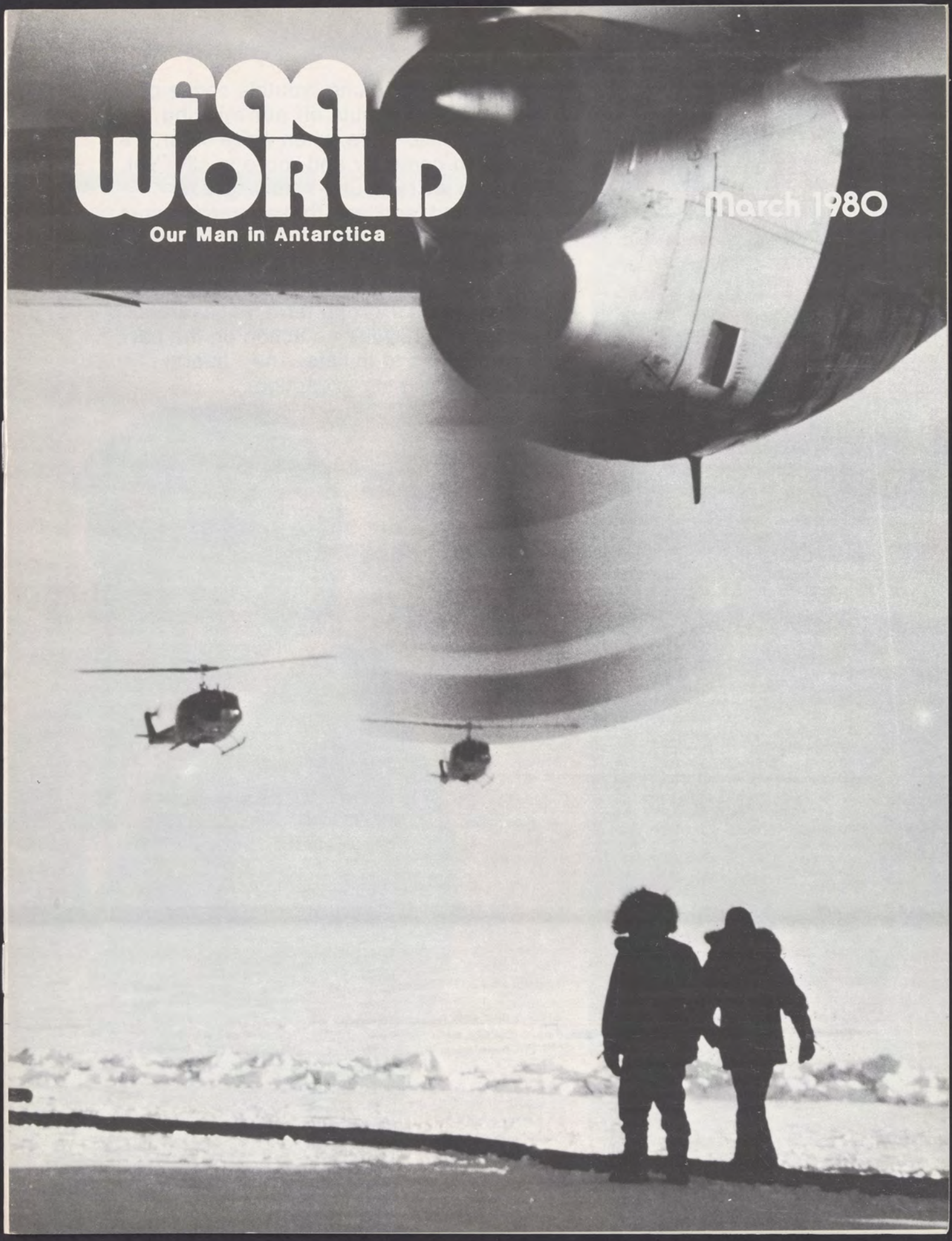
fm WORLD

Our Man in Antarctica

March 1980



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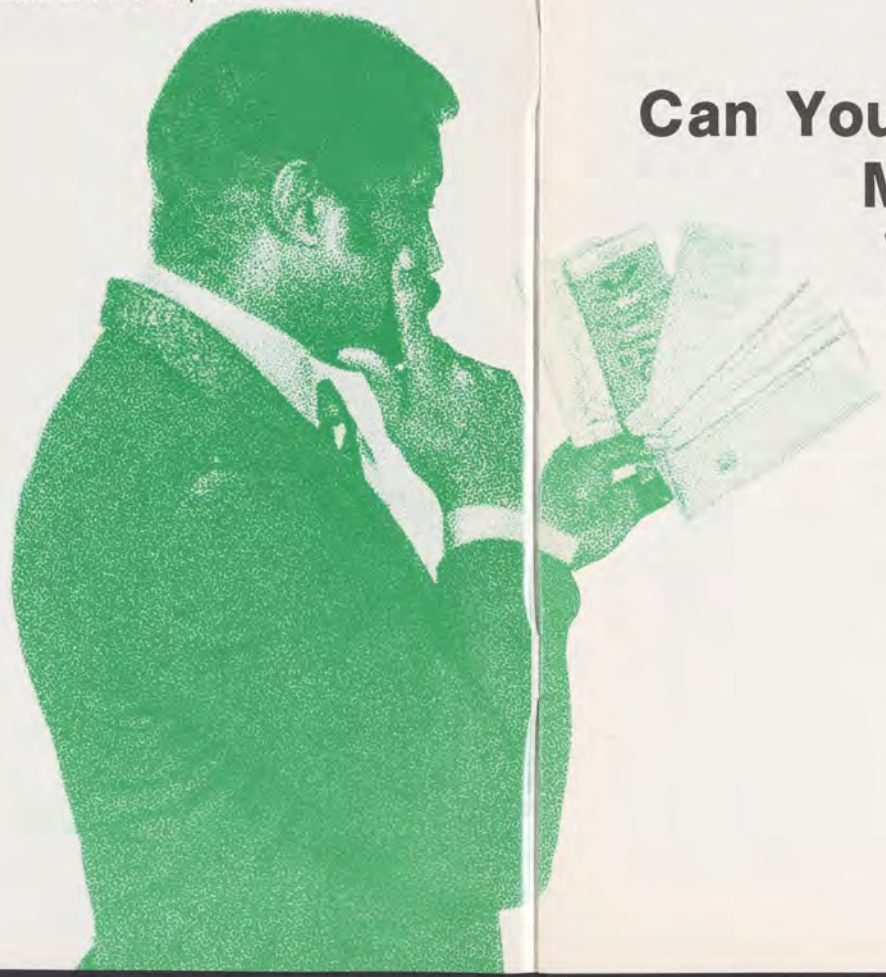
Cover photo courtesy of U.S. Navy

When we're young, youth's sense of immortality puts off our thinking about life insurance; when we're older, it's harder to come by and more costly. Yet, it's when we're young—starting our careers and families—that we need it most and can afford it least.

To avert the disaster that could befall those with this callow attitude, many employers offer group term life insurance policies that require no action on the part of employees to initiate. The Federal Government is no exception.



Can Your Family Make It Without You?

By Len Samuels

REGULAR INSURANCE

When you enter Federal service, unless you sign a waiver, you receive a certificate for the Federal Employees Group Life Insurance Program (FEGLI). This "Regular Insurance," for which you pay two-thirds of the cost, or 25.5 cents per $1,000 biweekly, and the government one-third, provides a face value of $2,000 more than your base pay rounded off to the next higher thousand. The minimum insurance is $10,000 and the maximum, $60,000. The amount changes automatically as your base pay does.

