



# PakAtom

Newsletter of the Pakistan Atomic Energy Commission

September-October, 2010

## Pakistan elected to the chair of IAEA Board of Governors

Pakistan has been elected to the chair of the International Atomic Energy Agency (IAEA) Board of Governors (BOG) for the term 2010-2011, by acclamation. Dr. Ansar Parvez Chairman, Pakistan Atomic Energy Commission (PAEC) will be the Chairman of the Board of Governors.



*The Governor to IAEA Board from Pakistan, Dr. Ansar Parvez (center), elected IAEA Board Chairman 2010 - 2011, at the start of the Board meeting at the agency headquarters, Vienna, Austria, 27 September 2010.*

The election was held during the first BOG meeting after the Fifty-fourth IAEA Annual General Conference held in Vienna (Austria) from 20-24 September, 2010.

Pakistan has previously served as Chairman of the IAEA Board of Governors twice. Once in 1962-63, when Dr. I. H. Usmani was the Chairman, PAEC and the second time in 1986-87 when Mr. Munir Ahmad Khan was the Chairman PAEC. This is the third time that Pakistan is getting the honour of serving as Chairman of the IAEA BOG where it will discharge its duties with impartiality, transparency and professionalism to promote the work of the IAEA.

Pakistan's election by acclamation is an acknowledgment of the positive advances it has made in the nuclear field and also a recognition of its active role in the Agency.

The Board is the executive organ of the Agency. It considers all major questions including applications for membership and the Agency's program of work.

It approves the Agency's Annual Report and the budget under its own authority. The Board also approves all safeguards agreements, important projects, safety standards and technical assistance grants to Member States.

*(Statement of Dr. Ansar Parvez, head of Pakistani delegation to 54<sup>th</sup> IAEA General Conference on P-3.)*

## DG, SPD visits PIEAS Lauds PAEC's HRD Program

Director General, Strategic Plans Division, Lieutenant General (Retd) Khalid Ahmed Kidwai visited Pakistan Institute of Engineering and Applied Sciences (PIEAS), a premier educational institute of Pakistan Atomic Energy Commission, on 8<sup>th</sup> October 2010.



*Director General, SPD, Lieutenant General (Retd) Khalid Ahmed Kidwai addressing the PIEAS students, faculty and Members of the PAEC at PIEAS Auditorium.*

A detailed presentation regarding PIEAS academic programs and its infrastructure was made by Rector PIEAS, Dr. Muhammad Aslam to the honorable guest followed by a comprehensive visit to the PIEAS laboratories and facilities.

A special get-together of PIEAS students, faculty and Members of the Commission was arranged in the Auditorium where the guest was formally welcomed by Dr. Ansar Parvez, Chairman, PAEC. In his address, the Chairman stressed upon the arrangements to vigorously promote university-industry liaison and asked all the Members of the Commission to contribute to this initiative.

DG, SPD, Lieutenant General (Retd) Khalid Ahmed Kidwai congratulated Dr. Ansar Parvez on his election as Chairman, IAEA Board of Governors. He acknowledged that achieving this position certainly enhances the pride and respect of Pakistan world-wide, especially in the present difficult times.

He expressed satisfaction over the historic role of PIEAS in delivering highly-qualified human resource to PAEC and other strategic organizations. He envisioned PIEAS to transform into an internationally distinguished institution of higher education.

He announced a grant of Rs.100 million for PIEAS Central Library, and vowed full support for PIEAS in its endeavours.

# PAEC Power Program In-house Seminar on Plant Life Management



Group photo taken on the occasion of inauguration of the seminar with Mr. Zia ul Hasan Siddiqui, Member (Power), PAEC.

Nuclear power plant life management (PLiM) has gained increased attention over the past decade and effective ageing management of systems, structures and components (SSCs) has now become a key element in PLiM for the safe, reliable and economic long term operation of nuclear power plants. In this context, a four-day seminar on Plant Life Management (PLiM) was jointly organized by KANUPP-1 and Directorate of Nuclear Power Operations (DNPO) on 20-23 September 2010 at KANUPP site.

This was first of a series of in-house seminars to be held at the different nuclear power plants belonging to PAEC Power Program. The idea of holding such seminars locally was initiated by DNPO and supported by Member (Power), to provide a forum for discussion and exchange of ideas, experience and good practices between NP program personnel and to increase mutual understanding of the problems of our NPPs.

