Ulaanbaatar, Mongolia

FED team designs renovation/repair for school gymnasium

Yes, Ulaanbaatar, Mongolia, was what it said on TDY orders for FED team members, Mr. Paul Yoo, Chief, Engineering Division; Mr. Na, U-Kyun, mechanical engineer, and Mr. Chon, Sung-Ho, architect, Design Branch.

They are members of a team that performed a site survey of a gymnasium at Special Math and Science School #11, April 3-10, 1998. They also conducted a market survey of the local construction material, and prepared a preliminary design and bill of materials. They accomplished a lot in one week.

The gymnasium was completed in the summer of 1995 under a joint effort by U.S. troops and Mongolian Army engineers. Because it was not heated adequately and mildew was forming on walls, FED was asked by USARPAC to provide engineers and an architect to evaluate deficiencies and provide a design to fix them.

In April, the team found the gymnasium had heating system design deficiencies due largely to the general design and construction practices that exist in Mongolia. The As-Built drawings the team obtained from the school, Mongolian Ministry of Defense, and the A-E lacked detailed information. Contract documents did not indicate detailed requirements, so it would be very difficult to enforce quality control/quality assurance during construction.

Building construction practices in Mongolia do not use wall insulation, but brick wall construction 24-inches thick. Roof construction uses insulation concrete on top of pre-cast concrete roof.

The existing heating system for the gymnasium consists of thin plate radiators of unknown capacity and it is one of three main heat distribution zones for the entire school. Like most buildings in Ulaanbaatar, the school receives heating hot water (85-90 degrees centigrade) from the three city power generating plants' heat recovery.

(continued on page 5)
I recently read a pamphlet, *A Survival Guide to the Stress of Organizational Change*, by Price Pritchett and Ron Pound. They highlighted three key drivers of change: people, technology and information. Today we are approaching six billion people with a predicted world population of ten billion by 2040. Since people produce technology, we can expect that the rate of technological change to follow the rate of population growth. And, people with technology generate information, a ton of information. Current estimates indicate that the amount of information available will double in the next five years.

We must become more adaptable to our changing environment. But, as we change we experience stress. Our instinctive reaction to stress, flight or fight, does not meet the challenges of change. Even yesterday’s successful reaction patterns will not work today. The authors assert there is relief in surrendering to and embracing change to create the opportunity for breakthrough instead of breakdown, the result of improperly addressing stress. Further, they maintain there is much to be learned from the Oriental philosophy of Zen. And I agree.

What is missing from the authors’ thesis is a foundation upon which one stands in the face of change. That foundation is a system of values, the social principles desirable and worthy of respect and esteem for their own sake. What is unique is that from culture to culture these values are essentially the same.

In the Army we have a model for values, Army Core Values, captured in the acronym, LDRSHIP (pronounced LEADERSHIP). Throughout this issue you will see these values displayed. Anchoring yourself in these values will give you the strength to endure the stress of change.

With each passing day, Barbara and I are amazed at all that you do and the manner in which you perform. You continue to do your best and we are proud of you.

**COL James L. Hickey**

*Check out the Far East District web site at [Http://www.pof.usace.army.mil]*

---

**LDRSHIP**

**Loyalty** --

Bear true faith and allegiance to the US Constitution, the Army, and other soldiers.

**Duty** --

Fulfill your obligations.

**Respect** --

Treat people as they should be treated.

**Selfless-service** --

Put the welfare of the nation, the Army and your subordinates before your own.

**Honor** --

Live up to all the Army values.

**Integrity** --

Do what’s right, legally and morally.

**Personal Courage** --

Face fear, danger or adversity (physical and moral).
Certain safety problems are common to hot environments. Heat tends to promote accidents due to the slipperiness of sweaty palms, dizziness, or the fogging of safety glasses. Wherever there exists molten metal, hot surfaces, steam, etc., the possibility of burns from accidental contact exists.

Aside from these obvious dangers, the frequency of accidents, in general, appears to be higher in hot environments than in more moderate environmental conditions. One reason is that working in a hot environment lowers the mental alertness and physical performance of an individual. Increased body temperature and physical discomfort promote irritability, anger, and other emotional states which sometimes causes workers to overlook safety procedures or to divert attention from hazardous tasks.

Excessive exposure to a hot work environment can bring about a variety of heat-induced disorders:

**Heat Stroke**

Heat stroke is the most serious of health problems associated with working in hot environments. It occurs when the body's temperature regulatory system fails and sweating becomes inadequate. The body's only effective means of removing excess heat is compromised with little warning to the victim that a crisis stage has been reached.

A heat stroke victim's skin is hot, usually dry, red or spotted. Body temperature is usually 105 degrees Fahrenheit or higher, and the victim is mentally confused, delirious, perhaps in convulsions, or unconscious. Unless the victim receives quick and appropriate treatment, death can occur.

