

MARTIN MARIETTA

news

DENVER AEROSPACE

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Titan II in 1962
test firing



On the cover

Titan II being retired after 20 years

The Titan II intercontinental ballistic missile (ICBM), which served as a major element of the nation's deterrent force for 20 years, is gradually being retired from service. Deployed in Arizona, Kansas, and Arkansas with two squadrons of nine missiles in each of those states, the country's first two-stage ICBM will be retired from the U.S. inventory by October 1987.

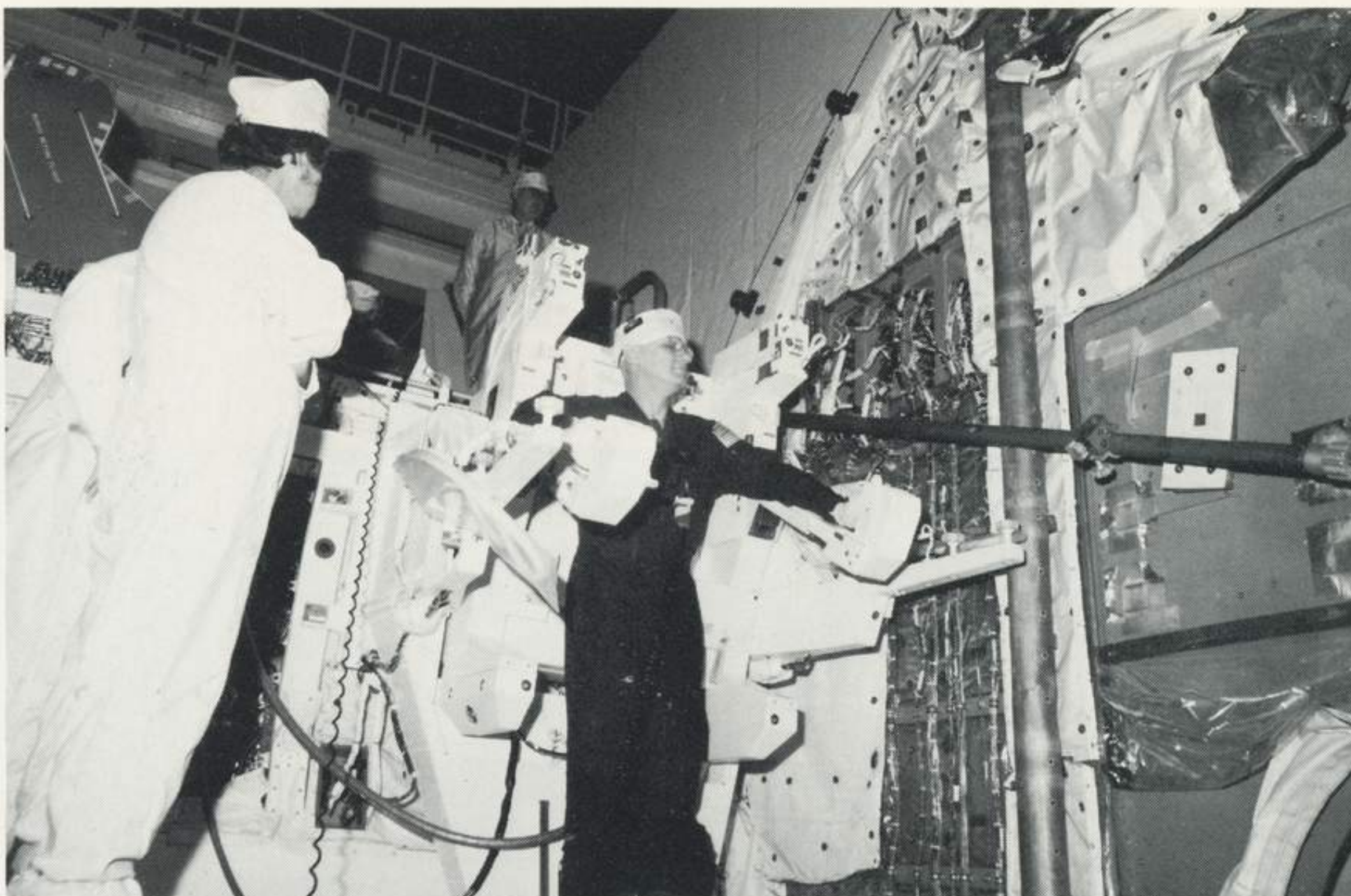
The advanced missile weapon system was designed and built by Martin Marietta Aerospace to meet the Air Force's need for a two-stage, reinforced stressed shell ICBM to succeed the one-and-a-half stage, pressurized tank Atlas.

