

RFD-1 Reactor Reentry Test Called Success by Scientists

On May 21, a Sandia-designed reentry vehicle carrying a dummy reactor was hurled aloft from Wallops Island, Va., on a four-stage Scout rocket. A suborbital trajectory carried it approximately 750 miles downrange to plunge into the ocean below Bermuda.

The flight, called RFD-1, was to examine the behavior of a satellite-borne reactor and fuel elements when subjected to reentry heating and verify the effectiveness of safety features incorporated in the reactor design.

The SNAP program (Systems for Nuclear Auxiliary Power) is sponsored by the AEC to meet future needs of electrical power for instrumentation of space vehicles, satellites, space stations, and possibly for space propulsion.

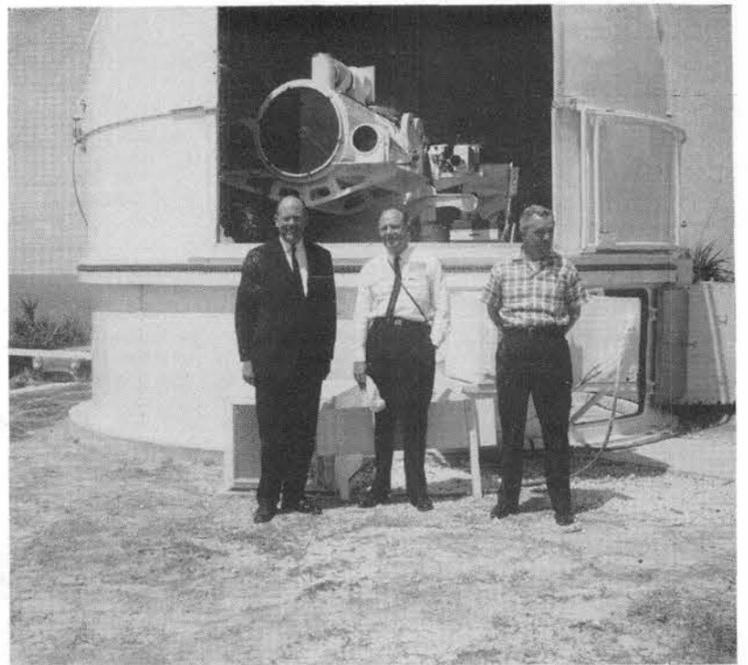
Safety studies and tests on the various SNAP programs are a Sandia Corporation responsibility under the AEC's Division of Reactor Development.

"The flight was successful,"

according to V. E. Blake, Jr., manager of Aerospace Nuclear Safety Department 7410. "We accomplished the majority of the objectives of the experiment."

The RFD-1 was launched at 9:38 p.m. (MST), May 21, after a long waiting period for appropriate weather conditions. Some technical delays also were experienced. The Scout launch vehicle performed perfectly as did the

(Continued on Page 3)



G. A. FOWLER, Vice President, Development, visited the Bermuda tracking station site at "Highpoint" Southampton, Bermuda. He is shown, left, with Lawrence Gise, ALO Deputy Manager, and W. E. Everhart (7113), Sandia Lab Operations manager for the RFD-1 experiment.

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JUNE 7, 1963



Robert C. Prim



George C. Dacey

G. C. Dacey, V.P. Research Returns to Bell Laboratories

Sandia Corporation's Vice President, Research 5000, George C. Dacey, has accepted the position of Executive Director, Telephones and Power Division, Bell Telephone Laboratories. His resignation will be effective July 31, 1963.

Mr. Dacey joined Sandia Corporation in October 1961. Previously, he was Director of Solid State Electronics Research at Bell Laboratories. He joined the technical staff of Bell Laboratories in 1951.

His first several years at Bell

Laboratories were spent in transistor device feasibility studies. He later supervised a group engaged in development work on silicon transistors and crosspoints.

