

March 11, 1988      Number 5



Mars—simulating landing

# Martin Marietta wins WSMC safety award—again

Vandenberg Operations has received the Western Space and Missile Center Commander's Safety Award for the fifth consecutive year. The company has received the award for nine of the past 12 years.

Martin Marietta competed with all other major aerospace contractors at Vandenberg Air Force Base and was selected on the basis of maintaining an overall superior safety program.

During 1987, Vandenberg Operations was instrumental in launching two Titans, two Peacekeepers and two Small ICBM Canister Assembly Launch Test program vehicles. At the same time, system test operations and phasedown to minimum facility caretaker status were completed on the space shuttle Ground Support Systems program.

These combined efforts involved more than 1,100 employees working more than two million manhours, said Felix J. Scheffler, director of Vandenberg Operations. The employees conducted thousands of potentially hazardous operations, ranging from ordnance handling to activation testing of newly installed fuel systems.

One key milestone recognized during the Feb. 19 presentation was the accomplishment of 1,000 days (700,000 working hours) of accident-free work under the company's "move safe" program for critical mission equipment, Scheffler said. ■

## Charlie challenges company employees

Martin Marietta employees are being challenged to join their company's team for the WalkAmerica/TeamWalk. Charlie Ward, the March of Dimes poster child, asks employees to join him in walking 20 kilometers on Saturday, April 23, for the prevention of birth defects.

Four-year-old Charlie and more than 250,000 babies are affected each year by birth defects. With TeamWalk, the March of Dimes hopes to provide everyone the opportunity to help reduce those numbers.

WalkAmerica/TeamWalk is a 20-kilometer (12.5-mile) walk-a-thon. Martin Marietta will be one of more than 100 teams accepting the challenge. Employees can become part of the Martin Marietta team by agreeing to walk in the event or volunteering to help coordinate the event. Walkers can pick up a TeamWalk sponsor form by contacting the Employee Services department, Ext. 7-6750, and asking co-workers, family and friends to sponsor them for each kilometer completed.

Every employee who turns in at least \$100 by the May 16 deadline will be entered in a drawing to win two round-trip tickets to Disneyland and Universal Studios in California. Everyone entered will receive coupons, based on the dollars raised, to exchange for merchandise at any PACE membership warehouse.



Col. William H. Anders, WSMC vice commander, far left, lauded Vandenberg Operations for safety programs. Receiving the WSMC award are, left to right, Bert King, Vandenberg safety manager; Larry Lewis, Strategic Systems safety chief; Michael F. Gaughen, Strategic Systems flight test director; and Felix J. Scheffler, director of Vandenberg Operations.

