MARTIN MARIETTA
news
ASTRONAUTICS GROUP

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Employees work to eliminate Code 37s

(What's a Code 37? See page 5)

Speakers, tours on the upswing

The Public Relations department's speakers bureau and tour program is in the midst of its most productive year ever. Already more tours and speeches have been conducted this year than in all of 1988.

As of Sept. 1, the Astronautics Group has conducted 112 tours for 3,576 people and coordinated 80 speakers to talk to 6,356 people.

"People from throughout the world have toured our facilities, and it's very common to receive calls from Kansas and Nebraska requesting speakers and tours," Wendy L. Peterson, coordinator of both programs for Public Relations, said.

The speakers bureau is made up of 20 Astronautics Group employees. "These people love to take time and speak to school groups, senior citizens and similar groups," Peterson said.

About 15 employees pitch in to assist in the tour group program. A typical tour consists of a walk through both floors of the factory, a look at the Space Operations Simulator, and a tour of the Electronic Manufacturing Facility.

"Any group can schedule a guided tour, provided that everyone is over the age of 12 and that the group size is no more than 30," she said. Visitors without U.S. citizenship should plan on providing the Astronautics Group with passport information and national origin at least 10 working days before the scheduled tour.

Anyone interested in scheduling a speaker or tour, or interested in becoming a tour guide or speaker, should contact Peterson at Ext. 7-5364. ■

Five receive Space Act Tech Brief Awards

Five Astronautics Group employees received Space Act Tech Brief Awards from NASA for disclosing a scientific or technical contribution. Carl Jensen, seated far left, Steven Ring, middle, Brent Cullimore, seated far right, and Richard Goble, not pictured, each received the award for their work in designing a thermal code for spacecraft. John Gille, not pictured, received his award for method and system design for filling storage Dewar with superfluid helium. Andrew J. Stofan, vice president of Technical Operations/ALS, top left, and James W. McAnally, president of Space Systems, top right, presented the awards.

Galileo ready for six-year trip to planet Jupiter

Imagine waiting seven years for a ride to work, taking six years to get there and then working for only 75 minutes. That's the job of NASA's Galileo probe, set to be launched this month for a 1995 rendezvous with the planet Jupiter.

The probe is part of the two-section Galileo spacecraft, which also includes an orbiter. The orbiter will circle Jupiter for nearly two years, making detailed observations of the planet and its moons, while the probe will perform the first-ever sampling of the planet's atmosphere. The probe includes three scientific instruments built by the Astronautics Group to help determine the composition and characteristics of the Jovian atmosphere.

Galileo, first conceived in the 1970s by NASA's Jet Propulsion Laboratory, originally was supposed to launch as early as 1982. But budget delays and the Challenger accident forced NASA to wait until this year. Once on its way, the spacecraft will take a winding 2.5-billion-mile tour of the solar system before it approaches Jupiter in 1995.

Five months before it reaches the planet, the teardrop-shaped probe will separate from the orbiter, and the two spacecraft will fly in tandem until the probe slams into Jupiter's atmosphere at more than 100,000 m.p.h. The probe then will deploy a parachute and descend about 370 miles through Jovian skies.

Before the probe is crushed by pressure 25 times greater than that of Earth's, it will transmit valuable information for 75 minutes back to the Galileo orbiter about Jupiter's clouds, thought by scientists to contain the original material from which stars are formed.

"There's nothing like being there," said Dr. Tony Knight, manager of payloads, sensors, and instruments for Space Systems. "From Earth, we've used spectroscopes to try to determine the makeup of Jupiter's clouds, but it's hit and miss."

Knight is responsible for the three instruments that Martin Marietta built, called the Atmosphere Structure Instrument, the Nephelometer, and the Net Flux Radiometer. These instruments are part of a total of six devices packed into the 34-inch-diameter probe.

These instruments, Knight said, will make a variety of measurements, including density, pressure, and temperature of the atmosphere; the size and density of cloud particles; and the balance of heat. These pieces of data will be assembled by scientists into a mosaic of information to determine what Jupiter is really like—information that will help scientists better understand the origin of Jupiter, the solar system and the universe.

Knight has been working on the Galileo mission since 1978 and, along with two other Martin Marietta engineers, Philip Avrin and Jeff Hayden, is serving as co-investigator on the mission. His team will help NASA and other scientists analyze data from the instruments when the information is beamed back to Earth in 1995. "I just hope by then we'll all still be around," Knight laughs. "Galileo has been a long time coming."

Galileo's journey includes two flybys of Earth and one of Venus to gather the momentum required to get to Jupiter. Along the way, Galileo will use its instruments to observe two asteroid belts for the first time.

