

MARTIN MARIETTA

news

DENVER DIVISION

NUMBER 9/1978



Division Open House scheduled for Saturday, July 15

An Open House for Denver Division employees and their families will be held Saturday, July 15, from 8 am to 5 pm.

Major buildings will be open, with the main tour planned for the factory, the electronic manufacturing facility, and the space simulation laboratory. Exhibits portraying products will be installed in these locations.

Buildings listed in the schedule on this page will be open so that employees may show their individual work areas.

Employees are urged to bring their families at the times listed for their buildings to avoid traffic congestion. Spacing of visitors will allow everyone to get a closer look at the displays and other points of interest.

Admittance to the Open House will be by employee badge, with at least one employee accompanying each vehicle entering the main gate. Special access passes will be issued to families of employees required to work the day of the Open House.

All visitors will park in the lots across from the RDL and engineering buildings. Shut-

tle buses will be operated from the north door of the factory to the EMF and SSL. From SSL the buses will return to the parking lots so that visitors may get off near their personal vehicles.

Special parking arrangements are available for visitors who may be using wheelchairs. Vehicles carrying wheelchair users should go directly to the special parking area at the north door of the factory.

It is suggested that those in wheelchairs visit only the second floor of the factory and the SSL because of the difficulty in negotiating stairways.

Free cold drinks will be provided at the north door of the factory and on the EMF patio. There is no food service for visitors.

Maps of the tour route and brief descriptions of items on display will be handed out at the beginning of the tour.

Drivers and pedestrians are urged to use caution while on division property and to obey plant protection personnel who will be directing traffic.

Visitors are asked not to smoke along main tour routes.

The satellite photo on the cover is considered by NASA officials at the Goddard Space Flight Center, Greenbelt, Maryland to be the sharpest yet returned from the Landsat-3 spacecraft. Taken March 14, 1978, from an altitude of 917 kilometers (570 statute miles), the photo shows major launching pads at Cape Canaveral (white dots left and slightly above picture center); the Apollo launching pads (upper left); Shuttle Transportation System runway (far upper left); and several bridges and causeways crossing the Banans and Indian Rivers (upper left corner to lower corner). The bridges in upper left connecting the Kennedy Space Center to the mainland appears to be open to let large shipping vessels through. The white dots in the Banana and Indian Rivers are believed to be channel markers, or are dredging deposits.

Open House tour schedules

Employees are encouraged to bring their families to the Open House during the hours suggested.

Work Areas	Suggested Tour Hours
Factory Cafeteria	8 am
Inventory GPL VTF EMF	9 am
DSC West Point	10am
CCMS Engineering, 2nd floor	11 am
Administration	12 noon
Engineering, 1st floor SSB, 6th floor	1 pm
SSB, 3rd floor SSB, 4th floor SSB, 5th floor	2 pm
RDL SSB, 1st floor SSB, 2nd floor All others	3 pm

Employees may take their families into their own work areas during the suggested hours shown in the schedule.

Building or Facility	Hours Open
Factory	8 to 10 am
Cafeteria	8 to 10 am
Inventory	8 to 10 am
GPL	8 to 10 am
VTF	9 to 11 am
EMF	10 am to noon
Engineering 2nd floor	11 am to 2 pm
Engineering 1st floor	11 am to 2 pm
SSB	1 to 4 pm
Vibration Acoustics	2 to 4 pm
SSL	2 to 4 pm
Cold Flow	2 to 4 pm
(All other facilities will be off limits to visitors)	

The Martin Marietta Corporation Annual Review 1978 film will be shown continuously during the Open House in the engineering building cafeteria. The 17-minute film will be shown at 10 minutes and 40 minutes past the hour.

