

KAMMAVARI SANGHAM (R),1952

K.S. School of Engineering and Management

Approved by AICTE-1-5279601, Affiliated to VTU, Belagavi #15, Near Vajarahalli, Mallasandra, off Kanakapura Road, Bengaluru - 560 109, www.kssem.edu.in

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To,

Engineer (KAVERI)

Chief administrative of fiee

Cauvery Bhavan,

KG Road

Bangalore

Dear sir/madam

Sub: Permission to visit water treatment plant at Torekadanahalli

As a part of our study of the subject water quality and treatment Engineering, for B. E(civil engineering) students from K. S. School of Engineering and Management Bangalore, would like to visit water treatment plant at Torekadanahalli.

We would like to request you to permit us to visit the water treatment plant for a team of 55.

Hereby we are attaching the students and faculty list who would like to visit the water treatment plant on 19-04-2018 (THUKSDAY).

We hope that this request will merit you are most favorable response

Yours faithfully

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Date:02/04/2018

Professor & Head Dept. of Civil Engineering

K.S. Group of Institutions

K.S. School of Engineering & Managemen Bangalore-560 062

Fax: 22945103



Phone No: 22945103

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BANGALORE WATER SUPPLY AND SEWERAGE BOARD Office of the Chief Engineer (K), 5th Floor, Cauvery Bhavan, K.G.Road, Blore-560 009.

BWSSB/CE(K)/ACE(K)-2/TA-10/D-457/ 04

Date: 04/04/2018

To, **EECH**

Sub: Seeking permission to visit Thorekadanahalli water purification

Ref: Letter of K.S. School of Engineering and Management, dated:02/04/2018.

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With respect to the above subject, Professor & Head Dept. of Civil Engineering, K.S.Group of Institutions, K.S.School of Engineering & Management, #15, Near Vajarahalli, Malasandra, off Kanakapura Road, Bangalore-560062, vide their letter cited under reference has requested permission to visit the Water Treatment Plant at Thorekadanahalli. The faculty and students intend to have educational trip on 19/04/2018 there are 54 members, (51 students 03 faculties) who would like to visit Thorekadnahalli.

In this regard it may be considered to permit the faculty and students of Civil Engineering, K.S.Group of Institutions, K.S.School of Engineering & Management, #15, Near Vajarahalli, Malasandra, off Kanakapura Road, Bangalore-560062, under the following conditions.

- 1. It is mandatory that, students should be above the age of 16 and the team should be accompanied by their Faculty.
- 2. One Assistant Engineer/Assistant Executive Engineer of the Board will be accompanying the team throughout the visit.
- 3. Selfie/Photography is prohibited in the Treatment Plant and BWSSB premises. Mobile phones/camera shall not be carried inside the BWSSB premises.
- 4. No recreation/cultural activities shall be entertained in the vicinity.
- 5. Consumption of food and vehicles are not allowed inside BWSSB premises.
- 6. Private Vehicles are not allowed inside BWSSB premises.
- 7. Faculty /Representatives of Institution will be held responsible for the safety of the students.

	K.S.SCHOOL OF ENGG & MGMT					
-	SI.		ENT OF CIVIL ENGINEERING			
!	No	USN Numbers	Name of the Student in full			
	1	1KG15CV001	AKSHYA KUMAR H. R			
	2	1KG15CV003	ASHWINI. M. J			
-	3	1KG15CV005	BASAVANA GOWDA.G.N			
	<u>4</u> 5	1KG15CV007	CHAITANYA M L CHETHANA.M			
-	<u>5</u> 6	1KG15CV009 1KG15CV010	DINESH.V			
-	5	1KG15CV010	GANGANENI HARISH KUMAR			
1 - 8	-	1KG15CV015	GONUGUNTLA HARIPRIYA			
	_	1KG15CV016	GOWTHAM.R.J			
1	0	1KG15CV017	HARI PREETH.B.M			
1	1	1KG15CV018	JAGDEESHAN.Y			
1.	2	1KG15CV019	K.KISHORE			
1.	3	1KG15CV020	K.NAGASRI			
14	1	1KG15CV021	KALDEN DORJEE			
15	5	1KG15CV023	KIRAN.M			
16		1KG15CV027	KUSHAL.S			
17		1KG15CV028	MANASA.T.S			
18		1KG15CV029	MANOJ MALLIK CHURCHIHAL			
19	_	1KG15CV031	MOHITH.N			
20	\perp	1KG15CV032	MOHITH S REDDY			
21	_	1KG15CV034	MYTHRI YADAV.D			
22	\perp	1KG15CV035	NAVEEN.J			
23	_	1KG15CV036	NISCHAL MADHU			
24	_		PAVAN KUMAR.G.D			
25		1KG15CV039	RAGHAVENDRA.B.R			
26		IKG15CV042	RANJITHA.K.R			
27	\rightarrow		RAVIKUMAR.S			
28	1	KG15CV046	SACHIN.T			
29	1	KG15CV047	SAGAR.L.M			
30	1	KG15CV048	SANDEEP.R.C			
31	1	KG15CV049	SHRAVAN.C			
32	1	KG15CV051	SRINIVAS.S.V			
33	1	KG15CV053	TEJASWI SANGAMITRA			
34	1	KG15CV055	VIJAY CHANDRA.T.K			
35	1	-	VIJAY KUMAR.R			
36	1-		UBAID AHMAD SODAGAR			
37	-		BHAVYA N			
38	-					
	-		CHETHAN M			
39			DINESH KUMAR G			
40			AYANTH KUMAR D			
41			LAKSHMI S			
12	11	KG16CV405 L	LOKESH M R			
43	114	G16CV406 N	MOHITH R			
14	1 K	G16CV407 N	MUNIRAJU G B			
15	1 K	G16CV408 N	NAVEEN K S			
-		G16CV409 P	PRADEEP T			

