



NEW HORIZON
COLLEGE OF ENGINEERING
New Horizon Knowledge Park, Ring Road, Marathalli
Autonomous College Permanently Affiliated to VTU, Approved by AICTE & UGC
Accredited by NAAC with 'A' Grade, Accredited by NBA

**“A Report on Industrial visit to Sewage
Treatment Plant - AGARAM STP, Sector 4,
HSR Layout, Bengaluru, Karnataka”.**
**(Under Bangalore Water Supply and
Sewerage Board).**

On: 07-01-2022.

For 7th Semester students

Department of Civil Engineering

Organised by:

Dr. Mahesha. N, Associate Professor

Department of Civil Engineering

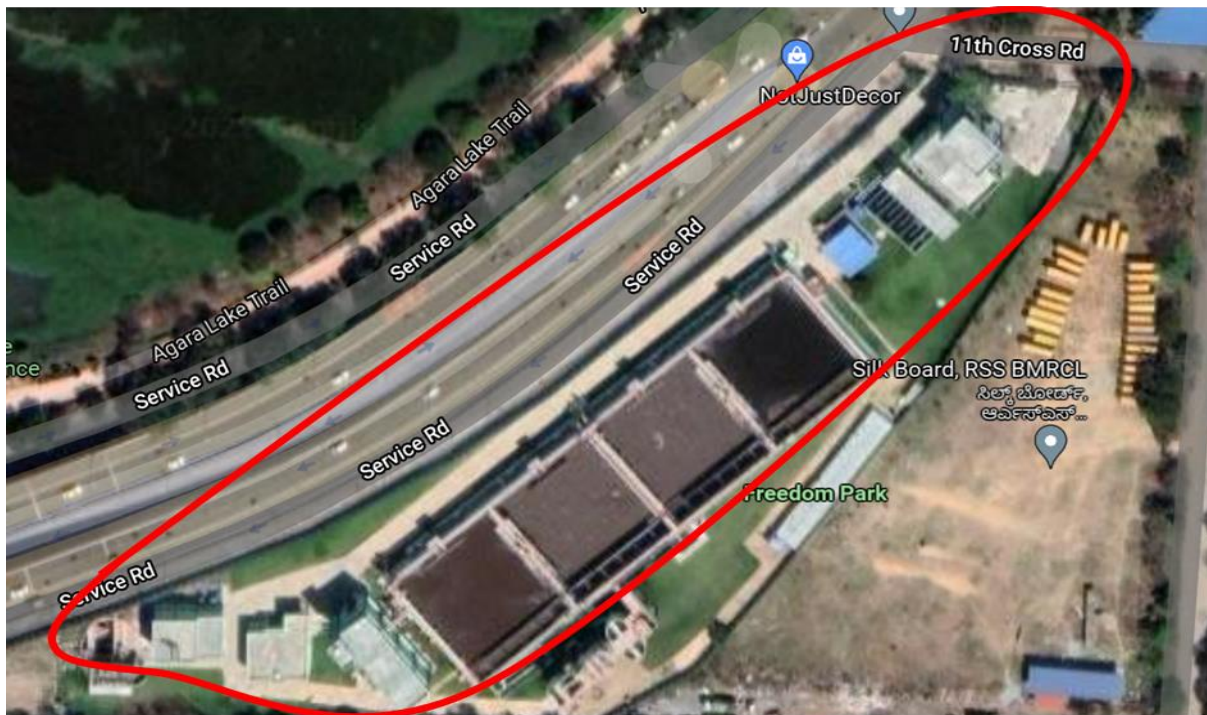
New Horizon College of Engineering

Bangalore.

Department of Civil Engineering organized one-day Industrial visit to Sewage Treatment Plant at Agaram as a part of Professional course curriculum “Recycling of waste water” bearing course code “20CIV755A” on 7th January 2022. The capacity of the Treatment plant is 35 MLD (Million Litres per Day). Nearly 40 students visited the sewage treatment plant under the supervision of Dr. Mahesha N, Associate Professor, Department of Civil Engineering. Er. Roshan Kumar, In-charge of Agara Sewage Treatment Plant, explained about the complete structure of sewage treatment plant starting from inlet point for entry of sewage to outlet point for disposal of treated water to Agara lake along with important processes involved in treatment plant as follows:

1. Screening is done with the help coarse and medium screen bars to remove floating materials which will cause problems for further process. Removed floating materials are sent to BBMP.
2. Grit chamber along with bottom scrapper are used to remove the sand, concrete, stone etc. which will be settled at the bottom.
3. SBR-Sequential Batch Reactors are used in this plant to remove organic suspended material through aerobic decomposition. In SBR, air diffusers are installed at the bottom of the tank to provide oxygen for aerobic decomposition under the influence of bacteria.
4. In SBR, the processes like digestion due to aerobic bacteria, settling of sludge, re-circulation of activated sludge for maintaining standard F/M ratio, removal of sulphates and phosphates are involved.
5. After SBR, the treated water is passed through the fibre disc filters to remove micro particles. Due to regular passage of water through these filters can leads to clogging. To remove clogging effect the fibre disc filters are regularly cleaned by high pressure air gun.