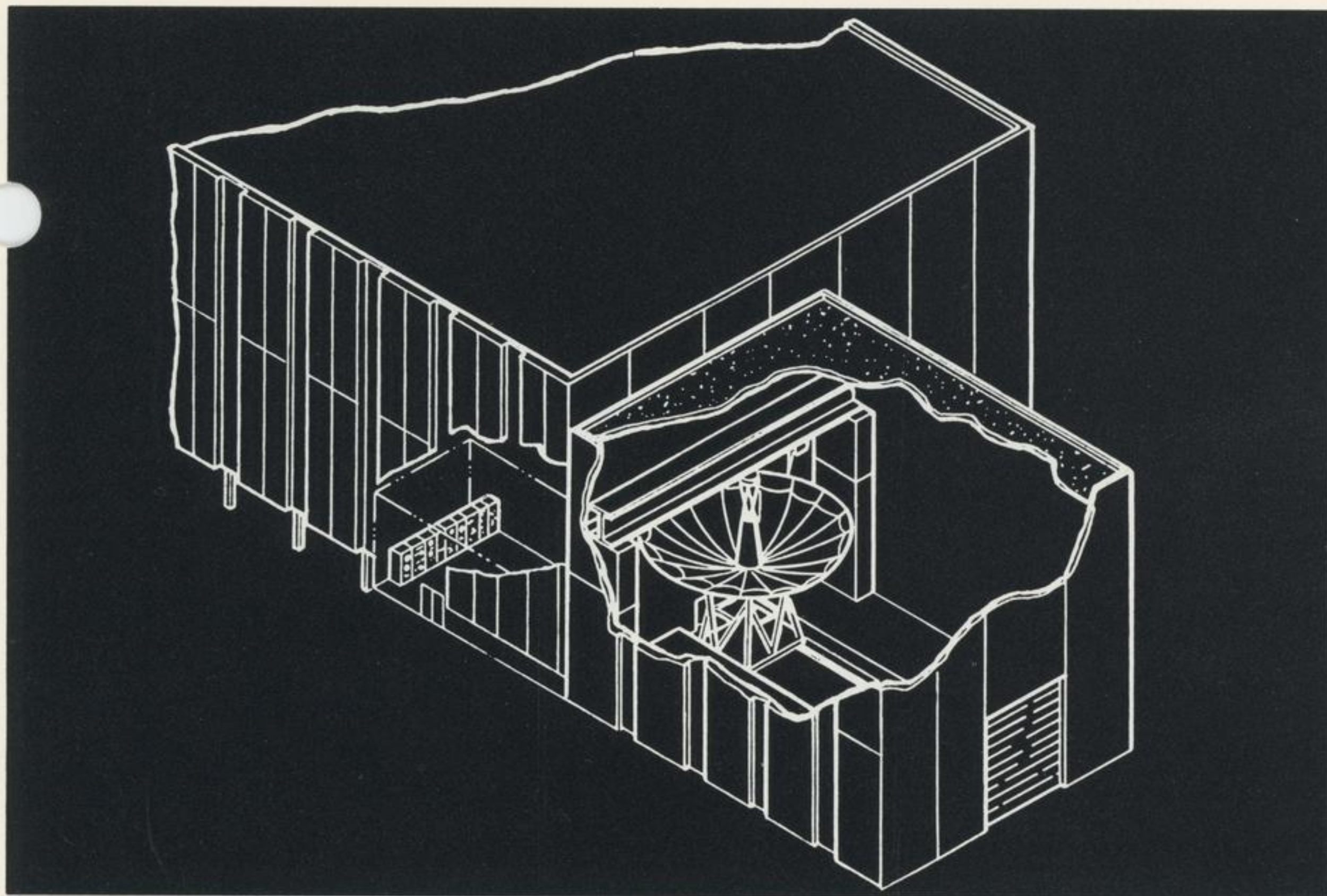


Kenneth E. Zitek has been named Titan 34D program director. He was acting program director for Titan IIIB and IIID until his promotion, and will continue to direct these programs until a replacement is named. Zitek joined the test department in 1963 and has worked in propulsion, mission success and project engineering. He has an Executive MBA degree from the University of Denver. He replaces Robert Johns.

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Denver Division
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The cutaway drawing of the addition to the SSB shows an antenna in the test chamber.

Construction begins on SSB addition for antenna test facility

Construction began last week at the Denver Division on the largest near-field antenna test facility of its kind in the United States.

The 102.5-foot long, 80-foot wide, 75-foot high facility is being built as an addition to the system support building (SSB) and will become an integral part of that building.

The \$4 million addition will be ready for use as a test facility in March 1979.

Antennas up to 50 feet in diameter can be tested and the facility will accommodate any spacecraft designed to fit in the Space Shuttle cargo bay.

In addition to the open high bay, the new structure will contain office space, a test chamber control room, computer room, a self-contained computer drive to gather and analyze data, and manipulators to move spacecraft and antennas.

Titan II trailers being modernized

Forty-three Titan II mobile propellant transfer system trailers are being modernized under a contract started last November. The contract is for renovation of the trailers with new components and equipment to help extend the life of the Titan II ICBM missile system.

