

License required
for business travel

NUMBER 15/1982



Lowrie to head Orlando Aerospace

Walter O. Lowrie has been elected a vice president of Martin Marietta Corporation and president of the company's Orlando Aerospace operations.

He has been vice president and general manager of the space and electronics systems division here since 1980.

C.B. Hurtt, former head of Denver Aerospace, has been temporarily in charge of Orlando Aerospace in addition to his responsibility as president of the parent company, Martin Marietta Aerospace.

Robert J. Polutchko, vice president of technical operations, will succeed Lowrie. James W. McAnally, director of electronics engineering, succeeds Polutchko.

Lowrie, a Martin Marietta employee since 1948, was program director of the Viking Mars exploration for which he received NASA's Distinguished Public Service Award.

He was named system engineer of the year by the American Institute of Aeronautics and Astronautics in 1976, the year of the Viking Landings on Mars.

Four additional promotions to vice president at Denver Aerospace also were announced: James L. Burridge, chief engineer; Reid H. Clausen, command and information systems; James A. Sterhardt, strategic systems, hardware design and fabrication; and Morris H. Thorson, special programs.



Walter O. Lowrie



Robert J. Polutchko



James W. McAnally



James L. Burridge



Reid H. Clausen



James A. Sterhardt



Morris H. Thorson

90-day Viking mission enters sixth year

The planned 90-day Viking primary mission to Mars ended in the fall of 1976. It was reported then that scientific exploration could continue for "a couple more years."

This month—July 20, to be exact—Viking lander 1 completed its sixth year on the Red Planet. It is still "basically healthy," recording and transmitting data.

"Lander 1 is transmitting data each week," said Alfred O. Britting Jr. "The batteries are weak, but we are reconditioning them. Lander 2 is no longer functioning."

Britting is the Denver Aerospace chief engineer and deputy program manager for NASA's Viking lander monitor mission at the Jet Propulsion Laboratory.

Each week, Lander 1 transmits an image of the Martian surface as part of a year-long sequence of images. (A Martian year is about 687 Earth days.)

"The quality is pretty good," said Britting. "We could see in one of them that a windstorm had removed a conical mound of soil that had shown in an earlier image."

The lander is also transmitting meteor-

ological data, is being used in a radio science experiment for doppler ranging, and is sending engineering housekeeping data.

"In the beginning, the Viking project looked like an insurmountable task," said W.O. Lowrie. Recently elected Corporate vice president and president of the company's Orlando Aerospace operation, Lowrie headed the Viking program for Denver Aerospace.

"It was an all consuming program," he added. "I doubt there has ever been a program like Viking. Other programs have been larger, but none pushed at the frontiers of technology in the way it did."

"Viking was a great achievement for the country and for the company," said Lowrie. "The reputation we gained on Viking has been important to us in gaining new spacecraft business and new command and control business."

Lander 1 is programmed to continue operating until 1994 and Lowrie is confident it will.

The site where the lander is operating has been named the Thomas Mutch Memorial Station in memory of the late team leader for lander imaging.



A thin layer of frost forms on the surface of Mars, during winter months. Photographed by Viking lander 1, the frost may be water ice or a crystalline mixture of water and carbon dioxide.

MX semitrailers are delivered

Two type I semitrailers used to transport MX solid stages were delivered to Vandenberg Air Force Base June 10.

Delivery of the 57 foot-long semitrailers marks completion of nearly three-quarters of 424 units of transportation and handling equipment.

Type I semitrailers can load and unload Stages I, II, and III in their containers from railcars, docks, ground level pads or Type II semitrailers which provide only stage roll-transfer capabilities.

The Type I transfer system is controlled by a remote, operator-held control box, allowing the operator to be close to his work. Both Type I and Type II semitrailers roll on independently suspended bogie wheels on five axles. The first, fourth and fifth axle are automatically steered by the tractor driver or may be steered by the operator for precise maneuverability.

Construction of the semitrailers was done by Goodyear Aerospace under a subcontract to Denver Aerospace. John D. Eagan, strategic systems division, directs the transportation and handling project.

