24.6.2022	4th	8.2	7.3	8.0	7.5	16.8	17.7	18.0	17.3	28.2	15.7	39.0	52.5	8.3	9.6	33.3	22.9
	8	28.6.2022		7.5	8.0	9.2	6.7	17.5	18.5	19.2	17.0	62.3	43.3	45.4	46.5	16.7	16.7	20.8	16.7
July	1	1.7.2022	1st	7.7	5.7	6.3	6.0	17.7	16.0	16.0	17.0	56.8	57.2	61.0	57.8	29.2	23.0	24.2	20.8
	2	5.7.2022		8.8	7.2	7.7	7.7	18.8	17.5	17.3	17.7	52.6	41.3	56.7	50.6	16.7	29.6	20.8	25.0
	3	8.7.2022	2nd	6.8	6.8	6.8	8.0	16.8	18.0	18.2	16.7	66.2	55.1	49.9	47.8	20.8	20.8	18.7	29.7
	4	12.7.2022		7.8	7.0	6.0	7.3	17.8	16.8	17.0	17.3	57.7	61.1	64.1	53.5	25.8	29.2	25.0	22.0
	5	15.7.2022	3rd	8.0	8.5	7.7	8.3	18.8	18.7	18.7	18.3	44.1	57.1	57.9	50.3	12.5	25.0	16.7	22.5
	6	19.7.2022		7.5	8.0	8.0	6.7	17.8	18.8	17.8	16.7	67.7	59.4	61.0	59.4	16.7	29.2	15.8	18.8
	7	22.7.2022	4th	6.7	6.8	6.7	8.0	18.2	17.3	17.7	18.0	48.3	66.5	54.8	62.0	12.5	20.8	20.4	22.1
	8	26.7.2022		8.0	7.2	7.6	9.2	18.0	17.7	17.6	19.2	58.1	60.8	65.1	58.9	16.7	17.5	22.9	20.8
	9	29.7.2022		8.0	8.0	8.8	6.5	18.0	18.0	17.8	18.0	63.7	67.5	67.1	59.4	27.5	16.7	19.6	25.0
August	1	2.8.2022	1st	8.0	6.8	6.8	6.8	18.0	17.0	16.8	17.3	40.7	36.8	35.8	45.0	17.9	8.3	4.2	9.2
	2	5.8.2022		7.5	8.0	8.3	8.0	17.5	18.0	18.3	18.0	47.9	40.3	30.5	34.2	4.2	6.7	12.5	8.3
	3	9.8.2022	2nd	7.7	8.2	7.7	9.6	18.3	19.0	17.7	19.2	42.3	34.6	39.9	39.9	12.5	14.6	7.5	13.3
	4	12.8.2022		8.3	9.2	8.3	7.2	19.2	18.5	18.3	17.7	48.6	47.0	45.7	48.1	12.5	8.3	13.3	12.9
	5	16.8.2022	3rd	9.0	8.7	8.3	7.5	19.0	19.0	19.2	18.0	45.4	32.2	43.3	39.1	7.5	8.3	12.9	13.3
	6	19.8.2022		7.7	6.8	7.3	8.0	17.7	16.7	18.2	18.0	37.7	34.8	48.1	41.6	8.3	12.5	10.0	10.4
	7	23.8.2022	4th	7.3	7.3	6.5	6.7	17.3	17.3	17.2	16.7	31.8	38.9	33.3	39.8	11.3	6.2	5.0	8.3
	8	26.8.2022		9.4	7.0	7.3	8.3	19.2	16.8	17.5	19.6	43.2	32.1	30.9	45.0	12.5	12.5	9.2	9.2
	9	30.8.2022		8.2	8.0	7.0	7.5	18.2	18.0	18.0	18.0	42.0	44.0	46.9	41.8	25.0	16.7	13.3	9.6
September	1	04.9.2022	1st	7.7	5.7	6.8	6.0	17.7	16.7	16.8	17.0	54.8	40.0	50.9	37.8	12.5	12.5	21.7	14.6
	2	07.9.2022		6.3	7.3	7.7	7.7	17.0	17.2	17.7	17.7	48.0	45.9	41.4	47.7	17.5	20.8	18.8	20.8
	3	11.9.2022	2nd	6.8	6.2	8.0	8.0	16.8	16.8	18.0	16.7	50.4	48.9	33.0	48.8	13.3	16.7	15.8	16.7
	4	14.9.2022		8.0	8.5	8.8	7.3	18.0	18.5	19.8	17.3	56.1	32.0	45.9	33.3	16.7	18.8	12.5	8.3
	5	18.9.2022	3rd	6.8	7.8	6.8	8.3	17.8	18.8	16.8	18.3	52.7	30.8	50.5	32.5	14.2	10.0	14.6	12.5
	6	21.9.2022		7.7	6.7	8.0	6.7	17.8	17.3	17.5	16.7	59.6	39.3	35.1	43.7	18.8	17.5	20.8	14.6
	7	24.9.2022	4th	7.8	8.2	8.7	8.0	18.0	19.0	18.7	18.0	53.3	46.9	42.1	38.4	14.2	15.8	22.9	20.8
	8	28.9.2022		7.2	7.5	8.8	9.2	17.8	17.5	18.8	19.2	57.9	55.6	40.0	48.1	20.5	18.3	19.6	16.7
Avg.				**7.6**	**7.5**	**7.6**	**7.6**	**17.9**	**17.8**	**17.9**	**17.8**	**58.7**	**52.9**	**48.6**	**49.9**	**20.5**	**20.9**	**20.5**	**20.5**
Min.				**6.2**	**5.7**	**6.0**	**6.0**	**16.5**	**16.0**	**16.0**	**16.5**	**28.2**	**15.7**	**30.5**	**30.6**	**4.2**	**6.2**	**4.2**	**8.3**
Max.				**9.4**	**9.2**	**9.2**	**9.6**	**19.2**	**19.5**	**19.8**	**19.6**	**86.5**	**80.7**	**73.5**	**76.1**	**37.5**	**37.5**	**33.3**	**36.0**

Note:- Location A-Near Admin Bld
Location B-Guest House
Location C-Muddapur
Location D-Bamanbudhini

Vani Patil
Monitored by

Vinit Kumar Sharma
Checked by

SCIENTIFIC & INDUSTRIAL RESEARCH CENTRE

Scientific & Industrial Research Centre
#91/43,1st Floor,8th cross Goraguntepalya, Yeshwantpur Industrial Area
Bangalore-560022. mail:sircbangalore@yahoo.com.
Ph: 080-23479900. www.sircblr.in
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Plant AAQ sample

Name and Address of Customer: **M/s. JK Cement Works, Muddapur** (Unit : J.K. Cement LTD.,) Muddapur -587122 Distt. Bagalkot (Karnataka) India	**Report Date:** 31/08/2022 **Date of Receipt of sample:** 24/08/2022 **Test Report No:** SIRC/2022/08/4767 **Test Completed on:** 31/08/2022
Test Performed On: 24/08/2022	**Sample Packing:** Absorbing solution Sealed Bottle and Filter paper zip lock covered