The "brains" behind the orbiter's journey will be assisted by attitude and articulation computers built by Martin Marietta. This system will control the spacecraft's complex maneuvers as it travels to Jupiter. Once at Jupiter, the system will keep the spacecraft in the proper orientation as it circles the planet 10 times, making extensive observations of the planet and its moons Io, Europa, Ganymede and Callisto. ■

Teets addresses CWA dinner

President Peter B. Teets told a Career Women's Association crowd of more than 100 that the Astronautics Group has made progress with regard to women in management and has specific plans and goals for the future, while acknowledging the company is not where he wants it to be on the issue.

He also said he has taken on a goal of appointing a female to his small staff by the end of 1990.

In addressing the role women have at Martin Marietta, Teets said, "I believe that we are moving in the right direction at Martin Marietta (with women in management), but we must pick up the pace."

Figures show that over the last 30 years, the number of women in the workforce has increased dramatically. And, according to Teets, "The previously male-dominated workplace culture has not adapted sufficiently to this societal change. A part of the cultural change at Martin Marietta includes melding the increasingly diverse elements of our employee population into an effective team."

To assist in the overall change, the Astronautics Group has started Cultural Diversity Training for all supervisors and management. The results of the program will include significantly improved interpersonal relationships, effective and productive communication, and a supportive environment for mutual respect and professional advancement, he said.

"Make no mistake about it, we're not providing this training just because it's a nice thing to do," Teets told the CWA. "This is in our best business interests. We must do this if we are to compete successfully for qualified women and minorities in a shrinking workforce and an increasingly competitive environment."

Teets told the group that Astronautics Group management makes a concerted effort to keep and recruit talented women. Each member of the executive staff also has a goal of adding a woman to his small staff by the end of 1990.

In addition, he said the company is recruiting at colleges, participating in job fairs, sponsoring special community activities for women, and providing formal training as part of the effort to ensure that standout women have the tools needed to fill higher positions in the company.

During his "Women in Management" speech, Teets restated his commitment to Total Quality Management and encouraged the attentive crowd to get actively involved in TQM. He said that TQM is continuous improvement in products and methods. "The result is, simply, quality in everything we do.

"TQM requires all of us at Martin Marietta to change. Most people resist change, so the job ahead of us won't be easy. It will require that we take some risks to succeed."

Teets said the company's case for change comes from the dynamic environment that now exists in the workplace. "If we don't truly empower our people and let them release their energies, through initiatives like High-Performance Work Teams, then we'll be passed up by our competitors." ■

ATB construction underway

President Peter B. Teets, middle left with shovel, helps several employees break ground for the new Advanced Test Bed (ATB) facility located south of the Integrated Robotics Laboratory. The 90,000-square-foot facility is designed to support the Advanced Launch System program and will feature a 5,000-square-foot high bay, a 5,000-square-foot terraced presentation area, and office and lab space. Completion of the new ATB is scheduled for April 1990.

Corporate news

Company wins contract for fuel system demo

Manned Space Systems has been awarded a contract by the National Aeronautics and Space Administration to design and develop a system to demonstrate propellant tank pressurization technology for future space boosters.

The three-year, $5.5-million contract is a result of the company's Liquid Rocket Booster study for NASA, which identified requirements for an advanced space booster.

The new project will allow NASA to demonstrate technology for liquid-fueled boosters as well as for hybrid boosters that are both liquid- and solid-fueled. A series of test firings on a converted rocket engine test stand at the NASA Marshall Space Flight Center, Huntsville, Ala., is planned for the mid-1990s.

Work on the contract will be carried out by Martin Marietta in the NASA Michoud Assembly Facility at New Orleans and at the Marshall Space Flight Center.

Mandatory security rebriefings scheduled

Annual security awareness rebriefings are being conducted for all employees to stress the importance the company places on protecting classified and proprietary information.

Because of the number of rebriefings, employee attendance at the scheduled time and location is essential. Each presentation takes about 30 minutes.

Schedules and times will soon be distributed through the facilities and on employee news bulletin boards. A limited number of makeup sessions have been arranged for employees who are unable to attend their designated presentations.

The following areas have been reserved for the briefings:

Facility	Briefing Location
Waterton	Space Support Building, sixth floor presentation room Engineering Building, second floor presentation room
South Park West	South Park West, MIC room
Deer Creek Facility	Auditorium, "R" level
Greenwood Commons	Building 6120, MIC

The Government Security department encourages 100 percent participation for these rebriefings. For more information, call a Government Security representative, or the Government Security office, Ext. 7-3905. ■

Teets discusses senior management changes

A number of senior management changes at the Astronautics Group that become effective next Monday were announced earlier this week. The *Martin Marietta News* interviewed President Peter B. Teets for more details on the changes.

