

Engineering College

(Approved by AICTE, Affiliated to JNTU H, Hyderabad) An Autonomous Institution

Ananthagiri (V & M), Kodad, Suryapet (Dt) - 508 206 T.S. Ph: 08683-272555, Fax: 08683-272454, www.anurag.ac.in

Date: 27-08-2019

To, The Chief Executive, Nuclear Fuel Complex, Department of Atomic Energy, Hyderabad - 500 062. Telangana, India.

Sir.

Sub: Permission for Industrial Visit in Your Esteemed Organization - reg.

The III & IV Year I Sem B. Tech ME students are required to visit your Nuclear Fuel Complex to acquire practical knowledge. The following students of our college enclosed here with to visit your esteemed Nuclear Fuel Complex. The students being sent to you for the visit are well disciplined. They will abide by the rules and regulations of your Nuclear Fuel Complex. We will be assisting the students and monitoring the progress of the visit under the supervision of suitable faculty from our college.

VISIT SCHEDULE:

Dates

: 12-09-2019 OR 13-09-2019(IV-MECH)

Dates

: 17-09-2019 **or** 18-09-2019(III-MECH)

Number of students visiting : 47(IV-MECH) & 35 (III-MECH)

Anurag Engineering College

Ananthagiri (V&M), Kodad,

Survapet (Dt.), Telangana-508206

Number of accompanying faculty: 2+2

So, we request you to extend necessary co-operation and guidance to our faculty and students during their visit.

Thanking you sir.

Contact Details:

Mr.K.Veeranjaneyulu

HOD of ME

Ph No: 9553122278

Mail id: hod.mech@anurag.ac.in

PRINCIPAL

Principal Anurag Engineering College Ananthagiri (V&M), Kodad, Sun/apot (74) Talandana 508208



hod mech <hod.mech@anurag.ac.in>

Re: Confirmation of Industrial Visit to NFC

3 messages

vvkumar, vvkumar <vvkumar@nfc.gov.in>

Fri, Sep 6, 2019 at 1:02 PM

To: hod.mech@anurag.ac.in

Cc: H R RAVINDRA ravindra@nfc.gov.in, JAWAD RASHEED jawad@nfc.gov.in, G Venkata Ramana rownow.in, HRD Office rownow.in

To,
The Principal / HOD (Mechanical)
Anurag Engineering College
Kodad
Suryapet District - 508 206

Dear Sir,

Greetings from HRD Division, Nuclear Fuel Complex.

With reference to your request letter Dt. 27/08/2019, we are pleased to inform you that your Industrial visit

to NFC is confirmed for 2 Batches.

First Batch is Confirmed on 16/09/2019.

The timings are from 9.30 - 16.30 hrs.

You are requested to come in time.

Please note:

The security clearance will take a minimum time of 30 - 40 mts.

Electronic Items like Laptops, Mobile Phones, Cameras and Pen Drives are Not allowed inside NFC.

All the students must bring their **ID Cards** with them.

Faculty members must bring ID Proof - Aadhaar Card etc.

Send us the list with names of students & accompanying faculty, at the earliest.

Please send all the details & Bus Number to Sri G. Venkataramana, PRO,NFC. email: pro@nfc.gov.in with a copy to hrd@nfc.gov.in

Tel: 27183888 / 27184888

Regards,

V. Vijaya Kumar, Addl. Manager, HRDD NFC

Tel: 040 - 27183240 or 27184958 (O), e-mail: vvkumar@nfc.gov.in

Anurag Engineering College Ananthagiri (V&M), Kodad, Suryapet (Dt.), Telangana-5080



ANURAG Engineering (

(Approved By AICTE, Permanently Affiliated to JNTU(H), Hyderabad & Accredited by NBA)

An Autonomous Institution

Ananthagiri(V&M), Suryapet(Dist.), Telangana.

Date: 18/09/2019

Place of Visit: NUCLEAR FUEL COMPLEX

An Industrial visit was organized for the students of IV B Tech Mechanical Engineering on 16/09/2019. 47 students along with 02 faculty members, of the Mechanical Engineering department visited NFC. Students along with faculty members reached NFC around 10 AM. Then, Resource persons explained the function of NFC. It was a great opportunity for the students of IV B. Tech to go on Industrial tour to the famous NFC.

