

MARTIN MARIETTA

news

ASTRONAUTICS GROUP

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Number 20



Secretary Welch tours Factory

Program offers professional options for engineers

There is little doubt that the Astronautics Group's success as a leader in today's high-tech world is directly related to its employees.

Innovative scientists, engineers, mathematicians, software specialists, and other technologists provide the breakthroughs that have propelled the Corporation to a position of leadership in the industry.

In an effort to strengthen that role, the Corporation has established the Engineering Dual-Career Ladder program to offer engineers a unique professional option, according to Fred Neuman, manager of Human Resources. Neuman, along with Tom Marsh, spearheaded the High-Performance Work Team that created the program.

The system provides technically trained and motivated engineers a chance for rewarding expansion in either technical or managerial disciplines.

Now there are two separate ladders to climb, but the ascents are similar. Salary, grade levels and pay ranges are designed to provide recognition and reward, whether the engineer prefers a management or technical career path.

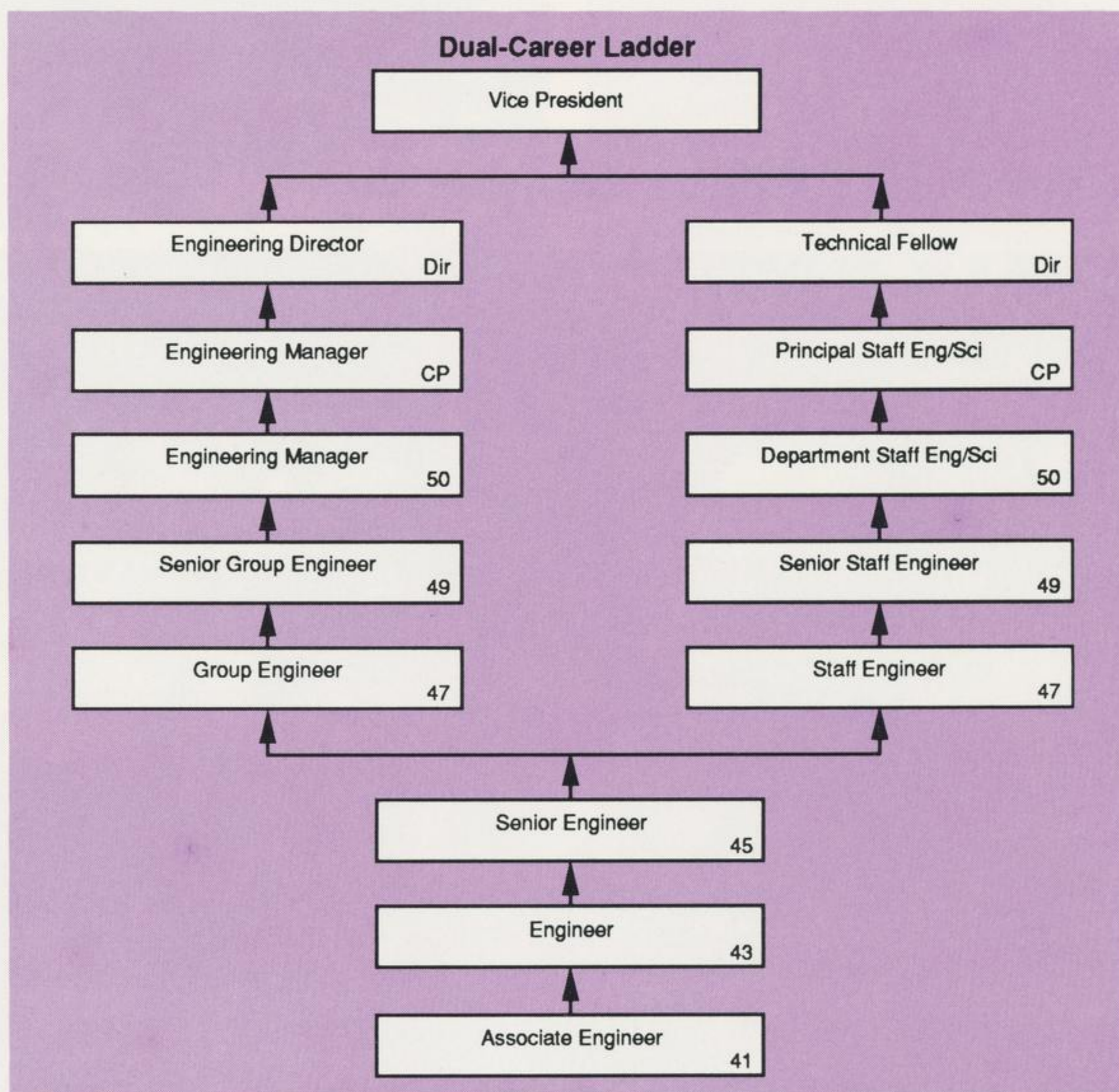
However, new engineers must advance through three levels before they decide which path to pursue. On completing their third level, engineers may progress up the dual ladder through a series of promotions based primarily on technical contributions.