Q. *At the time of the announcement you said these changes will apply senior management talent most effectively to meet both near-term and long-range program and operational objectives of the Group. Can you give some more details on these, for example, in Production Operations?*

A. I'd be happy to. I've asked Jim Sterhardt to take over Production Operations. Jim successfully implemented MRP in Strategic Systems and now will be responsible for MRP II (Manufacturing Resource Planning) in EMF, the companies, and in the Central Laboratories. As you know MRP II was previously managed in Central Technical Operations under Ron Drobnik, and now Ron will move to Production Operations and report directly to Jim. Jim also was successful in applying Total Quality Management techniques that turned a projected $19 million overrun on the Peacekeeper Instrumentation and Flight Safety System (IFSS) to a $33 million underrun. Our current business posture makes management of productivity enhancements and critical subcontracts absolutely vital to the future of Astronautics.

Q. *How do you see Gary Flora's role, at least in the near-term, in management of Strategic Systems?*

A. Gary has done an excellent job in the past in the acquisition of new business. For example, he was very instrumental in the development of the Complementary Expendable Launch Vehicle (CELV), which became the Titan IV. As you know, Gary has managed Titan IV through its design, development, and first flight test and, with its growth to a 49-vehicle program, has made it one of the most important, if not the most important, pieces of business in the Corporation. He now has the challenge of developing new business in Strategic Systems.

Q. *What are some of the new business opportunities we're looking at in Strategic Systems?*

A. There are a number of new business possibilities that we've been pursuing in Strategic Systems. One of these is upper stages that may develop from our Upper Stage Responsiveness Study for Air Force Space Systems Division. Another interesting new business area is the Space Transfer Vehicle for which we have won a competitive contract along with Boeing.

Q. *Fred Hudoff is rejoining Astronautics after having managed Data Systems in recent years. What are your principal charges to him?*

A. Mission Success on Titan IV and all the Titan programs, of course, continues to be our primary focus. Fred also will be responsible for continuation of the development of High-Performance Work Teams on Titan, which has gotten such a good start under John Adamoli. Fred's past work in development of the Air Force Space Shuttle Ground Support System at Vandenberg will also be valuable as we add a new Titan IV launch pad at Vandenberg Air Force Base and modify a launch pad at Cape Canaveral Air Force Station to double our Titan IV launch capability.

Q. *Stan Albrecht now is going to head the Personnel function. Doesn't he come from a non-traditional background for this job?*

A. Let me answer it this way: While Stan has a degree in Engineering, he also has a master's in management from the Sloan School. Those who know Stan also realize he is very people-oriented. His background in Production Operations will prove very valuable as we continue in the culture change that is absolutely essential to Total Quality Management, which I hope will soon permeate the entire Astronautics organization.

Q. *What will be the nature of the special assignments that Mr. Weber will have?*

A. With the culture change underway, Mr. Weber's more than 30 years background in Personnel is ideally suited to assist in a variety of special tasks to facilitate that change, including people empowerment, cultural diversity training, development programs for all our employees and so on.

Q. *Do you have any final comments?*

A. Yes. I would like to simply say in closing that it is imperative that we pull together as a team to implement TQM throughout Astronautics. I know that our talented people, led by the strongest management team in the industry, can and will work together to assure our future success. ■

Martin Marietta helps sponsor Colorado Woman '89

Martin Marietta is a main sponsor of the Colorado Woman '89 conference that will be conducted from 8 a.m. to 3 p.m., Friday, Oct. 20, at the Ramada Inn in Westminster.

The conference, run by the Woman's Education and Leadership Forum (WELF) in Washington, D.C., will feature expert-led workshops on the following topics: "Humorously Handling Stress," "Who Gets Ahead and Why," "The Mechanics of Owning Your Own Business," "Child Care," "Self Esteem," "Laws of Financial Management," and "How To Speak from a Position of Strength."

The event costs $25 and includes a luncheon. To register, send a check or money order to Colorado Woman '89, P.O. Box 998, Westminster, CO, 80030. For more information, contact Ellen Perry at WELF, (202) 223-2908. ■

Employees warned of possible computer virus

A computer virus, known as the Columbus Day or Friday the 13th Virus, has been discovered and may pose a threat to DOS-based PC's.

The virus is set to be triggered after Oct. 12. DOS-based PCs that utilize programs obtained by nonstandard methods (bulletin boards, computer clubs, freeware, etc.) are the most vulnerable.

The Electronics Systems company in Orlando has written a special program called CANARY that is designed to deactivate this virus. Contact Susan O'Grady, Ext. 7-0278, or John Castor, Ext. 7-2553, for more information about CANARY.

Public Relations department honored

The Astronautics Group's Public Relations department received three major awards at the 1989 Public Relations Society of America's (PRSA) annuaa
l Gold Pick Awards dinner.

A Gold Pick, the highest annual award presented at the local level, was presented to former Astronautics Group employee Jeff Fister for his work in planning the special events for Magellan's deployment from the Space Shuttle Atlantis.