Titan became operational in 1963 and, in its day, represented the deterrent equivalent of today's Minuteman and tomorrow's Peacekeeper.

At its inception, Titan II represented a marvel of the then emerging space-age technology—in guidance, fuels, construction, basing, command and control, launch operations, and reaction time.

More powerful than any other in the U.S. arsenal, it had a significantly longer range than the 6300 miles of its predecessor, Titan I. But among its most valuable features was the fact the ICBM used storable propellants that allowed it to be stored, at the ready, for months at a time and still be able to be fired within one minute of the command, as opposed to 15 minutes for Atlas or Titan I. The room-temperature, storable propellants ignite on contact, eliminating the need for a complex ignition system, such as Titan I's kerosene-based fuel and liquid oxygen oxidizer.

Among Titan II's other unique capabilities was the fact it was the first missile to be kept ready for firing from underground silos. It was less complex because it was the first missile to use an all-inertial guidance system, instead of Titan I's radio-command system. It also required comparatively little maintenance.



Astronaut Bruce McCandless (right), who will fly aboard the Space Shuttle on its next mission February 3, was at Florida's Kennedy Space Center to review installation of the two Manned Maneuvering Units (MMU) in the Orbiter Challenger. Assisting him are technicians from the National Aeronautics and Space Administration. McCandless will be the first person ever to use the MMU in space to propel himself with the backpack device, initially in the Shuttle's cargo bay and later outside the spacecraft without benefit of a tether. The February mission is a rehearsal for the next Shuttle flight in April when the MMU will be used to assist in the repair of the Solar Maximum Mission satellite—another space first.

'Project Referral' expanded

"Project Referral," Denver Aerospace's concerted hiring program, has been expanded significantly to meet broader needs.

Employees now can earn \$2000 bonuses for each of their professional referrals submitted since January 16 who are hired as grade 43 or above labor grade 43 and above (except new college graduates). Previously, employees qualified for bonuses when applicants they referred met special criteria on a critical skills list.

Dwaine Schilling, referral campaign manager, said the change "should demonstrate to employees the importance of the campaign and the company's need to staff existing and anticipated programs."

"Project Referral" was launched November 7 and, as of press time, some 450 persons had filed employment applications under the program. Among those that qualified as referrals, six have been hired—resulting in \$12,000 in bonuses to employees—and 14 others have received offers of employment with Denver Aerospace.

In addition to bonuses, referral winners also qualify automatically for mid-month drawings to award a trip for two to a Space Shuttle launch from Florida's Kennedy Space Center. Winners receive airfare to Cocoa Beach, meals, lodging and a rental car for four days and three nights. Drawing winners and their guests will witness the launch from the VIP viewing area and attend other selected activities.

The latest drawing winner was Frank Davis, test department, selected January 16. The first winner was Janice E. Strand, a software engineer, who won last month.

Employees submitting a qualified referral also receive a special "Project Referral" notebook.

Detailed information is available from personnel staffing, ext 2731. Employees with referral possibilities should:

- Obtain "Project Referral" applications from department or personnel administrators;
- Submit completed applications to personnel staffing, Mail No. L1311, Littleton Systems Center.

Employees will be contacted only if referrals qualify.

Former DOD, NASA, military officers face Feb 15 deadline

Denver Aerospace employees who formerly worked for the Department of Defense (DOD) and the National Aeronautics and Space Administration (NASA), as well as certain military officers, have to report aerospace and defense-related employment by February 15.

