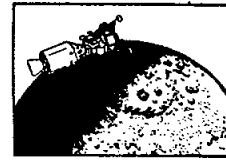


ROUNDUP

NASA MANNED SPACECRAFT CENTER

HOUSTON, TEXAS



Final day—

Secretaries Week

Complete your
EAA Recreation
Area Questionnaire

VOL. 9 NO. 13

APRIL 24, 1970



Flight Directors Griffin, Kranz, and Lunney speak eloquently for us all in this photo taken just at splashdown (12:07:44 CST) of Apollo 13.

"That's sure a load off my mind" seems to be written on the faces of the Apollo 13 crewmen as they step aboard the USS Iwo Jima following splashdown and recovery operations in the South Pacific.



Return

MSC rolls out the red carpet for 13 crew

The red carpet they rolled out over in building 4 is one way the Apollo 13 crew was welcomed back to MSC. The crowds at Ellington were another way; and the eyes on TV sets all over the Center at 12:07:44 CST on Friday, April 17 were yet another.

Quite a celebration welcomed the three astronauts when they returned to their offices at MSC: their offices were decorated with party trimmings, the red carpet had been brought out, telegrams and good wishes papered the walls. One telegram, from the people of Halifax, Nova Scotia, ran 10' long!

Now the task of analyzing the mission itself has begun.

A blue-ribbon Apollo 13 Review Board was announced Tuesday to investigate the causes of the inflight failure of the service module cryogenic oxygen system which forced the Apollo 13 deep-space abort.

NASA Langley Research Center director Edgar M. Cortright was named to chair the review board by NASA Administrator Thomas O. Paine. No estimate has been made of when the board will complete its investigations.

Commenting on the outlook for Apollo 14 and subsequent missions in the lunar landing program, Paine said, "I cannot yet set a firm schedule for the Apollo 14 mission, and as soon as the Apollo 13 review board has completed its review of the accident and we know that we are ready to apply the lessons of Apollo 13 to the next mission, fix the equipment, and understand the procedures, we will



Quite a turnout! A panoramic view of the Saturday morning crowd which came to hear President Nixon during his visit to MSC last Saturday.

Staff photo

announce the launch date for Apollo 14.

The inflight incident took place at about 55 hours after liftoff during translunar coast. One of the two cryogenic oxygen tanks in the service module, which supply oxygen to the fuel cells and breathing oxygen to the crew, apparently ruptured following a sudden pressure spike. The other oxygen tank also lost pressure. Photos taken by the crew after the service module was jettisoned about four and one half hours before entry showed the external panel covering the fuel cell and cryogenic tank sector of the service module was completely blown off by the mishap.

The Apollo 13 review board will attempt to pinpoint the probable cause of the accident and recommend any changes in design or procedures for subsequent missions.



The President of the United States of America

hails the

The Apollo XIII Mission Operations Team

We often speak of scientific miracles—forgetting that these are not miraculous happenings at all, but rather the product of hard work, long hours and disciplined intelligence.

The men and women of the Apollo XIII mission operations team performed such a miracle, transforming potential tragedy into one of the most dramatic rescues of all time. Years of intense preparation made this rescue possible. The skill, coordination and performance under pressure of the mission operations team made it happen. Three brave astronauts are alive and on Earth because of their dedication, and because at the critical moments the people of that team were wise enough and self possessed enough to make the right decisions. Their extraordinary feat is a tribute to man's ingenuity, to his resourcefulness and to his courage.

The White House
Washington, D.C.
April 18, 1970

The Presidential Medal of Freedom, presented by President Richard M. Nixon to the men and women of NASA. The award was accepted by Sigurd A. Sjoberg, Director of Flight Operations here at MSC.

Frederick Dawn brings unique abilities to MSC

One day 21 years ago, at about 3:00 in the afternoon, news came over the teletype machine in a large company in Shanghai that Communist Chinese troops had succeeded in crossing the Yangtze River, and were advancing across the 90-mile plain which separated them from Shanghai.

A young man named Frederic Dawn, or "Shinyuan", to use his Chinese name, responsible for running the plastics factory, and the textiles and flour mills which had been in his family for four generations, and which employed some 25,000 workers, had to decide what to do. His parents, three brothers and sisters, had already fled to Hong Kong or Taiwan. He, however, had refused to believe that the Chinese Communists would be victorious, and had stayed in Shanghai with his wife and three children to manage the family businesses.

