

JK Cement Works, Muddapur A Unit of JK Cement Ltd.

CIN: L17229UP1994PLC017199

Morks: P.O. Muddapur - 587 122 Distt. Bagalkot (Karnataka) India

😂 +91 - 8350-289954, 289607

No. JK-MIU/EC-COM/2025-26/93/\$5

Date - 26-05-2025

To

The Deputy Director,
Ministry of Environment, Forest Climate Change (MoEFCC)
Govt. of India, Indira Paryavaran Bhavan,
New Delhi- 110 003

Sub: Half Yearly Environmental Clearance Compliance report for the period of October-2024 to March-2025 (2nd Half) for Halki Limestone Mine of M/S JK Cement Ltd at Village- Halki, Taluka- Mudhol, District- Bagalkot (Karnataka).

Ref: EC. No: J-11015/384/2006-1A. II(M), dtd.21-01-2008.

Dear Sir,

With reference to aforesaid subject and reference matter, we are hereby submitting the enclosed pointwise environmental clearance compliance report for the period from **October-2024 to March-2025** (2nd Half) of Halki Limestone Mine of M/S JK Cement Ltd (Limestone production of 2 MTPA) at Village-Halki, Taluka-Mudhol, District-Bagalkot, Karnataka.

This for your kind perusal and acknowledge the receipt

Thanking you

Yours faithfully
For Halki Limestone Mine
(Unit: JK Cement Ltd)

Prabhat Singh Parihar
(Unit Head)

Enclosures: As above

Corporate Office

Prism Tower 5th Floor, Ninaniya Estate Gwal Pahari,
 Gurugram - 122102, Haryana, INDIA

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⊕ www.jkcement.com





BUILD SAFE

Manufacturing Units at : Nimbahera, Mangrol, Gotan (Rajasthan) | Muddapur (Karnataka) Jharli (Haryana) | Katni, Panna (M.P.) | Aligarh, Hamirpur (U.P.) Balasinor (Gujarat) | Fujairah





- 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

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Halki Limestone Mine(2344(A), Village- Halki, Taluk- Mudhol, Dist.- Bagalkot, Karnataka MoEF Letter No. J-11015/384/2006-1A. II(M) /dated. 21st January 2008

EC Compliance Report of Halki Limestone Mine (ML area 124.24 ha & 2.0 MTPA of limestone Production) of M/s J.K Cement Ltd., at village Halki, in Mudhol Taluk, Bagalkot, Dist. (Karnataka) for the Period

October 2024 to March 2025

S.No	Condition	Compliance status		
Α.	Specific Conditions			
j	Land use patterns of nearby villages shall be studied and action plan for abatement and compensation for damage to agriculture land /common property land as applicable due to mining activity shall be submitted to the Regional office of the Ministry within six months. Annual status of implementation of the plan and expenditure thereon shall be reported to the regional office of the ministry.	which was submitted to concerned authority. Mining is being done as per IBM approved modified mining Plan so there is no damage to agriculture land /common property. Environmental expenditure is attached as Annexure-6		
	Need based assessment for the nearby villages shall be conducted to study economic measures which can help in upliftment of poor section of society such as development of fodder farm, fruit orchard, vocational training etc. Year wise allocation of funds for implementation of these economic measures shall be reported to the regional office of the ministry within six months.	Complying, surrounding village people are sustaining their lively hood in this project. The literacy rate and living standard enhanced due to increased earning capacit of villagers, better medical facility transportation and communication facilities. For socio economic development we have		
iii)	A no mining zone barrier of 50 m from the cannel passing through the lease areas on both sides shall be demarcated and the area shall be afforested with thick species of native vegetation.	Complied. In mining zone barrier of 50 m from the channel passing through the lease areas on both sides has been demarcated and afforested with local species like Neem, Tapasi, and Gulmohar. It is also planned to shift the canal outside the lease area.		
iv)	Recommendations of NEERI, Nagpur, as mentioned in their report on status of Environment –"Action plan" for the State of Karnataka, as applicable to this project, shall be reported to the Regional office of the Ministry.	Not Applicable. As per the email communication, dated 15.12.2009 with NEERI director, NEERI has not prepared any report on status of Environment- "Action plan" for state of Karnataka.		
V)	Conservation plan for wild life shall be prepared in consultation of with the Chief wild life warden and shall be implemented within six months. Necessary allocation of fund for implementation of the same and the status of implementation of the plan shall be reported to the regional office of the Ministry.	Not Applicable. As there is no forest area nearby mining lease, however we had applied to forest department on 25.08.2007. Branch forest office, Lokapur had inspected the site on 27.08.2007 and submitted a letter to zonal forest office, Mudhol on 28.08.2007 and zonal forest		

Halki Limestone Mine(2344(A), Village- Halki, Taluk- Mudhol, Dist.- Bagalkot, Karnataka MoEF Letter No. J-11015/384/2006-1A. II(M) /dated. 21st January 2008

Ropenter

		office Mudhol had submitted report to Deputy conservator of forest, Bagalkot Division, Bagalkot on dated 28.08.2007, detailed report states that there is no schedule- 1 Species available in 10 KM radius area, hence conservation plan for wildlife is not applicable.
vi)	Measures for control and preventions of soil erosion and management of silt shall be prepared and submitted to the Regional office of the ministry within six months	Compiled. Soil erosion control measures have been mentioned in EIA which is already submitted to MOEF.
vii)	Water quality both for surface as well as ground water in the core zone shall be regularly monitored for contamination due to mining activity and records maintained. In case contamination is observed, measures for control and action taken shall be reported to the State Government as well as the Regional Office of the Ministry within six months.	Complying. Water quality is being monitored regularly and no contamination is observed. Water quality reports of surface (mine pit) as well as ground water in the core zone is attached as Annexure-5
viii)	Water bodies shall be developed and utilized to develop Pisciculture. Fishermen cooperative society shall be established with the land losers (if any) and specially the poorer section as members of society. Initial financial assistance either in the form of shared money or other wise and managerial assistance shall be provided so that the members themselves can run the affairs of the society in due course. The project proponent shall arrange marketing tie up so that the society gets fair price of their produce and the profits are equitably shared by the members of the society as regular source of income.	Noted. During final closure of mine, Mining pit will be developed as water body and to be utilized to develop Pisciculture.
ix)	Action taken report on issues raised during the public hearing shall be submitted to the Ministry and the State Governments within six months.	Complied and it has been submitted.
x)	Occupational health and safety measures for the workers including training on malaria eradication, HIV, health effects on exposure to mineral dust etc. shall be carried out. The company shall engage a full-time doctor who is trained in occupational health surveillance.	Complying. Initial and periodical medical examinations of all mine workers are being done on regular basis as required under Mine Rule 1955 and training on various medical aspects are being imparted. The company has engaged fulltime doctor who is trained in

Halki Limestone Mine(2344(A), Village- Halki, Taluk- Mudhol, Dist.- Bagalkot, Karnataka

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149	Records of the health of the workers shall be	Occupational health surveillance. Records are
	maintained.	being maintained.
xi)	Top soil/solid waste (if any) shall be stacked	Complying. Top soil is being utilized for
i voi:	properly with proper slope and adequate safe	plantation and solid waste is being stacked
1.14	guards and shall back filled for reclamation	properly with proper slope and adequate safe
	and rehabilitation of the mined area	guards have been provided.
xii)	Over burden if any shall be stacked at	Complying. Over burden is being stacked at
	earmarked dump site(s) only and shall not be	earmarked dump site as planned in mining
	kept active for long period. The maximum	plan. Presently, dumps are active. After
	height of the dump shall not be exceed 30m,	completion of dumps, planation will be done.
	each stage shall preferably be of 10m and	Presently dump height is 18 meters with two
	overall slope of the dump shall not exceeded	stages and overall slope is maintained less
	28°. The OB dump shall be backfilled. The OB	than 28°.
100	scientifically vegetated with suitable native	The OB dump is being scientifically vegetated
	species to prevent erosion and surface run	with suitable native species to prevent
	off. Monitoring and management of	erosion and surface run off. Compliance
	rehabilitated areas shall continue until the	report is being submitted to the Ministry of
	vegetation becomes self –sustaining.	Environment and Forest on six monthly basis.
	Compliance status shall be submitted to the	स्थित अवस्था प्रमाणको अनुसर्व स्थान
	Ministry of Environment Forests on six	give on agricipance authorization interior
	monthly bases.	team off or governous stave breading
xiii)	Garland drains shall be constructed to arrest	Complying. Garland drains have been made
	silt and sediment flows from soil, and mineral	around dumps and pit. The collected water in
	dumps. The water so collected shall be	the pit is being used for green belt
*	utilized for watering the mine areas, roads,	development and spraying on haul roads for
** **.	green belt development etc. The drains shall	controlling fugitive dust emission. There is no
4,	be regularly de-silted particularly after	nallah within the lease area.
, 20 GA 74 15 1	monsoon and maintained properly. Garland	
***	drain of appropriate size, gradient and length	The state of the s
	shall be designed keeping 50% safety margin	Secretary Market Develop Society and Tree Spacings as
	over and above peak sudden rain fall (based	**************************************
	on 50 years' data) and maximum discharge in the area adjoining the mine site. Sump	na na na manakana kaominina dia kalendra dia kalendra dia kalendra dia kalendra dia kalendra dia kalendra dia Na na na na manakana kalendra dia kalendra dia kalendra dia kalendra dia kalendra dia kalendra dia kalendra di
	capacity will also provide adequate retention	suso likeb. politopoje Berenne myldie
	period to allow proper settling of silt	
	materials. Sedimentation pits shall be	Park Statumens Dandes regular
	constructed at the corners of the garland	aux libera l'an lea thaireachtagaile leife saithaig aist.
1 (2) (4) (4) (4) (4) (4) (4) (4) (4) (4) (4	drains and desilted at regular intervals. Check	La so ade lessa y later de la variable anacida.
Tar es	dams and gully checks shall be constructed	man and the remains remains a made describe
	across nallahs (if any) flowing through the	signs and grands secund throne said.
	lease area.	unu de grine ingro legi uniput tregendo.
	·	the common control of the control of
xiv)	Slope of mining bench and ultimate pit limit	Complying. Slope of mining bench and
xiv)	Slope of mining bench and ultimate pit limit shall be as per the mining scheme approved	Complying. Slope of mining bench and ultimate pit limit are followed as per the