On the cover

This special 40-wheel tractor-trailer rig developed to carry up to 130,000 pounds of MX missile stages was delivered to the U.S. Air Force at Vandenberg Air Force Base June 10. (top photo)

The Type I transfer system lowers a MX stage container by remote control. (bottom photo)

TAs are required for business travel

Employees who travel on company business—other than local travel—are required to prepare and get approval of their trips on a Travel Authorization (TA).

The TA specifies the duration and purpose of the trip as well as how the employee will be traveling.

In addition to being the authority for making a trip, the TA serves as the basis for making an insurance claim should the employee be killed, dismembered, or permanently disabled in an accident while on company business.

Preparation of the TA is covered in the Policy Manual—Denver Aerospace Operating Instructions FIN-3-D1, and in Volume I of the Standard Procedures Manual—Standard Procedure 2.3

Cafeteria remodels

The second floor cafeteria in the engineering building will close August 2 for two months of remodeling. Lunch will be served in the first floor cafeteria, in SSB, and off-site locations as usual.

To avoid overcrowding, employees eating in the first floor cafeteria should adhere closely to their regular lunch schedule.

- 10:30 am Maintenance, Boiler house
- 10:40 am Factory, second floor
- 10:50 am Factory, first floor
- 11:00 am Inventory building
- 11:10 am Reproduction, GPL, VTL
- 11:20 am Engineering building, first floor even-numbered modules, hill labs
- 11:30 am Administration building, first floor
- 11:40 am Engineering building, second floor even-numbered modules
- 11:50 am RDL, first floor, second floor
- 12 noon Engineering building, first floor odd-numbered modules
- 12:10 pm RDL, third floor, fourth floor
- 12:20 pm Engineering building, second floor odd-numbered modules
- 12:30 pm Administration building, second floor
- 12:40 pm Administration building, third floor

Security inspections conducted on vehicles

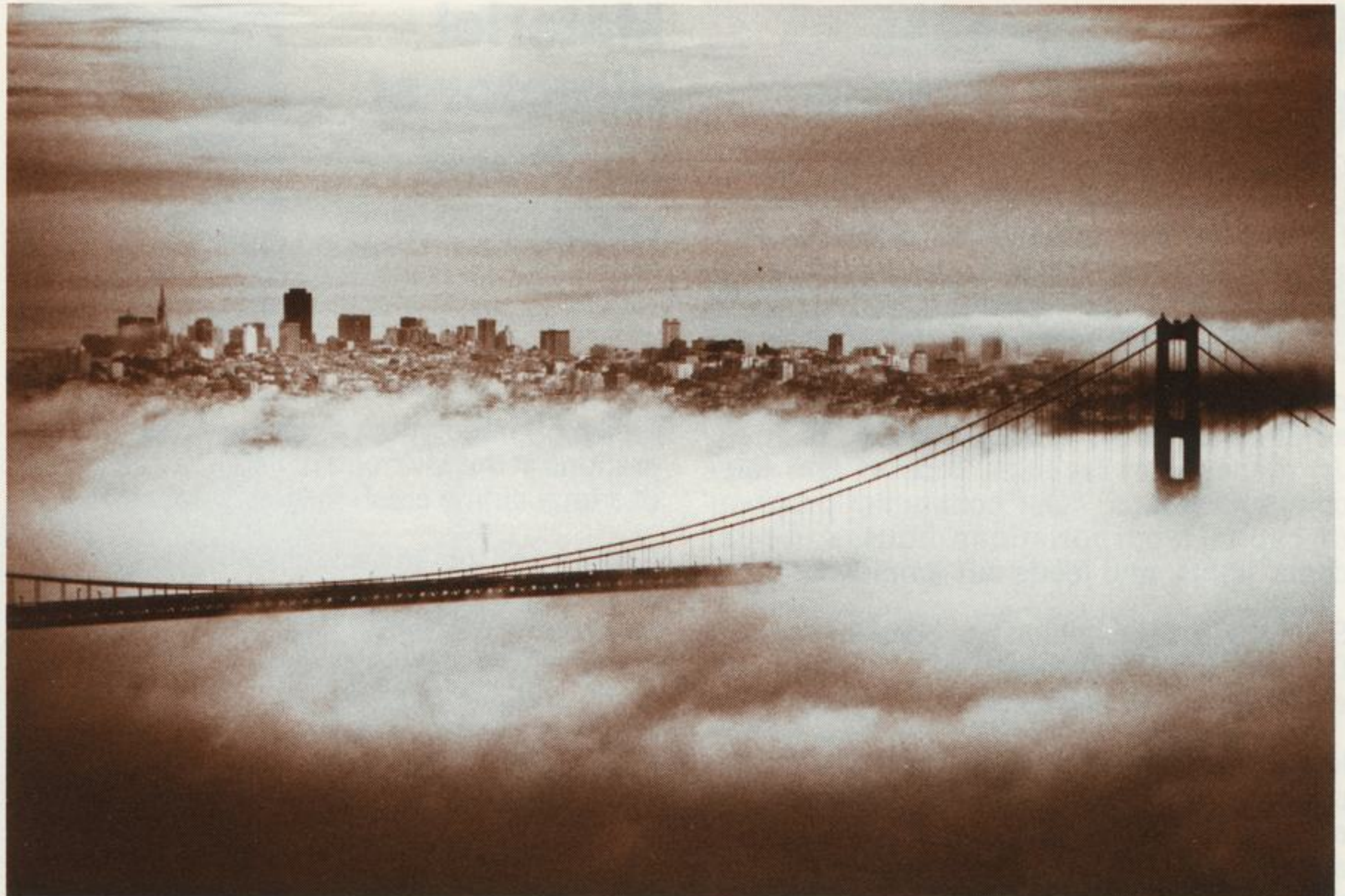
Random inspections of cars coming into and leaving the main plant are being conducted by plant protection.