If, for example, you are a GS-9, Step 1, your base salary is $17,035 and your Regular Insurance is $20,000. Your biweekly premium, then, is $5.10, irrespective of age. Unlike private term life insurance policies where the premium goes up every five or 10 years at renewal because you're older, FEGLI Regular Insurance premiums rise only when your salary, and thus the face value of the policy, does.

Another distinction with private insurance is that no medical examination is required. However, if you did waive the insurance when you were hired, you have to wait a year, after which you may request the insurance, but only after having and paying for a medical examination from your own doctor. Also, you cannot reapply for the insurance after you've reached age 50.

Still another distinction: Some private policies waive premium payment when you are disabled. FEGLI premiums are not required for any pay period for which you receive no pay up to 12 months, for certain periods during which you are receiving compensation benefits and are unable to return to duty or after you retire following five years of creditable service or retire on disability.

Like other employer insurance but unlike private insurance you buy, the term of your policy expires when you leave the job—in your case, when you leave the Federal service other than at retirement.

If you lose your insurance for any reason other than your own voluntary cancellation or the termination of the group policy—such as when you leave the Federal service or enter active military service not covered by military leave—you may apply to convert the FEGLI term policy into some other form than term as an individual policy of equal or lesser value and without a medical examination.

OPTIONAL INSURANCE

To further meet some of your insurance needs, the government offers Optional Insurance. There is only one face value—$10,000—and you pay its full cost, which, like private policies, is predicated on your age (see table).

Though higher in cost than the

FEGLI OPTIONAL INSURANCE COST
(biweekly)

Under age 35	$0.60
Age 35 through 39	1.00
Age 40 through 44	1.70
Age 45 through 49	2.40
Age 50 through 54	3.50
Age 55 through 59	7.50
Age 60 or over	9.00

average private term policy because of retirement, accident and premium-waiver benefits, Optional Insurance biweekly premiums appear nominal through most of your career as they advance through five-year age groupings, but actually are getting fairly expensive in your later years. This is generally the case with term insurance—one argument for purchasing whole-life insurance at an earlier age, because the premium doesn't jump when you reach a high-risk age.

Premium payments are waived when you are in a leave-without-pay status for up to a year, but not when you are retired and under age 65.

Note that you can't obtain or keep the Optional Insurance without the Regular.

Similar to the Regular Insurance, if you lose your Optional Insurance—such as when you leave the Federal service or retire and do not wish to continue this kind of policy—you may apply to convert it to another form.

Both the Regular and Optional policies provide accidental death and dismemberment coverage, which doubles the face value of the policy. In the example given earlier, accidental death would result in a payment of $40,000 under the Regular policy and $20,000 under the Optional. The loss of two or more hands, feet and eyes through an accident would bring $20,000 and $10,000, respectively, and a single loss would pay $10,000 and $5,000, respectively.

The amount of your life insurance on both policies is paid regardless of how you die, but the accidental death and dismemberment provisions have standard exclusions, including suicide, self-inflicted injuries, war and insurrection.

WHEN YOU RETIRE

One of the bonuses of FEGLI to contrast with private term insurance is that you can keep your insurance into retirement partly without having to pay the premiums. When you retire, the life insurance can follow you if you don't elect to convert it to whole life, but not the accidental death and dismemberment provisions.

To carry the insurance into retirement, you must have at least five years of creditable service and have been insured for the five years immediately preceding retirement or all periods of service for which insurance was available to you if for less than five years.

If you retire on an immediate annuity or because of disability, both policies will continue at full face value. The Regular Insurance will be free. The Optional Insurance's premiums will continue, being deducted from your annuity, until you are 65 years of age, after which the Optional Insurance will be free, too.

With both policies, however, at age 65 the face value will begin to decline at the rate of two percent per month until it reaches 25 percent of the value they had at retirement. For our example employee, assuming the same grade and step at retirement, the residual values would be $5,000 and $2,500.

THE PAYOFF

Your beneficiary must send in a claim to your employing office with proof of your death and of his or her right to payment within one year of your death if your designated beneficiary is to receive the benefits. An accident resulting in the loss of life, limb or eye must be reported within 20 days and proof of the loss within 90 days.

The insurance proceeds are normally made in a lump sum, but the beneficiary may make arrangements for one of four other options:

Interest payments—the principal left on deposit for up to 30 years with monthly or annual payments of accrued interest only. Withdrawals of at least $500 of principal are permitted.

Installments—Monthly or annual payments of principal and interest over periods of from one to 20 years.

Survivor payments—Monthly payments for either 10 or 15 years on a fund of at least $6,000. No withdrawals are permitted.

Life income—Monthly or annual payments guaranteed for lifetime and based on age of the claimant.

At the beneficiary's death, any remainder of the amount originally payable would be paid to the contingent, or second, beneficiary in a lump sum.

Speaking of beneficiaries, how many of you realize that if you have changed agencies in the government, any designation of beneficiaries that you may have made earlier has been cancelled? At each agency, you have to complete a new Standard Form 54, unless the standard order of precedence suits you. You may have other reasons for updating your designation of beneficiaries, such as marriage, divorce, death of a beneficiary or your own whims.

The standard order of precedence will suit most employees: widow or widower, child or children in equal shares, parents in equal shares, the executor or administrator of the estate and the next of kin according to the laws of the state in which you live.

The Insurance Menu

Different types of insurance serve different purposes. As the article above points out, for simple protection of your family and for the most for the least out-of-pocket expense, level term insurance is the policy of choice. However, other types may be better suited to specific needs. Here's a rundown on the major types.

Term Insurance

Level term insurance: The face value of the policy remains constant, as does the premium for the duration of the term, which may be one, five or 10 years. (There are shorter term policies, too, such as flight insurance.) If you renew the policy, the premium is adjusted upward based on your current age.

Within this category, policies may be renewable or nonrenewable, convertible or nonconvertible.

Policies that are renewable usually are so up to age 60, the exception being group insurance like FEGLI. But at that age, individual policy premiums are getting prohibitive. Nonrenewable policies expire at the end of the term, and you would have to apply anew to regain the insurance. Convertibility means your having the option of changing the term policy into a form of whole life, with premiums set at the age of conversion.

Declining term insurance: Here, the premium is fixed for the term, but the face value declines. This kind of policy should provide a lower premium than level term and is useful for paying off a mortgage in case of your death. However, since the decline may be too rapid in the face of inflation and will at some point give you less coverage for the premium paid, a better approach, if you can afford it at the time, is to take out level term insurance to cover this expense and drop it at the conclusion of the term when it's no longer needed.

Deposit term insurance: The first year's premium is higher than the rest of the term and is called the "deposit," which earns a return, making it a hybrid with whole life. However, the interest earned may not offset the premiums enough to make it a good buy, and you will take a loss if you drop the policy early.

Whole-Life Insurance

The character of all whole-life policies is that the face value and the premium remain constant as long as you hold the policy and that the policies have a cash value that you pay for in your premiums.

Straight life insurance: As with all whole life, the premium is fixed at the time you take out the policy, and you pay it as long as you live. If you cancel the policy, there is a surrender value. Since there is a cash value, you also can borrow against it, usually at a lower rate of interest than the banks charge. It represents a form of enforced saving, but the rate of return is lower than you can obtain elsewhere. Its major advantage to you is that it is insurance you can carry into old age at the same cost as when you first took it out. For people in high tax brackets, whole-life insurance can also function as a tax shelter.

Paid-up life insurance: In this policy, you pay the premium for a fixed number of years—20 or 30—but the coverage goes on until your death. The advantage is that you pay the premiums while you're working and do not have the expense in your retirement years. However, the premiums are higher than straight life.

Endowment: A still higher cost form of insurance, this policy runs for a fixed length of time—20 years, for example—at which point, if you have survived, the face value is paid. During the 20 years, the policy functioned as insurance; at the end, it functions as an annuity for you. It could be made payable, say, to your child so as to provide funds for college or setting up his own home or business.