The first step up the "technical" path is staff engineer (please see chart illustration), which is equivalent in level to group engineer on the "managerial" career path.

According to the program, employees earning a staff engineer position on the technical side will have proven themselves as creative, knowledgeable, and results-oriented engineering professionals—demonstrating competence in a specific field or scientific endeavor.

The technical path's next two levels, senior staff engineer and department staff engineer/scientist, are positions recognizing continuing contributions made by proficient technical engineers. Each position progresses in importance and represents a promotional step.

For example, a technical department staff engineer may be recognized by the Corporation,



and industry, as a leading authority in his or her scientific or engineering discipline or area of expertise.

The senior level position, principal staff engineer/scientist, will be recognized for his or her high degree of proficiency in a technical field—advancing state-of-the-art technology and developing new and theoretical engineering. This position is equivalent to the engineering manager within the management program.

The top rung of the technical ladder is a technical fellow position, which is comparable to an engineering director's position in management. Technical fellows must be recognized as

national and/or international authorities in a given scientific field and published in notable journals. They may function as task leaders and Corporation counselors in resolving complex technical problems.

All professional engineering employees who meet established criteria are eligible for senior level positions. However, because of its distinction, only a limited percentage of the Corporation's technical professionals will be designated. Very close attention is focused on ensuring that each successive step up the dual-career ladder is based on the individual's job performance and achievement. ■

YES offers jewelry sale, family portraits

Your Employee Store (YES) continues its special service this fall with a jewelry sale this month and free family portraits in November.

The first jewelry sale is from 10 a.m. to 3 p.m. today at the Engineering Building's cafeteria. The sale will continue next week from 10 a.m. to 3 p.m. at the following locations:

- Monday, Oct. 15, SPWI lobby
- Tuesday, Oct. 16, SSB cafeteria
- Wednesday, Oct. 17, DCF cafeteria
- Thursday, Oct. 18, Inverness atrium

In further appreciation of employees, YES will offer free 10x13 canvas family

portraits Saturday and Sunday, Nov. 3-4, at the Holiday Inn at Hampden Ave. and Wadsworth Blvd.

Employees may purchase additional photographs, but are assured of no "pressure sales."

For reservations, call 971-4288 between 8 a.m. and 2 p.m. Monday, Oct. 15, through Friday, Oct. 19.

In other YES news, employees finding mistakes on the October YES calendar are encouraged to bring the original calendar to the store for a "surprise." Also, remember to ask about Halloween candy while in the store; YES is offering "by the box" specials.

JAS and Recreation on the move, again

The Employee Services and Recreation department and the Job Availability System (JAS) are being relocated from the south end of the R level to the 3rd floor (off the center elevator) at the Deer Creek Facility. This move is effective Oct. 15.

All current phone numbers for these organizations will remain the same.



Jeffco students capture title

A group of Shaffer Elementary School fifth graders captured the World Championship title in the problem-solving Odyssey of the Mind competition last summer in Ames, Iowa. The team claimed the prestigious brainpower title from a field of 638 competitors from the United States, China, Poland, Russia, and other countries. The group made the excursion to the competition thanks to contributions from several Colorado businesses, including Martin Marietta. The champions, pictured above, include Dannielle Scoggins, Annie Fabik, Jenni Kelly, Ian Swanson, Linda Jurgemeyer, Jennifer Larson, Justin Stitt, Jeff Hutcheson, and Frank and Sheila Swanson.

