JK Cement Works, Muddapur
A Unit of JK Cement Ltd.
CIN : L17229UP1994PLC017199
Works : P.O. Muddapur - 587 122 Distt. Bagalkot (Karnataka) India
+91 - 8350-289954, 289607
factory.muddapur@jkcement.com
www.jkcement.com

No.JKCW/ENV/2024-25/ EC Compliance/1st Half(PLANT)/89/16 Date- 27-11-2024

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 April-2024 to September-2024 (1st Half) for JK Cement Works, Village- Muddapur, Taluka- Mudhol, District- Bagalkot (Karnataka)**

Ref: 1- MoEF Letter F. No. J-11011/489/2006-1A. II (I)/dtd.14-09-2007
2- Letter No. NIPL/CFO/AW-340496 dated 06/11/2023

★★★★★

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-2024 to September-2024 (1stHalf)** of JK Cement Works, Muddapur, (Unit: JK Cement Ltd) (Cement Plant -2.20 MTPA OPC, Clinker 2.64 MTPA, Captive Power Plant 1 x 25 MW, WHRS 18 MW and AFR Co-processing with Chlorine Bypass system 0.21 MTPA 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

Prabhat Singh Parihar
(Unit Head)

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 (Cement Plant -2.20 MTPA OPC, Clinker 2.64 MTPA, Captive Power Plant 1 x 25 MW, WHRS 18 MW and AFR Co-processing with Chlorine Bypass system 0.21 MTPA for JK Cement Works at Village- Lokapur, Mudhol, District Bagalkot, Karnataka by M/s J.K. Cement Works (Unit: JK Cement Ltd).

Reference: 1- MoEF vide Letter F. No. J-11011 / 489 / 2006-1A. II (I) / dated. 14th September 2007
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EC Compliance Report for the period April- 2024 to September- 2024

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 O2, 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 Ghataprabha 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,	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 September, 1999 and

Subject: EC to Cement Plant (Cement Plant -2.20 MTPA OPC, Clinker 2.64 MTPA, Captive Power Plant 1 x 25 MW, WHRS 18 MW and AFR Co-processing with Chlorine Bypass system 0.21 MTPA for JK Cement Works 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- 2024 to September- 2024

	2003. STP sludge shall be used as manure for green belt development. Used oil shall be sold to authorized recycler / re processor only.	amended in august, 2003. Fly ash utilization report submitted online on 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, greenbelt 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-

Subject: EC to Cement Plant (Cement Plant -2.20 MTPA OPC, Clinker 2.64 MTPA, Captive Power Plant 1 x 25 MW, WHRS 18 MW and AFR Co-processing with Chlorine Bypass system 0.21 MTPA for JK Cement Works 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- 2024 to September- 2024

		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 fully covered conveyors for transportation of materials	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 materials and fully covered conveyors for transportation of materials have been provided besides coal. Cement, fly ash and clinker are stored in silos.

	shall be provided besides coal, cement, fly ash and clinker shall be 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. NOC no. KGWAN1854669818, Dated 26.10.2024.
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-2024 to September-2024 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-2024 to September-2024 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	Complying.

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EC Compliance Report for the period April- 2024 to September- 2024

	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	
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 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	The fugitive dust emissions are controlled 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.

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	National Task Force (NTF). The NTF shall submit its recommendations within three months	• 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.

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2- Letter No. NIPL/CFO/AW-340496 dated 06/11/2023

EC Compliance Report for the period April- 2024 to September- 2024

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	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.

	be in the vernacular language of the locality concerned and a copy of the same shall be forwarded to the regional office at Bangalore.	
6.0	The Ministry or any other competent authority may stipulate any further condition(s) on receiving reports from the project authorities. The above conditions shall be monitored by the Regional offices of this Ministry located of Bangalore.	Noted.
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.

Annexure -2

COSMO CONSCIOUS RESEARCH LABORATC
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	:	**(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	:	**Source Emission Air Quality Monitoring**
5.	Sample Condition	:	**Satisfactory**
6.	Analysis Start Date	:	**03.04.2024**
7.	Analysis Completion Date	:	**08.04.2024**
8.	Month of Monitoring	:	**April 2024**
9.	Environmental condition at the time of sampling	:	**33.6°C**
10.	Unique Lab Report Number	:	**TC6152230000007525F**

Name of the Station/ Date of Sample Collection	Lab Sample Code	Particulars of Sample Collected			
		SO_2 (μg/m³)	NO_2 (μg/m³)	PM_{10} (μg/m³)	$PM_{2.5}$ (μg/m³)
AAQM Locations for Cement Plant		NAAQ standards 2009			
		80 (μg/m³)	80 (μg/m³)	100 (μg/m³)	60 (μg/m³)
AI- Admin Building					
06.04.2024	961, 961, C85, 052	15	19	48	15
AII- Guest House					
06.04.2024	962, 962, C86, 060	18	10	56	12
AIII-Muddapur Village					
02.04.2024	953, 953, C41, 595	15	13	65	12
AIV- Bomanbudhini Village					
03.04.2024	958, 958, C118, 953	18	20	51	20

END OF REPORT

Note: 1. SO2 – Sulfur Dioxide, NO2 – Nitrogen Dioxide, , PM10 – Particulate Matter (size less than 10 μm), PM2.5 – 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.

Name of the Equipment	Eq. ID. No.	Date of Calibration	Calibration Due on
Combo Sampler	230568 to 230571	30.11.2023	29.11.2024

ANALYZED BY:
(G.Dhavaleshwar)
Analyst

VERIFIED BY:
(P.Harika)
Technical Manager

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

"SURVEY HOUSE", #121, 2nd Cross, Nehru Colony, Ballari–583103 (Karnataka)
Ph: 08392 255744, Website: www.tsccrl.com email: chiefexecutive@tsccrl.com

AIR QUALITY MONITORING DATA

Report No.: I A1

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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	:	**07.05.2024**
7.	Analysis Completion Date	:	**10.05.2024**
8.	Month of Monitoring	:	**May 2024**
9.	Environmental condition at the time of sampling	:	**33.8°C**
10.	Unique Lab Report Number	:	**TC6152230000007638F**

Name of the Station/ Date of Sample Collection	Lab Sample Code	Particulars of Sample Collected			
		SO_2 (µg/m³)	NO_2 (µg/m³)	PM_{10} (µg/m³)	$PM_{2.5}$ (µg/m³)
AAQM Locations for Cement Plant		NAAQ standards 2009			
		80 (µg/m³)	80 (µg/m³)	100 (µg/m³)	60 (µg/m³)
AI- Admin Building					
09.05.2024	45, 45, C124, 806	18	19	58	17
AII- Guest House					
08.05.2024	43, 43, C126, 813	20	10	56	12
AIII-Muddapur Village					
06.05.2024	36, 36, C134, 804	14	17	60	19
AIV- Bomanbudhini Village					
07.05.2024	41, 41, C127, 817	19	16	53	11

END OF REPORT

Note: 1. SO2 – Sulfur Dioxide, NO2 – Nitrogen Dioxide, , PM10 – Particulate Matter (size less than 10 µm), PM2.5 – 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.

Name of the Equipment	Eq. ID. No.	Date of Calibration	Calibration Due on
Combo Sampler	230568 to 230571	30.11.2023	29.11.2024

ANALYZED BY:
(G.Dhavaleshwar)
Analyst

VERIFIED BY:
(P.Harika)
Technical Manager

AUTHORISED SIGNATORY:
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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	:	**18.06.2024**
7.	Analysis Completion Date	:	**20.06.2024**
8.	Month of Monitoring	:	**June 2024**
9.	Environmental condition at the time of sampling	:	**29.8°C**
10.	Unique Lab Report Number	:	**TC6152230000007738F**

Name of the Station/ Date of Sample Collection	Lab Sample Code	Particulars of Sample Collected			
		SO_2 (µg/m³)	NO_2 (µg/m³)	PM_{10} (µg/m³)	$PM_{2.5}$ (µg/m³)
AAQM Locations for Cement Plant		**NAAQ standards 2009**			
		80 (µg/m³)	**80 (µg/m³)**	**100 (µg/m³)**	**60 (µg/m³)**
AI- Admin Building					
17.06.2024	146, 146, C137, 285	14	12	58	17
AII- Guest House					
17.06.2024	147, 147, C40, 288	16	18	49	14
AIII-Muddapur Village					
18.06.2024	152, 152, C144, 292	17	10	47	14
AIV- Bomanbudhini Village					
19.06.2024	155, 155, C148, 296	12	15	55	14

END OF REPORT

Note: 1. SO2 – Sulfur Dioxide, NO2 – Nitrogen Dioxide, , PM10 – Particulate Matter (size less than 10 µm), PM2.5 – Particulate Matter (size less than 2.5 µm).
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Analyst

VERIFIED BY:
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Technical Manager

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

"SURVEY HOUSE", #121, 2nd Cross, Nehru Colony, Ballari–583103 (Karnataka)
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AIR QUALITY MONITORING DATA

Report No.: I A1

1.	Name of the Project	:	**M/s. JK Cement Works, Muddapur, (Unit: J.K.Cement Ltd), P.O.Muddapur-587122, Dist.Bagalkot (Karnataka) India**
2.	Sample Collected By	:	**Cosmo Conscious Research Laboratory**
3.	Particulars of Sample Collected	:	**Ambient Air Quality Monitoring**
4.	Sample Condition	:	**Satisfactory**
5.	Analysis Start Date	:	**09.07.2024**
6.	Analysis Completion Date	:	**13.07.2024**
7.	Month of Monitoring	:	**July 2024**
8.	Environmental condition at the time of	:	**26.8°C**
9.	Unique Lab Report Number	:	**TC6152230000007751J**

Name of the Station/ Date of Sample Collection	Lab Sample Code	Particulars of Sample Collected			
		SO_2 (µg/m³)	NO_2 (µg/m³)	PM_{10} (µg/m³)	$PM_{2.5}$ (µg/m³)
AAQM Locations for Cement Plant		NAAQ standards 2009			
		80(µg/m3)	80(µg/m3)	100(µg/m3)	60(µg/m3)
AI- Admin Building					
10.07.2024	291, 291, C09, 136	12	15	58	31
AII- Guest House					
10.07.2024	292, 292, C10, 137	14	13	49	16
AIII-Muddapur Village					
10.07.2024	294, 294, C12, 134	22	17	39	16
AIV- Bomanbudhini Village					
11.07.2024	295, 295, C14, 149	14	19	43	18
AAQM Locations for Halki Mines					
AV- Near Halki mines office					
09.07.2024	288, 288, C16, 141	12	17	42	18
AVI- North Boundary Side					
09.07.2024	289, 289, C17, 140	13	18	52	27
AVII-Halki Village					
08.07.2024	286, 286, C18, 144	15	19	48	26
AVIII- Metgudda Village					
08.07.2024	283, 283, C19, 142	12	15	42	17

Contd...

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AIR QUALITY MONITORING DATA

1.	Name of the Project	:	**M/s. JK Cement Works, Muddapur,**
2.	Name of the Client	:	**(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	:	**Source Emission Air Quality Monitoring**
5.	Sample Condition	:	**Satisfactory**
6.	Analysis Start Date	:	**23.08.2024**
7.	Analysis Completion Date	:	**23.08.2024**
8.	Report Issue Date	:	**02.09.2024**
9.	Month of Monitoring	:	**August 2024**
10.	Environmental condition at the time of sampling	:	**28.2°C**
11.	Unique Lab Report Number	:	**TC6152240000000052F**

Name of the Station/ Date of Sample Collection	Lab Sample Code	Particulars of Sample Collected			
		SO_2 (µg/m³)	NO_2 (µg/m³)	PM_{10} (µg/m³)	$PM_{2.5}$ (µg/m³)
AAQM Locations for Cement Plant		**NAAQ standards 2009**			
		80 (µg/m³)	**80** (µg/m³)	**100** (µg/m³)	**60** (µg/m³)
AI- Admin Building					
21.08.2024	355, 355, C03, 459	17	20	58	14
AII- Guest House					
21.08.2024	356, 356, C06, 461	20	18	50	23
AIII-Muddapur Village					
19.08.2024	361, 361, C02, 462	16	11	49	20
AIV- Bomanbudhini Village					
20.08.2024	364, 364, C08, 456	19	12	53	24

END OF REPORT

Note: 1. SO2 – Sulfur Dioxide, NO2 – Nitrogen Dioxide, , PM10 – Particulate Matter (size less than 10 µm), PM2.5 – 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.