S.No	Parameters	Method	NAAQ standards 2009	Location			
				Site-1	Site-2	Site-3	Site-4
1	Particulate Matter (PM10), µg/m3	IS 5182 (P23):2006	100	60	53.8	47.8	68
2	Particulate Matter (PM2.5), µg/m^3	40CFR Part 53& 58	60	36	29.1	34.9	36
3	Sulfur Dioxide (SO2), µg/m^3	IS 5182 (P2):2001	80	8	13.5	10.4	
4	Nitrogen Dioxide (NO2), µg/m^3	IS 5182 (P6):2006	80	17	26.1	21.4	26
5	Ammonia (NH3), µg/m^3	Method 401, Air Sampling	400	20.6	15.7	20.6	20
6	Carbon Monoxide (CO), mg/m^3	Non-Dispersive Infra-Red Method	04	ND	ND	ND	ND
7	Ozone (O3), µg/m^3	Method 411, Air Sampling	180	7.6	11.5	13.1	12.5
8	Lead (Pb), µg/m^3	EPA compendium method IO 3.2	1.0	BDL	BDL	BDL	BDL
9	Nickel (Ni), ng/m^3	EPA compendium method IO 3.2	20	BDL	BDL	BDL	BDL
10	Arsenic (As), ng/m^3	EPA compendium method IO 3.2	06	BDL	BDL	BDL	BDL
11	Benzo(a)Pyerene(BaP), ng/m^3	IS 5182 (Part 12):2004	01	BDL	BDL	BDL	BDL
12	Benzene (C6H6), µg/m^3	IS 5182 (Part11):2006	05	BDL	BDL	BDL	BDL

Note: Site-1: Near Administration Building Site-2: Near Guest House Site-3: Muddapur & Site-4: Bamanbudhini
BDL: Below detectable limit, ND: Not Detected

INFERENCE	As per NAAQMS Standards, Report Status: - - The measured values for the above parameters are within the standards

AUTHORIZED SIGNATORY
Dr.Siddalingeshwara K G
Quality

SCIENTIFIC & INDUSTRIAL RESEARCH CENTRE

#91/43,1stFloor,8th cross Goraguntepalya,Yeshwanthpur Industrial Area,Bangalore-560022.
E-mail:sircbangalore@yahoo.com. Web site: www.sircblr.in
Mob:8494900231, 8892972297, 9632917186

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TEST REPORT

Name and Address of Customer: **M/s. JK Cement Works, Muddapur** (Unit : J.K. Cement LTD..) Muddapur -587122 Dist. Bagalkot (Karnataka) India	**Report Date:** 06/07/2022 **Date of Receipt of sample:** 01/07/2022 **Test Report No:** SIRC/2022/06/3444 **Test Completed on:** 06/07/2022
Test Performed On: 01/07/2022	**Sample Packing:** Absorbing solution Sealed Bottle and Filter paper zip lock covered

RESULTS

Sample Collected By	Sample Nature	Sample Location	Sample Condition on Receipt
SIRC	AAQ sample	Near Dispatch Gate	Satisfactory

S.No	Parameters	Results	NAAQ standards 2009	Method
1	Particulate Matter (PM10), $\mu g/m^3$	65.0	100	IS 5182 (P-23):2006
2	Particulate Matter (PM2.5), $\mu g/m^3$	33.3	60	40CFR Part 53& 58
3	Sulfur Dioxide (SO2), $\mu g/m^3$	11.1	80	IS 5182 (P-2):2001
4	Nitrogen Dioxide (NO2), $\mu g/m^3$	19.4	80	IS 5182 (P-6):2006
5	Ammonia (NH3), $\mu g/m^3$	16.0	400	Method 401, Air Sampling
6	Carbon Monoxide (CO), mg/m^3	ND	04	Non-Dispersive Infra-Red Method
7	Ozone (O3), $\mu g/m^3$	11.0	180	Method 411, Air Sampling
8	Lead (Pb), $\mu g/m^3$	BDL	1.0	EPA compendium method IO 3.2
9	Nickel (Ni), ng/m^3	BDL	20	EPA compendium method IO 3.2
10	Arsenic (As), ng/m^3	BDL	06	EPA compendium method IO 3.2
11	Benzo(a)Pyerene(BaP), ng/m^3	BDL	01	IS 5182 (Part 12):2004
12	Benzene (C6H6), $\mu g/m^3$	BDL	05	IS 5182 (Part11):2006

BDL: Below detectable limit, ND: Not Detected

INFERENCE	As per NAAQMS Standards, **Report Status: - - The measured values for the above parameters are within the standards**

AUTHORIZED SIGNATORY
Sateesh G Muttagi
Technical Manager

NOTE

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#91/43,1st Floor,8th cross Goraguntepalya,Yeshwanthpur Industrial Area,Bangalore-560022.
E-mail:sircbangalore@yahoo.com, Web site: www.sircblr.in
Mob:8494900231, 8892972297, 9632917186

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TEST REPORT

Name and Address of Customer: **M/s. JK Cement Works, Muddapur** (Unit : J.K. Cement LTD.,) Muddapur -587122 Dist. Bagalkot (Karnataka) India	**Report Date:** 06/07/2022
	Date of Receipt of sample: 01/07/2022
	Test Report No: SIRC/2022/06/3443
	Test Completed on: 06/07/2022
Test Performed On: 01/07/2022	**Sample Packing:** Absorbing solution Sealed Bottle and Filter paper zip lock covered

RESULTS

Sample Collected By	Sample Nature	Sample Location	Sample Condition on Receipt
SIRC	AAQ sample	Near D Block Staff Colony Quarters	Satisfactory

S.No	Parameters	Results	NAAQ standards 2009	Method
1	Particulate Matter (PM10), $\mu g/m^3$	53.0	100	IS 5182 (P-23):2006
2	Particulate Matter (PM2.5), $\mu g/m^3$	19.1	60	40CFR Part 53& 58
3	Sulfur Dioxide (SO2), $\mu g/m^3$	11.4	80	IS 5182 (P-2):2001
4	Nitrogen Dioxide (NO2), $\mu g/m^3$	19.8	80	IS 5182 (P-6):2006
5	Ammonia (NH3), $\mu g/m^3$	14.4	400	Method 401, Air Sampling
6	Carbon Monoxide (CO), mg/m^3	ND	04	Non-Dispersive Infra-Red Method
7	Ozone (O3), $\mu g/m^3$	10.2	180	Method 411, Air Sampling
8	Lead (Pb), $\mu g/m^3$	BDL	1.0	EPA compendium method IO 3.2
9	Nickel (Ni), ng/m^3	BDL	20	EPA compendium method IO 3.2
10	Arsenic (As), ng/m^3	BDL	06	EPA compendium method IO 3.2
11	Benzo(a)Pyerene(BaP), ng/m^3	BDL	01	IS 5182 (Part 12):2004
12	Benzene (C6H6), $\mu g/m^3$	BDL	05	IS 5182 (Part11):2006

BDL: Below detectable limit, ND: Not Detected

INFERENCE	As per NAAQMS Standards. Report Status: -- The measured values for the above parameters are within the standards

AUTHORIZED SIGNATORY
Sateesh G Muttagi
Technical Manager

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#91/43,1stFloor,8th cross Goraguntepalya,Yeshwanthpur Industrial Area,Bangalore-560022.
E-mail:sircbangalore@yahoo.com. Web site: www.sircblr.in
Mob:8494900231, 8892972297, 9632917186