marche 4/4/18

Professor & Head
Dept. of Civil Engineering
K.S. Groue of Institutions
K.S. School of Engineering & Management
Bangalore-560 062

47	1KG16CV410	SHYLA C
48	1KG16CV411	SUMAN BHARADWAJ
49	1KG16CV412	SYED KHADEER S
50	1KG16CV413	VYSHAK GOWDA P
51	1KG16CV414	YASHAVANTH M

Professor & Head

Dept. of Civil Engineering

K.S. Group of Institutions
K.S. Schoel of Engineering & Management
Bangalore-560 062.

Faculty List

SI.No	Name	Designation
1	Naveena MP	Asst.Professor
2	Kavya M	Asst.Professor
<u>5</u>	Thejas C.M	Asst.Professor

K.S.School of Engineering & Management Department of Civil Engineering CIRCULAR

Subject: Field Visit

Date: 16-04-2018

This is to inform VI semester students that, field visit, to;

Torekadanahalli water treatment plant has been arranged on 19-04-2018.

Kindly make the best utilization of this field visit. Transportation facility is been arranged by the college.

Professor & Head Dept. of Civil Engineering K.S. Group of Institutions K.S. School of Engineering & Management Bangalore-560 082.

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CAUVERY WATER

Cauvery water supply to the city is sourced from Krishnarajasagara and Kabini dams. The water from T.Narsipur pumping station is drawn to Thorekadanahalli (T.K. Halli), where BWSSB's treatment and purification plant is stationed.

Potable water in India needs to meet the standards set by the Bureau of Indian Standards (BIS). These were parameters that were published first in 1983, revised in 1991 and again in 2012 to meet international specifications recommended by the World Health Organisation (WHO). The latest version in India is BIS 10500: 2012. It specifies the physical, chemical and bacteriological factors that indicate potable water.

Nithyanand Kumar, waste water management official from the Bengaluru Water Supply and Sewerage Board (BWSSB) said that currently, Bangalore draws 1450 MLD of water per day from Cauvery for about 8.5 million Bengalureans.



FILTRATION PROCESS.

Filtration is the next step. Municipal water supply agencies usually leverage sand filters to remove suspended particles. TDS is the measure of total solids dissolved in the water. Sedimentation of water is allowed to take place, by allowing suspended particles to settle. Some chemicals, mostly alum, are added to accelerate sedimentation, even as very fine and colloidal particles are removed through coagulation.

Water is passed through beds of sand filters or other granular materials. The process of rapid filtration helps to remove pathogenic bacteria. The filters could be cleaned through backwashing or 'forced upward movement' of wash water and compressed air.

From T K Halli, the water flows to Tataguni, Kanakapura Road, through three pumping stations. First, the water is drawn to Harohalli, pulled for 25 kms by gravity, without the need to be pumped. From this point, underground pipelines of 1,200 mm width take the waters to Tataguni. This stretch works against gravity, with the water pulled up by 1,500 ft.

That after the water gets treated, the BWSSB collects about 2,000 samples from all over the city to get tested in the central as well as the southern BWSSB labs. Cauvery water is mostly found to be free of chemical contaminants.



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