Friends who had fled Russia when the communists took over that country told him exactly what he could expect from the new rulers. Dawn knew that the family factories would be nationalized, and that he and his family would be seized and doubtlessly killed. They decided to flee.

That night at midnight the last ship sailed from Shanghai harbor. It had accommodations for 300, but this time no cargo was on board, so 2,000 dazed Chinese of the 500,000 who pleaded to go squeezed onto the ship with whatever family belongings they could pack into a suitcase. Dr. Dawn's family was lucky. All five of them were able to steam to Hong Kong, where they were reunited with the rest of the family.

Fortunately, Frederick had been trained in universities and family mills in China, and at Lowell Institute of Technology at the University of North Carolina in Chemistry and Materials Engineering. He was able to land jobs as a consultant to plastics and textiles mills in Taiwan, Hong Kong, Singapore, Indonesia, Thailand, and the Philippines. In Thailand he designed the largest textile mill which the country had ever had.

The children had been sent off to America, where a relative cared for them. Before long Dr. Dawn and his wife decided to join them in Wisconsin. Next, his path took Dr. Dawn to South America, where he designed and set up still more mills, everywhere from Lima, Peru to Sao Paulo, Brazil, while his wife Marie stayed behind with the children.

When Dr. Dawn returned to the family's home in Madison, he took post-Doctoral research work at the University of Wisconsin. Through his professors, he landed a job with a plastics company in Wisconsin. After 5 years there as Director of Research, he went into the Air Force Materials Division as a senior research scientist responsible for research on high temperature polymer systems.

That brought him up to 1962, when he decided to come to the Manned Spacecraft Center, where he now works as Chief of the Materials Development Section of Crew Systems Division. He is responsible for the development of flameproof non-metallic materials as well as other functional materials, fibers, plastics, and elastomers which are being used for extravehicular space suits, crew equipment, crew provisions, and spacecraft applications. He initiated and developed flame-proof materials as early as the Gemini program, and has been called the "Father of the Apollo flame-proof materials."

Since his work centers in the research laboratories, and since he is by nature a quiet man who shies from the limelight, he is relatively unknown, even at MSC.

He will be one of the experts taking part in the Materials for Fire Safety Conference, presenting his paper on "Nonmetallic Materials Development for Spacecraft Applications".

His family's factories are still being run by the communists, as far as Dr. Dawn has been able to find out. The whole chain of events which brought him to MSC must seem a bit unreal now. Developing materials to be used on the Moon is a far cry from the flour factory, wouldn't you say?!

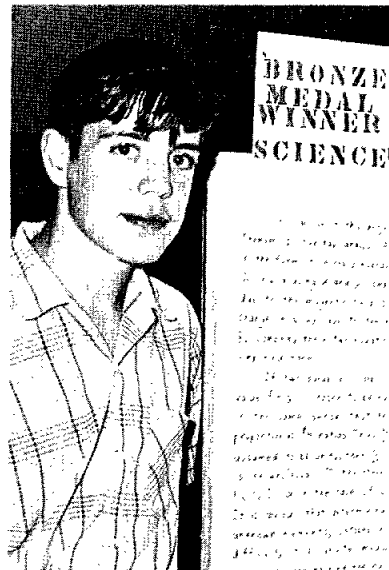


FREDERICK S. DAWN



JOHN SHELTON
4th Place

"Determining the Indices of Refraction of Gases"
Father- D. Harold, EG



DAN CHAPMAN
3rd Place

"Positive Ray Analysis Using a Mass Spectroscope"
Father-William B., TH



BARBARA RADNOFSKY
Special Award

"Moebius Strip and other Topological Problems"
Father - Matthew I., EC

MSC boasts 5 winners in Greater Houston Science Fair

Dads at MSC

The teenagers of five MSC families were named winners in the Eleventh Annual Greater Houston Science Fair held early this month at the Albert Thomas Convention & Exhibit Center. The five are John Shelton, Dan Chapman, Barbara Radnofsky, Randall Garriott, and Mark Low.

MSC took part in the Fair in two other ways: NASA-MSc gave five Special Awards, recognizing "creative scientific endeavor in aerospace research", and took part in the judging of two categories of the Fair — the NASA Science Awards, and the general competition.



RANDALL GARRIOTT
NASA Award

"Study of the Metabolic Rates of Mice"
Father- Owen K., CB



MARK LOW
2nd Place

"Orientation of the Human Body without the Aid of External Stimuli"
Father- George M., NASA Hq.