Mr. Dacey received a BS degree in Electrical Engineering in 1942 from the University of Illinois. He received the degree of PhD in Physics from the California Institute of Technology in 1951. He is a member of the Institute of Electrical and Electronic Engineers, the American Physical Society, Eta Kappa Nu, Phi Kappa Phi, Sigma Xi, and Tau Beta Pi.

Robert C. Prim will succeed Mr. Dacey as Vice President, Research 5000. Formerly Director of Mathematics and Mechanics Research at Bell Laboratories, Mr. Prim has served since July 1961 as Special Assistant to the Director of Defense Research and Engineering in the Department of Defense.

Mr. Prim was graduated from the University of Texas with the BS degree in electrical engineering, and from Princeton University with the MA and PhD degrees in mathematics. Before joining Bell Laboratories in 1949, he was with the General Electric Company from 1941-1944, the Naval Ordnance Laboratory from 1944-1948, and was a research associate in mathematics at Princeton University in the academic year 1948-49.

At Bell Laboratories, he was engaged in consultation and research in theoretical mechanics, semiconductor physics, and systems analysis. In 1958, he was appointed Director of Mathematics and Mechanics Research at Bell Laboratories.

Mr. Prim has taken part in a number of government projects, and served on the 1957 Gaither Committee. He was a consultant to the Department of Defense Research and Engineering Advisory Panel on Electronics in 1958-1959.

Purchasing U.S. Savings Bonds Gives Double Duty in Benefits

The bigger the family, the more important it is that there be established a regular savings plan for education costs, weddings, clothing, camp, and the host of other things it takes to give youngsters a comfortable start.

But the way things are today, is money all they need for a secure future?

The answer to this question is why millions of American families own U. S. Savings Bonds. Bond dollars help keep our economy sound, and help Uncle Sam keep the future free.

In effect, purchase of U. S. Savings Bonds is the development of a savings plan that pays us two ways.

First, our money earns a good guaranteed interest. Safe, certain interest, backed by the government itself.

Second, your money helps guarantee a safe, secure, and free future for ourselves and for our children. (And their children). Money spent for purchase of U. S. Bonds helps make the country financially strong. The stronger the

country is financially, as individuals and as a nation, the better we can demonstrate to the world the superiority of our system. And the safer the world will be for ourselves and our families.

Make sense? Sure it does. Good, hard financial sense. Both for us and for the country.

Not only the country benefits when you buy bonds. You get five personal benefits:

1. Your investment is guaranteed safe by the U. S. Government.
2. Your U. S. Savings Bonds are replaced free if anything happens to them.
3. You can get your money back whenever you need it.
4. You can save automatically through the Sandia Corporation payroll deduction plan.
5. You get back \$4 for every \$3 in just seven years and nine months.

How do you get on payroll deduction for U. S. Savings Bonds? It's easy! Monday, June 10, you will receive an Employee Bulletin

with payroll deduction card attached. Just fill it out for a new deduction or an increase and send it to Payroll organization 4131 at Sandia Laboratory and 8213 at Livermore Laboratory. It's as easy as that.

Nuclear Society Elects Sandians To Office Posts

Members of the Trinity Section, American Nuclear Society, elected three Sandians recently for 1963-64 terms of office.

D. M. Ellett (1541-1) will serve as chairman. F. A. Hasenkamp (5331) will be secretary, and P. D. O'Brien (5332) will be treasurer.

The Trinity Section is open to all persons professionally qualified in the nuclear energy field and presently has about 50 members. The section will have an active part in the ANS national meeting on Aerospace Nuclear Safety to be held in Albuquerque in October.

Walter Scott Heads Engineering Society

Three Sandians were installed May 27 as officers of the Albuquerque chapter of the National Society of Professional Engineers.