The trailers were built during 1961-63. The contract is primarily a rebuild of the original equipment to reflect state-of-the-art technology in pumps, sensors, and controls. Also included in the contract is an updating of the Titan II training facility at Chanute Air Force base.

Six different trailers are used with each Titan II ICBM. The set includes fuel transport and holding trailers, oxidizer transport and holding trailers, and conditioning and control trailers. The conditioning trailer insures the propellants are fed into the missile at the proper temperatures. The control trailer is used to direct the entire fueling process.

Work includes the reconstruction of the trailers and local fabrication of all details, parts, and valves. Joe Stackhouse is manager of the program which employs 44.

Control and conditioning trailers are refurbished in the factory. The trailers are strip-

ped down to the frame and rebuilt, substituting stainless steel for carbon steel, upgrading sensors, and providing new propellant temperature control devices.

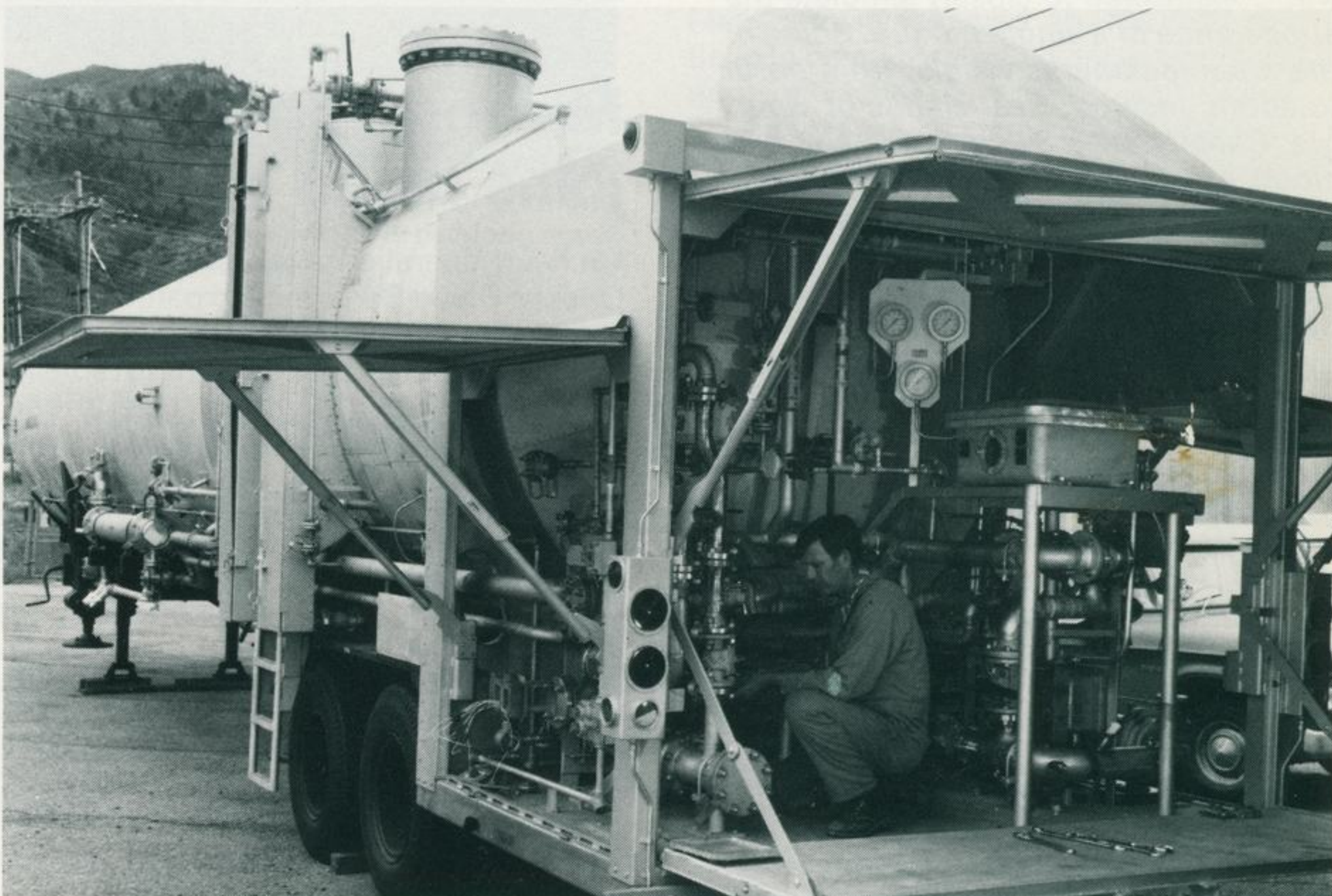
Fuel and oxidizer transport and holding trailers are completed in the engineering propulsion lab. The trailers are purged of toxic fuel residues prior to renovation. New equipment installed on the trailers includes pumps, fuel lines, and temperature control and indicating systems.