MSC hosts flammability conference

The Manned Spacecraft Center will be the site of an unprecedented confluence of experts in the field of fire safety, when it hosts the Materials for Fire Safety Conference on May 6 and 7.

Textile manufacturers, aerospace engineers, fire safety experts, representatives of domestic and foreign airlines, members of the FAA, professional societies, and industry associations will be here to see the results of NASA-sponsored research to reduce fire hazards.

During the two-day conference NASA engineers and fire safety experts will describe the use of such materials as nonflammable paper and paper laminates, glass fiber Beta fabric, flame resistant Velcro and fire-proof and fire-resistant synthetics such as Viton, Fluorel, Teflon, Nomex, Kapton, Durette, PBI, and others.

Perhaps the most well-known nonflammable product is called Fluorel. Fluorel can be foamed, molded, sprayed, or painted onto

paper, fabrics, wood and flooring or other materials, or it can be extruded into structural shapes. Combined with formulated ingredients it is nonflammable under spacecraft conditions.

Speakers at the conference will also discuss NASA's flammability testing, materials control techniques and test criteria. Other subjects will include problems of toxicity, odor and capability of various materials that have been developed and used in the space program. One major theme to be emphasized will be the "non-space" uses to which these specially-developed materials and techniques could be put—in the home, and in industry.

23 of the 26 papers to be presented will be given by MSC personnel. The MSC Directorates and Offices will be represented by papers read by the following men:

Engineering and Development: H. H. Jamison (EP), W. R. Downs (ES), R. L. Johnston (ES), R. W. Bricker (ES), H. F.

Kline (ES), J. H. Kimzey (ES), D. G. Sauers (EC) (2 papers), F. S. Dawn (EC), D. E. Supkis

"Please See Related Articles on F. S. Dawn, this page."

(EC), M. I. Radnofsky (EC), J. Naimer (EC), R. L. Jarboe (EC), T. J. Ballentine (EC).

Medical Research and Operations: E. S. Harris (DB).

Flight Operations: R. S. Bass (FL).

Reliability and Quality Assurance Office: C. J. Katskias (NB).

Apollo Spacecraft Program Office: M. W. Steinthal (PD), J. W. Craig (PD).

White Sands Test Facility: L. A. Schluter (RC).

Science and Applications: G. P. Primeaux (TH).

Flight Safety Office: A. W. Wardell (SF).

KSC will be represented by J. R. Reynolds; the Ames Research Center will be represented by R. H. Fish and J. A. Parker.

Your Job in Focus

POLITICAL ACTIVITY

The Personnel Office frequently receives inquiries regarding political activity of Federal employees. The Hatch Act and Civil Service Rule IV place certain restrictions on the political activities of Federal employees in addition to protecting them against the effect of political considerations that might damage their job security.

The general prohibition on Federal employees is that they may not take an active part in political management or in political campaigns of a partisan character. However, there are several permissible activities in which employees may participate, such as:

- You have the right to vote as you choose.
- You have the right to express your opinions on all political subjects and candidates as long as you do not do so in such a manner as to take an active part in political campaigns of a partisan nature.
- You may make a voluntary campaign contribution to any regularly constituted political organization.
- You may display a political sticker on your private automobile.
- You may wear a political badge or button.
- You may accept appointment to such positions as member of boards of education school committees, and boards of public libraries. If these offices are elective, you may not participate in a partisan political election.
- You may participate in a nonpartisan local election in which party designation, nomination, and sponsorship are completely absent. You may be a candidate for office in such an election and you may hold the office after election upon administrative approval.

New schedule for LSI tours

May 15 and 22 will be the last two Fridays for you to take advantage of the tours of the Lunar Science Institute building. Tours will be conducted on these days from 4 to 5 pm at no charge, as usual.

After May 22, tours will be announced only from time to time (close to major holidays such as July 4, Thanksgiving, Christmas, etc.).

The Roundup will keep you posted as to when the tours will be scheduled.

- You may petition Congress or any Member of Congress.
- You may sign petitions, including nominating petitions, but may not initiate them or canvass for the signature of others if they are identified with partisan political management or campaigns.
- You may attend political rallies and join political clubs, but you cannot take an active part in the conduct of the rally or the operation of the club or act as chairman, officer, committee member, or delegate. You may vote on issues, but you may not speak for or against them.