Name of the Equipment	Eq. ID. No.	Date of Calibration	Calibration Due on
Combo Sampler	230568 to 230571	30.11.2023	29.11.2024

ANALYZED BY:
(G.Dhavaleshwar)
Analyst

VERIFIED BY:
(P.Harika)
Technical Manager

AUTHORISED SIGNATORY: SHASHIKALA MULABAGULA Digitally signed by SHASHIKALA MULABAGULA Date: 2024.09.05 16:37:05 +05'30'
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AIR QUALITY MONITORING DATA

1.	Name of the Project	:	**M/s. JK Cement Works, Muddapur,**
2.	Name of the Client	:	**(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	:	**Source Emission Air Quality Monitoring**
5.	Sample Condition	:	**Satisfactory**
6.	Analysis Start Date	:	**18.09.2024**
7.	Analysis Completion Date	:	**21.09.2024**
8.	Report Issue Date	:	**04.10.2024**
9.	Month of Monitoring	:	**September 2024**
10.	Environmental condition at the time of sampling	:	**29.8°C**

Name of the Station/ Date of Sample Collection	Lab Sample Code	Particulars of Sample Collected			
		SO_2 (µg/m³)	NO_2 (µg/m³)	PM_{10} (µg/m³)	$PM_{2.5}$ (µg/m³)
AAQM Locations for Cement Plant		NAAQ standards 2009			
		80 (µg/m³)	80 (µg/m³)	100 (µg/m³)	60 (µg/m³)
AI- Admin Building					
19.09.2024	445, 445, C16, 083	12	14	51	13
AII- Guest House					
19.09.2024	443, 443, C17, 082	19	20	60	21
AIII-Muddapur Village					
17.09.2024	434, 434, C13, 088	11	16	55	14
AIV- Bomanbudhini Village					
18.09.2024	441, 441, C21, 085	21	20	50	22

END OF REPORT

Note: 1. SO2 – Sulfur Dioxide, NO2 – Nitrogen Dioxide, , PM10 – Particulate Matter (size less than 10 µm), PM2.5 – 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.

Name of the Equipment	Eq. ID. No.	Date of Calibration	Calibration Due on
Combo Sampler	230568 to 230571	30.11.2023	29.11.2024

ANALYZED BY:
(G.Dhavaleshwar)
Analyst

VERIFIED BY:
(P.Harika)
Technical Manager

AUTHORISED SIGNATORY:
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Annexure - 3

Analysis Report of Stack Emission

Report no: III G

1	Name of the Industry	**M/s. JK Cement Works, Muddapur,**
2	Address	**(Unit: J.K.Cement Ltd), P.O.Muddapur-587122, Dist.Bagalkot (Karnataka) India**
3	Date of Sampling	**13.04.2024**
4	Sample Type	**Stack Monitoring**
5	Sampling Location	**Lime Stone Crusher Stack**
6	Duration of Monitoring	**57 Minutes**
7	Sample Condition	**Satisfactory**
8	Lab Sample code	**ST-3417**
9	Analysis Start Date	**17.04.2024**
10	Analysis Completion Date	**18.04.2024**
11	Environmental Condition at the time of sampling	**39°C**
12	Unique Lab Report Number	**TC6152230000007535F**

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	**45.0**	^{0}C	IS-11255(Part 01)	-
2	Velocity of Flue Gas	**9.84**	m/sec	IS-11255(Part 01)	-
3	Particulate Matter	**19.6**	mg/Nm^3	IS 11255 (Part 01)	**50.0**
4	Gas flow rate *	**38828.24**	Nm^3/hr	IS-11255(Part 03)	-
5	Moisture *	**<1**	%	IS-11255(Part 03)	-
6	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.

Name of the Equipment	Eq. ID. No.	Date of Calibration	Calibration Due on
Stack Kit	VSS 1, 84-DTK-2017	24.06.2023	22.06.2024
Flue Gas Analyser	FGA-53X/FGA-037	01.06.2023	31.05.2024

MONITORED BY: **(G.Dhavaleshwar)**
Analyst

VERIFIED BY: **(P.Harika)**
Technical Manager

AUTHORISED SIGNATORY: **(M. Shashikala)**
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Analysis Report of Stack Emission

Report no: III F

1	Name of the Industry	**M/s. JK Cement Works, Muddapur,**
2	Address	**(Unit: J.K.Cement Ltd), P.O.Muddapur-587122, Dist.Bagalkot (Karnataka) India**
3	Date of Sampling	**11.04.2024**
4	Sample Type	**Stack Monitoring**
5	Sampling Location	**Cement mill -III**
6	Duration of Monitoring	**57 minutes**
7	Sample Condition	**Satisfactory**
8	Lab Sample code	**ST-3423**
9	Analysis Start Date	**17.04.2024**
10	Analysis Completion Date	**18.04.2024**
11	Environmental Condition at the time of sampling	**34°C**
12	Unique Lab Report Number	**TC6152230000007534F**

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	**40.0**	°C	IS-11255(Part 01)	-
2	Velocity of Flue Gas	**8.11**	m/sec	IS-11255(Part 01)	-
3	Particulate Matter	**18.1**	mg/Nm^3	IS 11255 (Part 01)	**30.0**
4	Gas flow rate *	**315555.03**	Nm^3/hr	IS-11255(Part 03)	-
5.	Moisture *	**<1**	%	IS-11255(Part 03)	-
6.	Production rate*	**218**	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.

Name of the Equipment	Eq. ID. No.	Date of Calibration	Calibration Due on
Stack Kit	VSS 1, 84-DTK-2017	24.06.2023	22.06.2024
Flue Gas Analyser	FGA-53X/FGA-037	01.06.2023	31.05.2024

MONITORED BY: (G.Dhavaleshwar) Analyst

VERIFIED BY: (P.Harika) Technical Manager

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

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Analysis Report of Stack Emission

Report no: III D

1	Name of the Industry	**M/s. JK Cement Works, Muddapur,**
2	Address	**(Unit: J.K.Cement Ltd), P.O.Muddapur-587122, Dist.Bagalkot (Karnataka) India**
3	Date of Sampling	**11.04.2024**
4	Sample Type	**Stack Monitoring**
5	Sampling Location	**Cement mill -I**
6	Duration of Monitoring	**46 minutes**
7	Sample Condition	**Satisfactory**
8	Lab Sample code	**ST-3425**
9	Analysis Start Date	**17.04.2024**
10	Analysis Completion Date	**18.04.2024**
11	Environmental Condition at the time of sampling	**32°C**
12	Unique Lab Report Number	**TC6152230000007533F**

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	77	^{0}C	IS-11255(Part 01)	-
2	Velocity of Flue Gas	7.82	m/sec	IS-11255(Part 01)	-
3	Particulate Matter	14.8	mg/Nm^3	IS 11255 (Part 01)	30.0
4	Gas flow rate *	37473.12	Nm3/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
2. The Tests marked with an * are not accredited by NABL.

Name of the Equipment	Eq. ID. No.	Date of Calibration	Calibration Due on
Stack Kit	VSS 1, 84-DTK-2017	24.06.2023	22.06.2024
Flue Gas Analyser	FGA-53X/FGA-037	01.06.2023	31.05.2024

MONITORED BY:
(G.Dhavaleshwar)
Analyst

VERIFIED BY:
(P.Harika)
Technical Manager

AUTHORISED SIGNATORY: (M. Shashikala)
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Analysis Report of Stack Emission

Report no: III C

1	Name of the Industry	**M/s. JK Cement Works, Muddapur,**
2	Address	**(Unit: J.K.Cement Ltd), P.O.Muddapur-587122, Dist.Bagalkot (Karnataka) India**
3	Date of Sampling	**13.04.2024**
4	Sample Type	**Stack Monitoring**
5	Sampling Location	**Cooler station**
6	Duration of Monitoring	**62 minutes**
7	Sample Condition	**Satisfactory**
8	Lab Sample code	**ST- 3424**
9	Analysis Start Date	**17.04.2024**
10	Analysis Completion Date	**18.04.2024**
11	Environmental Condition at the time of sampling	**29°C**
12	Unique Lab Report Number	**TC6152230000007532F**

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	**85.0**	^{0}C	IS-11255(Part 01)	-
2	Velocity of Flue Gas	**10.98**	m/sec	IS-11255(Part 01)	-
3	Particulate Matter	**16.30**	mg/Nm^3	IS 11255 (Part 01)	**30.0**
4	Gas flow rate *	**388149.14**	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.

Name of the Equipment	Eq. ID. No.	Date of Calibration	Calibration Due on
Stack Kit	VSS 1, 84-DTK-2017	24.06.2023	22.06.2024
Flue Gas Analyser	FGA-53X/FGA-037	01.06.2023	31.05.2024

MONITORED BY:
(G.Dhavaleshwar)
Analyst

VERIFIED BY:
(P.Harika)
Technical Manager

AUTHORISED SIGNATORY: (M. Shashikala)
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Analysis Report of Stack Emission

Report no: III B

1	Name of the Industry	**M/s. JK Cement Works, Muddapur**
2	Address	**(Unit: J.K.Cement Ltd),P.O.Muddapur-587122, Dist. Bagalkot (Karnataka) India**
3	Date of Sampling	**12.04.2024**
4	Sample Type	**Stack Monitoring**
5	Sampling Location	**Coal Mill**
6	Duration of Monitoring	**40 minutes**
7	Sample Condition	**Satisfactory**
8	Lab Sample code	**ST-3422**
9	Analysis Start Date	**17.04.2024**
10	Analysis Completion Date	**18.04.2024**
11	Environmental Condition at the time of sampling	**33°C**
12	Unique Lab Report Number	**TC6152230000007531F**

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	**59**	^{0}C	IS-11255(Part 01)	-
2	Velocity of Flue Gas	**10.47**	m/sec	IS-11255(Part 01)	-
3	Particulate Matter	**19.40**	mg/Nm^3	IS 11255 (Part 01)	**30.0**
4.	Gas flow rate *	**53055.25**	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.

Name of the Equipment	Eq. ID. No.	Date of Calibration	Calibration Due on
Stack Kit	VSS 1, 84-DTK-2017	24.06.2023	22.06.2024
Flue Gas Analyser	FGA-53X/FGA-037	01.06.2023	31.05.2024

MONITORED BY:
(G.Dhavaleshwar)
Analyst

VERIFIED BY:
(P.Harika)
Technical Manager

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

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Analysis Report of Stack Emission

Report no: III A

1	Name of the Industry	**M/s. JK Cement Works, Muddapur,**
2	Address	**(Unit: J.K.Cement Ltd), P.O.Muddapur-587122, Dist.Bagalkot (Karnataka) India**
3	Date of Sampling	**12.04.2024**
4	Sample Type	**Stack Monitoring**
5	Sampling Location	**Raw Mill**
6	Duration of Monitoring	**32 Minutes**
7	Sample Condition	**Satisfactory**
8	Lab Sample code	**ST- 3418**
9	Analysis Start Date	**17.04.2024**
10	Analysis Completion Date	**18.04.2024**
11	Environmental Condition at the time of sampling	**33°C**
12	Unique Lab Report Number	**TC6152230000007530F**

Stack Details

1	Stack attached to	**Raw Mill**
2	Stack Diameter (mtr)	**7.20**

Emission Details

Sl. No.	Parameters	Result	Unit	Method	Permissible Limit
1	Stack Temperature	**136**	^{0}C	IS-11255(Part 01)	-
2	Velocity of Flue Gas	**7.97**	m/sec	IS-11255(Part 01)	-
3	Particulate Matter	**21.4**	mg/Nm^3	IS 11255 (Part 01)	**30.0**
4	Sulphur dioxide (SO2)	**3.5**	mg/Nm^3	CCRL/TOP/06:2016	**100.0**
5	Oxides of Nitrogen (NOX)	**185**	mg/Nm^3	CCRL/TOP/06:2016	**800.0**
6	Carbon Monoxide *	**Nil**	ppm	CCRL/TOP/06:2016	-
7.	Gas flow rate *	**872320.00**	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.

Name of the Equipment	Eq. ID. No.	Date of Calibration	Calibration Due on
Stack Kit	VSS 1, 84-DTK-2017	24.06.2023	22.06.2024
Flue Gas Analyser	FGA-53X/FGA-037	01.06.2023	31.05.2024

MONITORED BY:
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Analyst

VERIFIED BY:
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Technical Manager

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Analysis Report of Stack Emission

Report no: III G

1	Name of the Industry	**M/s. JK Cement Works, Muddapur,**
2	Address	**(Unit: J.K.Cement Ltd), P.O.Muddapur-587122, Dist.Bagalkot (Karnataka) India**
3	Date of Sampling	**10.05.2024**
4	Sample Type	**Stack Monitoring**
5	Sampling Location	**Lime Stone Crusher Stack**
6	Duration of Monitoring	**128 Minutes**
7	Sample Condition	**Satisfactory**
8	Lab Sample code	**ST-4174**
9	Analysis Start Date	**17.05.2024**
10	Analysis Completion Date	**18.05.2024**
11	Environmental Condition at the time of sampling	**34°C**
12	Unique Lab Report Number	**TC6152230000007658F**

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	**38.0**	^{0}C	IS-11255(Part 01)	-
2	Velocity of Flue Gas	**4.15**	m/sec	IS-11255(Part 01)	-
3	Particulate Matter	**19.7**	mg/Nm^3	IS 11255 (Part 01)	**50.0**
4	Gas flow rate *	**16544.55**	Nm^3/hr	IS-11255(Part 03)	-
5	Moisture *	**<1**	%	IS-11255(Part 03)	-
6	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.