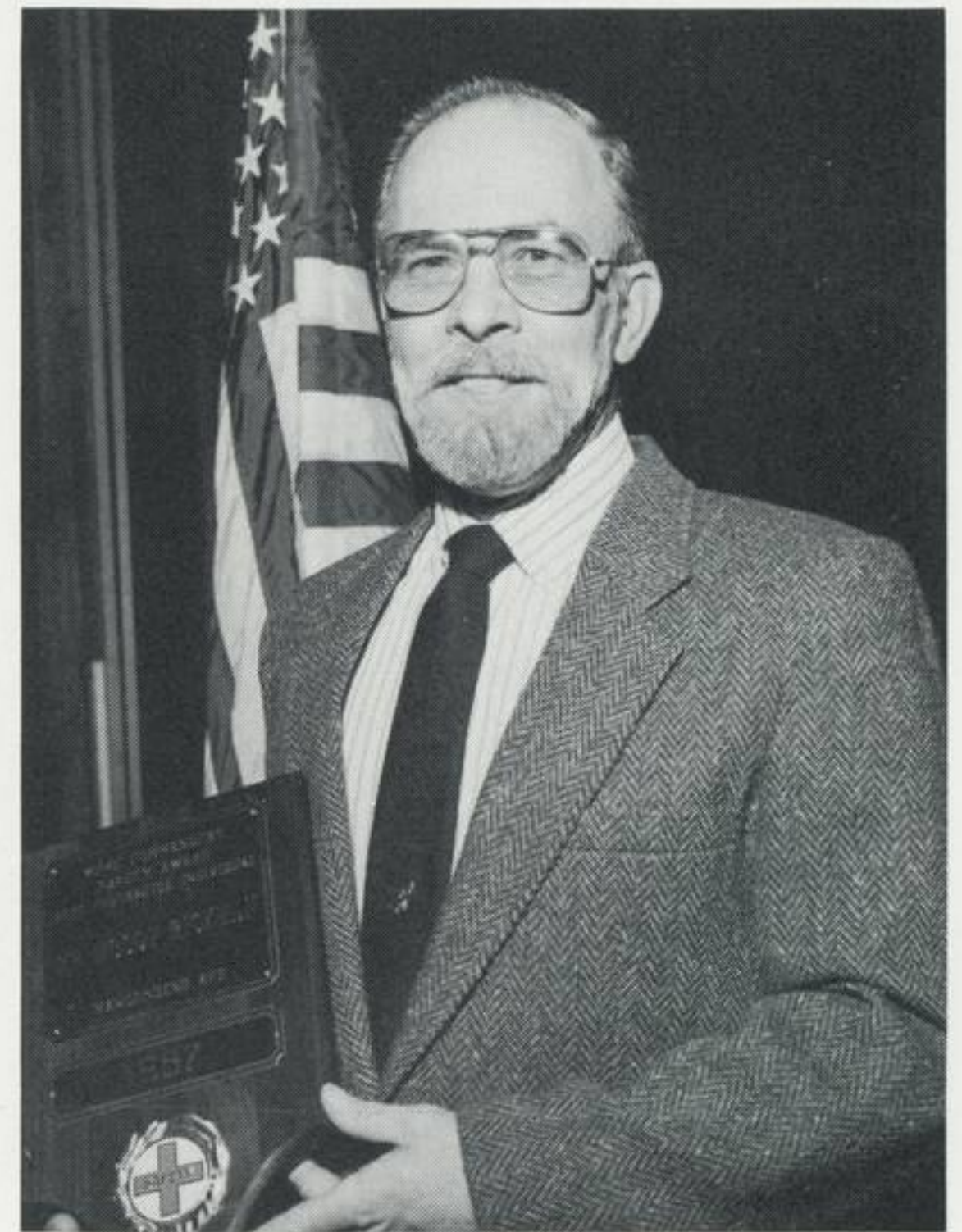
## Rickman receives top safety award

F.D. (Woody) Rickman, a lead systems safety engineer for Vandenberg Operations, has received the Air Force Western Space and Missile Center (WSMC) 1987 commander's individual safety award for contractors.

Rickman has had a key role in development of the Small ICBM safety program and continuation of the highly successful Peacekeeper safety program.

Within the Small ICBM flight test program, Rickman supported the canister assembly launch tests, the first of their type to be conducted at Vandenberg Air Force Base, and worked on the launch complex safety plan that details safe facility and equipment handling. He continues to contribute to the Peacekeeper flight test program and is a member of the certification board and problem anomaly teams for both programs.

A systems safety engineer with Martin Marietta since 1980, Rickman was commended for his motivation and dedication by Col. William H. Anders, WSMC vice commander, during the awards presentation. ■



Rickman

## Beery to lead Advanced Launch System effort

Warren G. Beery has been named vice president for the Advanced Launch System program, Peter B. Teets, president of the Astronautics Group, has announced.

Beery, most recently vice president and chief engineer for the Astronautics Group and formerly vice president of Technical Operations, is a 32-year veteran of Martin Marietta and has served in various technology leadership positions in engineering, test, and operations for Space Launch Systems, Strategic Systems, and Space Systems. In his new posi-

tion, Beery will report to Gareth D. Flora, president of Space Launch Systems.

The Space Launch Systems company is one of seven companies awarded Air Force contracts in July to design concepts for the ALS, a new launch system intended to reduce up to one-tenth the cost of launching payloads into space. The Air Force and NASA are studying vehicles able to boost 100,000-150,000 pounds into low-Earth orbit.

