

No.JKCW/ENV/2023-24/ EC Compliance/1st Half(PLANT)/89/24

Date- 20-11-2023

To

The Scientist-F
Ministry of Environment & Forest
Govt. of India, Indira Paryavaran Bhavan
Aliganj, New Delhi- 110 003Sub: **Half Yearly Environmental Clearance Compliance report for the period from April-2023 to September-2023 (1st 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**

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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 **April-2023 to September-2023 (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
Umeshankar Choudhary
(Unit Head)

Enclosures as above:

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

Corporate Office



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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).

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EC Compliance Report for the period April- 2023 to September- 2023

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 powerhouse 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 online 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 wastewater 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 wastewater 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 Ghatprabha river does not exceed the specified quantity. Dry manufacturing process has been adopted for cement manufacturing, so no wastewater is generated in cement plant. The treated wastewater, generated in CPP, is being used for dust suppression, green belt development, and other plant related activities /process. So, no process wastewater 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 reused 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 used as manure for green belt development.	Complied. The fly ash and bottom ash generated from the power plant is being used in the manufacturing of PPC, however our CPP is not in operation since 02.11.2021. The cement dust collected from the pollution control devices is recycled back in cement manufacturing. The fly ash utilization is as per the provision stipulated in the fly ash notification of

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	Used oil shall be sold to authorized recycler / re processor only.	September, 1999 and amended in august, 2003. Quarterly & Annual report on fly ash utilization has been submitted online (coalash.cpcb.gov.in) as well offline 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 @ 118.90 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 Letter No. F.No. J-11011/263/2009-IA II (I) dated 21-06-

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		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 conform 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. Asphaltting / 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 fully covered conveyors for transportation of materials shall be provided besides coal, cement, fly ash and clinker shall be stored in silos.	Complied, we have installed adequate dust collection and extraction system to control fugitive dust handling. Asphaltting / 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 materials and fully covered conveyors for transportation of materials have been provided besides coal. Cement, fly ash and clinker are

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		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 rainwater 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, rainwater 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-2023 to September-2023 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-2023 to September-2023 is enclosed as Annexure-4
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	Complying.

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	<p>notified standards, shall do the following to meet the standards:</p> <ul style="list-style-type: none"> • Augmentation of existing Air Pollution Control Devices -by July 2003 • Replacement of existing Air Pollution Control Devices -by July 2004 	
2	Cement Plants located in critically polluted or urban areas (including 5-km distance outside urban boundary) will meet 100 mg/Nm ³ limit of particulate matter by December 2004 and continue working to reduce the emission of particulate matter to 50 mg/Nm ³	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 10 th 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 SO ₂ and NO _x 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 DeNO _x system (SNCR) to control NO _x emissions
6	The Cement industries will control fugitive 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	<p>The fugitive dust emissions are controlled by implementing the below practices.</p> <ul style="list-style-type: none"> • Raw materials, product sheds, transfer points and belt conveyors are fully covered. • Bag filters are installed at all

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		transfer points. <ul style="list-style-type: none"> • 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 (2X25 MW) MW has been installed, however dropping out one boiler of CPP (1x25 MW) (Standby) out of (2x25 MW) to cater our plant and colony requirements, to reduce the pollution load & carbon footprint, also we have 18 MW of WHRS system and 5MW Solar Plant has been installed as green energy.
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

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		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 Bangalore.	Noted.

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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,

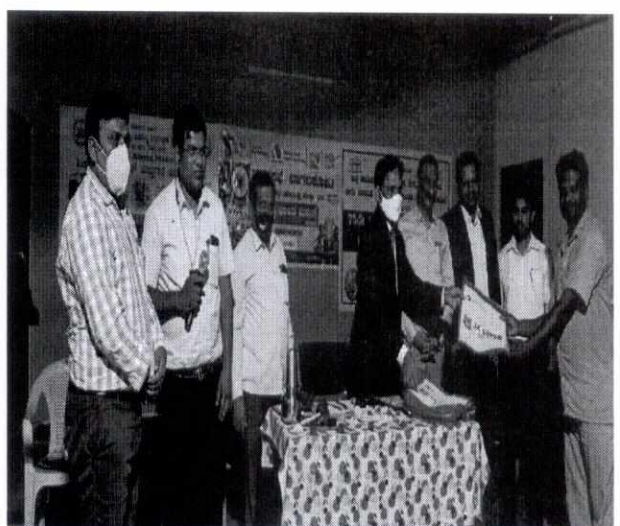
Yours Faithfully

J.K. Cement Works, Muddapur (Karnataka)

Uma Shankar Choudhary
(Unit Head)

Special Condition w.r.t office memorandum vide file no F. No. IA3-22/8/2021-1A.III [150512] dated 18.07.2022.

Sl No.	Special Condition	Compliance
(I)	All the project proponents are hereby requested to sensitize and create awareness among people working within the Project area as well as its surrounding area on the ban of SUP in order to ensure the compliance of Notification published by MoEF&CC on 12/08/2021.	We have conducted the awareness sessions among the people working within the Project area as well as its surrounding area on ban of single use plastic as per the Notification published by MoEF&CC on 12/08/2021 to ensure the compliance to sensitize the people and create the awareness among them.



Glimpse of awareness session on ban of SUP, Cotton Bags distribution and Sign board installation inside the offices.

J.K. Cement WORKS, MUDDAPUR (KARNATAKA)

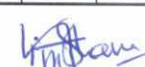
CEMENT PLANT & 2X25 CPP MW

HALF YEARLY AAQM REPORT (SO₂, NO₂, PM₁₀, PM_{2.5}), FOR THE MONTH OF APRIL-2023 TO SEPTEMBER-2023

(ALL VALUES IN MICROGRAMS / CUBIC METER)

Month	Sl.No.	Date	Week	SO ₂				NO ₂				PM ₁₀				PM _{2.5}			
				Locations				Locations				Locations				Locations			
				Admin Bld	Guest House	Muddapur	Bamanb udhini	Admin Bld	Guest House	Muddapur	Bamanb udhini	Admin Bld	Guest House	Muddapur	Baman budhini	Admin Bld	Guest House	Muddapur	Bamanb udhini
A P R I L	1	1.4.2023	1st	8.0	8.7	8.0	7.0	17.8	18.3	17.8	17.5	70.8	78.9	68.2	70.8	28.3	29.2	41.7	41.7
	2	5.4.2023		9.0	7.8	7.7	8.0	19.0	17.8	17.7	18.0	81.0	63.4	71.7	65.0	37.5	31.3	25.0	37.5
	3	8.4.2023	2nd	9.7	9.0	8.0	9.2	19.7	19.0	18.0	19.2	96.0	73.3	64.0	71.1	33.3	25.0	33.3	33.3
	4	12.4.2023		8.0	8.0	9.3	8.0	18.0	18.0	18.8	18.0	84.1	84.2	72.8	65.7	45.4	32.5	37.5	47.9
	5	15.4.2023	3rd	8.0	10.0	7.7	9.3	18.0	20.0	17.5	20.0	76.5	90.1	75.1	59.4	39.2	37.5	51.2	41.7
	6	19.4.2023		7.7	6.7	8.0	8.3	17.0	16.2	18.7	18.2	91.3	75.2	64.9	61.3	50.0	41.7	28.5	29.2
	7	22.4.2023	4th	9.5	8.8	9.0	9.0	19.3	19.5	18.8	19.0	92.5	89.8	59.9	73.3	35.4	45.0	30.7	24.2
	8	26.4.2023		8.0	7.5	7.2	8.0	18.7	17.0	17.8	18.0	82.5	81.2	70.5	75.9	48.0	33.3	29.2	37.5
M A Y	1	3.5.2023	1st	8.0	7.7	7.7	6.0	18.0	17.7	17.7	16.8	71.0	58.8	66.0	77.2	37.5	20.8	45.8	41.7
	2	6.5.2023		7.3	10.0	10.2	7.7	19.5	18.0	20.0	17.7	76.7	68.2	83.7	69.0	45.8	45.8	37.5	36.7
	3	10.5.2023	2nd	8.2	9.5	8.0	8.0	18.2	16.7	18.0	18.0	61.0	56.6	69.7	89.0	50.0	20.8	29.2	23.8
	4	13.5.2023		7.3	8.0	6.8	7.8	17.8	17.3	16.8	17.7	70.5	62.4	75.3	80.2	25.0	29.2	25.0	48.9
	5	17.5.2023	3rd	8.0	8.2	7.0	8.0	18.8	17.5	17.5	18.8	65.6	68.0	69.4	73.7	25.0	33.3	45.8	41.7
	6	20.5.2023		6.8	8.0	8.0	6.3	17.3	18.7	18.0	17.2	59.4	78.2	73.3	69.4	50.0	37.5	39.2	37.5
	7	24.5.2023	4th	8.0	6.7	7.3	7.2	19.8	16.7	17.3	16.7	64.2	74.2	67.1	80.0	16.7	20.8	37.5	41.7
	8	27.5.2023		6.8	7.8	9.8	6.8	17.5	17.7	19.7	16.8	69.4	69.0	75.5	70.1	20.8	45.8	54.2	36.7
J U N E	1	3.6.2023	1st	7.3	6.7	8.0	7.8	17.3	16.2	18.0	17.8	71.8	64.3	70.7	80.5	29.2	41.7	27.5	20.8
	2	7.6.2023		5.8	5.8	10.2	9.0	15.8	15.8	20.2	19.0	83.9	70.6	80.3	88.8	33.3	37.5	41.7	33.3
	3	10.6.2023	2nd	9.5	8.0	9.0	8.7	19.0	18.0	19.0	18.7	68.4	67.8	63.1	69.4	37.5	31.3	33.3	27.1
	4	14.6.2023		6.2	6.2	7.5	10.2	16.2	16.2	17.5	20.0	77.0	73.6	79.0	78.0	42.1	25.4	38.3	31.7
	5	17.6.2023	3rd	7.3	7.3	10.0	9.2	18.3	18.3	20.0	19.2	70.6	69.8	86.6	62.6	35.4	32.5	25.0	41.7
	6	21.6.2023		6.7	6.7	7.0	8.7	16.2	16.2	17.0	18.7	86.4	82.4	77.2	79.6	43.7	35.4	22.5	37.5
	7	24.6.2023	4th	7.3	7.3	5.8	8.7	16.5	16.5	16.7	19.0	74.6	73.8	86.2	70.2	27.1	31.3	20.8	32.1
	8	28.6.2023		6.8	6.8	7.3	10.2	16.8	16.8	17.5	20.2	88.7	77.9	70.6	70.1	35.0	25.0	39.6	31.7
J U L Y	1	01.7.2023	1st	7.7	6.0	6.8	5.7	17.7	16.5	17.8	16.0	42.1	35.8	42.6	40.4	10.0	8.3	10.4	16.7
	2	05.7.2023		8.8	7.3	7.8	7.2	18.8	18.3	18.0	17.5	33.6	46.5	47.8	35.3	14.6	10.4	12.5	12.5
	3	08.7.2023	2nd	6.8	8.8	6.8	6.8	16.8	18.0	16.7	18.0	24.3	38.8	45.8	37.7	12.9	16.7	8.3	14.2
	4	12.7.2023		7.8	6.8	6.7	7.0	17.8	17.5	15.5	16.8	35.4	47.1	34.9	27.4	11.2	11.7	12.5	10.8
	5	15.7.2023	3rd	8.0	7.3	7.3	8.5	18.8	17.5	17.7	18.7	27.5	38.5	39.8	34.0	8.3	10.4	11.7	11.7
	6	19.7.2023		7.5	6.8	8.0	8.0	17.8	18.0	18.2	18.8	31.3	45.7	42.1	47.5	12.9	14.6	14.2	14.2
	7	22.7.2023	4th	6.7	7.2	7.5	6.8	18.2	17.8	18.0	17.3	39.1	31.2	35.3	27.3	9.6	12.1	13.7	8.3
	8	26.7.2023		8.0	8.0	7.2	7.2	18.0	18.8	16.7	17.7	25.1	39.0	45.3	31.5	12.5	9.2	15.4	13.3
A U G U S T	1	1.8.2023	1st	13.3	6.2	7.5	8.3	19.5	16.7	15.8	18.0	63.9	61.4	67.3	62.2	41.7	37.5	29.2	12.5
	2	4.8.2023		8.0	7.5	8.2	8.0	18.0	17.5	17.5	18.2	78.4	51.2	55.8	79.7	55.6	33.3	25.0	15.0
	3	8.8.2023	2nd	5.7	12.7	6.0	9.2	15.7	25.7	14.2	19.2	58.4	66.0	62.9	87.7	29.2	29.2	29.2	16.7
	4	11.8.2023		5.0	4.8	7.3	7.0	15.2	14.8	15.3	17.8	64.6	62.5	72.2	77.9	29.2	25.0	20.8	20.8
	5	15.8.2023	3rd	6.8	6.8	5.5	6.2	17.8	16.8	16.0	17.3	59.7	78.8	68.9	66.5	41.7	22.9	25.0	33.3
	6	18.8.2023		7.2	4.8	6.2	7.5	17.0	14.0	16.3	18.0	57.7	58.0	81.2	70.4	20.8	20.8	41.7	29.2
	7	22.8.2023	4th	5.7	5.8	7.5	7.0	15.7	15.8	17.5	17.5	67.5	87.4	72.2	59.5	20.8	18.3	25.0	37.5
	8	25.8.2023		8.0	8.0	5.7	8.0	17.8	17.3	15.7	18.7	61.6	52.3	45.2	58.9	12.5	33.3	27.1	41.7
S E P T E M B E R	1	1.9.2023	1st	6.7	7.3	6.5	6.5	17.3	14.7	16.5	16.5	77.8	57.5	65.9	66.0	20.8	29.2	20.8	20.8
	2	5.9.2023		10.2	8.0	8.0	5.2	20.2	18.8	18.0	15.3	66.7	62.2	57.1	71.5	33.3	20.8	33.3	25.0
	3	8.9.2023	2nd	6.2	6.5	10.5	5.8	16.8	16.5	21.5	15.7	56.6	70.2	74.2	62.2	29.2	27.9	25.0	33.3
	4	12.9.2023		5.0	6.3	5.0	4.8	15.5	14.8	15.2	16.0	60.1	59.4	53.8	56.5	37.5	33.3	37.5	22.9
	5	15.9.2.23	3rd	8.2	5.8	6.0	4.5	18.0	15.3	16.0	14.7	69.3	59.4	70.6	70.6	33.3	25.0	29.2	33.4
	6	19.9.2023		7.3	5.3	5.2	5.2	17.3	14.3	16.0	16.0	67.1	73.5	79.4	80.6	25.0	37.5	27.9	28.5
	7	22.9.2023	4th	6.5	6.5	5.0	6.8	16.5	16.7	14.5	16.5	73.3	57.5	58.3	65.3	45.8	16.7	23.3	30.7
	8	26.9.2023		5.5	8.0	8.0	5.5	15.5	17.2	18.0	15.5	60.1	71.4	62.1	57.2	25.0	37.5	26.7	29.2
Miniumum				5.0	4.8	5.0	4.5	15.2	14.0	14.2	14.7	24.3	31.2	34.9	27.3	8.3	8.3	8.3	8.3
Maximum				13.3	12.7	10.5	10.2	20.2	25.7	21.5	20.2	96.0	90.1	86.6	89.0	55.6	45.8	54.2	48.9
Average				7.5	7.4	7.5	7.5	17.7	17.3	17.5	17.7	65.3	64.6	65.0	65.1	30.5	27.7	28.9	28.9