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	Stock Courant in a litter was in a little of the courant of the co	mining plan approved by Indian Bureau of mines.
xv)	Green Belt Development shall be carried out considering CPCB guidelines including selection of plan species and in consultation with DFO. Herbs, shrubs shall also form a part of a forestation programme besides tree plantation. Plantation shall be raised in 22.0 ha around the ML area, haul roads, OB dump sites etc. the density of the trees shall be not less than 2500 plants per ha. The company shall involve local people with the help of self-help group for plantation programme.	Complying. Green Belt Development is being done with native species and in consultation with DFO as committed in the Mining plan.
xvi)	Details of the year wise afforestation programme already under take as well as proposed to be taken of including rehabilitation of mined out areas shall be submitted to the Ministry within six months.	Compiled. Details of the year wise afforestation programme are already submitted to MoEF and plantation is being done as per mining plan.
xvii)	The project authority shall implement suitable conservation measures to augment ground water resource in the areas in consultation with the Regional Director, Central Ground Water Board. Status of implementation shall be reported to the regional office of the Ministry from time to time.	Complying. Surface/rain water harvested in the pit recharges ground water as water percolates downwards due to inclined strata.
xviii)	Prior permission from the competent authority shall be obtained for extraction of ground water, if any.	Compiled. Prior permission taken from Karnataka Ground water authority for extract of ground water.
xix)	Drilling and blasting (if any) shall be conducted by using dust extractors/ wet drilling.	Complying. Wet drilling is being followed.
xx)	Vehicles used for transportation of ores and other mining operation shall have valid permission as prescribed under Central Motor Vehicles rules,1989 and its amendments. Transporting of ores shall be done covered with a tarpaulin or other suitable enclosures so that no dust particles /fine matter escape during the course of transportation. No overloading of ores for transportation shall be undertaken.	Complying. Vehicles used for transportation of ores and other mining operations have valid permission as prescribed under Central Motor Vehicles rules,1989 and its amendments. It is ensured that no spillage occurs during transportation.
xxi)	Village roads through which transportation	Complying. Village roads through which
- A	of ores are being carried out shall be regularly	transportation is being carried out is

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<u> </u>		A CONTRACTOR OF THE CONTRACTOR
xxii)	A final mine closure plan, along with details of	Noted.
1 2 2 3 4 5 4 5 4 5 4 5 4 5 4 5 4 5 4 5 4 5 4	corpus funds, shall be submitted to the	ed regeard as Wedr apply access) body to
	Ministry of Environments & Forests within six	्रावेद्यां के व्यवस्था विकास स्थापन विकास स्थापन विकास स्थापन विकास स्थापन विकास स्थापन विकास स्थापन विकास स्थ
444628	months, in advance of final mine closure for	terre seus vous la gladie vous en en et et
ASTAVO (2	approval. अवस्थाना वैकार एकार नाम अन्य	cabi santa departi and coacong of feet bubblement for the
रिक्षेत्रकी है	s podsumskih kom galesen senepolis ine – siks	hape propidual ou ospetigació kega pasa å
	Company of the second s	set bas ver hez ha medingereshaf ban generetak
В	General Condition:	
isosi) vive	No change in mining technology and scope of	Agreed:
besite	working shall be made without prior approval	ic is a survivie building station die 🔻 💢
i i i i i i i i i i i i i i i i i i i	of Ministry of Environment& Forests.	we college to a appropriate participate of the part
saii)	No change in calendar plan including	Agreed.
	excavation, quantum of mineral, limestone	moth wang m
	and waste shall be made.	is considerable and the state of the state o
iii)	Four Ambient Air Quality – monitoring station	Compiled. Four Ambient Air Quality monitoring
[,	shall be established in the core zone as well as	stations have been established in the core and
	in the buffer zone for RPM, SPM, SO2, NOX	buffer zone. with the therease to all beet.
	monitoring. Location of the stations should be	arte del carlos o di base estitociones renconeto
	decided based on the metrological data,	Arow resmontered host
* · · · · · · · · · · · · · · · · · · ·	Topographical features and Environmentally	reproductives the properties of the set of the first
	, -,	Line of the second of the second second second
	and ecologically sensitive targets and	And balance of our Wife the Games
	frequency of monitoring should be under	n de la company de la comp La company de la company d
	taken in consultation with the State Pollution	
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Control Board.	and of the principle of a limitage of the control of
iv) . ,,	Data on Ambient Air Quality (RSPM, SPM, SO ₂ ,	Complying. Ambient air quality data is being
	and NOx) should be regularly submitted to	submitted regularly to MoEF, Bangalore and
	the Ministry including its Regional Office	SPCB/CPCB. AAQM data is attached as Annexure -
	located at Bangalore and the State Pollution	12 pisting of to wish anything a nation of it
	Control Board/Central Pollution Control	vs transit and to learning with this
	Boards once in six months.	eta se sikip alli sesa ecalifornia e esprisa i
v)	Fugitive dust emissions from all the sources	Complying. Water is sprayed on the haul roads,
1	shall be controlled regularly. Water spraying	loading and unloading points by tankers. Fugitive
	arrangements on haul roads, loading and	Dust emission reports enclosed as Annexure-3.
	unloading and at transfer points shall be	College Value of the policy of the College of the C
	provided and properly maintained.	o (speciality was as assistances), successed in
(iپ	Measures shall be taken for control of noise	Complying earplugs/ muffs have been provided.
e e consumer	level below 85 dBA in the work environments.	Noise Monitoring report enclosed as Annexure-4 .
	Workers engaged in operations of HEMM, etc	A page of character action well as previous
	shall be provided with ear plugs/ muffs.	yes a slace book acceptance before and
	Industrial waste water (Works shop and	Not applicable, there is no workshop in the mines
↓ yii)	waste water from the mine should be	area and no waste water discharged from mines.
1	properly collected, treated so as to conform	gain real carada in mud anomir restain an e
	to the standards prescribed under GSR 422 (E)	gradustics in most be especially and the especial
	dated 19th May, 1993 and 31st December	
		L

Halki Limestone Mine(2344(A), Village- Halki, Taluk- Mudhol, Dist.- Bagalkot, Karnataka

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	1993 or as amended from time to time. Oil	ateo who grade state passed being with cota
	and Grease trap shall be instilled before	a harringue en dens Lebnot euglis !
	discharge of effluents.	diski zmano ili zmegraminime to prizinimi ili.
viii)	Personnel working in dusty areas shall be	Complying. Personnel working in dusty areas have
	provided with protective respiratory devices	been provided with protective respiratory devices
	and they shall also be imparted adequate	and adequate training and information of Safety
	training and information of Safety and Health	and Health aspects provided.
	aspects.	
ix)	A separate Environmental Management cell	Compiled. A separate Environmental
	with suitable qualified personnel shall be set	Management cell with suitable qualified
	up the control of Senior Executive, who will be	personnel has been set up under the control of a
	report directly to the head of the	Senior Executive, who is reporting directly to the
	organization.	head of the organization.
X)	The project authorities shall inform to the	Compiled.
	Regional Office of the Ministry located at	Te geisement Art Quality - mongraphy St
346 . 9 70	Bangalore regarding date of financial closures	shall be established in the core and finds.
	and final approval of the project by the	• in the buffer pane for REAL SMI, SO2
	concern authorities and the date of start of	suds assas in our ministration in the interest of the state of the sta
	land development work.	sesseduriem edit ab beked bolibeb - 1
xi)	The funds earmarked for Environmental	Compiled.
	Protection measures shall be kept in separate	stegan avivores višorigalaris bab colos.
	account and shall not be diverted for other	u sid blussie gydnostram to ywnstysid 🗀 🗍
	purpose. Year wise expenditure shall be	dost repost outs other pedantinamen et metal f
	reported to the Ministry and its Regional	
458 4	office located at Bangalore.	3450 DEVERY WHENCE THE REAL OF A REPORT OF THE SECOND
xii)	The project authorities shall inform to the	Compiled.
	Regional Office of the Ministry located at	I tagoisett en gettofrag krouest off
	Bangalore regarding date of financial closures	AND BOOK ON THE PROPERTY OF THE PARTY OF THE
	and final approval of the project by the	ed freeholder Arrend Arrend Freed Freedom
	concern authorities and the date of start of	
	land development work.	we set its many expressions lead resigned in the
xiii)	The Regional Office of the Ministry, Bangalore	Agreed.
5-50	shall monitor compliance of the stipulated	gribesi absorbasi no batemagnetis (
	conditions. The project authorities shall	site carried reference to been purespine
	extend full cooperation to the officer(s) of the	Charestiinen viespolg bes beleizure j
	Regional office by furnishing the requisite	t for location will reside the temperate of the control of a
· · · · · · · · · · · · · · · · · · ·	data/ information /monitoring reports.	Compiled
xiv)	A copy of clearance letter will be marked to	Compiled.
	concerned panchayat /local NGO, if any from	्रहीं भाग \रक्षणें द्वार के के के किस के में किस के कि
	whom suggestion /representation has been	industrial (weste wate) (Works (Works)
	received while processing the proposal.	Noted
xv)	State Pollution Control Board shall display a	Noted.
	copy of the clearance letter at the Regional	14-3600 resons become the engage is affect.