Employees team up to make a difference

Astronautics Group employees Bill Usher, director of Human Resources for the Space Systems company, and Ron Halcomb, manager of occupational health and safety, have set an example worth following by volunteering their time in leadership positions at the Red Cross.

Usher is chairman of the Red Cross' Mile High Chapter board of directors and a current member of the American Red Cross Western Operations advisory council. Halcomb serves on the Arapahoe Red Cross advisory branch council, assisting with the planning of the Red Cross programs and services in Arapahoe County.

Leadership positions are one of many volunteer opportunities available at the Red Cross for employees who want to make a difference in their community. Other areas may be shopping for the homebound, reading for the visually impaired, participating on a disaster team, teaching first aid or CPR classes, or working with the community's young people.

For more information on volunteerism, call Elaine Weiss or Debra Fendrich at the Mile High Chapter of the American Red Cross at 399-0550. ■

Command media questions get answered

(Editor's note: The Martin Marietta News spoke with Phil DeLeo, manager of Command Media, to update employees on Astronautics Group policies, procedures, and practices. That conversation follows.)

What are command media?

Command media are the policies, procedures, and practices of the Corporation. Also called P³, command media state and describe the Corporation's operating methods—providing mandatory direction for all employees.

What is a policy?

A policy is a brief statement of management's goals and objectives. The policy assigns broad responsibilities and usually avoids details.

What is a standard procedure?

A standard procedure describes how departments interact with one another in carrying out a policy.

What is a practice?

There are two kinds of practices. The first type describes the detailed work methods used within a department, e.g., the Cost Estimating Manual. The other form of practice covers system descriptions and requirements defined by the department responsible for managing the system. These requirements are mandatory for employees who interact with the system. For

example, almost everyone interacts with the Astronautics Group Security Manual and the system it defines.

What is the "hierarchy" of Command Media?

"Hierarchy" refers to the vertical structure of Command Media. Policies sit atop the ladder, followed by standard procedures and practices. Going down the ladder generally increases detail. "Flowdown" also moves downward through the hierarchy.

What is "flowdown"?

Flowdown is the process by which a high-level requirement is amplified and made more specific as it moves down the hierarchy. For example, a policy may describe management's philosophy, while its corresponding procedure or practice describes the actual steps in carrying out that philosophy. The final result is said to have "flowed down" from the policy.

However, flowdown is not required at every level and may actually skip several levels.

What is the difference between Corporate, group, and company Command Media?

Corporate Policy and Operating Instructions apply to all employees at all operating locations and cover the operation of many systems. Corporate documents have precedence over group-generated P³.

Astronautics Group policies, procedures, and practices apply to all Astronautics Group

employees and cover group-defined systems used by all the companies and functional organizations. Documents issued by the group normally have priority over company documents except in areas where the companies have supplemented the group command media.

Company command media are issued by the individual companies. These instructions apply only within the company and cover company-defined operating systems.

Where can I find Command Media documents?

Hard copies of Astronautics Group Policies and Procedures may be found in all major locations. Manuals are updated on a monthly basis. Also, you can find them in electronic form on your Automated Policies and Procedures System (APPS).

Who is responsible for the command media?

All employees, especially those in management or supervisory positions, are responsible for making sure that the command media documents are accurate and enforced.

If you feel something needs changing, discuss the proposed change with your manager and fill out a Command Media Change Request Form (DEN 500436). Then, send it to the command media office. Normally, you should attach a "red-lined" copy of the existing document. We will confirm the need for change with the technical owner and begin processing if approved. ■

Reimbursements now subject to withholding

All undergraduate education reimbursements now are subject to withholding.

The Internal Revenue Code, which excluded employer-provided education assistance from income tax, expired Sept. 30. Therefore, reimbursements made to employees after Sept. 30 for expenses that are not job-related will be subject to federal and state income tax and FICA withholding.

However, reimbursements for job-related expenses will continue to be tax-free. Education expenses are treated as job related if the education maintains or improves skills required by the Corporation.

Graduate-level education reimbursements will remain the same.

Published articles should be submitted

Employees who have published articles in the last year may submit their work before Nov. 1 to the Publication Awards Committee (PAC) for awards consideration.