Art Koski, director of Public Relations, received a Gold Pick award of merit for the 30-minute film "Eyes on Venus."

Also, Evan McCollum, manager of Public Relations, was honored with an award of merit for his 1989 U.S. Savings Bonds campaign brochure for the Denver geographic area. ■

Company store opens

The company store is open for business. Located in the Engineering building, the first company store is officially open. Employees may take advantage of the wide variety of goods in the store during normal working hours, five days a week. Some of the items include a seasonal selection of greeting cards.

Work started to wipeout Code 37s

A cross-section of employees is working to improve the product discipline evaluation performance of the Astronautics Group.

Product discipline evaluation—most often referred to as "Code 37" items—deals with the overall work environment. It concerns things that affect products but that aren't physically part of the products.

Code 37 deficiencies can occur anywhere. When quality assurance inspectors with the Air Force Plant Representative's Office (AFPRO) write Code 37 discrepancies, the Astronautics Group has to resolve them in a manner similar to the way MARS items are dispositioned.

Although Code 37 is the most widely known term, it's not exactly a household term.

"I'd never even heard the term "Code 37" before," John Haney of tool management recalled.

Haney is a member of an ad hoc high-performance work team that has begun an education and awareness campaign to tell others why product discipline evaluation is important. The team was formed about a month ago and includes members of the AFPRO staff.

"Basic housekeeping is too general to describe product discipline evaluation," Haney said.

"Product discipline evaluation includes such items as adequate protection for hardware in transit, monthly quality audits, maintenance of electrostatic discharge control requirements, evidence of proper calibration status, and expiration of shelf life of various products we use," Haney continued.

Ruel Lovell and Rick Wilson of advanced manufacturing technology—also members of the team—recommend that all employees conduct what they call a "five-minute COR (Contractor Operations Review)."

"Perform a quick self-audit," said Jack Pullman of industrial engineering. "See if the procedures that dictate how you do your job are up to date and accurate. Check to see that your desk and work areas are clean and that no safety hazards are present."

Understanding came quickly for the members of the high-performance work team. Following the initial 15-minute briefing on what Code 37 means, Jewel Armistead of EMF nailed the problem. "Are you asking us to care?" she said.

Greg Womeldorff, who also works at EMF, relates eliminating Code 37 write-ups to Total Quality Management.

"When we listen, learn and respond, we develop an atmosphere that says 'We care,'" he said. "If we don't care, how can we expect anybody else to? Can you imagine the heights we can reach if 14,000 people develop the same perspective?"

It costs about $5,000 to disposition a Code 37 writeup. ■

Waste program produces results

The Astronautics Group has cut the amount of hazardous wastes it generates by nearly half since 1987 and has a goal of achieving an 87 percent reduction by 1992, the group's top environmental management official reports.

"We began an active waste minimization program a couple of years ago, and thus far we have achieved impressive results," said Bob McMullen, director, Environmental Management.

"Our ultimate goal is zero discharge of hazardous wastes, a goal we can achieve through process modification, recycling, new treatment facilities, and eliminating the unnecessary generation of wastes."

Two big targets of the waste minimization program are Freon and trichloroethane, degreasers used to clean electronic and metal components that go into various company products. Both Freon and trichloroethane damage the Earth's ozone layer, although McMullen pointed out that trichloroethane is much less harmful than Freon and other ozone-depleting chemicals.

The group has implemented or plans to implement 30 different waste minimization projects ranging from process modification to material substitution and recycle and reuse. One important project is a pilot program to use a water-based substitute for trichloroethane, and McMullen said the substitute degreaser shows promise. If it works, the Astronautics Group could almost eliminate the use of trichloroethane.