Name of the Equipment	Eq. ID. No.	Date of Calibration	Calibration Due on
Stack Kit	VSS 1, 84-DTK-2017	24.06.2023	22.06.2024
Flue Gas Analyser	FGA-53X/FGA-037	01.06.2023	31.05.2024

MONITORED BY:
(G.Dhavaleshwar)
Analyst

VERIFIED BY:
(P.Harika)
Technical Manager

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

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Analysis Report of Stack Emission

Report no: III F

1	Name of the Industry	**M/s. JK Cement Works, Muddapur,**
2	Address	**(Unit: J.K.Cement Ltd), P.O.Muddapur-587122, Dist.Bagalkot (Karnataka) India**
3	Date of Sampling	**13.05.2024**
4	Sample Type	**Stack Monitoring**
5	Sampling Location	**Cement mill -III**
6	Duration of Monitoring	**41 minutes**
7	Sample Condition	**Satisfactory**
8	Lab Sample code	**ST-4169**
9	Analysis Start Date	**17.05.2024**
10	Analysis Completion Date	**18.05.2024**
11	Environmental Condition at the time of sampling	**39°C**
12	Unique Lab Report Number	**TC6152230000007657F**

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	**87.0**	^{0}C	IS-11255(Part 01)	-
2	Velocity of Flue Gas	**11.32**	m/sec	IS-11255(Part 01)	-
3	Particulate Matter	**14.6**	mg/Nm^3	IS 11255 (Part 01)	**30.0**
4	Gas flow rate *	**386915.78**	Nm^3/hr	IS-11255(Part 03)	-
5.	Moisture *	**<1**	%	IS-11255(Part 03)	-
6.	Production rate*	**218**	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.

Name of the Equipment	Eq. ID. No.	Date of Calibration	Calibration Due on
Stack Kit	VSS 1, 84-DTK-2017	24.06.2023	22.06.2024
Flue Gas Analyser	FGA-53X/FGA-037	01.06.2023	31.05.2024

MONITORED BY: (G.Dhavaleshwar) Analyst

VERIFIED BY: (P.Harika) Technical Manager

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

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COSMO CONSCIOUS RESEARCH LABORATORY
Certificate No:TC6152

Analysis Report of Stack Emission

Report no: III D

1	Name of the Industry	**M/s. JK Cement Works, Muddapur,**
2	Address	**(Unit: J.K.Cement Ltd), P.O.Muddapur-587122, Dist.Bagalkot (Karnataka) India**
3	Date of Sampling	**14.05.2024**
4	Sample Type	**Stack Monitoring**
5	Sampling Location	**Cement mill -I**
6	Duration of Monitoring	**28 minutes**
7	Sample Condition	**Satisfactory**
8	Lab Sample code	**ST-4144**
9	Analysis Start Date	**17.05.2024**
10	Analysis Completion Date	**18.05.2024**
11	Environmental Condition at the time of sampling	**32°C**
12	Unique Lab Report Number	**TC6152230000007656F**

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	92	^0C	IS-11255(Part 01)	-
2	Velocity of Flue Gas	9.98	m/sec	IS-11255(Part 01)	-
3	Particulate Matter	13.1	mg/Nm^3	IS 11255 (Part 01)	30.0
4	Gas flow rate *	45624.96	Nm3/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
2. The Tests marked with an * are not accredited by NABL.

Name of the Equipment	Eq. ID. No.	Date of Calibration	Calibration Due on
Stack Kit	VSS 1, 84-DTK-2017	24.06.2023	22.06.2024
Flue Gas Analyser	FGA-53X/FGA-037	01.06.2023	31.05.2024

MONITORED BY: (G.Dhavaleshwar)
Analyst

VERIFIED BY: (P.Harika)
Technical Manager

AUTHORISED SIGNATORY: (M. Shashikala)
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Analysis Report of Stack Emission

Report no: III C

1	Name of the Industry	**M/s. JK Cement Works, Muddapur,**
2	Address	**(Unit: J.K.Cement Ltd), P.O.Muddapur-587122, Dist.Bagalkot (Karnataka) India**
3	Date of Sampling	**13.05.2024**
4	Sample Type	**Stack Monitoring**
5	Sampling Location	**Cooler station**
6	Duration of Monitoring	**59 minutes**
7	Sample Condition	**Satisfactory**
8	Lab Sample code	**ST- 3424**
9	Analysis Start Date	**17.05.2024**
10	Analysis Completion Date	**18.05.2024**
11	Environmental Condition at the time of sampling	**31°C**
12	Unique Lab Report Number	**TC6152230000007655F**

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	**226.0**	^0C	IS-11255(Part 01)	-
2	Velocity of Flue Gas	**6.50**	m/sec	IS-11255(Part 01)	-
3	Particulate Matter	**19.60**	mg/Nm^3	IS 11255 (Part 01)	**30.0**
4	Gas flow rate *	**164127.60**	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.

Name of the Equipment	Eq. ID. No.	Date of Calibration	Calibration Due on
Stack Kit	VSS 1, 84-DTK-2017	24.06.2023	22.06.2024
Flue Gas Analyser	FGA-53X/FGA-037	01.06.2023	31.05.2024

MONITORED BY:
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Analysis Report of Stack Emission

Report no: III B

1	Name of the Industry	**M/s. JK Cement Works, Muddapur**
2	Address	**(Unit: J.K.Cement Ltd),P.O.Muddapur-587122, Dist. Bagalkot (Karnataka) India**
3	Date of Sampling	**14.05.2024**
4	Sample Type	**Stack Monitoring**
5	Sampling Location	**Coal Mill**
6	Duration of Monitoring	**45 minutes**
7	Sample Condition	**Satisfactory**
8	Lab Sample code	**ST-4160**
9	Analysis Start Date	**17.05.2024**
10	Analysis Completion Date	**18.05.2024**
11	Environmental Condition at the time of sampling	**33°C**
12	Unique Lab Report Number	**TC6152230000007654F**

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	43	^{0}C	IS-11255(Part 01)	-
2	Velocity of Flue Gas	5.45	m/sec	IS-11255(Part 01)	-
3	Particulate Matter	17.10	mg/Nm^3	IS 11255 (Part 01)	30.0
4.	Gas flow rate *	28817.85	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.

Name of the Equipment	Eq. ID. No.	Date of Calibration	Calibration Due on
Stack Kit	VSS 1, 84-DTK-2017	24.06.2023	22.06.2024
Flue Gas Analyser	FGA-53X/FGA-037	01.06.2023	31.05.2024

MONITORED BY:
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Analysis Report of Stack Emission

Report no: III A

1	Name of the Industry	**M/s. JK Cement Works, Muddapur,**
2	Address	**(Unit: J.K.Cement Ltd), P.O.Muddapur-587122, Dist.Bagalkot (Karnataka) India**
3	Date of Sampling	**11.05.2024**
4	Sample Type	**Stack Monitoring**
5	Sampling Location	**Raw Mill**
6	Duration of Monitoring	**50 Minutes**
7	Sample Condition	**Satisfactory**
8	Lab Sample code	**ST- 4165**
9	Analysis Start Date	**17.05.2024**
10	Analysis Completion Date	**18.05.2024**
11	Environmental Condition at the time of sampling	**32°C**
12	Unique Lab Report Number	**TC6152230000007653F**

Stack Details

1	Stack attached to	**Raw Mill**
2	Stack Diameter (mtr)	**7.20**

Emission Details

Sl. No.	Parameters	Result	Unit	Method	Permissible Limit
1	Stack Temperature	**131**	^{0}C	IS-11255(Part 01)	-
2	Velocity of Flue Gas	**6.29**	m/sec	IS-11255(Part 01)	-
3	Particulate Matter	**9.50**	mg/Nm^3	IS 11255 (Part 01)	**30.0**
4	Sulphur dioxide (SO2)	**8.2**	mg/Nm^3	CCRL/TOP/06:2016	**100.0**
5	Oxides of Nitrogen (NOX)	**165**	mg/Nm^3	CCRL/TOP/06:2016	**800.0**
6	Carbon Monoxide *	**Nil**	ppm	CCRL/TOP/06:2016	-
7.	Gas flow rate *	**758121.12**	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.

Name of the Equipment	Eq. ID. No.	Date of Calibration	Calibration Due on
Stack Kit	VSS 1, 84-DTK-2017	24.06.2023	22.06.2024
Flue Gas Analyser	FGA-53X/FGA-037	01.06.2023	31.05.2024

MONITORED BY:
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Analysis Report of Stack Emission

Report no: III G

1	Name of the Industry	**M/s. JK Cement Works, Muddapur,**
2	Address	**(Unit: J.K.Cement Ltd), P.O.Muddapur-587122, Dist.Bagalkot (Karnataka) India**
3	Date of Sampling	**19.06.2024**
4	Sample Type	**Stack Monitoring**
5	Sampling Location	**Lime Stone Crusher Stack**
6	Duration of Monitoring	**57 Minutes**
7	Sample Condition	**Satisfactory**
8	Lab Sample code	**ST-41758**
9	Analysis Start Date	**26.06.2024**
10	Analysis Completion Date	**26.06.2024**
11	Environmental Condition at the time of sampling	**29°C**
12	Unique Lab Report Number	**TC6152230000007750F**

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	36	^{0}C	IS-11255(Part 01)	-
2	Velocity of Flue Gas	4.17	m/sec	IS-11255(Part 01)	-
3	Particulate Matter	25.1	mg/Nm^3	IS 11255 (Part 01)	50.0
4	Gas flow rate *	16454.65	Nm^3/hr	IS-11255(Part 03)	-
5	Moisture *	<1	%	IS-11255(Part 03)	-
6	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.

Name of the Equipment	Eq. ID. No.	Date of Calibration	Calibration Due on
Stack Kit	VSS 1, 84-DTK-2017	24.06.2023	22.06.2024
Flue Gas Analyser	FGA-53X/FGA-037	30.01.2024	29.01.2025

MONITORED BY: **(G.Dhavaleshwar)**
Analyst

VERIFIED BY: **(P.Harika)**
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Analysis Report of Stack Emission

Report no: III F

1	Name of the Industry	**M/s. JK Cement Works, Muddapur,**
2	Address	**(Unit: J.K.Cement Ltd), P.O.Muddapur-587122, Dist.Bagalkot (Karnataka) India**
3	Date of Sampling	**22.06.2024**
4	Sample Type	**Stack Monitoring**
5	**Sampling Location**	**Cement mill -III**
6	Duration of Monitoring	**57 minutes**
7	Sample Condition	**Satisfactory**
8	Lab Sample code	**ST-61083**
9	Analysis Start Date	**26.06.2024**
10	Analysis Completion Date	**26.06.2024**
11	Environmental Condition at the time of sampling	**30°C**
12	Unique Lab Report Number	**TC6152230000007749F**

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	40	^{0}C	IS-11255(Part 01)	-
2	Velocity of Flue Gas	4.16	m/sec	IS-11255(Part 01)	-
3	Particulate Matter	20.8	mg/Nm^3	IS 11255 (Part 01)	30.0
4	Gas flow rate *	158721.63	Nm^3/hr	IS-11255(Part 03)	-
5.	Moisture *	<1	%	IS-11255(Part 03)	-
6.	Production rate*	218	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.

Name of the Equipment	Eq. ID. No.	Date of Calibration	Calibration Due on
Stack Kit	VSS 1, 84-DTK-2017	24.06.2023	22.06.2024
Flue Gas Analyser	FGA-53X/FGA-037	30.01.2024	29.01.2025

MONITORED BY: **(G.Dhavaleshwar)**
Analyst

VERIFIED BY: **(P.Harika)**
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Analysis Report of Stack Emission

Report no: III E

1	Name of the Industry	**M/s. JK Cement Works, Muddapur,**
2	Address	**(Unit: J.K.Cement Ltd), P.O.Muddapur-587122, Dist.Bagalkot (Karnataka) India**
3	Date of Sampling	**20.06.2024**
4	Sample Type	**Stack Monitoring**
5	Sampling Location	**Cement mill -II**
6	Duration of Monitoring	**71 minutes**
7	Sample Condition	**Satisfactory**
8	Lab Sample code	**ST-42033**
9	Analysis Start Date	**26.06.2024**
10	Analysis Completion Date	**26.06.2024**
11	Environmental Condition at the time of sampling	**28°C**
12	Unique Lab Report Number	**TC6152230000007748F**

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	**98**	^{0}C	IS-11255(Part 01)	-
2	Velocity of Flue Gas	**4.12**	m/sec	IS-11255(Part 01)	-
3	Particulate Matter	**13.3**	mg/Nm^3	IS 11255 (Part 01)	**30.0**
4	Gas flow rate *	**18381.29**	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
2. The Tests marked with an * are not accredited by NABL.