Articles must be published in 1990 professional, technical, or trade periodicals, journals, books, papers, or bound proceedings.

Forms for entering a published article in the competition are available from Betty Graham at Ext. 1-2217, MS DC0301. ■

Group Command Media to host industry-wide symposium next month

The Astronautics Group Command Media department will host the first industry-wide symposium on command media, Nov. 7 and 8.

Speakers will address issues of documentation simplification, project management, quality, and automation. The format includes presentations, group discussions, and an executive panel discussion in the Deer Creek Facility auditorium. For reservations, call Joan Wise at Ext. 7-7557. ■

Marines stage dinner

Employees who are former Marines will have a dinner celebration Nov. 9 to commemorate the United States Marines Corps' 215th birthday.

More than 300 former Marines who are employees are invited to attend and bring guests. This year's dinner starts at 5:30 p.m. at the Holiday Inn on 7390 W. Hampden Ave.

The six-course meal offers a choice of either London broil at \$20 per plate or chicken breast at \$16 per plate.

Reservations must be made by Oct. 26 with either Jim Lingle (Ext. 7-7143) or Jeff Pursley (Ext. 7-7420). ■

Corporate news

Corporation increases quarterly cash dividend

The Corporation's Board of Directors raised the quarterly dividend on the Corporation's common stock from 33³/₄ cents to 37¹/₂ cents per share, an increase of 11.1 percent. Payment at the new annualized rate of \$1.50 per share will be made on Dec. 31. The last dividend increase was paid in September 1989.

"We have a solid and diversified backlog of orders in both our defense and non-defense businesses," said Norman R. Augustine, chairman and chief executive. "This dividend increase reflects our confidence in Martin Marietta's outlook and in our strategic positioning for the coming years."

Separately, the board authorized purchase of

1 million of its common shares from the Corporation's Master Retirement Trust. The Corporation will have approximately 49 million shares of common stock outstanding after completion of this purchase.

In other action, the board updated its Shareholder Rights Plan, which was adopted in July 1986. Under the amendment, rights would become exercisable if any person's holding reaches 15 percent of the Corporation's common stock. The amendment also adds both a percentage flip-in and an exchange feature. The Corporation said these changes were not in response to any effort to acquire control of Martin Marietta, and it is not aware of any such effort.

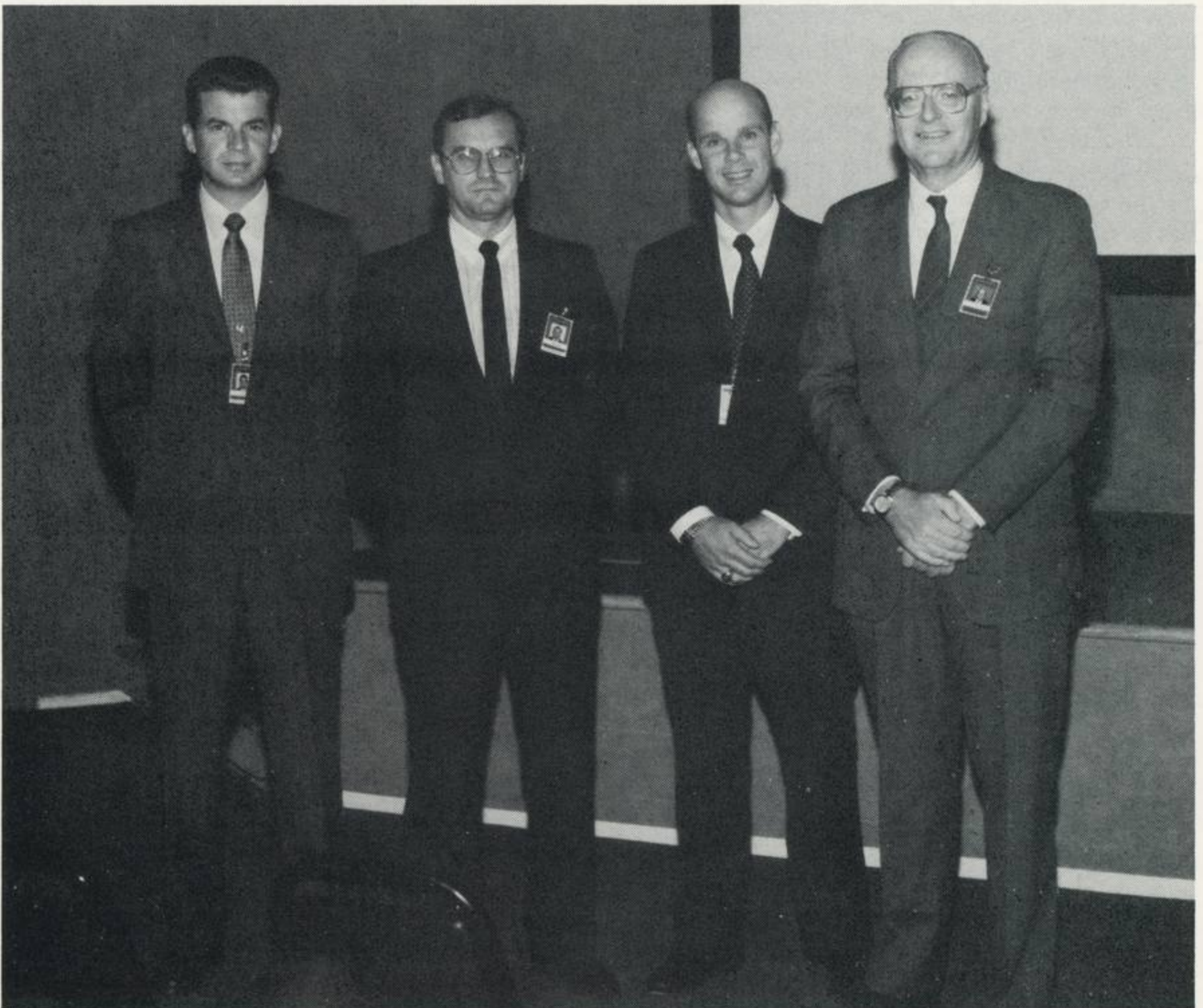
Martin Marietta sells Orlando real estate