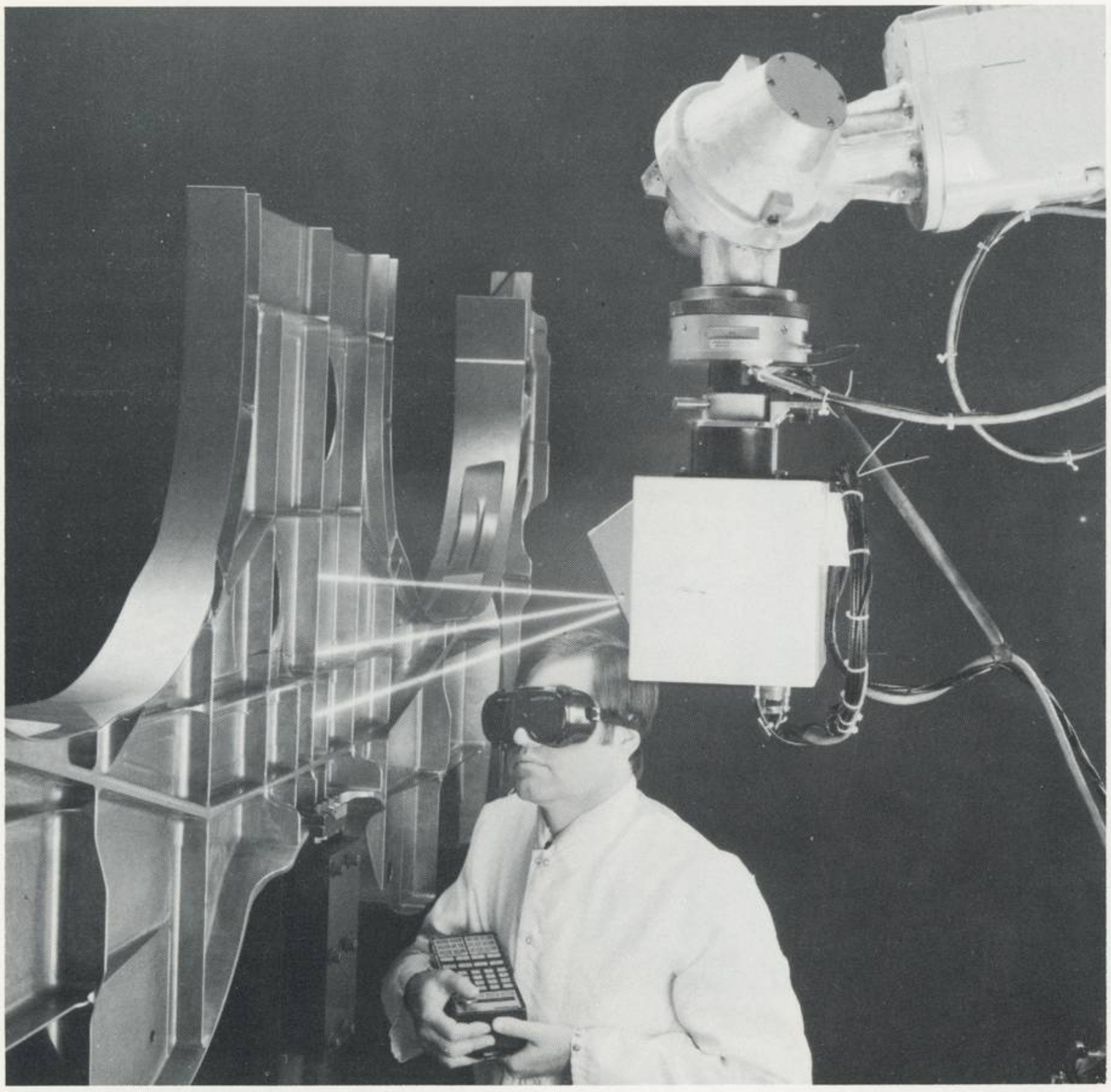
Work also has been initiated to define a pilot testing program using water systems in place of Freon. This program, and other actions to control or eliminate Freon use, will be accelerated in view of the concern for ozone depletion by Freon, McMullen said.

"To achieve our goal of zero discharge will take a new way of thinking, but we believe that with participation and support from all elements of the company, we can be successful," he said.

"Waste minimization is good for the environment, and it's good business as well." ■

On the cover

Research and development technicians and Ron Graham, right, and Geoff Swank, discuss eliminating Code 37s as they work on laying out a part in the Advanced Manufacturing Technology area located in the old Inventory building. A Code 37 discrepancy deals with things that affect products but that aren't physically part of the product.



I&CS wins contract

Under a $19.1-million Air Force contract, Information & Communications Systems will develop and validate an industry standard that will govern the design and construction of controllers and sensor subsystems as illustrated by this robotic system, which uses a laser scanner to autonomously inspect an aircraft bulkhead. Roy Greunke, now an Astronautics Group employee, is pictured.

Corporation to lead the development of a controller specification for U.S. manufacturers

Information & Communications Systems has received a $19.1-million U.S. Air Force contract to develop the next-generation workstation/machine controller architecture for automated manufacturing.

Under the 47-month contract, I&CS and its team will develop and validate an industry standard intended to govern the design and construction of computerized controllers for industrial workstations and equipment such as lathes, robotic welders, and milling machines. The contract was awarded by the Manufacturing Technology Directorate, Wright Research & Development Center, Aeronautical Systems Division, at Wright-Patterson Air Force Base, Ohio.

I&CS will employ expertise gained from advanced technology robotics and artificial intelligence research programs and the expertise of a large industry review board to develop the Next-Generation Controller (NGC).

"This is a great win for I&CS," B. Clovis Landry, I&CS vice president, said. "Our expertise gained from the Intelligent Task Automation (ITA) project, the Autonomous Land Vehicle (ALV), and other artificial intelligence programs was a key discriminator between I&CS and some formidable competitors."

