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Engineer Update

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Korea flood clean-up continues

Far East District's FY99 MILCON budget more than doubles

By Gloria Stanley
Far East District

Heavy equipment begins digging out the recreation center at Camp Red Cloud. (Photo courtesy of Far East District)

For this fiscal year, Far East District's annual military construction (MCA) workload has more than doubled. The district's typical workload is $100 million, but this year they will award an additional $118 million in MCA project contracts. The increase is due to flood damage at several U.S. Army installations when heavy rains struck the Republic of Korea last August.

This increase does not include the operations and maintenance (OMA) work, about another $25 million, which Eighth Army asked the district to carry out.

All of these contracts must be awarded by the end of September. The 11 MCA projects include constructing 22 buildings at Camps Casey, Hovey, Red Cloud, and Howze.

"The $25 million in OMA work includes 30 projects, but things are changing daily, so this may increase," said Richard Byron, Flood Supplemental Program Manager.

Design work for the MCA projects is in progress. The district is designing two administration buildings for Camp Casey; Honolulu District is designing two standard design Bachelor Officers Quarters (BOQs), each to house 48 officers, one for Camp Casey and one for Camp Hovey; and architect-engineer firms are designing the remaining eight projects. Those eight projects include barracks, warehouses, maintenance facilities, company operations buildings, a community service center, and two standard design BOQs.

"We are expediting all designs by using charettes (an intensive effort to finish a project) and in-progress reviews, and partnering with the users," said Byron. "We expect to go out for the first solicitation in March and anticipate completing construction of the last project in 2001."

The district's Tongduchon and Northern Resident Offices will oversee construction. Demolition of flood-damaged buildings will begin in April. The new buildings are replacements for those damaged or destroyed during the flooding and will include barracks space for 1,000 enlisted soldiers. Temporary buildings will be built to provide transition facilities for administrative office space and housing for organizations which will be displaced during the construction.

OMA funds will be used for fire stations, warehouses, a library, administration buildings, vehicle maintenance facilities, an education center, and Director of Public Works workshops.

Besides this work, the district has conducted a hydraulics and hydrology study of the flooded areas at Camps Casey and Red Cloud, and drafts with the Corps' recommendations have gone to the Directors of Public Works at those installations.

The moves, backfill, and construction of the flood supplemental work requires a great deal of cordination. A fusion (support) cell is being developed to assist the Area I staff engineer and the two Directors of Public Works. The 19th Theater Army Area Command will provide a GS-14 to head the team. Pete Perez, Programs and Project Management, will represent Far East District. Because the cell is still under development, other participants are not known at this time. The cell will be in place by the end of this month in office space at Camp Red Cloud.

"There are potentially 600 projects which will be going on at the same time," said Perez. "The fusion cell will track all installation activities in Area I, including the flood recovery program, to minimize disruption and scheduling conflicts."

Soldiers clear debris from flood-damaged areas of Camp Casey, Korea. (Photo courtesy of Far East District)

The tracking process will identify potential problems before they happen. Perez expects to have a proposed tracking system and reporting format ready to be sent out for comments in about 30 days; a model of the system incorporating comments in 60 days; and in 90 days a finalized tracking and reporting system. After 90 days, it will be a matter of maintaining and updating the system with current information.

Chaplain's Corner

Army values apply in day-to-day family life

By Chaplain (Lt. Col.) Tim Carlson
Headquarters

Many years ago I entered a chaplain's office and read this advice on his wall -- "If you want to love your children, love their mother." During the 27 years of my Army career, I have counseled hundreds of couples. Those who represent the most significant challenge and greatest disappointment have a common thread. They often say, "I love my kids and want what's best for them." I often follow up with this reply. "And how do you feel about your husband/wife?"

The impasse that often propels values deterioration in our nation emanates from abandoning a seminal value. That value is love. A learned scholar from the Jewish tradition wrote, "Husbands, love your wives." The context and original language indicates he was talking about *one* husband loving *one* wife.

I once sat in the home of a GS-14 engineer who has traveled around the world working for the Air Force. As he sat addressing 140 Christmas cards for his spouse, his wife sat on a nearby chair crafting a gorgeous quilt for their first granddaughter. I mentioned my time in Zaire (now the Democratic Republic of Congo) in 1970, and our houseboy Richard. Polygamy is common in that culture, so I once asked him, "Richard, why don't you have more than one wife?" In Lingala he replied, "Maloba mingi," or "Too many words," meaning he wouldn't be able to stand all the talking.

The wife making the quilt commented that *her* husband better not have more than one wife. This admonition goes back to "Husbands, love your wives." The basic value of love is at the core of all Army values and is critical to a strong U.S. Army Corps of Engineers, a strong community, a powerful nation, and a peaceful world.

This month is an easy time to overtly demonstrate love to one's spouse. The expression can take many forms. These questions are one recommended starting point -- What would my spouse really appreciate this year for Valentine's Day? What words will convey my sincerity and not evoke a gag when he/she reads the card that I choose to convey my love? Is the message congruent with my actions in the past year so there will be no need to convince my spouse that this communicates the true love of my heart?

Isn't that a great challenge?

The Army has developed an acronym to express our values:

Leadership
Duty
Respect
Selfless service
Honor
Integrity
Personal courage

All of these are intentionally linked with a leader's actions. All are also deep expectations from our nation's greatest resource, its people of all 50 states.

As we experience another February, I challenge all of us to live our values *first* with the wife or husband to whom we have voluntarily pledged our honor, our fidelity, and our sacred trust. Let's live out our *words* of love with intentional and planned *actions* of love.

This month we also celebrate the birthday of George Washington. As I think about his exploits (real and legendary), I sincerely believe his parents must have loved each other. I believe their love compelled him to love his wife, Martha, and to serve our country in such an exemplary, values-positive way.

Longfellow penned these words which I have often quoted in various contexts, "Lives of great men all remind us we can make our lives sublime,/And departing, leave behind us footprints in the sands of time./ Footprints that perhaps another, sailing o'er life's solemn main,/ A forlorn and shipwrecked brother...seeing may take heart again..."

Imagine seeing men and women of the Corps loving their spouses in 1999 with a love like the One Who defines Himself as love -- "God is love". What a resource for love to all of us. What a way to insure a values-based organization. What a powerful way to impact our society so that our chosen leadership values will be real and not just philosophical ideals.

I truly believe that values begin in the home, and that love is the underpinning of each of life's values. I think that chaplain years ago had something worth reading. The philosophy he kept on his wall embodied something essential about values which, if lived out daily, will make our Corps even stronger.

New child facility built in Germany

By Marnah Woken
Europe District

Brightly colored toys, stuffed animals, and baby cribs fill the new Child Development Center in the Vogelweh Family Housing area. Europe District recently completed construction on the $2.6 million facility. The new facility provides care for 100 infants and toddlers, ranging from 6 weeks to 3 years of age, and significantly increases child care opportunities for families in the greater Kaiserslautern military community.

"We've increased our child care capacity in Vogelweh threefold," said Center Director Maggie Machesky. "This new center has a lot more room which means we're now able to offer care for more children in different age groups."

Europe District completed construction on the project in just three months. The work was done by Bauwens GmbH with the assistance of the German Staatsbauamt Kaiserslautern. Europe District Project Engineer Hans Hoock managed the project, working with U.S. Air Force Europe Project Manager Jim Frishkorn.

The new center has nine child care rooms -- one for infants 6 weeks to 6 months of age, two rooms for infants 13 to 24 months of age, and four rooms for toddlers 2 to 3 years of age.

"Before we moved into this new facility, we had only two rooms to care for infants and toddlers from 6 months to 2 years," said Machesky. "We weren't able to offer care for infants younger than 6 months. Now we're able to care for infants as young as 6 weeks."

Machesky added that, along with three additional infant rooms, another care room created for 2 year old children lets the center care for an additional 14 children in that age group.

The new center is equipped with a large lobby, a drop-off and pick up area, an isolation and training room, a full-size kitchen, laundry facilities, air-conditioning, and heated flooring. A video-monitoring system in the lobby permits parents to view care room activities. Skylights, protective interior glass walls, and large windows give the center an open, airy feeling. The large windows also provide a clear view of the full playground.

"The playground is quite large and offers something for children of all ages," said Machesky. "The sunscreens and awnings attached to the building outside also cover part of the playground, which offers protection for the children."

The new Child Development Center in the Vogelweh Family Housing area accomodates children as young as six weeks old. (Photo courtesy of Europe District)

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Chief, Command Information.....George E. Halford
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Partnered study yields long term benefits

Nashville District recently completed a successful partnering effort with Tennessee that produced the Cumberland County Regional Water Supply Study. This preliminary engineering report, conducted under the Planning Assistance to States (Section 22) authority, gives Cumberland County residents innovative alternatives for a water supply through the year 2050.

"Water supply issues are becoming a priority throughout Tennessee," said Milton Hamilton, Jr., Commissioner of the Tennessee Department of Environment and Conservation (TDEC). "There are several areas across the state that are growing at a rapid rate. We now face the difficult challenges of providing utility districts with the water they need while, at the same time, trying to protect our natural resources."

The study is significant for several other reasons. First, the study team used innovative approaches and nontraditional methods to complete the study in a short time. Second, the team brought together a diverse group of parties that included representatives from regulatory agencies, the six county utility districts, local environmental interest groups, the Cumberland County Executive, and the state. Third, the team developed the study so it could be used as a model for future water supply studies. Both the state and Cumberland County said this is the most comprehensive analysis for a regional water supply they have seen.

The fact that six utility districts in Cumberland County came together to find a solution is significant on its own.

"It has been an educational process all the way around," said the project manager, Todd Boatman of Planning Branch. "The utility districts realized the importance of protecting the state's natural water resources, and that they needed to work together to find a long-term water supply. The environmental groups also learned about the significant engineering obstacles faced in delivering the large amount of water needed to supply the county."

Growth vs. conservation

Development verses conservation was Cumberland County's problem. The scenic, pristine rivers that drew new residents are the same resources that utility districts use to meet increasing water demands. Due to environmental pressures, they could not easily get permits for new impoundments, so they turned to the state for answers.

The idea for a regional approach to the problem was suggested during a partnering meeting between Tennessee and Nashville District. That idea turned into a negotiated six-month, $150,000 reconnaissance study cost-shared 50-50 between the state and the district.

The U.S. Army Corps of Engineers has long been a custodian of water resources, and Nashville District has developed particular expertise in water management through managing the Cumberland River system and regulatory program.

The study team evaluates a potential site for a "high-flow" water harvesting intake structure on the Caney Fork River. Team members, left to right, are Paul Bluhm, Tim Higgs, Mark Flick and James Gunnels. (Photo courtesy of Nashville District)

"The Corps, through our regulatory program, is involved in permitting for water intakes across the state," said Tom Swor, Chief of Environmental Analysis Section. "That also puts the Corps in the position to know the issues that are associated with providing water supply."

Responsive, reliable

When the county approached the Corps to do this study, the Corps responded quickly and positively.