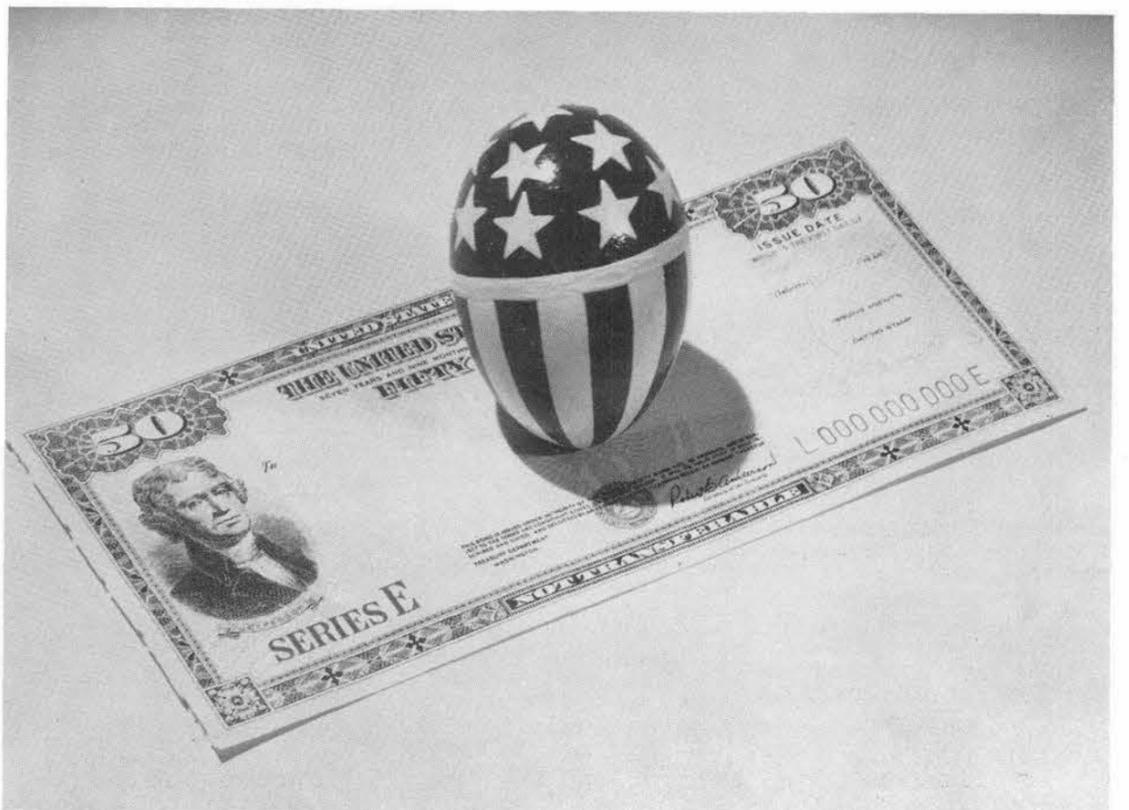
Walter Scott (1544-2) was elected to succeed Barney Smith (Portland Cement Assn.) as president. Howard Benischek (4371) will serve as vice president and M. G. Young (7523) as secretary for the 1963-64 year.

The other new officers are Mackie Murphy (Bureau of Indian Affairs), treasurer, and R. V. Taborelli (Lovelace Foundation), representative to the state board.

G. C. Beatrice New Chapter Chairman Of Welding Society

G. C. Beatrice (4413-3) and C. A. Corbin (4224) were installed as officers of the local chapter of the American Welding Society during a dinner-dance May 17 at the Coronado Club.

Mr. Beatrice is the new chairman and Mr. Corbin will serve as second vice-chairman.



RED, WHITE, AND BLUE NEST EGG — The fact that tens of millions of American family groups and individuals buy and hold U. S. Savings Bonds not only helps these Americans plan their financial future but it helps Uncle Sam manage his financial affairs better. June is sign-

up month at Sandia Corporation for payroll deduction for U. S. Savings Bonds. Make use of the payroll deduction card which will be sent you. Make use of your money for your own, and your country's benefit by making arrangements to purchase Bonds regularly.