When implemented in the mid-1990s, the NGC is expected to improve the efficiency of automated manufacturing by providing an industry standard and an open system architecture. The architecture will enable factory managers to quickly reconfigure machine tool workstations to produce different components. The controllers also are expected to reduce training requirements for machine operators.

The contract is part of the presidential domestic action plan for machine tools intended to help the U.S. maintain and, in some cases, regain a stronger manufacturing base. The program will be supported by industry, academia, and professional organizations.

"This is an opportunity to make the U.S. machine tool industry more competitive," Landry said. "The Next-Generation Controller will ensure compatibility and ease of use, allowing American manufacturers to develop products more efficiently and at lower cost."

The NGC program will take advantage of a new Manufacturing Technology Development Laboratory to be completed in December at the Littleton Systems Center. ■

Martin Marietta deleted from Superfund list

The Astronautics Group has deen deleted from the U.S. Environmental Protection Agency's list of hazardous waste sites targeted for cleanup under the federal Superfund law.

EPA officials said the $8.5-billion federal Superfund program is aimed at cleaning up hazardous waste sites that have been abandoned or are uncontrolled. Cleanup of contamination at the Waterton facility will continue under a federal law that deals with active waste treatment, storage or disposal sites.

Currently, the company is in the final phase of an in-depth study of the geology and nature and extent of contamination at the site. When studies are complete and remedies are selected, they will be carried out under a permit to be issued by the Colorado Department of Health. Superfund work has been administered by EPA.

"This action won't have any impact on our cleanup efforts," said Dr. Willard Haas, manager, remedial programs. "We plan to complete the study phase of the work under EPA jurisdiction and then proceed with the cleanup under the state permit."

Martin Marietta was proposed for inclusion on the Superfund list in 1985. ■

Credit Union offers special rates

Red Rocks Federal Credit Union this month is offering special rates on new and used car leasing and purchasing, starting at 8.9 percent for a new car purchase with 24-month terms and 80-percent financing.

The credit union's "October Carfest" also features pre-approved loans, auto and mechanical breakdown insurance, and free information on how to get the best deal when purchasing or leasing a car.

A special Saturday "Car Party" is scheduled for 9 a.m. to 3:30 p.m., Saturday, Oct. 21, at the main office, 7901 South Park Plaza. There will be free balloons and refreshments for everyone.

Call the credit union at 797-2900 for more information.

Volunteers needed for Special Olympics

The Denver Special Olympics needs volunteers for its annual bowling tournament scheduled from 8:30 a.m. to noon, Saturday, Oct. 14, at Monaco Lanes, 6767 Leetsdale Drive.

Volunteers are needed to help with scorekeeping, award presentations, and other similar items.

Interested employees should contact Shelly Pinkernell, of the Denver Special Olympics, at 744-2781. ■

Schallenmuller, Ballhaus join Astronautics Group

Schallenmuller

Ballhaus

Albert R. Schallenmuller and Dr. William F. Ballhaus, Jr. both have joined the Astronautics Group as vice presidents.

Schallenmuller is vice president in charge of the Earth-Moon-Mars program, reporting to Joseph C. Spencer, vice president of Business Development. Dr. Ballhaus is vice president, Research and Technology, reporting to Andrew J. Stofan, vice president of Technical Operations/ALS.

Schallenmuller previously served as vice president of NASA Systems for Information & Communications Systems. He has been with Martin Marietta in a variety of increasingly important positions for the last 25 years.

His assignment will include coordinating not only the group efforts, but also the efforts of the entire corporation for the new Earth-Moon-Mars initiative that complies with President Bush's commitment to returning to the moon and Mars.

"There's little question that in the 21st century humans will again leave their home planet for voyages of discovery and exploration."

—George Bush

On July 20, the President told the nation, on the 20th anniversary of the day Americans walked on the moon, to raise their eyes to the heavens and to join in a great dream—a return to manned missions to the moon and on to Mars.

"There's little question that in the 21st century humans will again leave their home planet for voyages of discovery and exploration," Bush said. "What was once improbable is now inevitable."

Since 1984, Dr. Ballhaus has been director of the National Aeronautics and Space Administration's Ames Research Center at Moffett Field, Calif. He also served this past year as president of the American Institute of Aeronautics and Astronautics (AIAA) and as acting associate administrator for Aeronautics and Space Technology at NASA headquarters.

Dr. Ballhaus, who has published more than 45 technical publications, had worked at the Ames Research Center since 1971.