The Corporation has completed the initial sale in its planned divestiture of holdings of the Corporation's Orlando Central Park, Inc. subsidiary in Orlando.

The sale to three groups of investors includes 150 acres of land for hotel and retail development and the Mercado Shopping Village in the Plaza International project. The price was \$42.5 million.

The Corporation's 50 percent interest in the Orlando Peabody Hotel, a premier convention center headquarters hotel located in Plaza International, is not included in the divestiture program.

The Corporation said efforts to complete its divestiture program, announced in August 1989, to sell the majority of acreage currently owned by Orlando Central Park are continuing.



Teets applauds EWI commitment

Astronautics Group President Peter Teets, far right, recently introduced participants in the Air Force's Education with Industry (EWI) management internship program. Joining Teets in recognizing the Corporation's 28-year commitment to EWI, from left to right, are Captains Bruce E. Ringstad, James Pohorence, and James E. Hurley. EWI provides selected officers on-site industrial education experience in production, procurement, and management concerns shared by industry and its customers. Participating officers face these issues while operating within the context of Total Quality Management.



Supplier expo succeeds

Twenty-nine business firms from 11 states and 300 people participated in the fifth Minority Supplier High-Technology Business Exposition Sept. 26 at the Deer Creek Facility's Auditorium. Jack E. Kimpton, manager of Materiel Operations, kicked off the event, saying the exposition is one of many programs the Astronautics Group supports as part of an effort to develop relationships with minority and small business firms. Also, the day before the event, the Small Business Development department hosted a roundtable to share accomplishments and experiences to prepare for conducting business in the 1990s.

Rep. Skaggs praises Peacekeeper work

(Editor's note: On Sept. 8, Colorado Rep. David Skaggs saluted the Corporation for its work on the Peacekeeper Instrumentation and Flight Safety System. That Congressional Record piece follows:)

Mr. Speaker, too often we hear about Federal contracts with huge cost overruns. And it is important that we learn from these mistakes. But let us not forget to learn from our successes, as well. I would like to bring to the attention of the House a success story that involves an aerospace company with a major facility in my state.

I want to salute the Martin Marietta Corporation. Through hard work, quality management, and a commitment by Martin Marietta employees, the company transformed a \$200 million Federal contract with a projected \$19 million cost overrun into a program with a \$33 million cost savings.