Insurance policies are available as participating or nonparticipating policies. A participating policy pays dividends and, as a consequence, usually has higher premiums. Generally—but not always—the dividends offset the higher premium cost, and the Internal Revenue Service counts them as nontaxable partial refunds of premiums. Participating policies are usually the better buy.

THE FUTURE

Of all Federal employee benefits, life insurance benefits appear to have the best chance for improvement in the foreseeable future because many of the costs of improvement can be offset by refining the premium structure and increasing earlier participation by more employees.

For the most part, insurance legislation in the first session of the 96th Congress had Administration support. A House bill (HR 3448) has carried over into the second session and, together with an Administration bill, is expected to get some Congressional attention this year.

What is proposed is higher Regular Insurance for younger employees, the opportunity to purchase Optional Insurance up to five times your base pay, permitting family members to buy insurance at Federal rates, boosting the residual insurance after age 65 to 40 percent of its original face value, increasing the government's share of the Regular Insurance premium to 40 percent and—to lower or hold premium rates in check—requiring premium payments on Regular Insurance between retirement and age 65. These improvements could be financed by the increased participation of younger employees, from the $2 billion insurance program reserves, economies like the elimination of the $6 million premium tax paid to the states (unneeded because the program is a self-insurance plan) or increased premiums.

How much employees will get remains to be seen.

HOW MUCH IS ENOUGH?

If you sit down and figure out how much insurance you need to satisfy all your plans for your family, you're likely to discover that you can't nearly afford it.

even if you're single, there can be a need for insurance

But this estimate is necessary, and you should do it to measure what your family will need, how close you can afford to come and which parts of the plan can be trimmed. You may also discover that you have more resources than you believed.

Even if you're single, there can be a need for insurance, although a smaller one. There are funeral costs, perhaps final medical costs and loans or other debts to avoid saddling your family with.

With an immediate family, if there are young children, you are already in need of as much financial protection as you ever will be. The children will have to be supported for a long time. A homemaking spouse will, too—certainly at least for an adjustment period after you're gone. If the spouse chooses to go to work while the children are still very young, then there will be babysitting or day-care costs that will have to be accommodated. Also, the spouse's job skills may not be very marketable, resulting in a lower income at first, sometimes barely offsetting the day-care and job costs, like lunch and transportation.

If the family is older, there's a shorter period of child support, but the spouse may find it even more difficult to renew a career with adequate earnings.

In both cases, you may want to provide for college educations for your children, which may be much more expensive than you estimated at the time you first took out insurance.

If both spouses work, it would be desirable for both to be insured, since you may have been living on both incomes. Even if the homemaker doesn't work at a job, you may have to consider the costs of final expenses and hiring a homemaker.

Each person has to make some assumptions about the surviving family's lifestyle—remarriage, remaining in your home, income prospects, educational needs, adjustments for inflation and even your spouse's retirement.

The February 1980 issue of *Consumer Reports* has an excellent article on evaluating your insurance needs. Below are some of the points to keep in mind in estimating your requirements.

Realizing that the proceeds from life insurance may be only part of what you leave your family, you may have to allow some funds to pay estate taxes. For most Federal employees, Federal estate taxes will be of no concern because there is an exemption of over $160,000, which rises to over $400,000 if everything passes to your spouse. However, state laws vary; some will tax from the first dollar.

You need to allow money for probate of your will. A ballpark estimate of the cost is about four percent of your assets, exclusive of life insurance proceeds, which, not so incidentally, are not taxable.

There are funeral costs to be considered, which *Consumer Reports* suggests averages about $2,000, and an allowance for uninsured medical costs for a terminal illness.

If you're not carrying credit life insurance on auto and personal loans, you'll have to plan on the funds to pay off these debts along with installment debts.

So much for the funds needed to settle your accounts. Now, turn to your family's living needs.

You'll need to plan on either paying off your mortgage, if you have one (or take out a mortgage-cancellation insurance policy), or allow money to meet the monthly mortgage payments—until the mortgage is paid off, until the children are out of the house or at some point where the spouse's income may be estimated to be adequate to carry the expense.

The unexpected does occur, so you have to allow for emergencies like uninsured medical expenses, house repairs and auto collision where the family would have to wait for recovery from the other driver. A recommended figure is $10,000.

Then there are just plain living expenses. A rule of thumb is that it will take 75 percent of your take-home pay to maintain your family's standard of living, and you'll have to multiply that to cover the period until your youngest child is 18 or until college is completed. Then, too, the figure you arrive at will have to be adjusted for inflation, which tends to outstrip the growth of your invested money.

While it's hard to gauge your children's educational requirements when they're very young, you won't want to foreclose their going to college, if at all possible, or leaving it to chance (read that as scholarships or spouse's

it will take 75 percent of your take-home pay to maintain your family's standard of living

adequate income or remarriage). And college costs are not the least of matters affected by inflation.

Finally, there's the question of a retirement fund for the surviving spouse. Much of the question revolves around age. Will there be enough years of working—from either shortly after your demise or after the children have left the house, if that's the plan—for the spouse to earn his or her own retirement benefits? In your case as a Federal employee, this could mean no additional funding on your part would be necessary if there's both a Civil Service survivor annuity and Social Security retirement benefits.

On the other hand, if you depart the scene at middle age or later, your spouse may not be able to earn adequate Social Security coverage because of age or infirmity. Yet, there may have been sufficient funds provided under other parts of this plan that were not tapped because you didn't die earlier, depending on the kind of insurance you carried.

WHERE THE MONEY COMES FROM

Cash and savings come to mind first, and they are especially important for the initial disruption caused by your death, before insurance and annuities can flow into your mailbox. Some funeral homes even require cash on the barrelhead before they'll give you your due.

Count the equity in your home only if your survivor plans to sell it. Any other real estate—business or vacation—should be counted since it is likely to be sold.

Securities that you may hold should be valued conservatively and not thought of for emergency money. As luck might have it, a panic sale will come just when the market is depressed.

Finally, life insurance and annuities that provide death benefits—these are the mainstays of your plan.

Add up the insurance you may already have: the Regular and Optional Insurance as a Federal employee, a G.I. policy from your military days, policies (usually small) from your membership in associations or other groups and any commercial insurance you purchased individually, including special-purpose policies like mortgage-cancellation insurance and endowment policies you may have taken out for the benefit of your children.

Remember that most group insurance, including the FEGLI policies, is term insurance and ceases if you leave the group or job, and it gets increasingly expensive as you grow older. Many term policies are not renewable when you reach age 65, which may or may not be of concern.

Also, declining term—like mortgage-cancellation insurance—reaches a point where the declining face value no longer is worth the premium. Initially the lower premium may be attractive—especially when you're young and really pinched for money—but the soundest advice would be to opt for level term insurance and drop the policy when the mortgage or other need no longer exists.

In general, level renewable term insurance appears to be the best bet when you're buying your own commercially. It gives you the most pure insurance protection for the least money at that time when you need it most and have the lowest income. That the premiums become excessive later in life may not be relevant, for you will have less need for a large amount of protection and can just not renew the policies.

You will need some protection later in life—for estate taxes, funeral costs, emergencies, living expenses and retirement money for your survivor. For that reason, your FEGLI and G.I. insurance is especially attractive at that time, and you will have the death benefits provided by your Civil Service annuity and, perhaps, Social Security. However, since you don't know what's around the corner—suppose you lost your Federal job before retirement—you will need to hedge your bets.

Secure investments are one way, but a business downturn just when your survivor needs the dividends or interest could hurt. Savings accounts or an IRA retirement account by your privately employed spouse (you can't open one), started early enough, are other approaches to provide old-age income for a spouse.