Nuclear Fuel Complex, Hyderabad is an industrial unit of the Department of Atomic Energy, Government of India. NFC is the only organization in India which caters to the fuel requirements of nuclear power reactors.

Nuclear Fuel Complex, Hyderabad was conceived in late 60's as a pivotal industrial arm of the Department of Atomic Energy with the mandate to fuel the nuclear power program of Govt. of India. An ISO certified organization, NFC is the only organization in the world today to have a comprehensive manufacturing cycle from ore to core, involving processing of both Uranium & Zirconium streams under the same roof.

NFC's specialty lies in the manufacturing of nuclear fuel bundles for Pressurized Heavy Water Reactors (PHWR), Boiling Water Reactors (BWR) and Fast breeder reactors; many reactor core components, various tubes, high purity special materials; etc.

About NFC

Dr. Homi Jahangir Bhabha conceived the Nuclear Program in India. Dr Bhabha established the Tata Institute of Fundamental Research (TIFR) for carrying out nuclear science research in 1945 and Atomic Energy Commission was constituted in 1948. To intensify the effort to exploit nuclear energy for the benefit of the nation, Dr Bhabha established the Atomic Energy Establishment, (AEET), Tomboy, and Mumbai in January 1954. AEET was subsequently renamed as Bhabha Atomic Research Centre (BARC). Initial lab scale experiments to make nuclear fuel were conducted at BARC.

> Anurag Engineering College Ananthagiri (V&M), Kodad, ੇ uryapet (Dt.),Telangana-508

The fuel requirement for the power program required industrial scale of operation and the area in Tomboy was not sufficient. So it was decided to go outside Tomboy. A team of Sr. Scientists were constituted to visit Bangalore, Madras and Hyderabad to search for a suitable site. The senior committee; after detailed scrutiny, recommended to Dr. Bhabha the choice of Hyderabad for the location of Nuclear Fuel Complex. The Andhra Pradesh Government has allotted land to the Department of Atomic in the year 1968. In 1968, NFC Board was created under the Chairmanship of Dr. Vikram Sarabhai for setting up of few production plants, common facilities and any other facility required at Hyderabad. Also the objective of setting-up of NFC was to create an organization to meet the future requirements of fuel for the nuclear power program.

Though NFC is one of the bright examples of successful transfer of technology from laboratory scale to large scale production, owing to transfer of the very personnel conducting the R&D at BARC, it is also a testimony that up scaling the large scale without any modeling is not without problems. All facilities connected with nuclear fuel starting from uranium concentrate and zircon were kept together at one place and under one organization so that there are no interfaces posing difficult co-ordination problems. NFC has different types of production facilities which include Zirconium Oxide Plant for processing of Zircon to nuclear grade Zirconium oxide; Zirconium Sponge Plant for conversion of Zirconium oxide to nuclear grade sponge metal; Melt Shop Plant for production of zirconium alloys; Extrusion and Piercing Plant for hot extrusion and expansion of different alloys and special materials into various shapes and sizes: Zircaloy Fabrication Plant for producing various zirconium alloy tubes, sheet, rod and wire products; Uranium Oxide Plant for processing crude uranium concentrates to pure uranium dioxide powder; Ceramic Fuel Fabrication Plant for producing Uranium oxide pellets and assembling of the fuel bundles for the PHWRs; BWR Fuel Fabrication Plant; Fast Reactor Facility Plant for fabrication of components and sub assemblies for Fast Breeder Reactors; Special Materials Plant for producing a number of high purity materials; Stainless Steel Tube plant for producing seamless tubes of stainless steel and other alloys.

Co-Ordinator

HoD-ME

Anurag Engineering College
Ananthagiri (V&M), Kodad,
Suryapet (Dt.), relangana-508206



(Approved By AICTE, Permanently Affiliated to JNTU(H), Hyderabad & Accredited by NBA)

An Autonomous Institution

Ananthagiri(V&M), Suryapet(Dist.), Telangana.

Place of Visit: Nuclear Fuel Complex

OBJECTIVES OF FIELD WORK:

- To physically observe Nuclear Power Generation by using Heat Energy produced from the Nuclear Reactor.
- 2. To get some field knowledge on Zirconium Oxide Plant and Uranium Oxide Plant.
- 3. To practically observe the working of Turbines, Nuclear Power Reactors.
- 4. To better understand the practical working of Nuclear Fuel Cycle.
- 5. To make some study on Nuclear Waste Management.