Halki Limestone Mine(2344(A), Village- Halki, Taluk- Mudhol, Dist.- Bagalkot, Karnataka MoEF Letter No. J-11015/384/2006-1A. II(M) /dated. 21st January 2008

xٔ۷)	State Pollution Control Board shall display a	Noted.
	copy of the clearance letter at the Regional	
	Office, District Industry Centre and collector's	
	office /Tahsildar's office for 30 days.	
xvi)	The project authorities shall advertise at least	Compiled.
	in two local Newspapers widely circulated,	
	one of which shall be in the vernacular	
	languages of the localities concern within	
	7days of issue of the clearance letter	
	informing that the project has been accorded	
	Environmental clearance and a copy of the	
	clearance letter is available with the State	
	Pollution Control Board and also at web site	
	of the Ministry of the Environment & Forests	
	at http: www.envfor.nic.in and a copy of the	
	same shall be forwarded to the Regional	
	Office of the Ministry located at Bangalore.	



Environmental laboratory, Recognized by MoEF & CC, and Certified by ISO (45001:2018)

AIR QUALITY MONITORING DATA

1. Name of the Project M/s. JK Cement Works, Muddapur,

(Unit: J.K.Cement Ltd), P.O. Muddapur-587122, 2. Name of the Client

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 31.10.2024 7.

Analysis Completion Date 02.11.2024

8. Report Issue Date 04.11.2024

9. Month of Monitoring October 2024

Environmental condition at the time 10. 29.1°C of sampling

Lab Sample Code	Particulars of Sample Collected					
	\$O ₂ (μg/m³)	NO₂ (µg/m³)	PM ₁₀ (µg/m³)	PM _{2.5} (µg/m³)		
AAQM Locations for Halki Mines			NAAQ standards 2009			
			100 (µg/m³)	60 (μg/m³)		
			· · · · · · · · · · · · · · · · · · ·			
427, 427, C11, 246	19	18	60	22		
Mass communication and manufacture productions				Section of the section of		
428, 428, C10, 248	14	13	51	16		
429, 429, C09, 245	15	21	59	11		
		×	1			
426, 426, C12, 247	12	16	57	24		
	Sample Code Wines 427, 427, C11, 246 428, 428, C10, 248 429, 429, C09, 245	Sample Code SO ₂ (µg/m³) Wines 80 (µg/m³) P 427, 427, C11, 246 19 428, 428, C10, 248 14 429, 429, C09, 245 15	Lab Sample Code SO2 (μg/m³) NO2 (μg/m³) Wines 80 (μg/m³) 80 (μg/m³) 80 (μg/m³) 18 427, 427, C11, 246 19 18 428, 428, C10, 248 14 13 429, 429, C09, 245 15 21	Sample Code SO ₂ (μg/m³) NO ₂ (μg/m³) PM₁₀ (μg/m³) NAAQ standards 2009 80 80 (μg/m³) 100 (μg/m³) PMines 80 (μg/m³) 100 (μg/m³) PM₁₀ 427, 427, C11, 246 19 18 60 428, 428, C10, 248 14 13 51 429, 429, C09, 245 15 21 59		

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



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





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COSMO CONSCIOUS RESEARCH LABORATORY



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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 : 20.11.2024

7. Analysis Completion Date : 23.11.2024

8. Report Issue Date : 29.11.2024

9. Month of Monitoring : November 2024

10. Environmental condition at the time of sampling : 29.5°C

11. Unique Lab Report Number

TC148922400000000217F

N	Lab Sample Code	Particulars of Sample Collected			cted
Name of the Station/ Date of Sample Collection		SO₂ (µg/m³)	NO₂ (µg/m³)	PM ₁₀ (µg/m³)	PM _{2.5} (µg/m³)
	Argeriskusyyzima.	NAAQ sta	ındards 2009		
AAQM Locations for Halki	80 (µg/m³)	80 (µg/m³)	100 (µg/m³)	60 (µg/m³)	
AV- Near Halki mines offic			aliana de la Regi.		
19.11.2024	520, 520, C24, 799	21	15	56	19
AVI- North Boundary Side					<u>.</u>
19.11.2024	522, 522, C22, 790	12	11	51	13
AVII-Halki Village					
19.11.2024	520, 520, C23, 798	16	12	60	22
AVIII- Metgudda Village					
19.11.2024	521, 521, C21, 800	19	21	57	17

END OF REPORT

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

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:**

Technical Manager

AUTHORISED SIGNATORY:

(M. Shashikala) Head of the Laboratory

2 of 26



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





Environmental laboratory, Recognized by MoEF & CC, Accredited by NABL (ISO/IEC: 17025:2017) vide certificate No : TC-14892 and Certified by ISO (45001:2018)



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 : 12.12.2024

7. Analysis Completion Date : 14.12.2024

8. Report Issue Date : 30.12.2024

9. Month of Monitoring : December 2024

10. Environmental condition at the time confirmed condition cond

11. Unique Lab Report Number : TC14892240000000248F

Name of the Station/	l-L	Pe	articulars of	Sample Colle	lected	
Date of Sample Collection	Lab Sample Code	\$O₂ (µg/m³)	NO₂ (µg/m³)	PM ₁₀ (µg/m³)	PM _{2.5} (µg/m³)	
k aran 1900 bermin beliau sedakar bidi menendaki bidi di bidi dibengalija bidi sebesar bermi Manan di bidi sebesar bidi sebes Manan di sebesar bidi		NAAQ sto	andards 2009			
AAQM Locations for Halki	Mines	80 (µg/m³)	80 (µg/m³)		60 (µg/m³)	
AV- Near Halki mines offic	ika - majirila (1904), ili 1907, ili 1906, ili 1906. I G ermaniya (1904), ili 1906, ili 1907, i	u latingalabetet . Hogsprendskol				
11.12.2024	583, 583, C27, 536	20	17	53	23	
AVI- North Boundary Side	Alexander de la companya de la compa				•:	
11.12.2024	581, 581, C25, 539	11	13	51	14	
AVII-Halki Village			AND THE REST.			
12.12.2024	584, 584, C28, 450	14	21	56	18	
AVIII- Metgudda Village						
11.12.2024	580, 580, C26, 538	17	18	60	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.

ANALYZED BY:

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

(P.Harika)

Technical Manager

AUTHORISED SIGNATORY:

(M. Shashikala) Head of the Laboratory

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Environmental laboratory, Accredited by NABL (ISO/IEC: 17025:2017) vide certificate No: TC-14892 And Certified by ISO (45001:2018)



AIR QUALITY MONITORING DATA

1. Name of the Project M/s. JK Cement Works, Muddapur,

(Unit: J.K.Cement Ltd), P.O.Muddapur-587122, 2. Name of the Client

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** 07.01.2025

7. **Analysis Completion Date** 13.01.2025

8. Report Issue Date 25.01.2025

9. Month of Monitoring January 2025

Environmental condition at the time 10. 29.0°C

of sampling 11. Unique Lab Report Number

TC14892250000000010F

Name of the Station/	طما	Po	articulars of	Sample Colle	cted	
Date of Sample Collection	Lab Sample Code	\$O₂ (µg/m³)	NO ₂ (μg/m³)	PM ₁₀ (µg/m³)	PM _{2.5} (µg/m³)	
araka la Li Hos ko La		NAAQ sto	ındards 2009	Agen John John Stramer		
AAQM Locations for Halki I	Vines	80 (µg/m³)	80 (µg/m³)	100 (µg/m³)	1 ³) 60 (µg/m³)	
AV- Near Halki mines office		11114	- 10 H.W	Pigasia at a managaran an a	s de Se ² de la lace	
06.01.2025	659, 659, C09, 058	20	16	53	24	
AVI- North Boundary Side	Distant providence service.			22.22.6	er e e	
06.01.2025	660, 660, C10, 061	12	11	51	10	
AVII-Halki Village						
06.01.2025	662, 662, C05, 064	19	17	59	23	
AVIII- Metgudda Village						
07.01,2025	661, 661, C08, 062	16	19	57	15	

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).

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

3. RA - Reaffirmed.

ANALYZED BY:

Analyst

VERIFIED BY:

Technical Manager

AUTHORISED SIGNATORY:

(M. Shashikala) Head of the Laboratory

2 of 31

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11.