The inspections are to assure that all persons entering the plant are complying with security requirements.

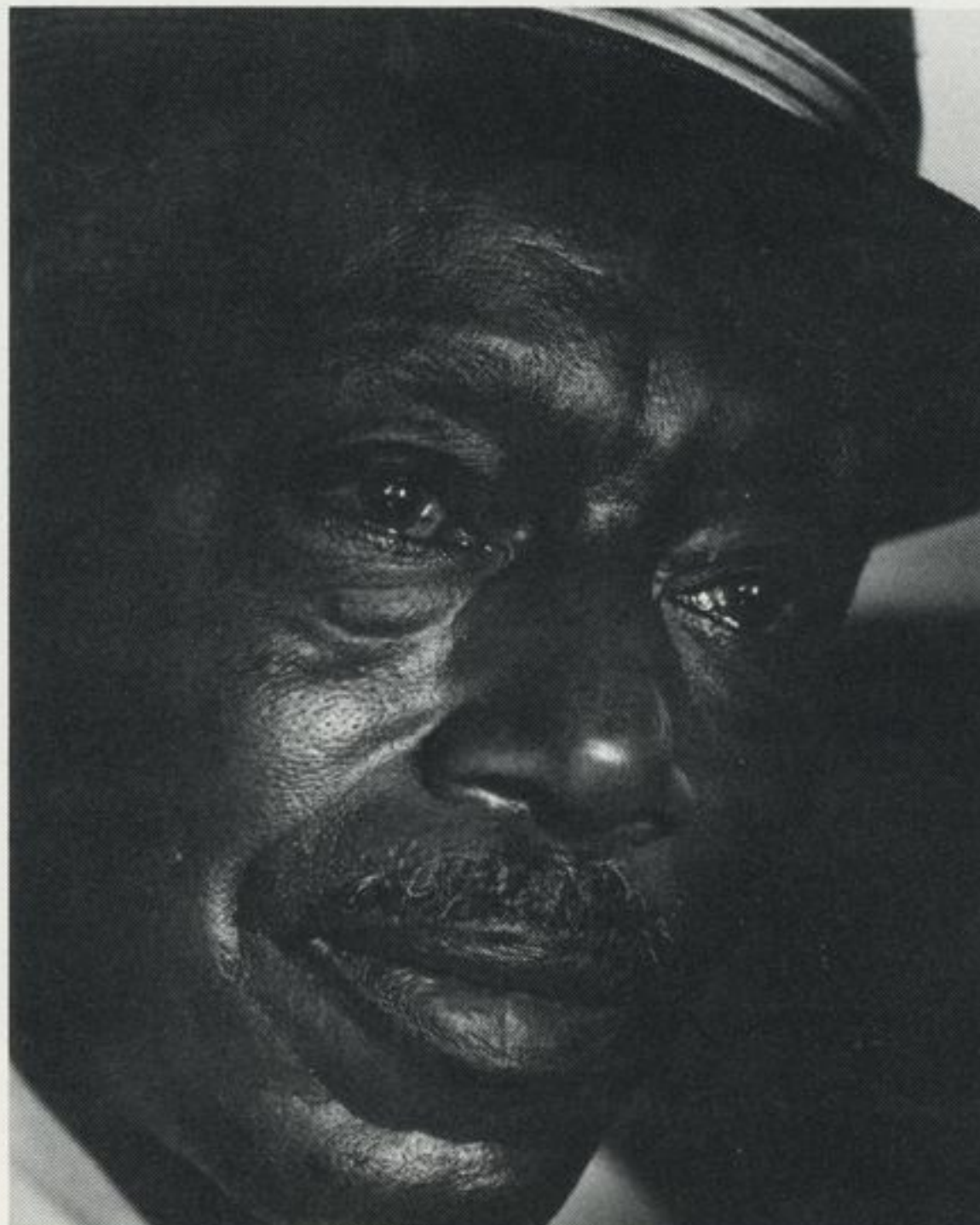
In particular, incoming vehicles are checked for firearms, cameras, and alcoholic beverages—all prohibited on company property. Outgoing cars are checked for company property, documents, and other items that are not to be removed without written authorization.