In his new position, Dr. Ballhaus will be responsible for coordinating and integrating research and technology activities for the entire Astronautics Group. ■

Great Performances opens 17th season

Eddie Bracken, shown at right and above with Richard White and Rebecca Baster, stars in the Jerome Kern-Oscar Hammerstein musical classic, "Show Boat," on Great Performances Friday, Oct. 27, on PBS (check local listings for times). The opulent new production was taped at New Jersey's Paper Mill Playhouse and it kicks off Great Performances' 17th season. Martin Marietta funds the specials on PBS that will also include "Our Town," Nov. 3; "Relatively Speaking," Nov. 10; "Letters from the Park," Nov. 17; and, "The Search for Nijinsky's 'Rite of Spring'," Nov. 24.

SDI seeker demonstrated during laboratory flight test

In a second successful test of key Strategic Defense Initiative technologies, the U.S. Air Force has successfully demonstrated a seeker's ability to control and maneuver a hovering vehicle in response to a target's location. The test also confirmed results of an earlier demonstration of technologies for locating and intercepting enemy missiles.

The Sept. 11 test at the Air Force Astronautics Laboratory was part of the Space-Based Interceptor (SBI) program being conducted by Martin Marietta for the Air Force Space Systems Division. SBI, as envisioned by SDI, would consist of orbiting interceptors that destroy hostile ballistic missiles by colliding with them. The technologies also could have application to a wide range of weapon systems.

During the indoor demonstration, a test vehicle hovered under its own power, firing microbursts from its rocket engine to stabilize itself, while its Martin Marietta-built seeker and parallel image processor, or computer, "looked" at a rocket engine burning outside the building. The test, designed to confirm the results of the first demonstration on Aug. 1, also increased the seeker's control and maneuver responsibilities.

The seeker is the "eyes" and "brain" of the interceptor. It consists of an imaging infrared sensor, a signal processor and software algorithms necessary to distinguish the missile itself from the bright exhaust plume of its engine during the missile's boost phase.

Space Systems is the prime systems contractor for SBI, with Missile Systems at Orlando responsible for the interceptor. A system concept and integrated test contract for SBI was awarded to Martin Marietta in 1987, with total funding to date of $142 million. ■

Martin Marietta sponsors NASA programs on KWBI

Two National Aeronautics and Space Administration specials will air in the coming weeks on KWBI-Channel 41, thanks to Martin Marietta sponsorship.

"Planet Mars," which will be shown at 7 p.m., Oct. 12, is the story of the exploration of Mars, from early investigations by telescope to the latest chapter, the landing of the Viking lander. That show will repeat at 3:30 p.m. on Oct. 14.

"19 Minutes to Earth" examines the scientific findings of the Viking mission to Mars, and features computer animation of the Galileo mission to Jupiter. It will air at 7 p.m., Oct 19, and again at 3:30 p.m., Oct. 21. ■

PROFS demonstration planned for Deer Creek

A PROFS demonstration, including a question and answer session, will be conducted from 9 a.m. to 2 p.m., Oct. 20 at the Deer Creek Computer Library, third floor. The demonstration is open to all current users and those interested in learning about PROFS. Staff members from the Office Automation Special Projects Group will be on hand to answer questions and to demonstrate the various uses of the PROFS system.

Family Event concerts set for tomorrow

Smokey Robinson and Stephanie Mills will entertain employees at company-sponsored Family Event concerts scheduled for 2:30 p.m. and 8 p.m. tomorrow, at McNichols Sports Arena.

Admission is by ticket only. Doors open one hour prior to the show, and seating is on a first-come basis. Each show lasts approximately two-and-one-half hours.

Several restaurants in the arena will be open for employees who wish to purchase lunch or dinner before the shows. Dining reservations are advised and can be made by calling 534-3757.

Call Ext. 1-5000 for more information.

Former Marines to celebrate 213th birthday

The United States Marine Corps will be 214 years old next month and employees who are former Marines are hosting a dinner Nov. 3 to celebrate.

All of the more than 300 former Marines who are employees are invited to attend and bring guests to the celebration.

This year's dinner starts at 5:30 p.m. at the Holiday Inn, 7390 W. Hampden. Reservations must be made by Oct. 27 to Jim Lingle, Ext. 7-7639.

The dinner is $35 per couple or $20 for individuals. ■

Alcoholics Anonymous meetings scheduled

Employees who want to address personal alcohol/addiction problems can attend Alcoholics Anonymous meetings at two work locations. Groups meet at Waterton at 11 a.m., Monday and Friday in the Technical Support Building, Room 402. At Littleton Systems Center, meetings are at 11:30 a.m. in Room 201.

Room locations may change due to availability. Contact the medical office, Ext. 7-4676, to confirm meeting location. ■

March of Dimes prizes available

Employees who participated in last spring's March of Dimes Walkathon and who are eligible for prizes should contact Debbie Smith at Ext. 1-4674 to claim them.