A convertible-up-to-age-60 feature in your term policies could provide whole-life insurance to carry into old age, but, if converted late, might be too expensive for your retirement budget.

A whole-life policy purchased young could be part of your raising-the-family program and, if you survive those years, also double as your survivor's old-age contingency. While more expensive than term insurance when you buy it young, whole life will impose a lower premium burden by the time you reach your later years. However, since part of your premium goes toward the policy's cash value, it is in a sense like a declining term policy—you've already paid up part of the value of the policy, so the insured portion of the face value is smaller, but you're still paying the same premium. In an accounting sense, the policy may be too costly in your later years, although not from an out-of-pocket standpoint.

In addition to your FEGLI insurance, no less a part of your overall insurance plan are the death benefits available from your Civil Service Retirement System and, if you qualify, from Social Security.

Most employees are aware that they can specify a survivor annuity at retirement, which will provide up to 55 percent of the annuity to which the employee alone is entitled. If you die before retirement, however, your spouse still will receive 55 percent of the annuity to which you would have been entitled if you had retired instead of died at that point in your career, except there is no reduction in benefit because you were

continued on page 13

Our Man in Antarctica

'. . . No Sky No Sides No Bottom'

By Pete Chesney

Mt. Erebus, some 40 miles distant in the background, will bear a cross in memory of the victims of the DC-10 crash similar to this one memorializing Capt. Robert Falcon Scott and his companions, who died here in 1912.

Investigators stand outside their orange tent city, close by the wreckage of the Air New Zealand DC-10 on Mt. Erebus on Ross Island off the coast of Antarctica.

The first thing we saw as we stepped from the Air Force C-141 at the Navy's McMurdo Station in the Antarctic was a rope with red flags every five feet that lead to the vehicles that had come to pick us up.

The rope was there to keep us from getting lost in the event of a whiteout. A whiteout—a spooky and disturbingly common phenomenom in the Antarctic—is a cloud of blowing snow that blanks out everything except objects just a few feet away.

And it was partly because of a whiteout and partly because of an apparent navigational error that we were there. We were from the FAA, the National Transportation Safety Board, the General Electric Company and the McDonnell-Douglas Corporation, and we were there—as representatives of the country that built the plane and its engines—to participate in the investigation of the crash of an Air New Zealand DC-10 on a glacier near the bottom of nearby Mt. Erebus last November 28.

The accident, in which 257 persons were killed, occurred when the aircraft, which was on a sight-seeing flight from New Zealand, flew past the wrong side of Mt. Erebus at too low an altitude and crashed into it at a little more than 1,300 feet after getting caught in a whiteout.

Our rendezvous point for the flight down to McMurdo was Christchurch, New Zealand, which I reached after a 30-hour trip from Washington. At Christchurch, the Navy supply facility there issued us our arctic gear. This consisted of sunglasses (to protect against snow blindness), three different pairs of gloves, a hat with earmuffs, a woolen muffler, two sets of thermal long johns, two sets of green Navy fatigues, a parka, winter pants with liner, woolen socks, a pair of black leather boondocks boots and a pair of snow bunnies—big, heavy, double-insulated white boots.

The Navy told me that I would have to take a physical and sit through a lecture on arctic survival. I got out of the physical by showing them my FAA first-class medical certificate, for which I had been examined only three weeks before. I avoided the lecture by telling them that they had taught it all to me before—in an Arctic survival course that I took when I was in the Navy.

Two scheduled departures for the Antarctic were cancelled, one because of bad weather at McMurdo and the other because of bad weather at Christchurch. We took advantage of the delays to interview the crew of the C-141 that had been in contact with the DC-10 shortly before the crash.

They told us that the DC-10 crew reported that they were in clear weather and were about to descend to 6,000 feet. It was the last communication from the crew.

When we finally did take off for the five-hour flight to McMurdo, we found that not much had changed from World War II and Korea. We were jammed in along with cargo and, to our dismay, learned the hard way that the Air Force still uses the same old canvas bucket seats, the same old box lunches and probably the same old coffee.

Once we were on the ground at McMurdo, the waiting vehicles took us from the airstrip to the station itself, a distance of about five miles. It was summer in Antarctica at the time, and the temperature was a "balmy" 25 degrees Fahrenheit.

The station, which consists of about 40 buildings on the rugged slopes of an extinct volcano, is not a military base but rather a support base for the U.S. National Science Foundation's research projects there. It has a population of approximately 1,000 persons during the summer months and about 75 "winter-overs" during the long winters.

The main building is a large three-story structure containing the mess hall and sleeping quarters. Our rooms, which we used when we weren't camping out at the accident site, were warm and comfortable. But before we could use them we had to go to our first briefing and organizational meeting.

It was here that we met Ron Chippendale, Chief Inspector of Air Accidents for the New Zealand government and head of the six-man investigation team from New Zealand (three from the New Zealand government and three from Air New Zealand).

He had been flown to the accident site by helicopter but had been unable to land because of high winds. Three "Mountain Men" had been let down to the site by winch, however, and they reported no signs of life.

The "Mountain Men" are members of a volunteer group of mountaineers in New Zealand who are organized to respond quickly to go to the aid of mountain climbers in trouble.

The status of the investigation at this time was that the cockpit voice recorder and the digital flight recorder had been recovered. The group decided that it would be best to get the recorders back to the United States to determine if the tapes were readable and to do this as

Pete Chesney is an accident coordinator with the Accident Investigation Division of the Office of Aviation Standards. He has been involved in the investigations of air-carrier crashes in San Diego, Chicago, Portland, Mexico City, Athens and Tenerife.

A New Zealand policeman (left) and Pete Chesney methodically hunt for navigation instruments scattered among the crash debris.

A Navy helicopter at McMurdo Station on Ross Island is rolled out to prepare for takeoff. The LN-1s serviced the investigation team and scientific expeditions in the area.

soon as possible. We wanted to do this for two reasons. First, if the tapes were unreadable then a more detailed investigation would have to be conducted at the scene under adverse conditions. Secondly, the additional personnel brought about by the accident were taxing the accommodations at McMurdo.

Chippendale said he had two men working at the site plotting the wreckage and that they would be brought back the next day, weather permitting, and we would go in.

The American team was divided into three groups. Alan L. Crawford, head of the National Transportation Safety Board's Los Angeles office, and Capt. C. N. Hammett, airline engineering pilot for the Douglas Aircraft Company, would document the cockpit. John Moehring, chief consulting engineer for the General Electric Company, and Lyle A. Wright, director of design engineering for commercial projects for Douglas, would document the engines. Steve P. Lund, senior flight safety engineer for Douglas, and I would retrieve navigation instruments and any other information that was not retrieved by the others.

The next day, December 4, was spent in being briefed on the rudiments of glacier climbing by a Mountain Man and getting proper equipment for the mountain weather. This additional gear consisted of a liner for the parka, ski goggles, woolen pants, crampons, ice axe, balaclava (a woolen ski mask) and a back pack.

Our time to depart came at 10:00 a.m., December 5. Lund and I went to the helicopter hangar as they were preparing to bring the chopper, a five-seat Navy LN-1, out. The takeoff was uneventful.

We had the earphones and were able to eavesdrop on the crew. There was a debate as to whether we could make it over the saddle due to weather, and it was music to my ears to hear the Navy pilot say, "Well, whatever, but I am not planning to become a hero." We kept on going, however, and I could just barely see the mountain on the right and nothing to the left. There was a complete whiteout, no sky, no sides, no bottom—weird. We broke out on the other side of the mountain into the bright sunlight.