Editorial Comment—

Savings Bonds For Freedom

"Freedom in America involves a profound respect for individual liberty, a strong determination to maintain that liberty, and to bring ourselves and others to a better life within its framework. Many Americans today are sincerely wondering what they can do to defend and preserve our freedom. They wish to contribute to our defense efforts, to our adventures in space, and to strengthening our free institutions and our traditions of liberty. The success of our efforts is based on a strong and expanding economy. By investing part of his savings in United States Savings Bonds, an individual citizen can contribute to all of these objectives."

John F. Kennedy
President of the United States

The President eloquently phrases the responsibilities resting with Americans in their determination to maintain liberty. What is being emphasized here is that due to the conditions we face today, both at home and overseas, a great challenge is being placed on our endurance and strength as individuals and as a nation.

One of the major underpinnings of this strength is the soundness of our economy. It alone can support the tremendous costs of promoting preparedness and peace.

U. S. Savings Bonds provide every individual a safe and practi-

cal means to promote his own security and, at the same time, to strengthen America.

Sandia employees are receiving, in this issue of the Lab News and in an upcoming Employee Bulletin, information on Savings Bonds and the opportunity to join the payroll savings plan.

When you get right down to it, there is no better reason for you to buy U. S. Savings Bonds than to help preserve the right to decide whether you wish to do so.

Isn't this type of freedom worth the protection your dollars can provide?

Doctor Urges Families To Immunize Now Against Smallpox

by S. P. Bliss, M.D.

Sandia Corporation Medical Director

The advent of fast economical methods of international travel has increased many public health problems. Among these is the possibility of an outbreak of smallpox. Most adults have not been vaccinated against smallpox since their original immunization during their grade school attendance. Hence, millions of Americans have reached a dangerously low immunization level.

The smallpox virus is a hardy one and will live in clothing and dusts for a long time. This fact, combined with the great American custom to travel about, increases the possibility of an outbreak at any time. The time to guard against it is when the incidence is nil, when physicians and public health forces are not under pressure of coping with an epidemic.

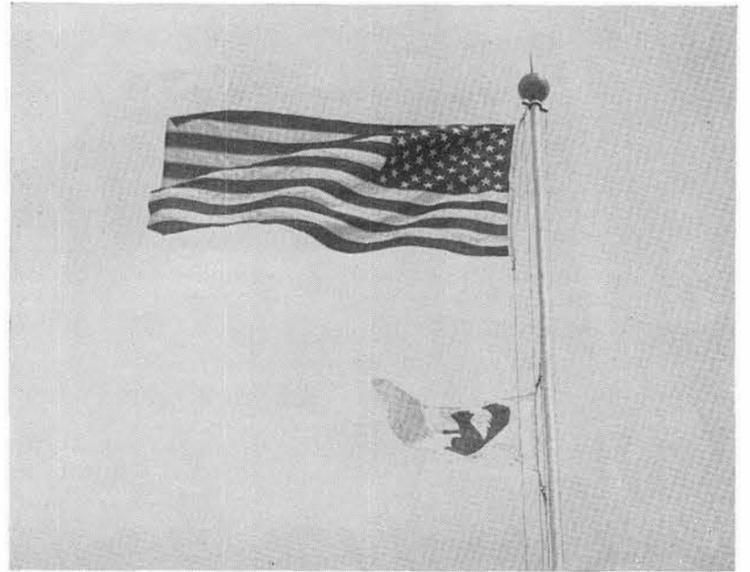
So if you or any member of your family have not been vaccinated in the last 3-5 years, you should consult your family physician as soon as possible.

Colors Rise Over Test Range; Squirrel Pennant Goes Up Too

When the American flag was raised over Tonopah Test Range on Apr. 1, there was a new and unusual banner accompanying it.