Employee services/recreation

Rifle Sight-In—For Martin Marietta employees and their guests will be from 8 a.m. to 2 p.m. tomorrow and Sunday at the rifle range. The fee is $1 per rifle and there is a 30-minute time limit. There must be at least one Martin Marietta employee in each car and you must inform guard at gate of your intentions to sight-in. Proceed directly to range (no tours). Children under age 16 cannot be admitted without a hunter safety card. Do not bring loaded rifles to the range.

Hunting and Fishing Club—The group will meet at 5 p.m., Monday, Oct. 9, in the clubhouse at the recreation area. For more information, contact Mel Smith, Ext. 1-8655.

Smoking Cessation Classes—Enjoy a breath of fresh air. The American Cancer Society's "Fresh Start" program is available free to all Martin Marietta personnel, their spouses and dependents. Classes consist of four meetings from 5 to 6:30 p.m., Oct. 9, 12, 16 and 19, at Goddard Middle School, Room 211. Those who have not sent in a registration form, but would like to attend, can call the Employee Services office at Ext. 7-6605.

Radio Club—The Waterton Amateur Radio Society will meet at 5 p.m., Tuesday, Oct. 10, in the hamshack at the recreation area. For further information, call Jeff Owings, Ext. 7-3629 or 7-6898.

Red Rock Bowmen—Archery club members will meet at 4:45 p.m., Tuesday, Oct. 10, in the clubhouse at the recreation area. This meeting will feature the last security briefing. All members are required to attend. For further information, call Dave Unruh, Ext. 7-0477.

Scuba Club—Fathom Dive Club members will meet at 6 p.m., Wednesday, Oct. 11, at A-1 Diving Company, one block west of Santa Fe at 1800 W. Oxford Ave. Upcoming dive trips include Cozumel, Nov. 17-24 and Dec. 25-29; and LaPaz in April 1990. For details, contact Carol Claypool, Ext. 7-4194, or Larry Espelage, Ext. 7-6371.

Ski Club—Satellite Ski Club members and guests will meet at 7 p.m., Wednesday, Oct. 11, at the Bear Creek Run Apartment clubhouse (Kipling and Morrison Road). The group will conduct a membership drive on Thursday, Oct. 12, at the Deer Creek and Littleton Systems Center cafeterias; and on Friday, Oct. 13, at the Space Support Building, and first floor Engineering building cafeterias. Discount American Ski Association cards will be sold. Contacts are Nancy Griffith, Ext. 7-5181, or Bob Foglia, Ext. 7-7122.

Parapsychology Club—The group will meet from 5 to 7 p.m., Thursday, Oct. 12, at South Park West I, MIC room. Subject: "Dowsing" with professional dowser, Greg Storozuk. All employees and guests, age 16 and older, are welcome. To reserve a guest badge or to obtain more information, please call Helen Davis, Ext. 1-6887.

Ada/Software Engineering Working Group—Interested employees will meet at 5 p.m., Monday, Oct. 16, at LSC, Room 106. Contact Robert Lewis, Ext. 1-6731, for further information.

Management Association—The Martin Marietta Chapter of the National Management Association will meet for dinner Tuesday, October 17, at the Sheraton Denver Tech Center. Mr. Nick Van Dewerker, director of Product Assurance, will discuss Total Quality Management (TQM). For reservation information, call Ext. 7-9508. Nonmembers are welcome.

Mixed Bowling League—The mixed league that bowls at 6 p.m. on Tuesdays at Green Mountain Lanes needs additional bowlers. Interested employees and immediate family members are welcome. For additional information, call Betty Leach, Ext. 7-3686, or 933-0229.

Toastmasters Clubs—Littleton Systems Center Toastmasters meets at 4:30 p.m., Wednesdays at Littleton Systems Center, Room 209G. The contacts are Michele Stillman, Ext. 7-3582, or Marti Friend, Ext. 1-1806. Titan Toastmasters meets at 6 p.m., Mondays at Mission Trujillo Restaurant, 181 Ridge Road (Broadway and Ridge Road). Contact Mark Willey, Ext. 1-6183, for more information. The Littleton Club meets at 7 p.m., Tuesdays at the John Christianson Library (Arapahoe and University). Contact George Fosdick, Ext. 7-9923.

Career Women's Association—CWA invites all employees and spouses to hear LeAnn Nelson discuss "The Power of Appearance," 6:30 p.m., Mon., Oct. 16, Southpark West I, MIC. Cost is $4.00 for members, $7.00 for nonmembers. CWA's Resource Committee will also host a "Rise n' Shine" breakfast meeting, 7:00 a.m., Fri., Oct 27, Eng. Executive Dining Room. Carol North, Space Systems' manager of Personnel and Human Resources, will speak on "Status of Women in Management—Now and in the Future." Cost for members is $6.50 and $8.00 for nonmembers. Check recreation racks for details.

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