Persons who have prohibited items may check them at the guard station before entering the plant and pick them up as they leave.

No set schedule has been established for the inspections, nor is any particular person or group of persons being singled out.



Sharon R. Hunter took first place in the slides and scenic slides class of the 1982 photo competition of the National Services and Recreation Association (NESRA) with "City in the Sky."



"Hard Times," Dennis M. Clark's black and white print took first place in the human interest class and fourth place in the same division.



"Hounds," by Lawrence A. Root placed second in the color prints class. Hot air balloons often take part in hare and hounds races.

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DENVER AEROSPACE
P.O. Box 179—Denver, CO 80201

July 30, 1982

New finance director, controller named

Richard J. Masi has been named director of finance and will serve as controller for Denver Aerospace.

He is returning to Denver from the Michoud division where he was business manager for the external tank operations. He has previously been assistant controller in accounting and treasury here.

Capital expenses exceed \$20 million

Capital expenditures of \$21 million authorized through the first half of 1982 show confidence in the company's future as construction, renovation, and equipment replacement continue here.

"Capital projects allow us to win and perform on our contracts, and support technical and administrative work," says Fred R. Bennett, Jr, manager of facilities support and telecommunications. "Our continuing program of capital appropriations houses, heats, cools, lights, and feeds our employees."

Since 1956, \$165 million has been invested in Denver Aerospace capital facilities, the equivalent of \$274 million in today's dollars.

Included in this year's capital facilities expenses: a 40,000 square foot addition to the engineering building, the SSB highbay/airlock, new cafeteria kitchen and expansion, major resurfacing of roads and parking lots, conversion of 160,000 square feet of the Littleton Systems Center to office space, replacement of obsolete machine tools, and acquisition of a high resolution surface analyzer to support materials analysis for all Aerospace operations.

Senior employee at Canaveral to retire



John R. Konarski

John R. Konarski, who has been employed with Martin Marietta longer than any other Canaveral operations employee, retires this month after more than 45 years.

He was hired by the Glenn L. Martin Company in Baltimore on March 22, 1937, to work in the metal bench and welding shop on the B-10 bomber.

Konarski moved to Florida in 1952 on the Matador program and remained at Canaveral operations except for an 18-month stint with the Mace program in Alamogordo, New Mexico, during 1955-56.

He went into test tool engineering in 1960 after working as a lead technician with Vanguard and Titan I.

