



POORNIMA UNIVERSITY

Bilaspur Dam and Water Treatment Plant Visit

On 11th October, Department of Civil Engineering of School of Engineering & Technology, Poornima University went to Bisalpur Dam for visiting Dam site, ongoing Pile foundation construction & nearby Water Treatment Plant. Bisalpur Dam is a gravity dam on the Banas River near Deoli in Tonk district, Rajasthan, India. The dam was completed in 1999 for the purpose of irrigation and water supply. Total around 180 students of sections (A, B & C) of Department of Civil Engineering went to visit along with 7 faculty members under the guidance of the Head of department **Ms. Ramaa Singh**. Student gathered at India Gate/EPIP (Sitapura Industrial Area) on 6:00 AM for their respected buses which were allocated before visit.

After gathering of students, buses moved towards Bisalpur Dam Site first. The breakfast & lunch was kept at Dhaba/Hotel located between the ways. The dam site was around 130 km far from our departure. Student reached there and visited dam site and ongoing pile foundation along their batch & faculty guide. **Mr. Ravindra Katara**, Executive Engineer (Construction) interacted with students and asked various basic questions. Student nicely answered their questions. Students also asked their queries. Sir explained all technical aspects & related technical terms. He also delivered the primary use & application of Dam.

After Dam Visit, students were forwarded to WTP (Water Treatment Plant), Surajpura, which were few kilometers away from dam site. Again students visited in their respective batches. The treatment plant serves the water supply of Jaipur. The intake water was from Bisalpur Dam. Student gone through various treatment process of water, which involves aeration, pre & post chlorination, filtration (Rapid gravity sand filter) & various other process.

After finishing visit of both places, student took their respective buses & finally came to Jaipur. The visit was successful and very good learning experience for students. Student thanked the Department & asked for more such visits, which could lead their learning experience to newer heights.

Technical Details

The Bisalpur-Jaipur Water Supply Project (BWSP) has been designed to deliver water from the existing Bisalpur Dam headworks up to Balawala on the south edge of Jaipur City to reduce the city's dependence on its ground water resources, and includes complementary provisions for supplying water to other areas. The conceptual planning for the BWSP is to utilize the Bisalpur Dam water in a phased manner in order to meet the ever increasing water demands of Jaipur City and reduce the groundwater abstraction to sustainable limits. Phase I of the BWSP with water treatment plant (WTP) designed to supply a total of 400 MLD with a provision of 360 MLD for Jaipur city and 40 MLD for rural area.

The transmission system portion of the Phase I works is comprised of:

- Supply and installation of 9 Nos. vertical turbine raw water pumps each 850KW having capacity of
- (Phase -I 416 MLD and for phase-II 624 MLD) in the existing pumping station at the Bisalpur Intake headworks.
- Supply and installation of 8.4 km of 2400 mm diameter MS raw water pipeline from Bisalpur up to Surajpura of 1060 mld capacity.
- Construction of a 400 MLD potable water treatment plant at Surajpura. Bisalpur Water Supply
- Construction of a 400 MLD capacity clear water pumping station at Surajpura, with 360 mld to be delivered to Jaipur and 40 mld for rural areas expendable for 600 mld capacity.
- Supply and installation of 96.0 km of 2300 mm diameter MS clear water pipeline from Surajpura up to Balawala of capacity 540 MLD suitable for phase-II..
- Dedicated power supply system, 220 KV GSS at Duni, 132 KV GSS at Surajpura, 2 Nos. of 33 KV Indoor type GSS at intake and WTP, double circuit 132 KV power line from Todaraisingh 10 Km. and single circuit 132 KV two lines 30 Km. from Duni to Surajpura.

Since 1st March 2009, potable water from Bisalpur Dam is being supplied to Jaipur city and rural areas. One feeder for Jaipur city and two rural feeders, one of Malpura and one for Jhirana are supplied water regularly. The transmission system of BJWSP handed over to PHED for further operation & Maintenance.