We landed on a helipad near the camp site and were directed by the Mountain Men to a tent city. There were 13 two-man tents and two five-man tents; one was for cooking and the other for supplies and eating.

We were given further lessons on how to properly carry the ice axe: on the upslope side with the point back. In addition, we were taught "body-arrest." This procedure is used to stop you when you slip on the ice, even wearing crampons (which we did), and start sliding down the glacier with nothing to stop you but wreckage, crevasses, deep snow or rocks after you fall off a cliff. It calls for rolling over on your stomach and digging in the point of the ice axe to stop the slide.

We were further instructed never to go out alone and to notify the cook, who was always at the camp, whenever leaving, to take all your clothing, except the excess, with you, to keep an eye on the weather and never to work up a sweat or get your clothes wet. They would freeze and so would you in the near-zero temperatures at the accident site.

We deposited our excess gear in the "Investigator's tent" and were led off by our Mountain Man to the accident site. In order to get to the impact point, we had to cross a crevasse that was narrow but 200 feet deep. As we approached it, I lost sight of the wreckage several times as whiteouts moved in and out.

The aircraft had impacted in a 10-degree nose-up angle against the 17-degree slope of the glacier. From that point on, the aircraft disintegrated as it slid up the mountain, leaving a trail of wreckage at least 2,000 feet long.

That night, we ate a good, solid hot stew and had a good bull session before turning in for the night. I made myself as comfortable as possible sitting on a folded up tent and, using my axe as a back rest, tried to catch a nap. A Mountain Man came by and said that there should be room for me in a tent and disappeared. In a short while, he returned and pointed me in the right direction. I crawled into it and made my way to a pad where I collapsed, not knowing who my tent mate was. At 5:30 in the morning, I was wide awake and decided to get a cup of coffee. As I was leaving the tent I heard a voice say, "There's a sleeping bag for you in the corner." "Thanks," I said to myself.

The weather was unpredictable. If it was good at the site, it was bad at McMurdo, and once when both were good, the helicopters were either down

Equipped for the polar rigors, accident coordinator Pete Chesney points out a feature on the mainland of Antarctica with an ice axe.

Returning to their tent city from the crash site with bags of evidence are (from the left) a New Zealand policeman, a Mountain Man and a U.S. Navy diesel engineer and paramedic. All carry the ubiquitous ice axe necessary on hard-packed glacial ice.

The Frigid Desert

From Antarctica, The Last Continent, by Ian Cameron:

"The Southern Continent is a desert, with an annual precipitation fall of less than 5 cm. per year, and there may well be places close to the Pole where snow has never fallen.

"Antarctica is by far the coldest place on earth; weather stations have reported temperatures of -88° C, more than 20° below those recorded anywhere else. In this sort of cold, if you try to burn a candle, the flame becomes obscured by a cylindrical hood of wax; if you drop a steel bar it is likely to shatter like glass; tin disintegrates into loose granules; mercury freezes into a solid metal; and if you haul up a fish through a hole in the ice, within five seconds it is frozen so solid that it has to be cut with a saw.

"All who have set foot in Antarctica agree that its predominant and most malevolent characteristic is wind. When we wintered in Adelie Land, the wind on 5th July blew non-stop for eight hours at an average speed of 107 mph; gusts were recorded of over 150 mph; and the average wind velocity for the month was 63.3. In these conditions, it was possible to stand for no more than a few seconds, and then only by leaning forward at an angle of 45°!"

for maintenance or off on a supply trip to one of the scientific expeditions. We later learned that these scientists had to go on half rations because the helicopter had been busy at the crash site. There were four helicopters—one was awaiting parts and one of the others seemed to be down for routine maintenance. They never sent one out on a mission unless there was another standing by for Search and Rescue (SAR) duty.

And we had our shortages, too. One of them was the alcohol we used for cooking fuel. If we had run out completely, we would have had to eat cold food and would have had no water, for there was no liquid fresh water at the crash site. And the only way to get drinking water was to melt the ice with the fuel.

Our time was spent in going over the wreckage time and time again. One never knew when one might find the one clue that was the key to the accident. Moehring of G.E., for example, worked continuously gathering engineering data and recording the extensive damage to the engines.

Good news—Saturday evening the helicopters were flying again. Our number two group left about 10 p.m., and we were next to leave shortly after midnight after three nights at the site. The sights we saw were grisly and heart breaking (for a pilot to see a broken plane) and, at the same time, awesome and beautiful.

Sunday and Monday were given over to progress meetings, each member giving a report on his findings. We were relieved to learn from Washington that both recorders had been functioning properly and that they were getting excellent readout data. This gave us a sense of relief knowing that we would not have to return to the scene and dig in the fuel-saturated snow and ice for more instruments.

We returned our arctic gear with gratitude, because we certainly would have been miserable, and possibly injured, without it.

We departed McMurdo on December 11 in a New Zealand Air Force Hercules C-130. The same bucket seats, the same coffee, the same box lunch—only the trip was longer by two hours, putting us in Christchurch at 2:15 a.m. I left that beautiful city at 4:15 p.m. for Auckland, N.Z., where I would meet with Crawford and Chippendale the following day.

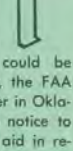
A last meeting was held on the 14th, and the last of the U.S. Investigation Team departed that evening for Los Angeles. I returned to Washington, having been gone for 17 days.

We had done our job; now the determination of cause was in New Zealand's hands.

SMALL WORLD

LET'S WAIT FOR THE MOVIE . . . All of a sudden, it's exciting and glamorous to work for FAA. It's getting so you can't pick up a paperback book at the drug store anymore without finding an FAAer in the hero's or the villain's role. Last month, for example, we reported on a new book that detailed a typical hum-drum day in the Miami control tower—i.e., controller runs amok, takes the Transportation Secretary hostage and imperils the safety of a Concorde flight. Now comes another novel ("Free Fall") about an FAA inspector who apparently has not gotten the word about the Administrator's stepped-up enforcement program. Instead of occupying his duty hours tracking down reckless pilots and unsafe operators, he's off in Montana somewhere chasing a D. B. Cooper-style hijacker who has made off with $750,000 in small bills. You see, the inspector was the hijacker's sergeant in the Green Berets and taught him everything he knew about guns and karate and stuff like that there. So, the way we see it, he has this sense of social responsibility that impells him to track down the hijacker and bring him before the bar of justice. We just hope he's using annual leave for all these goings on, or maybe comp time.

15¢ SAVED IS 15¢ EARNED . . . Out in the heartland of America, the Federal Government worker is considered a prolific spendthrift who devotes most of his/her time on the job to devising new ways to squander the public monies. Nothing, of course, could be farther from the truth. In fact, the FAA Depot at the Aeronautical Center in Oklahoma City recently sent out a notice to agency facilities soliciting their aid in recovering the Klimp fasteners used on wooden boxes. The notice pointed out that these spring fasteners (see drawing) cost about 15 cents each and are going out faster than they can be recovered. "This adds up to a large sum of money the way they are being used," the notice added, "and with your help and cooperation, we can reduce this expenditure." So if any of you have any loose Klimp fasteners lying around, box them up and ship them to AAC-431C. Every little bit helps.



LET THEM EAT CAKE . . . Union leaders who think FAA management is a tough nut to crack can thank their lucky stars that they don't have to deal regularly with the people who run the Kent County Airport in Grand Rapids, Mich. When controllers at the airport complained about being shifted to a new parking lot farther from the tower, they got precious little sympathy from the governing aeronautics board, although one member did propose a compromise solution. "Buy them roller skates," he quipped when told of the controllers' concerns, but nobody in the tower laughed or even smiled.