"We delivered exactly what we said we would within the time and monetary constraints," said Tom Waters, Chief of Engineering-Planning Division. "In the process, we gained the trust of the public, the utility districts, the local and state governments, and the environmental groups."

The study began June 1 and, as promised, was delivered six months later.

Respected

"We wanted thorough alternatives and analysis," said Dodd Galbreath, Director of the Environmental Policy Office for TDEC. "We wanted answers that everyone thought were reasonable and practical. From that standpoint, the Corps promised they'd deliver in six months; they promised a thorough study, and they delivered on it. The reliability was there and, as a result, there is a new respect for the Corps."

"This study was really a first of its kind," said Boatman. "Engineers, geologists, and environmental specialists all worked, and learned, together in developing alternatives that were not only technically feasible, but environmentally feasible as well."

Hamilton said, "Cumberland County has set the standard for water supply planning for the next century. This process can be used as a model for many other counties facing the challenge of balancing economic growth and natural resource protection."

Instead of just making a statement of findings, the study took the innovative approach of putting the proposals into a decision-making matrix that showed which proposals warranted further evaluation in an environmental impact/feasibility study.

"We put together a table listing all the alternatives we identified," said Boatman. "We categorized the alternatives from both the engineering assessment and permitting points of view, and then we did a yes/no on whether that alternative should be evaluated in greater detail in the next phase."

Other innovative practices used by the study team included researching recent state-of-the-art water supply techniques and adapting them to lessen the impact each alternative would have on the environment.

Field work

"After our initial research, we went out into the field," said Boatman. "We looked at possible pipeline routes and their stream crossings, modifying existing reservoirs, and potential sites for new impoundments. The team felt that the environmental impacts were so significant, we had to go to these sites instead of just looking at them on a map."

Innovative idea

One water harvesting alternative was an innovative twist on an old agricultural practice. The study team visited an Auburn University experiment station near Huntsville, Ala., that pumped water out of a nearby stream during high flows, and stored it in an impoundment for use later to irrigate cotton. That visit gave the team some ideas.

Modifying existing impoundments was one alternative explored by the study team. Mark Flick, an engineer from Hydraulics and Hydrology Branch, first looked at raising the dam at Meadow Park Lake, but found that alone would not increase the yield.

"There was plenty of storage capacity, but just not enough water coming from the watershed to fill it," said Flick. "We also looked at new reservoirs, such as the one proposed on the Caney Fork River, just four miles away. But there were a lot of environmental issues with the Caney Fork site.

"After our visit to Huntsville, we took a look at harvesting water from Caney Fork during high flow periods, and then pumping it into a raised Meadow Park reservoir," said Flick. "There are fewer environmental issues, and water gets pumped to where treatment facilities already exist. This combines the positive characteristics of two other alternatives while eliminating a majority of their negative characteristics."

The Cumberland County Regional Water Supply Study was a success because the Corps, the state and Cumberland County all came together to find innovative alternatives to that region's water supply problem.

"This study was unique in that it accomplished more than we anticipated in an extraordinarily quick timeframe for reasonable cost," Galbreath said. "It is the model we would like to replicate for other counties. We look forward to working with the Corps in the future."

(Todd Boatman, Nashville District Planning Branch, wrote this article.)

Corps builds school for Ramstein kids

Article and Photo
By Marnah Woken
Europe District

This year's fall term held special meaning for the students and teachers in Ramstein Air Force Base's elementary school. They began the 1998-1999 school year in a brand-new school, courtesy of Europe District.

Built from the ground up and completed two months ahead of schedule, the new facility has 31 classrooms, two computer labs, an art room, a library, music rooms, and a large multi-purpose room to be used as a theater, gymnasium, and cafeteria.

The first official function in the new multi-purpose room was the recent dedication ceremony. Students, parents, teachers and dignitaries attended the ceremony to participate in the official ribbon-cutting of their new school.

"This elementary school represents our commitment to education," said Brig. Gen. Michael Wooley, Commander of the 86th Airlift Wing, at the ceremony. "By modernizing our facilities we are building and guaranteeing a future for our children. A team of educators, parents, teachers and professional contractors have made this dream a reality."

Gen. John Jumper, Commander of U.S. Air Forces Europe (USAFE) also attended the ceremony.

"This is an important day for all of us and a day for celebration," said Jumper. "I'm proud of the entire team who put this together. It shows the forward movement we are taking within USAFE and EUCOM."

The new elementary school at Ramstein is a welcome relief to the overcrowding and makeshift classrooms, according to Lee Hunt, principal of Ramstein Elementary School.

"This is a tremendous improvement over where we were before," he said. "Before this, we were in temporary containers that served as classrooms while construction was being completed."

Europe District began the Ramstein Elementary School project in September 1996, working closely with the Staatsbauamt Kaiserslautern, and the German construction firm BUDAU GmbH. Europe District team members who worked on the project include project engineer Jutta Holzer-Lyroth, resident engineer Robert Michaels, project manager Archibald Commodore, and electrical engineer Hans Keller.

Children from Ramstein Elementary School filled the multi-purpose room of the new school to attend the ribbon cutting and dedication ceremony. The school was completed two months ahead of schedule.

Willi Zimmermann from the Staatsbaumt Kaiserlautern and Stefan Degen from BUDAU GmbH were instrumental in keeping the project on schedule, according to Holzer-Lyroth.

"Our goal was to give the Department of Defense Dependent Schools a new school by the beginning of the school year," she said. "Everyone worked very hard to complete the project."

About 1,100 students in kindergarten through third grade fill the halls and classrooms of the new school. There are about 300 students in each grade level.

Terri Gillespie, music teacher at Ramstein Elementary, looks forward to teaching in the new facility.

"I think the school is fantastic and I'm very excited," she said. "Moving here is like a renaissance. It revives you, especially if you've been teaching for a long time. It's a new beginning and I think it's going to be wonderful."

Europe District is also working on a new multi-purpose building for the existing Junior High School on Ramstein Air Force Base.

New facility for mappers finds high ground

By Brad Eaton
And Larry Root
Kansas City District

Most of us are familiar with the topographic and aeronautical maps that our military relies on, but probably few know that many of these maps are printed in St. Louis, Mo. For many years, on the banks of the Mississippi River near the St. Louis Arch, the Defense Mapping Agency (DMA) printed these and many other vital mapping products. DMA supported Desert Storm by providing near-realtime support to theater forces.

But the St. Louis facility was vulnerable to the Mississippi. During the flood of 1993 its map-making facility and presses ended up under 2.1 meters (about 6.8 feet) of muddy river water. It took more than six months to bring the printing operation back on-line.

Fortunately, the Gulf War had ended and there were no other major conflicts at the time requiring DMA's cartographic support. Still, the Department of Defense decided it was too risky to bet on the Big Muddy behaving during a future national crisis.

In fiscal year 1996, Congress appropriated funds to purchase land and build a state-of-the-art office and printing facility for DMA's successor, the National Imagery and Mapping Agency (NIMA). The new site is on 14 hectares (34.5 acres) of farmland in Arnold, Mo., some 30 kilometers (18.6 miles) south and 50 meters (164 feet) higher than the old location.

Kansas City District managed construction for the $39 million headquarters building of the National Imagery and Mapping Agency. (Photo courtesy of Kansas City District)

Kansas City District (KCD) managed construction of the $39 million facility. Parsons Main, Inc., of Boston provided the architectural and engineering services, and Fru-Con Construction Corporation of Ballwin, Mo., got the construction contract.

Some features of this 23,000 square meter (75,459 square foot) project include:

- A three-story office area with metal and glass curtain walls at its south end to house 300-plus employees.
- A steel-sided high bay warehouse and production facility at its north end to accommodate NIMA's three large presses and other map production equipment.
- Structural steel reinforcement and bracing to meet the requirements of the New Madrid fault region.
- Cellular floor decking in the office portion to provide maximum flexibility for running electrical and communications wiring.
- A three-story atrium with a translucent fiberglass skylight and glass block radius wall.
- Emergency generator to power critical systems independent of the external electrical service connection.
- A glass-faced central courtyard which provides a light well for the office space.
- 1,500 square meters (4,921 square feet) of raised computer flooring for NIMA's computer hardware.

The project, assigned to KCD's Fort Leonard Wood Area Office, required close partnering among the customer, designer, builder, and the Corps. Unexpected poor bedrock and a change in NIMA's mission requirements meant a redesign of the building's foundation plan six months after construction began. Massive spread footings replaced the originally planned drilled pier foundation in the facility's warehouse portion, extending completion by about a year.

This could have resulted in a failed project but, through teamwork and cooperation, all parties worked together to complete the job and provide the user with a valuable facility.

At the ribbon-cutting ceremony, Maj. Gen. James King, Director of NIMA, said the facility will enable NIMA to guarantee its military and civilian customers the information edge in the 21st century. U.S. House Minority Leader, Representative Richard Gephardt, added that the facility will help anchor the economic development of Arnold.

A Values-Based Organization

Respected ... Responsive ... Reliable

Corps supports troops deployed in Europe

By Torrie McAllister
Europe District

The quality of life for U.S. forces in Bosnia greatly improved when these life support areas were completed. These buildings, called seahuts (originally designed for use in Southeast Asia), are sectioned to provide sleeping quarters for six per room. (Photo by Joan Kibler, Transatlantic Programs Division)

Ten years after the fall of the Berlin Wall, 65,000 U.S. soldiers and 26,000 airmen are still forward-deployed in Europe promoting regional security and protecting American's interests abroad. Whether peacekeeping in Bosnia or training with foreign military in Ukraine, they serve on the front lines of U.S. efforts to favorably shape the international environment and promote global security.

The U.S. Army, Europe (USAREUR) is the European Command's primary land component, monitoring armed conflicts and potential flash points in an 80 nation area spanning three continents. Since 1990, USAREUR has deployed more than 100 times, from Iraq to the Balkans to Zaire. Last year, 1,220 USAREUR soldiers participated in 15 Partnership for Peace exercises in 11 countries, with military forces of NATO and 24 partner nations. Foreign military interaction builds cooperative relationships, deters aggression and serves as a role model for militaries in emerging democracies.

The U.S. Army Corps of Engineers is an integral part of the engineer team that supports this operational force. Engineering requirements abound.

• When Task Force Eagle needed value engineering to ensure the Base Operations contractor provided the most economical foundation for temporary buildings, they faxed engineer parameters to Europe District's Design Division. Structural engineer Gordon Simmons faxed back design sketches for stripe floatings of concrete that substantially cut costs.

• When the Judge Advocate received damage claims from Hungarian property owners alleging that convoy traffic caused wall cracks in buildings along the roads, engineers Jim Neubauer, Nurul Shameem and Gordon Simmons surveyed 79 buildings, from 300 year old churches to modern houses. Analysis showed no detrimental impact from the U.S. forces.

• When USAREUR's site survey team went to the Ukraine to assess the suitability of the Yavoriv Training Area for a large exercise, master planner Paul Ramey and mechanical engineer Ragan Glandon assisted with surveys. While 7th Army Training Command analyzed operational suitability, the Corps focused on life support and force protection requirements. They provided a cost estimate for living and dining facilities, utilities, trash disposal, and range facilities.

