



A Dam Site Visit  
Report  
On



छोटुबई गोंपलबई पटेल इंस्टीट्यूट ऑफ टेक्नॉलॉजी  
Chhotubhai Gopalbhai Patel Institute of Technology, Bardoli

**SARDAR SAROVAR DAM,  
KEVADIYA COLONY**



**Organized By:**

*Chhotubhai Gopalbhai Patel Institute of Technology,*

*Department of Civil Engineering*

*Uka Tarsadia University, Maliba Campus, Bardoli.*

*(31<sup>st</sup> January, 2024, Wednesday)*

**Branch: B. Tech**

**Course: Civil Engineering**

**Semester: 8<sup>th</sup>**

**No of Students: Total 19 (Boys- 13 and Girls-6)**

**Faculty Coordinator/Organizer: Prof. Yati Tank, Prof. Helly Mehta**

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*[Signature]*

HEAD

Department of Civil Engineering  
Chhotubhai Gopalbhai Patel Inst. of Tech.

UKA TARSADIA UNIVERSITY

Maliba Campus, Bardoli-Mahuva

Tal: Mahuva, Dist. Surat - 394 043

*[Signature]* 2/21/2024

Director

Chhotubhai Gopalbhai Patel Inst. of Tech.

UKA TARSADIA UNIVERSITY

Maliba Campus, Bardoli - Mahuva Road.

Tal. Mahuva, Dist. Surat

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## Visit Permission Letter/Mail

A mail regarding Visit Permission at Sardar Sarovar Dam was sent to the head office Sardar Sarovar Dam Nigam, Gandhi Nagar for approval. A copy of which is attached below.

Gmail - Request for Permission to Visit Sardar Sarovar Dam by B.Tech.... <https://mail.google.com/mail/u/0/?ik=d7bdf59cb8&view=pt&search=a...>

 Gmail Dgm Canals <narmadadgm1@gmail.com>

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**Request for Permission to Visit Sardar Sarovar Dam by B.Tech. Civil Final Year Students**  
1 message

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**Yati Tank** <yati.tank@utu.ac.in> Thu, Jan 18, 2024 at 12:43 PM  
To: "narmadadgm1@gmail.com" <narmadadgm1@gmail.com>

I hope this letter finds you well. Myself Yati R. Tank, Assistant Professor, Department of Civil Engineering, CGPIT, Uka Tarsadia University- Maliba Campus. I am writing to request your permission for a group of B.Tech. Civil Final year students from our Institution to visit the Sardar Sarovar Dam. We believe that such a visit would provide our students with valuable insights into real-world engineering practices, particularly in the domain of dam construction and water resource management.

Details of the proposed visit:

<b>Date:</b> 31/01/2024	<b>Number of Students:</b> 30	<b>Accompanying Faculty:</b> 2 Faculty Members	<b>Purpose of Visit:</b> The visit aims to expose our students to the practical aspects of dam construction, water resource management, and related engineering concepts. It will supplement the theoretical knowledge gained during their B.Tech. Civil engineering coursework.
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Our students are eager to witness firsthand the engineering marvel that is the Sardar Sarovar Dam and gain a deeper understanding of the challenges and solutions involved in such significant infrastructure projects.

We assure you that the visit will be conducted with the utmost respect for the rules and regulations set by Sardar Sarovar Narmada Nigam Limited. Our students and faculty will comply with all safety guidelines and protocols during the visit.

We kindly request your support and permission for this educational visit, as we believe it will greatly enhance the educational experience of our students and contribute to their overall development as future engineers.

If there are any specific requirements or procedures we need to follow to obtain permission for this visit, please do let us know. We are more than willing to comply with any necessary formalities.

Thank you for considering our request. We look forward to the opportunity to expose our students to the practical aspects of Civil Engineering through this visit to the Sardar Sarovar Dam.

Sincerely,

**Prof. Yati R. Tank,**  
Assistant Professor,  
Department of Civil Engineering, CGPIT,  
UTU- Maliba Campus.

## ***Visit permission approval letter from the institute***

Below is the attached scan copy of the visit permission approval letter from the Institute's Director.