WORD SEARCH

By Barbara Andrews
ATCS, Fayetteville, Ark., FSS

This month, the puzzle is simpler, so we're going to make it more difficult to do. The subject is thunderstorm hazards. There are only 13 terms hidden in the puzzle, so we're not giving you a word list, although we are circling one to get you started.

The terms read forward, backward, up, down and diagonally, are always in a straight line and never skip letters. The terms may overlap, and letters may be used more than once.

See how many you can find and rate yourself according to the PER below. When you give up, the answers may be found on page 17.

13 terms—Walks on water consistently
11-12 terms—Walks on water in emergencies
9-10 terms—Washes with water
7-8 terms—Drinks water
Less than 7—Sleeps on a water bed

INSURANCE

continued from page 7

no less a part of your overall insurance plan are the death benefits available from your Civil Service Retirement System

under age 55 at your death.

In addition, your children are entitled to an annuity if they are under age 18 and unmarried, over 18 and incapable of self-support or are students and between the ages of 18 and 21. If the student's 22nd birthday occurs during the school year, the annuity continues through June 30.

Each eligible child will receive an annual annuity equal to whichever of the following is the least: 60 percent of your high-three-years salary divided by the number of eligible children, $5,232 divided by the number of eligible children or $1,728. These figures are for 1978 and do not reflect cost-of-living increases since. If your spouse does not survive you, different figures apply to the child annuities.

If you have Social Security coverage from working in the private sector before or after your Federal service, your surviving spouse is entitled to a $255 lump sum for burial expenses and a monthly benefit equal to yours if she is of full retirement age or 75 percent of yours if she is younger and caring for your children. A widower must have a child in his care to receive a 75 percent benefit or have been dependent to receive full benefits. Each child can receive 75 percent of your entitlement, as well, although the total family benefit is limited.

Another important factor in providing for your family is your health insurance. Not only can you carry your health insurance into retirement but also, if you die and you carried family enrollment, your eligible survivor can continue your benefits, paying the premiums from the annuity.

So, your total resources may not be as limited as you imagined, but be realistic in computing your family's survivor needs. You may trim some of the standard of living to which they are being accustomed—expensive vacations and a non-essential car will have to go—but they are dependent on everyday necessities. Odds are that you'll find your current assets won't match them by a long shot, especially under continuing inflationary pressures. The longer you live, however, the better your resources will look.

For now, your best bet is to balance your accounts with some more level-term insurance.

Scarcely a month after she received her license from the Fedration Aeronautique Internationale in the summer of 1929, Blanche Noyes entered the Women's Air Derby in her Beech Travel Air Speedwing. Despite mishaps enroute, she placed fourth in the competition.

Smithsonian Institution photo

She Made a Mark on Aviation

If anyone could be said to have made a "mark" during an FAA career, it would certainly have to be Blanche Noyes.

In fact, it would be more accurate to say "marks," because in her more than 35-year FAA career Blanche Noyes made about 75,000 of them all across the U.S.

It was she who spearheaded the air-marking program to paint the names of cities and towns on the roofs of buildings and on highways and fields as a guide to lost pilots.

Air marking may sound obsolete in this jet age when airliners and many other aircraft are equipped with sophisticated electronic navigation gear. But, actually, it's as up-to-date as Blanche Noyes herself, who lives in retirement in a Watergate apartment in Washington, D.C., and still remains actively interested in aviation and the FAA. Recently, for example, she came back to the FAA to help kick off the Combined Federal Campaign and regale the audience with her flying experiences in the early days of aviation.

The 99s, an association of women flyers that Mrs. Noyes helped to found in the 1930s, still has an active air marking program. And FAA, to a limited degree, is involved with such a program in Alaska where low-flying pilots still rely heavily on markings to guide them.

Mrs. Noyes' interest in air marking was sparked by a personal tragedy. In December 1935, her husband, Dewey, who had taught her to fly, was killed in a plane crash. They had first met in 1927 in Pittsburgh at a dinner honoring Charles Lindbergh, then touring the U.S. after his celebrated flight to Paris.

At the time, Blanche had absolutely no interest in aviation. She was pursuing a successful acting career in the theater, and, in fact, was in Pittsburgh starring in a melodrama called "White Cargo" when the dinner invitation came.

By chance, she was seated next to a handsome local airmail pilot by the name of Dewey Noyes, who spent the entire meal talking enthusiastically about aviation. Because he was so handsome, Blanche feigned an interest in aviation and, despite her fears, even agreed to fly with him. Within a year they were married. He soon taught her to fly and, with fewer than four hours of instruction, she soloed, becoming the first licensed woman pilot in Ohio and one of the first 10 women pilots in the U.S.

After that, she flew every chance she got and, in 1929, entered the Women's Air Derby (later to become the annual "Powder Puff Derby") from Santa Monica, Calif., to Cleveland. Flying a Beech Travel Air Speedwing, she had to make an emergency landing in the Arizona desert to put out an engine fire. On takeoff, she bent the landing gear and had to land on one wheel in Pecos, Tex., to make repairs. In spite of these problems, she finished the race in fourth place behind the winner, Amelia Earhart.

She soon became an aviation celebrity, acting as a demonstration pilot for aircraft companies and lecturer on aviation. She also promoted interest in aviation among business leaders, including John D. Rockefeller, Sr., who took his one and only airplane ride with her at the age of 91.

In 1935, after Dewey Noyes had taught her instrument flying, the two began planning an around-the-world flight. But those plans were shattered in December of that year when she got the news that Dewey had been killed.

She temporarily lost interest in aviation. But then, with Amelia Earhart's encouragement, she began to realize how many pilots lost in bad weather over unfamiliar countryside could be saved if communities around the country could be persuaded to put up some kind of markers.

From then on, air marking became her career. (See "FAA Women Pilots—Then and Now" in January 1980 issue of *FAA WORLD*.) When she went to work for the Bureau of Air Commerce in 1935, the goal of the bureau's national air-marking program was to divide the nation into 15-square-mile segments, with an air marker located in each square. That plan never succeeded, mainly because the bureau couldn't get the necessary funds to keep it going. So, Blanche, who was appointed an air-marking pilot for the bureau in 1936, and others had to fly around the country to drum up support from local chambers of commerce and other civic groups. Soon, the names of towns and villages were displayed on thousands of rooftops, fields and highways across the land.

Chief of the Air Marking Staff, Blanche Noyes served for 36 years in the Bureau of Air Commerce, Civil Aeronautics Administration and FAA until her retirement in 1972.

Smithsonian Institution photo

Blanche still found time for competitive flying. In 1936, for instance, she teamed with Louise Thaden to win the 1936 Bendix Air Race from New York to Los Angeles in 14 hours and 55 minutes. To both of them, the $7,000 prize money was far less gratifying than the satisfaction of beating the male competitors, especially the famous ones.

During World War II, the air-marking program was suspended. In fact, shortly after the Pearl Harbor attack, the War and Navy Departments, concerned that air markers might help enemy pilots, asked the Civil Aeronautics Administration to screen or obliterate all markers within 150 miles of both the Atlantic and Pacific coasts.

As soon as the war ended, however, Blanche and her co-workers, with help from the 99s, were back at work getting the old markers repainted and new ones added.

By the time Blanche retired on Jan. 1, 1972, as chief of Air Marking for FAA, more than 75,000 communities had been air marked for pilots. Many pilots whose lives were probably saved by air markings when they were far off course or dangerously low on fuel and desperately looking for an airport, never knew whom to thank for the unexpected help. But, many others did know who was responsible and commonly referred to Blanche as the "patron saint of pilots."

Blanche received so many trophies, cups, medals, plaques and other national and international honors in her 45 years in aviation that her apartment can hardly handle them all. Her honorary titles range from one of the "top aviator greats" and aviation's "Woman of the Year" to "The Grand Lady of Aviation." But, the honor she cherishes above all others is the fact that she was the first woman pilot ever hired by the U.S. Government. She thinks Dewey would have liked that best, too.