All range personnel were on hand for the flag raising ceremony, but an "outsider" might have been puzzled by the pen-

nant which was also raised. Sandians at the range are designated by the term "squirrels" and Bob Statler, who heads the range, is known as the "chief squirrel." W. K. Valley (7246) designed a pennant with an appropriate motif.



SHOW STOPPER at flag raising ceremony at Tonopah Test Range was Bob Statler's personal pennant for his position as "chief squirrel."

Bell Laboratories Scientist to Discuss Telstar Reliability

Dr. Paul S. Darnell of Bell Telephone Laboratories will speak on "The Telstar Satellite Program" at a joint meeting of local sections of the American Society for Quality Control and the Institute of Electrical and Electronic Engineers on Monday, June 10.

The meeting will start at 8 p.m. in the Coronado Club.

In Dr. Darnell's presentation, measures taken to obtain reliability in the Telstar satellite are assessed in the light of its performance to date.

Further information about the meeting may be obtained from Mary Pasko (7511-2), ext. 25153.



CONSULTANT Harold Dodge (left) has frequently conferred with A. F. Cone, manager of Quality Assurance Department 7510, during his short business visits to Sandia Laboratory over the past 13 years.

Consultant since 1950

Short Sandia Visits Add Up to Year's Stay

"I've 'lived' in Albuquerque nearly a year, but at no time has my stay here been longer than 10 days," remarked Harold F. Dodge, a consultant to Sandia's Quality Assurance Organization since 1950.

This statement is probably typical of many professional men, scientists, and engineers who assist on Sandia programs in specialized fields. Their work as consultants is valuable to the Company even though the individual's actual contact with Sandia employees may be extremely brief.

Mr. Dodge contributes knowledge and experience dating back to 1924 when quality assurance was a brand new field. His work with Sandia Corporation in developing a QA program within the AEC-Sandia Corporation agreement includes such activities as methods for setting quality standards; verification inspection procedures; quality evaluations; quality rating systems; and Stockpile Sampling Programs.

Most recently he was co-author with A. F. Cone, manager of Quality Assurance Department 7510, of a technical paper, "A Cumulative-Results Plan for Small-Sample Inspection," which was presented at the 17th annual convention of the American Society for Quality Control, held in Chicago.

"I'm excited about this paper because it indicates how the combining of statistics and psychology can aid in improving quality in dealing with sampling of small

quantities," he explained. "When large quantities are available, statistical techniques are normally sufficient."

Mr. Dodge has an SB degree in electrical engineering from Massachusetts Institute of Technology and an AM degree in physics and mathematics from Columbia University.

He joined the Bell Telephone System as a development engineer at Western Electric, New York, in 1917, and worked until 1924 in development of submarine detectors, telephone instruments, electrical stethoscopes, sound ranging detectors, and acoustic devices. He holds patents on four items invented during that period including one telephone part which was in use over 25 years.

When Bell Telephone Laboratories' Inspection Engineering Department began work on quality assurance, Mr. Dodge transferred. "They discovered I made pretty charts," he joked. (Former Sandia Corporation President Donald A. Quarles was also one of the pioneers in this field and was in the same department—later renamed Quality Assurance Department.) For the next 33 years, Mr. Dodge worked in the QA field, his specialty being sampling inspection plans and quality rating systems.

During World War II, he served as a consultant to the Secretary of War on quality control and sampling procedures. He was one of a small group that developed the Army Ordnance Standard



STARS AND STRIPES was raised over Tonopah Test Range, Nev., recently by Federal Services Inc. personnel (l to r) Sgt. Kessie Hall, Sgt. Tim Lydon and Lt. Harry Schnarer, with W. K. Valley (7246) assisting.

Sandia Engineers On Canadian Program Of Tunnel Association

Two Sandians played an active part in the 19th semi-annual meeting of the Supersonic Tunnel Association on May 16 and 17 at the National Aeronautical Establishment, Ottawa, Canada.