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TEST REPORT

Name and Address of Customer: **M/s. JK Cement Works, Muddapur** (Unit : J.K. Cement LTD.,) Muddapur -587122 Dist. Bagalkot (Karnataka) India	**Report Date:** 06/07/2022
	Date of Receipt of sample: 01/07/2022
	Test Report No: SIRC/2022/06/3442
	Test Completed on: 06/07/2022
Test Performed On: 01/07/2022	**Sample Packing:** Absorbing solution Sealed Bottle and Filter paper zip lock covered

RESULTS

Sample Collected By	Sample Nature	Sample Location	Sample Condition on Receipt
SIRC	AAQ sample	Near Guest House	Satisfactory

S.No	Parameters	Results	NAAQ standards 2009	Method
1	Particulate Matter (PM10), $\mu g/m^3$	52.0	100	IS 5182 (P-23):2006
2	Particulate Matter (PM2.5), $\mu g/m^3$	15.0	60	40CFR Part 53& 58
3	Sulfur Dioxide (SO2), $\mu g/m^3$	10.7	80	IS 5182 (P-2):2001
4	Nitrogen Dioxide (NO2), $\mu g/m^3$	23.3	80	IS 5182 (P-6):2006
5	Ammonia (NH3), $\mu g/m^3$	15.2	400	Method 401, Air Sampling
6	Carbon Monoxide (CO), mg/m^3	ND	04	Non-Dispersive Infra-Red Method
7	Ozone (O3), $\mu g/m^3$	11.0	180	Method 411, Air Sampling
8	Lead (Pb), $\mu g/m^3$	BDL	1.0	EPA compendium method IO 3.2
9	Nickel (Ni), ng/m^3	BDL	20	EPA compendium method IO 3.2
10	Arsenic (As), ng/m^3	BDL	06	EPA compendium method IO 3.2
11	Benzo(a)Pyerene(BaP), ng/m^3	BDL	01	IS 5182 (Part 12):2004
12	Benzene (C6H6), $\mu g/m^3$	BDL	05	IS 5182 (Part11):2006

BDL: Below detectable limit, ND: Not Detected

INFERENCE	**As per NAAQMS Standards.** **Report Status: - - The measured values for the above parameters are within the standards**

AUTHORIZED SIGNATORY
Sateesh G Muttagi
Technical Manager

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#91/43,1st Floor,8th cross Goraguntepalya,Yeshwanthpur Industrial Area,Bangalore-560022.
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TEST REPORT

Name and Address of Customer: **M/s. JK Cement Works, Muddapur** (Unit : J.K. Cement LTD.,) Muddapur -587122 Dist. Bagalkot (Karnataka) India	**Report Date:** 06/07/2022
	Date of Receipt of sample: 01/07/2022
	Test Report No: SIRC/2022/06/3441
	Test Completed on: 06/07/2022
Test Performed On: 01/07/2022	**Sample Packing:** Absorbing solution Sealed Bottle and Filter paper zip lock covered

RESULTS

Sample Collected By	Sample Nature	Sample Location	Sample Condition on Receipt
SIRC	AAQ sample	Near Administration Building	Satisfactory

S.No	Parameters	Results	NAAQ standards 2009	Method
1	Particulate Matter (PM10), $\mu g/m^3$	67.0	100	IS 5182 (P-23):2006
2	Particulate Matter (PM2.5), $\mu g/m^3$	21.2	60	40CFR Part 53& 58
3	Sulfur Dioxide (SO2), $\mu g/m^3$	10.5	80	IS 5182 (P-2):2001
4	Nitrogen Dioxide (NO2), $\mu g/m^3$	20.0	80	IS 5182 (P-6):2006
5	Ammonia (NH3), $\mu g/m^3$	17.6	400	Method 401, Air Sampling
6	Carbon Monoxide (CO), mg/m^3	ND	04	Non-Dispersive Infra-Red Method
7	Ozone (O3), $\mu g/m^3$	12.7	180	Method 411, Air Sampling
8	Lead (Pb), $\mu g/m^3$	BDL	1.0	EPA compendium method IO 3.2
9	Nickel (Ni), ng/m^3	BDL	20	EPA compendium method IO 3.2
10	Arsenic (As), ng/m^3	BDL	06	EPA compendium method IO 3.2
11	Benzo(a)Pycrene(BaP), ng/m^3	BDL	01	IS 5182 (Part 12):2004
12	Benzene (C6H6), $\mu g/m^3$	BDL	05	IS 5182 (Part11):2006

BDL: Below detectable limit, ND: Not Detected

INFERENCE	**As per NAAQMS Standards,** **Report Status: - - The measured values for the above parameters are within the standards**

AUTHORIZED SIGNATORY
Sateesh G Muttagi
Technical Manager

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Annexure-3

J.K. Cement WORKS, MUDDAPUR (KARNATAKA)

(Unit : J.K. Cement Ltd.)

Stack monitoring report of Cement plant & 2x25 MW Thermal power plant for April-2022 to September-2022

Sl. No.	Month/Year	Stack locations						
		Thermal Power Plant			Kiln / Raw Mill			DG Set
		Standards 50 mg/Nm3	Standards 600 mg/Nm3	Standards 450 mg/Nm3	Standards 30 mg/Nm3	Standards 100 mg/Nm3	Standards 800 mg/Nm3	
		PM in mg/Nm3	SO2 in mg/Nm3	NOx in mg/Nm3	PM in mg/Nm3	SO2 in mg/Nm3	NOx in mg/Nm3	PM in mg/Nm3
1	Apr-22	Plant Shutdown			11.5	0.0	552.0	-
2	May-22				7.1	0.0	548.0	-
3	Jun-22				15.6	0.0	445.0	-
4	Jul-22				9.4	0.0	524.0	-
5	Aug-22				14.9	0.0	360.0	-
6	Sep-22				14.4	0.0	396.0	-

Sl. No.	Month/Year	Stack locations						
		PM Standards 30 mg/Nm3						
		CM-3 (Slag Cement Mill)	Coal crusher	LSC	CM-1	CM-2	Cooler	Coal Mill
1	Apr-22	17.1	9.0	12.3	6.53	11.10	7.6	17.6
2	May-22	15.4	10.0	7.6	8.16	16.00	11.2	14.0
3	Jun-22	11.3	13.2	10.1	5.0	17.0	9.7	16.9
4	Jul-22	15.6	11.2	12.2	Mill shutdown	15.0	14.5	14.5
5	Aug-22	9.5	8.9	8.6	6.2	10.7	7.5	12.7
6	Sep-22	14.5	9.9	11.7	17.7	14.5	17.1	11.5

Vani Patil
Monitored by

Vinit Kumar Sharma
Checked by

SCIENTIFIC & INDUSTRIAL RESEARCH CENTRE

Scientific & Industrial Research Centre
#91/43,1st Floor,8th cross Goraguntepalya, Yeshwantpur Industrial Area
Bangalore-560022. mail:sircbangalore@yahoo.com.
Ph: 080-23479900. www.sircblr.in
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STACK TEST REPORT

Name and Address of Customer: **M/s. JK Cement Works, Muddapur** (Unit : J.K. Cement LTD.,) Muddapur -587122 Distt. Bagalkot (Karnataka) India	**Report Date:** 31/08/2022
	Date of Receipt of sample:25/08/2022
	Test Report No: SIRC/2022/08/4770
	Test Completed On: 31/08/2022
Test Performed On: 25/08/2022	**Date of Monitoring:**23/08/2022