A downselect to two competing teams is expected later this year for Phase I. ■



### JCSAT representatives tour Martin Marietta

More than 40 representatives of the Japan Communications Satellite Company (JCSAT) and potential future customers visited Martin Marietta recently for briefings and a tour of the facility. Commercial Titan, Inc., has a launch services contract with Hughes Communications, Inc., to launch a communications satellite for JCSAT. Richard E. Brackeen, president of Commercial Titan, Inc., discusses models in the gallery at Waterton with three members of JCSAT. Left to right are Hiroyuki Wakai, Toshiba Corp.; Takao Moriyama, Hitachi, Ltd.; and Ryohei Kikuno, president of JCSAT.

## Success Through Suggestions

The Success Through Suggestions program received 1,273 suggestions last year, an average of 106 each month, according to program head Carol Romero, who called it a good response.

"I think people sometimes lose sight of the real intent of the suggestion program—to provide a vehicle for employees to suggest solutions to their concerns," she said.

"Our primary charter is to provide suggestors with a response to those concerns," Romero said. The program was developed as a result of the company-wide survey conducted in 1984, where employees indicated a desire to increase communication. "Cost savings and innovations are incidental benefits," Romero said.

Of the suggestions received last year, 222 were adopted. One hundred-sixty six were designated "intangible suggestions," which means the suggestions didn't result in cost savings, but were related to safety and improvements to quality of work life. Fifty-six were designated "tangible suggestions"—those that save money. The 56 suggestions generated a savings of more than \$4 million, principally in Strategic Systems, Plant Operations, and Space Launch Systems.

There were three top awards in 1987, Romero reported. Ronald (Bud) Murphy, test program manager for Strategic Systems, saved the company \$430,000 with a recommendation that assists in locating and using surplus inventory. Kevin Lewis, an engineer for Strategic Systems, saved \$467,203 by suggesting improvements to large high-speed Xerox printers at Inverness, using new software. Dorothy Eddie, an assistant foreman for Plant

Operations, saved the company \$328,167 by suggesting a new fixture to improve an electronic component.

"The principal ingredient to a successful suggestion program is making our employees aware that the program is important and that their suggestions will be promptly and fairly evaluated by management," said James A. Sterhardt, president of Strategic Systems. The Strategic Systems company garnered 47.7 percent of the 1987 cost savings—or \$1,918,878 in savings.

"Carol Romero and Nadine Holder run our program and provide instant follow-up on every suggestion, so that we have no backlog of suggestions in the pipeline," Sterhardt said. "In addition, I review those suggestions that will be evaluated for implementation and get personal—verbal or written—feedback on them."

All suggestions are eligible for consideration, Romero said, even those within an employee's job scope. Only those suggestions that relate to a job task specifically assigned to the employee is deemed ineligible for a cash award by the program administrator or the employee's supervisor.

"Suggestions must be supported by mid-level management, taking a suggestion through to implementation approval—not just agree that the idea is feasible."

"Suggestors receive a commendation letter along with certain gifts," Romero said. "A recommendation for a spot award also is made to the department supervisor."

"Don't withhold your ideas," Romero urged. "We want to hear from you." ■

## DIS inspection favorable

Results of a February Defense Investigative Service (DIS) semiannual industrial security inspection of the Denver Astronautics Group were favorable, according to the DIS. The inspection, which included Commercial Titan, Inc., was conducted Feb. 3-12 and resulted in the following observations:

Audit trail records for certain approved stand-alone computer systems were not being completed and maintained correctly. The Department of Defense requires that a review of all audit trail records be conducted on a weekly basis by an automated data processing (ADP) system security custodian or a designated ADP alternate custodian to ensure accuracy and completeness.

DIS observed a significant improvement in the handling of classified working papers and marking of classified documents. Document and repository custodians and their alternates are to be commended for this improvement. Martin Marietta was also commended for the overall security awareness of its employees. ■

## EMF Functional Test team reduces time

Members of the Electronic Manufacturing (EMF) Facility Functional Test Team have reduced the time spent on stamping procedures during hardware tests and procedure change notice (PCN) approvals.