Forms and information are available from Leroy Hollins, Denver, ext. 6750; Richard A. Freeman, Cape Canaveral, ext. 6066; Dottie McCann, Michoud, ext. 3694; and Steve Hornack, Vandenberg Air Force Base, ext. 3595.

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January 20, 1984

Cook named Denver Aerospace personnel director

Dennis F. Cook, personnel director at the Aerospace Division, Baltimore, MD, since July 1982, has been named director of personnel for Denver Aerospace.

The 45-year-old Cook, who replaces R. E. "Ed" Burnett, assumed his new duties January 3. Burnett has moved to Tennessee where he will be personnel director for Martin Marietta Energy Systems at Oak Ridge.

Cook joined Martin Marietta in 1981 as director of personnel management at Aerospace Headquarters, Bethesda, MD.

Before joining Martin Marietta, Cook was personnel director for five years in the Lebanon, PA, Design, Manufacturing and Construction Division of General Electric Environmental Systems. He held a similar position from 1974 to 1976 with Curtiss-Wright Corp. in its Wood-Ridge, NJ, Design and Manufacturing Division.

Cook also worked for six years as labor relations manager in the Dana Corp.'s Reading, PA, Manufacturing Division and for six years as assistant personnel manager



and then personnel manager at two GTE Sylvania, Inc., facilities.

A native of western Pennsylvania, Cook holds a bachelor of science degree in psychology from Lycoming College, Williamsport, PA.

Cook, who is married and has five children, is looking for a home in the Littleton area.

Murphy named director of Peacekeeper flight test program



John P. Murphy has succeeded John R. Adamoli as director of the Peacekeeper Flight Test program at Vandenberg Air Force Base.

Adamoli has been appointed director, Peacekeeper deployment, a Strategic and Launch Systems Division effort focused on the competition for the Peacekeeper in Minuteman silos program.

Meanwhile, Joseph Jackson has been appointed acting director of Vandenberg operations.

"These changes reflect the continuing emphasis by Martin Marietta on these nationally important programs that are so vital to the nation's strategic defense posture, as well as the Corporation's continuing emphasis on mission success," said Peter B. Teets, vice president and general manager of the Strategic and Launch Systems Division.

Flexible Spending Account now in effect

An innovative new program to reimburse employees for certain health care expenses with pre-tax dollars and that also allows flexibility in choosing health care options went into effect January 1.

All full-time, permanent salaried employees who are enrolled in the Connecticut General Life Insurance Company plan are eligible to participate in the Flexible Spending Account (FSA).

Each January 1, the employee's FSA is credited with \$500 for reimbursement of health expenses incurred by that person, or the individual's eligible dependents, that are not covered by the Connecticut General medical/dental plans.

Not only does the employee pay no taxes on that reimbursement, but any unused amount of the \$500 for health expenses during 1984 will be added to 1985's account balance. An employee may "bank" up to \$1000. A cash option is another feature of the program, which allows the employee to receive a check for the unused portion of the \$500 in the fourth quarter of the following year.

FSA funds can be used to pay expenses that come under medical and dental deductible and co-payments, or expenses that are not covered by the existing Connecticut General plans, such as eyeglasses, hearing aids, routine physical examinations, and amounts for dental care in excess of plan maximums. Any expense can be submitted for charges not covered by the medical or dental plans, provided that expense would have been deductible if filing a medical expense deductible on a federal income tax return. Those expenses, however, must be prescribed by a physician.

Expenses incurred before January 1, 1984, or the date of employment, whichever is later, are excluded. Also excluded under the FSA program are: medical expenses claimed as a deduction or credit for federal income tax purposes; those expenses that have been reimbursed through any other policy, group plan, Medicare, or any other federal or state program; and medical expenses not prescribed by a physician or dentist.

Reimbursement checks are made payable to the employee and are mailed to that person's home address approximately one month after the end of the calendar quarter once the claim has been filed. Claim forms are available from the Benefits office, Engineering Module 125, ext 3009 or 4928. Office hours are Mondays, Wednesdays, and Fridays from 10:30 a.m. to 12:30 p.m. and from 2 to 3 p.m.