Sample Collected By	Sample Nature	Stack ID	Sample Packing:
SIRC	STACK	RAW MILL	Thimble in zip lock covered

Stack Details

Stack Id	RAW MILL
Ambient Temperature ,(^{0}C)	32
Stack Temperature, (^{0}C)	168
Diameter, (m)	7.54
Cross Sectional Area in meter square, (m^2)	19.63
Velocity, (m/s)	5.69
Flue gas Discharge, Nm^3/hr	278182.5
Dust Emission , mg/Hr	2.8

Results

S.No	Parameters	Unit	Results	Limits	Method
1	Particulate Matter	mg/Nm^3	12	30	IS 11255 (P1) 2003
2	Moisture	%	<1	NS	IS 11255 (P1) 2003
3	Sulphur Dioxide	mg/Nm^3	ND	100	IS 11255 (P2) 2003
4	Oxides of nitrogen	mg/Nm^3	465	800	Flue gas analyzer

Note: ND: Not Detected, NS: Not Specified

INFERENCE	**As per MOEF Standards,** **Report Status:** - - The measured values for the above parameters are within the standards.

AUTHORIZED SIGNATORY
Sateesh G Muttagi
Technical Manager

SCIENTIFIC & INDUSTRIAL RESEARCH CENTRE

Scientific & Industrial Research Centre

#91/43,1st Floor,8th cross Goraguntepalya, Yeshwantpur Industrial Area
Bangalore-560022. mail:sircbangalore@yahoo.com.
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TEST REPORT

Name and Address of Customer: **M/s. JK Cement Works, Muddapur** (Unit : J.K. Cement LTD.,) Muddapur -587122 Distt. Bagalkot (Karnataka) India	**Report Date:** 31/08/2022
	Date of Receipt of sample:25/08/2022
	Test Report No: SIRC/2022/08/4773
	Test Completed On: 31/08/2022
Test Performed On: 25/08/2022	**Date of Monitoring:**23/08/2022

Sample Collected By	Sample Nature	Stack ID	Sample Packing:
SIRC	STACK	Cement Mill-2	Thimble in zip lock covered

Stack Details

Stack Id	Cement Mill-2
Ambient Temperature ,(^{0}C)	31
Stack Temperature, (^{0}C)	125
Diameter, (m)	1.4
Cross Sectional Area in meter square, (m^2)	1.23
Velocity, (m/s)	5.41
Flue gas Discharge, Nm^3/hr	18241.5
Dust Emission , mg/Hr	0.2

Results

S.No	Parameters	Unit	Results	Limits	Method
1	Particulate Matter	mg/Nm^3	11.6(7.6)	30	IS 11255 (P1) 2003
2	Moisture	%	<1	NS	IS 11255 (P1) 2003

Note: NS: Not Specified

INFERENCE	**As per MOEF Standards,** **Report Status:** - - The measured values for the above parameters are within the standards.

AUTHORIZED SIGNATORY
Sateesh G Muttagi
Technical Manager

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TEST REPORT

Name and Address of Customer: **M/s. JK Cement Works, Muddapur** (Unit : J.K. Cement LTD.,) Muddapur -587122 Distt. Bagalkot (Karnataka) India	**Report Date:** 02/09/2022
	Date of Receipt of sample:27/08/2022
	Test Report No: SIRC/2022/08/4803
	Test Completed On: 02/09/2022
Test Performed On: 27/08/2022	**Date of Monitoring:**25/08/2022

Sample Collected By	Sample Nature	Stack ID	Sample Packing:
SIRC	STACK	Cement Mill-3	Thimble in zip lock covered

Stack Details

Stack Id	Cement Mill-3
Ambient Temperature ,(^{0}C)	30
Stack Temperature, (^{0}C)	105
Diameter, (m)	3.75
Cross Sectional Area in meter square, (m^2)	11.04
Velocity, (m/s)	5.53
Flue gas Discharge, Nm^3/hr	176315.4
Dust Emission , mg/Hr	2.3

Results

S.No	Parameters	Unit	Results	Limits	Method
1	Particulate Matter	mg/Nm^3	12.8(7.6)	30	IS 11255 (P1) 2003
2	Moisture	%	<1	NS	IS 11255 (P1) 2003

Note: NS: Not Specified

INFERENCE	**As per MOEF Standards,** **Report Status:** - - The measured values for the above parameters are within the standards.

AUTHORIZED SIGNATORY
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TEST REPORT

Name and Address of Customer: **M/s. JK Cement Works, Muddapur** (Unit : J.K. Cement LTD.,) Muddapur -587122 Distt. Bagalkot (Karnataka) India	**Report Date:** 31/08/2022
	Date of Receipt of sample:25/08/2022
	Test Report No: SIRC/2022/08/4771
	Test Completed On: 31/08/2022
Test Performed On: 25/08/2022	**Date of Monitoring:**24/08/2022

Sample Collected By	Sample Nature	Stack ID	Sample Packing:
SIRC	STACK	Coal Mil	Thimble in zip lock covered

Stack Details

Stack Id	Coal Mil
Ambient Temperature ,(^{0}C)	31
Stack Temperature, (^{0}C)	84
Diameter, (m)	1.80
Cross Sectional Area in meter square, (m^2)	2.54
Velocity, (m/s)	5.12
Flue gas Discharge, Nm^3/hr	39938.7
Dust Emission , mg/Hr	0.5

Results

S.No	Parameters	Unit	Results	Limits	Method
1	Particulate Matter	mg/Nm^3	13.58(12)	30	IS 11255 (P1) 2003
2	Moisture	%	<1	NS	IS 11255 (P1) 2003

Note: NS: Not Specified

INFERENCE	**As per MOEF Standards,** **Report Status:** - - The measured values for the above parameters are within the standards.

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TEST REPORT

Name and Address of Customer: **M/s. JK Cement Works, Muddapur** (Unit : J.K. Cement LTD.,) Muddapur -587122 Distt. Bagalkot (Karnataka) India	**Report Date:** 02/09/2022
	Date of Receipt of sample:27/08/2022
	Test Report No: SIRC/2022/08/4804
	Test Completed On: 02/09/2022
Test Performed On: 27/08/2022	**Date of Monitoring:**25/08/2022

Sample Collected By	Sample Nature	Stack ID	Sample Packing:
SIRC	STACK	Clinker Cooler Stack	Thimble in zip lock covered

Stack Details

Stack Id	Clinker Cooler Stack
Ambient Temperature ,(^{0}C)	32
Stack Temperature, (^{0}C)	267
Diameter, (m)	3.86
Cross Sectional Area in meter square, (m^2)	12.56
Velocity, (m/s)	6.62
Flue gas Discharge, Nm^3/hr	168948.3
Dust Emission , mg/Hr	1.5

Results

S.No	Parameters	Unit	Results	Limits	Method
1	Particulate Matter	mg/Nm^3	9.1(11.8)	30	IS 11255 (P1) 2003
2	Moisture	%	<1	NS	IS 11255 (P1) 2003

Note: ND: Not Detected, NS: Not Specified

INFERENCE	**As per MOEF Standards GSR 612 E dated 25.08 2014.** **Report Status:** - - The measured values for the above parameters are within the standards.