The seminar which drew participants from across the various nuclear power plants and projects of PAEC, aimed at the fulfillment of the following objectives:

1. Role of PLiM Program was emphasized to assure safe, reliable, and economical operation of present and future nuclear power plants of PAEC Power Program.
2. The seminar provided a forum for information exchange between the NPPs of PAEC and to share strategies in ageing management and PLiM programs.
3. It helped in identification of progress on ageing management and PLiM processes at the two operating nuclear power plants.

The seminar was attended by engineers and scientists from K-1, K-2, C-1 and C-2. The seminar comprised six

Technical Sessions, a visit to K-1 Plant and a visit to CIAL Test Rig and other facilities. In the Technical Sessions, total 31 papers were presented. To follow-up the suggestions made in the seminar a PLiM working group will be formed with relevant persons from the NPPs and convened by DNPO in future.

## Honour for PAEC Scientist

Dr. Mehboob-ur-Rehman, Principal Scientist, NIBGE Faisalabad has been awarded Lahore Chamber of Commerce & Industry (LCCI) Scientist Achievement Award-2010 along with a cash prize of Rs.0.50 million (Sponsored by Guard Agricultural Research & Services) which was awarded to him by the Honorable Prime Minister of Pakistan on September 18, 2010. His group has bred several cotton lines (NIBGE-115 and NN-3 etc.) including one approved cotton variety NIBGE-2 using DNA based marker assisted selection. The material (NIBGE-115 and NN-3) developed by this group has been declared the most tolerant to "Burewala Virus Disease" by various public agencies. This material was transferred to other organizations for using in cotton breeding programs. His group has been instrumental for breeding biotech cotton varieties using *Bt gene* (Mon-531). All these efforts led to the development of two Bt cotton cultivars such as IR-NIBGE-3701 and IRNIBGE-1524 which have been approved on 31<sup>st</sup> March 2010; and two new IR cotton lines IR-901 and IR-NIBGE-3 are being tested in national trials.

He has also published several research articles in prestigious journals including. Nature, Plant Physiology, Plant Pathology, Crop Sciences. Moreover, he has published two chapters in books published by Springer Publisher. His total IF is ~72.

## Urges equitable and non-discriminatory assistance to member states for peaceful applications of nuclear technology

Pakistan actively engaged in nuclear safety and security activities with the world

PAEC to install 8800 MW of nuclear by 2030

PAEC utilizing nuclear technology in the fields of agriculture, health and industry

Addressing the 54<sup>th</sup> IAEA General Conference, Dr. Ansar Parvez, Chairman, PAEC and head of Pakistani delegation, urged the IAEA to continue to maintain its principle-based role to assist its member states on equitable and non-discriminatory basis in line with the Agency's Mission Statement, i.e., realization of the right of every state to the peaceful applications of nuclear technology, particularly nuclear power generation.

The 54<sup>th</sup> IAEA General Conference is remained in session from September 20-24 at Vienna, Austria.

Striking a balance between its role as the promoter of nuclear energy and its responsibility as the nuclear watchdog is indeed a challenge faced by the IAEA particularly in the wake of large number of aspirant countries, Dr. Ansar Parvez stated.

Pakistan has established a strong and independent safety and security infrastructure, including the establishment of an independent regulatory authority, the Pakistan Nuclear Regulatory Authority (PNRA), in the year 2000. Pakistan is a party to several international conventions and actively participates in the nuclear safety and security activities and programs of the Agency, including the Nuclear Security Action Plan, he informed the IAEA General Conference.

Pakistan Atomic Energy Commission has been given a mandate by the Government of Pakistan to install 8800 MWe of nuclear by 2030. Pakistan faces severe load-shedding, we need to build more nuclear power plants to alleviate the energy shortfall and to support our socio-economic development, he informed.

We are operating two nuclear power plants, KANUPP and Chashma Nuclear Power Plant C-1. Another nuclear power plant C-2 at Chashma is in the final stages of construction and will be commissioned in 2011. Pakistan now already has to its credit more than 45 years of safe

reactor operation experience and a technical and engineering infrastructure to maintain and provide technical support to these plants, he added.

In addition to nuclear power, Pakistan has also focused on applications of ionizing radiation and radioisotopes in the fields of health, agriculture and industry. The Pakistan Atomic Energy Commission currently manages 14 nuclear medical centers across the country. These centers cater to around half a million patients every year most of them free of cost. Another four centers are under-construction, the PAEC chief stated.