6. Then the treated water is sent to disinfection process where the chlorine gas of standard quantity is mixed with water to remove the microorganisms/pathogenic bacteria before disposal of water into Agara lake.
7. At every stage, the water is tested for p^H , BOD, Dissolved Oxygen, Mixed Liquor Suspended Solids, COD etc.
8. The settled sludge at the SBR is sent to sludge digestion unit for dewatering. After dewatering the sludge is distributed to farmers on first come first serve to use as manure in agricultural fields.



Bird eye view of Agara Sewage treatment Plant

PHOTOS:







Summary:

This visit helped the students to enhance their collective knowledge about Sewage Treatment Plant and processes involved in it both theoretically as well as practically. Students can make utilize of this knowledge during their internships and project works. Students are well versed with practical aspects like design criteria's, working principles and waste water analysis by different laboratory methods. Physical observation of various processes involved in sewage treatment plants will definitely help the students in understanding the concept in a better way and can remember for longer period of time.



ಬೆಂಗಳೂರು ನೀರು ಸರಬರಾಜು ಮತ್ತು ಏಳಜರಂಡಿ ಮಂಡಳಿ

BANGALORE WATER SUPPLY & SEWERAGE BOARD
O/o Chief Engineer(WWM), 5th Floor, Cauvery Bhavan, Bangalore-560009.

No. BWSSB/CE(WWM)/ACE(WWM)-1/DCE(WWM)/TA-1/1660 /2021-22

Date: 03/01/2022

To
Dr.N.Mahesh
Associate Professor
Department of Civil Engineering,
New Horizon College of Engineering
Bangalore-560103.

Sir,

Sub: Permission to visit sewage treatment plant at Agaram STP - reg.

~~*

With reference to the above, as per the request made by the Associate Professor, New Horizon College Of Engineering, permission is hereby accorded to 66 students and 02 faculties for visiting the Agaram STP on 07-01-2022. This approval is given subject to the following conditions


1. The entire team should visit the plant with the directions of the concerned Assistant Engineer of the Board who will be present at the plant site.
2. Photography/Videography is prohibited in the treatment plant and BWSSB premises.
3. No recreational/cultural activities will be entertained in the Vicinity of plant premises.
4. Faculty/representative of Institution will be held responsible for the safety of the students.
5. Visitors/students are prohibited to enter the restricted area in the plants. If violated Board will not be responsible for any kind of loss/damages to the visitors/students.
6. All the visitors have to carry their photo ID proofs.

In addition you are requested to deposit Rs.340/- (Rupees Three Hundred and Forty only) at Assistant Controller (AC accounts), 1st floor, BWSSB, Cauvery Bhavan, K.G.Road, Bangalore-560009 before the visit.

For any details you may contact the concerned Asst.Executive Engineer in charge of the plant and his mobile number is 9845444084.

Thanking you,

Yours faithfully,


Chief Engineer(WWM)(I/C)
5th Floor, Cauvery Bhavan,
BWSSB, Bangalore-560009.

03/01/2022

Copy to CAO-S for kind information

Copy to ACE(WWM)-3(STP-KV) division for information and further necessary action.

NO. 26285-5-1-2022 - 17-340/-
Office of the Assistant Controller (Accts.)
Bangalore Water Supply and Sewerage Board
5th Floor, Cauvery Bhavan,
Bangalore - 560 009

05.01.2022

To,

The Principal
NHCE
Bangalore

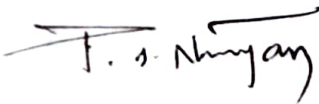
Dear Sir,

Sub: Industrial visit – Request for Transportation to visit Sewage Treatment Plant at Agaram, Bangalore on 07/01/2022– Reg

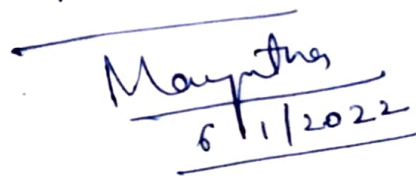
An Industrial visit for the present 7th semester B.E – Civil students (66 number- opted Recycling of Waste water as professional elective + 02 faculty members) has been arranged to visit Sewage Treatment Plant at Agaram, Bangalore *on Friday 7th January 2022* for which **one college bus of 70-seater capacity is required**. The bus has to leave NHCE College Campus at 09:30AM. The approximate distance from Institution to Sewage Treatment Plant & back to Institution is around 10 km.