 Vinit Kumar Sharma
 Monitored By


 Vinit Kumar Sharma
 Checked By



COSMO CONSCIOUS RESEARCH LABORATORY

Environmental laboratory, Recognized by MoEF & CC, Accredited by NABL (ISO/IEC: 17025)
vide certificate No: TC6152 and Certified by ISO (45001:2018)



Certificate No: TC6152

AIR QUALITY MONITORING DATA

Report No.: I A1

1. Name of the Project : M/s. JK Cement Works, Muddapur.
2. Name of the Client : M/s. JK Cement Works, Muddapur, (Unit: J.K.Cement Ltd),
P.O.Muddapur-587122, Dist.Bagalkot (Karnataka) India
3. Sample Collected By : Cosmo Conscious Research Laboratory
4. Particulars of Sample Collected : Ambient Air Quality Monitoring
5. Sample Condition : Satisfactory
6. Analysis Start Date : 29.09.2023
7. Analysis Completion Date : 04.10.2023
8. Month of Monitoring : September 2023
9. Environmental condition at the time of sampling : 28.2°C
10. Unique Lab Report Number : TC6152230000006546F

Name of the Station/ Date of Sample Collection	Lab Sample Code	Particulars of Sample Collected			
		SO ₂ (µg/m ³)	NO ₂ (µg/m ³)	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
AAQM Locations for Cement Plant		NAAQ standards 2009			
		80 (µg/m3)	80 (µg/m3)	100 (µg/m3)	60 (µg/m3)
AI- Admin Building					
30.09.2023	391, 391, C01, 236	11	13	60	32
All- Guest House					
30.09.2023	392, 392, C02, 237	15	11	46	18
AIII-Muddapur Village					
30.09.2023	394, 394, C999, 234	25	15	42	17
AIV- Bomanbudhini Village					
01.10.2023	395, 395, C15, 249	12	18	40	15

END OF REPORT

Note: 1. SO₂ – Sulfur Dioxide, NO₂ – Nitrogen Dioxide, PM₁₀ – Particulate Matter (size less than 10 µm), PM_{2.5} – Particulate Matter (size less than 2.5 µm).

2. The above results are related only to the samples collected & tested on the particular date and time.

3. RA – Reaffirmed.


ANALYZED BY:


(G. Dhavaleshwar)
Analyst

VERIFIED BY:


(P. Harika)
Technical Manager

AUTHORISED SIGNATORY:


(M. Shashikala)
Head of the Laboratory

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DQS Inc.



CCRL
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COSMO CONSCIOUS RESEARCH LABORATORY

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vide certificate No.: TC 6152 and Certified by ISO 14001:2015



Certificate No: TC 6152

AIR QUALITY MONITORING DATA

Report No.: I A1

1. Name of the Project : JK Cements Works
M/s. JK Cements Works, Muddapur,
(Unit: J.K.Cement Ltd),
2. Name of the Client : P.O.Muddapur-587122,
Dist.Bagalkot (Karnataka) India
3. Sample Collected By : Cosmo Conscious Research Laboratory
4. Particulars of Sample Collected : Source Emission Air Quality Monitoring
5. Sample Condition : Satisfactory
6. Analysis Start,Date : 17.08.2023
7. Analysis Completion Date : 19.08.2023
8. Month of Monitoring : August 2023
9. Environmental condition at the time : 29°C
10. Unique Lab Report Number : TC6152230000006521F

Name of the Station/ Date of Sample Collection	Lab Sample Code	Particulars of Sample Collected			
		SO ₂ (µg/m ³)	NO ₂ (µg/m ³)	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
AAQM Locations for Cement Plant					
AI- Admin Building					
16.08.2023	345, 345, C21, 955	15	11	43	16
AII- Guest House					
16.08.2023	346, 346, C20, 957	13	11	57	15
AIII-Muddapur Village					
18.08.2023	353, 353, C15, 249	12	13	60	20
AIV- Bomanbudhini Village					
18.08.2023	354, 354, C14, 958	25	16	49	14
AAQM Locations for Halki Mines					
AV- Near Halki mines office					
16.08.2023	347, 347, C23, 960	20	16	45	11
AVI- North Boundary Side					
16.08.2023	348, 348, C22, 956	25	17	59	12
AVII-Halki Village					
17.08.2023	350, 350, C16, 952	23	21	55	13
AVIII- Metgudda Village					
17.08.2023	349, 349, C18, 953	13	17	44	15

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COSMO CONSCIOUS RESEARCH LABORATORY

Environmental Laboratory Recognized by MoEF & CC. Accredited by NABL (ISO/IEC: 17025)
Lab Certificate No. TC 6152 and Certified by ISO 145001:2018



Certificate No TC 6152

Name of the Station/ Date of Sample Collection	Lab Sample Code	Particulars of Sample Collected			
		SO ₂ (µg/m ³)	NO ₂ (µg/m ³)	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
AAQM Locations for Muddapur Mines					
AIX-Near Muddapur Mines Office					
18.08.2023	355, 355, C16, 959	17	16	53	19
AX- Petlur					
17.08.2023	352, 352, C17, 957	13	21	51	14
AXI-Thimmapur Village					
17.08.2023	351, 351, C19, 954	12	18	53	19
AXII- D-Colony, D-block quarters					
18.08.2023	356, 356, C12, 256	13	17	57	14

END OF REPORT

- Note: 1. SO₂ – Sulfur Dioxide, NO₂ – Nitrogen Dioxide, PM₁₀ – Particulate Matter (size less than 10 µm), PM_{2.5} – Particulate Matter (size less than 2.5 µm).
2. The above results are related only to the samples collected & tested on the particular date and time.
3. RA – Reaffirmed.