Specific questions regarding current accounts can be pursued through Connecticut General's FSA office at Hartford by calling, toll-free, 1-(800)-242-2269



The third consecutive 1983 test flight of the Air Force's Peacekeeper intercontinental ballistic missile was launched successfully December 20 from California's Vandenberg Air Force Base. The 30-minute flight of the research and development missile covered a distance of 4800 nautical miles from the launch site to a target area about 375 miles northwest of Guam in the Pacific Ocean. The first and second Peacekeeper launches were June 17 and October 14 last year.

Front Range Ada working group formed

Denver Aerospace was instrumental last month in the formation of a working group to support implementation of a new computer programming language for defense work.

The company also will begin a series of extended classes later this month to train company personnel in the new language at a planned rate of 200 a year during the next three to four years.

Ada, as the new computer language is called, was developed to serve as the single effective language to replace hundreds of computer languages in use currently. It has been chosen by the Department of Defense (DOD) for all mission-critical applications and for all embedded computer systems (that is, systems in which the computer provides exclusive support for the overall system in which it operates.)

Other government and commercial customers also are expected to specify the new language in the future.

The Front Range Ada Working Group was formed last month following a four-hour meeting at the plant among Denver Aerospace management, members of the military and academic communities, and others in the defense and aerospace industries. They had gathered here during October for a live television transmission via satellite from Washington DC that featured a panel of major policy makers from DOD and the commercial sector discussing Ada implementation strategies.

Norman R. Augustine, Denver Aerospace president, announced plans during that meeting to develop a "software center of excellence," not only to support implementation of Ada, but also to ensure the company's preeminence in the software field.

The Front Range Ada Working Group currently numbers about 40 persons from the academic, military, aerospace and defense industries. Represented within the group, in addition to Denver Aerospace, are the University of Denver, the Air Force Academy, Lowry Air Force Base, Hughes Aircraft, and Ford Aerospace, among others. The group's next meeting is scheduled for March.

The company's first "hands-on learning" sessions with Ada, using a dedicated computer and a validated computer, will begin January 23, according to Robert L. Lewis, software education and training, who has set up the classes and will supervise training. Gary P. McKee, software education and training, and Kevin J. Weise, computer systems technology, will be the instructors. All three are members of the Software Engineering department.

The first class will be limited to a maximum of 16 students, including a member of the Air Force Plant Representative's Office, Lewis said.

"But we plan to have about 50 in each class once the program is in full operation." He added that although only 60 per-

sons will be trained during 1984, "we aim to be training at a rate of 200 a year as soon as possible over a three- or four-year period.

Each 13-week class, involves a five-day-a-week, eight-hour-day program. The second round of classes is scheduled to begin April 2.