Using its research reactor, Pakistan Atomic Energy Commission indigenously produces most of the radioisotopes required for medical purposes. A Molybdenum production facility has recently been commissioned. This facility will not only meet the requirements of the country's nuclear medical centers and hospitals, but will also have spare capacity for export to other countries, Dr. Parvez told.

With a sizeable nuclear power program, a well-trained pool of experts and decades of experience in the areas of power generation, health, medicine, agriculture, biotechnology and industrial applications, Pakistan is now poised to share its knowledge and expertise with upcoming member states through training placements and expert missions, the head of Pakistani delegation stated.

Concluding the address, he said, I express our deep appreciation for the valuable assistance provided by the Agency in the fields of nuclear technology, safety and security. My delegation firmly believes that the Agency should take larger initiatives to facilitate construction of nuclear power plants in Member States on a non-discriminatory basis thereby contributing to the social and economic development of these countries.

# World Breast Cancer Awareness/Mammogram Day

## PAEC Cancer Hospitals undertake awareness campaign on cancer

The year 2010 has been declared as Cancer Prevention Year with slogan "Cancer Can Be Prevented Too" and the month of October has been declared as "Breast Cancer Awareness Month" globally, in which various activities related to generating awareness of the disease are being arranged through out the world including Pakistan, while 25<sup>th</sup> of October was particularly declared and observed as a Mammogram Day universally.

All the fourteen (14) Cancer Hospitals run by Pakistan Atomic Energy Commission organized various activities aimed at outreaching the public, media and the medical community for disseminating important information for educating the public on the need of physical activity, healthy foods, risk factors, early detection, self-breast examination and subsequent proper steps of the treatment.

The public awareness theme projected the well established fact that breast cancer is preventable and curable if detected early and that is why there is need of launching of breast screening programs such as mammogram for women. In response to the advertisements placed in the newspapers, a large number of women reported voluntarily for seeking of mammograms and consultation. Free advice related to this subject was also offered by the experts. Seminars and workshops were arranged in which printed material containing information on self-breast examination, risk factors and importance of early detection, was distributed. All the PAEC Cancer Hospitals have well established breast care clinics and offer the mammogram facility through out the year as well.

Other than this special campaign, PAEC has already a whole time program in place for reaching out the remote areas of the country for



*Dr. Maria Catalina, Counsel of Chilean Embassy and chief guest of Breast Cancer Awareness Seminar arranged by PAEC's Nuclear Medicine Oncology and Radiotherapy Institute (NORI), receiving shield from Prof. Syed Aslam Shah, Head of Department of General Surgery, Pakistan Institute of Medical Sciences.*



*The seminar on "Breast Cancer Awareness" at NORI, Islamabad was attended by eminent doctors, medical students, teachers from different universities and general public.*

advice and screening of various sections of public with particular emphasis on Breast Screening of Rural Female Population through mobile breast care units stationed at INMOL, Lahore, BINO, Bahawalpur and NIMRA, Jamshoro.

It may be recalled that PAEC is running fourteen (14) Cancer Hospitals across the country and four (04) such hospitals are under construction. About 500,000 patients benefit from very sophisticated diagnostic and treatment facilities available at PAEC Cancer Hospitals annually, most of them free of cost.

## NCNDT provides technical assistance to Power, Gas Processing and Fertilizer Industries

The National Centre for NDT (NCNDT) continues to extend non-destructive inspection services to different national industries. The Centre is regularly providing third party inspection services to Uch Power Plant in Balochistan during their planned shutdown since 2002. A team of NCNDT is now scheduled to reach Dera Murad Jamali in a few days for assistance in inspection of boilers components of the Uch Power Plant. The inspection work includes magnetic particle testing, dye penetrant testing, ultrasonic flaw detection and thickness measurement.

NCNDT is also providing non-destructive In-Service Inspection (ISI) for condition assessment of defective Lean Amine Pump Casings at Sawan Gas Field of OMV (Pakistan) since 2005. The techniques used for the non-destructive re-assessment of the casings include hardness testing, ultrasonic testing for location and sizing of inherent casting flaws, ultrasonic thickness gauging,

crack depth gauging, and fluorescent magnetic particle testing. The condition re-assessment task is scheduled to be undertaken for this year in a few weeks time at the site of Sawan Gas Processing Plant in Sindh.