Name of the Equipment	Eq. ID. No.	Date of Calibration	Calibration Due on
Stack Kit	VSS 1, 84-DTK-2017	24.06.2023	22.06.2024
Flue Gas Analyser	FGA-53X/FGA-037	30.01.2024	29.01.2025

MONITORED BY: **(G.Dhavaleshwar)**
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VERIFIED BY: **(P.Harika)**
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Analysis Report of Stack Emission

Report no: III D

1	Name of the Industry	**M/s. JK Cement Works, Muddapur,**
2	Address	**(Unit: J.K.Cement Ltd), P.O.Muddapur-587122, Dist.Bagalkot (Karnataka) India**
3	Date of Sampling	**20.06.2024**
4	Sample Type	**Stack Monitoring**
5	Sampling Location	**Cement mill -I**
6	Duration of Monitoring	**67 minutes**
7	Sample Condition	**Satisfactory**
8	Lab Sample code	**ST-3406**
9	Analysis Start Date	**26.06.2024**
10	Analysis Completion Date	**26.06.2024**
11	Environmental Condition at the time of sampling	**27°C**
12	Unique Lab Report Number	**TC6152230000007747F**

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	^{0}C	IS-11255(Part 01)	-
2	Velocity of Flue Gas	4.20	m/sec	IS-11255(Part 01)	-
3	Particulate Matter	19.4	mg/Nm^3	IS 11255 (Part 01)	30.0
4	Gas flow rate *	19313.83	Nm3/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
2. The Tests marked with an * are not accredited by NABL.

Name of the Equipment	Eq. ID. No.	Date of Calibration	Calibration Due on
Stack Kit	VSS 1, 84-DTK-2017	24.06.2023	22.06.2024
Flue Gas Analyser	FGA-53X/FGA-037	30.01.2024	29.01.2025

MONITORED BY: (G.Dhavaleshwar) Analyst

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Analysis Report of Stack Emission

Report no: III C

1	Name of the Industry	**M/s. JK Cement Works, Muddapur,**
2	Address	**(Unit: J.K.Cement Ltd), P.O.Muddapur-587122, Dist.Bagalkot (Karnataka) India**
3	Date of Sampling	**20.06.2024**
4	Sample Type	**Stack Monitoring**
5	Sampling Location	**Cooler station**
6	Duration of Monitoring	**58 minutes**
7	Sample Condition	**Satisfactory**
8	Lab Sample code	**ST- 41751**
9	Analysis Start Date	**26.06.2024**
10	Analysis Completion Date	**26.06.2024**
11	Environmental Condition at the time of sampling	**28°C**
12	Unique Lab Report Number	**TC6152230000007746F**

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	**182**	^0C	IS-11255(Part 01)	-
2	Velocity of Flue Gas	**6.40**	m/sec	IS-11255(Part 01)	-
3	Particulate Matter	**13.10**	mg/Nm^3	IS 11255 (Part 01)	**30.0**
4	Gas flow rate *	**177762.81**	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.

Name of the Equipment	Eq. ID. No.	Date of Calibration	Calibration Due on
Stack Kit	VSS 1, 84-DTK-2017	24.06.2023	22.06.2024
Flue Gas Analyser	FGA-53X/FGA-037	30.01.2024	29.01.2025

MONITORED BY: **(G.Dhavaleshwar)**
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VERIFIED BY: **(P.Harika)**
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Analysis Report of Stack Emission

Report no: III B

1	Name of the Industry	**M/s. JK Cement Works, Muddapur**
2	Address	**(Unit: J.K.Cement Ltd),P.O.Muddapur-587122, Dist. Bagalkot (Karnataka) India**
3	Date of Sampling	**21.06.2024**
4	Sample Type	**Stack Monitoring**
5	Sampling Location	**Coal Mill**
6	Duration of Monitoring	**51 minutes**
7	Sample Condition	**Satisfactory**
8	Lab Sample code	**ST-4155**
9	Analysis Start Date	**26.06.2024**
10	Analysis Completion Date	**26.06.2024**
11	Environmental Condition at the time of sampling	**29°C**
12	Unique Lab Report Number	**TC6152230000007745F**

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	65	^{0}C	IS-11255(Part 01)	-
2	Velocity of Flue Gas	5.19	m/sec	IS-11255(Part 01)	-
3	Particulate Matter	18.50	mg/Nm^3	IS 11255 (Part 01)	30.0
4.	Gas flow rate *	25591.65	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.

Name of the Equipment	Eq. ID. No.	Date of Calibration	Calibration Due on
Stack Kit	VSS 1, 84-DTK-2017	24.06.2023	22.06.2024
Flue Gas Analyser	FGA-53X/FGA-037	30.01.2024	29.01.2025

MONITORED BY: (G.Dhavaleshwar) Analyst

VERIFIED BY: (P.Harika) Technical Manager

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Analysis Report of Stack Emission

Report no: III A

1	Name of the Industry	**M/s. JK Cement Works, Muddapur,**
2	Address	**(Unit: J.K.Cement Ltd), P.O.Muddapur-587122, Dist.Bagalkot (Karnataka) India**
3	Date of Sampling	**19.06.2024**
4	Sample Type	**Stack Monitoring**
5	Sampling Location	**Raw Mill**
6	Duration of Monitoring	**51 Minutes**
7	Sample Condition	**Satisfactory**
8	Lab Sample code	**ST- 3403**
9	Analysis Start Date	**26.06.2024**
10	Analysis Completion Date	**26.06.2024**
11	Environmental Condition at the time of sampling	**26°C**
12	Unique Lab Report Number	**TC6152230000007744F**

Stack Details

1	Stack attached to	**Raw Mill**
2	Stack Diameter (mtr)	**7.20**

Emission Details

Sl. No.	Parameters	Result	Unit	Method	Permissible Limit
1	Stack Temperature	**131**	^{0}C	IS-11255(Part 01)	-
2	Velocity of Flue Gas	**6.18**	m/sec	IS-11255(Part 01)	-
3	Particulate Matter	**14.0**	mg/Nm^3	IS 11255 (Part 01)	**30.0**
4	Sulphur dioxide (SO2)	**8.2**	mg/Nm^3	CCRL/TOP/06:2016	**100.0**
5	Oxides of Nitrogen (NOX)	**152**	mg/Nm^3	CCRL/TOP/06:2016	**800.0**
6	Carbon Monoxide *	**Nil**	ppm	CCRL/TOP/06:2016	-
7.	Gas flow rate *	**733938.38**	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.

Name of the Equipment	Eq. ID. No.	Date of Calibration	Calibration Due on
Stack Kit	VSS 1, 84-DTK-2017	24.06.2023	22.06.2024
Flue Gas Analyser	FGA-53X/FGA-037	30.01.2024	29.01.2025

MONITORED BY:
(G.Dhavaleshwar)
Analyst

VERIFIED BY:
(P.Harika)
Technical Manager

AUTHORISED SIGNATORY: (M. Shashikala)
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Analysis Report of Stack Emission

Report no: III F

1	Name of the Industry	**M/s. JK Cement Works, Muddapur (Unit : J.K. CEMENT LTD.,)**
2	Address	**Muddapur Village, Mudhol Taluk, Bagalkot District (KAR)-587122.**
3	Date of Sampling	**11.07.2024**
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-06**
9	Analysis Start Date	**15.07.2024**
10	Analysis Completion Date	**15.07.2024**
11	Environmental Condition at the time of sampling	**30°C**
12	Unique Lab Report Number	**TC6152230000007758J**

Stack Details

1	Stack attached to	**Limestone Crusher**
2	Stack Diameter (mtr)	**1.20**

Emission Details

Sl. No.	Parameters	Result	Unit	Method	Permissible Limit
1	Stack Temperature	**66**	^{0}C	IS-11255(Part 01)	-
2	Velocity of Flue Gas	**7.45**	m/sec	IS-11255(Part 01)	-
3	Particulate Matter	**20.40**	mg/Nm^3	IS 11255 (Part 01)	**30.0**
4	Gas flow rate *	**16768**	Nm^3/hr	IS-11255(Part 03)	-
5	Moisture *	**<1**	%	IS-11255(Part 03)	-
6	Production rate*	**211**	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.

ANALYZED BY: (G.Dhavaleshwar) Analyst

VERIFIED BY: (P.Harika) Technical Manager

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Analysis Report of Stack Emission

Report no: III E

1	Name of the Industry	**M/s. JK Cement Works, Muddapur (Unit : J.K. CEMENT LTD.,)**
2	Address	**Muddapur Village, Mudhol Taluk, Bagalkot District (KAR)-587122.**
3	Date of Sampling	**11.07.2024**
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-05**
9	Analysis Start Date	**15.07.2024**
10	Analysis Completion Date	**15.07.2024**
11	Environmental Condition at the time of sampling	**27°C**
12	Unique Lab Report Number	**TC6152230000007757J**

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	**78**	^{0}C	IS-11255(Part 01)	-
2	Velocity of Flue Gas	**9.56**	m/sec	IS-11255(Part 01)	-
3	Particulate Matter	**14.6**	mg/Nm^3	IS 11255 (Part 01)	**30.0**
4	Gas flow rate *	**157785**	Nm^3/hr	IS-11255(Part 03)	-
5.	Moisture *	**<1**	%	IS-11255(Part 03)	-
6.	Production rate*	**217**	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.

ANALYZED BY: (G.Dhavaleshwar) Analyst

VERIFIED BY: (P.Harika) Technical Manager

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Analysis Report of Stack Emission

Report no: III D

1	Name of the Industry	**M/s. JK Cement Works, Muddapur (Unit : J.K. CEMENT LTD.,)**
2	Address	**Muddapur Village, Mudhol Taluk, Bagalkot District (KAR)-587122.**
3	Date of Sampling	**11.07.2024**
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-04**
9	Analysis Start Date	**15.07.2024**
10	Analysis Completion Date	**15.07.2024**
11	Environmental Condition at the time of sampling	**28°C**
12	Unique Lab Report Number	**TC6152230000007756J**

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	**65**	^{0}C	IS-11255(Part 01)	-
2	Velocity of Flue Gas	**13.34**	m/sec	IS-11255(Part 01)	-
3	Particulate Matter	**21.4**	mg/Nm^3	IS 11255 (Part 01)	**30.0**
4	Gas flow rate *	**18546**	Nm^3/hr	IS-11255(Part 03)	-
5.	Moisture *	**<1**	%	IS-11255(Part 03)	-
6.	Production rate*	**129**	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.

ANALYZED BY: (G.Dhavaleshwar) Analyst

VERIFIED BY: (P.Harika) Technical Manager

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Analysis Report of Stack Emission

Report no: III C

1	Name of the Industry	**M/s. J.K Cement Works, Muddapur (Unit : J.K. CEMENT LTD.,)**
2	Address	**Muddapur Village, Mudhol Taluk, Bagalkot District (KAR)- 587122.**
3	Date of Sampling	**10.07.2024**
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-03**
9	Analysis Start Date	**15.07.2024**
10	Analysis Completion Date	**15.07.2024**
11	Environmental Condition at the time of sampling	**29°C**
12	Unique Lab Report Number	**TC6152230000007755J**

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	**244**	^{0}C	IS-11255(Part 01)	-
2	Velocity of Flue Gas	**10.83**	m/sec	IS-11255(Part 01)	-
3	Particulate Matter	**15.9**	mg/Nm^3	IS 11255 (Part 01)	**30.0**
4	Gas flow rate *	**178678**	Nm^3/hr	IS-11255(Part 03)	-
5	Moisture *	**<1**	%	IS-11255(Part 03)	-
6	Production rate*	**322**	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.

ANALYZED BY: (G.Dhavaleshwar) Analyst

VERIFIED BY: (P.Harika) Technical Manager

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Analysis Report of Stack Emission

Report no: III B

1	Name of the Industry	**M/s. JK Cement Works, Muddapur (Unit : J.K. CEMENT LTD.,)**
2	Address	**Muddapur Village, Mudhol Taluk, Bagalkot District (KAR)-587122.**
3	Date of Sampling	**10.07.2024**
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	**15.07.2024**
10	Analysis Completion Date	**15.07.2024**
11	Environmental Condition at the time of sampling	**27°C**
12	Unique Lab Report Number	**TC6152230000007754J**

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	72	^{0}C	IS-11255(Part 01)	-
2	Velocity of Flue Gas	7.44	m/sec	IS-11255(Part 01)	-
3	Particulate Matter	18.6	mg/Nm^3	IS 11255 (Part 01)	30.0
4	Gas flow rate *	25765	Nm^3/hr	CCRL/TOP/06:2016	-
5	Moisture *	<1	%	IS-11255(Part 03)	-
6	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
2. The Tests marked with an * are not accredited by NABL.