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TEST REPORT

Name and Address of Customer: **M/s. JK Cement Works, Muddapur** (Unit : J.K. Cement LTD.,) Muddapur -587122 Distt. Bagalkot (Karnataka) India	**Report Date:** 31/08/2022
	Date of Receipt of sample:25/08/2022
	Test Report No: SIRC/2022/08/4772
	Test Completed On: 31/08/2022
Test Performed On: 25/08/2022	**Date of Monitoring:**23/08/2022

Sample Collected By	Sample Nature	Stack ID	Sample Packing:
SIRC	STACK	Crusher	Thimble in zip lock covered

Stack Details

Stack Id	Crusher
Ambient Temperature ,(^{0}C)	32
Stack Temperature, (^{0}C)	58
Diameter, (m)	1.20
Cross Sectional Area in meter square, (m^2)	1.13
Velocity, (m/s)	4.93
Flue gas Discharge, Nm^3/hr	18495.1
Dust Emission , mg/Hr	0.3

Results

S.No	Parameters	Unit	Results	Limits	Method
1	Particulate Matter	mg/Nm^3	17.9	30	IS 11255 (P1) 2003

INFERENCE	**As per MOEF Standards,** **Report Status:** - - The measured values for the above parameters are within the standards.

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Sateesh G Muttagi
Technical Manager

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E-mail:sircbangalore@yahoo.com. Web site: www.sircblr.in
Mob:8494900231, 8892972297, 9632917186

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TEST REPORT

Name and Address of Customer: **M/s. JK Cement Works, Muddapur** (Unit : J.K. Cement LTD.,) Muddapur -587122 Dist. Bagalkot (Karnataka) India	**Report Date:** 09/07/2022
	Date of Receipt of sample:02/07/2022
	Test Report No: SIRC/2022/07/3509
	Test Completed On: 09/07/2022
Test Performed On: 02/07/2022	**Date of Monitoring:**01/07/2022

Sample Collected By	Sample Nature	Stack ID	Sample Packing:
SIRC	STACK	Crusher	Thimble in zip lock covered

Stack Details

Stack Id	Crusher
Ambient Temperature ,(^{0}C)	32
Stack Temperature, (^{0}C)	45
Diameter, (m)	1.20
Cross Sectional Area in meter square, (m^2)	1.13
Velocity, (m/s)	4.83
Flue gas Discharge, Nm^3/hr	18869.4
Dust Emission , mg/Hr	0.4

Results

S.No	Parameters	Unit	Results	Limits	Method
1	Particulate Matter	mg/Nm^3	21.3	30	IS 11255 (P1) 2003

INFERENCE	As per KSPCB Standards, **Report Status:** - - The measured values for the above parameters are within the standards.

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NOTE

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TEST REPORT

Name and Address of Customer: **M/s. JK Cement Works, Muddapur** (Unit : J.K. Cement LTD.,) Muddapur -587122 Dist. Bagalkot (Karnataka) India	**Report Date:** 09/07/2022 **Date of Receipt of sample:**02/07/2022 **Test Report No:** SIRC/2022/07/3508 **Test Completed On:** 09/07/2022
Test Performed On: 02/07/2022	**Date of Monitoring:**01/07/2022

Sample Collected By	Sample Nature	Stack ID	Sample Packing:
SIRC	STACK	Clinker Cooler Stack	Thimble in zip lock covered

Stack Details

Stack Id	Clinker Cooler Stack
Ambient Temperature ,(^{0}C)	32
Stack Temperature, (^{0}C)	289
Diameter, (m)	4.00
Cross Sectional Area in meter square, (m^2)	12.56
Velocity, (m/s)	6.75
Flue gas Discharge, Nm^3/hr	165608.5
Dust Emission , mg/Hr	1.7

Results

S.No	Parameters	Unit	Results	Limits	Method
1	Particulate Matter	mg/Nm^3	10.4	30	IS 11255 (P1) 2003
2	Moisture	%	<1	NS	IS 11255 (P1) 2003

Note: ND: Not Detected, NS: Not Specified

INFERENCE	**As per KSPCB Standards,** **Report Status:** - - The measured values for the above parameters are within the standards

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TEST REPORT

Name and Address of Customer: **M/s. JK Cement Works, Muddapur** (Unit : J.K. Cement LTD.,) Muddapur -587122 Dist. Bagalkot (Karnataka) India	**Report Date:** 09/07/2022
	Date of Receipt of sample:02/07/2022
	Test Report No: SIRC/2022/07/3507
	Test Completed On: 09/07/2022
Test Performed On: 02/07/2022	**Date of Monitoring:**01/07/2022

Sample Collected By	Sample Nature	Stack ID	Sample Packing:
SIRC	STACK	Coal Mil	Thimble in zip lock covered

Stack Details

Stack Id	Coal Mil
Ambient Temperature ,(^{0}C)	31
Stack Temperature, (^{0}C)	78
Diameter, (m)	1.80
Cross Sectional Area in meter square, (m^2)	2.54
Velocity, (m/s)	5.08
Flue gas Discharge, Nm^3/hr	40278.6
Dust Emission , mg/Hr	0.6

Results

S.No	Parameters	Unit	Results	Limits	Method
1	Particulate Matter	mg/Nm^3	14.56	30	IS 11255 (P1) 2003
2	Moisture	%	<1	NS	IS 11255 (P1) 2003

Note: NS: Not Specified

INFERENCE	**As per KSPCB Standards,** **Report Status:** - - The measured values for the above parameters are within the standards.

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TEST REPORT

Name and Address of Customer: **M/s. JK Cement Works, Muddapur** (Unit : J.K. Cement LTD.,) Muddapur -587122 Dist. Bagalkot (Karnataka) India	**Report Date:** 06/07/2022 **Date of Receipt of sample:**01/07/2022 **Test Report No:** SIRC/2022/06/3430 **Test Completed On:** 06/07/2022
Test Performed On: 01/07/2022	**Date of Monitoring:**29/06/2022

Sample Collected By	Sample Nature	Stack ID	Sample Packing:
SIRC	STACK	Cement Mill-3	Thimble in zip lock covered

Stack Details

Stack Id	Cement Mill-3
Ambient Temperature ,(^{0}C)	30
Stack Temperature, (^{0}C)	98
Diameter, (m)	3.75
Cross Sectional Area in meter square, (m^2)	11.04
Velocity, (m/s)	5.48
Flue gas Discharge, Nm^3/hr	177971.0
Dust Emission , mg/Hr	1.7

Results

S.No	Parameters	Unit	Results	Limits	Method
1	Particulate Matter	mg/Nm^3	9.5	30	IS 11255 (P1) 2003
2	Moisture	%	<1	NS	IS 11255 (P1) 2003

Note: NS: Not Specified

INFERENCE	**As per KSPCB Standards,** **Report Status:** - - The measured values for the above parameters are within the standards.