J. C. Weydert, supervisor of Special Projects Section 7423-1, presented a paper entitled "Redesign of the Hot Air Valve for the Sandia 18-inch Hypersonic Wind Tunnel."

R. C. Maydew, supervisor of Experimental Aerodynamics Division 7422, served as a panel member for discussion of "Wind Tunnel Problems of the Future." He was also elected the STA Recording Secretary for 1963-64.

During the meeting, the Association membership was increased to 42 with admittance of the National Aero- and Astronautical Research Institute of Holland, and the Training Center for Experimental Aerodynamics of Brussels, Belgium.



Brenda Redenbaugh (8212-3)

Take a Memo, Please

Accidents can happen anywhere at any time. It's the alert person who is aware of accident hazards at all times.

Congratulations

Mr. and Mrs. G. H. Donaldson (2452-2) a son, John Marshall, on May 18.

Mr. and Mrs. William D. Lynch (4254-2) twins, Scott Merideth and Kathleen Yvonne, on May 15.

Mr. and Mrs. R. N. Tomlinson (7311-3) a son, Erik Todd, on May 15.

Sympathy

To Alice Vancil (4131-3) for the death of her sister in Denver, May 7, and her father, also in Denver, on May 14.

To Henry Aira (4621-1) for the death of his mother on May 29.

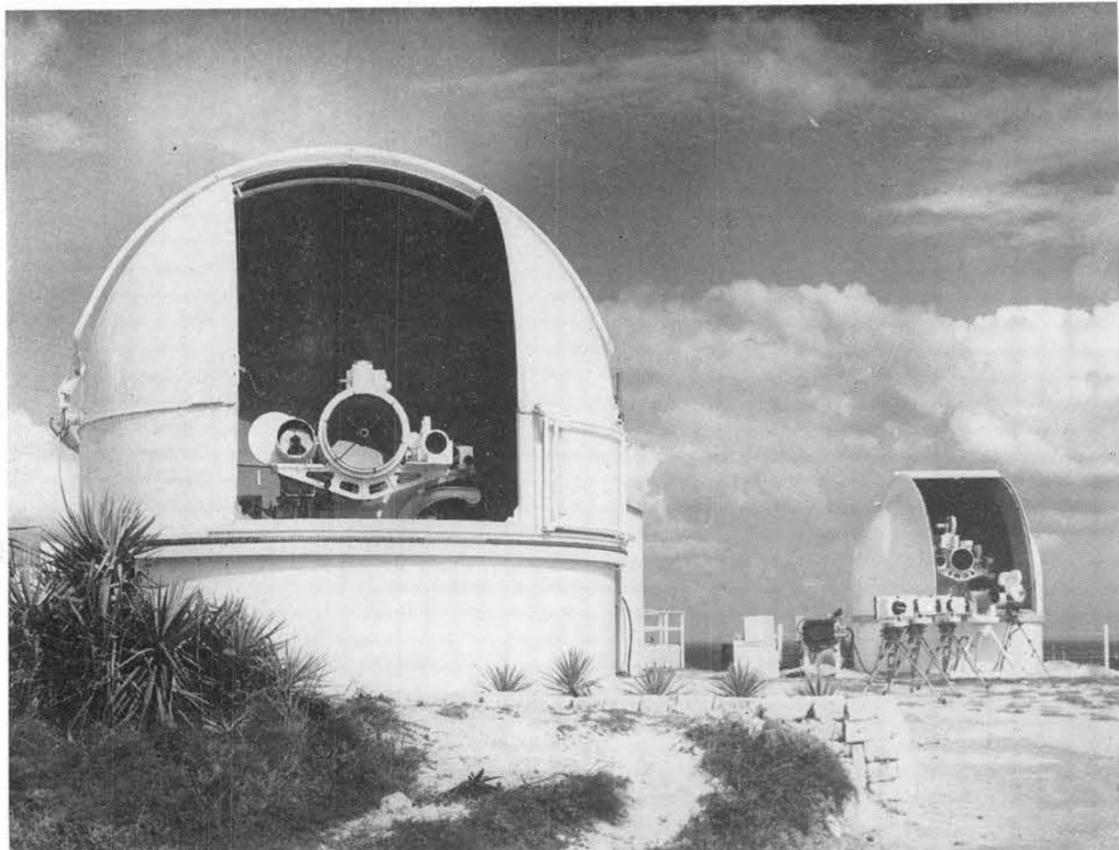
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OPTICAL TRACKING STATION located near "High Point," Southampton Parish, Bermuda, recorded reentry events of the RFD-1 experiment. At left is an LA-24 tracking telescope. This 120-in. focal length f5 optical system directs images through the mirror housing on top of the telescope tube to the streak spectrograph behind it. The smaller unit on the left of the