ANALYZED BY:

(B. Maruthi Rao)
Analyst

VERIFIED BY:

(P. Harika)
Technical Manager

AUTHORISED SIGNATORY:

(M. Shashikala)
Head of the Laboratory



AIR QUALITY MONITORING DATA

Report No.: I A1

1. Name of the Project : JK Cements Works
M/s. JK Cements Works, Muddapur,
(Unit: J.K.Cement Ltd),
2. Name of the Client : P.O.Muddapur-587122
Dist.Bagalkot (Karnataka) India
3. Sample Collected By : Cosmo Conscious Research Laboratory
4. Particulars of Sample Collected : Source Emission Air Quality Monitoring
5. Sample Condition : Satisfactory
6. Analysis Start Date : 10.07.2023
7. Analysis Completion Date : 10.07.2023
8. Month of Monitoring : July 2023
9. Environmental condition at the time : 26.5°C

Name of the Station/ Date of Sample Collection	Particulars of Sample Collected			
	SO ₂ (µg/m ³)	NO ₂ (µg/m ³)	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
AAQM Locations for Cement Plant				
AI- Admin Building				
03.07.2023	13	20	52	15
AII- Guest House				
03.07.2023	19	11	48	19
AIII-Muddapur Village				
07.07.2023	13	17	56	12
AIV- Bomanbudhini Village				
04.07.2023	17	14	50	11

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vide certificate No. TC4152 and Certified by ISO (45001:2018)



Certificate No: TC6152

Name of the Station/ Date of Sample Collection	Particulars of Sample Collected			
	SO ₂ (µg/m ³)	NO ₂ (µg/m ³)	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
AAQM Locations for Halki Mines				
AV- Near Halki mines office				
06.07.2023	16	11	50	16
AVI- North Boundary Side				
04.07.2023	18	18	59	21
AVII- Halki Village				
05.07.2023	12	20	55	19
AVIII- Metgudda Village				
04.07.2023	15	12	56	17
AAQM Locations for Muddapur Mines				
AIX- Near Muddapur Mines Office				
07.07.2023	19	14	51	17
AX- Petlur				
05.07.2023	19	13	51	15
AXI- Thimmapur Village				
04.07.2023	13	19	59	18
AXII- D-Colony, D-block quarters				
04.07.2023	18	20	54	17

END OF REPORT

Note: 1. SO₂ – Sulfur Dioxide, NO₂ – Nitrogen Dioxide, PM₁₀ – Particulate Matter (size less than 10 µm), PM_{2.5} – Particulate Matter (size less than 2.5 µm).

2. The above results are related only to the samples collected & tested on the particular date and time.

3. RA – Reaffirmed.

ANALYZED BY:

(B. Maruthi Rao)
Analyst

VERIFIED BY:

(P. Harika)
Technical Manager

AUTHORISED SIGNATORY:

(M. Shashikala)
Head of the Laboratory

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OHSAS 18001:2007

J.K. Cement WORKS, MUDDAPUR (KARNATAKA)

(Unit : J.K. Cement Ltd.)

Stack monitoring report of Cement plant & 2x25 MW Thermal power plant for April-2023 to September-2023

Sl. No.	Month/Year	Stack locations						
		Thermal Power Plant			Kiln / Raw Mill			DG Set
		SPM in mg/Nm3	SO2 in mg/Nm3	NOx in mg/Nm3	SPM in mg/Nm3	SO2 in mg/Nm3	NOx in mg/Nm3	SPM in mg/Nm3
1	Apr-23	Plant Shutdown			25.1	0.0	354.0	-
2	May-23				17.7	0.0	587.0	-
3	Jun-23				9.9	0.0	665.0	-
4	Jul-23				13.0	0.0	568.0	-
5	Aug-23				13.8	0.0	568.0	-
6	Sep-23				12.3	0.0	574.0	-

Sl. No.	Month/Year	Stack locations						
		SPM in mg/Nm3						
		CM-3 (Slag Cement Mill)	Coal crusher	LSC	CM-1	CM-2	Cooler	Coal Mill
1	Apr-23	15.6	11.8	12.3	6.64	10.8	8.6	10.2
2	May-23	14.3	8.1	12.1	5.8	7.0	5.9	13.3
3	Jun-23	12.7	10	8.8	11.2	7.4	6.9	7.9
4	Jul-23	10.0	14.5	12.2	6.7	12.1	7.7	10.1
5	Aug-23	5.4	11.1	9.1	4.1	15.5	13.0	14.0
6	Sep-23	8.6	13.3	13.4	7.0	13.0	20.6	16.2


Vani Patil
Monitored by


Vinit Kumar Sharma
Checked by



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Certificate No:TC6152

Analysis Report of Stack Emission

Report no: III A

1	Name of the Industry	M/s. JK Cement Works
2	Address	M/s. JK Cement Works, Muddapur, (Unit: J.K.Cement Ltd),P.O.Muddapur-587122, Dist.Bagalkot(Karnataka) India
3	Date of Sampling	07.09.2023
4	Sample Type	Stack Monitoring
5	Sampling Location	Raw Mill
6	Duration of Monitoring	38 Minutes
7	Sample Condition	Satisfactory
8	Lab Sample code	ST- 01
9	Analysis Start Date	29.09.2023
10	Analysis Completion Date	29.09.2023
11	Environmental Condition at the time of sampling	26°C
12	Unique Lab Report Number	TC6152230000006553F

Stack Details

1	Stack attached to	Raw Mill
2	Stack Diameter (mtr)	7.54

Emission Details

Sl. No.	Parameters	Result	Unit	Method	Permissible Limit
1	Stack Temperature	152	°C	IS-11255(Part 01)	-
2	Velocity of Flue Gas	11.42	m/sec	IS-11255(Part 01)	-
3	Particulate Matter	11.44	mg/Nm ³	IS 11255 (Part 01)	30.0
4	Oxides of Sulphur	0.5	mg/Nm ³	CCRL/TOP/06:2016	100.0
5	Oxides of Nitrogen	426	mg/Nm ³	CCRL/TOP/06:2016	800.0
6	Carbon Monoxide *	Nil	ppm	CCRL/TOP/06:2016	-
7.	Gas flow rate *	817837.65	Nm ³ /hr	IS-11255(Part 03)	-
8.	Moisture *	<1	%	IS-11255(Part 03)	-
9.	Production rate*	423	TPH	-	-

End of Report

- Note: 1.The above results are related only to the samples collected & tested on the particular date and time
2. The Tests marked with an * are not accredited by NABL.

MONITORED BY:


(G.Dhavaleshwar)
Analyst

VERIFIED BY:


(P.Harika)
Technical Manager

AUTHORISED SIGNATORY: 
(M. Shasthikala)
Head of the Laboratory

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via certificate No: TC6152 and Certified by ISO (45001:2018)



Certificate No:TC6152

Analysis Report of Stack Emission

Report no: III B

1	Name of the Industry	M/s. JK Cement Works
2	Address	M/s. JK Cement Works, Muddapur, (Unit: J.K.Cement Ltd),P.O.Muddapur-587122, Dist.Bagalkot(Karnataka) India
3	Date of Sampling	27.09.2023
4	Sample Type	Stack Monitoring
5	Sampling Location	Coal Mill
6	Duration of Monitoring	61 minutes
7	Sample Condition	Satisfactory
8	Lab Sample code	ST-02
9	Analysis Start Date	29.09.2023
10	Analysis Completion Date	29.09.2023
11	Environmental Condition at the time of sampling	25°C
12	Unique Lab Report Number	TC6152230000006554F

Stack Details

1	Stack attached to	Coal Mill
2	Stack Diameter (mtr)	1.40

Emission Details

Sl. No.	Parameters	Result	Unit	Method	Permissible Limit
1	Stack Temperature	70	°C	IS-11255(Part 01)	-
2	Velocity of Flue Gas	7.40	m/sec	IS-11255(Part 01)	-
3	Particulate Matter	16.2	mg/Nm ³	IS 11255 (Part 01)	30.0
4	Gas flow rate *	60741.40	Nm ³ /hr	CCRL/TOP/06:2016	-
5	Moisture *	<1	%	IS-11255(Part 03)	-
6.	Production rate*	23	TPH	-	-

End of Report

Note: 1.The above results are related only to the samples collected & tested on the particular date and time
2. The Tests marked with an * are not accredited by NABL.

MONITORED BY:

(G.Dhavaleshwar)
Analyst

VERIFIED BY:

(P.Harika)
Technical Manager

AUTHORISED SIGNATORY: (M. Shashikala)
Head of the Laboratory

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Certificate No:TC6152

Analysis Report of Stack Emission

Report no: III C

1	Name of the Industry	M/s. JK Cement Works
2	Address	M/s. JK Cement Works, Muddapur, (Unit: J.K.Cement Ltd), P.O.Muddapur-587122, Dist.Bagalkot(Karnataka) Indi
3	Date of Sampling	26.09.2023
4	Sample Type	Stack Monitoring
5	Sampling Location	Cooler station
6	Duration of Monitoring	34 minutes
7	Sample Condition	Satisfactory
8	Lab Sample code	ST-40381
9	Analysis Start Date	29.09.2023
10	Analysis Completion Date	29.09.2023
11	Environmental Condition at the time of sampling	30°C
12	Unique Lab Report Number	TC6152230000006555F

Stack Details

1	Stack attached to	Cooler station
2	Stack Diameter (mtr)	3.86

Emission Details

Sl. No.	Parameters	Result	Unit	Method	Permissible Limit
1	Stack Temperature	245	°C	IS-11255(Part 01)	-
2	Velocity of Flue Gas	11.89	m/sec	IS-11255(Part 01)	-
3	Particulate Matter	11.9	mg/Nm ³	IS 11255 (Part 01)	30.0
4	Gas flow rate *	534281	Nm ³ /hr	IS-11255(Part 03)	-
5	Moisture *	<1	%	IS-11255(Part 03)	-
6	Production rate*	323	TPH	-	-

End of Report

Note: 1.The above results are related only to the samples collected & tested on the particular date and time
2. The Tests marked with an * are not accredited by NABL.