Martin Marietta was awarded an Air Force contract in 1986 to deliver 108 instrumentation and flight safety systems (IFSS) for MX missiles. The three critical functions of the IFSS during missile flight tests are to gather more than 20 million pieces of information on more than 300 performance measurements, to continuously track the missile's position during flight, and to provide the capability for range safety personnel to destroy the missile should it veer off its intended flight path at any time during its journey.

Because the IFSS was on the leading edge of electronic technology, it was fraught with the potential for large cost overruns. The program had an overrun projected at \$19 million even before someone picked up the first soldering iron. However, because of superb guidance by the Air Force and highly motivated work teams at Martin Marietta, the company was able to reduce direct labor costs by over 40 percent and program costs by 22 percent over three years.

Moreover, the company was able to reduce manufacturing defects by 75 percent, attain a perfect final inspection record, and improve delivery dates by two years. On 19 missile flight tests approximately 1,300 IFSS boxes monitored and recorded 13,000 flight measurements without a single failure.

This remarkable achievement is a tribute to the people who work at Martin Marietta. It demonstrates that with the right kind of leadership, workmanship of unparalleled quality can be the hallmark of American industry. ■

Space Systems' IIVV gets high award fee

For the second time in a year, Space Systems' Inertial Upper Stage (IUS) Independent Verification and Validation (IIVV) program received a 98.2 percent award fee from the U.S. Air Force, bringing its record to six consecutive award fees above 95 percent. The overall average for the IIVV program for the past five years is 95.6 percent.

The IIVV program's mission ensures that the computer program that controls the flight computers on the IUS—the rocket that maneuvers a payload into its final orbit or interplanetary trajectory—works properly from launch to final positioning.

Program manager Dale Pettit said the high scores are directly related to ongoing High-Performance Work Team concepts. The program uses skills from systems engineering, guidance, navigation, controls, software, orbital mechanics, and quality assurance.

The Air Force said IIVV program "management and technical teams have maintained a very professional and open relationship with our team and the rest of the IUS community."

Summer hire programs capture new graduates

The Astronautics Group's University Relations program has helped the company develop strong ties with major schools from throughout the nation.

For instance, the Massachusetts Institute of Technology Engineering Internship Program (EIP) has helped Space Systems hire Scott Geels, a student who ranked number one in his class at MIT with a grade point average of 5.0 on a 5.0 scale. Also, Denise Kato will join Space Systems this month through EIP.

In the program, students commit to work for the Astronautics Group for three work sessions—the first after their sophomore year (three months), the second after their junior year (three months), and the third after baccalaureate graduation (six to eight months). The student then graduates with a master's degree.

In addition to EIP, the Astronautics Group works with other cooperative programs, including INROADS, a program designed to support the college education of high-potential minority students. Fifteen co-op students worked at the Astronautics Group last summer.

Another tool for cultivating students is the summer internship program.

The program is set up to preview exceptional students for potential full-time employment the following year.

Last summer, 56 students from 18 schools participated in the program. Their average grade point average was 3.31 on a 4.0 scale.

To find out more about these programs for college students, you may call Jeff Ross, University Relations coordinator, at Ext. 7-1178, MS DC1311.

On the cover

Ed Miera, numerical control mill operator, left, demonstrates to John J. Welch, assistant secretary of the Air Force for acquisition, right, a new one-piece manhole cover for a stage one or two oxidizer on the Titan IV in the first floor of the Factory. Welch learned during his visit last Friday that the new dome is 100 percent machine-made, resulting in lower costs. In the background is Brant Farrow, numerical control chief. Welch toured the Factory to observe Total Quality Management and High-Performance Work Team efforts and met with several employees about the Titan IV program.



Bighorn sheep get aid in Waterton

The United States Forest Service, in conjunction with the Colorado Division of Wildlife, Denver Water Department, the Astronautics Group, and several volunteers, recently installed a watering station for wildlife in a remote area of the main plant. The work was conducted as part of the continuing effort to develop habitat for bighorn sheep and other wildlife species in Waterton Canyon under a cooperative agreement between government agencies and private industry.

Don't forget to vote

Today is the deadline to register to vote in the statewide and local Nov. 6 election.