AUTHORIZED SIGNATORY
Sateesh G Muttagi
Technical Manager

NOTE

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TEST REPORT

Name and Address of Customer: **M/s. JK Cement Works, Muddapur** (Unit : J.K. Cement LTD.,) Muddapur -587122 Dist. Bagalkot (Karnataka) India	**Report Date:** 06/07/2022 **Date of Receipt of sample:**01/07/2022 **Test Report No:** SIRC/2022/06/3429 **Test Completed On:** 06/07/2022
Test Performed On: 01/07/2022	**Date of Monitoring:**29/06/2022

Sample Collected By	Sample Nature	Stack ID	Sample Packing:
SIRC	STACK	Cement Mill-2	Thimble in zip lock covered

Stack Details

Stack Id	Cement Mill-2
Ambient Temperature ,(^{0}C)	31
Stack Temperature, (^{0}C)	105
Diameter, (m)	1.25
Cross Sectional Area in meter square, (m^2)	1.23
Velocity, (m/s)	5.27
Flue gas Discharge, Nm^3/hr	18717.9
Dust Emission , mg/Hr	0.3

Results

S.No	Parameters	Unit	Results	Limits	Method
1	Particulate Matter	mg/Nm^3	17.2	30	IS 11255 (P1) 2003
2	Moisture	%	<1	NS	IS 11255 (P1) 2003

Note: NS: Not Specified

INFERENCE	**As per KSPCB Standards,** **Report Status:** - - The measured values for the above parameters are within the standards.

AUTHORIZED SIGNATORY
Sateesh G Muttagi
Technical Manager

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TEST REPORT

Name and Address of Customer: **M/s. JK Cement Works, Muddapur** (Unit : J.K. Cement LTD.,) Muddapur -587122 Dist. Bagalkot (Karnataka) India	**Report Date:** 06/07/2022
	Date of Receipt of sample:01/07/2022
	Test Report No: SIRC/2022/06/3427
	Test Completed On: 06/07/2022
Test Performed On: 01/07/2022	**Date of Monitoring:**29/06/2022

Sample Collected By	Sample Nature	Stack ID	Sample Packing:
SIRC	STACK	RAW MILL	Thimble in zip lock covered

Stack Details

Stack Id	RAW MILL
Ambient Temperature ,(^{0}C)	32
Stack Temperature, (^{0}C)	176
Diameter, (m)	5.00
Cross Sectional Area in meter square, (m^2)	19.63
Velocity, (m/s)	5.74
Flue gas Discharge, Nm^3/hr	275693.1
Dust Emission , mg/Hr	2.5

Results

S.No	Parameters	Unit	Results	Limits	Method
1	Particulate Matter	mg/Nm^3	9.2	30	IS 11255 (P1) 2003
2	Moisture	%	<1	NS	IS 11255 (P1) 2003
3	Sulphur Dioxide	mg/Nm^3	ND	NS	IS 11255 (P2) 2003
4	Oxides of nitrogen	mg/Nm^3	481	NS	Flue gas analyzer

Note: ND: Not Detected, NS: Not Specified

INFERENCE	**As per KSPCB Standards,** **Report Status:** - - The measured values for the above parameters are within the standards

AUTHORIZED SIGNATORY
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J.K. Cement WORKS, MUDDAPUR (KARNATAKA)

(Unit: J.K. Cement Ltd.)

Noise monitoring report of Cement & Power Plant for April-22 to June-22 & July-22 to Sept-22

Annexure-4

Ambient Noise							
Sl. No.	Location Name	April-22 to June-22		July-22 to Sept-22		Average	
		Day (dB) Leq	Night (dB) Leq	Day (dB) Leq	Night (dB) Leq	Day (dB) Leq	Night (dB) Leq
1	Boundary side	71.6	67.5	70.2	68.5	70.9	68.0
2	Administrative Building	68.5	66.4	66.5	65.8	67.5	66.1
3	Lime Stone gate	73.5	70	73.5	72.8	73.5	71.4
4	Despatch gate	70.8	69.5	70.8	69.2	70.8	69.4
5	Near QC Lab.	63.2	60.5	61.7	60.5	62.5	60.5
6	Near Canteen	65.9	63.8	67.5	66.4	66.7	65.1
7	Plant main gate	66.4	63.2	62.8	61.5	64.6	62.4
8	General Store	62.5	60.7	64.6	65.7	63.6	63.2

Work zone Noise				
Sl. No.	Location Name	April-22 to June-22	July-22 to Sept-22	Average
		Day (dB) Leq	Day (dB) Leq	Day (dB) Leq
1	Lime Stone Crusher	84.5	80.5	82.5
2	Kiln/ Cooler	82.5	82.8	82.7
3	Kiln Platform	80.6	80.5	80.6
4	Power Plant	50.8	48.7	49.8
5	Coal Yard	61.8	62.5	62.2
6	Slag yard	64.3	61.6	63.0
7	Gypsum yard	60.2	60.2	60.2
8	Raw mill proporting hopper	70.8	68.6	69.7
9	coal mill	78.3	74.2	76.3
10	Near silo clinker loading point	76.7	70.8	73.8
11	CM-1 weigh feeder	74.5	72.6	73.6
12	CM-2 weigh feeder	72.8	70.7	71.8
13	Cement silo Packer-1	78.6	81.5	80.1
14	Cement silo Packer-2	80.2	73.4	76.8
15	Cement silo Packer-3	78.5	74.6	76.6
16	Cement silo Packer-4	83.5	81.5	82.5
17	Truck Loading point- 1	71.7	71	71.4
18	Truck Loading point- 2	70.3	69	69.7
19	Truck Loading point- 3	72.8	74.5	73.7
20	Truck Loading point- 4	70.5	76.4	73.5
21	Slag mill weigh feeder	66.7	67.4	67.1

Vani Patil
Monitored by

Vinit Kumar Sharma
Checked by

Annexure - 5

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Scientific & Industrial Research Centre
#91/43,1st Floor,8th cross Goraguntepalya, Yeshwantpur Industrial Area
Bangalore-560022. mail:sircbangalore@yahoo.com.
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TEST REPORT

Name and Address of Customer: **M/s. JK Cement Works, Muddapur** (Unit : J.K. Cement LTD.,) Muddapur -587122 Distt. Bagalkot (Karnataka) India	**Report Date:**02/09/2022
	Date of Receipt of sample:26/08/2022
	Test Report No: SIRC/2022/08/4791-4798
Test Performed On: 26/08/2022	**Test Completed on:**07/07/2022

RESULTS

Sample Collected By	Sample Nature	Sample Location	Sample Condition on Receipt
SIRC	Fugitive Emission Monitoring	Mentioned Below	Satisfactory

Job Code	Locations	SPM (ug/m3)	Fugitive emission standard as per CPCB
4791	Near slag Storage shed	1422.5	5000µg/m3
4792	Near Gypsum Storage Shed	1033.0	
4793	Near Cement Mill Area	1184.1	
4794	Near Laterite Storage Area	1306.6	
4795	Near Cement Plant Coal Storage Shed	1495.8	
4796	Near Lime Stone Crusher area	1366.3	
4797	Near Packing Plant area	1450.4	
4798	Near CPP Coal storage shed	1334.3	2000µg/m3

AUTHORIZED SIGNATORY
Sateesh G Muttagi
Technical Manager

Annexure-6

SCIENTIFIC & INDUSTRIAL RESEARCH CENTRE

Scientific & Industrial Research Centre
#91/43,1st Floor,8th cross Goraguntepalya, Yeshwantpur Industrial Area
Bangalore-560022. mail:sircbangalore@yahoo.com.
Ph: 080-23479900. www.sircblr.in
Recognized by MoEF& CC.
ISO/IEC 17025:2017 - NABL Accredited Laboratory.
ISO 9001:2015 &ISO 45001:2018 Certified Laboratory