ANALYZED BY: (G.Dharvateshwar) Analyst

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Analysis Report of Stack Emission

Report no: III A

1	Name of the Industry	**M/s. JK Cement Works, Muddapur (Unit : J.K. CEMENT LTD.,)**
2	Address	**Muddapur Village, Mudhol Taluk, Bagalkot District (KAR)-587122.**
3	Date of Sampling	**10.07.2024**
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	**15.07.2024**
10	Analysis Completion Date	**15.07.2024**
11	Environmental Condition at the time of sampling	**27°C**
12	Unique Lab Report Number	**TC6152230000007753J**

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	**154**	^{0}C	IS-11255(Part 01)	-
2	Velocity of Flue Gas	**11.38**	m/sec	IS-11255(Part 01)	-
3	Particulate Matter	**13.54**	mg/Nm^3	IS 11255 (Part 01)	**30.0**
4	Oxides of Sulphur	**0.8**	mg/Nm^3	CCRL/TOP/06:2016	**100.0**
5	Oxides of Nitrogen	**428**	mg/Nm^3	CCRL/TOP/06:2016	**800.0**
6	Carbon Monoxide *	**Nil**	ppm	CCRL/TOP/06:2016	-
7.	Gas flow rate *	**823837**	Nm^3/hr	IS-11255(Part 03)	-
8.	Moisture *	**<1**	%	IS-11255(Part 03)	-
9.	Production rate*	**421**	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.

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Analysis Report of Stack Emission

1	Name of the Industry	**M/s. JK Cement Works, Muddapur,**
2	Address	**(Unit: J.K.Cement Ltd), P.O.Muddapur-587122, Dist.Bagalkot (Karnataka) India**
3	Date of Sampling	**23.08.2024**
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-01**
9	Analysis Start Date	**26.08.2024**
10	Analysis Completion Date	**26.08.2024**
11	Report Issue Date	**02.09.2024**
12	Environmental Condition at the time of sampling	33°C IS-11255(Part 01)
13	Stack Temperature	42°C IS-11255(Part 01)
14	Velocity of Flue Gas	4.95 m/sec
15	Gas flow rate	**183467.60** Nm^3/hr IS-11255(Part 03)
16	Moisture	<1 % IS-11255(Part 03)
17	Production rate	**218 TPH**
18	Unique Lab Report Number	**TC6152240000000061F**

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	Particulate Matter	**12.2**	mg/Nm^3	IS 11255 (Part 01)	**30.0**

End of Report

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

MONITORED BY:
(G.Dhavaleshwar)
Analyst

VERIFIED BY:
(P.Harika)
Technical Manager

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Analysis Report of Stack Emission

1	Name of the Industry	**M/s. JK Cement Works, Muddapur,**
2	Address	**(Unit: J.K.Cement Ltd), P.O.Muddapur-587122, Dist.Bagalkot (Karnataka) India**
3	Date of Sampling	**22.08.2024**
4	Sample Type	**Stack Monitoring**
5	Sampling Location	**Cement mill -II**
6	Duration of Monitoring	**34 minutes**
7	Sample Condition	**Satisfactory**
8	Lab Sample code	**ST-4305**
9	Analysis Start Date	**26.08.2024**
10	Analysis Completion Date	**26.08.2024**
11	Report Issue Date	**02.09.2024**
12	Environmental Condition at the time of sampling	32°C IS-11255(Part 01)
13	Stack Temperature	62°C IS-11255(Part 01)
14	Velocity of Flue Gas	6.31 m/sec
15	Gas flow rate *	31837.05 Nm^3/hr IS-11255(Part 03)
16	Moisture *	<1 % IS-11255(Part 03)
17	Production rate*	125 TPH
18	Unique Lab Report Number	**TC6152240000000060F**

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	Particulate Matter	13.70	mg/Nm^3	IS 11255 (Part 01)	30.0

End of Report

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

MONITORED BY:
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Analysis Report of Stack Emission

1	Name of the Industry	**M/s. JK Cement Works, Muddapur,**
2	Address	**(Unit: J.K.Cement Ltd), P.O.Muddapur-587122, Dist.Bagalkot (Karnataka) India**
3	Date of Sampling	**22.08.2024**
4	Sample Type	**Stack Monitoring**
5	Sampling Location	**Cement mill -I**
6	Duration of Monitoring	**48 minutes**
7	Sample Condition	**Satisfactory**
8	Lab Sample code	**ST-4302**
9	Analysis Start Date	**26.08.2024**
10	Analysis Completion Date	**26.08.2024**
11	Report Issue Date	**02.09.2024**
12	Environmental Condition at the time of sampling	**28**^{0}C IS-11255(Part 01)
13	Stack Temperature	**72**^{0}C IS-11255(Part 01)
14	Velocity of Flue Gas	**5.58** m/sec
15	Gas flow rate *	**26979.26** Nm^3/hr IS-11255(Part 03)
16	Moisture *	**<1** % IS-11255(Part 03)
17	Production rate*	**125 TPH**
18	Unique Lab Report Number	**TC6152240000000059F**

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	Particulate Matter	9.4	mg/Nm^3	IS 11255 (Part 01)	30.0

End of Report

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

MONITORED BY:
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Analyst

VERIFIED BY:
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Analysis Report of Stack Emission

1	Name of the Industry	**M/s. JK Cement Works, Muddapur,**
2	Address	**(Unit: J.K.Cement Ltd), P.O.Muddapur-587122, Dist.Bagalkot (Karnataka) India**
3	Date of Sampling	**25.09.2024**
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-5341**
9	Analysis Start Date	**28.09.2024**
10	Analysis Completion Date	**28.09.2024**
11	Report Issue Date	**04.10.2024**
12	Environmental Condition at the time of sampling	**23**^{0}C IS-11255(Part 01)
13	Stack Temperature	**36**^{0}C IS-11255(Part 01)
14	Velocity of Flue Gas	**3.92** m/sec
15	Gas flow rate	**147994.08** Nm^3/hr IS-11255(Part 03)
16	Moisture	**<1** % IS-11255(Part 03)
17	Production rate	**218** **TPH**

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	Particulate Matter	15.2	mg/Nm^3	IS 11255 (Part 01)	30.0

End of Report

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

MONITORED BY:
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Analysis Report of Stack Emission

1	Name of the Industry	**M/s. JK Cement Works, Muddapur,**
2	Address	**(Unit: J.K.Cement Ltd), P.O.Muddapur-587122, Dist.Bagalkot (Karnataka) India**
3	Date of Sampling	**24.09.2024**
4	Samp'e Type	**Stack Monitoring**
5	Sampling Location	**Cement mill -II**
6	Duration of Monitoring	**49 minutes**
7	Sample Condition	**Satisfactory**
8	Lab Sample code	**ST-5343**
9	Analysis Start Date	**28.09.2024**
10	Analysis Completion Date	**28.09.2024**
11	Report Issue Date	**04.10.2024**
12	Environmental Condition at the time of sampling	**28**^{0}C IS-11255(Part 01)
13	Stack Temperature	**46**^{0}C IS-11255(Part 01)
14	Velocity of Flue Gas	**5.02** m/sec
15	Gas flow rate *	**26192.84** Nm^3/hr IS-11255(Part 03)
16	Moisture *	**<1** % IS-11255(Part 03)
17	Production rate*	**125** **TPH**

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	Particulate Matter	12.6	mg/Nm^3	IS 11255 (Part 01)	30.0

End of Report

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

MONITORED BY:
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Analysis Report of Stack Emission

1	Name of the Industry	**M/s. JK Cement Works, Muddapur,**
2	Address	**(Unit: J.K.Cement Ltd), P.O.Muddapur-587122, Dist.Bagalkot (Karnataka) India**
3	Date of Sampling	**24.09.2024**
4	Sample Type	**Stack Monitoring**
5	Sampling Location	**Cement mill -I**
6	Duration of Monitoring	**22 minutes**
7	Sample Condition	**Satisfactory**
8	Lab Sample code	**ST-5342**
9	Analysis Start Date	**28.09.2024**
10	Analysis Completion Date	**28.09.2024**
11	Report Issue Date	**04.10.2024**
12	Environmental Condition at the time of sampling	27°C IS-11255(Part 01)
13	Stack Temperature	42°C IS-11255(Part 01)
14	Velocity of Flue Gas	**10.91** m/sec
15	Gas flow rate *	**57475.02** Nm^3/hr IS-11255(Part 03)
16	Moisture *	**<1** % IS-11255(Part 03)
17	Production rate*	**125** **TPH**

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	Particulate Matter	6.98	mg/Nm^3	IS 11255 (Part 01)	30.0

End of Report

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

MONITORED BY: (G.Dhavaleshwar) Analyst

VERIFIED BY: (P.Harika) Technical Manager

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Annexure – 4

AMBIENT NOISE LEVEL MONITORING DATA

Report No. IV A

1.	Name of the Client	:	**M/s. JK Cement Works, Muddapur,**
2.	Address	:	**(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	:	**Noise Monitoring**
5.	Sample Condition	:	**Satisfactory**
6.	Monitoring Date	:	**06.05.2024 to 15.05.2024**
7.	Month of Monitoring	:	**May 2024**

I. Ambient Noise Locations for Cement Plant:

Sl. No.	Code	Sampling Location	Date	Unit	L max.	L eq.		L min.
						Day	Night	
1.	N1	CPP Boundary Side	06.05.2024	dB (A)	62.8	54.1	52.7	52.0
2.	N2	Near Administrative Building	06.05.2024	dB (A)	63.9	53.2	52.8	51.9
3.	N3	Lime Stone Crusher Gate	07.05.2024	dB (A)	64.1	62.8	57.3	53.7
4.	N4	Near Logistic Office	07.05.2024	dB (A)	62.7	52.7	51.9	51.1
5.	N5	Near QC Lab	14.05.2024	dB (A)	64.0	53.2	52.4	52.0
6.	N6	Near Plant Canteen	14.05.2024	dB (A)	63.9	53.8	52.9	51.8
7.	N7	Plant Main Gate	15.05.2024	dB (A)	62.8	57.2	56.3	53.7
8.	N8	Plant General Store	15.05.2024	dB (A)	63.5	56.2	54.2	52.8

MOEF ambient Noise standards in dB(A) Leq (No.41, Dt.11.01.2010)	Residential Area limits dB(A) Leq		Industrial Area limits dB(A) Leq	
	Day time	Night time	Day time	Night time
	55	45	75	70
Method Adopted	Integrated Sound Level Meter			

Name of the Equipment	Eq. ID. No.	Date of Calibration	Calibration Due on
Sound Level Meter	Lutron/SL-4030	26.06.2023	25.06.2024

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

MONITORED BY: **(G.Dhavaleshwar)**
Analyst

VERIFIED BY: **(P.Harika)**
Technical Manager

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

"SURVEY HOUSE", #121, 2nd Cross, Nehru Colony, Ballari–583103 (Karnataka)
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AMBIENT NOISE LEVEL MONITORING DATA

1.	Name of the Client	:	**M/s. JK Cement Works, Muddapur,**
2.	Address	:	**(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	:	**Noise Monitoring**
5.	Sample Condition	:	**Satisfactory**
6.	Monitoring Date	:	**24.09.2024 to 25.09.2024**
7.	Month of Monitoring	:	**September 2024**

I. Ambient Noise Locations for Cement Plant:

Sl. No.	Code	Sampling Location	Date	Unit	L max.	L eq.		L min.
						Day	Night	
1.	N1	CPP Boundary Side	24.09.2024	dB (A)	67.9	53.8	52.4	51.6
2.	N2	Near Administrative Building	24.09.2024	dB (A)	69.3	61.2	58.9	57.2
3.	N3	Lime Stone Crusher Gate	24.09.2024	dB (A)	65.2	63.1	56.2	54.3
4.	N4	Near Logistic Office	25.09.2024	dB (A)	72.4	68.2	62.5	58.9
5.	N5	Near QC Lab	25.09.2024	dB (A)	73.4	68.3	65.7	57.2
6.	N6	Near Plant Canteen	25.09.2024	dB (A)	75.3	69.5	65.7	58.3
7.	N7	Plant Main Gate	25.09.2024	dB (A)	76.2	65.2	62.8	54.2
8.	N8	Plant General Store	25.09.2024	dB (A)	72.4	66.8	63.8	53.2

MOEF ambient Noise standards in dB(A) Leq (No.41, Dt.11.01.2010)	Residential Area limits dB(A) Leq		Industrial Area limits dB(A) Leq	
	Day time	Night time	Day time	Night time
	55	45	75	70
Method Adopted	Integrated Sound Level Meter			

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

MONITORED BY:
(G.Dhavaleshwar)
Analyst

VERIFIED BY:
(P.Harika)
Technical Manager

SHASHIKALA MULABAGULA
Digitally signed by SHASHIKALA MULABAGULA
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AUTHORISED SIGNATORY: (M. Shashikala)
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Annexure - 5