NCNDT is also scheduled to perform inspection based on Eddy Current Testing (ET) of Urea Stripper and Carbamate Condensers at Pak-American Fertilizers Limited (PAFL) Daud Khel. The Centre is providing ET services to PAFL since 2003.



Hot Water Boiler at Uch Power Plant.

Ultrasonic Testing of Lean Amine Pump Casing at OMV (Sawan Gas Field Pakistan).

Eddy Current Testing of Carbamate Condenser at Pak-American Fertilizers Limited.

## Announcement

### NIFA to hold 27<sup>th</sup> Postgraduate Training Course on the “Use of Nuclear and Other Techniques in Food and Agricultural Research”

The Nuclear Institute for Food and Agriculture (NIFA), an establishment of Pakistan Atomic Energy Commission, is actively involved in basic and applied research in selected areas of food and agriculture. The institute is well-equipped with modern laboratory facilities and trained manpower. It maintains an active collaboration with PAEC establishments and other national and international organizations engaged in similar pursuits. The institute will hold 27<sup>th</sup> two-week Postgraduate Training Course on the “Use of Nuclear and Other Techniques in Food and Agricultural Research” from **November 29 to December 10, 2010** at its premises.



A view of Nuclear Institute for Food and Agriculture (NIFA), Peshawar.

Following topics will be covered in the course:

#### A. Radiation Concepts

Fundamentals of radiations, radioisotopes and their applications in Food, Agriculture, Health, Industry and Environment  
Food Irradiation for Food Safety & Security  
Quantities and units in Radiation Protection  
Effect of Ionizing Radiation on Living organisms

#### B. Food Nutrition and Engineering

Extrusion Technology  
Nutritional Evaluation of Foods  
Herbal Medicine

#### C. Crop Improvement

Biotechnology  
Mutation Breeding  
Plant Pathology

#### D. Entomology

Insecticide Resistance Mng. In Crop Pests  
Termite Control

#### E. Soil Sciences

Biological Nitrogen Fixation  
Isotopes in Soil Science and Plant  
Nutrition

- #### F. Modern Analytical Techniques
- Irrigated Systems Farming  
Chromatography  
Spectroscopy
- #### G. Data Analysis
- Statistical Designs  
Economic Analysis
- #### H. Special Lectures
- Nano Technology and its Application in Biology  
Environmental issues/Global Warming

For further information visit NIFA website:

<http://www.nifa.org.pk/annualtrainingcourse.htm>

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## Chairman's Assignments Abroad

- Dr. Ansar Parvez, Chairman, PAEC participated in IBC Asia's Inaugural International Conference on Nuclear Power held in Singapore from 01-04 August, 2010.
- Chairman, PAEC led Pakistani delegation to 54th IAEA General Conference held in Vienna (Austria) from 20-24 September, 2010. Participated in the meetings of the IAEA Board of Governors from 13-17 September, 2010 and on 27 September 2010. During the last meeting, he was elected Chairman IAEA Board of Governors for the term 2010-2011.
- He also visited CERN, Geneva, from 20-22 September, 2010 and held meeting with new DG (CERN), Mr. Rolf Heuer.

## Appointments abroad

- Dr. Asif Salahuddin, Director General (IA & Training) joined IAEA, Vienna (Austria) as Programme Management Officer (against P-4 level Post) for 3 months from 19 August, 2010.
- Mr. Shahid Ullah Baig, Deputy Chief Engineer, KNPC Karachi proceeded to Canada on 13-08-2010 for undertaking assignment as "KANUPP Representative (KANREP) at Candu Owners Group (COG)" Office, Toronto for a period of six months.

## Assignments of PAEC Experts Abroad

- Mr. Khurram Shahzad Ahmad, SE, NCNDT, SES Directorate, Islamabad undertook assignment as Consultant on Updating Training Materials on Visual Testing, Based on TECDOC-628 Syllabus, from 23-27 August, 2010 at IAEA HQ., Vienna (Austria).
- Mr. Iqbal Hussain Khan, DCE, IAD, PINSTECH carried out National Consultant Mission at Commonwealth Scientific and Industrial Research Organization (CSIRO), Brisbane, Australia from 23-27 August, 2010.