STP WATER ANALYSIS REPORT

Name and Address of Customer: M/s. JK Cement Works, Muddapur(Unit : J.K. Cement LTD.,) Muddapur -587122 Dist. Bagalkot (Karnataka) India	**Date of Receipt of sample:** 27/08/2022
	Test Performed On: 29/08/2022
	Test Completed On: 10/09/2022
	Report Date: 10/09/2022
ULR No:TC846222000001775P	**Test Report No:** SIRC/2022/08/4882

Sl. No	Parameters	Protocol	Result	Standards As per IS :3025
			STP Out Let	
1.	pH	APHA 23rd Edition-2017,4500H+B	8.5	6.5-9.0
2.	Total Suspended	APHA 23rd Edition-2017,2540 D	18	20
3.	BOD, mg/lt, 3 days at 27O C	APHA 23rd Edition- 2017, 5210B	8.8	10
4.	COD, mg/lt	APHA 23rd Edition- 2017, 5220B	29	50
5.	Ammonical Nitrogen mg/lt	APHA 23rd Edition-2017, 4500 NH_3C	2	05
6.	Phosphorous as P	APHA 23rd Edition-2017, 4500 P D	0.86	2
7.	Total Nitrogen mg/lt	APHA 23rd Edition-2017, 4500- NO3E, 4500 NH3C ,4500Norg	6	10
8.	Faecal Coliforms, cfu/100ml	APHA 23rd Edition-2017, 9222 D	Absent	250

AUTHORIZED SIGNATORY
Dr.Siddalingeshwara K G
Quality Manage

1. The results listed refer only to the tested samples & applicable parameters. Endorsement of product is neither inferred nor implied.
2. Samples will be destroyed after specified retention time.
3. This report is not to be reproduced wholly or in part & cannot be used as evidence in the court of law & should not be used in any advertising media without our special permission in writing.
4. Sample(s) not drawn by us unless otherwise stated.
5. Total liability of our laboratory is limited to the invoice amount. Any dispute arising out of this report is subjected to Bangalore Jurisdiction only.

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STP WATER ANALYSIS REPORT

Name and Address of Customer: M/s. JK Cement Works, Muddapur(Unit : J.K. Cement LTD.,) Muddapur -587122 Dist. Bagalkot (Karnataka) India	**Date of Receipt of sample:** 08/07/2022
	Test Performed On: 09/07/2022
	Test Completed On: 16/07/2022
	Report Date: 18/07/2022
	Test Report No: SIRC/2022/07/3802

Sl. No	Parameters	Protocol	Result	Standards As per IS :3025
			STP Out Let	
1.	pH	APHA 23rd Edition-2017,4500H+B	8.7	6.5-9.0
2.	Total Suspended Solids	APHA 23rd Edition-2017,2540 D	16	20
3.	BOD, mg/lt, 3 days at 27°C	APHA 23rd Edition- 2017, 5210B	8.6	10
4.	COD, mg/lt	APHA 23rd Edition- 2017, 5220B	25	50
5.	Ammonical Nitrogen mg/lt	APHA 23rd Edition-2017, 4500 NH_3C	2	05
6.	Phosphorous as P	APHA 23rd Edition-2017, 4500 P D	0.99	2
7.	Total Nitrogen mg/lt	APHA 23rd Edition-2017, 4500- NO3E, 4500 NH3C ,4500Norg	6.4	10

AUTHORIZED SIGNATORY
Dr.Siddalingeshwara K G
Quality Manage

SCIENTIFIC & INDUSTRIAL RESEARCH CENTRE

#91/43,1st Floor,8th cross Goraguntepalya,Yeshwanthpur Industrial Area,Bangalore-560022.
E-mail:sircbangalore@yahoo.com. Web site: www.sircblr.in
Mob:8494900231, 8892972297, 9632917186

Recognized by MoEF&CC.
ISO 9001:2015 & OHSAS 45001:2018 Certified Laboratory.

TEST REPORT

Name and Address of Customer:	Date of Receipt of sample: 08/07/2022
M/s. JK Cement Works, Muddapur (Unit : J.K. Cement LTD.,) Muddapur -587122 Dist. Bagalkot (Karnataka) India	Test Performed On: 09/07/2022
	Test Completed On: 16/07/2022
	Report Date: 18/07/2022
	Test Report No: SIRC/2022/07/3802

Biological Testing

Sample Collected By	Sample Description	Sample Location	Sample Condition on Receipt
Company	STP Out Let Water	Company Premises	Satisfactory

Sl. No	Test Parameter	Result	Limit as per KSPCB	Test Method
1.	Faecal Coliforms, cfu/100ml	Absent	Less than 250	APHA 23rd EDITION, 2017, 9222 D

Note: The above tested parameters are within the limits (As per KSPCB)

AUTHORIZED SIGNATORY
Dr.Siddalingeshwara K G
Quality Manager

NOTE

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2. Samples will be destroyed after specified retention time.
3. This report is not to be reproduced wholly or in part & cannot be used as evidence in the court of law & should not be used in any advertising media without our special permission in writing.
4. Sample(s) not drawn by us unless otherwise stated.
5. Total liability of our laboratory is limited to the invoice amount. Any dispute arising out of this report is subjected to Bangalore Jurisdiction only.

.....We Provide Environmental Services.....

Annexure-7	
EXPENDITURE ON THE ENVIRONMENTAL MANAGEMENT PLAN FOR THE PERIOD OF APRIL-22 TO SEPTEMBER-22	
DESCRIPTION	**Expenditure (in Lakh)**
Air Pollution Control in Kiln, Cooler, cement mill, coal mill, and LS crusher (main equipment) including stacks, Bag filters along with ventilation system for the control of fugitive dust emissions from the plant including stacks/ Cost of equipment for controlling emission like bag house, ESP, Bag filter etc., Operational cost/electricity cost, Operation & Maintenance cost	897.14
Fly ash Silo's and ash handling systems	87.55
Emission Monitoring equipment (including online emission monitoring equipment (CEMS) at sources and ambient air quality in the vicinity) and laboratory	3.52
Green Belt Development, Sewage Treatment plant and Water Harvesting Schemes for plant	25.96
Extra expenditure on green purchase (Purchase of green fuel, recycled materials or any other such purchase (AFR purchase, Fly ash and Slag purchase) to reduce environmental footprint	1077.33
Other environmental management costs (AFR system operation, odour control, environmental training/Award, SNCR system CPP, Environmental License Fees)	40.39
TOTAL (Rs in Lakhs)	**2131.88**

Prepared By
Vinit Kumar Sharma

Checked by
Veerbhadrarao Vetcha

Annexure-8

JK CEMENT WORKS, MUDDAPUR

DETAILS OF CSR ACTIVITY UNDERTAKEN DURING April-2022 to Sept-2022		
SL NO	Particulars	Amount (Rs)
1	Providing New desks for Govt. college	477280
2	Running and maintenance of Sir Padampat School	549199
3	Education aid and support	30000
4	Road infrastructure development in Local village	630668
5	Pooja/ Fair/Festival/temple contributions	642000
6	Rural development & other welfare activities	1195000
7	Health Camp at nearby village Halki	12,500
8	Promoting Rural sports, Nationally recognized sports	120000
9	Health Camp at nearby village Halki, medical and health care activity.	109962.4
10	Promotion of education, upliftment of education quality for the surroundi	82292
11	Pooja/ Fair/Festival/temple contribututions/Rural development.	193,615
12	Rural development & other welfare activities	585440
13	Promoting Rural sports, Nationally recognized sports	15000
	Grand Total	**4642956**