Team members Wanda Appleton, Jim Burr, Julian Clay, Kevin Hackbarth, Clark Lechner, Dave Moyer, Susan Saunders and Lisa Zitek, along with Dennis Huang, Project Challenge facilitator, studied the large number of retested and returned hardware and reduced the number of data reviews by building quality into the test process. The team reported a savings of 65 hours of testing per electronic black box, a representative deployment payload and verification unit for Commercial Titan.

Then the team turned to the PCN approval process and discovered that the process could take from one to 103 days. By measuring the process, the team showed that the majority of the PCNs were administrative changes that had no effect on the product and could require fewer signatures, thus speeding the process.

Top management agreed to support the recommendations, Huang reported. ■

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## Help to prevent material damage

(Editor's note: The following article, part of a series of articles covering the increase of material handling incidents that occurs each spring, and the need for employees to reduce the incidents, was written by Ray Cannon, chief of System Safety for the Astronautics Group.)

Are the procedures you use for critical moves of hardware validated?

A Titan IV Stage I fuel tank was damaged recently when lifted from a hydro dolly with a lifting tool that has a pickup point in the middle with two adjustable lift arms. The last two bolts in the hydro dolly ring could not be removed until the fuel tank was raised slightly.

When the bolts were removed, the tank tilted and came into contact with the dolly. The lift was conducted in accordance with Method A of the manufacturing engineering plan (MEP) for the Titan IV launch vehicle.

Investigation of the incident, however, determined that not all of the MEP had been validated. Method A had *not* been validated, and the fuel tank was not centered properly under the crane hook. The lift beam should not have been used to unload the fuel tank from the hydro dolly.

The use of fully validated procedures—step by step examination during material handling—is vital to our success, and can prevent this kind of incident. ■

## People

— Jennifer Steele just treated her parents to a trip to Australia for 12 days as a result of winning the Miss Teen of America pageant in December. Dave Steele, an engineering manager on the Small ICBM program, said his daughter, who studies classical piano, will reign for one year. A senior at Arapahoe High School, Jennifer also won a trip to Canada, a Caribbean cruise, a possible meeting with Nancy Reagan for the "Just Say No" campaign, and a shopping spree in New York.

— Betsy Folger, a quality assurance statistician for Plant Operations, credits David Townsend with assisting her during a traumatic situation. Townsend, a manager for Strategic Planning, Information & Communications Systems (I&CS), stopped his car to help after Folger's vehicle skidded on ice and rolled into the median strip on South Kipling Street recently. Townsend helped her out of the vehicle and stayed with her until the police and tow truck arrived, Folger said.

— William McElroy, I&CS, manager of engineering for the All Source Analysis System/Enemy Situation Correlation Element (ASAS/ENCE) program, is representing Martin Marietta at the Defense Systems Management College Program Management Course in Washington D.C. McElroy was selected from a large number of nominees from all operating companies within the corporation. His term runs from January to June.

— During the December blizzard, many Humana Hospital staff found travel to work impossible, reported Cheryl Davison, director of marketing and public relations at Humana. Rocky Grosch, an Astronautics Group employee, volunteered his four-wheel-drive vehicle to transport employees to and from the hospital. Davison called his actions "heroic" and said they "certainly appreciated his help." Grosch, who lives in Thornton, also volunteers his time and vehicles to ferry fire and police personnel through snow drifts. Grosch remembers the April storm two years ago as the worst; he was called to transport the Thornton Fire Department out by snowmobile. ■

## 30-year company service noted



Employees celebrating 30 years of service with Martin Marietta during the first quarter of 1988 were honored recently. Standing, left to right, are Kip Christopher, Frank Samora, Virgil Napue and Richard Boydston. Seated, left to right, are Gene Pickett, Dick Cooney, Gene Granger, Doug Bush and Jack Marino.