A Values-Based Organization

• When an earthquake struck Incirlik and Adana in Turkey, it forced many Air Force facilities to close for damage assessments and safety inspections. Four structural engineers from Europe, Seattle, Los Angeles, and Tulsa districts quickly inspected buildings so they could reopen and return to normal operation.

• When a Bosnian waste water treatment plant supporting 3,500 soldiers proved too small for the job, environmental project manager Daphne Ross used the Corps' Rapid Response Contract (RRC) to design an expansion of the plant's capacity. Engineer Ehsan Nawabi is the latest to volunteer for a 90-day rotation to manage this project. The RRC provides environmental support in Bosnia, Croatia, and Hungary. This includes spill containment, POL separators, wash rack monitoring, emergency response, and clean up.

• When Task Force Eagle needed to know whether reliable commercial power was available for base camps in Bosnia, electrical engineer Bill Wadsworth worked with the base support contractor and the 249th Engineer Battalion (Prime Power) to design a distribution system and an emergency back-up generation plant to protect critical facilities. He provided technical assistance to USAREUR's Power Procurement Office to support their negotiations with utility companies.

• When troop units needed bridge load capacity evaluated for contingency route reconnaissance in Macedonia, they e-mailed field measurements and digital photos to Gordon Simmons, a structural engineer, for evaluation.

• When Physicians for Human Rights asked the State Department and the Defense Missing Personnel Office for archeological help in exhuming mass grave sites in Bosnia-Herzogovina, St. Louis District arranged for Melissa Conner from the National Park Service to go to Bosnia for six months to assist.

• When the Air Force needed the optimum asphalt mix for runway repairs at Tuzla Airbase, Dr. Gary Anderton, a research civil engineer from Waterways Experiment Station, was the on-site technical consultant for quality assurance on the paving materials.

• When the 5th Signal Command needed secure, reliable communications in Bosnia, Rick Moreta, project engineer, managed structural upgrades to the Eagle Base communications tower.

• When base camp planning became essential to commanders trying to make facilities management decisions, master planner Tim Huwe developed the planning annex for the Base Camp Facilities Standards and helped set up a Base Camp Planning Board.

• When Congress funded $34 million to move soldiers in Bosnia out of tents and into wooden buildings before winter, Jacksonville, Nashville, and Omaha districts sent people to Bosnia to assist with construction management and quality assurance. They supported an effort by Navy Seabees, Transatlantic Center's sustainment contractor, and Army combat heavy engineers to rebuild the camps.

• When USAREUR needed full-time facility engineering support for Operation Joint Forge, Europe District created nine one-year positions for engineers who will go to Hungary and Bosnia. While the jobs are being filled, the Corps is providing TDY support.

"Missions are fast-paced and varied," said Lt. Col. Al Bleakley, Deputy District Engineer. "We try to stay ahead of the requirements and anticipate needs by working as an integral part of the EUCOM and USAREUR teams. District planners make regular coordination visits to write annexes to Operations Plans and participate in exercises. Most recently, Operations Officer Scott Lowdermilk worked as the civil engineering planner for a NATO disaster response exercise. We are also planning for the upcoming V Corps Warfighter exercise to include tele-engineering support from the district and Corps laboratories.

"Europe District is forward-deployed, but we count on the rest of the Corps for specialized expertise and extra muscle," Bleakley said. "In fiscal year 1998, we deployed 44 Corps people to support operational forces throughout the EUCOM area of responsibility. Thanks to the commitment of the entire Corps team, we have proven our capability to respond wherever U.S. forces deploy with whatever expertise is needed."

A team of people which included CRREL scientists, faced the challenge of freeing a ski-equipped C-130 stuck in an Antarctic crevasse.

CRREL people help stranded aircraft

Article by Marie Darling
Photos by Steve Arcone
CRREL

Antarctica has been called the crystal desert -- a freezing white landscape, remote and lonely. Temperatures can hit 110 degress below zero, but in the Antarctic summer the winds lessen their intensity and temperatures climb above zero. Then it is an icy paradise for cold weather study, and that's why scientists from the Cold Regions Research and Engineering Laboratory travel there.

But even in summer Antarctica is harsh and dangerous, and the requirements for logistics and safety can sometimes be more pressing than research.

On Nov. 16, an LC-130 aircraft (a ski-equipped version of the Hercules transport), landed at a remote site on Ice Stream D in West Antarctica. A crew from the New York Air National Guard in Schenecteday, N.Y., flew the aircraft. Their mission was to deliver a first load of tents and fuel for a research camp to study the ice stream.

The aircrew was experienced in Antarctic operations. After three successful "drags" (touchdowns and takeoffs to test the snow for crevasses), they landed their aircraft, unloaded its cargo, and taxied back to its landing strip for takeoff.

While taxiing, the big four-engine transport broke through a snow bridge above a crevasse. The right ski first crushed the snow bridge, then the left ski broke through and stopped the aircraft. The propellers on two engines were damaged.

No injuries occurred and the crew and passengers were evacuated.

The crevasse was six feet, eight inches wide at the surface, 132 feet deep, and had a snowbridge six to seven feet deep. The accident site is near a shear zone in Ice Stream D, so other crevasses were strongly suspected. Aerial photographs taken after the accident revealed the accident crevasse and the possibility of others in the area.

On Nov. 17, the National Science Foundation (NSF) asked CRREL researchers Allan Delaney and Steven Arcone for help. They were in Antarctica preparing for a ground-penetrating radar (GPR) research project to find evidence of ancient rivers and lakes in the Antarctic Dry Valleys. NSF required their expertise with GPR to find a crevasse-free taxiway at the accident site, a crevasse-free route from the accident site to that skiway, and several crevasse-free work areas, both for aircraft repair and for the planned science project. GPR easily detects hidden crevasses, and can also estimate snowbridge width and depth.

A train of snowmobiles pulled the ground-penetrating radar which mapped the crevasses and snow-bridges.

The Dry Valleys radar activities were suspended on Nov. 29 and Delaney and Arcone deployed to the accident site the next day. They were accompanied by a Global Positioning System (GPS) specialist, the Chief Safety Officer for the U.S. Antarctic Program, and one mountaineer. The group assembled a train of two snowmobiles, a sled between them, and a GPR radar antenna in the lead. The snowmobiles and sleds were roped together, a standard safety procedure in the Antarctic.

Delaney and Arcone and the group obtained more than 50 kilometers (31 miles) of line profile data Dec. 1-5. All suspected crevasses were pinpointed with the GPS and flagged. The data were also recorded, then processed and reviewed each afternoon and night to check the results and estimate the width of crevasses.

After calibration runs over the accident crevasse, the team found a 300 by 10,000 foot crevasse-free area between the first two drags. However, the GPR also found a second crevasse, this one 10 feet wide, between this skiway and the accident site. So the team had to plot a 5,000 foot long route around this crevasse.

An Air Force inspection crew arrived on Dec. 10 and found no structural damage to the aircraft, and damage to only one engine. The final plan was to fill the crevasse which caused the accident with snow and prepare a taxiway from the crevasse. Work was completed on Jan. 4 and several days later the aircraft was safely back in Christchurch, New Zealand.

A Values-Based Organization

Baby rescued from flaming wreck

By Jennifer Wilson
Little Rock District

In a split second, a routine trip on Oct. 29 became a life-and-death struggle for Matt Burg and Mike Rosales of the Little Rock District Safety Office.

They were on their way from the Millwood Project office to district headquarters. "I was driving along Interstate 30 in normal traffic when all of a sudden I saw flames in front of me," Rosales said. "In just a second, the traffic went from traveling 70 miles an hour to almost a complete stop with cars swerving all over the place."


Mike Rosales

It took Burg and Rosales about a minute to discover the cause of the traffic jam. A driver had lost control of her small pickup and run the passenger side onto a guardrail, causing the truck to flip over onto the driver side. At the same instant, a spark ignited the ruptured gas tank.

"As we got closer, it was like a scene in a movie, but it was real," Burg said. "The bed of the truck was on fire, and people were running around like crazy."

Instant response

Some people were trying to help the driver, but most were just gawking as they drove by.

"Without even talking about it, I pulled to the side of the road, and we jumped out and started trying to help," Rosales said. "A lady was trying to crawl out of the front windshield of the truck. We ran over, pulled her out and literally threw her to the ground to try and roll her to extinguish her flaming clothes."

It worked, and Burg began trying to help the woman.

"She was in pretty bad shape," Burg said. "I had never seen a burn victim until then, and she looked pretty bad. The truck seat had caught fire and her back and arms were severely burned. Her hair was burned into clumps, and she had deep cuts from the windshield."

Rosales heard people shouting that a baby was trapped inside the burning truck, so he returned to the wreck. By this time, the fire had completely engulfed the truck-bed and was quickly taking over the cab.

Into the fire

"The truck seat was on fire, the back of the baby seat was melting and somehow the lock on the seat restraint had gotten jammed," Rosales said. "The baby's hair caught on fire, and at one point I had to pat her head to put it out."

The fire was getting closer and hotter. Rosales and the others knew the truck would explode at any moment.

"We all started shouting for a knife to cut her out," Rosales said. "Someone finally found a knife after what seemed like forever, and I was able to cut the baby girl out of the seat. I pulled her out and ran with her. I barely got clear of the vehicle and rolled to the ground when it exploded. I was scared that I would crush her, but God was still with her, and she was unharmed."

No one was hurt by the explosion, but now that mother and baby were safe, all attention turned to treating their injuries.

The baby sustained minor burns and cuts and lost most of her hair, and her clothes were still hot to the touch from the intense heat. Rosales removed the baby's pullover and gave her to another passerby who managed to change and clean her up.

Because of the serious burns covering most of the mother's body, they just tried to make her comfortable until help arrived. The mother and child were taken to Southwest Hospital in Little Rock, then flown to the Memphis Burn Center.

The child has recovered, but the mother died from complications due to her injuries.

Silence

After the action, Rosales and Burg silently got in their vehicle and continued their trip back to the office. It was awhile, about three miles from the Federal Building, before they spoke.

"We were in shock, and really shook up," Rosales said. "When we finally spoke, I just looked at Matt and said, 'Man, what just happened? Did we save someone?' Up to that point, we were just reacting to the situation. Matt said, 'I think that's what we just did.'"

Both Rosales and Burg say they did nothing heroic that day.

"Mike and I were both soldiers, and we were just taught to do everything we could to help our buddies. That's all we did," Burg said.

"If someone wouldn't have found a knife, that baby wouldn't have made it," Rosales said. "Just a few seconds more, and the vehicle explosion and fire would have killed her. I'm glad we were there, and I'm glad we were able to help, but I don't want to ever have to do that again."

A Values-Based Organization

Other Corps help

Burg and Rosales were not the only Little Rock District employees to witness the accident and stop to help. Ken Lyon and Elaine Edwards of Regulatory Section were on Interstate 30 at the same time.


Matt Burg

"We saw this huge fireball shoot up in front of us and across the highway," Lyon said. "We knew it was something serious, and then the traffic stopped."