January 30<sup>th</sup>, 2024

To,  
Prof. B. M. Vadher  
Director, CGPIT

Subject: Request for Permission to Organize an Educational Visit to Sardar Sarovar Dam and Statue of Unity on January 31, 2024

I hope this letter finds you in good health and high spirits. As we strive to provide our students with enriching educational experiences beyond the classroom, I am writing to seek your permission to organize a visit to the Sardar Sarovar Dam and the Statue of Unity.

The Sardar Sarovar Dam and the Statue of Unity are not just architectural marvels but also significant landmarks in our nation's history and development. A visit to these iconic sites would offer our students a unique opportunity to witness firsthand the engineering prowess and cultural heritage of our country.

Outlined below are the details of the proposed visit:

- Date: January 31, 2024
- Mode of Transportation: Bus
- Number of Students: 19 (A sheet is attached)
- Faculty Members accompanied: 2 (Prof. Yati R. Tank, Prof. Helly Mehta)

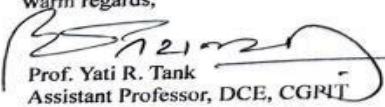
Our faculty members will accompany the students throughout the visit to ensure their safety and supervision. Additionally, we will make all necessary arrangements to ensure a smooth and educational experience for everyone involved. We believe that this visit aligns perfectly with our academic goals of providing holistic learning experiences and fostering a deeper understanding of our nation's heritage and development. Furthermore, it offers a platform for our students to appreciate the significance of environmental conservation and sustainable development, topics that are integral to our curriculum.

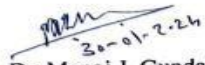
We assure you that every measure will be taken to ensure the safety, discipline, and academic relevance of this excursion. We will also adhere strictly to all guidelines and protocols laid down by the college administration and the authorities responsible for the management of these sites.


Given the aforementioned reasons, we earnestly request your kind permission to proceed with organizing this visit. We are confident that it will be an enriching experience for our students and contribute positively to their overall growth and development.

Thank you for considering our request. We eagerly await your favourable response.

Warm regards,

  
Prof. Yati R. Tank  
Assistant Professor, DCE, CGPIT 30/1/24

  
30-01-2024  
Dr. Manoj J. Gundalia  
Head, DCE, CGPIT

  
30-1

## Visit confirmation letter from SSD head office

Letter No: SSNNL/0121/01/2024 Dt: 25-01-2024



### Sardar Sarovar Narmada Nigam Ltd.

(A Wholly owned Govt. of Gujarat undertaking)

3<sup>rd</sup> Floor, Block No.12,  
New Sachivalaya Complex,  
Gandhinagar – 382 010.  
Gujarat – INDIA

Deputy General Manager (Canals)

To,

Sh. Yatin R. Tank,  
Asstt. Professor,  
Department of Civil Engineering,  
CGPIT, Uka Tarsadia University,  
Maliba Campus.

Sub: - Permission to Visit Sardar Sarovar Dam at Ekta Nagar.

Ref: - Your office mail, date:-18.01.2024.

Sir,

This has reference to your letter referred at above wherein; permission to visit visiting the Sardar Sarovar Dam for 30 students alongwith 02 faculty members of your institute on **31.01.2024** has been requested.

In the above context, I am directed to convey the permission of Nigam to the aforesaid visit of 25 students alongwith 02 faculty members of your institute to visit Sardar Sarovar Dam, River Bed Power House (RBPH) & HR of Narmada Main Canal on **31.01.2024** subject to the following conditions:

1. All transportation and required arrangement shall be made by the institutes at its own.
2. Tourist bus cannot be allowed up to the A-Frame.
3. The permission may be extent only technical support.

**Thanking You**

- Copy with enclosure submitted to CE (D&V), Ekta Nagar, for information and necessary action please. (Encl: copy of mail under reference)
- Copy with enclosure submitted to the Superintending Engineer, NPHW Circle, Ekta Nagar for information with a request to depute a technical staff to accompany and provide necessary information to the visitors during their visit. (Encl: copy of mail under reference).