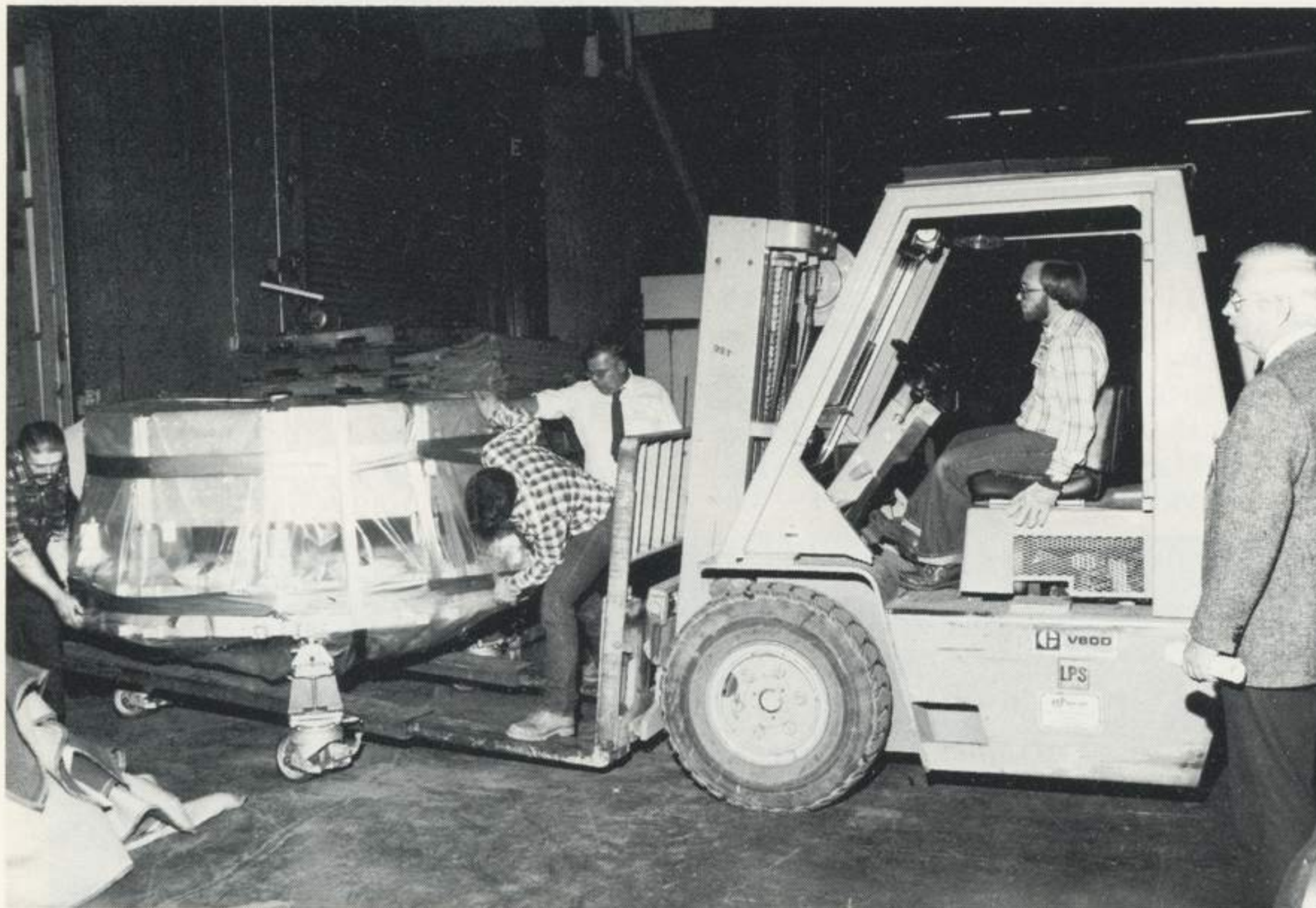
What's in a name?

The name, Ada—registered Department of Defense trademark for a new standardized computer language for defense systems—was chosen during late 1979 in honor of Augusta Ada Byron, countess of Lovelace, and daughter of poet Lord Byron.

Ada Lovelace was a mathematician who worked with Charles Babbage, creator of a mechanical "difference engine" that could be "programmed" much like the Jacquard loom.

The loom had an apparatus for weaving fabric patterns that had a mechanism controlled by a chain of perforated cards. The cards caused the threads to be lifted in the proper sequence to produce patterns. Previously, such work all had to be done by hand.

Babbage also had plans to build a mechanical "analytical engine." Since Ada had "programmed" that planned engine, she was considered by many to be the world's first computer programmer.



The 10-sided structure being maneuvered at the Littleton Systems Center loading dock is the basic structure for the Venus Radar Mapper (VRM) spacecraft, scheduled for an April 1988 launch. The structure originally was the Voyager bus, the basic spacecraft structure from that residual 1977 program. That and other ground support equipment have been supplied to Denver Aerospace by the California Institute of Technology's Jet Propulsion Laboratory (JPL) at Pasadena. The company recently won a \$120 million-plus contract to design, build and test the NASA-funded VRM spacecraft. Individual subsystems are now in the early design phase. JPL's Vince Wirth (in white shirt) supervises the unloading while Bill Wolfe, quality manager, (in sportcoat) looks on.