Like Rosales and Burg, Lyon got out of the car and ran to help. Lyon and Burg crossed paths as they both tried to assist the mother. Then Lyon joined Rosales in helping rescue the baby.

"There was so much going on and so many people helping, I guess we didn't recognize each other," Lyon said. "It was really touch-and-go there for a while. Right after Mike pulled the baby out of the truck, we took about 10 steps and the whole thing blew."

When everything settled down, Lyon and Edwards also left the accident scene, but they headed to a gas station. Lyon washed off the blood of the injured mother and baby and headed to their next appointment in the field.

The incident is something Burg, Rosales, Lyon, and Edwards will never forget. And thanks to their willingness to help, a child escaped a fiery death.

Safety featured on Missouri billboards

By Andrew Jefferson
St. Louis District

What do the U. S. Army Corps of Engineers, Missouri State Highway Patrol, Missouri State Water Patrol, and the Missouri Division of Highway Safety all have in common? The desire to keep people safe on the waterways and highways.

A partnership developed under Wappapello Lake's Public Safety Education Program is placing safety messages on 10 billboards throughout Missouri. (Wappapello Lake is a Corps flood control lake in southeastern Missouri.) The billboards feature the safety team of park ranger Willie B. Safe (Corps), Corporal A. Float (Water Patrol), and Sergeant B. Wright (Highway Patrol).

The message is "Seat Belts and Life Jackets Save Lives," and this joint effort illustrates the safety concern these agencies share.

Diane Stratton, a park ranger at Wappapello Lake, successfully coordinated this statewide effort. She coordinated a memorandum of agreement (MOA) among the state agencies and five Corps districts in Missouri (St. Louis, Kansas City, Little Rock, Memphis, and Rock Island). The MOA sets the framework for combining statewide efforts in safety education, which led to the Challenge Cost Share Agreement for the billboards. Each agency has agreed to share the cost of placing these billboards along the major highways throughout Missouri for the next five years. The only costs to the agencies are for sign production. The signs will remain three months to a year in each location.

"If you could do one thing to save a person, you have done the public a great service," said Charles Hess, Chief of Operations Division at Headquarters. "This partnership is a splendid effort and it is what good government and great public service is all about."

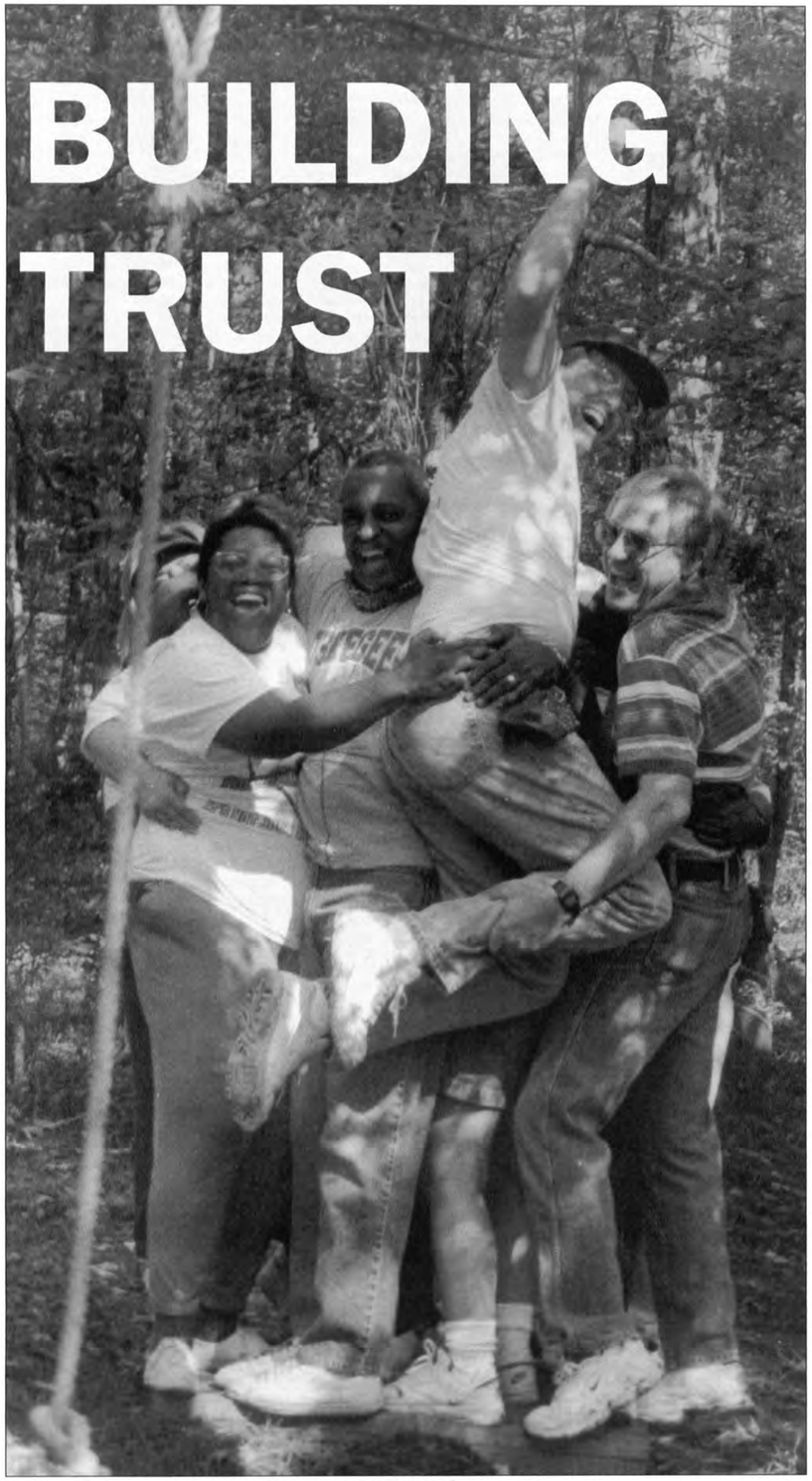
"Our goal is to continue seeking growth opportunities with this program by having it replicated nationwide throughout the Corps' projects and at military bases," said Michael McClendon, Wappapello Lake Operations Manager.

"Military and civilian personnel and their families are all subject to the same potential safety hazards if they fail to wear their life jackets and buckle their seat belts. No one particular agency can get this message out to the public by itself. It's going to take a team effort by us pooling our resources together to make it happen," he said.

(Andrew Jefferson is a park ranger at Wappapello Lake.)

A cooperative effort among several Corps districts and other federal and state agencies is spreading this safety message throughout Missouri. (Photo courtesy of St. Louis District)

BUILDING TRUST



Emerging Leaders cheer as the last team member is caught and held on a small platform after swinging by rope over a pit -- one of the obstacles on the Challenge Course.

Emerging leaders face challenge, teamwork

Article and Photos
By Tim Dugan
Mobile District

Six Mobile District employees slowly approached the 35-foot-high utility pole. It was studded with metal hand-holds, and planted in the ground like a tree. Looking up at the pole's height, one participant said, "There's no way I'm climbing that."

But within an hour, not only had all climbed the pole, but all had inched onto a one-foot-square platform, and most had stood on the swaying pole and jumped into thin air to grasp a trapeze-like bar before descending to the ground.

They weren't alone. They wore rope harnesses with safety ropes, and had trained instructors. So there was little physical danger; their real opponent was their own fear.

A Values-Based Organization

The 35-foot-tall pole was just one challenge that 19 members of the district's Emerging Leaders Forum (ELF) faced at Beckwith Camp in Fairhope, Ala., near Mobile.

The Challenge Course was part of the year-long training to teach the group leadership skills. Participants learned about teamwork, communications, and getting the job done in a day-long exercise that stretched mental and physical limits and challenged them to step out of their comfort zones.

The instructors split the group into two teams. In the morning, they faced challenges near the ground -- basically big logistics and cooperation puzzles they had to work together to solve. The teams had to work on communication and listening skills, and build trust and teamwork.

For example, members walked blindfolded through the woods following a partner's verbal instructions. In another activity, the group had to swing by rope over a shallow pit to a two-foot-square platform. The trick is, each person who swung over had to *remain* on the platform as each new person arrived. What looked impossible, fitting all 10 on the small platform, proved possible. The last person to swing over literally landed atop the rest.

One challenge had the group cross an area studded with stubby posts. They had to balance on the thin edge of 2x6-inch boards that they placed in notched posts. But with only three boards of varying lengths, not enough to span the entire area, the team had to move both boards and people through the course.

After a few failed attempts, the group devised a solution by moving boards back and forth and shuttling people through one at a time, with a few acting as anchors at key locations.

"I enjoyed the course. It helped everybody work together and learn from each other," said Joe Hand, a civil engineer. "Some people had physical strengths and some had mental strengths. We worked together to solve problems, and it was physically challenging."

Nelson Sanchez, another civil engineer, said the course was "the most fun of all our ELF activities. I challenged myself outside my comfort zone and everybody supported me on the decisions I made."

In the afternoon the stakes were raised -- literally. One activity involved three challenges, each progressively more difficult. Roped for safety, a person walked up an inclined tree log, then climbed to a cable stretched between two trees 18 feet above the ground, and then walked across the cable (balanced by holding onto two parallel ropes).

An Emerging Leader team builds a bridge and helps one another to cross a "pit." The Challenge Course was part of a year-long training program to teach group leadership skills.

Left, environmental engineer Jerry Jones scales an inclined log to start the rope course. Below, civil engineer Rhonda Wall prepares to climb a 35-foot pole.

Then the climber walked across a horizontal utility pole 25 feet above ground, then climbed to another higher cable and crossed to the middle. From there the climber rappelled down. Team members not climbing held guide ropes on the ground and offered encouragement.

Gail Peters, a management assistant, "It definitely made me step out of my comfort zone. It was a good day. There was a lot of camaraderie. We learned we could trust and depend on one another."

The ELF is a leadership and management development program formed in Mobile District in 1996 as a junior committee of the district's Senior Leaders Affirmative Action Group.

It is geared to GS-12s and below and is 12 months long, including 200 hours of duty time and 200 hours of personal time. It includes retreats, speeches, lunch-and-learn sessions, university classes, seminars, team projects, and shadowing senior leaders.

"The purpose of the Emerging Leaders Forum is to develop the leadership skills of individual team members in all levels of the organization," said Meddie Clark, Management Support Branch, and ELF union representative.

"Essentially, we're trying to show people that leadership occurs at every level," said Paul Tucker, Chief of Construction Division and a senior leader representative who monitors the ELF. "There are 21 candidates a year, and it's a very diverse program. The ELF has GS-5s and GS-12s, blacks, whites, men, women, engineers, park rangers, and secretaries. If we can increase their leadership skills, it will add value to our organization."

Hand volunteered for the program to advance his career and because his boss recommended it. "It was an opportunity to help me progress in my career, and learn more about leadership and management. It's a very good program."

Peters applied for ELF during the district downsizing, hoping to get management and average workers working closer together and communicating better. "I know it will only enhance me. It's a wonderful vehicle to get employees to build confidence in themselves and what they are doing."