Work on the trailers is expected to be completed in November 1979. One set of trailers is completed every three months.

Viking mission book on sale

"Viking — Mars Expedition 1976," a report on the exploration of the Red Planet, is on sale for \$3 at the Denver Division cafeteria.

Prepared by the division's public relations department, the report discusses the mission, experiment results, and performance of the lander and the orbiter. It is the first publication that provides a complete summary of instrument and spacecraft performance and all experiment results.



Jim Burcar, shop foreman, installs a valve system on a partially completed oxidizer holding trailer as part of the Titan II fuel system trailer rebuild contract begun here last November.

Rattlesnakes sun themselves on walkway

Between June and September each year division security receives an average of two calls weekly from employees about rattlesnakes.

According to Dorrall A. Young, of plant protection, rattlesnakes are most often found along the walkway between the engineering building parking lot and the system support building (SSB). Other common areas of sightings are the parking lots by the SSB and the electronics manufacturing facility and the recreation area. "Generally, it doesn't make any difference where you go," Young said. "They're all over."

Rattlesnakes are most often seen during the lunch hour, the time the snakes are out to sun themselves. Security personnel rarely encounter one during evening hours.

Except for an occasional bull snake, misidentification by employees is a rare problem.

Only one rattlesnake bite has been reported since the plant opened in 1956. "We had one of our security inspectors bitten on the hand about seven years ago while trying to get a snake out of a hedge in

Stop smoking program set

The "5-Day Plan to Stop Smoking" conducted by Porter Memorial Hospital will be held at the Denver Division beginning July 10.

Employees interested in enrolling in the program may obtain registration forms from the employee-labor relations office in room 125 of the engineering building.

The five consecutive sessions will be held from 4:30 to 6 pm.

front of the engineering building," Young said.

Camping season brings an increase in rattlesnake awareness by all persons. Despite myths, rattlesnakes generally are not quarrelsome, use their poison primarily to obtain food, do not have to coil to strike, do not always rattle before they strike or as a warning, and they can swim.

The best protection from a rattlesnake is to avoid areas where they live, such as dense brush and spaces in and under rocks.

Recommended snakebite treatment does not include tourniquets, cuts over the fang marks, or sucking out poison. Merely keep the victim calm and proceed to the nearest medical facility for antivenom treatment.

Junior Achievers to attend national JA conference

Three members of a Denver Division sponsored Junior Achievement company — United Achievers I — will attend the National Junior Achievement conference August 5 to 12 at the University of Indiana.

Chosen to attend are Brett and Carla Goodwin and Beth Hutt. The Goodwins are the son and daughter of W.E. Goodwin, a division employee.

The division is sponsoring the trip to the conference for the three because of their outstanding contributions to their JA company and for reaching the finals in the annual JA performance competition. Brett was runnerup in the Achiever of the Year program; Beth was runnerup in Production Company of the Year competition; and Carla finished third in overall judging for Marketing Executive of the Year.

Canaveral operations earns safety award

Canaveral operations has earned the National Safety Council's Award of Honor for its 1977 safety performance.

The award is the Council's highest recognition for outstanding occupational safety records.

Fewer than five out of 100 Award applications qualify for the Award of Honor.

CAD/CAM assists in product design, manufacturing

"The name is descriptive of what the equipment does," Richard W. Cheever says of the computer aided design/computer aided manufacture (CAD/CAM) facility. Martin Marietta Data Systems, for whom Cheever works, leases time at the facility to the division.

"All our equipment is what we call user equipment," Cheever explained. "Data Systems provides the equipment, the training, and some assistance, but Denver Division people operate it. Departments using CAD/CAM pay only for the time it is used."

With CAD/CAM, a product can be taken through all the steps of its development and manufacture — except for the actual machining and assembly.