MONITORED BY:

(G.Dhavalreshwar)
Analyst

VERIFIED BY:

(P.Harika)
Technical Manager

AUTHORISED SIGNATORY: (M. Shashikala)
Head of the Laboratory

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Environmental laboratory, Recognized by MoEF & CC. Accredited by NABL (ISO/IEC: 17025)
vide certificate No: TC6152 and Certified by ISO (45001:2018)



Certificate No:TC6152

Analysis Report of Stack Emission

Report no: III D

1	Name of the Industry	M/s. JK Cement Works
2	Address	M/s. JK Cement Works, Muddapur, (Unit: J.K.Cement Ltd),P.O.Muddapur-587122, Dist.Bagalkot(Karnataka) India
3	Date of Sampling	25.09.2023
4	Sample Type	Stack Monitoring
5	Sampling Location	Cement mill -I
6	Duration of Monitoring	37 minutes
7	Sample Condition	Satisfactory
8	Lab Sample code	ST-40376
9	Analysis Start Date	29.09.2023
10	Analysis Completion Date	29.09.2023
11	Environmental Condition at the time of sampling	27°C
12	Unique Lab Report Number	TC6152230000006556F

Stack Details

1	Stack attached to	Cement mill-I
2	Stack Diameter (mtr)	1.4

Emission Details

Sl. No.	Parameters	Result	Unit	Method	Permissible Limit
1	Stack Temperature	86	°C	IS-11255(Part 01)	-
2	Velocity of Flue Gas	7.54	m/sec	IS-11255(Part 01)	-
3	Particulate Matter	13.4	mg/Nm ³	IS 11255 (Part 01)	30.0
4	Gas flow rate *	67690.69	Nm ³ /hr	IS-11255(Part 03)	-
5.	Moisture*	<1	%	IS-11255(Part 03)	-
6.	Production rate*	125	TPH	-	-

End of Report

Note: 1.The above results are related only to the samples collected & tested on the particular date and time
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MONITORED BY:


(G.Dhavaleshwar)
Analyst

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Technical Manager

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Certificate No:TC6152

Analysis Report of Stack Emission

Report no: III E

1	Name of the Industry	M/s. JK Cement Works
2	Address	M/s. JK Cement Works, Muddapur, (Unit: J.K.Cement Ltd),P.O.Muddapur-587122, Dist.Bagalkot(Karnataka) India
3	Date of Sampling	27.09.2023
4	Sample Type	Stack Monitoring
5	Sampling Location	Cement mill -II
6	Duration of Monitoring	42 minutes
7	Sample Condition	Satisfactory
8	Lab Sample code	ST-01
9	Analysis Start Date	29.09.2023
10	Analysis Completion Date	29.09.2023
11	Environmental Condition at the time of sampling	26°C
12	Unique Lab Report Number	TC6152230000006557F

Stack Details

1	Stack attached to	Cement mill -II
2	Stack Diameter (mtr)	1.4

Emission Details

Sl. No.	Parameters	Result	Unit	Method	Permissible Limit
1	Stack Temperature	64	°C	IS-11255(Part 01)	-
2	Velocity of Flue Gas	14.11	m/sec	IS-11255(Part 01)	-
3	Particulate Matter	23.3	mg/Nm ³	IS 11255 (Part 01)	30.0
4	Gas flow rate *	60688.19	Nm ³ /hr	IS-11255(Part 03)	-
5.	Moisture *	<1	%	IS-11255(Part 03)	-
6.	Production rate*	130	TPH	-	-


End of Report

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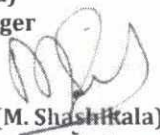
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Head of the Laboratory

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Certificate No:TC6152

Analysis Report of Stack Emission

Report no: III F

1	Name of the Industry	M/s. JK Cement Works
2	Address	M/s. JK Cement Works, Muddapur, (Unit: J.K.Cement Ltd),P.O.Muddapur-587122, Dist.Bagalkot(Karnataka) India
3	Date of Sampling	27.09.2023
4	Sample Type	Stack Monitoring
5	Sampling Location	Cement mill -III
6	Duration of Monitoring	62 minutes
7	Sample Condition	Satisfactory
8	Lab Sample code	ST-40377
9	Analysis Start Date	29.09.2023
10	Analysis Completion Date	29.09.2023
11	Environmental Condition at the time of sampling	26°C
12	Unique Lab Report Number	TC6152230000006558F

Stack Details

1	Stack attached to	Cement mill -III
2	Stack Diameter (mtr)	3.75

Emission Details

Sl. No.	Parameters	Result	Unit	Method	Permissible Limit
1	Stack Temperature	77	°C	IS-11255(Part 01)	-
2	Velocity of Flue Gas	9.91	m/sec	IS-11255(Part 01)	-
3	Particulate Matter	17.5	mg/Nm ³	IS 11255 (Part 01)	30.0
4	Gas flow rate *	751878.89	Nm ³ /hr	IS-11255(Part 03)	-
5.	Moisture *	<1	%	IS-11255(Part 03)	-
6.	Production rate*	218	TPH	-	-

End of Report

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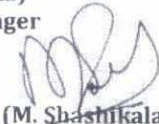
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VERIFIED BY:


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Technical Manager

AUTHORISED SIGNATORY:


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Certificate No:TC6152

Analysis Report of Stack Emission

Report no: III G

1	Name of the Industry	M/s. JK Cement Works
2	Address	M/s. JK Cement Works, Muddapur, (Unit: J.K.Cement Ltd),P.O.Muddapur-587122, Dist.Bagalkot(Karnataka) India
3	Date of Sampling	27.09.2023
4	Sample Type	Stack Monitoring
5	Sampling Location	Lime Stone Crusher Stack
6	Duration of Monitoring	50 Minutes
7	Sample Condition	Satisfactory
8	Lab Sample code	ST-40378
9	Analysis Start Date	29.09.2023
10	Analysis Completion Date	29.09.2023
11	Environmental Condition at the time of sampling	31°C
12	Unique Lab Report Number	TC6152230000006559F

Stack Details

1	Stack attached to	Lime Stone Crusher
2	Stack Diameter (mtr)	1.20

Emission Details

Sl. No.	Parameters	Result	Unit	Method	Permissible Limit
1	Stack Temperature	65	°C	IS-11255(Part 01)	-
2	Velocity of Flue Gas	7.21	m/sec	IS-11255(Part 01)	-
3	Particulate Matter	18.05	mg/Nm ³	IS 11255 (Part 01)	30.0
4	Gas flow rate *	220687	Nm ³ /hr	IS-11255(Part 03)	-
5	Moisture *	<1	%	IS-11255(Part 03)	-
6	Production rate*	210	TPH	-	-

End of Report

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MONITORED BY:


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Analyst

VERIFIED BY:


(P.Harika)
Technical Manager

AUTHORISED SIGNATORY:


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Analysis Report of Stack Emission

Report no: III H

1	Name of the Industry	M/s. JK Cement Works
2	Address	M/s. JK Cement Works, Muddapur, (Unit: J.K.Cement Ltd), P.O. Muddapur-587122, Dist. Bagalkot (Karnataka) India
3	Date of Sampling	06.07.2023
4	Sample Type	Stack Monitoring
5	Sampling Location	Captive Power Plant
6	Duration of Monitoring	-
7	Sample Condition	-
8	Lab Sample code	-
9	Analysis Start Date	-
10	Analysis Completion Date	-
11	Environmental Condition at the time of sampling	-
12	Unique Lab Report Number	-

Stack Details

1	Stack attached to	Captive Power Plant
2	Stack Diameter (mtr)	3.30

Emission Details

Sl. No.	Parameters	Result	Unit	Method	Permissible Limit
1	Stack Temperature	SHUT DOWN	⁰ C	IS-11255(Part 01)	-
2	Velocity of Flue Gas		m/sec	IS-11255(Part 01)	-
3	Particulate Matter		mg/Nm ³	IS 11255 (Part 01)	50.0
4	Oxides of Sulphur		mg/Nm ³	CCRL/TOP/06:2016	600.0
5	Oxides of Nitrogen		mg/Nm ³	CCRL/TOP/06:2016	300.0
6	Mercury*		mg/Nm ³	AAS Method	0.03
7	Gas flow rate *		Nm ³ /hr	IS-11255(Part 03)	-
8	Moisture *		%	IS-11255(Part 03)	-
9	Production rate*		MWH	-	-

End of Report

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Technical Manager

AUTHORISED SIGNATORY: (M. Shashikala)

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Certificate No TC6152

Analysis Report of Stack Emission

Report no: III A

1	Name of the Industry	M/s. J.K. Cements Works, Muddapur (Unit : J.K. CEMENT LTD.,)
2	Address	Muddapur Village, Mudhol Taluk, Bagalkot District (KAR)-587122.
3	Date of Sampling	29.08.2023
4	Sample Type	Stack Monitoring
5	Sampling Location	Raw Mill
6	Duration of Monitoring	42 minutes
7	Sample Condition	Satisfactory
8	Lab Sample code	ST-03
9	Analysis Start Date	31.08.2023
10	Analysis Completion Date	31.08.2023
11	Environmental Condition at the time of sampling	32°C
12	Unique Lab Report Number	TC6152230000006529F

Stack Details

1	Stack attached to	Raw Mill
2	Stack Diameter (mtr)	7.45

Emission Details

Sl. No.	Parameters	Result	Unit	Method	Permissible Limit
1	Stack Temperature	161	°C	IS-11255(Part 01)	-
2	Velocity of Flue Gas	12.45	m/sec	IS-11255(Part 01)	-
3	Particulate Matter	11.0	mg/Nm ³	IS 11255 (Part 01)	30.0
4	Oxides of Sulphur	60.0	mg/Nm ³	CCRL/TOP/06:2016	100.0
5	Oxides of Nitrogen	500.0	mg/Nm ³	CCRL/TOP/06:2016	800.0
6	Carbon Monoxide *	Nil	ppm	CCRL/TOP/06:2016	-
7	Gas flow rate *	3809.70	Nm ³ /hr	IS-11255(Part 03)	-
8	Moisture *	<1	%	IS-11255(Part 03)	-
9	Production rate*	450	TPH	-	-

End of Report

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MONITORED BY:

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Analyst

VERIFIED BY:

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Technical Manager

AUTHORISED SIGNATORY:

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Head of the Laboratory

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Certificate No:TC6152

Analysis Report of Stack Emission

Report no: III B

1	Name of the Industry	M/s. J.K. Cements Works, Muddapur (Unit : J.K. CEMENT LTD.,)
2	Address	Muddapur Village, Mudhol Taluk, Bagalkot District (KAR)-587122.
3	Date of Sampling	30.08.2023
4	Sample Type	Stack Monitoring
5	Sampling Location	Coal Mill
6	Duration of Monitoring	62 minutes
7	Sample Condition	Satisfactory
8	Lab Sample code	ST-70437
9	Analysis Start Date	31.08.2023
10	Analysis Completion Date	31.08.2023
11	Environmental Condition at the time of sampling	33°C
12	Unique Lab Report Number	TC6152230000006530F

Stack Details

1	Stack attached to	Coal Mill
2	Stack Diameter (mtr)	1.40

Emission Details

Sl. No.	Parameters	Result	Unit	Method	Permissible Limit
1	Stack Temperature	57	°C	IS-11255(Part 01)	-
2	Velocity of Flue Gas	9.18	m/sec	IS-11255(Part 01)	-
3	Particulate Matter	19	mg/Nm ³	IS 11255 (Part 01)	30.0
4	Oxides of Sulphur	83.52	mg/Nm ³	CCRL/TOP/06:2016	-
5	Oxides of Nitrogen	174.28	mg/Nm ³	CCRL/TOP/06:2016	-
6	Gas flow rate *	2660.36	Nm ³ /hr	CCRL/TOP/06:2016	-
7	Moisture *	<1	%	IS-11255(Part 03)	-
8	Production rate*	22	TPH	-	-