Sanchez said, "I thought it'd be a good opportunity to refresh management-type skills in communications and listening. At times it was challenging to budget my time to do the outside work. Working with the other folks has been great, getting to know them and learning their disciplines."

At day's end on the Challenge Course, the emerging leaders got one last task -- to select one of many placards that littered the forest floor. The placards read "team building," "mentor," "courage," "servant-leader," "listening," and "build trust." Each had to explain how the term they selected applied to their day's experiences.

Volunteer track coach does it for the kids

Article and Photo
By Lira Frye
New Orleans District

During the day Jackie Callendar is a program analyst, but after work he laces up his running shoes and becomes Coach Callendar, track coach for the New Orleans Comet Track Team and runners from a number of New Orleans area schools.

Since 1990, Callendar has devoted his nights and weekends to student athletes. His interest began when his daughter, Kia, told him she wanted to run track.

"I've always loved athletics, and when she told me she wanted to run, I thought, 'I must be living right,'" said Callendar.

Callendar got involved when Kia's coach, with whom he had gone to school, asked him to help coach the Comets. "Once you get into something, especially if it involves your kids, you do the best you can," Callendar said. "I just ran with it!"

Kia now attends Southern University in Baton Rouge, but Callendar is continuing the coaching tradition with his son, Jackie Jr. His commitment involves more than just coaching track; he also considers himself a "life coach."

"Athletics reaches kids," he said. "While I've got their attention, why not give them a few concepts of life?"

Callendar said many of his runners come to the track carrying heavy loads.

"They have emotional baggage," he said. "And no one is letting them know what the important issues are," said Callendar. "No one's giving them a work ethic. I can teach them that through athletics."

In teaching, Callendar tries to impress on them that they can succeed.

"I grew up in a New Orleans housing project, and sometimes I take them there," he said. "I tell them, 'Where you come from, you have no control over. But where you're going, you can master that destiny.'"

His philosophy is simple -- "How bad do you want it, and are you willing to work for it? I ask them, 'Do you have the heart to be Michael Jordan? The focus?' Not many do. I tell them that having the ability to do what needs to be done, no matter what's going on off the court, epitomizes focus."

Callendar believes focus is necessary to succeed on or off the track.

"I don't want them to remember me as the person who taught them to run or jump hurdles," he said. "I want them to remember me as the person who taught them focus."

That focus in both Callendar and his athletes has translated into success, on the track and academically. He's negotiated scholarships for his runners, sending them to Southern in Baton Rouge, Alcorn State, Southern University at New Orleans, and Louisiana Tech.

Tiffany Hardison, a senior at Warren Easton High, has been working with Callendar since she was a freshman. She's hoping for a scholarships to the University of Arkansas.

"I was sitting around doing nothing and thought that what Coach Callendar was doing looked like fun," she said. "He's probably one of the best coaches I've ever met. He explains why he's asking you to do something, what it means. He breaks it down."

Hardison is one of Callendar's strongest runners. During last year's track season, Hardison was stabbed in the back, an injury requiring more than 50 stitches. But she pushed herself to recover in less than two months and came back to win the state title in the 500 meter hurdles.

Jackie Callendar shows Kerri Green proper running technique.

After eight years of coaching, Callendar (recently named president of the Southern Association of USA Track and Field) says he has occasional thoughts about slowing down, but the kids always bring him back.

"Every year there's something about one or two of the kids that catches my eye," he said. "I look and think, 'See that kid? I can do something for him.'"

Civil engineer takes tactical training

By Mike Dace
St. Louis District

"Welcome to the Engineer Officer Advanced Course -- Reserve Component!"

These were the first words that Deanne Strauser heard when she arrived at the U.S. Army Engineer School at Fort Leonard Wood, Mo. Strauser is a civil engineer in the Engineering Division of St. Louis District. She attended the two-week course last November through cooperative efforts between the U.S. Army Corps of Engineers and the Engineer School.

A Values-Based Organization

This cooperative professional development opportunity offers Corps civilian engineers a chance to obtain tactical and technical training, and gives them greater visibility in the Army.

As a student in the course, Strauser was assigned to C Company, 554th Engineer Battalion, 1st Engineer Brigade. They train and provide command support for all engineer student officers. This tactical and technical training allowed Strauser to see total force training and the interaction between active and reserve Army officers.

Following is her description of the experience.

"The first week entailed understanding the fundamentals of U.S. offensive doctrine and the tactical concepts of offensive operations," said Strauser. "We learned the organization and capabilities of armored division Combat Service Support units and the system for organizing and providing combat service support for tactical combat operations. In addition, we were taught the basic engineer battlefield functions of mobility, countermobility, and survivability, and how to apply those principles in tactical situations.

"One of the more career-applicable classes to me was the terrain analysis class," Strauser said. "Here we conducted an analysis of the terrain from a military perspective with a view to understand how terrain can be used or manipulated to our advantage. Activities included using a computer assisted terrain evaluation system called TerraBase II to analyze an area of operation. This program used digital elevation data to create 3D views and evaluation of the terrain.

Deanne Strauser, a civil engineer with St. Louis District, takes part in a terrain analysis team field exercise. (Photo courtesy of St. Louis District)

"We continued to learn how to conduct an engineer battlefield assess-

Continued on next page

Boat captain builds underwater 'eye'

Article by Tim Dugan
Photo by Adrien Lamarre
Mobile District

Rigged with safety ropes and harnesses and standing in a metal cage above a workboat, a crane lowers three men in a small boat 80 feet into the black tainter valve pit at Whitten Lock and Dam. The Operations team was using a new method to inspect underwater structures of the Whitten Lock and Dam at Bay Springs, Miss. Jeff Byars, of the Tuscaloosa Site Office, was piloting a remotely operated vehicle (ROV) he designed and built himself.

"The ROV is a remotely operated submarine transporting a video camera," said Wynne Fuller, Operations Division chief. "This system, developed and built by Jeff off-duty, has revolutionized the way we perform many of our underwater inspections, eliminating the need for divers, dramatically reducing costs and risk, while improving safety."

The ROV is a system of tubes equipped with three propellers, two lights, and a video camera mounted to the frame. It is controlled from a surface boat via cables. A VCR monitor on the boat shows and records what the camera sees underwater.

Byars conceived the idea a few years ago while attending the Corps' Diving Supervisory School in Key West, Fla. "The safety manual says if you can do underwater repairs without divers, it is safer," so he thought of using an ROV to inspect lock and dam structures and videotape them. Structural engineers can then review the tape and see what repairs are needed.

Byars, captain of the survey boat *E.B. Wallace,* is a tinkerer. "My grandfather was a tractor mechanic, and when I was real young I worked with him and learned a lot," he said. "I've been in the diving business since '82 and I've always been interested in ROVs. And I used to be a commercial diver, so I have an understanding of what you need to see."

A Values-Based Organization

To most people, ROVs are the high-tech megabuck probes that explored the "Titanic" and "Bismarck" shipwrecks. You wouldn't imagine one could be built by a handyman in his garage. But Byars built an ROV on his own time and expense in 1992. The prototype cost about $5,000. In 1993 he tested it at Corps locks and dams. Once Byars proved the prototype, managers on the Tenn-Tom Waterway and Black Warrior-Tombigbee (BWT) River System projects funded a new $8,000 ROV. Commercial ROVs cost from $60,000 to $150,000.

Jeff Byars, captain of the survey boat *E.B. Wallace,* prepares his remotely operated vehicle (ROV) for an underwater inspection.

Byars built both ROVs using off-the-shelf materials -- PVC pipe, trolling motors, lights, and a video camera. The current unit weighs about 75 pounds and runs off a 12-volt battery. The ROV uses five or six batteries per inspection. The surface boat carries the batteries and feeds power to the ROV via waterproof cable.

"Each time we use it at Bay Springs we save about $23,000 a day that would be spent on divers," Byars said. "It can pay for itself very quickly."

In 1994-95 Byars used his prototype to inspect structures during the Bay Springs Lock closure. Then came 15 inspections for the Tuscaloosa office on the BWT. In May 1997, Byars' team did the first inspection with the current ROV. Since then they have done eight more.

"We've had good success so far," Byars said. "Some people thought you wouldn't be able to see anything underwater," but the lights give a clearer picture than the naked eye.

The ROV can't replace divers for everything. But even when divers have to do down, the ROV can still act as a safety scout. At Miller's Ferry, down below the spillway, the ROV spotted a log with giant hooks all over it. The ROV warned divers of the hazard before they dove.

During the Whitten Lock and Dam inspection, Byars and his crew maneuvered the ROV 150 to 200 feet underwater to the culvert ceiling to inspect an area that was repaired in 1996. Engineers will determine if the grout has deteriorated and a major repair is needed.

"The last time we looked, it still looked good," said Harry Stone of the Tenn-Tom Waterways Navigation Section. "It's keeping us going until we can schedule a major closure and make a complete repair with concrete."

"Everything went well," said Byars after the ROV surfaced. "We wanted to see if the grout's not eroding the concrete in the dam structure. We noticed last time where one piece of grout had turned loose. This time everything was still like it was the last time."

The team spent an hour-and-a-half inspecting the repair. Later, they moved their equipment to the lock chamber to search for a 20x10 foot, 3/8-inch thick metal plate that had blown off the intake structure to determine if it was damaging the chamber wall.

"We found it by following the scratches on the lock wall," Byars said.

"We don't want that plate flopping around and gouging the concrete," said Stone. "The last time we looked, it wasn't."

Each situation where the ROV is used is different. "You just have to adapt and change things as you go to fit different tasks," he said. "When I built this ROV I had 160 feet of hose. For this job we had to reach 200 feet, so I had make up another section of hose."

Byars is already planning the next ROV modification -- attaching a mechanical arm to the ROV. He plans to use the mechanical arm and a cutting torch to cut up the steel plate when the lock can be temporarily closed.

"It could be hazardous for divers to cut it up and move it," Byars said. "If we can cut that steel plate out with the ROV it will avoid having to set stoplogs and dewater the lock. The ROV will save time from shutting down the lock."

Byars is already designing the third generation ROV, and has the frame built on the new model. This one will have two controllable arms for lifting and moving.

The ROV is a challenge, but it fascinates Byars. "It's a work in progress," he said. "You have to adapt it to different jobs. A lot of it is experimental. We do everything as safely as possible, and using the ROV is a lot safer than putting in divers. You just have to adapt it to fit different tasks. We're learning as we go."

Civil engineer

Continued from previous page

ment, including friendly and enemy mobility, countermobility, and survivability, to determine threat courses of action, and how to apply military decision-making to a tactical situation," said Strauser. "We developed facts, assumptions, conducted mission analysis, and developed a mission statement.

"We then went on to engineer defensive planning -- obstacle integration doctrine and survivability doctrine," Strauser said. "We learned how to write and brief an engineer company operations order.

"Week two. This part of the course included the technical engineering product," Strauser continued. "Course work consisted of different methods of soil stabilization, classification, compaction, specifications, and cost of stabilization additives. A class in basic hydrology taught runoff estimation, drainage basin delineation, flow paths, and erosion control in support of ditch and culvert design.