The product can be designed at one of the four stations using a keyboard, a magnetic stylus, and a television-like display. The whole product or any of its parts can be drawn on the screen, its dimensions

changed, its shape altered — all before anything is put on paper. However, anytime during the design process the operator can press a button and get an 8½ x 11 inch paper copy of the material.

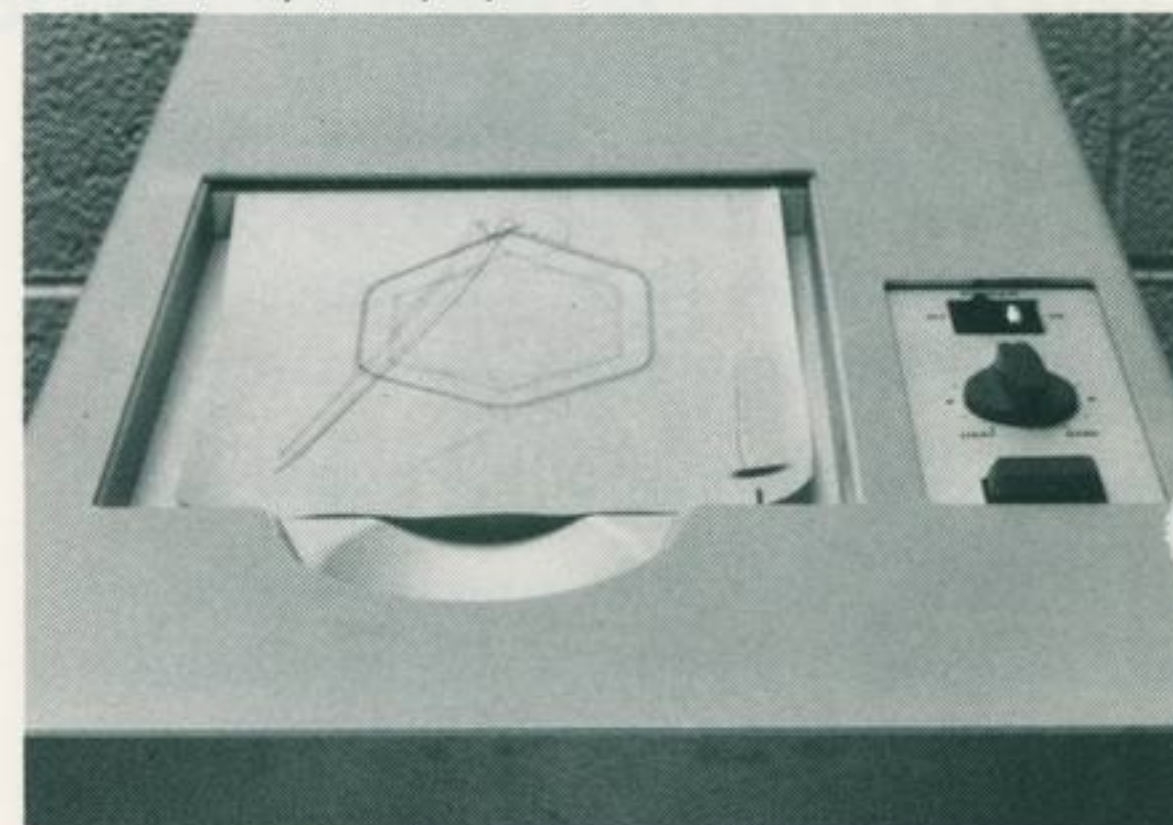
Once complete, the design, which has been stored in the computer, can be transferred to a drawing up to 33 inches by 57 inches, and tapes can be produced that will program the numerically controlled machines in the factory to produce the parts of the product.

"The main purpose of the facility," Cheever said, "is to free the designer from almost all of his nit-picking detail work. CAD/CAM can accomplish in minutes or hours what could take days or weeks if the designer was doing the work at his desk or at a drawing board.

"The versatility of the equipment makes it useful on all current and future projects in the Denver Division — even to the point of making small changes in existing drawings."