OUTCOMES OF FIELD WORK:

- 1. Students will be able to understand the working principles Nuclear Power Generation.
- 2. Students will be able to get the knowledge on various Plants Installed in NFC.
- 3. Students can be able to understand the Working Principle of Turbines and reactors.
- 4. Students can be able to understand the working of Fuel Cycles.
- 5. Students can be able to understand the Waste Management Techniques adopted in NFC.

Co-Ordinator

Principal
Anurag Engineering College
Ananthagiri (V&M), Kodad,
Suryapet (Dt.), Telangana-508206

HoD-ME



ANURAG Engineering College (Approved By AICTE, Permanently Affiliated to JNTU(H), Hyderabad & Accredited by NBA)

An Autonomous Institution

Ananthagiri(V&M), Suryapet(Dist.), Telangana.



Anurag Engineering Collage Anenthegiri (V&lid), Koded, Suryapet (Dt.), Telangana-508206



Engineering College

(Approved by AICTE, Affiliated to JNTU H Hyderabad) An Autonomous Institution

Ananthagiri (V & M), Kodad, Suryapet (Dt) - 508 206 T.S. Ph : 08683-272555, Fax : 08683-272454, www.anurag.ac.in

Date: 17-09-2019

To,

THE CHIEF ENGINEER (O&M). PALVONCHA, BHADRADRI KOTHAGUDEM (Dist). TELANGANA.

Sir.

Sub: Permission for Industrial Visit in Your Esteemed Organization - reg.

The III Year I Sem B. Tech ME students are required to visit your power plant to acquire practical knowledge. The following students of our college enclosed here with to visit your esteemed power plant. The students being sent to you for the visit are hard working and disciplined. They will abide by the rules and regulations of your power plant. We will be assisting the students and monitoring the progress of the visit under the supervision of suitable faculty from our college.

VISIT SCHEDULE:

Date

: 21-09-2019

Number of students visiting

:34

Number of accompanying faculty

:2

So we request you to extend necessary co-operation and guidance to our faculty and students during their visit.

Thanking you sir,

Anurag Engineering College Ananthagiri (Valvi), Kodad,

Suryapet (Dt.), Telangana-508206

PRINCIPAL

Principal

Arragement July v Hanthagiri (Volat, Kocco

Surveyer (OL), Total Lang-house c

TELANGANA STATE POWER GENERATION CORPORATION LIMITED KOTHAGUDEM THERMAL POWER STATION - V& VI STAGES, PALONCHA

From.
The Chief Engineer,
Operation & Maintenance
KTPS- V&VI Stages
Bhadradri Kothagudem (Dist

To.
The principal.
ANURAG Engineering College
Ananthagiri (V &M).
Suryapet (Dist) -508206

Lr. No.CE/O&M/KTPS V&VI stages/Safety- V&VI /F. Plant visit/D. No 500 / 2019, dt. 18 .09.2019

Sir.

Sub: TSGENCO - KTPS V&VI stages - Permission for visiting KTPS- V&VI stages to the B Tech Mechanical Engineering Students of ANURAG Engineering College - Permission Granted - Regarding.

Ref. Your request letters dated 17.09.2019 and received on 17.09.2019

With reference to your request made vide above cited subject, the permission for plant Visit is granted to (34) B Tech ME students and (02) faculty members of ANURAG Engineering College On 21.09.2019 (Saturday) for visiting KTPS- V &VI Stages from 10:00 Hrs to 17:00 Hrs

All necessary safety precautions are to be strictly followed during the visit. It may Please be noted that the TSGENCO will not be held responsible for any kind of accident to the staff And students inside the plant premises during the above visiting period. You are requested to Complete your visit before 17:00 Hrs and handover the mobiles to the duty officer SPF in the gate while emering in to the plant

CHIEF ENGINEER,
O&M/KTPS V & VI STAGES.

To.