Brainstorms pay off for suggestors

Brainstorms paid off for 37 MSC suggestors recently, as they collected awards from \$25 to \$805 for their ideas about ways to save money or increase convenience at MSC.

Harold J. Clancy was top money winner, with \$805. His idea to use instruments to determine analysis of RCS contaminants, thus allowing the RCS to be completely flushed and purged in the field so

that further deactivation does not have to be performed at the contractor plant upon the return of the spacecraft, will save the Government an estimated \$20,800.

Roundup Swap-Shop

(Deadline for Swap-Shop classified ad is Thursday of the week preceding Roundup publication date. (8 days before publication). Ads are limited to MSC civil service employees and assigned military personnel. Maximum length is 15 words, including name, office code and home telephone number. Send ads in writing to Roundup Editor, AP3.)

REAL ESTATE

3-2-2 Beverly Hills, den, fenced yard, near schools and shopping, 5 1/4% loan, \$135/mo., 944-2838, Hopkins

3-2-2 Nassau Bay Colonial, fenced, corner, formal living and dining, paneled den, fireplace, custom draped, carpeted, 5 3/4%, 591-2340

4-2-2 CLC brick, across from school and pool, 6 3/4%, like new, Thunderbay, Dr., \$28k 488-2991

3-2-2 League City, brick, carpeted, drapes, central a/h, fenced, equity, \$158/mo., x3091, Wood, or 932-5663
3-2-2 Dickinson, colonial, 2000 sq. feet, corner lot, large den, fireplace, extras, 6 1/4% loan, low balance, 534-4771, Metz.

3-1 1/2-carport, Beverly Hills, 5 1/2%, \$98/mo., low equity, fenced, patio, new carpets, 946-4462

Resort lot on Padre Island, Corpus Christi, corner lot, beach access, 225x100', sale or trade, 488-4120, Hooper.

AUTOMOBILES

68 Firebird 400, power seats, turbohydromatic, air, power, service record, condition excellent 534-5866, Clawson
63 Peugeot 4-dr, good tires, air?, radio, heater, a real 'dog', \$150, 534-2437 (Dickinson)

68 Fiat Sport Coupe, air, am/fm, good condition, \$1595, x3844, Berry
68 Dune Buggy, vinyl top convertible, tread tires, 8k miles, \$1475, 488-3841 after 5 pm.

60 Chevy 2-dr, six cylinder, stick shift, excellent motor, radio, good tires, \$250 firm, x4411, Collins, 488-0216

62 Triumph TR-3, roadster, \$450, 487-0114, Nason

65 Chevy Impala hdt, 396 engine, power, air, very clean, \$1100 firm, x5165, Starnes, or 534-5397 (Dickinson)

60 Chevy 4-dr, good dependable work car, air, radio, \$150, 932-5267
67 Honda 300 Scrambler, 64k miles, windshield and 2 helmets, \$375, x3073, Tiedt, or 488-2679.

65 Plymouth Satellite, 383, factory air, 4-speed, limited slip, rally suspension, \$975, 488-3635, Campbell

64 Rambler American 330 wagon, a/c, god condition, \$500; also 67 Dodge Sportswagon Custom camper, V8, automatic, a/c, awning, sleeps 4, 877-1859, Rippey

68 Suzuki Laredo, 305 cc, high exhaust, 4.00-18 trials Universal, extra tire, extra gear ratios, 3500 miles, \$595; also 67 Fairlane GT-A, disc

brakes, vinyl top, factory tachometer, steel style wheels, excellent, \$1395, 932-2697, Schmitt

69 Ford Chateau Club wagon (van) fully equipped, 9800 miles, still under warranty, perfect condition, save \$1500, 479-2249, evenings.

67 Sunbeam Alpine, red, see at Balboa Apts, Payne, x3958 or 591-3850.

69 Corvette convertible, green, 350, air, positraction, automatic, am-fm, radial tires, power, 932-5622, Cobb

66 Honda, 65cc, new tags, helmet, \$160, x4501, Penn, or 488-3286.

62 1.7 liter Rebuilt Opel engine, complete to battery and transmission, 5,000 miles, \$25, 932-5292

MISCELLANEOUS

Flintlock musket, old Belgian made, 69 calibr, ideal Early American decorator item, \$48, 946-6660, Zetka

Folding mesh playpen, 8; bassinette w/pad, \$8; lawn fertilizer spreader, \$4, 932-3964, Gatlin

2-speed Wollensak (3M) stereo tape recorder-player, \$75, x3541, Casson

"Jewel" wigs, look and feel of real hair, no rolling, \$30 each, 645-6391, Norma, after 6 pm.