Any person with signs or symptoms of heat stroke requires immediate hospitalization. However, first aid should be immediately administered. This includes removing the victim to a cool area, thoroughly soaking the clothing with water, and vigorously fanning the body to increase cooling. Further treatment, at a medical facility, should include continuation of the cooling process and monitoring complications which often accompany heat stroke. Early recognition and treatment are the only means of preventing permanent brain damage or death.

**Heat Exhaustion**

Heat exhaustion includes several clinical disorders having symptoms which may resemble the early symptoms of heat stroke. Heat exhaustion is caused by the loss of large amounts of fluid by sweating, sometimes with excessive loss of salt. A worker suffering from heat exhaustion still sweats but experiences extreme weakness or fatigue, giddiness, nausea, or headache. In more serious cases, the victim may vomit or lose consciousness. The skin is clammy and moist, the complexion is pale or flushed, and the body temperature is normal or only slightly elevated.

On most cases, treatment involves having the victim rest in a cool place and drink plenty of liquids. Victims with mild cases of heat exhaustion usually recover spontaneously with this treatment. Those with severe cases may require extended care for several days. There are no known permanent effects.

**PERSONS WITH HEART PROBLEMS OR THOSE ON A 'LOW SODIUM' DIET WHO WORK IN HOT ENVIRONMENTS SHOULD CONSULT A PHYSICIAN ABOUT WHAT TO DO UNDER THESE CONDITIONS.**

---

**June Safety Slogan:**

Safety First, For Life
New Team Members

Mr. David M. Honbo arrived at FED on May 25th and is serving as Chief, Information Management Office. Honbo is not a stranger to FED. Between 1991 and 1997 he served as Chief, Engineering Support Section, Engineering Services Branch, Engineering Division. From 1982 to 1991, he served as Chief, Programs and Reports Section, Military Branch, Engineering Division, POD. His awards include three Commanders Awards for Civilian Service. Honbo has a Bachelor of Science Degree in civil engineering from the University of Hawaii. His hobbies and interests include bowling and golf. He also repairs golf clubs. Honbo and his wife, Anna, have two sons, Jamie and Dana.

Major Paul D. Cramer arrived at FED on May 28th to assume duties as a project engineer at Tongdunchon Resident Office. His hometown is Canton, South Dakota, and he is a registered professional engineer in the Commonwealth of Virginia. Cramer holds a Bachelor of Science in Civil Engineering from South Dakota State University and a Masters of Science in Engineering Management from the University of Missouri at Rolla. He is on an unaccompanied 12-month tour and his interests include golf. Cramer and his wife, Monica have two daughters, Jennifer, and Laura.

P.E. Examination Review

The University of Missouri - Columbia is offering civil engineers a chance to review for the PE license examination without going to a classroom. All you need is a computer connected to the internet. The problem and solutions review course uses web pages and friendly 3-mail conferencing software. Topics include steel and concrete design, highway and traffic engineering, geotechnical engineering, water supply, wastewater treatment, solid waste open channel flow, hydraulic machines and hydraulics. Students will receive a comprehensive review and reference text. Instructors will be on-line to answer questions. You can see the course for free at www.missouri.edu/-ceewww/cyberpe. Contact John Atkinson at atkinsoj@ext.missouri.edu for additional information.

Worth Repeating

"Freedom is the sure possession of those alone who have the courage to defend it."

Pericles
Greek Statesman
C. 495-529 B.C.
During the Korean Union Picnic on May 23, 1998, the blue team (in left photo above) (l-r): Kim, Kang-Pil; Yi, Won-Chong; Song, Un-Ho; Yi, Myong-Chin; and Chong, Hyong-Kun competes against the red team (in right photo above) (l-r): Kim, Hyong-Su; Kim, Hui-Kyu; Yi, Pyong-U; Sin, Won-Kyun; and Yi, Han-Kyu, in a group relay.

**FED team designs renovation/repair for school in Mongolia**

(continued from page 1)

system through a primary and secondary pumping system. From the hot water distribution control room in the school, the hot water is distributed into three main zones that include the domestic hot water heating system. The heat distribution control lacks ball or globe valves which would allow adequate balancing of water flow for each zone commensurate with the heating requirement.

Only three columns of the radiators installed on the west side wall were producing heat with the rest of the radiators cold due to lack of heated water flow. Blocked supply water pipe and inadequately sized radiators seem to be the main reasons for the heating problem.

The scope of work was developed to maintain a warmer indoor temperature and eliminate conditions for mildew formation on the walls and ceiling. This will be done by installing wall insulation, increasing heating capacity of radiators and replacing windows. Radiator heating was selected due to the non-availability of heating and ventilating units in Mongolia and maintenance concerns.

USARPAC decided against using U.S. made floor materials due to inadequate funding. The new floor will be an exact replacement of the existing floor using materials available in Mongolia.