"We also applied the project management critical path method to several construction directives," Strauser said. "This involved preparing a critical path logic network, determining the best method of construction, scheduling, and working with resource constraints.

"The final class concentrated on the practical application of assessing environmental-related risks when performing all previous learned activities," Strauser said. "This exercise employed a risk-management work sheet to document and track risk. These environmental risks were then incorporated into an operational plan.

"In summary, this was an intense, information-packed course," said Strauser. "As a civil engineer, and a DoD civilian employee, this was a definite benefit to my training program and career development. I gained a civilian perspective into military engineering and planning, as well as a technology exchange between the Corps and the Engineer School. This course has most certainly enhanced the 'One Corps, One Regiment, One Fight' philosophy. It is my opinion that many civilian employees can benefit from this course, especially anyone that has a military customer or produces support products for the military."

(Mike Dace is the Chief of Ordnance and Technical Services Branch in St. Louis District.)

Virtual team helps plan Charleston Harbor's future

By Jeffery Adkins
Charleston District

Economic studies currently being conducted by Charleston District achieve many of goals expressed in the Vision Statement of the U.S. Army Corps of Engineers. The use of a virtual team and innovative application of existing technology is providing Corps customers with seamless access to world-class expertise in navigation planning.

The project

During the past decade, containerized traffic in Charleston Harbor has outgrown all projections. A 1996 feasibility study by Charleston District predicted a growth rate of five percent annually. At that time, South Carolina's port authority planned to build a new container terminal on Daniel Island with five berths to accommodate expected future growth.

But actual growth rates have ranged from 8 to 15 percent annually and the port authority's plans have expanded to include seven additional berths.

This year, initial construction funds were received for the deepening and widening project that resulted from the 1996 feasibility study. This project will deepen Charleston's main channel and two tributary channels to 45 feet and the entrance channel will be deepened to 47 feet. The project will also align two reaches of the inner harbor to allow two-way traffic, widen a third reach for safety, and a turning basin will serve the new container terminal. The planned deepening of the Wando River will follow the existing 400-foot channel alignment.

In addition, Charleston District is investigating the need to widen the Wando River for increased traffic and to build a turning basin for the additional berths planned for Daniel Island. These studies could result in a Post Authorization Change report if more project features are in the federal interest.

The people

The members of this project's "virtual team" are located in Nashville, Tenn.; Huntington, W.Va.; Vicksburg, Miss.; and Charleston, S.C. Team members include Corps employees, South Carolina's port authority, Charleston's harbor pilots, and private towing companies. This study team is giving non-federal customers one-stop access to a wide range of expertise, making possible what none of them could accomplish alone.

A virtual team enabled the district to reach beyond South Atlantic Division (SAD) to provide seamless access to a cadre of the Corps' most talented planners, computer programmers, and modelers. The district's expertise in navigation planning is supplemented by Lakes & Rivers Division's Navigation Center in Huntington, recognized internationally as leaders in simulation modeling. The Navigation Center is a hub for integrating improvements and lessons learned into computer models of a diverse array of water transportation planning problems and projects.

David Weekly and Tim Smith of the Navigation Center extrapolate lessons learned in inland navigation to analyze the intraharbor movements and interactions of ships that navigate Charleston's deep-draft channels.

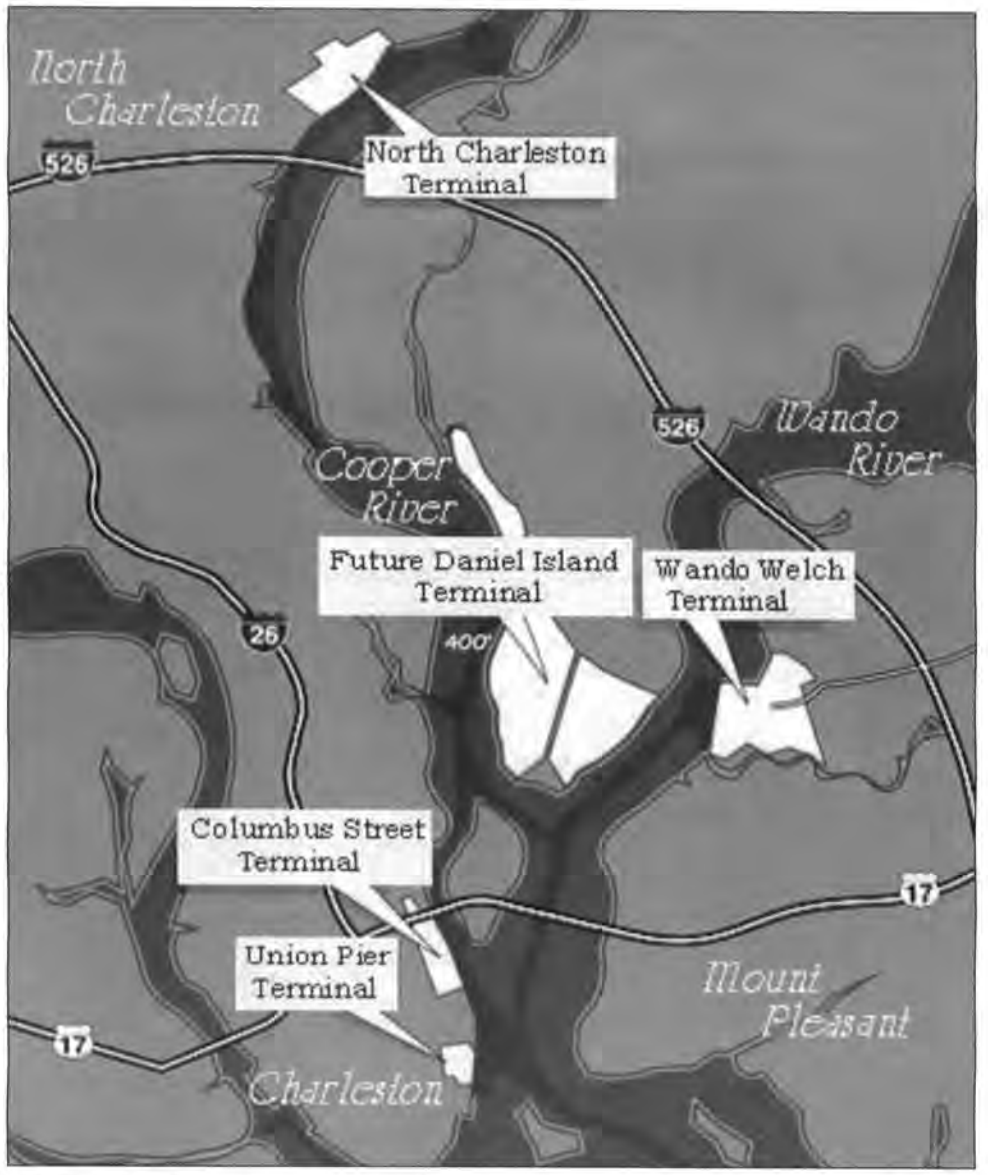
A Values-Based Organization

Changes to the model itself were done by Nashville District's James Roberts, one of the Corps' best computer programmers. The port authority, Charleston's pilots, and local tug operators provided vast quantities of data upon which the model is based, and important insights into the operation of the existing harbor navigation system.

After an initial briefing at the Navigation Planning Center in Huntington, model development, network construction, testing, data collection, and model validation and verification were conducted from various remote sites. Horizontal communications are maintained daily via Lotus Notes, SAD's Regional Village Software. Input files and model revisions are being transferred electronically to key team members for review and comment.

The model

In evaluating the federal interest in additional project features, traditional core competencies in inland navigation were adapted for analyzing harbor navigation. Efficiency gains, which form the basis of economic justification from a national perspective, are being measured by adapting models that have been effective in analyzing inland navigation systems for more than 20 years.



This is one of the maps the virtual team created as a comprehensive illustration of the planned changes to Charleston Harbor. (Graphic courtesy of Charleston District)

The economic justification of any navigation improvement is normally based on improving the system's overall efficiency. Simulation models are powerful tools for measuring such gains. A model calibrated to reflect the operation of an existing navigation system and traffic levels can be easily modified to simulate the effects of a wide array of physical and operational changes.

More important, simulation models can capture the effects of randomness on system performance. The normal operations of Charleston Harbor are punctuated by random periods of extremely high use.

Obviously, vessel interference and other delays would be greatly reduced if vessels arrived at a uniform rate. Models that fail to capture the effect of randomness overstate the efficiency of the system and thus understate the benefits that improvements can make in that system.

Innovative adaption

The Waterways Analysis Model (WAM) has been used for two decades to simulate the operation of locks in the inland navigation systems and is internationally recognized as the best in its class. Adapting the WAM to simulate harbor operations in Charleston Harbor is the first such application of this model, and a good example of integrating technology across traditional functional and geographic boundaries.

The district's innovative use of existing technology has simplified and expedited the study process. Developing a new model could have taken years, but WAM was adapted for use in Charleston and ready for final verification and validation in just three months. The results of the WAM model are widely accepted and have demonstrated the economic viability of $6 billion of approved projects, $3 billion of which have already been built.

"Seeing" numbers

The visual displays of the model's animation features complement the computations of the numerical model. Customers and other interested stakeholders can observe the competition of vessels for the harbor's channels, berths, and turning basins. It's a vivid impression of the Corps' ability to deploy cutting edge technology and inspires confidence in the model's reliability. These displays of real-world conditions enable analysts to "see" how the numerical model is working and refine its operation. They also make great briefing tools for decision-makers.

(Jeffrey Adkins is the director of the virtual team.)

Contracts are booming in Little Rock

By Jennifer Wilson
Little Rock District

Little Rock District's Job Order Contract (JOC) is filling the bill for the district, the division, and the customers. JOC is an indefinite delivery/indefinite quantity contract that task orders or jobs are issued against.

Little Rock District issued its first two regional JOCs, each worth a maximum of $15 million, last March to Del-Jen Inc. of Clarksville, Tenn., and Rayco Construction Inc. of Irving, Texas. Since then, business has been booming for the contract specialists, designers, and contractors working on the JOC. Contracting personnel issue the task orders, and behind the scenes employees in Engineering and Technical Services Division develop the scope of work, get the government estimate, and negotiate the contract.

Since the JOC was awarded, 37 task orders have been issued for jobs ranging from chipping and sealing a road to repairing a boiler. Twenty-one of those task orders, totaling $3 million, were issued in the last 10 days of fiscal year 1998.

"I think it's just gone great," said Paris Embree, the JOC program manager. "We're still learning, and probably will be for some time, but that means we'll just get better as we go. It was impressive to me that we got as many awarded as we did."

The Army Reserve's 90th Regional Support Command (RSC) and the Pine Bluff Arsenal were big end-of-year customers for the JOC.

"We hope to get more work from Little Rock Air Force Base, too," said Janet Holmes, the JOC contract specialist.

"We did two small jobs for them in the summer, then we received a request on Sept. 24 to renovate a building using JOC. We held a site visit the next day, negotiated the contract the following day, and it was awarded on Sept. 28," Holmes said.

