DEPARTMENT OF ELECTRONIC & COMPUTER ENGINEERING

A REPORT ON INDUSTRIAL VISIT TO

BARKA II POWER AND DESALINATION PLANT

The EPE level 3 students (32) of PPCMR Module visited Barka II Power and Desalination Plant on 18th Nov 13 as part of their Case Based Course Work. The Module Leader and Tutors, Dr. Venkateswara Sarma Mallela and Dr Parmal Singh Solanki accompanied the students for the visit.

The Caledonian team was received by Mr Juma Al Balushi, HR Manager and Mr Sunil Kumar, Training Manager of Barka II Power Plant. Safety Induction was given by Mr Karim Said for about 15 minutes through a ppt. Introduction and Plant details were explained by Mr Sunil Kumar through a ppt presentation for about an hour. The Training Manager explained about the complete plant and their working principles, capacities and ratings of various equipment used for Generation of Power (677.887 MW) Combined Cycle Plant and a 120 Million Liters per day reverse osmosis desalination plant. Some aspects of Maintenance were also included in the presentation.
Then 02 teams were formed to visit facilities and equipment of the plant. One team was escorted by Mr Massim Al Siyabi, Plant Engineer, while the second team was escorted by Mr Sunil Kumar. The teams were shown almost all major systems/sub-systems of the plant (with adequate explanations wherever required). Some of the Maintenance aspects were also explained to the Caledonian team.

The operation and Maintenance of Barka II Power and Desalination Plant is undertaken by STOMO. The students were shown the following equipment:

Gas turbines (03), Steam Turbines (02), Generators of 15.74 kV (05), Step up transformers (220 kV), Cooling systems, Microcontroller based digital and analog Protection Systems, Parallel operation of Generators using Synchroscope, SF6 Gas Circuit Breakers, Control Room Panels which show online generation capacities and protections, Heat Recovery systems, Desalination plant filters, etc.

Our students had the opportunity to visit one of the Gas Turbines(GT), which is under
shut down. All sub-systems of GT were shown to our students, which normally is inaccessible under running conditions.

Our students have visited Rusayl Power Plant on 3rd Oct 2013, whose Operation and Maintenance is also undertaken by STOMO as for Barka II Plant. As such, our students have got opportunity to visit and study the two Gas based Power Plants. The two visits should greatly assist the students to carry out their Case Based Course Work.