COSMO CONSCIOUS RESEARCH LABORATORY

Environmental laboratory, Accredited by NABL (ISO/IEC: 17025:2017) vide certificate No: TC-14892 And Certified by ISO (45001:2018)



AIR QUALITY MONITORING DATA

1. Name of the Project M/s. JK Cement Works, Muddapur.

(Unit: J.K.Cement Ltd), P.O.Muddapur-587122, 2. Name of the Client

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** 21.02.2025

7. **Analysis Completion Date** 26.02.2025

8. Report Issue Date 28.02.2025

9. Month of Monitoring February 2025

Environmental condition at the time 10. 32.3°C

of sampling Unique Lab Report Number

TC148922500000000123F

Name of the Station/	Lab	Po	articulars of	Sample Colle	cted
Date of Sample Collection	\$O₂ (μg/m³)	NO ₂ (μg/m³)	PM ₁₀ (µg/m³)	PM _{2.5} (µg/m³)	
en de l'ambient de l L'ambient de l'ambient		NAAQ sto	indards 2009		
AAQM Locations for Halki	80 (µg/m³)	(µg/m³)	100 (µg/m³)	60 (µg/m³)	
AV- Near Halki mines offic	: e				
19.02.2025	801, 801, C04, 118	21	10	53	24
AVI- North Boundary Side			400		
19.02.2025	800, 800, C02, 120	14	13	51	16
AVII-Halki Village				n garakari	
19.02.2025	798, 798, C01, 117	16	19	58	18
AVIII- Metgudda Village					
19.02.2025	799, 799, C03, 119	18	20	60	21

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.

ANALYZED BY:

(G.Dhavaleshwar) **Analyst**

VERIFIED BY:

Technical Manager

AUTHORISED SIGNATORY:

(M. Shashikala) Head of the Laboratory







Environmental laboratory, Accredited by NABL (ISO/IEC: 17025:2017) vide certificate No: TC-14892 And Certified by ISO (45001:2018)



AIR QUALITY MONITORING DATA

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

21.03.2025

7. Analysis Completion Date

22.03.2025

8. Report Issue Date

31.03.2025

9. Month of Monitoring

March 2025

10. Environmental condition at the time

22.200

of sampling

33.3°C

11. Unique Lab Report Number

TC148922500000000243F

N	1 _ L	Po	articulars of	Sample Colle	cted			
Name of the Station/ Date of Sample Collection	Lab Sample Code	\$O ₂ (μg/m³)	NO₂ (µg/m³)	PM ₁₀ (µg/m³)	PM _{2.5} (µg/m³)			
. 1900 a. 1. 187 p. K		NAAQ standards 2009						
AAQM Locations for Halki	Mines	80 (µg/m³)	80 (µg/m³)	100 (µg/m³)	60 (μg/m³)			
AV- Near Halki mines offic	(e			and the state of t				
18.03.2025	870, 870, C17, 703	17	13	53	18			
AVI- North Boundary Side								
18.03.2025	871, 871, C19, 949	12	10	50	14			
AVII-Halki Village		2. Annual de la computation de la comp						
18.03.2025	869, 869, C16, 702	18	19	58	23			
AVIII- Metgudda Village		•						
18.03.2025	872, 872, C24, 850	20	21	59	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.

ANALYZED BY:

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

Technical/Makager

AUTHORISED SIGNATORY:

(M. Shashikala) Head of the Laboratory

2 of 22



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Environmental laboratory, Recognized by MoEF & CC, Accredited by NABL (ISO/IEC: 17025:2017) vide certificate No: IC-14892 and Certified by ISO (45001:2018)

FUGITIVE EMISSION AIR QUALITY MONITORING DATA

1. Name of the Industry M/s. JK Cement Works, Muddapur,

(Unit: J.K.Cement Ltd), P.O.Muddapur-587122, Address 2.

Dist.Bagalkot (Karnataka) India

Sample Collected By 3. % **Cosmo Conscious Research Laboratory**

Particulars of Sample Collected **Fugitive Emission Air Quality Monitoring** 4.

Sample Condition 5. Satisfactory

Analysis Start Date 19.12.2024 6.

7. **Analysis Completion Date** 20.12.2024

Report Issue Date 30.12.2024 8.

9. Month of Monitoring December 2024

Environmental condition at the time of 29.3°C 10.

IS 5182 (Part 4) :2006 Method adopted (Sampling & Analysis) :: 11.

Sl. No.			Lab Sample Code	SPM (mg/m³)	IBM Standard (mg/m³)	
Fugitive	Locations for Hai	ki Mines	Massax4	angura sa animais		
1.	11.12.2024	Drilling Area	523001	1.05	1,2	
2.	12.12.2024	Loading Area	523011	0.93	1.2	
3.	11.12.2024	Haulage Road	523003	0.85	1.2	
4.	11.12.2024	Waste Dumping Site	523002	1.07	1.2	
5.	11.12.2024	Service Road	523020	0.99	1.2	

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

P.Harika)

Technical Manager

AUTHORISED SIGNATORY:

(M. Shashikala) Head of the Laboratory







Environmental laboratory, Accredited by NABL (ISO/IEC: 17025:2017) vide certificate No: TC-14892

And Certified by ISO (45001:2018)

FUGITIVE EMISSION AIR QUALITY MONITORING DATA

M/s. JK Cement Works, Muddapur, 1. Name of the Industry and the language and : (Unit: J.K.Cement Ltd), P.O.Muddapur-587122, 2. Dist.Bagalkot (Karnataka) India 3. Sample Collected By **Cosmo Conscious Research Laboratory** Particulars of Sample Collected **Fugitive Emission Air Quality Monitoring** 4. Sample Condition Satisfactory 5. **Analysis Start Date** 25.03.2025 6. Analysis Completion Date 7. 26.03.2025 Month of Honitotias Report Issue Date 8. 31.03.2025 Month of Monitoring 9. March 2025 Environmental condition at the time of 33.3°C lanA & goffems() beognis i unitali 10. sampling 11. Method adopted (Sampling & Analysis) IS 5182 (Part 4):2006

65.00 Y -	and the second of the	그 그 그 그 그 그 그 그 그 그 그 그 그 그 그 그 그 그 그	Mari Will Street Street	Land of the Control of the Control	A 2011 A 48/40 T
SI. No.	Date of Sample Collection	Name of the Station	Lab Sample Code	SPM (mg/m³)	IBM Standard (mg/m³)
Fugitive	Locations for Hall	ki Mines	ESTA RAISTYS (* \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	
1.	18.03.2025	Drilling Area	514483	0.89	1.2
2.	18.03.2025	Loading Area	514495	0.87	1.2
3.	18.03.2025	Haulage Road	514496	0.91	1.2
4.	18.03.2025	Waste Dumping Site	514494	1.08	1.2
5.	19.03.2025	Service Road	514497	1.07	1.2

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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ALTERNATURAL CA

COSMO CONSCIOUS RESEARCH LABORATORY

Environmental laboratory, Recognized by MoEF & CC, Accredited by NABL (ISO/IEC: 17025:2017) vide certificate No : TC-14892 and Certified by ISO (45001:2018)

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 : 11.12.2024

7. Month of Monitoring : December 2024

I. Halki Mines (Buffer Zone):

SI.	Code	Sampling Location	Doto 1114	Unit	764 / 6.34	L	eq.	
No.	Coue		Date	UIIIL	L max.	Day	Night	Lmin.
1,	N1	Halki Mines North Boundary	11.12.2024	dB (A)	59.4	54.5	53.2	51.2
2.	N2	Halki Mines Office	11.12.2024	dB (A)	60.0	53.9	52.8	51.6

II. Halki Mines (Core Zone):

	SI.	aria da aria d	A production of the state of th	<u> </u>		Da	ı y
***************************************	No.	Code	Sampling Location	Date	Unit	Max.	Min.
Account Name	1.	N1	Halki Mines Drilling Time	11.12.2024	dB	63.8	62.3
	2.	N2	Halki Mines Waste Dump Site	11.12.2024	dB	64.5	63.1
	3.	N3	Halki Mines Service Road	11.12.2024	dB	62.3	61.6
	4.	N4	Excavator Halki Mine	11.12.2024	dB	63.9	62.7

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

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

MONITORED BY:

(G.Dhavaleshwar) Analyst

VECTAMBER SECTORS

VERIFIED BY:

(P.Harika) Technical Manager

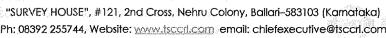
AUTHORISED SIGNATORY:

(M. Shashikala)

Head of the Laboratory

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Environmental laboratory, Accredited by NABL (ISO/IEC: 17025:2017) vide certificate No: TC-14892
And Certified by ISO (45001:2018)

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

18.03.2025

7. Month of Monitoring

March 2025

I. Halki Mines (Buffer Zone):

Sl.	Code	Sampling Location	Date	Unit	D:	ay
 No.	- CVUC	Jampinig Location	Date	UIIIL	Max.	Min
1.	N1	Halki Mines North Boundary	18.03.2025	dΒ	58.1	51.2
2.	N2	Halki Mines Office	18.03.2025	dB	55.2	50.9