FUGITIVE EMISSION AIR QUALITY MONITORING DATA

Report No. I B1

1.	Name of the Industry	:	**M/s. JK Cement Works, Muddapur,**
2.	Address	:	**(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	:	**Fugitive Emission Air Quality Monitoring**
5.	Sample Condition	:	**Satisfactory**
6.	Analysis Start Date	:	**11.05.2024**
7.	Analysis Completion Date	:	**15.05.2024**
8.	Month of Monitoring	:	**May 2024**
9.	Environmental condition at the time of sampling	:	**33.6°C**
10.	Method adopted (Sampling & Analysis)	:	**IS 5182 (Part 4) :2006**

Sl. No.	Date of Sample Collection	Name of the Station	Lab Sample Code	SPM (mg/m^3)	IBM Standard (mg/m^3)
Fugitive Locations for Cement Plant					
1.	11.05.2024	Lime Stone Crushing Site	510427	**1.04**	5.0
2.	13.05.2024	Fly ash Yard	510439	**0.85**	5.0
3.	12.05.2024	Gypsum Yard	510438	**0.90**	5.0
4.	11.05.2024	Slag Yard	510428	**0.98**	5.0
5.	10.05.2024	Cement Mill	510425	**0.89**	5.0
6.	14.05.2024	Lime Stone unloading hopper	510432	**0.87**	5.0
7.	12.05.2024	Coal Yard	510437	**0.86**	5.0
8.	10.05.2024	Packing Plant	510426	**0.86**	5.0

END OF REPORT

Note: 1. SPM – Suspended Particulate Matter.
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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FUGITIVE EMISSION AIR QUALITY MONITORING DATA

1.	Name of the Industry	:	M/s. JK Cement Works, Muddapur,
2.	Address	:	(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	:	Fugitive Emission Air Quality Monitoring
5.	Sample Condition	:	Satisfactory
6.	Analysis Start Date	:	28.09.2024
7.	Analysis Completion Date	:	28.09.2024
8.	Report Issue Date	:	04.10.2024
9.	Month of Monitoring	:	September 2024
10.	Environmental condition at the time of sampling	:	29.8°C
11.	Method adopted (Sampling & Analysis)	:	IS 5182 (Part 4) :2006

Sl. No.	Date of Sample Collection	Name of the Station	Lab Sample Code	SPM (mg/m^3)	IBM Standard (mg/m^3)
Fugitive Locations for Cement Plant					
1.	24.09.2024	Lime Stone Crushing Site	509961	**1.08**	5.0
2.	26.09.2024	Fly ash Yard	509969	**0.86**	5.0
3.	24.09.2024	Gypsum Yard	509962	**0.93**	5.0
4.	25.09.2024	Slag Yard	509965	**1.03**	5.0
5.	23.09.2024	Cement Mill	509963	**1.01**	5.0
6.	25.09.2024	Lime Stone unloading hopper	509970	**0.89**	5.0
7.	26.09.2024	Coal Yard	509968	**0.87**	5.0
8.	23.09.2024	Packing Plant	509960	**0.90**	5.0

END OF REPORT

Note: 1. SPM – Suspended Particulate Matter.
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:
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Annexure – 6

Analysis Report of STP Treated Sewage Water

Report No: II A1

1.	Name of the Industry	:	**M/s. JK Cement Works, Muddapur,**
2.	Address	:	**(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 9625**
8.	Date of sample collection	:	**20.04.2024**
9.	Date of sample Received	:	**21.04.2024**
10.	Date of sample Analyzed	:	**21.04.2024 to 25.04.2024**
11.	Method of Sampling	:	**IS:3025 (Part 1) 1987 (Reaffirmed 2019)**
12.	Environmental condition at the time of sampling	:	**33.8°C**
13.	Unique Lab Report Number	:	**TC6152230000007528F**

Sl. No	Parameters	Protocol	Unit of Measurement	Results Apr.'-24	As per GSR 1265 E
PHYSICAL					
1.	pH	IS:3025 (part 11)-1983, RA-2022, Electrometric method	-	**7.11**	6.50-9.0
2.	Total Dissolved Solids	IS:3025 (part 16)-1984, RA-2017 Gravimetric method	mg/L	**2730**	-
3.	Total Suspended Solids	IS:3025 (part 17)-1984, , RA-2021, Gravimetric Method	mg/L	**19**	<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	**6.00**	20
5.	Chemical Oxygen Demand as O_2	APHA 23rd Edition 5220-B Closed reflux method	mg/L	**16**	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)**
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Analysis Report of STP Treated Sewage Water

Report No: II B1

1.	Name of the Industry	:	**M/s. JK Cement Works, Muddapur,**
2.	Address	:	**(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	:	**Near Guest House**
5.	Particulars of sample collected	:	**STP Treated Sewage Water**
6.	Field Sample code	:	**JKSW3**
7.	Lab Sample Code	:	**CCRL W 9626**
8.	Date of sample collection	:	**20.04.2024**
9.	Date of sample Received	:	**21.04.2024**
10.	Date of sample Analyzed	:	**21.04.2024 to 25.04.2024**
11.	Method of Sampling	:	**IS:3025 (Part 1) 1987 (Reaffirmed 2019)**
12.	Environmental condition at the time of sampling	:	**33.5°C**
13.	Unique Lab Report Number	:	**TC6152230000007529F**

Sl. No	Parameters	Protocol	Unit of Measurement	Results Apr.'-24	As per GSR 1265 E
PHYSICAL					
1.	pH	IS:3025 (part 11)-1983, RA-2022, Electrometric method	-	**7.21**	6.50-9.0
2.	Total Dissolved Solids	IS:3025 (part 16)-1984, RA-2017 Gravimetric method	mg/L	**828**	-
3.	Total Suspended Solids	IS:3025 (part 17)-1984, , RA-2021, Gravimetric Method	mg/L	**14**	<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	**5.00**	20
5.	Chemical Oxygen Demand as O_2	APHA 23rd Edition 5220-B Closed reflux method	mg/L	**16**	30
6.	Oil & Grease	IS:3025 (part 39)-1991, RA-2021 Partition Gravimetric method	mg/L	**1.30**	-

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)**
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Analysis Report of STP Treated Sewage Water

Report No: II A1

1.	Name of the Industry	:	**M/s. JK Cement Works, Muddapur,**
2.	Address	:	**(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 9654**
8.	Date of sample collection	:	**17.05.2024**
9.	Date of sample Received	:	**17.05.2024**
10.	Date of sample Analyzed	:	**17.05.2024 to 21.05.2024**
11.	Method of Sampling	:	**IS:3025 (Part 1) 1987 (Reaffirmed 2019)**
12.	Environmental condition at the time of sampling	:	**33.8°C**
13.	Unique Lab Report Number	:	**TC6152230000007641F**

Sl. No	Parameters	Protocol	Unit of Measurement	Results May.'-24	As per GSR 1265 E
PHYSICAL					
1.	pH	IS:3025 (part 11)-1983, RA-2022, Electrometric method	-	**7.20**	6.50-9.0
2.	Total Dissolved Solids	IS:3025 (part 16)-1984, RA-2017 Gravimetric method	mg/L	**2810**	-
3.	Total Suspended Solids	IS:3025 (part 17)-1984, , RA-2021, Gravimetric Method	mg/L	**4**	<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	**6.00**	20
5.	Chemical Oxygen Demand as O_2	APHA 23rd Edition 5220-B Closed reflux method	mg/L	**16**	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)**
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Analysis Report of STP Treated Sewage Water

Report No: II B1

1.	Name of the Industry	:	**M/s. JK Cement Works, Muddapur,**
2.	Address	:	**(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	:	**Near Guest House**
5.	Particulars of sample collected	:	**STP Treated Sewage Water**
6.	Field Sample code	:	**JKSW3**
7.	Lab Sample Code	:	**CCRL W 9651**
8.	Date of sample collection	:	**17.05.2024**
9.	Date of sample Received	:	**17.05.2024**
10.	Date of sample Analyzed	:	**17.05.2024 to 21.05.2024**
11.	Method of Sampling	:	**IS:3025 (Part 1) 1987 (Reaffirmed 2019)**
12.	Environmental condition at the time of sampling	:	**33.7°C**
13.	Unique Lab Report Number	:	**TC6152230000007642F**

Sl. No	Parameters	Protocol	Unit of Measurement	Results May.'-24	As per GSR 1265 E
PHYSICAL					
1.	pH	IS:3025 (part 11)-1983, RA-2022, Electrometric method	-	**7.69**	6.50-9.0
2.	Total Dissolved Solids	IS:3025 (part 16)-1984, RA-2017 Gravimetric method	mg/L	**819**	-
3.	Total Suspended Solids	IS:3025 (part 17)-1984, , RA-2021, Gravimetric Method	mg/L	**6**	<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	**8.00**	20
5.	Chemical Oxygen Demand as O_2	APHA 23rd Edition 5220-B Closed reflux method	mg/L	**24**	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)**
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Analysis Report of STP Treated Sewage Water

Report No: II A1

1.	Name of the Industry	:	**M/s. JK Cement Works, Muddapur,**
2.	Address	:	**(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 9688**
8.	Date of sample collection	:	**22.06.2024**
9.	Date of sample Received	:	**23.06.2024**
10.	Date of sample Analyzed	:	**23.06.2024 to 27.06.2024**
11.	Method of Sampling	:	**IS:3025 (Part 1) 1987 (Reaffirmed 2019)**
12.	Environmental condition at the time of sampling	:	**30.2°C**
13.	Unique Lab Report Number	:	**TC6152230000007741F**

Sl. No	Parameters	Protocol	Unit of Measurement	Results June.'-24	As per GSR 1265 E
PHYSICAL					
1.	pH	IS:3025 (part 11)-1983, RA-2022, Electrometric method	-	**7.06**	6.50-9.0
2.	Total Dissolved Solids	IS:3025 (part 16)-1984, RA-2017 Gravimetric method	mg/L	**2560**	-
3.	Total Suspended Solids	IS:3025 (part 17)-1984, , RA-2021, Gravimetric Method	mg/L	**10**	<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	**3.10**	20
5.	Chemical Oxygen Demand as O_2	APHA 23rd Edition 5220-B Closed reflux method	mg/L	**16**	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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Analysis Report of STP Treated Sewage Water

Report No: II A1

1.	Name of the Industry	:	**M/s. JK Cement Works, Muddapur, (Unit: J.K.Cement Ltd), P.O.Muddapur-587122, Dist. Bagalkot (Karnataka) India**
2.	Sample collected by	:	**Cosmo Conscious Research Laboratory**
3.	Name of the Location	:	**Industry Premises**
4.	Particulars of sample collected	:	**STP Treated Sewage Water**
5.	Field Sample code	:	**JKSW1**
6.	Lab Sample Code	:	**CCRL W 9699J**
7.	Date of sample collection	:	**12.07.2024**
8.	Date of sample Received	:	**13.07.2024**
9.	Date of sample Analyzed	:	**13.07.2024 to 19.07.2024**
10.	Method of Sampling	:	**IS:3025 (Part 1) 1987 (Reaffirmed 2019)**
11.	Environmental condition at the time of sampling	:	**28.9°C**
12.	Unique Lab Report Number	:	**TC6152230000007752J**

Sl. No	Parameters	Protocol	Unit of Measurement	Results July.'-24	As per GSR 1265 E
PHYSICAL					
1.	pH	IS:3025 (part 11)-1983, RA-2022, Electrometric method	-	**7.54**	6.50-9.0
2.	Total Dissolved Solids	IS:3025 (part 16)-1984, RA-2107, Gravimetric Method	mg/L	**2235**	-
3.	Total Suspended Solids	IS:3025 (part 17)-1984, , RA-2021, Gravimetric Method	mg/L	**10**	<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	**3.50**	20
5.	Chemical Oxygen Demand as O_2	APHA 23rd Edition-5220-B, Closed reflux method	mg/L	**17**	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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Analysis Report of STP Treated Sewage Water

1.	Name of the Industry	:	**M/s. JK Cement Works, Muddapur,**
2.	Address	:	**(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	:	**Near Guest House**
5.	Particulars of sample collected	:	**STP Treated Sewage Water**
6.	Field Sample code	:	**JKSW3**
7.	Lab Sample Code	:	**CCRL W 9755**
8.	Date of sample collection	:	**25.08.2024**
9.	Date of sample Received	:	**25.08.2024**
10.	Date of sample Analyzed	:	**25.08.2024 to 30.08.2024**
11.	Report Issue Date	:	**02.09.2024**
12.	Method of Sampling	:	**IS:3025 (Part 1) 1987 (Reaffirmed 2019)**
13.	Environmental condition at the time of sampling	:	**28.2°C**
14.	Unique Lab Report Number	:	**TC6152240000000055F**