End of Report

- Note: 1. The above results are related only to the samples collected & tested on the particular date and time
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Analyst

VERIFIED BY:

(P.Harika)
Technical Manager

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Head of the Laboratory

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Certificate No. TC 6152

Analysis Report of Stack Emission

Report no: III C

1	Name of the Industry	M/s. J.K. Cements Works, Muddapur (Unit : J.K. CEMENT LTD.,)
2	Address	Muddapur Village, Mudhol Taluk, Bagalkot District (KAR)- 587122.
3	Date of Sampling	26.08.2023
4	Sample Type	Stack Monitoring
5	Sampling Location	Cooler station
6	Duration of Monitoring	minutes
7	Sample Condition	Satisfactory
8	Lab Sample code	ST-70443
9	Analysis Start Date	31.08.2023
10	Analysis Completion Date	31.08.2023
11	Environmental Condition at the time of sampling	30°C
12	Unique Lab Report Number	TC6152230000006531F

Stack Details

1	Stack attached to	Cooler station
2	Stack Diameter (mtr)	3.86

Emission Details

Sl. No.	Parameters	Result	Unit	Method	Permissible Limit
1	Stack Temperature	245	°C	IS-11255(Part 01)	-
2	Velocity of Flue Gas	11.89	m/sec	IS-11255(Part 01)	-
3	Particulate Matter	20.6	mg/Nm ³	IS 11255 (Part 01)	30.0
4	Oxides of Sulphur	Nil	mg/Nm ³	CCRL/TOP/06:2016	-
5	Oxides of Nitrogen	Nil	mg/Nm ³	CCRL/TOP/06:2016	-
6	Carbon Monoxide *	Nil	ppm	CCRL/TOP/06:2016	-
7	Gas flow rate *	434932	Nm ³ /hr	IS-11255(Part 03)	-
8.	Moisture *	<1	%	IS-11255(Part 03)	-
9.	Production rate*	358	TPH		-

End of Report

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Certificate No. TC6152

Analysis Report of Stack Emission

Report no: III D

1	Name of the Industry	M/s. J.K. Cements Works, Muddapur (Unit : J.K. CEMENT LTD.,)
2	Address	Muddapur Village, Mudhol Taluk, Bagalkot District (KAR)-587122.
3	Date of Sampling	10.08.2023
4	Sample Type	Stack Monitoring
5	Sampling Location	Cement mill -I
6	Duration of Monitoring	38 minutes
7	Sample Condition	Satisfactory
8	Lab Sample code	ST-04
9	Analysis Start Date	11.08.2023
10	Analysis Completion Date	11.08.2023
11	Environmental Condition at the time of sampling	31°C
12	Unique Lab Report Number	TC6152230000006532F

Stack Details

1	Stack attached to	Cement mill-I
2	Stack Diameter (mtr)	1.4

Emission Details

Sl. No.	Parameters	Result	Unit	Method	Permissible Limit
1	Stack Temperature	104	°C	IS-11255(Part 01)	-
2	Velocity of Flue Gas	17.21	m/sec	IS-11255(Part 01)	-
3	Particulate Matter	15.2	mg/Nm ³	IS 11255 (Part 01)	30.0
4	Gas flow rate *	4987.45	Nm ³ /hr	IS-11255(Part 03)	-
5	Moisture*	<1	%	IS-11255(Part 03)	-
6	Production rate*	120	TPH	-	-

End of Report

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Certificate No: TC 6152

Analysis Report of Stack Emission

Report no: III E

1	Name of the Industry	M/s. J.K. Cements Works, Muddapur (Unit : J.K. CEMENT LTD.,)
2	Address	Muddapur Village, Mudhol Taluk, Bagalkot District (KAR)- 587122.
3	Date of Sampling	30.08.2023
4	Sample Type	Stack Monitoring
5	Sampling Location	Cement mill -II
6	Duration of Monitoring	58 minutes
7	Sample Condition	Satisfactory
8	Lab Sample code	ST-70430
9	Analysis Start Date	31.08.2023
10	Analysis Completion Date	31.08.2023
11	Environmental Condition at the time of sampling	26°C
12	Unique Lab Report Number	TC6152230000006533F

Stack Details

1	Stack attached to	Cement mill -II
2	Stack Diameter (mtr)	1.4


Emission Details

Sl. No.	Parameters	Result	Unit	Method	Permissible Limit
1	Stack Temperature	96	°C	IS-11255(Part 01)	-
2	Velocity of Flue Gas	11.7	m/sec	IS-11255(Part 01)	-
3	Particulate Matter	16.8	mg/Nm ³	IS 11255 (Part 01)	30.0
4	Gas flow rate *	3390.66	Nm ³ /hr	IS-11255(Part 03)	-
5	Moisture *	<1	%	IS-11255(Part 03)	-
6	Production rate*	120	TPH	-	-


End of Report

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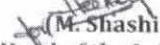
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Lab certificate No: IC6152 and Certified by ISO (45001:2018)



Certificate No: IC6152

Analysis Report of Stack Emission

Report no: III F

1	Name of the Industry	M/s. J.K. Cements Works, Muddapur (Unit : J.K. CEMENT LTD.,)
2	Address	Muddapur Village, Mudhol Taluk, Bagalkot District (KAR)-587122.
3	Date of Sampling	30.08.2023
4	Sample Type	Stack Monitoring
5	Sampling Location	Cement mill -III
6	Duration of Monitoring	68 minutes
7	Sample Condition	Satisfactory
8	Lab Sample code	ST-70435
9	Analysis Start Date	31.08.2023
10	Analysis Completion Date	31.08.2023
11	Environmental Condition at the time of sampling	32°C
12	Unique Lab Report Number	TC6152230000006534F

Stack Details

1	Stack attached to	Cement mill -III
2	Stack Diameter (mtr)	3.70

Emission Details

Sl. No.	Parameters	Result	Unit	Method	Permissible Limit
1	Stack Temperature	97	°C	IS-11255(Part 01)	-
2	Velocity of Flue Gas	9.34	m/sec	IS-11255(Part 01)	-
3	Particulate Matter	19.3	mg/Nm ³	IS 11255 (Part 01)	30.0
4	Gas flow rate *	2706.73	Nm ³ /hr	IS-11255(Part 03)	-
5	Moisture *	<1	%	IS-11255(Part 03)	-
6	Production rate*	245	TPH	-	-

End of Report

Note: 1. The above results are related only to the samples collected & tested on the particular date and time
2. The Tests marked with an * are not accredited by NABL.

MONITORED BY:

(B.Maruthi Rao)
Analyst

VERIFIED BY:

(P.Harika)
Technical Manager

AUTHORISED SIGNATORY:

(M. Shashikala)
Head of the Laboratory

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Valid certificate No. TC6152 and Certified by ISO 14001:2015



Certificate No. TC6152

Analysis Report of Stack Emission

Report no: III G

1	Name of the Industry	M/s. J.K. Cements Works, Muddapur (Unit : J.K. CEMENT LTD.,)
2	Address	Muddapur Village, Mudhol Taluk, Bagalkot District (KAR)-587122.
3	Date of Sampling	29.08.2023
4	Sample Type	Stack Monitoring
5	Sampling Location	Lime Stone Crusher Stack
6	Duration of Monitoring	50 minutes
7	Sample Condition	Satisfactory
8	Lab Sample code	ST-04
9	Analysis Start Date	31.08.2023
10	Analysis Completion Date	31.08.2023
11	Environmental Condition at the time of sampling	32°C
12	Unique Lab Report Number	TC6152230000006535F

Stack Details

1	Stack attached to	Lime Stone Crusher
2	Stack Diameter (mtr)	1.20

Emission Details

Sl. No.	Parameters	Result	Unit	Method	Permissible Limit
1	Stack Temperature	70	°C	IS-11255(Part 01)	-
2	Velocity of Flue Gas	6.24	m/sec	IS-11255(Part 01)	-
3	Particulate Matter	20.5	mg/Nm ³	IS 11255 (Part 01)	50.0
4	Oxides of Sulphur	210	mg/Nm ³	CCRL/TOP/06:2016	600.00
5	Oxides of Nitrogen	170.50	mg/Nm ³	CCRL/TOP/06:2016	300.00
6	Mercury*	0.01	mg/Nm ³	CCRL/TOP/06:2016	0.03
7	Gas flow rate *	3490.61	Nm ³ /hr	IS-11255(Part 03)	-
8	Moisture *	<1	%	IS-11255(Part 03)	-
9	Production rate*	210	TPH	-	-

End of Report

Note: 1. The above results are related only to the samples collected & tested on the particular date and time.
2. The Tests marked with an * are not accredited by NABL.

MONITORED BY:

(B. Maruthi Rao)
Analyst

VERIFIED BY:

(P. Harika)
Technical Manager

AUTHORISED SIGNATORY:

(M. Shashikala)
Head of the Laboratory

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"SURVEY HOUSE", #121, 2nd Cross, Nehru Colony, Ballari-583103 (Karnataka)
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Wide participation No. 106152 and Certified by ISO (45001:2018)

Analysis Report of Stack Emission

Report no: III H

1	Name of the Industry	M/s. J.K. Cements Works, Muddapur (Unit : J.K. CEMENT LTD.,)
2	Address	Muddapur Village, Mudhol Taluk, Bagalkot District (KAR)- 587122.
3	Date of Sampling	30.08.2023
4	Sample Type	Stack Monitoring
5	Sampling Location	Captive Power Plant
6	Duration of Monitoring	-
7	Sample Condition	-
8	Lab Sample code	-
9	Analysis Start Date	-
10	Analysis Completion Date	-
11	Environmental Condition at the time of sampling	-
12	Unique Lab Report Number	-

Stack Details

1	Stack attached to	Captive Power Plant
2	Stack Diameter (mtr)	3.30

Emission Details

Sl. No.	Parameters	Result	Unit	Method	Permissible Limit
1	Stack Temperature	SHUT DOWN	°C	IS-11255(Part 01)	-
2	Velocity of Flue Gas		m/sec	IS-11255(Part 01)	-
3	Particulate Matter		mg/Nm ³	IS 11255 (Part 01)	50.0
4	Oxides of Sulphur		mg/Nm ³	CCRL/TOP/06:2016	600.0
5	Oxides of Nitrogen		mg/Nm ³	CCRL/TOP/06:2016	300.0
6	Mercury*		mg/Nm ³	AAS Method	0.03
7	Gas flow rate *		Nm ³ /hr	IS-11255(Part 03)	-
8	Moisture *		%	IS-11255(Part 03)	-
9	Production rate*		MWH	-	-