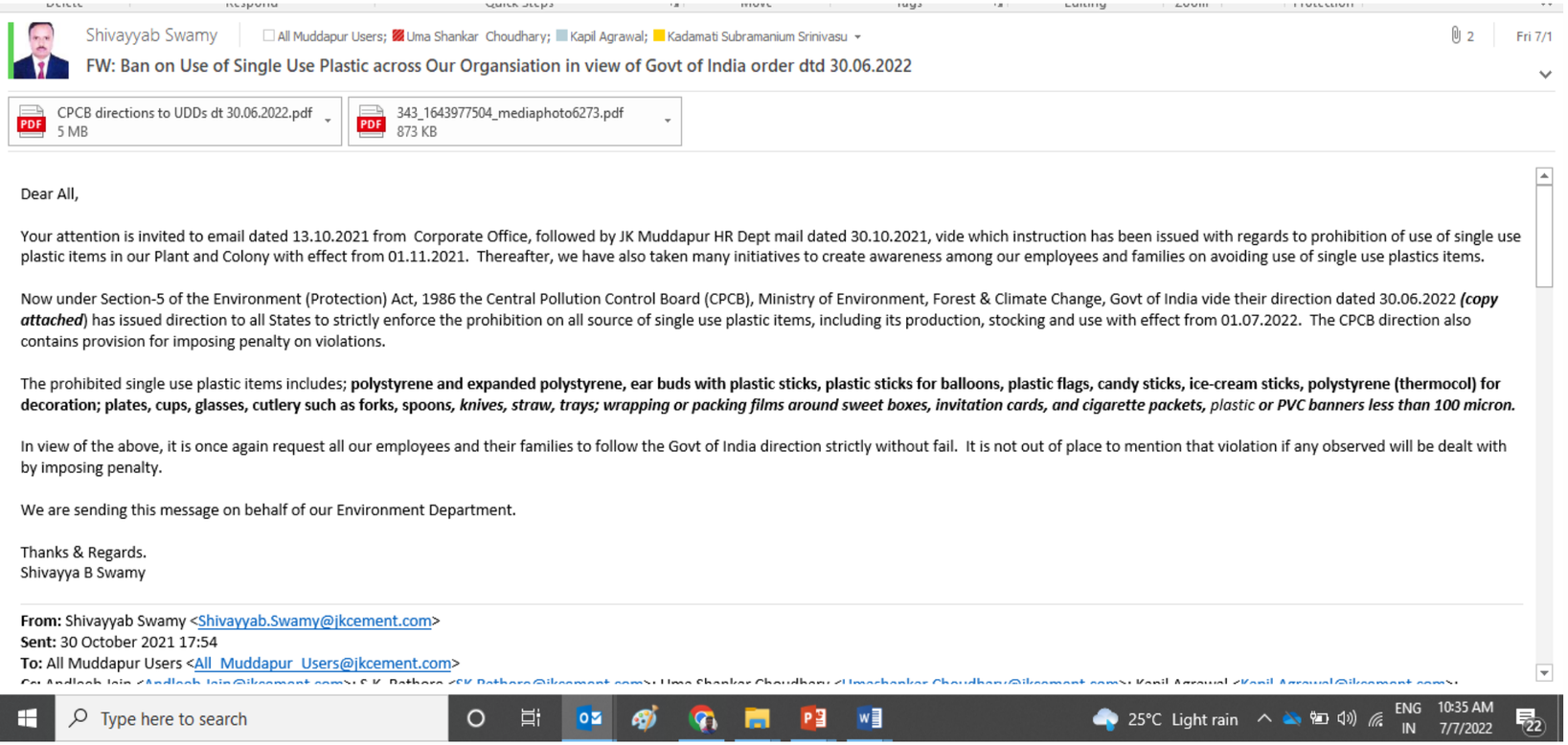
Prepared by
Vinit Kumar Sharma

Checked By
VeerbhadraRao Vetcha

MoEF Office Memorandum F.No. IA3-22/8/2021-IA.III(150512), dated 18th July-2022

Sensitization of project proponents on implementation of ban on single use plastic (SUP)-reg

Actions taken on ban of single use plastic along with photograph.



Shivayyab Swamy | All Muddapur Users; Uma Shankar Choudhary; Kapil Agrawal; Kadamati Subramanium Srinivasu | 2 | Fri 7/1

FW: Ban on Use of Single Use Plastic across Our Organsiation in view of Govt of India order dtd 30.06.2022

CPCB directions to UDDs dt 30.06.2022.pdf 5 MB

343_1643977504_mediaphoto6273.pdf 873 KB

Dear All,

Your attention is invited to email dated 13.10.2021 from Corporate Office, followed by JK Muddapur HR Dept mail dated 30.10.2021, vide which instruction has been issued with regards to prohibition of use of single use plastic items in our Plant and Colony with effect from 01.11.2021. Thereafter, we have also taken many initiatives to create awareness among our employees and families on avoiding use of single use plastics items.

Now under Section-5 of the Environment (Protection) Act, 1986 the Central Pollution Control Board (CPCB), Ministry of Environment, Forest & Climate Change, Govt of India vide their direction dated 30.06.2022 ***(copy attached***) has issued direction to all States to strictly enforce the prohibition on all source of single use plastic items, including its production, stocking and use with effect from 01.07.2022. The CPCB direction also contains provision for imposing penalty on violations.

The prohibited single use plastic items includes; **polystyrene and expanded polystyrene, ear buds with plastic sticks, plastic sticks for balloons, plastic flags, candy sticks, ice-cream sticks, polystyrene (thermocol) for decoration; plates, cups, glasses, cutlery such as forks, spoons*, knives, straw, trays; wrapping or packing films around sweet boxes, invitation cards, and cigarette packets,*** *plastic* ***or PVC banners less than 100 micron.***

In view of the above, it is once again request all our employees and their families to follow the Govt of India direction strictly without fail. It is not out of place to mention that violation if any observed will be dealt with by imposing penalty.

We are sending this message on behalf of our Environment Department.

Thanks & Regards.
Shivayya B Swamy

From: Shivayyab Swamy <Shivayyab.Swamy@jkcement.com>
Sent: 30 October 2021 17:54
To: All Muddapur Users <All_Muddapur_Users@jkcement.com>

Type here to search | 25°C Light rain | ENG IN | 10:35 AM 7/7/2022

Awareness programs inside and outside of the Plant

District police Head Quarters, Bagalkot in collaboration with JK Cement for banning of single use plastics and Distributed cloth bags to all the students and members.

Training And awareness program have been organized on **“No To Single Use Plastics” , Online Quiz & Distribution of Cloth bags** to Roshini club members of JK Cement Works

Plastic Waste collection and Door to Door Awareness Drive

Plastic waste collection drive

House to house plastic free awareness drive

Display of Environment Awareness boards in residential area and in Offices