II. Halki Mines (Core Zone):

Sl.	Code	Sampling Location	Date	Unit	Day	
No.	Couc	Samping Location	Vale	UIIIL	Max.	Min.
1. N. 1	N1	Halki Mines Drilling Time	18.03.2025	dB	62.3	60.1
2.	N2	Halki Mines Waste Dump Site	18.03.2025	dB	63.2	61.2
3.	N3	Halki Mines Service Road	18.03.2025	dB	61.2	59.2
4.	N4	Excavator Halki Mine	18.03.2025	dB	60.2	58.1

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

AUTHORISED SIGNATORY:

(M. Shashikala)

Head of the Laboratory

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Analysis Report of Mines Pit Water

1. Name of the Industry

2. Address

3. Sample collected by

4. Name of the Location

5. Particulars of sample collected

6. Field Sample code

7. Lab Sample Code

8. Date of sample collection

9. Date of sample Received

10. Date of sample Analyzed

11. Report Issue Date

12. Method of Sampling

13. Environmental condition at the time of sampling

14. Unique Lab Report Number

M/s. JK Cement Works, Muddapur, (Unit: J.K.Cement Ltd),P.O.Muddapur-

: 587122,

Dist.Bagalkot (Karnataka) India

: Cosmo Conscious Research Laboratory

Halki Mines

: Mines Pit Water-1

: IKSW7

: CCRL W 9871

: 22.11.2024

22.11.2024

: 23.11.2024 to 28.11.2024

: 29.11.2024

: IS:17614 (Part-I) 2021

: 29.2°C

: TC14892240000000224F

Sl. No	Parameters	Protocol	Unit of Measure ment	Results	General Standards for Inland Surface water Schedule- VI (EPA-'86)
		and an administration and administration of the second second second second second second second second second		Nov.'-24	Limits
PHYSIC	AL	. 18 of the extremental management of the detailed of the continue of the cont			
1.	Colour	IS: 3025 (PART 4)- 1984, RA-2021, Platinum cobalt Method	Hazen units	<1	- -
2.	Conductivity	IS:3025 (PART 14)-1984, RA-2019, Electrometric method	μs/cms	523	-
3.	Total Dissolved Solids	IS:3025 (part 16)-1984, RA-2017, Gravimetric method	mg/L	368	
4.	pH	IS:3025 (part 11)-1983, RA-2022, Electrometric method	-	7.94	5.50 to 9.0
5.	Turbidity	IS:3025 (part 10)-1984, RA-2017, Nephelometric method	NTU	1.30	-
CHEM	ICAL				
6.	Dissolved Phosphate as	IS:3025 (part 31)-1988, RA-2021 Stannous chloride method	mg/L	0.088	5
7.	Sodium as Na	IS:3025 (part 45)-1993, RA-2019 Flame Emissionphotometric method	mg/L	98.4	-
8.	Potassium as K	IS:3025 (part 17)-1984, , RA-2019 Flame Emissionphotometric method	mg/L	4.10	-
9.	Calcium as Ca	IS:3025 (part 40)-1991, RA-2019 EDTA Titrimetric method	mg/L	36.87	- -
10.	Magnesium as Mg	APHA 23 rd Edition 3500-B-Mg By calculation	mg/L	38.35	-
11.	Total Hardness as CaCO ₃	IS:3025 (part 21)-1983, RA-2019 EDTA Titrimetric method	mg/L	250	-
12.	Chloride as Cl	IS:3025 (part 32)-1988, RA-2019 Argentometric Method	mg/L	34.98	-
13.	Sulphate as SO4	APHA 23 rd Edition 4500-SO4 ² -E (P.NO.4-190-191) Turbidimetric method	mg/L	33.79	-

Cont'd...



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



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Certificate No:TC14892

Sl. No	Parameters	Protocol	Unit of Measure ment	Results	General Standards for Inland Surface water Schedule-VI (EPA-'86) Limits
14.	Fluoride as F	APHA 23 rd Edition 4500-F ⁻ D. (P.NO. 4-87 – 88)SPADNS Method	mg/L	1.42	2
15.	Nitrate Nitrogen as NO₃	IS:3025 (part 34)-1988, RA-2019 Chromotropic acid method	mg/L	1.90	10
16.	Total Alkalinity as CaCO ₃	IS:3025 (part 23)-1986, RA-2019 Indicator method	mg/L	175	***************************************
TRACE	E METALS	•			
17.	Total Iron as Fe	APHA 23 rd Edition 3111B (p.no.3-19) Direct Air Acetylene Flame Method	mg/L	BDL	3
18.	Nickel as Ni	APHA 23 rd Edition 3111B (p.no.3-19) Direct Air Acetylene Flame Method	mg/L	BDL	3
19.	Manganese as Mn	APHA 23 rd Edition 3111B. (p.no.3-19) Direct Air Acetylene Flame Method	mg/L	BDL	2
20.	Copper as Cu	APHA 23 rd Edition 3111B. (p.no.3-19) Direct Air Acetylene Flame Method	mg/L	BDL	3
21.	Zinc as Zn	APHA 23 rd Edition 3111 B. (p.no.3-19) Direct Air Acetylene Flame Method	mg/L	BDL	3
22.	Lead as Pb	APHA 23 rd Edition 3111 B. (p.no.3-19) Direct Air Acetylene Flame Method	mg/L	BDL	0.10
23.	Chromium as Cr	APHA 23 rd Edition 3111 B. (p.no.3-18) Direct Air Acetylene Flame Method	mg/L	BDL	2

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:

Technical Manager

AUTHORISED SIGNATORY:

Head of the Laboratory



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Analysis Report of Mines Pit Water

Name of the Industry 1.

2. Address

3. Sample collected by

Name of the Location 4.

Particulars of sample collected 5.

Field Sample code 6.

7. Lab Sample Code

8. Date of sample collection

9. Date of sample Received

10. Date of sample Analyzed

11. Report Issue Date

Method of Sampling 12.

M/s. JK Cement Works, Muddapur,

(Unit: J.K.Cement Ltd), P.O. Muddapur-

587122,

Dist.Bagalkot (Karnataka) India

Cosmo Conscious Research Laboratory

Halki Mines

Mines Pit Water-1

JKSW7

CCRL W 9871

22.11.2024

22.11.2024

23.11.2024 to 28.11.2024

29.11.2024

IS:17614 (Part-I) 2021

Sl. No	· Parameters	Protocol	Unit of Measurement	Results	General Standards for Inland Surface water Schedule- VI (EPA-'86)
	en e			Nov.'-24	Limits
TRACE	METALS	2			
1.	Mercury as Hg	APHA 23 rd Edition 3112 B. (p.no.3-23) Direct Air Acetylene e Flame Method	mg/L	BDL	0.01

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:

Analyst

VERIFIED BY: A

Technical Manager

AUTHORISED SIGNATORY:

(M. Shashikala)

Head of the Laboratory



18 of 26

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





Environmental laboratory, Recognized by MoEF & CC, Accredited by NABL (ISO/IEC: 17025:2017) vide certificate No : TC-14892 and Certified by ISO (45001:2018)



WATER QUALITY MONITORING DATA

(GROUND WATER)

1. Name of the Project

2. Name of the Client

3. Sample collected by

4. Name of the Location

5. Particulars of sample collected

6. Field Sample code

7. Lab Sample Code

8. Date of sample collection

9. Date of sample Received

10. Date of sample Analyzed

11. Report Issue Date

12. Method of Sampling

13. Environmental condition at the time of sampling

14. Unique Lab Report Number

: M/s. JK Cement Works, Muddapur,

(Unit: J.K.Cement Ltd), P.O.Muddapur-587122,

Dist.Bagalkot (Karnataka) India

: Cosmo Conscious Research Laboratory

: Halki Mines Office

: Bore well

JKGW12

: CCRL W 9896

17.12.2024

17.12.2024

: 17.12.2024 to 26.12.2024

: 30.12.2024

IS:17614 (Part-I) 2021

: 29.2°C

TC148922400000000259F

Si. No.	Parameters	Protocol	Unit of Measure	Results	per IS:10500:2012	
IVO.			ment	Dec.'24	Desirable Limits	Permissible Limits
PHY	/SICAL :	IN 18 1 CONTROL OF THE PROPERTY OF THE PROPERT			1.5	
1.	Colour	IS: 3025 (PART 4)- 1984, RA-2021, Platinum cobalt Method	Hazen units	<1	5	15
2.	Temperature	IS:3025 (PART 9)-1984, RA-2023, Thermometer	°C	26.5	-	
3,	Conductivity	IS:3025 (PART 14)-1984, RA-2019, Electrometric method	μs/cms	775	<u>.</u>	•
4.	Total Dissolved Solids	IS:3025 (part 16)-1984, RA-2023, Gravimetric method	mg/L	543	500	2000
5.	рН	IS:3025 (part 11)-1983, RA-2012, Electrometric method	: •	7.13	6.5 to 8.5	No relaxation
6.	Turbidity (NTU)	IS:3025 (part 10)-1984, RA-2023, Nephelometric method	NTU	0.00	1	5
7.	Total Suspended Solids	IS:3025 (part 17)-1984, RA-2022, Gravimetric Method	mg/L	13	-	_
CHE	MICAL		orteneda inter an eterriore			le production of the second
8.	Dissolved Oxygen	IS:3025 (part 38)-1989, RA-2019, Winkler titrimetric azide modification	mg/L	6.90	*	<u>-</u>
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	APHA 24 th Edition 5220-B Open reflux method	mg/L	<1		-
11.	Phosphorous as P	IS:3025 (part 31)-1988, RA-2021 Stannous chloride method	mg/L	0.176	-	- - - - - -
12.	Sodium as Na	IS:3025 (part 45)-1993, RA-2019 Flame Emissionphotometric method	mg/L	21.10	- 1	-
13.	Potassium as K	IS:3025 (part 17)-1984, , RA-2019 Flame Emissionphotometric method	mg/L	0.60	-	-
14.	Calcium as Ca	IS:3025 (part 40)-1991, RA-2019 EDTÁ Titrimetric method	mg/L	100.20	75	200

Conf'd...