This isn't the first JOC for Little Rock District, but it is the first to cover a six-state region.

"When we started pushing for a JOC, we wanted it to cover just the area of Little Rock District," said JOC program manager Paris Embree. "We were planning to use it to help local agencies, the Army Reserve's 90th Regional Support Center in North Little Rock, Pine Bluff Arsenal, and Little Rock Air Force Base. Then we realized the advantage of making it a *regional* contract covering all of Southwestern Division's districts. In expanding the coverage of the JOC, we also included all the states where the 90th RSC had field offices."

With 140 field offices across a five-state region, the 90th RSC has been a big JOC customer.

"We work with the geographic districts to meet the customer's needs," Embree said. "The JOC is a great tool to get jobs awarded and completed quickly."

Steve Wright in Fort Worth District's Programs and Project Management has worked with the 90th RSC for 18 months. This year, he began using Little Rock District's JOC.

"I put all of my eggs in the JOC basket this year," Wright said. "The 90th had put aside $2 million for end-of-year money. On Oct. 29 and 30, we were able to get task orders issued for $1.6 million of that. It was very efficient and effective. Last year I tried doing the same amount of work without a JOC, and it was difficult."

The 90th RSC had jobs in Texas, Louisiana, and Oklahoma to get awarded by the end of the fiscal year 1998.

"Most of the projects were negotiated subject to the availability of funds earlier in September, then as soon as the funds were available, we processed the award," Holmes said. "We worked overtime most days and on weekends to award all the projects that the customers were prepared to fund."

A job order contract was used to chip and seal the access road at the Montgomery Point Lock and Dam construction sit. (Photo courtesy of Little Rock District)

The visitor's center at DeGray Lake in Vicksburg District was re-sided with a job order contract. (Photo courtesy of Little Rock District)

The way Little Rock District set up the contract is helpful to agencies or installations with repeat business because there are two contractors working on the task orders.

"My ultimate goal is to decrease administrative costs and to increase quality," Wright said. "With two contractors repeatedly working with the same customer, they will quickly learn what the customer expects. Their learning curve will be very quick, and they can get on to the job of doing the work."

Holmes considers several factors when dividing the work between contractors. She looks at the amount of work each contract has, their performance ratings on previous task orders, the location of the work, and the expertise required.

"This year I put all my eggs in the JOC basket. It was very efficient and effective."

"So far this hasn't been a problem," Holmes said. "Rayco has satellite offices all over Texas that allow quick responses in that area. Del-Jen has offices in Fort Smith, which allows quick response to Oklahoma, Missouri, and Arkansas. There is some overlap to allow for an equitable division of work."

JOC also has worked well for Pine Bluff Arsenal, as well as for Vicksburg District. All have projects being completed under JOC.

Typical JOC task orders include projects between $2,000 and $2 million in Arkansas and between $25,000 and $2 million in the other states. Most JOC tasks involve repair and maintenance. As the Air Force, Army, and other federal agencies downsize, they no longer have the manpower or the money to do some of the things for themselves that they have done in the past. JOC enables the district and the division to fill that gap for these customers.

"With JOC, it all boils down the amount of money and time that can be saved in design costs, and how fast we can award," Embree said. "We know we can do the job right, but with JOC we can to it *right now*. That makes it a tool for us to market our abilities to customers who we might never reach if we didn't have the JOC in place."

The time from a customer placing his initial phone call until Contracting issues the task order can take as little as four days. That includes a site visit, developing a scope of work, and negotiating the cost.

JOC has passed the first test. Task orders have been issued quickly and efficiently. The next test is how well the work is done. "So far, the contractors are doing great," Holmes said. "We are fortunate to have two experienced contractors who are flexible to our needs."

All work started by Jan. 1, and the projects are currently in various stages. Two projects, re-siding the Visitors Center at DeGray Lake in Vicksburg District, and replacing HVAC equipment in the Miller Memorial U.S. Army Reserve Command Center in Huntsville, Texas, have been completed.

Flood project wins Minnesota award

By Peter Verstegen
St. Paul District

It wasn't just the Partnership Minnesota Special Achievement Award from the Governor of Minnesota, although that helped. What pleased David Raasch most was "the personal satisfaction at how the Chaska project prevented damages from the flood in 1993, and it succeeded 100 percent during the spring flooding in 1997."

Raasch is a project manager for St. Paul District. He managed the flood control project at Chaska, Minn., from 1991 to its recent dedication.

Severe floods hit Chaska in 1952, 1965, 1969, and 1993. Chaska is a community of about 12,000 on the Minnesota River near Minneapolis. The project was authorized in 1976 and the district awarded the first construction contract in September 1988 after Congress appropriated new start-up construction funds.

The district and the city established three goals for the flood control project. One was to prevent the potential for catastrophic flooding from the Minnesota River. Previous floods damaged property and public facilities in excess of $12.3 million.

Goal two was removing the lower portion of the community from the federal and state floodplain. According to a city fact sheet, floods had increased the deterioration of housing and limited opportunities for rehabilitation. Expensive flood insurance premiums had become an economic burden.

The city had a third goal -- increase the standard of living for low-to-moderate income families. Fifty-five percent of the households in the floodplain qualified as low-to-moderate income. The city targeted the floodplain, known locally as Block 54, for re-development. The block was a highly visible entrance to the community. In 1995, when the Corps designed a 2.6-mile-long levee along the Minnesota River, the city proposed to re-develop it to showcase the south side of the city near the river.

The Chaska flood control project is both beautiful and practical. (Photo courtesy of St. Paul District)

"This is a project Chaska had been working on for a long time," said David Pokorney, the city administrator for 14 years. "There are two significant benefits. The first is to protect the city from flooding by the Minnesota River. Second, the project allowed the older part of the community to thrive once it was taken out of the floodplain."

Re-developing the block presented engineering challenges and required the Corps, the city and the contractor to work closely on project details. Design and construction of project features on or near flood control levees required special attention to maintain the integrity of the levee. Detailed discussions involved proper fill placement, the design of building footings, utilities, walkways, interior drainage, levee relief wells and real estate easements.

One special challenge for the Corps and its prime contractor, Park Construction, was jacking two 12-by-12 foot concrete culverts under Minnesota State Highway 41 -- a major Chaska thoroughfare. Jacking involves heavy machinery *pushing* the culverts *through* the earth under the highway. "It's similar to a mining operation," said Mark Koenig, resident engineer on the project. "The contractor did this in the summer of '97. Nothing of that size and shape had ever been done before, and we had to do it without interrupting traffic."

A traffic interruption meant closing down the highway, a major detour, and upgrading alternate routes. It helped that the same contractor was doing other related work for Chaska. The city, the Corps, the contractor and the Minnesota Department of Transportation worked closely to provide uninterrupted access on Highway 41. "The partnering worked exceptionally well," said Koenig.

That partnership between Chaska and the Corps paid big dividends. The levee system became the base for a portal park -- a grand welcome to the city. Sidewalks and stairs tied the development into Chaska's extensive recreational trail system.

"The last stage of construction combined the double-box culvert that provides flood protection with a non-grade pedestrian crossing for safe highway crossing and a bike trail," said Raasch. "The upper culvert box is part of the bike trail. We designed about 2.9 miles of paved recreation trails on top of the levee and around Courthouse Lake."

Flood control features include 1.1 miles of upgraded levee and 1.5 miles of new levee with appropriate landward drainage facilities and a storm-water pumping station. Two mile-long creek bypass channels form the borders of Chaska Creek and East Creek. The project replaced nine bridges to accommodate flood control objectives.

The contractor completed the Minnesota River levees in June 1996. Today, River Bend Park, a hotel, and portal pillars extend Chaska's welcome and stand as a testament to a successful partnership. "Flood control was the major objective, but recreation and overall project aesthetics were also important," said Raasch.

Senators tour Russian nuclear storage area

By Denise Tatu
Transatlantic Programs Center

Senators Richard Lugar (R-Ind.) and Carl Levin (D-Mich.) were among a U.S. delegation that visited the fissile storage facility under construction near Oziorsk, Russia, in November. Others in the group included former Senator Sam Nunn (D-Ga.); Rose Gottemoeller, the Department of Energy's Director of Nonproliferation and National Security; and Susan Koch, Deputy Assistant Secretary of Defense for Threat Reduction Policy.

Nunn and Lugar are co-authors of the Nunn-Lugar legislation that funds the Cooperative Threat Reduction (CTR) program, under which the storage facility is being built. The CTR began in 1991 when Congress directed the Department of Defense (DoD) to help secure former Soviet weapons of mass destruction. Since then, Congress has appropriated $2.3 billion to assist eligible states of the former Soviet Union to dismantle weapons of mass destruction and to reduce the threat of proliferation.

The nine-day inspection included field sites in Russia where missiles, missile silos, bombers, and submarines are being dismantled and destroyed.

The storage facility is being built under an agreement between DoD and Russia's Ministry of Atomic Energy. The Russians are designing the storage facility concurrently with the construction, which is being done by the South Urals Construction Company under subcontract to Bechtel National Inc. The facility will store up to 50,000 containers of radioactive materials from about 12,500 dismantled nuclear weapons in steel tube "nests" encased on concrete.

(From left) Former senator Sam Nunn, and senators Carl Levin and Richard Lugar toured the fissile material storage facility being built in Russia. Vasily Derevyanko, chief engineer of the South Urals Construction Company, conducted the tour. (Photo courtesy of Bechtel National Inc.)

The first 25,000 container capacity storage facility includes the receiving building, the support buildings, and the storage facility. It is scheduled for completion in 2002. Another 25,000 container capacity storage building may be added later.

The U.S. Army Corps of Engineers' role is to execute all of DoD commitments to the storage program. According to Carl Anderson, Transatlantic Program Center's resident engineer in Oziorsk, the group was briefed enroute to the project site on how fissile material is processed from its arrival, through the accountability and controls system, to final storage. They were also briefed on the site layout and saw the electrical substation, security building, personnel entry control facility, administration building, and toured inside the storage area.

Following the tour, the group traveled to Oziorsk for lunch with representatives of South Urals, the Corps, Bechtel, and Department of Energy officials. Anderson said that Lugar told him he was impressed with the facility and said the Corps and Bechtel were doing a good job overseeing the construction.

During a news conference in Moscow, Levin said he would work to continue funding for the program.

"We will take back what we've learned to Congress to make sure the anti-proliferation, anti-terrorist programs we have put in place continue, and we'll try to fend off efforts to reduce them," Levin said.

Around the Corps

Small business award

The U.S. Small Business Administration and the Minority Business Development Agency recenty honored Los Angeles District and its Deputy for Small Business, Daniel Hanas, with its "Outstanding Government Procuring Agency" award.

For fiscal year 1998, the district awarded about $45 million dollars to small minority-owned firms. This is almost 12 percent of the district's total construction awards. The district also awarded more than $50 million dollars with small disadvantaged businesses, and more than $110 million to small businesses.

Since coming to the Corps three years ago, Hanas has helped the district steadily increase its percentage of small business participation. The district continues to exceed federal mandates on the percent of contract awards to small businesses each year.