## Visits of Foreign Experts to Pakistan

- Mr. Musikavanhu Roy Mlambo, Specialist, (Zimbabwean) visited INMOL, Lahore on 1st August, 2010 for a period of one week for Application Training on Siemens LINAC "Oncor Impression IMRT Plus".
- Mr. Tayfun Izmittli, Engineer, (Turkish) visited INMOL, Lahore from 29 August to 04 September, 2010 for Installation of CO-60 Source and Service of Alcyon CO-60 Teletherapy Unit.
- Mr. Thomas Anthony Cunningham and Mr. Rupert Moscrop Knowles from Ireland visited PARAS Foods,

## PINUM gets full accreditation by CPSP

A team of experts from College of Physicians and Surgeons Pakistan (CPSP) visited PAEC's Punjab Institute of Medicines (PINUM), Faisalabad on 28-06-2010 for accreditation of the Institute for FCPS (Nuclear Medicine). They visited different sections including Labs, Gamma Cameras, Library and OPDs. They also witnessed the installation process of new SPECT CT System and appreciated the services and facilities provided by the Institute. As a result of their visit, PINUM has been recognized for 04 years for FCPS training in Nuclear Medicine.

## INMOL organizes a course on "Blood Bank and Transfusion Medicine"

PAEC's Institute of Nuclear Medicine and Oncology (INMOL), Lahore organized a "National Blood Bank and Transfusion Medicine Training Course" at its premises from 4-7 October 2010. Honorable chief guest Prof. Dr. Mahfooz ur Rahman, Director, Institute of Blood Transfusion Services Punjab, Lahore inaugurated the Course. Participants from almost all over the country attended the course. The course was highly appreciated by the participants in understanding the subject both practically and theoretically from the experts of this field.

Blood Banking and Transfusion Medicine is an important subject contributing towards a quality healthcare system. The participants availed the opportunity in understanding the basic as well as contemporary techniques of the Blood Banking and Transfusion medicines. Very important Clinical topics like, Safe Blood, Use of Blood Components, Blood Transmissible infections, were covered. Concepts of Alloantibody, Autoantibody, Cold antibodies, Warm antibodies, Naturally occurring immuno antibodies, unexpected antibodies, complete antibodies, Incomplete antibodies, Complement system, factors enhancing Antigen and Antibody Reactions and their effects in Blood Grouping, Cross matching and transfusion were deliberated.

The key message of the course, "Blood Components Therapy", was emphasized before the audience. Procedures for the preparation of the Blood Components manual as well as on Cell Separators were demonstrated during the course.

In addition to the participants from outside Lahore, local Haematologists, students of Haematology and personals engaged with Blood Banking participated in the Course and took keen interest in interactive sessions.



Participants of National Blood Bank Course at INMOL on 4-7 October, 2010 with facilitators and Director, INMOL.

# 6<sup>th</sup> Executive Management Seminar on “Environmental Pollution Scenario of Pakistan: Findings and Remediation” at PINSTECH



*Dr. Ansar Parvez, Chairman, PAEC (centre) presiding over the inaugural session of the course. To his right are Dr. Shoaib Ahmad, Member (Physical Sciences), Dr. Javed Akhtar, Director, Science and to his left are Dr. Jamsheed Hussain Zaidi, Director General, PINSTECH and Dr. Shahida Waheed, Seminar Coordinator.*

A safe environment is prerequisite for healthy life and efforts are ongoing in nearly all countries of the world to make it achievable. The present day situation of atmospheric and water pollution and its transboundary spread in particular has become an alarming issue of concern both nationally and internationally.

The status of environmental degradation in and around large population centers and industrial sites in Pakistan is quite alarming. Accordingly, the vital issues of monitoring of environmental pollution, pollution source identification, pollution control strategies and waste management solutions need to be investigated for protection of the human and living environment. These problems must be jointly addressed by the government, environmental activists, scientists and the citizens. In this context, the Chemistry Division of the Directorate of Science organized a three days National Executive Management Seminar (NEMS) on “Environmental Pollution Scenario of Pakistan: Findings and Remediation” at PINSTECH from 27-29 October, 2010. The aim of the seminar was to bring together scholars, scientists, students, health workers, Lawyers and environmental activists from all over Pakistan to focus on the severity of the problem, to investigate its root causes and discuss the remedial steps. The NEMS was 6<sup>th</sup> in the series organized by PINSTECH. Around 100 professionals and executive managers attended the Seminar. These include representatives from various government departments, NGOs, scientific and research organizations, universities/ academic institutions from different parts of the country.