Signature Not Verified

Signed by  S.  
GOYAL  
Deputy General Manager  
Date: 2024.01.25 16:32:10  
+05:30

File No: SSNNL/VST/e-file/199/2024/0012/DGM (Canal)

Approved By: Deputy General Manager,DGM (Canal),SSNNL

Open the document in Adobe Acrobat DC to verify the E-sign





## ***List of students went on visit***

Students from B.tech(Civil Engineering) 8<sup>th</sup> Semester of academic year 2023-24 were taken to SSD and their names are as listed below.

**List of Students B.Tech. Civil 8<sup>th</sup> Sem A.Y. 2023-24**

<b>Sr. No.</b>	<b>Enrolment No</b>	<b>Student Name</b>
1	201603100410104	Jaiminkumar Kantilal Patel
2	201903103510303	Komalben Hiteshbhai Vasava
3	202003103510057	Dhruv Keshavbhai Patel
4	202003103510070	Aayush Rakesh Dubey
5	202003103510114	Richakumari Maheshbhai Patel
6	202003103510132	Yash Chaturbhai Hirpara
7	202003103510182	Chand Dhirubhai Patel
8	202003103510232	Omveer Lamor Omveer
9	202003103510337	Kanishka Ashok Kumar Bohra
10	202103103520001	Alisakumari Satishbhai Chaudhari
11	202103103520032	Rahul Kumar Navinbhai Mistry
12	202103103520034	Sahil Ashvinbhai Tanti
13	202103103520037	Ronaksinh Prabhakarsingh Thakor
14	202103103520054	Jaykumar Sanjaykumar Patel
15	202103103520091	Karishma Prabhakar Bhagne
16	202103103520094	Vishakha Hitenkumar Mistry
17	202103103520121	Huzaiifa Mohammed Hanif Patel
18	202103103520123	Nirav Raval Raval
19	202103103520124	Raj Shaileshkumar Barot

  
30/01/2024

  
30-1

## ***Schedule of Visit***

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<b>TIMINGS (From – To)</b>		<b>LOCATION</b>
5:30 AM	11:00 AM	Surat to Sardar Sarovar Dam Site
11:00 AM	11:45 AM	Power Plant Visit (Executive Engineer, SSNL)
11.45 AM	12.45 PM	Structural Features of Sardar Sarovar Dam (Executive Engineer, SSNL)
12:45 PM	01:45 PM	Lunch Break
01:45 PM	02:40 PM	Way to Main Canal
02:40 PM	03:30 PM	Narmada Main Canal Head Regulator
03:30 PM	04.00 PM	Tea Break
04.00 PM	04.15 PM	Way to Statue of Unity
04.15 PM	06:00 PM	Visit of SOU
06:00 PM	06.20 PM	Gathering at a point & Taking Attendance of the Students
06:20 PM	06:30 PM	Departure towards the bus parking.
06:40 PM	12:30 AM	Back to Surat

## ***Detail Visit Report***

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The department of Civil Engineering of Chhotubhai Gopalbhai Patel Institute of Technology organized a one day educational visit to Sardar Sarovar Dam. The site visit was organized with the prior permission of Sardar Sarovar Narmada Nigam Ltd. Authority. The Sardar Sarovar Project is an inter-state project, which has participation from the States of Gujarat, Madhya Pradesh, Maharashtra and Rajasthan. The project has undertaken construction of a Sardar Sarovar Dam across Narmada River in Navagam near Kevadiya, Narmada District of the Gujarat State in India. It is on the border of Gujarat and Maharashtra States. It is the second largest concrete dam in the world in terms of the volume of concrete used in its construction, after the Grand Coulee dam across River Columbia, US. The maximum height of the dam would be 138.68 meters. The height of dam is being increased in phases.