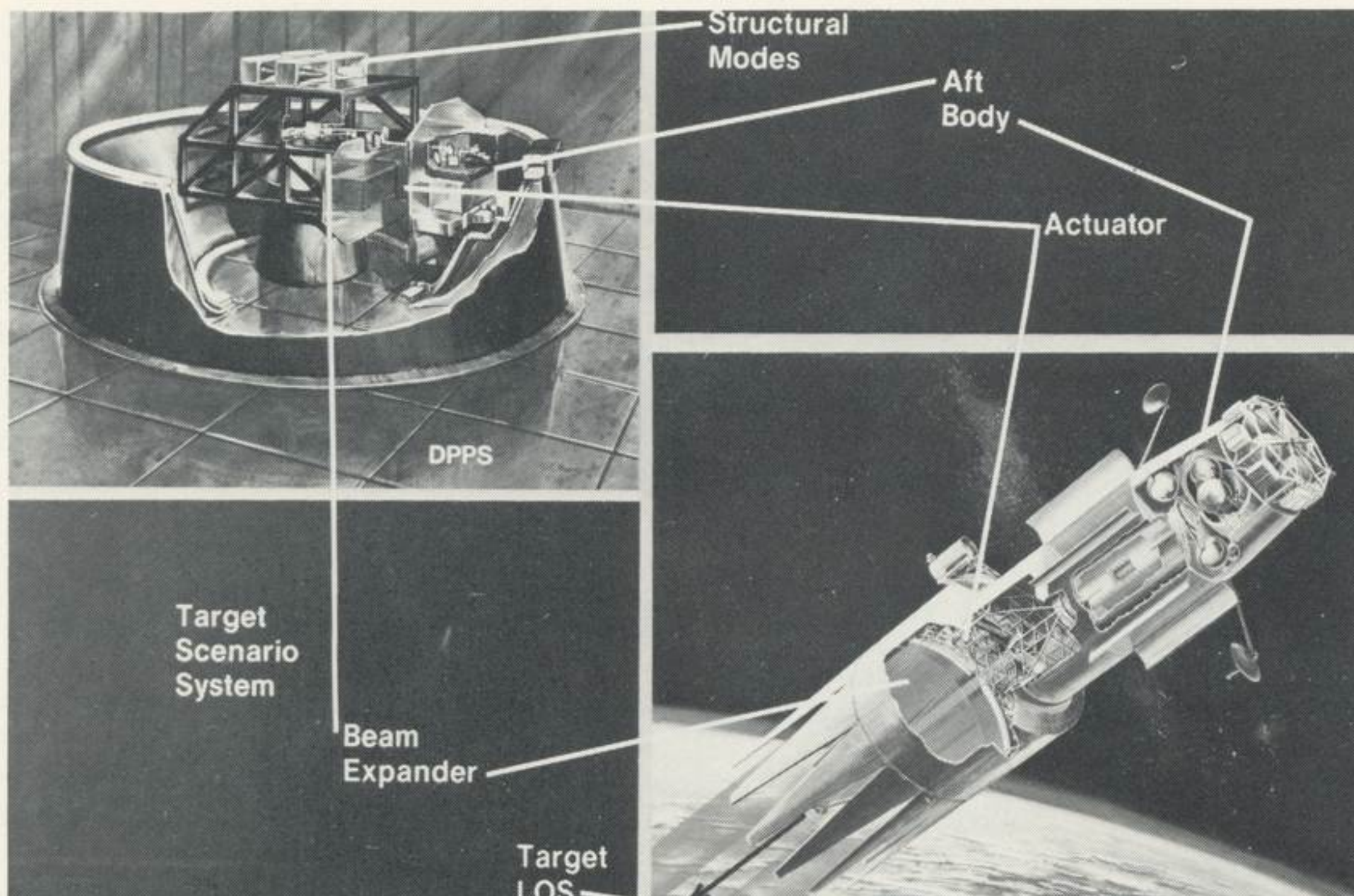
Corporation promotes Westwood

Dr. Albert R. C. Westwood has been promoted to corporate director of research and development for Martin Marietta Corporation.

He succeeds Kenneth Jarmolow who moved to Tennessee as president of Martin Marietta Energy Systems at Oak Ridge.

In making the announcement, Laurence J. Adams, president, said Westwood's new duties would be in addition to his present assignment as director of Martin Marietta Laboratories.