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"SURVEY HOUSE", #121, 2nd Cross, Nehru Colony, Ballari–583103 (Karnataka)
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Environmental laboratory, Recognized by MoEF & CC, Accredited by NABL (ISO/IEC: 17025:2017) vide certificate No : TC-14892 and Certified by ISO (45001:2018)



Sl. No.	Parameters	Protocol	Unit of Measure ment	Results	specificat per IS:10	g water ion Std. as 500:2012 Permissible
				Dec.'24	Limits	Limits
15.	Magnesium as Mg	APHA 24th Edition 350-B-Mg By calculation	mg/L	37.83	30	100
16.	Total Hardness as CaCO ₃	IS:3025 (part 21)-1983, RA-2019 EDTA Titrimetric method	mg/L	406	300	600
17.	Chloride as Cl	IS:3025 (part 32)-1988, RA-2019 Argentometric Method	mg/L	66.47	250	1000
18.	Sulphate as SO ₄	APHA 24 th Edition 4500-SO4 ² E Turbidimetric method	mg/L	4.65	200	400
19.	Fluoride as F	APHA 24 th Edition 4500-F [.] D. SPADNS Method	mg/L	1.19	1	1.50
20.	Nitrate Nitrogen as NO ₃	IS:3025 (part 34)-1988, RA-2019 Chromotropic acid method	mg/L	1.02	45	No relaxation
21.	Total Alkalinity as CaCO ₃	IS:3025 (part 23)-1986, RA-2023 Indicator method	mg/L	265	200	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	-	-
TRAC	E METALS			filia ya ka sa		!
24.	Total Iron as Fe	APHA 24 th Edition 3111B Direct Air Acetylene Flame Method	mg/L	BDL	0.30	No relaxation
25.	Nickel as Ni	APHA 24th Edition 3111B Direct Air Acetylene Flame Method	mg/L	BDL	0.02	No relaxation
26.	Manganese as	APHA 24th Edition 3111B Direct Air Acetylene Flame Method	mg/L	BDL	0.10	0.30
27.	Copper as Cu	APHA 24th Edition 3111B Direct Air Acetylene Flame Method	mg/L	BDL	0.05	1.50
28.	Zinc as Zn	APHA 24 th Edition 3111B Direct Air Acetylene Flame Method	mg/L	BDL	5	15
29.	Lead as Pb	APHA 24 th Edition 3111B Direct Air Acetylene Flame Method	mg/L	BDL	0.01	No relaxation
30.	Silver as Ag	APHA 24 th Edition 3111B Direct Air Acetylene Flame Method	mg/L	BDL	0.10	No relaxation
31.	Chromium as Cr	APHA 24 th Edition 3111B Direct Air Acetylene Flame Method	mg/L	BDL	0.05	No relaxation

END OF REPORT

Note: 1. BDL: Below detectable limit. (Oil & Grease <4, for trace metals <0.1)

RA: Reaffirmed.

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

ANAB (6)

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





Environmental laboratory, Recognized by MoEF & CC, Accredited by NABL (ISO/IEC: 17025:2017) vide certificate No : TC-14892 and Certified by ISO (45001:2018)

WATER QUALITY MONITORING DATA

(GROUND WATER)

1. Name of the Project

2. Name of the Client

3. Sample collected by

4. Name of the Location

5. Particulars of sample collected

6. Field Sample code

7. Lab Sample Code

8. Date of sample collection

9. Date of sample Received

10. Date of sample Analyzed

11. Report Issue Date

12. Method of Sampling

: M/s. JK Cement Works, Muddapur,

(Unit: J.K.Cement Ltd), P.O.Muddapur-587122,

Dist.Bagalkot (Karnataka) India

Cosmo Conscious Research Laboratory

: Halki Mines Office

: Bore well

: IKGW12

: CCRL W 9896

: 17.12.2024

17.12.2024

: 17.12.2024 to 26.12.2024

: 30.12.2024

: IS:17614 (Part-I) 2021

Sl.	Parameters	Protocol	Unit of Measure	Results	Drinking water specification Std. as per IS:10500:2012		
No.		110000	ment	Dec.'24	Desirable Limits	Permissible Limits	
TRA	CE METALS		seperation of the second				
1.,	Mercury as Hg	APHA 24th Edition 3112 B. Direct Air Acetylene e Flame Method	mg/L	BDL	0.001	No relaxation	
MICE	ROBIOLOGICAL						
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.	E.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) RA: Reaffirmed.

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

34 of 59







Environmental laboratory, Recognized by MoEF & CC, Accredited by NABL (ISO/IEC: 17025:2017) vide certificate No : TC-14892 and Certified by ISO (45001:2018)



WATER QUALITY MONITORING DATA

(GROUND WATER)

1. Name of the Project

2. Name of the Client

3. Sample collected by

4. Name of the Location

5. Particulars of sample collected

6. Field Sample code

7. Lab Sample Code

8. Date of sample collection

9. Date of sample Received

10. Date of sample Analyzed

11. Report Issue Date

12. Method of Sampling

13. Environmental condition at the time of sampling

14. Unique Lab Report Number

M/s. JK Cement Works, Muddapur,

(Unit: J.K.Cement Ltd), P.O.Muddapur-587122,

Dist.Bagalkot (Karnataka) India

: Cosmo Conscious Research Laboratory

: Halki Mines Observatory well

: Bore well

: JKGW15

: CCRL W 9916

: 17.12.2024 : 17.12.2024

17.12.2024 to 26.12.2024

30.12.2024

: IS:17614 (Part-I) 2021

29.2°C

TC148922400000000260F

SI. No.	Parameters	Protocol	Unit of Measure	Results	per IS:10500:201	
			ment	Dec.'24	Desirable Limits	Permissible Limits
PHY	SICAL				en e	
1.	Colour	IS: 3025 (PART 4)- 1984, RA-2021, Platinum cobalt Method	Hazen units	<1	5	15
2.	Temperature	IS:3025 (PART 9)-1984, RA-2023, Thermometer	°C	25.8		_
3.	Conductivity	IS:3025 (PART 14)-1984, RA-2019, Electrometric method	μs/cms	3200		<u>-</u>
4.	Total Dissolved Solids	IS:3025 (part 16)-1984, RA-2023, Gravimetric method	mg/L	1970	500	2000
5.	рН	IS:3025 (part 11)-1983, RA-2012, Electrometric method	•	6.95	6.5 to 8.5	No relaxation
6.	Turbidity (NTU)	IS:3025 (part 10)-1984, RA-2023, Nephelometric method	NTU	0.30	1	5
7.	Total Suspended Solids	IS:3025 (part 17)-1984, RA-2022, Gravimetric Method	mg/L	16	<u>-</u>	To constant of the constant of
CHE	MICAL				· · · · · · · · · · · · · · · · · · ·	
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	APHA 24 th Edition 5220-B Open reflux method	mg/L	<1		-
11.	Phosphorous as P	IS:3025 (part 31)-1988, RA-2021 Stannous chloride method	mg/L	0.360	- -	-
12.	Sodium as Na	IS:3025 (part 45)-1993, RA-2019 Flame Emissionphotometric method	mg/L	201.8	-	-
13.	Potassium as K	IS:3025 (part 17)-1984,, RA-2019 Flame Emissionphotometric method	mg/L	0.80	<u>-</u>	-
14.	Calcium as Ca	lS:3025 (part 40)-1991, RA-2019 EDTA Titrimetric method	mg/L	193.91	75	200

Cont'd



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Environmental laboratory, Recognized by MoEF & CC, Accredited by NABL (ISO/IEC: 17025:2017) vide certificate No : TC-14892 and Certified by ISO (45001:2018)