DIRECT LINE

Q **A pilot flying at FL 450 enroute from Point A to Point B is approaching Point B and is issued this clearance by an ARTCC: ". . descend to FL 330, maintain FL 330" (to comply with a letter of agreement with the adjacent facility). The pilot responded with a request to maintain FL 450 to conserve fuel. The pilot's request was forwarded to the adjacent facility and disapproved because of traffic. He is again issued the descent clearance, which he refuses. Then the adjacent facility advised us to hold the aircraft, and the pilot was cleared to make a 360-degree turn. This clearance was also refused with lengthy verbiage on the cost of fuel. The aircraft was then handed off and communications transferred to the adjacent facility. On callup to the receiving facility, the pilot was asked if he was declaring an emergency. His reply was negative, accompanied by why he would not descend until he was ready. Several aircraft were vectored to keep clear of this problem aircraft. The center that issued the clearances filed possible-violation forms with the appropriate Flight Standards District Office against the company, which has a long history of operational practices that have taxed the system at the expense of other users. The FSDO refused to process the violation because they contended that the pilot was within his rights to refuse these clearances and was not in violation of FAR 91.75. If this interpretation is correct, how can air traffic be controlled and safely separated?**

A FAR 91.75(a) states that "when the ATC clearance has been obtained, no pilot in command may deviate from that clearance except in an emergency, unless he obtains an amended clearance." This inquiry itself does not provide adequate factual background from which to base a legal judgment on the question of whether a violation actually occurred. Controllers are responsible for separating aircraft, while the pilot-in-command of the aircraft is directly responsible for, and is the final authority for, the *safe* operation of that aircraft.

Q **My question concerns the selection process for a GS-13 crew chief vacancy at an ARTCC Airway Facilities Sector. As I understand it, the selection list is made by the regional office and sent to the sector manager. The sector manager then selects a name from this list and sends it back for regional office and EEO council approvals. This process could be speeded up if the regional office and EEO would get together before the list is completed, omitting any name they could not agree on. Then, this list could be sent to the sector manager for final selection, permitting the manager to announce his selection at the same time he makes it. If the rules say this can't be, how can agency orders and regulations be changed?**

A The agency's Merit Promotion Program regulations are revised when management determines that they are no longer applicable due to changes in Federal regulations, if they are outdated or if they are inappropriate. You, as an employee, can bring to management's attention any regulations you believe are inappropriate when they do not benefit the efficiency and effectiveness of government operations and services, using the suggestion program, "Direct Line" or direct contact with the appropriate officials. In this particular case, there are good reasons for the review process described. Applications are reviewed by a personnel specialist, a field personnel specialist or an MPP panel of three individuals who have knowledge of the position. Candidates are rated on the quality of their experience, self-development and training, PER and awards. The best-qualified candidates are then referred to the selecting official. The selection is then reviewed by the Civil Rights Staff—which provides advice on civil rights and equal opportunity issues as they pertain to internal regional employment practices—and the regional Personnel Office—to assure that all personnel regulatory and legal requirements are met. For these reasons, the selecting official must not make commitments to any of the candidates. The notification of selection, including arrangements for a release date, is the responsibility of the regional Personnel Management Division. These review functions provide a checks-and-balances system that is necessary to preserve the integrity of MPP.

Q **In addition to Stage II, which provides radar advisories and sequencing of VFR aircraft, the definition of Expanded Radar Service—Stage III includes separation between all participating aircraft. When a pilot says "Negative Stage III," is he telling the controller that he does not want radar advisories, sequencing and separation, or is he only indicating that he does not want separation service? If an aircraft requests a Special VFR clearance to enter or depart a control zone, may ATC issue an SVFR clearance to the pilot if the weather reported for that control zone is VFR? The pilot may be requesting this clearance to allow him to operate at less than the VFR minimum distance from clouds when he is only a VFR-rated pilot.**

A When a pilot states "Negative Stage III," it should be interpreted by you as meaning that the pilot wants none of the Stage III services. Conversely, when a pilot does not state it, you should provide all of the services of Stage III (FAA Handbook 7110.65A, Air Traffic Control, Section 21, Stage III Service). You may only authorize Special VFR operations in weather conditions less than the basic VFR minima. In your example, the reported weather at the airport of intended landing or departure was VFR. Thus, the pilot's request for SVFR should be denied. Also, if the pilot reports weather below the reported VFR conditions, you should relay the report to the weather reporting station and assist the pilot in finding an alternate route of flight to maintain VFR minimum distance from clouds.

Q **Please define simultaneous operations and advise on the following: Our airport has parallel runways separated by less than 2,500 feet. Is it permissible to run simultaneous operations to these runways if small, large or heavy traffic is being intermixed on both runways?**

A Simultaneous operations are the operation of two or more aircraft arriving and/or departing the same or adjacent airports and for which procedures and criteria in Handbook 7110.65 permit them to be conducted at the same time, as opposed to sequentially. Each procedural paragraph of this nature specifically uses the word "simultaneous" in the paragraph and text. The handbook contains a number of provisions that apply to such operations on runways separated by less than 2,500 feet. For example, paragraphs 796, 1103 and 1104 could apply. The involvement of heavy aircraft could also require the application of one or more of the provisions of Chapter 6, Wake Turbulence. The question itself is not specific enough for the operation you have in mind to get a more specific answer.

Q **FAA Order 7210.3E, dated Oct. 1, 1979, Para. 241, Section b, has been amended by GENOT 9/166, Oct. 10, 1979, removing the requirement that team supervisors no longer have to rotate through all watches. Our facility has had five assistant chief/team supervisors for over 15 years, and now our chief is planning to follow suit and replace them with controllers-in-charge on the mid-watch. The duties and responsibilities on the watch have not changed. In effect, the station will have six team supervisors, not five. Section f of the same paragraph states that the controller-in-charge is to be used when supervisory personnel are not available. Is removing the team supervisor from the mid-watch making them not available? I don't believe this was the intent of the GENOT. Another item. The new position description for a supervisory controller, as well as the old one, makes no reference to the controller-in-charge, nor does the job performance standards or the performance evaluation. Why? What is the definition of "no supervisory personnel available"? This facility has used the controller-in-charge habitually over the past two years, even when supervisors are available to avoid overtime on the part of the team supervisors.**

A GENOT 9/166 corrected the wording of Para. 241 b. Inadvertently, the wording "team supervisor" was entered in the new publication of 7210.3E. The intent of this paragraph is to insure that under normal circumstances the basis for establishing five or more secondary-level supervisors (assistant chiefs) is strictly followed; namely, the requirement for such a supervisor to rotate through all watches. Insofar as the designation of a controller-in-charge is concerned, such a designation is appropriate whenever and for whatever reason a supervisor is not available. The position description and performance standards only make reference to major job assignments and responsibilities, and performance of controller-in-charge duties is not considered a major job assignment. Prior to Sept. 19, 1978, flight service stations called their first-line supervisors "assistant chiefs." With the issuance of Order 1100.146, Standard Organization of Air Traffic Flight Service Stations, these first-line supervisors are now called team supervisors, and second-line supervisors are called assistant chiefs.

Word Search Answer

puzzle on page 13

EFFECTS ON ALTIMETERS
HAIL
HAZARDS
ICING
LIGHTNING
LOW CEILINGS
LOW VISIBILITY
PRECIPITATION
SQUALL LINE
SURFACE WINDS
THUNDERSTORM
TORNADOES
TURBULENCE

The Dead Do Tell a Tale

By Covey Bean

"Dead men tell no tales," somebody once said in obvious ignorance.