Copy to the Superintending Engineer / O&M / KTPS V stage / Paloncha

Copy to the Superintending Engineer / O&M / KTPS VI stage / Paloncha

Copy to the Superintending Engineer / A&P / KTPS V&VI stages / Paloncha

Copy to the DE / Fire & Safety / KTPS V&VI stage / Paloncha

Copy to the Inspector / SPF / KTPS-V&VI stages / Paloncha - is requested to depute one security constable to Escort the visitors/students till they leave the site

Principal
Anurag Engineering College
Ananthagin (V&M), Kodad,
Suryapet (Dt.), Telangana-508208



ANURAG Engineering College (Approved By AICTE, Permanently Affiliated to JNTU(H), Hyderabad & Accredited by NBA)

An Autonomous Institution

Ananthagiri(V&M), Suryapet(Dist.), Telangana.

Date: 23/09/2019

REPORT ON INDUSTRIAL VISIT TO KTPS

Place of Visit: KTPS

On 21/09/2019 we started from Anurag college campus with students of IV &III mechanical at 6.30am by a bus arranged by the institute. We reached kinnerasani project at about 11.30 am .the students were subdivided into four groups and faculty members were demonstrated about water storage and catmint area.

After lunch we started from kinerasani to KTPS at 2.00pm then students were subdivided into four groups and members of KTPS engineer's forum were demonstrated about inside working and operation process of thermal power generation components. i.e.

- 1. Boilers
- 2. Turbines
- 3. Cooling towers
- 4. Condensers
- 5. Ash and coal handling plants
- 6. Water purification
- 7. Plant control room

Ananthagiri (V&M), Kodad, Suryapet (Dt.), Telangana-508200



(Approved By AICTE, Permanently Affiliated to JNTU(H), Hyderabad & Accredited by NBA)

An Autonomous Institution

Ananthagiri(V&M), Suryapet(Dist.), Telangana.

Place of Visit: Kothagudem Thermal Power Station (KTPS)

OBJECTIVES OF FIELD WORK:

- 1. To physically observe the Thermal Power generation Components.
- 2. To get some field knowledge on Boiler, Turbine, Cooling Towers and Condensers.
- 3. To practically observe the working of Turbines and Boilers.
- 4. To better understand the practical working of Control System Units.
- 5. To make some study on Coal Handling Devices.

OUTCOMES OF FIELD WORK:

- 1. Students will be able to understand the working principles of Rankine Cycle.
- 2. Students will be able to get the knowledge on Boiler, Cooling Towers and Condensers.
- 3. Students can be able to understand the Working Principle of Turbines and Boilers.
- 4. Students can be able to understand the working of Control System Units.
- 5. Students can be able to understand the Handling Devices.

Co-Ordinator

Anurag Engineering College Ananthagiri (V&M), Kodad, Suryapet (Dt.), Telangana-508206 HoD-ME



ANURAG Engineering College (Approved By AICTE, Permanently Affiliated to JNTU(H), Hyderabad & Accredited by NBA) An Autonomous Institution

Ananthagiri(V&M), Suryapet(Dist.), Telangana.



Anurag Engineering College Ananthagiri (V&Id), Kodad, Suryapet (Dt.), Telangana-508206



(Approved by AICTE, Affiliated to JNTU H, Hyderabad)

An Autonomous Institution

Ananthagiri (V & M), Kodad, Suryapet (Dt) - 508 206 T.S. Ph: 08683-272555, Fax: 08683-272454, www.anurag.ac.in

Date: 12/06/2019

From
The Principal,
Anurag Engineering College,
Anathagiri (V&M),
Telangana -508206
India.

To
The Chief Engineer,
Kaleshwaram Project,
Kaleshwaram,
Telangana.

Sub: - Permission for Industrial Visit in Your Esteemed Organization - reg.

Dear Sir/Madam,

The III & IV Year I Sem B. Tech Civil Engineering students are required to visit Kaleshwaram Project to gain practical knowledge. The following students of our college enclosed here with to visit your esteemed Kaleshwaram Project. We will assist the students and monitoring the progress of the visit under the supervision of suitable faculty from our college. So they are willing to visit as on 21st June 2019.

Kindly help us for getting permission from Kaleshwaram project .We are hopeful to get a positive response from you.

Thanking you sir,

Contact Details:

Mr. C. Manikanta Reddy,

HOD of CE

Ph No: 9553122282

Yours sincerely,

(Principal)

Principal
Anurag Engineering College
Ananthagiri (V&M), Kodad,
Suryapet (Dt.), Telangana-508200

Ananthagiri (V&M), Kodad, Suryapet (Dt.), Telangana-508206

Anurag Engineering College



(Approved By AICTE, Permanently Affiliated to JNTU(H), Hyderabad & Accredited by NBA)

An Autonomous Institution

Ananthagiri(V&M), Suryapet(Dist.), Telangana.