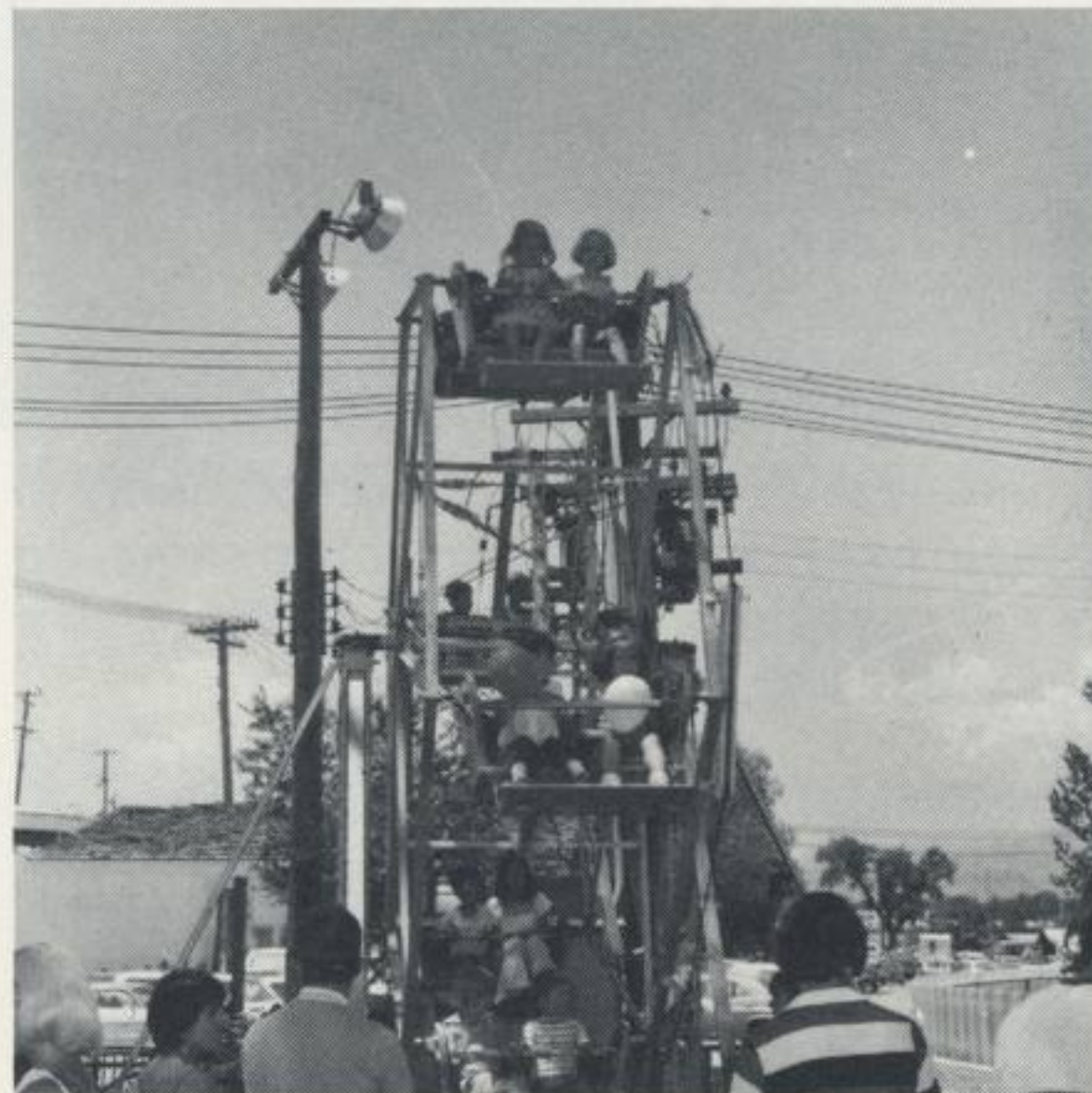
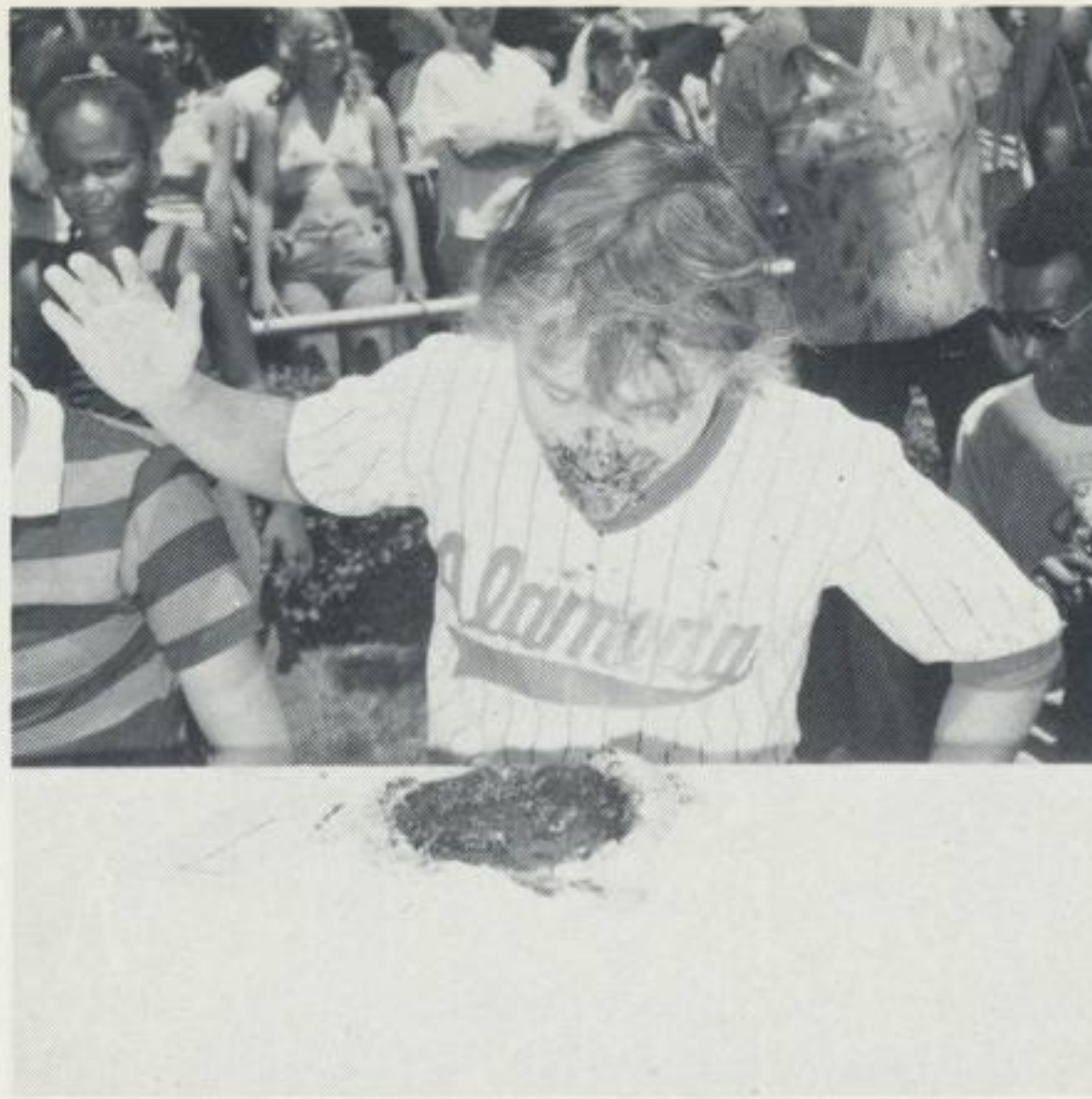