But dead men, in fact, have contributed volumes of information to the Federal Aviation Administration—information that may prevent pilots and passengers in civil aviation from sharing their fate.

The man charged with collecting these facts is Dr. Bill Kirkham, a pathologist and chief of the Aviation Toxicology Laboratory in the Civil Aeromedical Institute at the Aeronautical Center.

Despite his title, Dr. Kirkham's work is not confined to microscope and test tube. He is a crash investigator, a medical examiner on a grand scale. The "Quincy" of air disaster.

He has been present in the aftermath of the worst airplane crash in the United States—273 killed in Chicago last May—and the worst airplane crash in the world—530 killed in the Canary Islands in 1977.

Every major airline accident in the last five years—San Diego, Portland, Evansville, Virgin Islands, New York, Madrid, Mexico City—has been the subject of his scrutiny.

He is the only pathologist in the world whose work is devoted to civil aviation, attempting to learn the causes of airplane deaths and, thus, finding ways to prevent them.

"It's unique," he conceded. "Being one of a kind is a good feeling."

Like most who deal with death on a regular basis, Kirkham is detached and matter-of-fact when he talks about it. A hundred bodies in a makeshift morgue become 100 sources of information, often providing more details than those who survive.

Did the victims die on impact or perish in fire? Did fire kill them? Or smoke?

The Daily Oklahoman, **December 23, 1979**

Photo by Bob Albright

Why did some live and some die? Could others have survived? What equipment worked and what equipment failed? The questions are as endless as the answers.

The findings of the FAA often lead to modifications that may prevent a similar tragedy in the future.

"That's the kind of thing we're shooting for," Kirkham explained. "That's the kind of benefits that can come from investigating an accident in this manner."

While other investigators concentrate on structural evidence in the wake of a crash, Kirkham probes the human factors.

He has performed autopsies on as many as 50 victims of a single crash, seeking clues in bits and pieces of tissue that might be overlooked with less thoroughness.

His laboratory work determines if drugs, alcohol or illness were factors. A charred windpipe tells him a person lived through the crash only to die by inhaling flames or fumes.

"We've made a lot of people aware that they could do a better job of investigating these accidents," the doctor said.

Working in support of local medical examiners, Kirkham also helps identify the dead, often an awesome task.

Personal effects—a ring on a finger, credit cards, hair color, size, anything at all—may be the key to identifying the dead.

Dr. Kirkham discovered that after the DC-10 crash in Chicago, so many personal items were found by a cleanup crew raking debris in the area that he plans making such a procedure a requirement before a site is released in the future.

The investigation of a major accident is no one-man show by any means, the doctor pointed out. More than 100 investigators may be involved, working under a team from the National Transportation Safety Board, the agency that is ultimately responsible for determining probable cause.

As an FAA pathologist, he said his efforts support the local medical examiners who are seldom ready for the magnitude of an air catastrophe.

"When it comes to an airplane, it's a whole new ballgame," Kirkham said.

He considers the crash of an airliner at St. Thomas, Virgin Islands, the most interesting of the major disasters he has studied, simply because 37 people died when they might have lived.

"Most of them survived the impact," he noted, "but there was a rapid spread of fire and toxic gases."

Kirkham said the plane landed long and hit an embankment, and one side was jammed against a building. Some passengers trapped inside knocked on a cockpit door begging for help, but died because an ax wasn't handy.

"It was very marginal," he said. "We had the problem of identification, we had all the injuries and we had to put the whole picture together."

Survivors and witnesses are interviewed in detail following a crash, but all facets of the investigation are pieced together for the final report prepared by the NTSB.

"An investigator can tell more than a person who was there," said the FAA's Lee Lowrey, "because we can get information from more than one point of view."

Crashes in which fatalities are avoided are of just as much interest to the FAA, Kirkham said, because they provide valuable information on evacuation systems and how other safety devices work.

He said the way stewardesses prepared youngsters for the Portland, Ore., crash some months ago is an example of something that proved successful. However, it was also learned the intercom systems did not work properly during the same pre-crash preparations, which may call for modifications.

Crashes involving small planes present the same problems on a lesser scale, but the FAA takes a look at each one.

"We have a very broad interest," Kirkham said. "We're learning what we can to improve the safety of aviation."

That is also the goal of research at the toxicology lab in Oklahoma City, where Kirkham directs a staff of 19 people whose day-to-day experiments reveal many potential hazards before they claim lives.

Learning whether a certain aircraft material gives off poisonous fumes when burned is knowledge that might save lives.

Sharing all of this information with others interested in aviation safety is another aspect of the FAA's laboratory operation.

But while this work is going on, Kirkham keeps coveralls, old shoes and an autopsy kit ready near his desk. He is apt to be departing at a moment's notice for a first-hand look at another aviation tragedy.

He flies, of course, if somewhat nervously.

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Gerald E. DeDecker, chief of the Cedar Rapids, Iowa, Tower, from the Des Moines, Iowa, Tower . . . **Donald D. Early,** chief of the Evaluations & Automation Branch, Air Traffic Division, from the St. Louis Tower . . . **Wayne A. Smith,** chief of the Plans and Programs Branch, Air Traffic Division, from the Wichita, Kan., Tower.

EASTERN REGION

Pasquale D. Codispoti, deputy chief of the Millville, N.J., Flight Service Station, from the Erie, Pa., Flight Service Station . . . **John W. Morgan,** chief of the Wilkes-Barre, Pa., Flight Service Station, from the Philadelphia Flight Service Station . . . **Richard H. Morgan,** chief of the Pittsburg, Pa., Flight Service Station, from the Charleston, W. Va. Flight Service Station . . . **Raymond L. Shannon,** area officer at the Washington ARTCC.

GREAT LAKES REGION

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NEW ENGLAND REGION

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NORTHWEST REGION

Richard J. Young, chief of the Bellingham, Wash., Flight Service Station, from the Seattle, Wash., Flight Service Station.

PACIFIC-ASIA REGION

Peter L. Ellena, manager of the Honolulu, Haw., Hub Airway Facilities Sector, from the Honolulu ARTCC Sector . . . **Gerald W. Hill,** chief of the Honolulu Flight Inspection Group, from the Flight Standards National Field Office at the Aeronautical Center.

ROCKY MOUNTAIN REGION

Alvin L. Johnson, chief of the Rawlins, Wyo., Flight Service Station.

SOUTHERN REGION

Armand G. Estrada, chief of the Bowman Field Tower in Louisville, Ky., from the Greater Cincinnati Airport Tower in Covington, Ky. . . . **Richard S. Gersley,** chief of the Isla Grande Tower in San Juan, P.R., from the Greenville, S.C., Downtown Tower . . . **Leo R. Wiggins,** chief of the Huntsville, Ala., Tower, from the Birmingham, Ala., Tower.

SOUTHWEST REGION

George W. House, chief of the Tulsa, Okla., Flight Standards District Office, from the Tulsa Air Carrier District Office . . . **Earl H. Wolfe,** chief of the Air Traffic Operations Branch, from the Evaluation Branch, Air Traffic Division.

WESTERN REGION

Howard W. Hinton, chief of the Riverside, Calif., Tower. from the Fullerton, Calif., Tower . . . **Richard Huff,** assistant chief at the Los Angeles ARTCC in Palmdale, Calif., from Regional Air Defense Liaison Officer at Luke Air Force Base, Ariz. . . . **James E. Kemple,** chief of the North Las Vegas, Nev., Tower, from the Las Vegas Tower . . . **Juan O. Taisague,** chief of the Santa Barbara, Calif., Airway Facilities Sector Field Office, from the Edwards Air Force Base, Calif., RAPCON Sector Field Office.