Hence, we request you to kindly give necessary instruction to avail one college bus for the conveyance.

Thanking You



HOD – CIVIL

Permitted

6/1/2022

N. Madhale
Faculty In-charge

Enclosures:

1. Permission letter from BWSSB, Bangalore
2. Students list

New Horizon College of Engineering

Department of Civil Engineering

List of Students visiting STP on 07.01.22

Sl. No	USN	Name	Sl. No	USN	Name
1	INH18CV005	ADITHYA T M	35	INH18CV077	JASKARAN SINGH RANDHAWA
2	INH18CV008	AKASH.S	36	INH18CV080	JEROME RAJ R
3	INH18CV009	AKHILA UMESH	37	INH18CV087	KARAN
4	INH18CV010	AKSHATHA RAJANNA	38	INH18CV098	LALITH KISHORE R
5	INH18CV013	AMAN BIKRAM THAPA	39	INH18CV099	LIKITH V
6	INH18CV014	ANJANEYAREDDY K N	40	INH18CV103	MALATESH RATHOD
7	INH18CV015	ANKIT RAJ ADHIKARI	41	INH18CV104	MANOJ GOWDA G P
8	INH18CV016	ANKUSH S R	42	INH18CV109	MONISH REDDY P
9	INH18CV017	ANUP ASHOK NAYAK	43	INH18CV111	MURALI M
10	INH18CV022	ARAMBAM CHANU NGANTHOIBI	44	INH18CV112	NANDHAKISHORE S N
11	INH18CV023	ARAVIND J	45	INH18CV114	NIKHIL BHARAMAPPA NARASAGOND
12	INH18CV024	ARPAN ADHIKARI	46	INH18CV116	NIKHIL R I
13	INH18CV025	ARSHAD IQBAL	47	INH18CV127	PRAJVAL M REDDY
14	INH18CV029	B V VASUDATTA	48	INH18CV130	PRAKASH K KAVATI
15	INH18CV032	BHARATH.C.S	49	INH18CV133	PRAPUL REDDY L
16	INH18CV035	BISHNU PRASAD SHARMA	50	INH18CV134	PRASHANTH M
17	INH18CV037	CHANDAN G	51	INH18CV135	PRASIDDA BARSINGH THAPA
18	INH18CV040	CHETHANA V	52	INH18CV136	PRATEEK V CHIKKUR
19	INH18CV041	CHIRAG M	53	INH18CV137	PRATHEEK V K
20	INH18CV042	CHIRRA HARISHWAR REDDY	54	INH18CV138	PREETHAM V
21	INH18CV045	DANISH DAYAL	55	INH18CV141	R ROHAN
22	INH18CV047	DEEPA KUMARI	56	INH18CV143	RAJESH B
23	INH18CV048	DEVVRAT SINGH	57	INH18CV147	REVANTH GOWDA A
24	INH18CV051	DIVYA.T.V	58	INH18CV156	SANAA SHAH
25	INH18CV053	BHAVYASHRE G	59	INH18CV158	SANDEEP M
26	INH18CV056	GANESH KASABA N	60	INH18CV165	SHARATH BABU N
27	INH18CV060	GAYATHRI	61	INH18CV174	SIDDARTH M
28	INH18CV061	GAYATHRI NIVEDHA R	62	INH18CV176	SRIPATHI SRIHARSHA VARDHAN
29	INH18CV064	GNANESH B	63	INH18CV181	SUMANTH KUMAR C S
30	INH18CV067	GURUDEEP YADAV	64	INH18CV188	THOPUDURTHI SAI JASWANTH REDDY
31	INH18CV068	GURUPRASAD V	65	INH18CV194	YUKTHA V
32	INH18CV071	HARSHA.N	66	INH18CV195	YUVARAJ K M
33	INH18CV074	HEMANTH R	67	INH18CV043	CHITRASHREE
34	INH18CV075	JAI MOHAN S REDDY			

Faculty Members

1 Dr. Mahesha N

2 Mr. Rajendra T N

T. N. Rajendra

HoD - CIVIL