Cooperation agreement

On Jan. 13, the Corps and the Port Authority of New York and New Jersey signed a joint Project Cooperation Agreement (PCA) for a $733 million navigation improvement project to deepen the Kill Van Kull (KVK) and Newark Bay Channels. The project calls for deepening the channels to 45 feet. The current 40-foot depth will not permit access by many modern ships to the largest refined petroleum port in the U.S., and the nation's third largest container port. The groundbreaking for the project is scheduled for next April, with completion in 2004.

The project will cost about $733 million, of which about $550 million would be paid by the federal government, and $183 million by the Port Authority of New York & New Jersey. Under the Water Resources Development Act of 1986, the federal government will finance 75 percent of the costs, and the port authority will finance the remaining 25 percent, plus repay the government 10 percent of the construction costs during the first 30 years of the project's life.

The Corps will soon open bids on the first of eight contracts. The first contract, $25 to $40 million, will deepen channels in the Constable Hook area at the mouth of the KVK.

Corrections

Engineer Update published the wrong address for the digital projects notebook in the January edition. An interim site has been set up to immediately direct those who use the incorrect address to the correct page.

The DPN can be accessed through either the Corps' homepage (www.usace.army.mil), or the Topographic Engineering Center's (TEC) homepage (www.tec.army.mil).

From the Corps' homepage, first click on Organization, then click on Civil Works, and finally click on Projects. In the TEC homepage, click on Project and Programs, then click on the Digital Project Notebook.

Robert Mann and Gary Hall took the photographs for the article.

Engineer Dinner

The 132d annual Engineer Dinner will be held Feb. 18 at the Crystal Gateway Marriott in Arlington, Va. The guest speaker will be Dr. Joseph Westphal, Assistant Secretary of the Army (Civil Works).

Dress will be Army blue mess uniform or Army blue with bowtie, and black tie optional for civilians. Cost is $42 per person. Dinner entree is a combination of chicken and fish, and there will be a cash bar.

For more information, please call the Protocol Office at (202) 761-1220 or (202) 761-0045.

Journalism awards

On Jan. 22, a panel of Army and DoD journalist chose the winners in the Corps' annual Herbert A. Kassner journalism contest.

Corps divisions, districts, and labs submitted 100 entries. First place in each category is submitted for competition in the Department of Army journalism awards.

The Corps competition is named for Herbert A. Kassner, public affairs officer for the former Mississipi Valley Division, who died in 1988.

The winners are:

Army-funded Newspapers, Small

Transatlantic News, Transatlantic Programs Center

Bulletin, U.S. Army Engineering and Support Center, Huntsville

Yankee Engineer, New England District

Army-funded Newspapers, Other

"LRDispatch," Little Rock District

"Constellation," Baltimore District

"Corps'pondent," Portland District

Magazines

"Charger," Buffalo District

"Castle," Savannah District

"Flagship," Seattle District

Special Achievement

Army Values Special Pull-Out, Savannah District

Reduction in Force Special Edition, Honolulu Engineer District

"Sandbag Techniques" Brochure, Seattle District

Photojournalism

Jonas Jordan, Savannah District

Tim Dugan, Mobile District

Rodric McLean, Los Angeles District

Contract Writers/Stringers

Clancy Wahl, Transatlantic Programs Center

Jan Duchnowski, Seattle District

Arleen Kreusch and Mary Grace Quinn, Buffalo District

Stand-alone Photos

Doyal Dunn, Japan Engineer District

Jonas Jordan, Savannah District

Kenneth Winters, Buffalo District

Journalist of the Year

Lira Frye, New Orleans District

Matt Rabe, Portland District

(No third place)

Features

Candace Hull, New Orleans District

Matt Rabe, Portland District

Lira Frye, New Orleans District

Commentaries

Kathleen Evans, Pittsburgh District

Matt Rabe, Portland District

Paul Shapiro, Pittsburgh District

News

Nancy Gould, Savannah District

Larry Hawthorne, Pacific Ocean Division

Anita Horky, Fort Worth District

Picture Stories

Dee Dedman, Fort Worth District

Charles Groover, Fort Worth District

Richard Dowling, Pittsburgh District

Illustrative Art

Marie Heinz, Buffalo District

Verdelle Lambert, Savannah District

(No third place)

Quaker Neck project

The Quaker Neck Dam Removal Project Team received the 1998 Coastal America Partnership Award. The award recognized team efforts, including Wilmington District, for restoring fish habitat at Quaker Neck.

A 1989 study found that removing the Quaker Neck Dam and another dam nearby would enhance migration of fish up the Neuse River for spawning. Federal and state officials agreed on the project in 1997.

Carolina Light and Power, which built Quaker Neck Dam, agreed if sufficient water would be available for cooling operations at their powerplant. Wilmington District assumed this task. District people studied the situation, then designed a low-head weir and dredging in a bypass canal.

The project has been implemented, restoring 75 miles of the Neuse and 925 miles of its tributaries to the migrating species.

Low-tech fix

Philadelphia District recently joined the New Jersey Department of Environmental Protection (NJDEP) in a low-tech venture that could save millions in environmental cleanup. Utility poles were placed on Nantuxent Cove to anchor oil spill booms and support osprey nests.

"This pilot project will allow booms to be placed in half the time by eliminating the need to install temporary land-based anchors," said NJDEP Commissioner Bob Shinn.

The project protects Nantuxent Creek, Back Creek, and Cedar Creek. Two poles were placed at the mouth of each creek for booms to be connected to stop oil from spreading upstream.

"This is about as low-tech as it gets, but it works," said Stanley Delikat, chief of NJDEP's Bureau of Emergency Response.

Philadelphia District's crane barge *Titan* installed the 35-foot utility poles, which were donated by Public Service Electric & Gas Co. The next time a spill is headed for the area's shoreline, a contractor can place booms across the river in less than half the time.

The Citizens United of Millville built three-foot-square osprey nests on top of the poles, with predator protection below the platforms.

"We're now aware of at least 250 nests, up from 50 in 1970," said Shinn. "They have returned to cleaner waters and a more plentiful fish supply."

Old bridge reappears

A piece of history, submerged when Youghiogheny River Lake was built in the early 1940s, reappeared recently when water levels dropped at the Corps project in Somerset County, Pa. The three-arch stone Great Crossings Bridge, originally part of the National Road, was completed in 1818. Since the bridge reappeared, many visitors have toured the site. Above, Clyde Braun, resource manager of Youghiogheny River Lake, tells two visitors about the significance of the bridge and the effects of low water levels at the project. (Photo by Liane Freedman, Pittsburgh District)

Top realtor retires:

Plain-spoken Frankel finds new location, location, location

Article by Bernard Tate
Photo by F.T. Eyre
Headquarters

"We run one of the biggest real estate companies in the U.S.," said Barry Frankel, the Corps' recently-retired Chief of Real Estate. "It's been a gas," he said regarding his 33 years as an Army realtor.

When most people think of the U.S. Army Corps of Engineers, "real estate company" is probably not the first term that comes to mind. "Builders," certainly, civil and military. "Disaster relief," sure, from hurricanes to floods. Maybe even "international engineering consultant," from our allies in the Middle East to our former enemies in Russia.

But when Barry Frankel retired on Jan. 2, he had been the director or deputy director of what he calls "the last, largest full-service real estate operation in the federal government" for more than 20 years. He had been in or around government real estate for almost 33 years, counting his time in uniform. That gives him a lot of perspective on the past, present, and future of Corps real estate operations.

And Frankel is a plain-spoken man.

"The Army is a land-holding agency, whether it likes it or not," he said a few days before retirement. "That means we have reason to get land; we have reason to get rid of land; we have reason to lease land; we have reason to allow people to use our land on a temporary basis. Each of those things requires certain skills, and that's what we do for the Army and Air Force civil works accounts. So we run one of the biggest real estate companies in the U.S., except we're full-service."

Frankel did a lot of real estate work when he was in the Army from 1965 to 1970, including some time with Norfolk District, but his first full-time civilian job with the Corps was in Baltimore District in 1971. "There were 180 people in real estate in those days," he said. "We had five civil works projects; we had seven states of military work for the Air Force and the Army; homeowners assistance program; I mean we had *everything*."

Whether the Corps can keep that ability to do everything is what concerns Frankel most, now that he has retired.

"The biggest changes I've seen during my career are that, when I started, training and expertise were all-important," Frankel said. "Today we have a lot fewer people, and some of the work we have is more complicated because of environmental issues, monetary issues, political issues, and because of downsizing all over the Army and the government. So today people have become more generalists than specialists and, in a lot of cases, they have to learn their craft on the go. We did a lot of that early in my career, too, but there were layers of people watching over you to make sure you didn't go astray. Today a young person has to learn the craft by his- or herself and there's nobody looking over their shoulder to make sure they're doing it right.

"I try to emphasize the need to learn one's craft," Frankel said. "It's important, particularly in the government. We don't hire people off the street who know what we do. The fact that you have a degree or that you were in real estate doesn't mean you know how to be a government real estate person. We have to teach almost everybody who comes in how we do it under government regulations.

"So I'd say we've become more generalists, and we're successful not because we've changed any systems, but because we're hired very bright, enthusiastic young people who worked their hearts out and increased the productivity of this organization, despite all the other problems we've had with structure and resources. It all goes to smart people with enthusiasm who have a joy for what they do."

What does Frankel see in the future for the Corps' enthusiastic real estate people?

"I think that real estate work and requirements will always be there," Frankel said. "The question is, who's going to do them? Privatization is on the horizon. Everybody assumes you can just privatize real estate. Well, that's not true, in my opinion. I think there will be some attempts at privatizing, and people will find it's too expensive and difficult to control.

"I think we'll see a lot of agency jumping," Frankel continued. "You'll see people, instead of staying in the Corps for their whole careers, they'll go from the Corps, to the General Services Administration, to the Park Service, to the Department of Interior, to the Bureau of Land Management, just keep moving around the government to wherever the work is.

"The problem is, some of the agencies won't realize they've lost so much capability until they have to rebuild it, then where they start will be a difficult question. I'd say that if there's an agency around that has real estate capability, with trained people who know their craft, that agency may end up doing a lot of work for the other. And it could very well be us. In the past we've done work for the Department of Energy, the Park Service, the Department of Justice, and others. Whether we still have the capability eight or 10 years from now, I can't project.

"Hopefully this agency *will* have the commitment to maintain that expertise," said Frankel. "We have the expertise in a lot of young folks right now and I've very proud of them, but whether we retain it or not is not for me to say."

Giving the younger people a chance is one reason that Frankel is retiring now.

"It's time to create some new old-timers," he said. "There are plenty of excellent ladies and gentlemen around who can fill my shoes. Most of the people here have made me look good for the past 30 years. So there are plenty out there who can do the job.'

Frankel's immediate plans for retirement are to relax for a few months before going on to something new. Not that he regrets what he has done for nearly 33 years.

"It's been a gas," Frankel said as he summed up his career. "It's been a great ride and I've enjoyed every minute of it, and I'd do all over in exactly the same way. I've had the best job in the Army."