Standing, left to right, are Tony Wilkins, Joseph Anselmo, Pat Schmidt, Charles Mitchell and Carl Colaianne. Seated, left to right, are Jim Tutchton, George Dickens, Robert Casey, Gary Hinds and Al Thompson. Not pictured: Arnold Fox, Frank Spillane and Curt Williams.

## Corporate news

Directors of the Corporation authorized a quarterly cash dividend of 27-1/2 cents per share on the company's common stock, payable March 31, to holders of record at the close of business on March 7.

The action continues the dividend rate, which became effective on Martin Marietta common in the third quarter of 1987, of \$1.10 on an annualized basis. ■



### Explorer Scouts tour National Test Bed

More than 150 Explorer Scouts from Post 819, a computer career-oriented post sponsored by Martin Marietta, and their parents, viewed the National Test Bed (NTB) facility at the Littleton Systems Center recently. Information & Communications Systems was awarded a five-year, \$508-million contract this year for design, installation, and operation of the test bed that will be a primary element of the Strategic Defense Initiative. The test bed will be used to simulate, test and evaluate strategic defense concepts, architectures, battle management and hardware applications.

## 1988—The Year of Quality

(Editor's note: The following article on "The Year of Quality" was written by Nicholas J. Van Dewerker, director of Product Assurance for the Astronautics Group.)

The Air Force Contract Management Division (AFCMD), under the command of Major General Bernard L. Weiss, has designated 1988 as "The Year of Quality." General Weiss is referring to quality in all phases of our activities—or "Big Q"—and the need for a basic attitude change. It has been said that you get what you expect. Each of us needs to raise our level of expectation to continue to drive for real improvements in quality that will result in improvements in cost, schedule and competitive position.

A number of initiatives began within the Astronautics Group during 1987 that support or reinforce our commitment to quality improvements, such as Project Challenge, Process Simplification and Engineering Excellence. Senior management is committed to quality improvement initiatives throughout the Astronautics Group as we progress in 1988. President Peter B. Teets has given full support to General Weiss and "the year of quality" with quantifiable improvement goals that we are committed to achieve in 1988.

Among the goals is a continued reduction of defects per 100 hours of government inspection to a level well below that of our AFCMD competition, the Space and Missiles Commodity Group of contractors. This is a very specific measure of how we are performing relative to other aerospace contractors and determines, among other things, the frequency of government audits such as the Contractor Operations Review (COR).

Another significant initiative is Process Simplification. Our goal is to simplify 1,000 processes during 1988. This difficult, but achievable goal is "Big Q" quality improvement in its purest form. Every action we take to become more efficient or more productive is a positive step toward quality improvement and

will bring us closer to becoming the best contractor in the industry. We know that we have the people with the talent to make us the best. Our dedication to these initiatives will prove it to those who can influence our future.

The initiatives have paid and will continue to pay tremendous dividends for Astronautics, but we must begin quality improvements at every level of performance.

Poor quality is estimated to cost us and, therefore, our customers, 10 to 40 percent of sales. This is an enormous amount of money that can be eliminated through vigorous quality improvement efforts—again, the Big Q.

The years ahead appear very bright for the Astronautics Group. The need for improved quality will increase as our business expands and our products become more complex. Each contribution makes an important difference. 1987 was a good year. 1988 can be even better if we all continue to strive for continuous quality improvement. ■

### On the cover

David Harak, safety monitor, inspects a scale model of Mars' surface in the Space Operations Simulator laboratory at Waterton. By using the 16-foot-square scale model of Mars, engineers hope to learn to land an unmanned craft on Mars during a mission in 1998.

The plywood and plastic scale model took 300 man-hours to build and was installed in the lab last week. The company is testing sensor equipment, such as specialized radar and color cameras, that could be linked to a sophisticated computer in the landing craft. The setup would let an onboard computer decide exactly where to land as the craft descends to the planet's surface. Bill Woodis is program manager.