End of Report

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MONITORED BY:

(B. Maruthi Rao)
Analyst

VERIFIED BY:

(P. Harika)
Technical Manager

AUTHORISED SIGNATORY: (M. Shashikala)
Head of the Laboratory



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vide certificate No : TC 6152 and Certified by ISO 45001:2018



Certificate No:TC6152

Analysis Report of Stack Emission

Report no: III A

1	Name of the Industry	M/s. J.K. Cements Works, Muddapur (Unit : J.K. CEMENT LTD.,)
2	Address	Muddapur Village, Mudhol Taluk, Bagalkot District (KAR)-587122.
3	Date of Sampling	03.07.2023
4	Sample Type	Stack Monitoring
5	Sampling Location	Raw Mill
6	Duration of Monitoring	58 minutes
7	Sample Condition	Satisfactory
8	Lab Sample code	ST-01
9	Analysis Start Date	10.07.2023
10	Analysis Completion Date	10.07.2023
11	Environmental Condition at the time of sampling	30°C

Stack Details

1	Stack attached to	Raw Mill
2	Stack Diameter (mtr)	7.45

Emission Details

Sl. No.	Parameters	Result	Unit	Method	Permissible Limit
1	Stack Temperature	154	°C	IS-11255(Part 01)	-
2	Velocity of Flue Gas	11.43	m/sec	IS-11255(Part 01)	-
3	Particulate Matter	17.0	mg/Nm ³	IS 11255 (Part 01)	30.0
4	Oxides of Sulphur	50.0	mg/Nm ³	CCRL/TOP/06:2016	100.0
5	Oxides of Nitrogen	630.0	mg/Nm ³	CCRL/TOP/06:2016	800.0
6	Carbon Monoxide *	Nil	ppm	CCRL/TOP/06:2016	-
7.	Gas flow rate *	1340363	Nm ³ /hr	IS-11255(Part 03)	-
8.	Moisture *	<1	%	IS-11255(Part 03)	-
9.	Production rate*	476	TPH		-

End of Report

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MONITORED BY:

(B.Mafathi Rao)
Analyst

VERIFIED BY:

(P.Harika)
Technical Manager

AUTHORISED SIGNATORY: (M. Shashikala)
Head of the Laboratory

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Lab Certificate No. 10 6152 and Certified by ISO 14500 (2018)



Certificate No: TC6152

Analysis Report of Stack Emission

Report no: III B

1	Name of the Industry	M/s. J.K. Cements Works, Muddapur (Unit : J.K. CEMENT LTD.,)
2	Address	Muddapur Village, Mudhol Taluk, Bagalkot District (KAR)-587122.
3	Date of Sampling	08.07.2023
4	Sample Type	Stack Monitoring
5	Sampling Location	Coal Mill
6	Duration of Monitoring	53 minutes
7	Sample Condition	Satisfactory
8	Lab Sample code	ST-02
9	Analysis Start Date	10.07.2023
10	Analysis Completion Date	10.07.2023
11	Environmental Condition at the time of sampling	30°C

Stack Details

1	Stack attached to	Coal Mill
2	Stack Diameter (mtr)	1.40

Emission Details

Sl. No.	Parameters	Result	Unit	Method	Permissible Limit
1	Stack Temperature	73	°C	IS-11255(Part 01)	-
2	Velocity of Flue Gas	7.12	m/sec	IS-11255(Part 01)	-
3	Particulate Matter	8.0	mg/Nm ³	IS 11255 (Part 01)	30.0
4	Oxides of Sulphur	75.14	mg/Nm ³	CCRL/TOP/06:2016	-
5	Oxides of Nitrogen	187.1	mg/Nm ³	CCRL/TOP/06:2016	-
6	Gas flow rate *	49285	Nm ³ /hr	CCRL/TOP/06:2016	-
7	Moisture *	<1	%	IS-11255(Part 03)	-
8	Production rate*	25	TPH	-	-

End of Report

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MONITORED BY:

(B. Maruthi Rao)
Analyst

VERIFIED BY:

(P. Harika)
Technical Manager

AUTHORISED SIGNATORY: (M. Shashikala)
Head of the Laboratory



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vide certificate No: TC6152 and Certified by ISO: 45001:2018



Certificate No:TC6152

Analysis Report of Stack Emission

Report no: III C

1	Name of the Industry	M/s. J.K. Cements Works, Muddapur (Unit : J.K. CEMENT LTD.,)
2	Address	Muddapur Village, Mudhol Taluk, Bagalkot District (KAR)- 587122.
3	Date of Sampling	08.07.2023
4	Sample Type	Stack Monitoring
5	Sampling Location	Cooler station
6	Duration of Monitoring	55 minutes
7	Sample Condition	Satisfactory
8	Lab Sample code	ST-03
9	Analysis Start Date	10.07.2023
10	Analysis Completion Date	10.07.2023
11	Environmental Condition at the time of sampling	33°C

Stack Details

1	Stack attached to	Cooler station
2	Stack Diameter (mtr)	3.86

Emission Details

Sl. No.	Parameters	Result	Unit	Method	Permissible Limit
1	Stack Temperature	251	°C	IS-11255(Part 01)	-
2	Velocity of Flue Gas	15.21	m/sec	IS-11255(Part 01)	-
3	Particulate Matter	8.5	mg/Nm ³	IS 11255 (Part 01)	30.0
4	Oxides of Sulphur	Nil	mg/Nm ³	CCRL/TOP/06:2016	-
5	Oxides of Nitrogen	Nil	mg/Nm ³	CCRL/TOP/06:2016	-
6	Carbon Monoxide *	Nil	ppm	CCRL/TOP/06:2016	-
7	Gas flow rate *	589464	Nm ³ /hr	IS-11255(Part 03)	-
8	Moisture *	<1	%	IS-11255(Part 03)	-
9	Production rate*	305	TPH	-	-

End of Report

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MONITORED BY:

(Signature)
(B.Maruthi Rao)
Analyst

VERIFIED BY:

(Signature)
(P.Harika)
Technical Manager

AUTHORISED SIGNATORY: *(Signature)*
(M. Shashikala)
Head of the Laboratory

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VOC certificate No. TC6152 and Certified by ISO 14001:2015



Certificate No:TC6152

Analysis Report of Stack Emission

Report no: III D

1	Name of the Industry	M/s. J.K. Cements Works, Muddapur (Unit : J.K. CEMENT LTD.,)
2	Address	Muddapur Village, Mudhol Taluk, Bagalkot District (KAR)-587122.
3	Date of Sampling	02.07.2023
4	Sample Type	Stack Monitoring
5	Sampling Location	Cement mill -I
6	Duration of Monitoring	39 minutes
7	Sample Condition	Satisfactory
8	Lab Sample code	ST-04
9	Analysis Start Date	10.07.2023
10	Analysis Completion Date	10.07.2023
11	Environmental Condition at the time of sampling	35°C

Stack Details

1	Stack attached to	Cement mill-I
2	Stack Diameter (mtr)	1.4

Emission Details

Sl. No.	Parameters	Result	Unit	Method	Permissible Limit
1	Stack Temperature	103	°C	IS-11255(Part 01)	-
2	Velocity of Flue Gas	8.1	m/sec	IS-11255(Part 01)	-
3	Particulate Matter	7.0	mg/Nm ³	IS 11255 (Part 01)	30.0
4	Gas flow rate *	40953	Nm ³ /hr	IS-11255(Part 03)	-
5.	Moisture*	<1	%	IS-11255(Part 03)	-
6.	Production rate*	137	TPH	-	-

End of Report

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MONITORED BY:

(B.Maruthi Rao)
Analyst

VERIFIED BY:

(P.Harika)
Technical Manager

AUTHORISED SIGNATORY:

(M. Shashikala)
Head of the Laboratory



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Certificate No: TC 6152

Analysis Report of Stack Emission

Report no: III E

1	Name of the Industry	M/s. J.K. Cements Works, Muddapur (Unit : J.K. CEMENT LTD.,)
2	Address	Muddapur Village, Mudhol Taluk, Bagalkot District (KAR)-587122.
3	Date of Sampling	07.07.2023
4	Sample Type	Stack Monitoring
5	Sampling Location	Cement mill -II
6	Duration of Monitoring	75 minutes
7	Sample Condition	Satisfactory
8	Lab Sample code	ST-05
9	Analysis Start Date	10.07.2023
10	Analysis Completion Date	10.07.2023
11	Environmental Condition at the time of sampling	30°C

Stack Details

1	Stack attached to	Cement mill -II
2	Stack Diameter (mtr)	1.4

Emission Details

Sl. No.	Parameters	Result	Unit	Method	Permissible Limit
1	Stack Temperature	109	°C	IS-11255(Part 01)	-
2	Velocity of Flue Gas	5.1	m/sec	IS-11255(Part 01)	-
3	Particulate Matter	12.0	mg/Nm ³	IS 11255 (Part 01)	30.0
4	Gas flow rate *	15129	Nm ³ /hr	IS-11255(Part 03)	-
5.	Moisture *	<1	%	IS-11255(Part 03)	-
6.	Production rate*	126	TPH	-	-

End of Report

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MONITORED BY:

(B.Maruthi Rao)
Analyst

VERIFIED BY:

(P.Harika)
Technical Manager

AUTHORISED SIGNATORY:

(M. Shashikala)
Head of the Laboratory



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Environmental laboratory: Recognized by MoEF & CC Accredited by NABL (ISO/IEC: 17025)
vide certificate No: UC 6152 and Certified by ISO (45001:2018)



Certificate No: UC6152

Analysis Report of Stack Emission

Report no: III F

1	Name of the Industry	M/s. J.K. Cements Works, Muddapur (Unit : J.K. CEMENT LTD.,)
2	Address	Muddapur Village, Mudhol Taluk, Bagalkot District (KAR)-587122.
3	Date of Sampling	06.07.2023
4	Sample Type	Stack Monitoring
5	Sampling Location	Cement mill -III
6	Duration of Monitoring	49 minutes
7	Sample Condition	Satisfactory
8	Lab Sample code	ST-06
9	Analysis Start Date	10.07.2023
10	Analysis Completion Date	10.07.2023
11	Environmental Condition at the time of sampling	33°C

Stack Details

1	Stack attached to	Cement mill -III
2	Stack Diameter (mtr)	3.70

Emission Details

Sl. No.	Parameters	Result	Unit	Method	Permissible Limit
1	Stack Temperature	95	°C	IS-11255(Part 01)	-
2	Velocity of Flue Gas	5.58	m/sec	IS-11255(Part 01)	-
3	Particulate Matter	16.0	mg/Nm ³	IS 11255 (Part 01)	30.0
4	Gas flow rate *	249059	Nm ³ /hr	IS-11255(Part 03)	-
5.	Moisture *	<1	%	IS-11255(Part 03)	-
6.	Production rate*	232	TPH	-	-