Craftsman 8" tilt table saw, solid dural extensions, 1/2 hp motor, mitre, rail guide, wood bench, \$70, x3941, Muhly, or GR1-3762

Golf clubs, 8 irons, 3 woods, good condition, \$50; M-1 30 cal. carbine and bayonet, \$75; 1903-A3 Springfield 30-06, excellent, make offer, 932-5267, Forsythe

22 Cal. Mark 10 target rifle, \$5; rhythm guitar and amplifier, \$50; x7505, Lizza, or 932-4663.

Infant car bed, deluxe model, excellent condition, \$10, 877-2483, Williams

Lady Kenmore Deluxe washer, 16 lbs, white, used 3 months, \$220; also Goldspot air conditioner, 16,500 BTU, 220v, used 2 months, \$200, 488-2184, Durand

Modern bleached mahogany coffee table, \$15; '63 Kenmore automatic washing machine, \$35; ironer with built-in stand and cover, \$40, x5841, High or 591-3254

16' cutter, 35 hp Evinrude, jackets, skis, 2 gas tanks, anchor, big wheel trailer, \$650; also 30" gas range, \$35; 932-3765

Lido 14, trailer, life preservers, excellent condition, \$1050, Wilson, 591-3886

Dynaco PAS-3X stereo preamp, less than 1 year old, superb condition, \$50, 488-3966, Musgrove.

Vox Super-Beattle amplifier, \$325, 644-0853, Franklin

Lamar 13' outboard motor boat, with motor, trailer, accessories, \$275, 944-2497, Westover.

Tanaka surfboard, 8'4", V-bottom, very good condition, \$75, 877-4922, Griffith.

5 mounted tubeless 6.50x13 tires, four are low-mileage ww, all \$25; also VW trailer hitch, fits early bugs, \$7, 932-5292

Ward's "Traveler" tent trailer, 470 lbs, licenses as utility, \$200 or best offer, 534-5057, Laughon.

Listings of used Lidos, where they are, condition, price, fleet activities, 877-3366, Hoover.

Lodgewagon wheel camper, fold-down type, everything but shower, 2 yrs old, excellent condition, 932-2836 after 5.

Polaroid 100 camera, flash attachment, portrait kit, UV filter, automatic timer, carrying case, excellent condition, \$65, 591-3628, Ward

68 Shasta deluxe 21 travel trailer, self-contained, all extras, used twice, illness reason for selling, \$3000, 487-1066, Smith

Lace short-sleeve wedding dress and 18 double veil, size 10-12, \$125; also piano, recently tuned, \$250; Boy Scout uniform, \$3.50, 591-2567, Loftus.

Aquarium equipment, good condition, worth \$100 new, sell for \$45, x3121, Adams, or 534-3243.

14' sailboat, fiberglass, cabin, 2 bunks, equipment includes anchor, compass electrical system, cushions, etc., \$1000 with trailer, x2848, Cree, or 487-1158.

Vox dual-pickup electric guitar, superb condition, includes sturdy case, \$185, x4247, Crain, or 468-4163

PETS

German Shepherd, female, show potential, excellent temperament, permanent shots, AKC, 4 months, \$175, x2391, Howard, or 482-7082

Lhasa Apso, 1 yr. old, unregistered female, all shots, housebroken, HU8-0284, Contella

Gentle horse for children, saddle, bridle, \$150; exercisor couch, like new, \$75; x6151, Schneider.

WANTED

German Shepherd puppy, will pay, x4045, Chao, or 591-4666 after 5.

Wood lath, 12" swing, 36" length, must be in good condition, x2501, Hogg, or 487-3656

Bar bell set; redwood picnic table and bench, x4776, Rosenbaum, or 474-4386.

Reader for elderly blind man, hourly rate, afternoons, near Clear Creek High School, 932-2708, Cope-land.

Ride from Timber Cove to Lunar Lab, x5341, Hetemann.

Baby crib with teething bars and lowerable sides; also a highchair and playpen, x4637, Hill, or 643-4677



Weight reduction begins at home

Everyone in ASPO concentrates so much on keeping down the weight of the spacecraft, that apparently the idea has been contagious—the girls have decided that weight reduction "begins at home". Every Monday for the past five weeks twenty of the girls have gotten together for a "weigh-in". They started with a combined weight of 3043 pounds. So far they've lost over 110 pounds.