## Relocations

Employee moves to various facilities continue to proceed according to schedule, said Stanley F. Albrecht, Plant Operations vice president. Among recent moves are the following:

Peter B. Teets, Astronautics Group president, has moved to the first floor of the Deer Creek Facility. The phone number remains the same: Ext. 7-4488. The Mail Stop is DC1000.

J. Richard Cook, Technical Operations vice president, and Frank X. McKenna Jr., Business Management vice president, also have moved to the first floor of the Deer Creek Facility. Cook is available at Ext. 7-2772, Mail Stop DC1002, and McKenna, Ext. 7-3368, Mail Stop DC1001.

Joseph C. Spencer, Business Development vice president, is located temporarily on the third floor of Deer Creek, Ext. 7-4243, Mail Stop DC1003.

Richard E. Weber, Personnel vice president, also has moved temporarily to the third floor of the Deer Creek Facility, Ext. 7-3880, Mail Stop DC1004.

Michael A. Steuer, General Counsel, and the Legal department, Ext. 7-6008, Mail Stop DC1400; and Arnold F. Roane, Administration director, Ext. 7-9971, Mail Stop DC1050, are located on the third floor of Deer Creek.

Arthur E. Koski, director of Public Relations, and the Public Relations department, have moved to the third floor of Deer Creek, Ext. 7-5364, Mail Stop DC1020.

Stanley F. Albrecht, Plant Operations vice president, has moved to the second floor of the Engineering Building at Waterton, Ext. 7-4907, Mail Stop 1000.

James W. McAnally, Space Systems company president, will move to the third floor of the Deer Creek Facility next week, along with approximately 125 Space Systems employees.

Gareth D. Flora, Space Launch Systems company president, will move to the first floor executive area in the Engineering Building at Waterton next week. The phone number, Ext. 1-2081, will remain the same.

Richard E. Brackeen, Commercial Titan, Inc., president, and the Commercial Titan company, are expected to move to Deer Creek sometime in August.

Santo Bertuzzi, Project Challenge program director, and the Project Challenge team have moved to the north end of the third floor of Deer Creek, Ext. 7-6492, Mail Stop DC1800.



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## Employees services/recreation

**Commodore Users Group**—The club will meet at 5 p.m., Tuesday, March 15. For more details and the location, contact Chuck Barton, Ext. 7-9950.

**Corporate Games**—Martin Marietta employees will participate in the eighth annual Denver Corporate Games June 3 and 4, and hope to regain the first-place position from the Public Service Company. Proceeds from the games benefit the Colorado Special Olympics. Employees are encouraged to try out for Martin Marietta's corporate team that will compete in track, swimming, tennis, bicycle, racquetball, 5-k races and trap shooting.

Bowling participants were selected in January during the Masters Qualifying Tournament; coed volleyball team members are selected from the current competitive league.

Forms are available in the recreation racks. Return them to the Employee Services office by March 18.

**Denver Center Theatre Company**—Coupons offering 25 percent off the price of two tickets to any production are available in the recreation racks, at the Recreation office and from recreation representatives. Performances are: "Table Manners," "The Colored Museum," and "A Lie of the Mind" through April 9; and "Man of La Mancha," April 18-June 4.

**Denver Symphony Orchestra**—Martin Marietta employees can receive a 50-percent discount on all 1988 classical, pops, chamber and family concerts (Great Artist recitals not included). Obtain a discount flyer from the recreation racks. Tickets may be ordered in advance by mail or the discount flyer can be redeemed at the symphony box office. Tickets are subject to availability.

**Income Tax Forms**—The Internal Revenue Service and Colorado state income tax forms for 1987 are available at the following work locations: Waterton Facility, Employee Services/Recreation office, Engineering Bldg., Room 124G; Denver Systems Center (DSC) I, Room 200J; Littleton Systems Center (LSC), Room 201E; South Lincoln Facility, in the personnel representative's office. Terrace Towers, Greenwood and Deer Creek have tax form order sheets in the information racks. Employees can mail their request for forms to the Employee Services/Recreation office, Mail Stop 1344, to receive IRS forms through company mail.