End of Report

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MONITORED BY:

(B.Maruthi Rao)
Analyst

VERIFIED BY:

(P.Harika)
Technical Manager

AUTHORISED SIGNATORY:

(M. Shashikala)
Head of the Laboratory



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Certificate No:TC6152

Analysis Report of Stack Emission

Report no: III G

1	Name of the Industry	M/s. J.K. Cements Works, Muddapur (Unit : J.K. CEMENT LTD.,)
2	Address	Muddapur Village, Mudhol Taluk, Bagalkot District (KAR)-587122.
3	Date of Sampling	06.07.2023
4	Sample Type	Stack Monitoring
5	Sampling Location	Lime Stone Crusher Stack
6	Duration of Monitoring	53 minutes
7	Sample Condition	Satisfactory
8	Lab Sample code	ST-07
9	Analysis Start Date	10.07.2023
10	Analysis Completion Date	10.07.2023
11	Environmental Condition at the time of sampling	32°C

Stack Details

1	Stack attached to	Lime Stone Crusher
2	Stack Diameter (mtr)	1.20

Emission Details

Sl. No.	Parameters	Result	Unit	Method	Permissible Limit
1	Stack Temperature	75	°C	IS-11255(Part 01)	-
2	Velocity of Flue Gas	6.12	m/sec	IS-11255(Part 01)	-
3	Particulate Matter	18.5	mg/Nm ³	IS 11255 (Part 01)	50.0
4	Oxides of Sulphur	220.3	mg/Nm ³	CCRL/TOP/06:2016	600.00
5	Oxides of Nitrogen	150.3	mg/Nm ³	CCRL/TOP/06:2016	300.00
6	Mercury*	0.01	mg/Nm ³	CCRL/TOP/06:2016	0.03
7	Gas flow rate *	349061	Nm ³ /hr	IS-11255(Part 03)	-
8	Moisture *	<1	%	IS-11255(Part 03)	-
9	Production rate*	221	TPH	-	-

End of Report

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MONITORED BY:

(B.Maruthi Rao)
Analyst

VERIFIED BY:

(P.Harika)
Technical Manager

AUTHORISED SIGNATORY:

(M. Shashikala)
Head of the Laboratory

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Certificate No: TC6152

Analysis Report of Stack Emission

Report no: III H

1	Name of the Industry	M/s. J.K. Cements Works, Muddapur (Unit : J.K. CEMENT LTD.,)
2	Address	Muddapur Village, Mudhol Taluk, Bagalkot District (KAR)- 587122.
3	Date of Sampling	06.07.2023
4	Sample Type	Stack Monitoring
5	Sampling Location	Captive Power Plant
6	Duration of Monitoring	-
7	Sample Condition	-
8	Lab Sample code	-
9	Analysis Start Date	-
10	Analysis Completion Date	-
11	Environmental Condition at the time of sampling	-

Stack Details

1	Stack attached to	Captive Power Plant
2	Stack Diameter (mtr)	3.30

Emission Details

Sl. No.	Parameters	Result	Unit	Method	Permissible Limit
1	Stack Temperature	SHUT DOWN	°C	IS-11255(Part 01)	-
2	Velocity of Flue Gas		m/sec	IS-11255(Part 01)	-
3	Particulate Matter		mg/Nm ³	IS 11255 (Part 01)	50.0
4	Oxides of Sulphur		mg/Nm ³	CCRL/TOP/06:2016	600.0
5	Oxides of Nitrogen		mg/Nm ³	CCRL/TOP/06:2016	300.0
6	Mercury*		mg/Nm ³	AAS Method	0.03
7	Gas flow rate *		Nm ³ /hr	IS-11255(Part 03)	-
8	Moisture *		%	IS-11255(Part 03)	-
9	Production rate*		MWH	-	-

End of Report

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MONITORED BY:

(B.Maruthi Rao)
Analyst

VERIFIED BY:

(P.Harika)
Technical Manager

AUTHORISED SIGNATORY:

(M. Shashikala)
Head of the Laboratory

J.K. Cement WORKS, MUDDAPUR (KARNATAKA)

(Unit: J.K. Cement Ltd.)

Half Yearly Noise monitoring report of Cement & Power Plant for the month of April-2023 to September-2023**Ambient Noise**

Sl. No.	Location Name	Apr-23		May-23		Jun-23		Jul-23		Aug-23		Sep-23		Minimum		Maximum		Average	
		Day (dB) Leq	Night (dB) Leq	Day (dB) Leq	Night (dB) Leq	Day (dB) Leq	Night (dB) Leq	Day (dB) Leq	Night (dB) Leq	Day (dB) Leq	Night (dB) Leq	Day (dB) Leq	Night (dB) Leq	Day (dB) Leq	Night (dB) Leq	Day (dB) Leq	Night (dB) Leq	Day (dB) Leq	Night (dB) Leq
1	CPP Boundary side	67.6	64.5	68.5	66.7	67.5	64.8	68.6	63.7	70.8	67.7	72.5	68.9	67.5	63.7	72.5	68.9	69.3	66.1
2	Near Administrative Building	63.8	61.6	64.7	62.9	62.8	60.5	60.7	58.8	66.5	64.6	65.4	63.8	60.7	58.8	66.5	64.6	64.0	62.0
3	Lime Stone Crusher Gate	70.8	63.8	71.4	68.6	70.8	68.4	65.4	67.7	72.6	67.5	70.5	68.4	65.4	63.8	72.6	68.6	70.3	67.4
4	Near Logistic Office	66.8	64.4	68.5	65.7	67.6	64.9	63.7	65.8	68.7	65.9	67.5	66.3	63.7	64.4	68.7	66.3	67.1	65.5
5	Near QC Lab.	64.5	62.7	65.4	63.4	63.2	60.3	62.5	57.9	65.6	60.6	64.8	62.8	62.5	57.9	65.6	63.4	64.3	61.3
6	Near Plant Canteen	66.7	64.4	67.5	65.8	65.5	62.6	60.2	58.4	67.5	64.8	66.4	64.7	60.2	58.4	67.5	65.8	65.6	63.5
7	Plant Main Gate	68.5	66.6	69.6	67.9	69.6	65.6	68.7	66.4	62.4	58.9	63.5	60.5	62.4	58.9	69.6	67.9	67.1	64.3
8	Plant General Store	64.6	61.5	66.8	63.7	63.5	60.7	64.5	62.1	65.6	63.7	66.8	64.7	63.5	60.7	66.8	64.7	65.3	62.7

Sl. No.	Location Name	Apr-23	May-23	Jun-23	Jul-23	Aug-23	Sep-23	Min	Max	Average
		(dB) Leq	(dB) Leq	(dB) Leq	(dB) Leq	(dB) Leq	(dB) Leq	(dB) Leq	(dB) Leq	(dB) Leq
1	Lime Stone Crusher	83	83	82	80	83	82	80	83	82.2
2	Kiln/ Cooler	81	80	81	80	81	80	80	81	80.5
3	Kiln Platform	78	82	75	73	75	76	73	82	76.5
4	Power Plant (Near cooling tower)	62	65	62	62	65	66	62	66	63.7
5	Coal Shed	66	68	65	66	67	68	65	68	66.7
6	Slag Shed	67	64	65	64	63	64	63	67	64.5
7	Gypsum Shed	70	72	67	68	69	66	66	72	68.7
8	Raw mill proportioning hopper	76	77	75	74	75	72	72	77	74.8
9	Coal Mill	73	72	78	76	78	75	72	78	75.3
10	Near silo clinker loading point	75	76	71	72	75	72	71	76	73.5
12	CM-1 weigh feeder	79	78	77	78	80	78	77	80	78.3
13	CM-2 weigh feeder	75	74	75	76	78	75	74	78	75.5
14	Cement silo Packer-1	82	83	79	80	81	80	79	83	80.8
15	Cement silo Packer-2	80	81	75	77	78	75	75	81	77.7
16	Cement silo Packer-3	77	76	77	79	75	72	72	79	76.0
17	Cement silo Packer-4	75	73	80	82	80	78	73	82	78.0
18	Truck Loading point- 1	78	77	75	76	75	73	73	78	75.7
19	Truck Loading point- 2	76	75	78	75	72	70	70	78	74.3
20	Truck Loading point- 3	78	78	80	82	70	68	68	82	76.0
22	Truck Loading point- 4	75	74	74	76	78	75	74	78	75.3
23	Slag mill weigh feeder	74	76	72	73	72	74	72	76	73.5


Vinit Patil
Monitored By


Vinit Kumar Sharma
Checked By



COSMO CONSCIOUS RESEARCH LABORATORY

Environmental laboratory. Recognized by MoEF & CC. Accredited by NABL (ISO/IEC: 17025)
vide certificate No: TC6152 and Certified by ISO (45001:2018)

Annexure 4

Noise Report of Cement Plant

1. Name of the Industry : M/s. JK Cement Works
M/s. JK Cement Works,
Muddapur, (Unit: J.K.
Cement Ltd), P.O. Muddapur-
587122, Dist.
Bagalkot (Karnataka) India
2. Address : Cosmo Conscious Research
Laboratory
3. Sample collected by : Cement Plant
4. Name of the Location :

Ambient Noise													
Sl. No.	Location Name	Jul-23		Aug-23		Sep-23		Minimum		Maximum		Average	
		Day (dB) Leq	Night (dB) Leq	Day (dB) Leq	Night (dB) Leq	Day (dB) Leq	Night (dB) Leq	Day (dB) Leq	Night (dB) Leq	Day (dB) Leq	Night (dB) Leq	Day (dB) Leq	Night (dB) Leq
1	CPP Boundary side	67.6	61.7	70.2	64.7	72.5	60.9	67.6	60.9	72.5	64.7	70.1	62.4
2	Near Adm Building	61.4	53.6	65.5	64.6	65.4	53.8	61.4	53.6	65.5	64.6	64.1	57.3
3	Limestone Crusher Gate	68.7	57.7	72.6	64.5	70.5	67.4	68.7	57.7	72.6	67.4	70.6	63.2
4	Near Logistic Office	62.5	55.8	68.7	61.9	67.5	60.3	62.5	55.8	68.7	61.9	66.2	59.3
5	Near QC Lab.	60.8	57.9	65.6	54.6	64.8	52.8	60.8	52.8	65.6	57.9	63.7	55.1
6	Near Plant Canteen	58.8	48.4	66.5	54.8	66.4	51.7	58.8	48.4	66.5	54.8	63.9	51.6
7	Plant Main Gate	67.4	56.4	62.4	56.9	63.5	50.5	62.4	50.5	67.4	56.9	64.4	54.6
8	Plant General Store	65.6	52.1	65.6	53.7	66.8	54.7	65.6	52.1	66.8	54.7	66.0	53.5