MSC men don't work for their communities?? Don't you believe it!

Government employees are too often accused of being lackadaisical about their communities — accused of only taking the services provided by the community, never contributing to its operation.

While we can not speak for all areas of the country, we can say with certainty that this accusation has no basis in the NASA area. Some two dozen MSC employees serve in various elective positions in civic government, and scores more serve as appointees.

While government employees are of course prohibited from participation in any partisan political activities, they may be permitted to seek local non-partisan offices.

By filing the required "request for approval to engage in outside activity" form, before running for office, any legal questions can be cleared up.

In the NASA area, MSC men hold such posts as Mayor, Councilman (or Alderman), Commissioner, School Board Member, Board Member, and Director.

Most of them serve without pay, or with token salaries — \$1 per year being common. As one non-paid official says, "I get a salary, I think, in that I think the things I'm doing are worthwhile." Some positions do entail a small expense account, up to \$40 per month, or payment of up to \$25 for each meeting attended (about 2 each month) for some of the water control and improvement boards.

One man expressed the outlook of civic officials who work for NASA this way: "People are much more civic-minded than you might think. We've got lots of expert engineers and scientists at NASA,

guys itching to come up with better ways to do things, whether it be garbage collection, water treatment, or what-have-you. We'd like to apply space-age knowhow to city problems."

Apparently there are more and more people in the MSC area who are taking this attitude. In one municipality, every elective office is filled, for the first time, with men connected with NASA — all but one of them works at MSC, one works across the street.

How much time is involved in this work? The answer which Al Ligrani, Mayor of El Lago, gave is representative of many other officials canvassed: at first, he said, the job took a bit of time. In his particular case there was no real office system for filing, etc. That's one of the first things he corrected. Now that things are

running more smoothly the job requires much less of his time.

Alan Doyle, Business Manager of the Nassau Bay Homes Association (not an elective position, strictly speaking, since the area was not yet incorporated when Alan took office, and services were provided by the N.B.H.A., itself a non-elective board of trustees) faced similar problems. When he took the job of Business Manager some 2½ to 3 years ago, the area was in debt some \$87,000. At present the debt is down to \$5,000, in spite of all the capital improvements to the area. Administration of the area has become more routine, and the job demands less of his time.

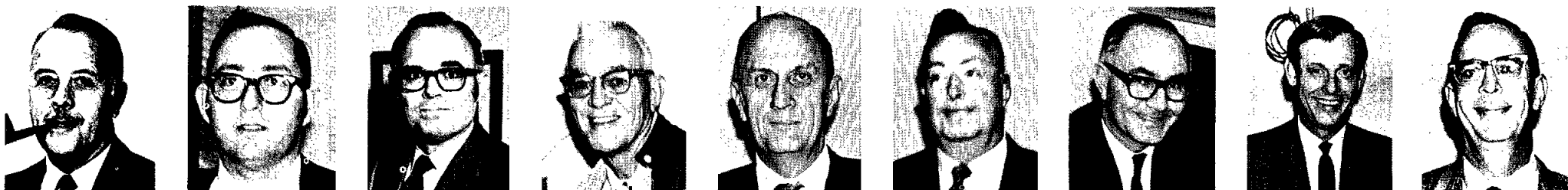
Seabrook's business office has been computerized, to speed administration.

Some offices require their incumbents to handle the day-to-day operations of the community — such things as mosquito spraying, garbage service, storm sewers, curbs, swimming pools, and the like. Members of many of the local water boards make decisions about water conservation, treatment facilities, flood control. And filling an office on one of the local school boards has its own unique demands.