The entire visit is guided by Executive Engineer of Sardar Sarovar Dam explained the structural features of Sardar Sarovar Dam at the same place where he explained it to the honorable Prime Minister of India, Shri Narendra Modi. He explained how dam was constructed and reached to its existing height. He also explained how the gate installed on dam to increase the reservoir capacity. He has made this session interesting by asking basic questions to the students. He performed his duty in construction of the Dam starting from the foundation to the completion of the dam. He is witness of all the hurdles that arose in the past in the progress of the dam. At the end of dam visit, there was a technical interaction to strengthen the knowledge regarding Sardar Sarovar.

We have also visited Narmada Canal Head Regulator. Narmada Canal network is the longest network in Asia. The total estimated length of the Canal network is 71,748 Km. Narmada Main Canal is a contour canal. It is the Largest lined irrigation canal in the world. It is about 458 km. long up to Gujarat -Rajasthan border. It has a capacity to flow 40000 cusecs.



### River Bed Power House:

The RBPH is an under ground power house stationed on the right bank of the river located about 165 meters downstream of the dam. It has six number of Francis type reversible turbine generators each of 200 MW installed capacity. The T.G. Sets are supplied by M/S Sumitomo Corporation, Japan and M/S BHEL. These units can operate at minimum reservoir water level of 110.64 meters. These six units have been commissioned in a phase manner during Feb-05 to June-06. The generation of energy depends upon inflow of water from upstream projects and need of water for irrigation in Gujarat.

At the end, Mr. Yati Tank and Ms. Helly Mehta, Assistant professor of DCE extended gratitude to Engineer of SSNL for helping out in visit permission and sparing his valuable time with us. Without his support this visit would have not been possible. We have also visited the Statue of Unity. The SoU is the tallest statue in the world. Students really enjoyed this visit. The visit was very fruitful as it improved our knowledge of irrigation and dam. We had very good support and cooperation from all concern instructors available on the site who explained each and every section very interestingly and deeply.

## Salient Features of Sardar Sarovar Project

<b>I. Location</b>	
State	Gujarat
District	Narmada
Taluka	Rajpipla (Nandod)
River	Narmada
<b>II. Dam</b>	
Type	Concrete Gravity
Length	1210.02 m
Maximum height	163.00 m
Top of dam	EL 146.50 m
Crest	EL 121.92 m
Spillways	
Service spillway	23 bays
	60 ft (18.30 m) each
Auxiliary spillway	7 bays
	60 ft (18.30 m) each
Crest gates	
Type	Radial
Size	18.30 mx 16.76 m (23 Nos.)
	18.30 mx 18.30 m (7 Nos)
Construction sluices at EL. 58.00m	2.10 m x 2.74 m (10 Nos)
	Closed in Feb 94
River sluices at EL.53.00m	2.5m x 3.6 m (4 Nos.)
<b>III. Power Installation(Chph)</b>	
General	

Location	Right bank
No. of units	5
Rated capacity of each unit	50 MW
Installed capacity	250 MW
Type of turbines	Kaplan (Conventional)
Type of Power House	Surface

<b>IV. Canal System</b>	
FSL at head regulator of main Canal	91.45 m (300ft)
Type of Canal	Lined contour canal
Length	458 Km up to Rajasthan border and 74 Km in Rajasthan
Base width in head reach	73.1 m
FSD in head reach	7.6 m
Discharge capacity in head reach	1132.68 cumecs (40000 cusecs)
Gross Command Area (GCA)	34.286 lakh ha
Colorable Command Area (CCA)	21.190 lakh ha
Annual Irrigation	17.92 lakh ha

**Photo Gallery**

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**Hydro-Power Plant Visit**



**SSD Visit Canal Side**







## Summary

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This visit helped students to enhance their collective theoretical and practical knowledge of Gravity Dam and Canal Network. They can identify their prospective study areas of future work in the overall organizational function. Students can also understand detailed design of dam and canal network system which will be covered in the subject. Physical observation of various structural features of the dam and canal network will definitely be enhanced the skill and understanding of students in the filled of Water Resources and Irrigation Engineering.