**LSC Toastmasters**—The club meets at 4:30 p.m., Wednesdays, in Room 217 at LSC. Contact Kathy DeWitt, Ext. 7-0397.

**Parapsychology Club**—The group will meet from 5-7 p.m., Thursday, March 17, in the cafeteria at LSC. Non-employees are welcome to attend, but corporate policy requires a minimum age of 16. Employees must provide escorts for their guests, and give names of guests to Janna Winkel, Ext. 7-7814, DSC, or Helen Hussander, Ext. 1-6887, SouthPark West II, 24 hours before the meeting.

**Rocky Mountain AIAA Section**—The local section of the American Institute of Aeronautics and Astronautics plans a dinner meeting at 6:30 p.m. on Tuesday, March 22, at the Sheraton Denver Tech Center. Guest John Swihart, the corporate vice president of International Affairs for the Boeing Company, will speak about commercial aeronautics in the 21st century. For reservations, call Tom Williams, Ext. 7-8168, by March 18.

**Softball**—A softball organizational meeting will be at 5 p.m., Monday, March 14, in the Deer Creek Facility Auditorium. (Park on the roof of the building near the north elevator and take elevator to the R level. Follow signs to the auditorium.) All team captains and interested employees should attend. Rosters and season information are in the recreation racks. The first chance to submit rosters with full payment will be at the March 14 meeting. After that, rosters and fees should be submitted to the Recreation office in the Engineering Building, Room 124. The fee is \$10 per player, with a minimum of 10 persons per roster. Refer to the flyer for full payment details. The deadline to accept rosters is Tuesday, April 19; however, some leagues will fill up before the deadline.

**Cafeteria Highlights**—On March 17, the cafeteria will celebrate St. Patrick's Day by featuring corned beef and cabbage. Wear something green and receive a free Irish ice cream cone. On March 31, a special Easter dinner will be served.

**Estes Park Lodging Discount**—The Holiday Inn in Estes Park offers a 10 percent discount on lodging to Martin Marietta employees with advance reservations. The discount is not available on holidays. Proof of Martin Marietta employment is required and the employee must mention that the company is a member of the Denver Area Employee Services/Recreation Association.

**Titan Toastmasters**—The group meets at 6 p.m., Mondays, at Abe's Cafe, 2489 W. Main St., Littleton. Contact Mark Willey, Ext. 1-6183.

## Hall named VP of NASA Systems



Hall

Grover W. Hall has been named vice president of NASA Systems for the Space Systems company, James W. McAnally, Space Systems president, announced.

Hall formerly was vice president of Technical Operations for Space Systems, a post he was named to in July 1987. In his new position, Hall will report to McAnally and be responsible for the spacecraft-related programs that Space Systems currently has with NASA, including Magellan, the Tethered Satellite System and the Flight Telerobotic Servicer.

John Goodlette, currently vice president and chief engineer for Space Systems, will assume additional duties as acting vice president of Technical Operations for the Space Systems company.

Hall, a 20-year Martin Marietta employee, has held various management positions in space, defense and electronics programs. He worked on space programs such as Titan, Skylab, Viking and Voyager in the 1970s before being named director of electronics for Denver Aerospace, now the Astronautics Group, in 1982. In 1985, he was named director of engineering for the Defense Systems division of Denver Aerospace before becoming vice president of Technical Operations for the newly formed Space Systems company last summer.

Hall graduated from the University of Cincinnati in 1968 with a bachelor's degree in electrical engineering. In 1979, he was named to the prestigious post of Sloan Fellow from Martin Marietta, in which he spent a year at the Massachusetts Institute of Technology and earned a master of science degree in engineering. ■

## Speedier service, better nutrition

To speed cafeteria lines and offer more time to enjoy meals, the Food Service department is eliminating weighing items such as salad, fruit and baked potatoes. Instead, there will be three different bowl sizes with commensurate prices.

In addition, a full HealthMark menu now is offered on the second-floor cafeteria in the Engineering Building at Waterton. HealthMark-approved food is lower in sodium, calories and polyunsaturated fats, according to Food Service.