Certificate No:TC14892

Sl. No.	Parameters	Protocol	Unit of Measure	Results	specificat per IS:10	Drinking water specification Std. as per IS:10500:2012	
	- 1 12 12 12 12 12 12 12 12 12 12 12 12 1	The state of the s	ment	Dec.'24	Desirable Limits	Permissible Limits	
15.	Magnesium as Mg	APHA 24th Edition 350-B-Mg By calculation	mg/L	73.23	30	100	
16.	Total Hardness as CaCO ₃	lS:3025 (part 21)-1983, RA-2019 EDTA Titrimetric method	mg/L	580	300	600	
17.	Chloride as Cl	IS:3025 (part 32)-1988, RA-2019 Argentometric Method	mg/L	335.39	250	1000	
18.	Sulphate as SO ₄	APHA 24 th Edition 4500-SO4 ² E Turbidimetric method	mg/L	35.62	200	400	
19.	Fluoride as F	APHA 24 th Edition 4500-F ⁻ D. SPADNS Method	mg/L	1.43	1	1.50	
20.	Nitrate Nitrogen as NO ₃	IS:3025 (part 34)-1988, RA-2019 Chromotropic acid method	mg/L	1.14	45	No relaxation	
21.	Total Alkalinity as CaCO ₃	IS:3025 (part 23)-1986, RA-2023 Indicator method	mg/L	355	200	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	-		
TRAC	E METALS			Project.	4) 2	***************************************	
24.	Total Iron as Fe	APHA 24th Edition 3111B Direct Air Acetylene Flame Method	mg/L	0.140	0.30	No relaxation	
25.	Nickel as Ni	APHA 24 th Edition 3111B Direct Air Acetylene Flame Method	mg/L	BDL	0.02	No relaxation	
26.	Manganese as	APHA 24th Edition 3111B Direct Air Acetylene Flame Method	mg/L	BDL	0.10	0.30	
27.	Copper as Cu	APHA 24 th Edition 3111B Direct Air Acetylene Flame Method	mg/L	BDL	0.05	1.50	
28.	Zinc as Zn	APHA 24th Edition 3111B Direct Air Acetylene Flame Method	mg/L	BDL	5	15	
29.	Lead as Pb	APHA 24 th Edition 3111B Direct Air Acetylene Flame Method	mg/L	BDL	0.01	No relaxation	
30.	Silver as Ag	APHA 24 th Edition 3111B Direct Air Acetylene Flame Method	mg/L	BDL	0.10	No relaxation	
31.	Chromium as Cr	APHA 24th Edition 3111B Direct Air Acetylene Flame Method	mg/L	BDL	0.05	No relaxation	

END OF REPORT

Note: 1. BDL: Below detectable limit. (Oil & Grease <4, for trace metals <0.1)

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: \(\sigma\)

(P. Harika) **Technical Manager**

AUTHORISED SIGNATORY:

(M. Shashikala) Head of the Laboratory

36 of 59



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Environmental laboratory, Recognized by MoEF & CC, Accredited by NABL (ISO/IEC: 17025:2017) vide certificate No: TC-14892 and Certified by ISO (45001:2018)

WATER QUALITY MONITORING DATA

(GROUND WATER)

Name of the Project 1.

2. Name of the Client

3. Sample collected by

4. Name of the Location

5. Particulars of sample collected

6. Field Sample code

7. Lab Sample Code

Date of sample collection 8.

9. Date of sample Received

Date of sample Analyzed 10.

Report Issue Date 11.

12. Method of Sampling M/s. IK Cement Works, Muddapur,

(Unit: J.K.Cement Ltd), P.O.Muddapur-587122,

Dist.Bagalkot (Karnataka) India

Cosmo Conscious Research Laboratory

Halki Mines Observatory well

Bore well

JKGW15

CCRL W 9916

17.12.2024

17.12.2024

17.12.2024 to 26.12.2024

30.12.2024

IS:17614 (Part-I) 2021

SI.	Parameters	Protocol	Unit of Measure	Results	Drinking water specification Std. as per IS:10500:2012	
No.	Parameters	Frotocol One of the control of the	ment	Dec.'24	Desirable Limits	Permissible Limits
TRA	CE METALS		orani memini meminen	in address destroit PV PV CONTROL	and the same of th	
1.	Mercury as Hg	APHA 24th Edition 3112 B. Direct Air Acetylene e Flame Method	mg/L	BDL	0.001	No relaxation
MICI	ROBIOLOGICAL	jurijali ili Paliaka. Liugi — — — — — — — <u>— — — — — — — — — — — —</u>	da protesta unad teorial de la Sila. Contrata confidentia e e e e e e e e e e e e e e e e e e e	7 Tersel je se nabel New Pr Norman (2002 a nabel 2002 a bi	Salas. Salas kasaran kasaran	
2.	Total Coliform count	APHA 24 th Edition 9222-B Membrane filter technique	CFU/ 100 ml	Absent	Shall not be detectable in any 100 ml sample	•
3.	E.Coli count	APHA 24 th 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) RA: Reaffirmed.

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: Was also

(P. Harika) **Technical Manager**

AUTHORISED SIGNATORY:

(M. Shashikala) Head of the Laboratory

37 of 59



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OHSAS 18001:2007



Environmental laboratory, Recognized by MoEF & CC, Accredited by NABL (ISO/IEC: 17025:2017) vide certificate No : TC-14892 and Certified by ISO (45001:2018)



Analysis Report of Mines Pit Water

1. Name of the Industry

2. Address

3. Sample collected by

4. Name of the Location

5. Particulars of sample collected

6. Field Sample code

7. Lab Sample Code

8. Date of sample collection

9. Date of sample Received

10. Date of sample Analyzed

11. Report Issue Date

12. Method of Sampling

13. Environmental condition at the time of sampling

14. Unique Lab Report Number

: M/s. JK Cement Works, Muddapur, (Unit: J.K.Cement Ltd), P.O.Muddapur-

: 587122,

Dist.Bagalkot (Karnataka) India

: Cosmo Conscious Research Laboratory

: Halki Mines

: Mines Pit Water-1

: JKSW7

: CCRL W 9897

: 17.12.2024

: 17.12.2024

: 17.12.2024 to 26.12.2024

30.12.2024

: IS:17614 (Part-I) 2021

: 29.4°C

: TC148922400000000261F

Sl. No	Parameters	Protocol	Unit of Measure ment	Results	General Standards for Inland Surface water Schedule- VI (EPA-'86)
				Dec.'-24	Limits
PHYSIC	AL		Summer Sum Commercial		
1.	Colour	IS: 3025 (PART 4)- 1984, RA-2021, Platinum cobalt Method	Hazen units	< 1	
2.	Conductivity	IS:3025 (PART 14)-1984, RA-2019, Electrometric method	μs/cms	583	granen semperatuer in the semperature in the semper
3.	Total Dissolved Solids	IS:3025 (part 16)-1984, RA-2017, Gravimetric method	mg/L	405	• •
4.	pH	IS:3025 (part 11)-1983, RA-2022, Electrometric method		7.86	5.50 to 9.0
5.	Turbidity	IS:3025 (part 10)-1984, RA-2017, Nephelometric method	NTU	0.00	•
CHEM	ICAL		Agencia de la companya del companya del companya de la companya de		·\$
6.	Dissolved Phosphate as PO ₄	IS:3025 (part 31)-1988, RA-2021 Stannous chloride method	mg/L	0.172	5
7.	Sodium as Na	IS:3025 (part 45)-1993, RA-2019 Flame Emissionphotometric method	mg/L	101.4	-
8.	Potassium as K	IS:3025 (part 17)-1984, , RA-2019 Flame Emissionphotometric method	mg/L	12.9	
9.	Calcium as Ca	IS:3025 (part 40)-1991, RA-2019 EDTA Titrimetric method	mg/L	42.48	-
10.	Magnesium as Mg	APHA 23 rd Edition 3500-B-Mg By calculation	mg/L	25.24	
11.	Total Hardness as CaCO ₃	IS:3025 (part 21)-1983, RA-2019 EDTA Titrimetric method	mg/L	210	- -
12.	Chloride as Cl	IS:3025 (part 32)-1988, RA-2019 Argentometric Method	mg/L	46.48	· •
13.	Sulphate as SO ₄	APHA 23 rd Edition 4500-SO4 ² -E (P.NO.4-190-191) Turbidimetric method	mg/L	20.68	-

Cont'd...



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"SURVEY HOUSE", #121, 2nd Cross, Nehru Colony, Ballari–583103 (Karnataka)
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Sl. No	Parameters	Protocol	Unit of Measure ment	Results	General Standards for Inland Surface water Schedule-VI (EPA-'86) Limits
14.	Fluoride as F	APHA 23 rd Edition 4500-F ⁻ D. (P.NO. 4-87 – 88)SPADNS Method	mg/L	1.42	2
15.	Nitrate Nitrogen as NO ₃	IS:3025 (part 34)-1988, RA-2019 Chromotropic acid method	mg/L	3.89	10
16.	Total Alkalinity as CaCO3	IS:3025 (part 23)-1986, RA-2019 Indicator method	mg/L	85	
TRACE	METALS				h iji))),
17.	Total Iron as Fe	APHA 23 rd Edition 3111B (p.no.3-19) Direct Air Acetylene Flame Method	mg/L	BDL	3
18.	Nickel as Ni	APHA 23 rd Edition 3111B (p.no.3-19) Direct Air Acetylene Flame Method	mg/L	BDL	3
19.	Manganese as Mn	APHA 23 rd Edition 3111B. (p.no.3-19) Direct Air Acetylene Flame Method	mg/L	BDL	2
20.	Copper as Cu	APHA 23 rd Edition 3111B. (p.no.3-19) Direct Air Acetylene Flame Method	mg/L	BDL	3
21.	Zinc as Zn	APHA 23 rd Edition 3111 B. (p.no.3-19) Direct Air Acetylene Flame Method	mg/L	BDL	3
22.	Lead as Pb	APHA 23 rd Edition 3111 B. (p.no.3-19) Direct Air Acetylene Flame Method	mg/L	BDL	0.10
23.	Chromium as Cr	APHA 23 rd Edition 3111 B. (p.no.3-18) Direct Air Acetylene Flame Method	mg/L	BDL	2

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

AUTHORISED SIGNATORY:

Y: (M. Shashikala) Head of the Laboratory



DOS Inc.