Internationally recognized as a leader in materials science and research, and a Fellow of the National Academy of Engineering, Westwood has been with Martin Marietta for almost 20 years—as a scientist, head of the laboratories' materials department, and as a director of the laboratories since 1974.



Rapid Retargeting/Precision Pointing contract add on worth \$874,237

Construction is expected to start the last quarter of this year on an on-ground simulator of an operational laser under a Defense Advanced Research Projects Agency (DARPA)-sponsored contract through Army Missile Command (MICOM) at Huntsville, AL.

Known as Rapid Retargeting/Precision Pointing (R2P2), it will evaluate the performance of the space-based laser (SBL).

Scheduling calls for R2P2 to be ready for

DOE picks Martin Marietta to operate Oak Ridge facilities

The Department of Energy (DOE) has selected Martin Marietta Corporation, one of three finalists, to operate four of its facilities at Oak Ridge, TN, and Paducah, KY. DOE fiscal 1984 operating budget for the four facilities is approximately \$2 billion.

"Our selection concludes a Corporate-wide effort that began nearly one year ago, and we are both delighted and honored to be the successful bidder," said Thomas G. Pownall, chairman and chief executive officer, who added "the impressive aggregation of intellect, of diverse technological intelligence, and skill represented in the Oak Ridge facilities and people, is truly a national treasure—one that we will work very hard to preserve and see prosper."

The four facilities—Oak Ridge National Laboratory (ORNL), the Oak Ridge Y-12 plant, the Oak Ridge Gaseous Diffusion Plant (ORGDP), and the Paducah Gaseous Diffusion Plant (PGDP)—are engaged in programs related to energy research, development, and production and national defense.

Martin Marietta Energy Systems, Inc., a wholly owned subsidiary of the Corporation will manage the operations.

Kenneth Jarmolow, who has been corporate vice president of research and devel-

use in January 1986.

The 12-month, \$874,237 add-on contract moves the project from the preliminary design phase to the detail design phase. It makes the original July 1980 contract now worth \$2.2 million.

According to project manager Louis A. Morine, R2P2 "is being considered one of the major new programs in the Directed Energy Office at DARPA."

opment, is president of the subsidiary. He will report directly to Laurence J. Adams, Corporation president and chief operating officer, who also serves as chairman of the energy subsidiary.

Following a three-month transition phase along side Union Carbide Corporation, the outgoing contractor who has decided to withdraw from the 18,000-employee operation to concentrate on its commercial business, Martin Marietta will assume full management responsibilities April 1.



Gen. John A. Wickham, Jr., U.S. Army chief of staff, recently addressed the large staff at Denver Aerospace. He also met with President Norman R. Augustine and members of the executive staff and was briefed on the automated staff message processing system (AN/TYC-16) and other programs of special interest to the Army.

Performance Sharing Plan deferral reduction announced

Salaried employees in the upper one-third salary range may contribute up to 12 percent of their salaries under the salary deferral option (before tax) in the company's Performance Sharing Plan. Contributions by those in the lower two-thirds salary range are not affected.

The percentage is determined according to government regulations.

Contributions exceeding 12 percent elected by those in the upper third will either be distributed to the Performance Sharing Plan on an after-tax basis or paid as taxable income through paychecks, according to the election made by each individual on the enrollment form.

Persons in the upper one-third salary category who would be affected by the percentage reduction should have received correspondence explaining distribution of their contributions by now. If not, they should contact the Benefits office, ext 5609.

Employee purchase of personal computers made easier

Employees with at least six months service can now get assistance toward purchases of personal computers through a new Denver Aerospace program.

The program includes discounted prices through group purchases ranging from 18 to 40 percent, favorable loan rates, and repayment through payroll deductions. Among the computer makes that are discounted are Altos, Digital, Eagle, Hewlett-Packard, NEC, Northstar, Radio Shack, Zenith, and IBM.

The program was initiated to encourage greater employee use of and familiarity with computers because of rapidly expanding applications of computer technology in both the work and home environments.