A push of a button transfers drawing on screen, top, to paper, bottom.





More than 12,000 children and adults participated in the Family Day at Lakeside Amusement Park June 17. The variety of activities kept everyone busy during the day-long event — as these photos show.



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Work begins to upgrade, repair parking lots

Work has begun to upgrade, repair, and improve parking control of Denver Division parking lots.

First to be changed was the controlled parking area at the system support building (SSB). With the addition planned to the SSB, it was necessary to remove the reserved parking area north of the building to the east and across the street.

New parking boundary posts were set, boundary lines painted, and new signs installed at SSB. The posts, lines, and signs are typical of those to be used in other parking lots.

Reserved parking designations are being changed to more effectively monitor parking, to accommodate reassignment of key personnel among buildings, and to reduce sign costs.

Names are being eliminated from reserved parking signs except for the division executive staff. Other spaces reserved for executives and top-level visitors will be assigned by letter and number.

Parking lots will have a letter designation. Assigned so far are A — engineering building; B — administration building; C — space park (SSB, SSL); D — RDL; E — Denver Systems Center; I — inventory building. Others will be assigned as they become needed.

The letter/number assignment facilitates parking control and also allows an executive who moves to immediately have a reserved space at his new location.

Management reserved spaces will continue to be marked with diamonds and operational necessity spaces with circles. Two new reserved space designations are being implemented. One is for visitors and the other for service vehicles. The visitor spaces will have letter and number designations to correspond with passes issued visitors.