CCRL

OHSAS 18001:2007



Environmental laboratory, Recognized by MoEF & CC, Accredited by NABL (ISO/IEC: 17025:2017) vide certificate No: TC-14892 and Certified by ISO (45001:2018)

Analysis Report of Mines Pit Water

1. Name of the Industry

2. Address

3. Sample collected by

4. Name of the Location

5. Particulars of sample collected

Field Sample code 6.

Lab Sample Code 7.

Date of sample collection 8.

9. Date of sample Received

10. Date of sample Analyzed

11. Report Issue Date

Method of Sampling 12.

M/s. JK Cement Works, Muddapur,

(Unit: J.K.Cement Ltd), P.O. Muddapur-

587122,

Dist.Bagalkot (Karnataka) India

Cosmo Conscious Research Laboratory

Halki Mines

Mines Pit Water-1

IKSW7

CCRL W 9897

17.12.2024

17.12.2024

17.12.2024 to 26.12.2024

30.12.2024

IS:17614 (Part-I) 2021

Sl. No	Parameters	Protocol	Unit of Measurement	Results	General Standards for Inland Surface water Schedule- VI (EPA-'86)
		100 (100 (100 (100 (100 (100 (100 (100		Dec.'-24	Limits
TRACE	METALS		Service S	***************************************	
1.	Mercury as Hg	APHA 23 rd Edition 3112 B. (p.no.3-23) Direct Air Acetylene e Flame Method	mg/L	BDL	0.01

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:

Technical Manager

AUTHORISED SIGNATORY:

(M. Shashikala) Head of the Laboratory









Environmental laboratory, Recognized by MoEF & CC, Accredited by NABL (ISO/IEC: 17025:2017) vide certificate No : TC-14892 and Certified by ISO (45001:2018)



Analysis Report of Mines Pit Water

1. Name of the Industry

2. Address

3. Sample collected by

4. Name of the Location5. Particulars of sample collected

6. Field Sample code

7. Lab Sample Code

8. Date of sample collection

9. Date of sample Received

10. Date of sample Analyzed

11. Report Issue Date

12. Method of Sampling

13. Environmental condition at the time of sampling

14. Unique Lab Report Number

M/s. JK Cement Works, Muddapur, (Unit: J.K.Cement Ltd), P.O.Muddapur-

: 587122,

Dist.Bagalkot (Karnataka) India

: Cosmo Conscious Research Laboratory

Halki Mines

: Mines Pit Water-2

: IKSW8

: CCRL W 9898

: 17.12.2024

: 17.12.2024

: 17.12.2024 to 26.12.2024

: 30.12.2024

: IS:17614 (Part-I) 2021

: 29.2°C

TC148922400000000262F

Sl. No	Parameters	Protocol	Unit of Measure ment	Results	General Standards for Inland Surface water Schedule- VI (EPA-'86)
	· · · · · · · · · · · · · · · · · · ·			Dec.'-24	Limits
PHYSIC	ÄL			***************************************	······································
1.	Colour	IS: 3025 (PART 4)- 1984, RA-2021, Platinum cobalt Method	Hazen units	<1	-
2.	Conductivity	IS:3025 (PART 14)-1984, RA-2019, Electrometric method	μs/cms	411	
3.	Total Dissolved Solids	IS:3025 (part 16)-1984, RA-2017, Gravimetric method	mg/L	268	• •
4.	рН	IS:3025 (part 11)-1983, RA-2022, Electrometric method	•	7.67	5.50 to 9.0
5.	Turbidity	IS:3025 (part 10)-1984, RA-2017, Nephelometric method	NTU	0.50	
CHEM	ICAL			ijakera medelek k	
6.	Dissolved Phosphate as PO ₄	IS:3025 (part 31)-1988, RA-2021 Stannous chloride method	mg/L	0.184	5
7.	Sodium as Na	IS:3025 (part 45)-1993, RA-2019 Flame Emissionphotometric method	mg/L	98.4	-
8.	Potassium as K	IS:3025 (part 17)-1984, , RA-2019 Flame Emissionphotometric method	mg/L	2.10	*
9,	Calcium as Ca	IS:3025 (part 40)-1991, RA-2019 EDTA Titrimetric method	mg/L	48.09	<u>.</u>
10.	Magnesium as Mg	APHA 23 rd Edition 3500-B-Mg By calculation	mg/L	16.49	_ 1
11.	Total Hardness as CaCO ₃	IS:3025 (part 21)-1983, RA-2019 EDTA Titrimetric method	mg/L	188	*
12.	Chloride as Cl	IS:3025 (part 32)-1988, RA-2019 Argentometric Method	mg/L	18.99	<u>.</u>
13.	Sulphate as SO ₄	APHA 23 rd Edition 4500-SO4 ² -E (P.NO.4-190-191) Turbidimetric method	mg/L	15.69	-

Cont'd...



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



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Certificate No:TC14892

Sl. No	Parameters	Protocol	Unit of Measure ment	Results	General Standards for Inland Surface water Schedule-VI (EPA-'86) Limits
14.	Fluoride as F	APHA 23 rd Edition 4500-F ⁻ D. (P.NO. 4-87 – 88)SPADNS Method	mg/L	1.36	2
15.	Nitrate Nitrogen as NO ₃	IS:3025 (part 34)-1988, RA-2019 Chromotropic acid method	mg/L	2.07	10
16.	Total Alkalinity as CaCO ₃	IS:3025 (part 23)-1986, RA-2019 Indicator method	mg/L	105	
TRACI	METALS				
17.	Total Iron as Fe	APHA 23 rd Edition 3111B (p.no.3-19) Direct Air Acetylene Flame Method	mg/L	BDL	3
18.	Nickel as Ni	APHA 23 rd Edition 3111B (p.no.3-19) Direct Air Acetylene Flame Method	mg/L	BDL	3
19.	Manganese as Mn	APHA 23 rd Edition 3111B. (p.no.3-19) Direct Air Acetylene Flame Method	mg/L	BDL	2
20.	Copper as Cu	APHA 23 rd Edition 3111B. (p.no.3-19) Direct Air Acetylene Flame Method	mg/L	BDL	3
21.	Zinc as Zn	APHA 23 rd Edition 3111 B. (p.no.3-19) Direct Air Acetylene Flame Method	mg/L	BDL	3
22.	Lead as Pb	APHA 23 rd Edition 3111 B. (p.no.3-19) Direct Air Acetylene Flame Method	mg/L	BDL	0.10
23.	Chromium as Cr	APHA 23 rd Edition 3111 B. (p.no.3-18) Direct Air Acetylene Flame Method	mg/L	BDL	2

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:

Analyst

VERIFIED BY:

Technical Manager

AUTHORISED SIGNATORY:

(M. Shashikala) Head of the Laboratory





Environmental laboratory, Recognized by MoEF & CC, Accredited by NABL (ISO/IEC: 17025:2017) vide certificate No : TC-14892 and Certified by ISO (45001:2018)

Analysis Report of Mines Pit Water

Name of the Industry

2. Address

3. Sample collected by

4. Name of the Location

5. Particulars of sample collected

6. Field Sample code

7. Lab Sample Code

8. Date of sample collection

9. Date of sample Received

10. Date of sample Analyzed

11. Report Issue Date

12. Method of Sampling

M/s. JK Cement Works, Muddapur,

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: 17.12.2024

: 17.12.2024

: 17.12.2024 to 26.12.2024

: 30.12.2024

: IS:17614 (Part-I) 2021

Sl. No	Parameters	Protocol	Unit of Measurement	Results	General Standards for Inland Surface water Schedule- VI (EPA-'86)
				Dec.'-24	Limits
TRACE	METALŞ				
1.	Mercury as Hg	APHA 23 rd Edition 3112 B. (p.no.3-23) Direct Air Acetylene e Flame Method	mg/L	BDL	0.01

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

AUTHORISED SIGNATORY:

(M. Shashikala)

Head of the Laboratory



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M/s. J K Cement Works Muddapur

Environmental Expenditure for Halki Limestone Mine-2344(A) Oct 2024 to Mar 2025

Sl.	Particulars	Cost (In Rs.)	Remarks
No.			·
1	Pollution Control	3015000.00	Water Tankers
2	Pollution Monitoring	57525.00	
3	Occupational Health & Safety	0.00	:
4	Green belt	70650.00	Gardener Salary
, 5	Reclamation	0.0	
-6	Others	159750.00	JCB
	Total	33,02,925.00	Rupees Thirty-Three Lacs
			Two Thousand & Nine
			Hundred Twenty-Five Only

Mines Manager

Halki Limestone Mine

Annexur-7

Details of CSR Expenditure for 2024-25				
Sr.No	Focus area	Particulars Particulars	Amount (Rs)	
i	Health	Support for Health care, Training and Medical Aid	1,96,500.00	
2	Education	Education aid and Support for Schools	49,57,563.00	
3	Rural Transformation	Rural Development & Other Welfare Activities	31,15,969.20	
4	Other	Miscellaneous Activities	6,71,100.00	
		Grand Total	89,41,132.20	