One week was too short to conduct a comprehensive market survey, so the team determined what materials are reasonably available based on the team's information. The bill of materials was prepared with sketches and other information to enable award of a local materials purchase contract by Major LaPorte and Capt. Stoll.

Construction is beginning in June, with the renovation to be completed in September 1998.
FEDsters get involved in

story by Sam Barnes
photos by Mr. Yo, Kyong-II

The Far East District (FED) celebrated its second annual safety day on May 28, 1998. The motto, "Safety First For Life" was chosen from several entries in the contest prior to safety day. During the opening ceremony, COL James Hickey, District Commander, presented the Construction Management Excellence Award to Mr. Chang, Yong-Ung, Chief of Construction Services Branch. Mr. Sam Barnes, Chief, Safety & Occupational Health Office, presented the first three specially minted safety coins to COL Hickey; Mr. Tim Phillips, Resident Engineer, Soul Resident Office, (who submitted the winning safety motto); and Mr. Olsen Okada, civil engineer, Civil/Specifications Section (who submitted the winning coin design).

Following the morning opening ceremony, 150 FEDsters and guests picked up free safety day t-shirts. Other activities included informative displays and presentations by the Community Health Council on cancer awareness, substance abuse, lifestyle for a healthy heart, and breast cancer. These were so popular, the safety office is planning to bring them back for encore presentations.

Impressive, was the very large bus provided by the Korean Industrial Safety Corporation (KISCO), Korea’s equivalent of OSHA. Inside the bus was a large comfortable theater for viewing KISCO’s abundant library of safety-related videos. These videos, handouts of various safety subjects, and graphic displays reinforced everyone’s need for working safely.

The Yongsan Fire Department stopped by in the afternoon to demonstrate the proper use of different types of fire extinguishers. Many found out there was more to putting out a fire than just "point and shoot" with the fire extinguisher.

Not to be left out, the field offices conducted safety day training at their respective installations. Some highlights included: construction safety videos, exchange of summer safety issues (i.e. water, home, office, fire, driving); instructions given on proper completion of Immediate Report of Accident POD Form 265-R; safety tour of construction sites using safety checklist; and viewing electrical safety and scaffolding videos.

It is through the efforts and friendship of Mr. David McCracken, Industrial Hygienist, FED Safety & Occupational Health Office, with Mr. Kwon, H.C. (KISCO), it has been possible for the professional relationship FED now has with KISCO to develop.
Ms. Carolyn Hawkins checks the blood pressure of Mr. Kim, Yong-II.

At the end of the day, Mr. Barnes presented safety coins to Mr. Yo, Kyong-II, Information Management Office, for graphics support, and to Mr. Pak, Hong-Chae, Quality Assurance Branch, for his coordination and translation assistance with the KISCO team.

It is certain that through activities like Safety Day, the FED and KISCO will make a big difference in improving the quality of safety in the work place for everyone throughout the Republic of Korea. The intent of Safety Day is to keep safety foremost in everyone's mind during their daily activities.

Members of the Yongsan Fire Department explain many FEDsters there is more to putting out a fire than "pointing and Shooting" a fire extinguisher.

FEDsters picked up valuable safety and health information throughout the day.
Customer Corner

Edward Kanciruk
Deputy Director, DPW Area II
Hometown: Pacific Grove, CA
With DPW Area II: 11 yrs.

Ed Kanciruk has been the Deputy Director for Public Works (DPW), Area II, for 5 years now and loves his job at Yongsan Garrison in Seoul. He is a partner with the DPW and the 34th Support Group.

"I'd like to have a year with no power outages and no water line breaks," he said when asked about job goals.

Kanciruk said his job is 60% fire fighting, 10% personnel management, 25% routine, and 5% shmoozing. He provides continuity for the Director of Public Works with the military; provides institutional memory; and is the conduit for customers regarding power, roads, water and real property needs (DPW, Area II, is responsible for 1,730 buildings.).

Kanciruk holds a Bachelor's Degree in Mechanical Engineering from City University of New York and has 16 years of government service. Prior to coming to Korea, he was the industrial engineer for the DPW at Ft. Ord, Calif. Earlier in his career he worked in the private sector for Corning Glass Works, Ford Motor Company, and Kaiser Aluminum Corporation.

Travel and model airplane building are among Kanciruk's personal hobbies and interests. He took his family on an 18-hour ferry trip from Russia to China and was pleased to give his family some idea of what it was like when his grandparents made the trip in the bow of a ship and it took two weeks. Kanciruk is also a member of the Master's Clowns at the South Post Chapel at Yongsan.

Kanciruk and his wife, Jane, have two teenage daughters, Polly Anne and Vanessa Claire, a son, Basil B., a foster child (girl), Young-jin, living with them. During this interview, he received word that another foster child would be moving in with them the next day. The Kanciruks also have two children in the U.S. and one in Germany with their families.

Editor's note: This is the first article for a new monthly column to acquaint our readers with some of FED's customers.