Reserved parking signs will be removed from posts and hung from cables outlining the parking area to make it easier for parking lot maintenance — especially snow removal.

One parking lot will be completely rebuilt and two will be repaired and resurfaced this year.

The lot north of the inventory building will be rebuilt. The lot south of the administration building and the south half of the lot across from the engineering building will be repaired and resurfaced. Work on these last will begin in late July.

Employee attends Urban League seminar

Fitzroy Newsum, manager of civic liaison, has received a certificate of recognition for his participation in a National Urban League seminar.

Newsum is a member of the board of the local Urban League.

The seminar, held at the Urban League headquarters in New York City, was designated to train volunteer leaders to be more effective as officers of nonprofit

agencies and to understand the role of the board as a policy making unit.

The program for education and development for board officers complements the ongoing activities of the Management and Development Center which trains Urban League staff members in a variety of management skills and techniques.

Newsum attended the seminar under a grant from the W.K. Kellogg Foundation.



This NASA photograph is a mosaic of several ERTS-r multi-spectral scanner scenes, covering an area nearly 500 miles long (N-S distance) that includes most of Florida and part of Georgia. It was constructed to closely simulate the appearance of a single picture. Some of the main landmarks visible, from north to south, include: Sea Islands of Georgia; Okefenokee Swamp (just south of cloud patch), the St. Johns River (top, center, parallel to the coast), Cape Canaveral (center), Tampa Bay area (left, partly cloud-covered), Lake Okechobee (35 miles long; lower center); the Everglades (south of Lake Okechobee, to the SW coast); Palm Beach-Miami area (light-colored area along coast SW of Lake Okechobee); northern Florida Keys (bottom center; partly cloud-covered).

At Michoud

Call Ext. 3788 with suggestions or information for articles.

Answering service to assist Michoud employees

A 24-hour answering service has been arranged with a New Orleans agency to provide an around the clock point of contact for employees who need to notify supervisors of an impending unscheduled absence from work. The service is to be used only if an employee is unable to contact the supervisor during normal working hours.

The new service is available by calling 504-525-0184.

Employees who are unable to report at the scheduled work time should immediately call this number and provide the following

information to the answering service operator:

1. Identify yourself as a Martin Marietta employee,
2. State your name, department, and 5-digit badge number,
3. State the reason for your absence, and
4. Provide the date you expect to return to work.

The information from the answering service will then be provided to Michoud operations daily.

Shuttle main engines pass third test

The Space Shuttle three main engines successfully passed their third firing test June 15 burning fuel at a rate of more than 50-thousand gallons per minute from the main propulsion test external tank. The test lasted 38 seconds with the engines burning at 90 percent of their rated thrust level.

Results of the test, which have now been thoroughly analyzed, indicate the external tank performed as planned.

Up to 15 propulsion tests are scheduled throughout this year at NASA's National Space Technology Laboratories, Bay St. Louis, Miss. NASA engineers are now planning the next test for a duration of up to 300 seconds at a thrust level of 70 percent. The test features a cluster of three main

engines installed in an orbiter aft fuselage section. Liquid hydrogen and liquid oxygen propellants are fed through two 17-inch diameter feed lines to the engines from the flight-type external tank which is suspended in a vertical position alongside the engines.

The purpose of the test program is to evaluate the performance of the entire main propulsion system prior to the first manned flight next year. The engines will be test fired to full thrust for approximately 500 seconds later this year.

Michoud operations joins blood bank

Michoud operations has joined the New Orleans Blood Bank, Inc., to participate in a blood replacement program. The new plan will establish a blood bank to replace blood used by Michoud operations employees and their immediate families.

This new program will eliminate the future need for Michoud employees to find replacement donors after receiving transfusions.

Blood donations by employees must maintain an annual 25 percent participation rate needed to maintain the 100 percent employee coverage specified in the program. All employees will be notified of several bloodmobile visits that will be made to the facility throughout the year.

Michoud savings bond campaign begins

The annual Michoud operations Savings Bond campaign will be conducted July 19 through 30. The goal this year is 100 percent participation and an increase in the total amount invested by employees.

During the last four years Michoud operations employees have achieved a 99 percent participation rate through payroll deductions. Last year the rate was 99.7 percent participation.

The goal this year is to maintain our role as a leader in the Corporation's savings bond effort.

Employees who are not participating should see the department Savings Bond coordinator who has information regarding the many advantages of participating in the program.