Detailed information is available from Recreation, Engineering Module 124, ext. 6750; the computer library, Engineering Module 217, ext. 6716; and John Ulrich of the Waterton Computer Club, ext. 4138.

Ten employees honored for 375 years of service to Denver Aerospace



Denver Aerospace recently honored ten employees for their long years of service to the company, an accumulative total of 375 years. One group of five and their wives were feted at a recognition dinner December 1. Earlier that day the others were honored at a luncheon. Pictured at right, with the number of years of service in parentheses are: standing left to right, Walter Habicht (45); John Lengle (45); Norman R. Augustine, Denver Aerospace president; William Eberle (45); and, seated left to right, James Burridge (40) and Edward Kalbfleisch (45). Pictured at the left, seated left to right, are Donald Crouch (30); J. W. Webb (30); Chet Seese (35); and, standing left to right, Fred Lecker (30); Martin Costello (30); and Augustine.



Hollins is president-elect of national professional group

Leroy Hollins, who heads Denver Aerospace's employee service and recreation department, recently was voted president-elect of the National Employee Services and Recreation Association (NESRA), which represents about 50 million employees.

Hollins, a certified employee services and recreation administrator, previously served on the organization's board of directors and as vice president of member services. He is also co-founder of the Denver Area Employee Services and Recreation Association.

NESRA, a nonprofit organization, has a membership today of more than 2500 groups in the U.S., Canada, and Mexico. Dedicated to the principle that "employee recreation, fitness and services programs are essential to sound personnel management," the organization promotes employee programs as means of improving productivity by fostering good relationships among employees and between employees and management.

Safety glasses contract announced

Prescription industrial safety eyeglasses may now be purchased by employees through a contract Denver Aerospace has negotiated with Spectacles by Leon, 10151 West Bowles Ave, Littleton, 978-1170.

The office of Personnel Safety recommends the industrial grade safety eyewear, both on an off the job, and notes "the newer styles of frames and lens shapes make the eyeglasses as attractive as street-wear styles while still providing the extra measure of protection."

The average cost for single vision correction lenses and frames is in the \$30 range. Glasses can be paid for through the payroll deduction plan over four pay periods by hourly and nonexempt salaried employees, and exempt salaried employees over two pay periods.

Also included in the contract with the optometrist is a 10 percent discount on street-wear glasses for family members.

Nuggets basketball tickets distribution Jan 23

Department administrators may pick up Denver Nuggets basketball tickets from the Recreation/Employee Service Office in the Engineering Bldg, module 124G, between 10 a.m. and 3 p.m. January 23.

Tickets are for those employees who had signed up earlier on a first-come, first-served basis as part of the 1984 company-sponsored family events program.

Recreation

Alpine—The Rocky Mountain Alpine Club (RMAC) has announced winter activities for January. Sunday, January 22, there will be a cross-country day trip from Guanella Pass to Scott Gomer Creek for a limit of 12 beginner to intermediate skiers. Contact Gordon Voss, ext 8109 and 973-6512, or Brad Meacham, ext 5039 and 688-4646. RMAC's second multiannual tubing party will be held for a maximum of 40 persons Saturday, January 28, at the Fraiser Valley tubing hill. Contact Brian Gallagher, ext 5399 and 791-2143, or Joe Mensch, ext 6248 and 979-0426.

Skiing—The Martin Marietta Satellite Ski Club is sponsoring four events for March. There will be a Breckenridge bus trip leaving DSC at 6 a.m., March 3. Cost is \$29 per person and includes lift tickets, the ride, and refreshments. Contact Gordon Duncan, ext 1455. March 3 is also a "Teamski Race Day" at Breckenridge. Contact Darrell Deering, ext 7053. An outing to Purgatory is scheduled for March 9-11. Cost is \$103 per person, which includes bus travel, two nights' lodging at the Travel Inn at Durango, two days' lift tickets, refreshments, and dinner aboard the bus. A \$35 deposit is required, and the balance must be paid by February 8. Contact Jim Maeder, ext 7217. A one-day bus trip to Beaver Creek is scheduled March 18 for 47 persons. Contact Mike Stacnik, ext 8544.