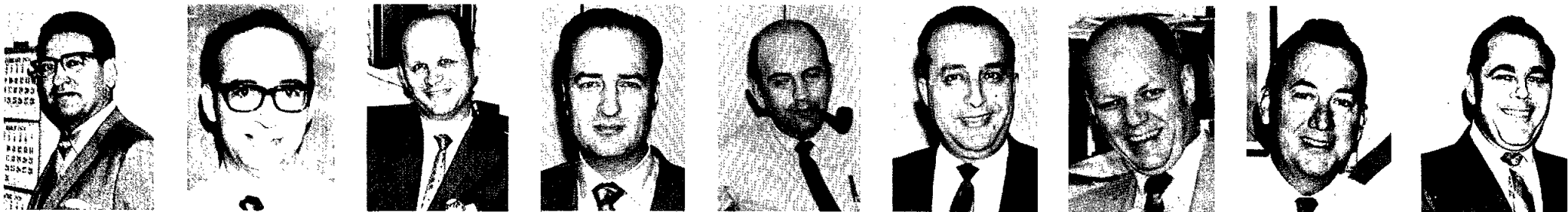
The work done by these men, and the many men like them in appointed positions, plainly gives the lie to the stereotype of blase' government employees. Their often thankless service speaks well for the contributions which MSC makes to its neighborhood.



Officials from left to right: William Chmylak, Councilman, Deer Park; Earl M. Crum, Board Member, Water Control & Improvement District #50 (El Lago); Alan F. Doyle, Business Manager, Nassau Bay Homes Association; James R. Fulton, Board Member, Sagmont Municipal Utility District; Charles M. Grant, Jr., Board of Directors, Clear Creek Basin Authority; Percy F. Hunt, Board Member, Friendswood Independent School District; W. W. Kemmerer, Jr., Board Member, Clear Creek School District; Alfred J. Ligrani, Mayor of El Lago; James E. Mager, Councilman, Friendswood City Council.



Left to right: Shell E. Martin, Mayor of Shoreacres; Louis W. McFadin, Board of Directors, Clear Creek Basin Authority; Robert B. Merrifield, Board Member, Water Control & Improvement District #83 (Nassau Bay); William A. Milam, Board Member, Clear Creek Basin Authority; Owen G. Morris, Board Member, Water Control & Improvement District #75 (Timber Cove); A. B. Olson, Board Member, Water Control & Improvement District #75 (Timber Cove); Joe M. Pirtle, Alderman, Seabrook City Council; George F. Prude, Jr., Councilman, Friendswood City Council; David T. Riley, Board Member, Clear Lake City Water Authority.



Left to right: Earl Rubenstein, Councilman, El Lago; D. R. Segna, Board Member, Water Control & Improvement District #60 (El Cary); Robert E. Smylie, Councilman, El Lago; Stanley F. Snipes, President, Water Control & Improvement District #91; Robert P. Soens, President, Water Control & Improvement District #60 (El Cary); Edward J. Stelly, Councilman, League City; James A. Stephens, Board Member, Sagmont Municipal Utility District; Robert L. Ward, Board Member, Water Control & Improvement District #83 (Nassau Bay); D. K. Warren, Board Member, Friendswood Independent School Board. Not available for photos: Robert P. Linberger, Councilman, Deer Park

Joint ERC-MSC Technical Program Review

A joint ERC-MSC Technical Program Review entitled "Recent Advances in Numerical Methods and Related Topics" will be held April 29, 30, and May 1, 1970, at the Lunar Science Institute near MSC.

Registration will be conducted from 8 to 10 am each day of the

Umpires still needed

Umpires are still needed for the MSC Softball League. If you're interested, contact Mike Christensen, x3271. Season starts May 4.

Review. There is no fee for registration.

Topics include the following: Astrodynamics I — Flight Mechanics and Related Topics; Astro-

dynamics II — Optimization; Astrodynamics III — Guidance and Control; Numerical Methods — Mathematics; Numerical Methods — Statistics.

T. Heil leads Jrs. in Hunter Safety

Mr. Terry Heil, Contracting Officer in the Program Control & Contracts Division, will be conducting a 12-hour course in Hunter Safety for anyone eleven years old and older, at the Clear Lake Junior Rifle Club, beginning Saturday, April 18. The classes will

meet each Saturday morning for four weeks, from 9 a.m. until noon. The fee for the course will be \$3.50. The Club is located just west of Horsepen's Bayou, on Bay Area Boulevard. Call either Terry Heil, x2331, or Tom Ross, 474-2041,

Chess Club Tournament

Join the MSC Chess Club now and play in the 1970 Club Championship May 7, 9, and 10. Registration and the first round of the five-round tournament is 7:30 pm May 7 at building 336, EAFB.

Table Tennis Club welcomes members

The newly-formed MSC Table Tennis club is now accepting memberships. The club offers organized play on weekly basis, coaching clinics and tournaments. Steve Jacobs, x4564, has all the information.

Editor Sally LaMere
Staff Photographer A. "Pat" Patnesky