Colorado voters must register 25 days before the election at their county clerk's office. Several King Soopers also are offering voter registration today.

Those unable to get to the polls on Election Day, can either vote earlier in person or pick up an absentee ballot. If you plan to vote early in person, you must do it by Oct. 19.

Absentee ballots must be received by Nov. 2.

To find out how easy and convenient it is to register, please call your local county clerk's office.

Today is the deadline for eating well

Today is the registration deadline for "Eating for Wellness," a seven-session weight management program focusing on ways to incorporate healthful lifestyle habits into your busy life. Valerie Peters, a dietician and nutrition consultant, will conduct the lunch-time classes.

Registration forms are available in the recreation information racks. Course fee is \$25.

Concert music offered at bargain prices

Season tickets to the Denver Chamber Orchestra's 1990-91 concert season are available to employees at substantially reduced "senior/student" rates.

Also, single concert tickets may be ordered by calling the box office at 744-9999. Employees should identify themselves as Martin Marietta employees and ask for the "group" discount rate of \$10—a savings of \$6 off the regular price.

Product demos set for this month, November

Several demonstrations are planned for those interested in learning about new software and hardware. The shows are:

- Toolbook demonstration; Engineering Building, Presentation Room; 8 to 9:30 a.m. Oct. 17
- Hewlett Packard Macintosh peripherals with typist; Deer Creek Facility, Room 2D614; 9 a.m. to 3 p.m. Oct. 18
- Microsoft Days—both PC and Macintosh; Engineering Building, Presentation Room; 8:30 a.m. to 12:30 p.m. Oct. 19
- Microsoft Days; Littleton Systems Center, Presentation Room; 1:30 to 4 p.m. Oct. 22
- Microsoft Days; Deer Creek Facility, Room 2D614; 9 a.m. to 3 p.m. Nov. 1
- NEC Corp. hardware presentation; Deer Creek Facility, Room 2D614; 9 a.m. to 3 p.m. Nov. 13

Employee services/recreation

Commodore Users Group—Members and interested employees will meet Tuesday, Oct. 16, at 5 p.m. on the west side of the recreation area clubhouse. Meetings of the C-64/128 and Amiga SIGs will follow the group session. The club has a large C-64/128 and Amiga software library and Commodore computer hardware is available to club members. For more information, contact Stan Lindholm, Ext. 7-3618, or Roy Kannady, Ext. 1-8569.

Martin Marietta Ada Working Group-Ada/Software Engineering—Interested employees will meet at 5 p.m. Wednesday, Oct. 17, at the Littleton Systems Center Presentation Room. Contact Robert Lewis at Ext. 1-6731 for more information.

Discounts on Dance Classes—Employees are eligible for discounts on three different dance classes, including Arthur Murray at Mission Trace, country western at Grandview Range, and jitterbug classes at the Dianne Page studio. The Arthur Murray introductory dance program discount is offered to employees who preregister and attend a

complimentary evening of dance on Saturday, Oct. 20. Informational flyers may be found in the recreation racks.

Photography Club—The club will meet at 7 p.m. Monday, Oct. 22, for members, guests, and interested employees at the Public Service building, 10001 W. Hampden Ave. Professional photographer Dee Crouch will present a slide and print show focusing on solarization, surrealism, and fine art photography. For more information, call Bill Privratsky at Ext. 7-4969.

Mile High L5—The club will meet at 7 p.m. Friday, Oct. 26, at the Sheraton Denver-West, 360 Union Blvd, Fourth and Union in Lakewood. The meeting will be held in conjunction with the Mile-High Science Fiction Convention and will feature a videotaped interview with science fiction writer Connie Willis. For more information, call Cyndi Bissett at Ext. 7-5844.

Wellness Works Wonders—Employees can begin fitness classes at any time at the Wellness Center in Deer Creek. In addition to


aerobics, one class uses 'step-up' benches to work the cardiovascular system. The ski fitness class incorporates sport movements, weights, rubberbands, and Dyna-Bands to prepare skiers for the upcoming season. Twenty-use class cards are \$27; 10-use cards are \$15. Both cards may be purchased at the Wellness Center between 11 a.m. and 5:30 p.m., Monday through Friday. For more information, call the center at Ext. 7-7575 or 7-7576.

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