main tube is a photometer. On the right of this is a 40-in. focal length f5 lens used to provide images for a high speed motion picture camera. The tripod-mounted instruments are assorted spectrographic and ballistic plate cameras. The astrodome on the right houses an ME-16 telescope carrying three high speed motion picture camera systems, the largest one exposes 70 mm.

Continued from Page One . . .

RFD-1 Test Called Success . . .

telemetry equipment and the tracking signal for five and one half minutes until blackout occurred. Heat generated by reentry into the earth's atmosphere causes a blanket of ionized gas to form around the vehicle which ultimately blocks radio transmission.

"Data gathered from this portion of the flight by telemetry covered the significant events," Mr. Blake said.

During reentry burning, the fuel rod experiment and reentry vehicle were observed optically by instrumentation located on Bermuda and aboard C-54 aircraft operated by the Air Force Special Weapons Center.

No further telemetry contact was made with the reentry vehicle after blackout and the search for the vehicle was abandoned.

Although recovery of the instrumented package would have given additional evidence of the

extent of reactor disintegration, it is believed that the overall purpose of the test — to obtain data on reentry heating and burn-up—was successful. Data obtained included photographs of dummy fuel elements which were ejected from the package and burned up as planned.

The dummy fuel rods contained layers of different tracer elements. When mock-up fuel was consumed by the heat of reentry, the tracer elements flared. Special instrumentation designed by Optical Development Section 7224-1 with the help of Section 1122-2 recorded the events.

The instrumentation included a cine - spectrograph, time - resolve spectrograph, plate spectrograph cameras, and movie event cameras. The spectral instruments split the light coming from the

flaring rods into a spectrum and recorded the spectral lines on film. A photometer mounted on a 24-inch diameter tracking telescope performed a similar function but recorded the data electronically on an oscillograph record.

Spectrographic plate cameras and ballistic plate cameras recorded the reentry sequence as a series of streaks on 8- by 10-in. glass film plates.

Aerospace Nuclear Safety Division III, 7413, under A. E. Bentz, directed the RFD-1 operation. Operations manager at Wallops Island was W. H. Everhart of the Division. D. G. Beatson (7241) was Field Test project engineer at Bermuda. Some 40 Sandians participated in the operation.

The AEC plans other flight tests over the next five years designed to obtain additional safety data.

Coronado Club Dollar Night Set for June 12

The Coronado Club calendar for June features a Dollar Night on June 12. For a dollar, the Club will furnish all the hamburgers, potato salad, and beer that members can consume. The event will be held from 5-7 p.m.

On June 22, the Club will feature a Showboat Dance, with music provided by McCloskey's Dixieland All Stars. Dancing starts at 9 p.m. and lasts until 1 a.m. The Club's regular monthly buffet will be served from 6:30-8:00 p.m. Prices are \$2.60 per person for members; \$3.60 for guests.