The lost is found

A wide variety of items lost by employees have been found.

In fact, plant protection's collection of items is growing almost daily.

Wrist watches, rings (including a wedding band), checkbooks, eyeglasses, sweaters, gloves, jackets, keys, and a tape measure are among the items waiting to be claimed.

If you have lost something, go to plant protection headquarters next to the fire station. You will be asked to describe your lost item. If it is there, it will be returned.

Materiel director at Michoud dies



Phillip L. Greenwood

Phillip L. Greenwood, director of materiel operations at the Michoud division, was a victim of a fatal airline crash in New Orleans July 9.

Greenwood joined Denver Aerospace in 1960 as a buyer in the facilities department. He progressed through a number of progressively more responsible positions until being named purchasing manager for the Michoud division in 1973.

One of the first employees transferred to New Orleans to work on the external-tank project, Greenwood played a key role in the establishment of the materiel services department. In 1979, he was appointed director of Michoud materiel operations.

Greenwood is survived by his wife, Jean, two sons, and a brother.

Inventors to receive awards

Twelve employees have been honored by the Denver product development review board for their inventions.

Receiving cash awards are:

Joseph B. Hunt and Richard F. Hattz, mechanical and structural engineering: solar cell/substrate soldering tool.

M. Keith Umbreit, engineering mechanics: isobaric reflexive catenary system;

Sidney Broadbent, electronics: central pedestal mounted solar arrays including low profile and porous concepts;

Eldon E. Constable and Billy D. Orr, electronics: rapid removal grounding assembly;

Lawrence M. Germann, electronics: manipulator joint command generation by least squares successive approximation;

Lawrence M. Germann and John C. Tietz, electronics: coordinate rotations and transformations in as little as 100 nanoseconds with CORDIC algorithm;

Mohan S. Misra, engineering mechanics: passive shape-memory actuator for the flexible radiation louver; and

Loman T. Park, engineering-strategic systems division, Alexander R. O'Connell and John B. Hurley, engineering mechanics: integral gas generator design concept.

Performance sharing plan unit values set for June

Unit values for the Performance Sharing Plan reported as of June 30, 1982, were:

Fund A (Indexed Equity):	1.4253051579
Fund B (Fixed Income):	1.5288457269

Martin Marietta Aerospace opens Colorado Springs office

Martin Marietta Aerospace will open a district office in Colorado Springs in mid-August.

The office will serve as a focal point for program development and as a liaison between the company and the newly established Space Command and Aerospace Defense Command.

The office will be managed by Howard Vasina, formerly on the engineering staff of command and information systems at Denver Aerospace. It will be located at 1250 Academy Park Loop.

"Our focus," according to Norman R. Augustine, Denver Aerospace president, "is on the present and future requirements within the Colorado Springs defense community."

The company has major commitments to the development of large systems and technologies in the fields of strategic command, control, and communications for a number of years.

"The establishment of an office in the area will be a key element in bettering our understanding of our customer's requirements in both ground and space based operations." Augustine said.

Denver Aerospace is one of two companies competing for a major role in the development of the Space Defense Operations Center (SPADOC) located in the Cheyenne Mountain complex.

Energy savings a major concern

This winter Denver Aerospace will see its first \$750,000 monthly energy bill. This is an increase of 50 percent over last winter's highest bill.

Nearly half the increase is due to added facilities while the remainder is caused by inflation. The company is striving constantly to improve the energy efficiency of its operations. It is a concern of which every employee should be aware. For, in these times of abundant oil reserves and stable gasoline prices, people tend to lose sight of the importance of energy conservation.

Regardless of the accuracy of future oil shortage projections, energy prices will continue to increase.

In future *Martin Marietta News* articles, specific concerns of the company as well as proposed or already implemented changes will be discussed.

Energy tip: insulate

A properly insulated home not only will lower winter heating bills, but also will keep you cooler in the summer.

To keep cool this summer, operate window or attic fans in the evening through early morning. Shut off fans in the afternoons, and close all windows and south-facing drapes.

If ventilation is necessary, use north-facing windows and doors.

Drapes should be drawn in all south-facing windows even in air-conditioned homes to minimize heat gain.