The seminar was inaugurated by Dr. Ansar Parvez, Chairman Pakistan Atomic Energy Commission. In the inaugural address, he emphasized on development of strategies for environmental monitoring and control to address the environmental pollution. He enumerated the impact by various factors such as deforestation, discharge of untreated domestic and industrial wastes into water

courses and toxic emissions into the air by industrial units. He commended the cleaner energy production by nuclear power reactors. He said that we need to worry about polluting our environment as such practices are associated with severe local impacts, regional or cross boundary impacts and the global impacts. He remarked that environmental pollution is a key issue in Pakistan and stressed that relevant agencies should make emergency preparedness plans to combat air, soil and water pollution in the country. He threw light on the importance of public awareness to secure our natural reserves and to control pollution, as a small effort by each of us towards cleaner environment counts a lot.

Dr Jamshed Hussain Zaidi, Director General, PINSTECH, thanked the Chairman, PAEC for accepting the invitation to inaugurate the NEMS and for providing patronage and support to PINSTECH management to hold such training events, workshops and conferences throughout the year. He also extended a warm welcome to the Dr. Shoaib Ahmad, Member (Physical Sciences) as well as participants and resource persons. He presented a copy of the PINSTECH Scientific Calendar-2011 to the Chairman PAEC. He highlighted the thematic importance of the seminar and emphasized the role of PINSTECH for building analytical capacity and expertise for pollution monitoring and to impart training for human resource development. He mentioned that holding of such Seminars and Training events is essential as it provides opportunities to exchange information, views and share experience with each other.

Earlier, Dr Shahida Waheed, Coordinator of the Seminar described some of the activities conducted by PINSTECH in this field. She mentioned that the 6<sup>th</sup> NEMS organized by PINSTECH will prove as a step forward towards long-term practical solutions to the enormous challenge of environmental pollution.

# CHASNUPP-1 Completes 10 Years of Successful Operation

A simple but dignified ceremony was held at Chashma site on 21<sup>st</sup> October 2010 to commemorate the achievements and good performance of C-1 as it completes 10 years of operation. Lt. Gen. (Retd) Khalid Ahmed Kidwai, Director General (Strategic Plans Division) was the chief guest at the occasion and the function was attended by Dr. Ansar Parvez, Chairman Pakistan Atomic Energy Commission (PAEC), Mr. M. Anwar Habib, Chairman, Pakistan Nuclear Regulatory Authority (PNRA), Mr. Zia ul Hasan Siddiqui, Member (Power), PAEC and other dignitaries besides plant management and personnel.

During his address, the chief guest applauded the achievements and good performance of C-1 and specifically appreciated the efforts of plant personnel to

indigenize its operation and maintenance activities. He said that the good performance of C-1 facilitated Government approval for initiating new projects in the nuclear power sector. He also appreciated the friendly support of People's Republic of China in the Nuclear Power Program of Pakistan. He remarked that he is optimistic of achieving the 8800 MWe target given to PAEC.

During his introductory speech, Mr. Safder Habib, Director General of Chashma Nuclear Power Generating Station informed that C-1 has achieved a very high capacity factor during 2009 and that plant capacity and availability factors following Sixth Refueling Outage are 93 and 98% respectively.



*Lt. Gen. (Retd) Khalid Ahmed Kidwai, Director General, Strategic Plans Division addressing a function arranged at Chashma titled "CHASNUPP-1 Completes 10 Years of Successful Operation". Sitting on the stage from (L to R) are Mr. Safder Habib, DG, Chashma Nuclear Power Complex, Dr. Ansar Parvez, Chairman, PAEC and Mr. Zia ul Hasan Siddiqui, Member (Power), PAEC.*

## Chairman, Pakistan Space and Upper Atmosphere Research Commission (SUPARCO) visits PIEAS

Chairman, Space and Upper Atmosphere Research Commission (SUPARCO) Maj. Gen. Ahmed Bilal visited PAEC's Pakistan Institute of Engineering and Applied Sciences (PIEAS). He was given a briefing about PIEAS by the Rector, Dr. Muhammad Aslam.

Later on, he had a meeting with faculty members in PIEAS conference room. He was shown various laboratories and facilities at PIEAS. Maj. Gen. Ahmed Bilal appreciated the progress made by PIEAS and he showed keen interest in collaboration between PIEAS and SUPARCO in various research areas.

Before his departure from PIEAS, Chairman, SUPARCO also planted a sapling as mark of cooperation between the two strategic organizations.



*Dr. Nasir M. Mirza is showing Laboratory facilities to Chairman, SUPARCO. Dr. Muhammad Aslam, Rector, PIEAS is accompanying them.*