End of Report

Note:

1. The above results are related only to the samples collected & tested on the particular date and time.

ANALYZED BY:

(Harika.R)
Analyst

AUTHORISED SIGNATORY:

(M.Sashikala)
Head of the Laboratory

1 of 1



"SURVEY HOUSE", # 121, 2nd Cross, Nehru Colony, Ballari-583103 (Karnataka)

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J.K. Cement WORKS, MUDDAPUR (KARNATAKA)

(Unit : J.K. Cement Limited)

Half Yearly Fugitive Emission Monitoring Report of Cement plant for the month of April-2023 to September-2023

SL. NO.	MONTH/YEAR	SPM (microgram/m ³)						
		Gypsum Yard	Slag Yard	Flyash Yard	Cement mill	Lime stone unloading hopper	Lime stone crushing Site	Coal Yard
1	April-23	1003.0	1029.2	1613.2	1087.7	702.8	1119.3	1260.5
2	May-23	1217.6	1154.6	1596.6	1413.1	883.8	1274.2	898.7
3	June-23	949.7	938.6	858.4	944.6	943.4	967.2	971.4
4	July-23	893.1	870.6	1008.2	1013.7	1027.7	1211.0	1166.8
5	August-23	1029.6	1043.0	764.9	1086.6	1218.1	1306.8	915.5
6	September-23	1197.5	1155.4	876.6	905.2	1169.8	1157.1	1005.7
	Minimum	893.14	870.63	764.93	905.24	702.77	967.24	898.69
	Maximum	1217.63	1155.45	1613.25	1413.11	1218.13	1306.77	1260.50
	Average	1048.43	1031.91	1119.67	1075.16	990.91	1172.61	1036.44
								911.29

Monitored by



Vinit Patil

 Vinit Kumar Sharma
 Checked by





COSMO CONSCIOUS RESEARCH LABORATORY

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vide certificate No. 1C6152 and Certified by ISO (45001:2018)

Annexure 5

Fugitive Report of Cement Plant

1. Name of the Industry : M/s. JK Cement Works
M/s. JK Cement Works,
2. Address : Muddapur, (Unit: J.K.Cement
Ltd), P.O. Muddapur-587122,
Dist. Bagalkot (Karnataka) India
3. Sample collected by : Cosmo Conscious Research
Laboratory
4. Name of the Location : Cement Plant

SL. NO.	MONTH/YEAR	SPM (microgram/m ³)							
		Gypsum Yard	Slag Yard	Flyash Yard	Cement mill	Limestone unloading hopper	Limestone crushing Site	Coal Yard	Packing Plant
1	July-23	875.4	905.3	868.4	1013.7	989.5	1143.6	890.5	1176.3

End of Report

Note:

1. The above results are related only to the samples collected & tested on the particular date and time.

ANALYZED BY:


(Harika.P)
Analyst

AUTHORISED SIGNATORY:


(M. Sashikala)
Head of the Laboratory

1 of 1



"SURVEY HOUSE", #121, 2nd Cross, Nehru Colony, Ballari-583103 (Karnataka)

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Annexure - C

J.K. Cement WORKS, MUDDAPUR (KARNATAKA)

(Unit: J.K. Cement Ltd.)

STP water Analysis Report (Monthly Average) for the Month of April-2023 to September-2023

Sl.No.	Month	Suspended Solids	PH	BOD	COD	NH ₄ -N	N-total	Fecal Coliform
	Tolerance limit	20	6 to 9	10	50	5	10	<230
1	Apr-23	16.0	7.2	8.0	30	3.0	8.2	Nil
2	May-23	15	7	8	28	3.2	7.5	Nil
3	Jun-23	15	7	8	26	3.4	7.4	Nil
4	Jul-23	18	8	8	28	3.5	7.2	Nil
5	Aug-23	17	8	7.6	26	3.8	7.4	Nil
6	Sep-23	18	8	9.5	32	3.5	6.8	Nil
Half Yearly Min.		15.00	7.00	7.60	26.00	3.00	6.80	Nil
Half Yearly Max.		18.00	8.00	9.50	32.00	3.80	8.20	Nil
Half Yearly Avg.		16.50	7.37	8.08	28.33	3.40	7.42	Nil


Vani Ratil
Monitored by


Vinit Kumar Sharma
Checked by

J.K. Cement WORKS, MUDDAPUR (KARNATAKA)

(Unit: J.K. Cement Ltd.)

EFFLUENT WATER ANALYSIS REPORT (Monthly Average) FOR THE MONTH OF APRIL-2023 TO SEPTEMBER-2023

Constituents	Suspended Solids (mg/L)	Temperature (°C) max	pH value	Oils and Grease (mg/L)
Permissible limit	100	Unobjectionable	5.5 to 9	10
Oct-21	PLANT SHUT DOWN			
Nov-21				
Dec-21				
Jan-22				
Feb-22				
Mar-22				
Half Avg	#DIV/0!	#DIV/0!	#DIV/0!	Nil
Half Minimum	0.0	0.00	0.00	Nil
Half Maximum	0.0	0.00	0.00	Nil

Monitored by

Vabir Patil

Vinit Kumar Sharma
Checked by



COSMO CONSCIOUS RESEARCH LABORATORY

Environmental laboratory Recognized by MoEF & CC Accredited by NABL (ISO/IEC: 17025)
vide certificate No : TC 6152 and Certified by ISO (45001:2018)

Annexure -6

STP Water Report of Cement Plant

- Report No: II B18
1. Name of the Industry : M/s. JK Cement Works
M/s. JK Cement Works,
Muddapur, (Unit: J.K.
Cement
2. Address : Ltd), P.O. Muddapur-
587122, Dist.
Bagalkot (Karnataka)
India
3. Sample collected by : Cosmo Conscious
Research Laboratory
4. Name of the Location : Cement Plant

STP water Analysis Report (Monthly Average) from July-2023 to September-2023								
Sl.No.	Month	Suspended Solids	PH	BOD	COD	NH4-N	N-total	Fecal Coliform
Tolerance limit		20	6 to 9	10	50	5	10	<230
1	Jul-23	18	7.6	8.8	29.5	3.5	6.6	Nil
2	Aug-23	17	8.1	7.6	32.4	2.3	8.1	Nil
3	Sep-23	18	7.5	6.5	26.3	3.3	7.4	Nil
Half Yearly Min.		17.00	7.50	6.50	26.30	2.30	6.60	Nil
Half Yearly Max.		18.00	8.10	8.80	32.40	3.50	8.10	Nil
Half Yearly Avg.		17.67	7.73	7.63	29.40	3.03	7.37	Nil

End of Report

Note:

1. The above results are related only to the samples collected & tested on the particular date and time.

ANALYZED BY:

(G.Dhavalreshwar)
Analyst

AUTHORISED SIGNATORY:

(M.Sashikala)
Head of the Laboratory

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vide certificate No. TC6152 and Certified by ISO (45001:2018)



Certificate No:TC6152

Annexure -6

Analysis Report of STP Treated Sewage Water

Report No: II A

1. Name of the Industry : M/s. JK Cement Works
2. Address : M/s. JK Cement Works, Muddapur, (Unit: J.K.Cement Ltd), P.O. Muddapur-587122, Dist. Bagalkot (Karnataka) India
3. Sample collected by : Cosmo Conscious Research Laboratory
4. Name of the Location : Industry Premises
5. Particulars of sample collected : STP Treated Sewage Water
6. Field Sample code : JKSW2
7. Lab Sample Code : CCRL W 9257
8. Date of sample collection : 15.09.2023
9. Date of sample Received : 16.09.2023
10. Date of sample Analyzed : 16.09.2023 to 22.09.2023
11. Method of Sampling : IS:3025 (Part 1) 1987 (Reaffirmed 2019)
12. Environmental condition at the time of sampling : 29.4°C
13. Unique Lab Report Number : TC6152230000006549F

Sl. No	Parameters	Protocol	Unit of Measurement	Results Sept.-'23	As per GSR 1265 E
PHYSICAL					
1.	pH	IS:3025 (part 11)-1983, RA-2022, Electrometric method	-	7.64	6.50-9.0
2.	Total Dissolved Solids	IS:3025 (part 16)-1984, RA-2017 Gravimetric method	mg/L	948	-
3.	Total Suspended Solids	IS:3025 (part 17)-1984, RA-2021, Gravimetric Method	mg/L	9	<50
CHEMICAL					
4.	Biochemical Oxygen Demand for 3 days at 27°C	IS:3025 (part 44)-1993, RA-2019, Three days BOD at 27°C	mg/L	3.20	20
5.	Chemical Oxygen Demand as O ₂	APHA 23 rd Edition 5220-B Closed reflux method	mg/L	28.5	30
6.	Oil & Grease	IS:3025 (part 39)-1991, RA-2021 Partition Gravimetric method	mg/L	BDL	-

End of Report

Note: 1. RA: Reaffirmed. BDL- Below detectable limit (Oil & Grease <4.0).

2. The above results are related only to the samples collected & tested on the particular date and time.

ANALYZED BY:

(G. Dhavaleshwar)
Analyst

VERIFIED BY:

(P. Harika)
Technical Manager

AUTHORISED SIGNATORY:

(M. Shashikala)
Head of the Laboratory

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Annexure-7

EXPENDITURE ON THE ENVIRONMENTAL MANAGEMENT PLAN FOR PERIOD FROM APRIL 2023 TO SEPTEMBER 2023

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.	1122.86
Fly ash Silo's and ash handling systems.	78.68
Emission Monitoring equipment (including online emission monitoring equipment (CEMS) at sources and ambient air quality in the vicinity) and laboratory.	10.18
Green Belt Development, Sewage Treatment plant and Water Harvesting Schemes for plant.	16.40
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.	1136.27
Other environmental management costs (AFR system operation, odour control, environmental training/Award, SNCR system CPP, Environmental License Fees).	626.91
TOTAL (Rs in Lakhs)	2991.32



Prepared by



Checked by

Annexure-8

JK CEMENT WORKS, MUDDAPUR

DETAILS OF CSR ACTIVITY UNDERTAKEN DURING APRIL-2023 TO SEPTEMBER-2023		
SL NO	Particulars	Amount (RS)
1	Running and maintenance of Sir Padampat School	499,087
2	Education aid and support	540,000
3	Pooja/ Fair/Festival/temple contributions	290,240
4	Rural development & other welfare activities	914,817
5	Promoting Rural sports, Nationally recognized sports	316,500
Total		2,560,644

Prepared by

Checked By