Sl. No	Parameters	Protocol	Unit of Measurement	Results Aug.'-24	As per GSR 1265 E
PHYSICAL					
1.	pH	IS:3025 (part 11)-1983, RA-2022, Electrometric method	-	7.41	6.50-9.0
2.	Total Dissolved Solids	IS:3025 (part 16)-1984, RA-2017 Gravimetric method	mg/L	962	-
3.	Total Suspended Solids	IS:3025 (part 17)-1984, , RA-2021, Gravimetric Method	mg/L	26	<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	4.30	20
5.	Chemical Oxygen Demand as O_2	APHA 23rd Edition 5220-B Closed reflux method	mg/L	8	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

SHASHIKALA MULABAGULA Digitally signed by SHASHIKALA MULABAGULA Date: 2024.09.05 16:57:59 +05'30'

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

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Ph: 08392 255744, Website: www.tsccrl.com email: chiefexecutive@tsccrl.com

Analysis Report of STP Treated Sewage Water

1.	Name of the Industry	:	**M/s. JK Cement Works, Muddapur,**
2.	Address	:	**(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	:	**Near Guest House**
5.	Particulars of sample collected	:	**STP Treated Sewage Water**
6.	Field Sample code	:	**JKSW3**
7.	Lab Sample Code	:	**CCRL W 9789**
8.	Date of sample collection	:	**23.09.2024**
9.	Date of sample Received	:	**24.09.2024**
10.	Date of sample Analyzed	:	**24.09.2024 to 01.10.2024**
11.	Report Issue Date	:	**04.10.2024**
12.	Method of Sampling	:	**IS:17614 (Part-I) 2021**
13.	Environmental condition at the time of sampling	:	**28.8°C**

Sl. No	Parameters	Protocol	Unit of Measurement	Results Sept.'-24	As per GSR 1265 E
PHYSICAL					
1.	pH	IS:3025 (part 11)-1983, RA-2022, Electrometric method	-	**7.54**	6.50-9.0
2.	Total Dissolved Solids	IS:3025 (part 16)-1984, RA-2017 Gravimetric method	mg/L	**789**	-
3.	Total Suspended Solids	IS:3025 (part 17)-1984, , RA-2021, Gravimetric Method	mg/L	**8**	<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	**6.00**	20
5.	Chemical Oxygen Demand as O_2	APHA 23rd Edition 5220-B Closed reflux method	mg/L	**24**	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

SHASHIKALA MULABAGULA Digitally signed by SHASHIKALA MULABAGULA Date: 2024.10.04 17:16:56 +05'30'

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WATER QUALITY MONITORING DATA

(GROUND WATER)

1.	Name of the Industry	:	**M/s. JK Cement Works, Muddapur,**
2.	Address	:	**(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	:	**Bore well No.1 (Near Main Gate)**
5.	Particulars of sample collected	:	**Bore well**
6.	Field Sample code	:	**JKGW13**
7.	Lab Sample Code	:	**CCRL W 9753**
8.	Date of sample collection	:	**25.08.2024**
9.	Date of sample Received	:	**25.08.2024**
10.	Date of sample Analyzed	:	**25.08.2024 to 30.08.2024**
11.	Report Issue Date	:	**02.09.2024**
12.	Method of Sampling	:	**IS:3025 (Part 1) 1987 (Reaffirmed 2019)**
13.	Environmental condition at the time of sampling	:	**29.1°C**
14.	Unique Lab Report Number	:	**TC6152240000000058F**

Sl. No	Parameters	Protocol	Unit of Measure ment	Results	Drinking water specification Standards as per IS:10500:2012
				Aug.'-24	Limits
PHYSICAL					
1.	Colour	IS: 3025 (PART 4)- 1984, RA-2021, Platinum cobalt Method	Hazen units	<1	15
2.	Temperature	IS:3025 (PART 9)-1984, RA-2017, Thermometer	ºC	28.30	-
3.	Conductivity	IS:3025 (PART 14)-1984, RA-2019, Electrometric method	µs/cms	3150	-
4.	Total Dissolved Solids	IS:3025 (part 16)-1984, RA-2017, Gravimetric method	mg/L	1980	2000
5.	pH	IS:3025 (part 11)-1983, RA-2022, Electrometric method	-	7.09	6.5 to 8.5
6.	Turbidity	IS:3025 (part 10)-1984, RA-2017, Nephelometric method	NTU	1.30	5
7.	Total Suspended Solids	IS:3025 (part 17)-1984, RA-2021, Gravimetric Method	mg/L	4	-
CHEMICAL					
8.	Dissolved Oxygen	IS:3025 (part 38)-1989, RA-2019, Winkler titrimetric azide modification	mg/L	5.40	-
9.	Biochemical Oxygen Demand for 3 days at 27°C	IS:3025 (part 44)-1993, , RA-2019 Three days BOD at 27°C	mg/L	<1	-
10.	Chemical Oxygen Demand as O_2	APHA 23rd Edition 5220-B (P.NO. 5-17) Closed reflux method	mg/L	<1	-
11.	Dissolved Phosphate as PO_4	IS:3025 (part 31)-1988, RA-2021 Stannous chloride method	mg/L	0.604	-
12.	Sodium as Na	IS:3025 (part 45)-1993, RA-2019 Flame Emissionphotometric method	mg/L	57.9	-
13.	Potassium as K	IS:3025 (part 17)-1984, , RA-2019 Flame Emissionphotometric method	mg/L	8.20	-
14.	Calcium as Ca	IS:3025 (part 40)-1991, RA-2019 EDTA Titrimetric method	mg/L	150.70	200

Cont'd..

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Sl. No	Parameters	Protocol	Unit of Measure ment	Results	Drinking water specification Standards as per IS:10500:2012
				Aug.'-24	Limits
15.	Magnesium as Mg	APHA 23rd Edition 3500-B-Mg By calculation	mg/L	59.67	100
16.	Total Hardness as $CaCO_3$	IS:3025 (part 21)-1983, RA-2019 EDTA Titrimetric method	mg/L	584	600
17.	Chloride as Cl	IS:3025 (part 32)-1988, RA-2019 Argentometric Method	mg/L	200.48	1000
18.	Sulphate as SO_4	APHA 23rd Edition 4500-SO_4^{2-} E (P.NO.4-190-191) Turbidimetric method	mg/L	17.24	400
19.	Fluoride as F	APHA 23rd Edition 4500-F^- D. (P.NO. 4-87 – 88)SPADNS Method	mg/L	1.04	1.50
20.	Nitrate Nitrogen as NO_3	IS:3025 (part 34)-1988, RA-2019 Chromotropic acid method	mg/L	3.40	45
21.	Total Alkalinity as $CaCO_3$	IS:3025 (part 23)-1986, RA-2019 Indicator method	mg/L	305	600
22.	Acidity as $CaCO_3$	IS:3025 (part 22)-1986, RA-2019 Indicator method	mg/L	Nil	-
23.	Oil & Grease	IS:3025 (part 39)-1991, RA-2021 Partition Gravimetric method	mg/L	BDL	-
TRACE METALS					
24.	Total Iron as Fe	APHA 23rd Edition 3111B (p.no.3-19) Direct Air Acetylene Flame Method	mg/L	BDL	0.30
25.	Nickel as Ni	APHA 23rd Edition 3111B (p.no.3-19) Direct Air Acetylene Flame Method	mg/L	BDL	0.02
26.	Manganese as Mn	APHA 23rd Edition 3111B. (p.no.3-19) Direct Air Acetylene Flame Method	mg/L	BDL	0.30
27.	Copper as Cu	APHA 23rd Edition 3111B. (p.no.3-19) Direct Air Acetylene Flame Method	mg/L	BDL	1.50
28.	Zinc as Zn	APHA 23rd Edition 3111 B. (p.no.3-19) Direct Air Acetylene Flame Method	mg/L	BDL	15
29.	Lead as Pb	APHA 23rd Edition 3111 B. (p.no.3-19) Direct Air Acetylene Flame Method	mg/L	BDL	0.01
30.	Chromium as Cr	APHA 23rd Edition 3111 B. (p.no.3-18) Direct Air Acetylene Flame Method	mg/L	BDL	0.05
31.	Silver as Ag	APHA 23rd Edition 3111 B. (p.no.3-19) Direct Air Acetylene Flame Method	mg/L	BDL	0.10

End of Report

Note: 1. RA: Reaffirmed **BDL**- Below detectable limit, (For trace metals <0.1, 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

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WATER QUALITY MONITORING DATA

(GROUND WATER)

F	Name of the Industry	:	**M/s. JK Cement Works, Muddapur,**
2.	Address	:	**(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	:	**Bore well No.1 (Near Main Gate)**
5.	Particulars of sample collected	:	**Bore well**
6.	Field Sample code	:	**JKGW13**
7.	Lab Sample Code	:	**CCRL W 9753**
8.	Date of sample collection	:	**25.08.2024**
9.	Date of sample Received	:	**25.08.2024**
10.	Date of sample Analyzed	:	**25.08.2024 to 30.08.2024**
11.	Report Issue Date	:	**02.09.2024**
12.	Method of Sampling	:	**IS:3025 (Part 1) 1987 (Reaffirmed 2019)**

Sl. No	Parameters	Protocol	Unit of Measurement	Results	Drinking water specification Standards as per IS:10500:2012
				Aug.'-24	Limits
TRACE METALS					
1.	Mercury as Hg	APHA 23rd Edition 3112 B. (p.no.3-23) Direct Air Acetylene e Flame Method	mg/L	BDL	0.001
MICROBIOLOGICAL					
2.	Total Coliform count	APHA 23rd Edition 9222-B (p.no.9-57-61) Membrane filter technique	CFU/ 100 ml	Absent	Shall not be detectable in any 100 ml sample
3.	Escherichia coli count	APHA 23rd Edition 9221-F (p.no.9-51-52) Membrane filter technique	CFU/ 100 ml	Absent	Shall not be detectable in any 100 ml sample

End of Report

Note: 1. **BDL**- Below detectable limit. (Mercury <0.001).
2. The above results are related only to the samples collected & tested on the particular date and time.

ANALYZED BY: **(G.Dhavaleshvar)**
Analyst

VERIFIED BY: **(P.Harika)**
Technical Manager

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Analysis Report of RO Outlet

(Drinking water)

1.	Name of the Industry	:	**M/s. JK Cement Works, Muddapur,**
2.	Address	:	**(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	:	**Dispatch Gate**
5.	Particulars of sample collected	:	**RO Water**
6.	Field Sample code	:	**JKGW4**
7.	Lab Sample Code	:	**CCRL W 9780**
8.	Date of sample collection	:	**23.09.2024**
9.	Date of sample Received	:	**24.09.2024**
10.	Date of sample Analyzed	:	**24.09.2024 to 01.10.2024**
11.	Report Issue Date		**04.10.2024**
12.	Method of Sampling	:	**IS:17614 (Part-I) 2021**
13.	Environmental condition at the time of sampling	:	**28.9°C**

Sl. No	Parameters	Protocol	Unit of Measurement	Results	Drinking water specification Standards as per IS:10500:2012
				Sept.'-24	Limits
PHYSICAL					
1.	Colour	IS: 3025 (PART 4)- 1984, RA-2021, Platinum cobalt Method	Hazen units	**<1**	15
2.	Temperature	IS:3025 (PART 9)-1984, RA-2023, Thermometer	°C	**28.8**	-
3.	Conductivity	IS:3025 (PART 14)-1984, RA-2019, Electrometric method	µs/cms	**232**	-
4.	Total Dissolved Solids	IS:3025 (part 16)-1984, RA-2023, Gravimetric method	mg/L	**163**	2000
5.	pH	IS:3025 (part 11)-1983, RA-2012, Electrometric method	-	**8.03**	6.5 to 8.5
6.	Turbidity	IS:3025 (part 10)-1984, RA-2023, Nephelometric method	NTU	**0.00**	5
7.	Total Suspended Solids	IS:3025 (part 17)-1984, RA-2022, Gravimetric Method	mg/L	**7**	-
CHEMICAL					
8.	Dissolved Oxygen	IS:3025 (part 38)-1989, RA-2019, Winkler titrimetric azide modification	mg/L	**6.20**	-
9.	Biochemical Oxygen Demand for 3 days at 27°C	IS:3025 (part 44)-1993, , RA-2023 Three days BOD at 27°C	mg/L	**<1**	-
10.	Chemical Oxygen Demand as O_2	APHA 24th Edition 5220-B Open reflux method	mg/L	**<1**	-
11.	Dissolved Phosphate as PO_4	IS:3025 (part 31)-1988, RA-2021 Stannous chloride method	mg/L	**0.196**	-
12.	Sodium as Na	IS:3025 (part 45)-1993, RA-2019 Flame Emissionphotometric method	mg/L	**4.10**	-
13.	Potassium as K	IS:3025 (part 17)-1984, , RA-2019 Flame Emissionphotometric method	mg/L	**0.10**	-
14.	Calcium as Ca	IS:3025 (part 40)-1991, RA-2019 EDTA Titrimetric method	mg/L	**22.44**	200

Cont'd...