DEPARTMENT OF CIVIL ENGINEERING

REPORT ON INDUSTRIAL VISIT TO KALESHWARAM PROJECT

Date 24.6.2019

Place of Visit: KALESHWARAMPROJECT

An industrial visit was organized for the students of III B. Tech Civil Engineering on 21-06-2019. Students (108) along with Faculty Members (4) of Civil Engineering Department Visited Kaleshwaram Project. They all are Reached Dam Around 11am .Then, AE, Water Resource department, explained the Function of Kaleshwaram Dam.

Telangana Government give a great opportunity for the students of III B. Tech to go on Industrial tour to the famous Kaleshwaram Project with key locations at Kagnnepalli Pumphouse, Medigadda Barriage and Ramagundam pump house.

It is contemplate that with the activation of all the operations of Kaleshwaram project, abundant water will be lifted up from Kannepalli pump house (Kaleshwaram bhupalapalli And Brought Up To Konda Pochamma Barriage (Gajwel, Nalgonda) covering total height of 650 mts and made available for the vast areas of lands spread over 13 districts of Telangana State covering to the extent of 37 lakh Acers, for the purpose of irrigation. Drinking water and industry requirements.

KALESHWARAM PROJECT PROFILE:

The Kaleshwaram lift irrigation project is a multi-purpose irrigation project on the Godavari river in Kaleshwaram, Bhoopalapally, Telengana, India. Currently the world's largest multistage lift irrigation project, its farthest upstream influence is at the confluence of the Pranahita and Godavari rivers. The Pranahita river is itself a confluence of various smaller tributaries including the Wardha, Painganga, and Wainganga rivers combine to form the seventh largest drainage basin on subcontinent, with an estimated annual discharge of more than 6,427,900 acre feet(7,930 cubic hectometers) or 280 TMC.

Principal
Anurag Engineering College
Ananthagiri (V&M), Kodad,
Suryapet (Dt.), Telangana-508206



The Students Could Get Lot of Useful And Important Practical Knowledge About The World's Largest Lift Irrigation Project Coming Up Under The Dynamic Leadership Of Chief Engineer overseeing the Civil Construction, installation and commissioning of various heavy Electrical and Mechanical machinery.



Pump House at Kaleshwaram Project

Principal
Anurag Engineering College
Ananthagiri (V&M), Kodad,
ayanot (Dt.) Telangana-508200



Kaleshwaram Project Dam Map



Power station at Kaleshwaram Project

Anurag Engineering Colle Ananthegiri (V&M), Kodau, Suryapet (Dt.), Telangana-5082



(Approved By AICTE, Permanently Affiliated to JNTU(H), Hyderabad & Accredited by NBA)

An Autonomous Institution

Ananthagiri(V&M), Suryapet(Dist.), Telangana.

III B TECH I SEM A.Y: 2019-20

PLACE OF VISIT: KALESHWARAM PROJECT

The Kaleshwaram lift irrigation project is a multi-purpose irrigation project on the Godavari river in Kaleshwaram, Bhoopalapally, Telengana, India. Currently the world's largest multistage lift irrigation project, its farthest upstream influence is at the confluence of the Pranahita and Godavari rivers.

OBJECTIVES OF FIELD WORK

- > To impart knowledge on structure of dam, reservoir and overall irrigation project.
- > To virtually observe the working of dam gates and head works
- > To make some study on reservoir water storage conditions and working techniques.
- > To pinpoint the components of the dam and head works.
- > To get some field knowledge on head distribution works and canals.
- > To better understand the practical working of hydraulic machinery installed for the working of the project.

OUTCOMES OF FIELD WORK

- > Students will be able to understand the working principles of hydraulics structures practically and can be able to apply the same knowledge in designing the irrigation structures.
- > Students will be able to study flood conditions for the past few years and analyze efficiency of the hydraulics structure during critical times.
- > Students can be abele too understand and design the distribution works like head works, spillways, dam gates & shutters etc.

Co-Ordinator

Anurag Engineering College Ananthagiri (V&M), Kodad, Suryapet (Dt.), Telangana-508206

HoD- CE