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Sl. No	Parameters	Protocol	Unit of Measurement	Results	Drinking water specification Standards as per IS:10500:2012
				Sept.'-24	Limits
15.	Magnesium as Mg	APHA 24th Edition 350-B-Mg By calculation	mg/L	17.48	100
16.	Total Hardness as $CaCO_3$	IS:3025 (part 21)-1983, RA-2019 EDTA Titrimetric method	mg/L	128	600
17.	Chloride as Cl	IS:3025 (part 32)-1988, RA-2019 Argentometric Method	mg/L	27.99	1000
18.	Sulphate as SO_4	APHA 24th Edition 4500-SO_4^{2-}-E Turbidimetric method	mg/L	11.13	400
19.	Fluoride as F	APHA 24th Edition 4500-F- D. SPADNS Method	mg/L	0.68	1.50
20.	Nitrate Nitrogen as NO_3	IS:3025 (part 34)-1988, RA-2019 Chromotropic acid method	mg/L	0.369	45
21.	Total Alkalinity as $CaCO_3$	IS:3025 (part 23)-1986, RA-2023 Indicator method	mg/L	65	600
22.	Acidity as $CaCO_3$	IS:3025 (part 22)-1986, RA-2019 Indicator method	mg/L	Nil	-
23.	Oil & Grease	IS:3025 (part 39)-1991, RA-2021 Partition Gravimetric method	mg/L	BDL	-
TRACE METALS					
24.	Total Iron as Fe	APHA 24th Edition 3111B Direct Air Acetylene Flame Method	mg/L	BDL	0.30
25.	Nickel as Ni	APHA 24th Edition 3111B Direct Air Acetylene Flame Method	mg/L	BDL	0.02
26.	Manganese as Mn	APHA 24th Edition 3111B Direct Air Acetylene Flame Method	mg/L	BDL	0.30
27.	Copper as Cu	APHA 24th Edition 3111B Direct Air Acetylene Flame Method	mg/L	BDL	1.50
28.	Zinc as Zn	APHA 24th Edition 3111B Direct Air Acetylene Flame Method	mg/L	BDL	15
29.	Lead as Pb	APHA 24th Edition 3111B Direct Air Acetylene Flame Method	mg/L	BDL	0.01
30.	Chromium as Cr	APHA 24th Edition 3111B Direct Air Acetylene Flame Method	mg/L	BDL	0.05
31.	Silver as Ag	APHA 24th Edition 3111B Direct Air Acetylene Flame Method	mg/L	BDL	0.10

End of Report

Note: 1. **RA:** Reaffirmed **BDL-** Below detectable limit, (For trace metals <0.1, 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

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Analysis Report of RO Outlet

(Drinking water)

1.	Name of the Industry	:	**M/s. JK Cement Works, Muddapur,**
2.	Address	:	**(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	:	**Dispatch Gate**
5.	Particulars of sample collected	:	**RO Water**
6.	Field Sample code	:	**JKGW4**
7.	Lab Sample Code	:	**CCRL W 9780**
8.	Date of sample collection	:	**23.09.2024**
9.	Date of sample Received	:	**24.09.2024**
10.	Date of sample Analyzed	:	**24.09.2024 to 01.10.2024**
11.	Report Issue Date	:	**04.10.2024**
12.	Method of Sampling	:	**IS:17614 (Part-I) 2021**

Sl. No	Parameters	Protocol	Unit of Measurement	Results	Drinking water specification Standards as per IS:10500:2012
				Sept.'-24	Limits
TRACE METALS					
1.	Mercury as Hg	APHA 24th Edition 3112 B. Direct Air Acetylene e Flame Method	mg/L	**BDL**	0.001
MICROBIOLOGICAL					
2.	Total Coliform count	APHA 24th Edition 9222-B Membrane filter technique	CFU/ 100 ml	**Absent**	Shall not be detectable in any 100 ml sample
3.	Escherichia coli count	APHA 24th Edition 9222-B Membrane filter technique	CFU/ 100 ml	**Absent**	Shall not be detectable in any 100 ml sample

End of Report

Note: 1. **BDL-** Below detectable limit. (Mercury <0.001).
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)**
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Analysis Report of RO Outlet

(Drinking water)

1.	Name of the Industry	:	**M/s. JK Cement Works, Muddapur,**
2.	Address	:	**(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	:	**Near Canteen**
5.	Particulars of sample collected	:	**RO Water**
6.	Field Sample code	:	**JKGW7**
7.	Lab Sample Code	:	**CCRL W 9781**
8.	Date of sample collection	:	**23.09.2024**
9.	Date of sample Received	:	**24.09.2024**
10.	Date of sample Analyzed	:	**24.09.2024 to 01.10.2024**
11.	Report Issue Date		**04.10.2024**
12.	Method of Sampling	:	**IS:17614 (Part-I) 2021**
13.	Environmental condition at the time of sampling	:	**28.8°C**

Sl. No	Parameters	Protocol	Unit of Measurement	Results	Drinking water specification Standards as per IS:10500:2012
				Sept.'-24	Limits
PHYSICAL					
1.	Colour	IS: 3025 (PART 4)- 1984, RA-2021, Platinum cobalt Method	Hazen units	<1	15
2.	Temperature	IS:3025 (PART 9)-1984, RA-2023, Thermometer	ºC	28.7	-
3.	Conductivity	IS:3025 (PART 14)-1984, RA-2019, Electrometric method	µs/cms	236	-
4.	Total Dissolved Solids	IS:3025 (part 16)-1984, RA-2023, Gravimetric method	mg/L	129	2000
5.	pH	IS:3025 (part 11)-1983, RA-2012, Electrometric method	-	6.56	6.5 to 8.5
6.	Turbidity	IS:3025 (part 10)-1984, RA-2023, Nephelometric method	NTU	0.00	5
7.	Total Suspended Solids	IS:3025 (part 17)-1984, RA-2022, Gravimetric Method	mg/L	8	-
CHEMICAL					
8.	Dissolved Oxygen	IS:3025 (part 38)-1989, RA-2019, Winkler titrimetric azide modification	mg/L	6.10	-
9.	Biochemical Oxygen Demand for 3 days at 27°C	IS:3025 (part 44)-1993, , RA-2023 Three days BOD at 27°C	mg/L	<1	-
10.	Chemical Oxygen Demand as O_2	APHA 24th Edition 5220-B Open reflux method	mg/L	<1	-
11.	Dissolved Phosphate as PO_4	IS:3025 (part 31)-1988, RA-2021 Stannous chloride method	mg/L	0.076	-
12.	Sodium as Na	IS:3025 (part 45)-1993, RA-2019 Flame Emissionphotometric method	mg/L	3.80	-
13.	Potassium as K	IS:3025 (part 17)-1984, , RA-2019 Flame Emissionphotometric method	mg/L	0.20	-
14.	Calcium as Ca	IS:3025 (part 40)-1991, RA-2019 EDTA Titrimetric method	mg/L	26.45	200

Cont'd...

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Sl. No	Parameters	Protocol	Unit of Measurement	Results	Drinking water specification Standards as per IS:10500:2012
				Sept.'-24	Limits
15.	Magnesium as Mg	APHA 24th Edition 350-B-Mg By calculation	mg/L	**13.10**	100
16.	Total Hardness as $CaCO_3$	IS:3025 (part 21)-1983, RA-2019 EDTA Titrimetric method	mg/L	**120**	600
17.	Chloride as Cl	IS:3025 (part 32)-1988, RA-2019 Argentometric Method	mg/L	**35.98**	1000
18.	Sulphate as SO_4	APHA 24th Edition 4500-SO_4^{2-}-E Turbidimetric method	mg/L	**2.39**	400
19.	Fluoride as F	APHA 24th Edition 4500-F^- D. SPADNS Method	mg/L	**0.86**	1.50
20.	Nitrate Nitrogen as NO_3	IS:3025 (part 34)-1988, RA-2019 Chromotropic acid method	mg/L	**0.332**	45
21.	Total Alkalinity as $CaCO_3$	IS:3025 (part 23)-1986, RA-2023 Indicator method	mg/L	**75**	600
22.	Acidity as $CaCO_3$	IS:3025 (part 22)-1986, RA-2019 Indicator method	mg/L	**Nil**	-
23.	Oil & Grease	IS:3025 (part 39)-1991, RA-2021 Partition Gravimetric method	mg/L	**BDL**	-
TRACE METALS					
24.	Total Iron as Fe	APHA 24th Edition 3111B Direct Air Acetylene Flame Method	mg/L	**BDL**	0.30
25.	Nickel as Ni	APHA 24th Edition 3111B Direct Air Acetylene Flame Method	mg/L	**BDL**	0.02
26.	Manganese as Mn	APHA 24th Edition 3111B Direct Air Acetylene Flame Method	mg/L	**BDL**	0.30
27.	Copper as Cu	APHA 24th Edition 3111B Direct Air Acetylene Flame Method	mg/L	**BDL**	1.50
28.	Zinc as Zn	APHA 24th Edition 3111B Direct Air Acetylene Flame Method	mg/L	**BDL**	15
29.	Lead as Pb	APHA 24th Edition 3111B Direct Air Acetylene Flame Method	mg/L	**BDL**	0.01
30.	Chromium as Cr	APHA 24th Edition 3111B Direct Air Acetylene Flame Method	mg/L	**BDL**	0.05
31.	Silver as Ag	APHA 24th Edition 3111B Direct Air Acetylene Flame Method	mg/L	**BDL**	0.10

End of Report

Note: 1. **RA:** Reaffirmed **BDL-** Below detectable limit, (For trace metals <0.1, 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

SHASHIKALA MULABAGULA Digitally signed by SHASHIKALA MULABAGULA Date: 2024.10.04 17:18:27 +05'30'

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

"SURVEY HOUSE", #121, 2nd Cross, Nehru Colony, Ballari–583103 (Karnataka)
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Analysis Report of RO Outlet

(Drinking water)

1.	Name of the Industry	:	**M/s. JK Cement Works, Muddapur,**
2.	Address	:	**(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	:	**Near Canteen**
5.	Particulars of sample collected	:	**RO Water**
6.	Field Sample code	:	**JKGW7**
7.	Lab Sample Code	:	**CCRL W 9781**
8.	Date of sample collection	:	**23.09.2024**
9.	Date of sample Received	:	**24.09.2024**
10.	Date of sample Analyzed	:	**24.09.2024 to 01.10.2024**
11.	Report Issue Date	:	**04.10.2024**
12.	Method of Sampling	:	**IS:17614 (Part-I) 2021**

Sl. No	Parameters	Protocol	Unit of Measurement	Results	Drinking water specification Standards as per IS:10500:2012
				Sept.'-24	Limits
TRACE METALS					
1.	Mercury as Hg	APHA 24th Edition 3112 B. Direct Air Acetylene e Flame Method	mg/L	BDL	0.001
MICROBIOLOGICAL					
2.	Total Colifor n count	APHA 24th Edition 9222-B Membrane filter technique	CFU/ 100 ml	Absent	Shall not be detectable in any 100 ml sample
3.	Escherichia coli count	APHA 24th Edition 9222-B Membrane filter technique	CFU/ 100 ml	Absent	Shall not be detectable in any 100 ml sample

End of Report

Note: **1. BDL-** Below detectable limit. (Mercury <0.001).
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

SHASHIKALA MULABAGULA Digitally signed by SHASHIKALA MULABAGULA Date: 2024.10.04 17:18:54 +05'30'

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

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Annexure-7

EXPENDITURE ON THE ENVIRONMENTAL MANAGEMENT PLAN FOR PERIOD FROM APRIL 2024 TO SEPTEMBER 2024

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.	162.49
Fly ash Silo's and ash handling systems.	32.27
Emission Monitoring equipment (including online emission monitoring equipment (CEMS) at sources and ambient air quality in the vicinity) and laboratory.	8.00
Green Belt Development, Sewage Treatment plant and Water Harvesting Schemes for plant.	23.50
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.	4746.22
Other environmental management costs (AFR system operation, odour control, environmental training/Award, Environmental License Fees)	260.08
TOTAL (Rs in Lakhs)	**5232.57**

Annexure-8

JK CEMENT WORKS, MUDDAPUR

DETAILS OF CSR ACTIVITY UNDERTAKEN DURING APRIL-2024 TO SEPTEMBER-2024		
SL NO	Particulars	Amount (RS)
1	Support for Health care, training and medical Aid	3,32,566
2	Education Aid and support to schools	8,87,500
3	Environmental activities and sampling donation	29,500
4	Rural development & other welfare activities	2,38,260
5	Other Activities	2,50,000
Total		**17,37,826**