WELCOME Newcomers

May 20-31

Albuquerque	
David J. Barton	3444
Margaret M. Boyd	4333
Donald E. Duran	4362
Erma H. Hatfield	3126
Celia S. Meeks	3126
William I. Orth	1431
Jose P. Salazar	3444
*Frank W. Scheer	4543
Harry R. Shortt	4574
Mary Ann Whitlock	4333
California	
Robert A. Lefever, Palo Alto	5135
Melvin D. Smith, Torrance	4234
Indiana	
James E. Keith, Plymouth	5414
Pennsylvania	
Robert K. Byers, Philadelphia	1322
Temporary Summer Hires	
Vuryl L. Klassen, Tucson, Ariz.	5426
William D. Lawing, Jr., Ames, Ia.	1440
*Raymond P. Lutz, Jr., Ames, Ia.	2630
*Ronald R. Miller, Tucson, Ariz.	3453
*Goebel Davis, Albuquerque	1314
*Larry Z. Kennedy, Tucson, Ariz.	1113
Returned from Leave	
Walter D. Hewitt	2412

* Denotes rehired



BALLISTIC PLATE CAMERAS, designed by J. S. Llamas (7224-1) recorded the RFD-1 reentry as broken streaks on 8x10-in. glass film plates. Mr. Llamas engineered the conversion of the three surplus aerial mapping cameras and associated newly-designed features for the RFD-1 flight.

Sandia Recording Air Blast Waves In Northern Arizona Test Program

A series of nine chemical explosive detonations, connected with microbarographic studies being conducted by Sandia Laboratory, is scheduled in June on government land about 10 miles south of St. George, Utah. The site is on uninhabited land in a remote area of Mohave County, Ariz.

Sandia has operated a microbarograph station at the St. George airport for the recording of signals for many previous events at the Nevada Test Site. By detonating explosives near St. George and having the microbarograph equipment mounted on the 1,527-ft.-high BREN tower at NTS, scientists hope to learn whether air blast waves which are refracted back to the ground from the ozonosphere at large distances will reflect from the ground at low incidence angles as do those of more

normal, direct travel.

Chemical high explosive charges of approximately one ton yield will be fired on wooden towers 15 ft. high for the explosion wave source. Three detonations are scheduled for each of three days, with dates dependent upon weather conditions. The detonations scheduled in these studies do not involve nuclear devices or radioactive materials. There will be no resulting radiation.

Scientific advisors for the program are J. W. Reed and H. W. Church, both of Aerospace Physics Division 5414. Project engineer is Fred Shoemaker, of Explosives and Timing Section 7254-1. He is being assisted by F. B. Collins, E. L. Jenkins (both 7254-1), and W. E. Cordek, of NTS Activities Division 7256.

Sandia Speakers

Following is a list of speakers, titles, and places of presentation for recent or forthcoming talks by members of Sandia Corporation.

F. N. Coppage (5322) and A. W. Snyder (5320), "Neutron Effectiveness in Producing Photoconductivity in Dielectric Materials," 1963 AIEE Summer General Meeting, June 16-21, Toronto, Canada. Mr. Coppage will make the presentation.

S. E. Harrison (5322), "Gamma Ray Photoconductivity Decay in Organic Dielectric Materials," 1963 AIEE Summer General Meeting, June 16-21, Toronto, Canada.

D. D. Glower (5322) and D. F. Warnke (5322), "Radiation Effects on Lead Zirconate Titanate Ferroelectrics," 1963 AIEE Summer General Meeting, June 16-21, Toronto, Canada. Mr. Glower will make the presentation.

D. E. Munson (1113), "Positive and Negative Equation of State of Metals," University of Arizona, Department of Mining and Metallurgical Engineering, May 14, Tucson.

G. H. Miller (5413), "Surface Condensation Studies," Conference on Molecular and Atomic Gas Beams and Related Problems, May

13-14, University of Virginia, Charlottesville.

B. M. Butcher, L. M. Barker, D. E. Munson, and C. D. Lundergan (all 1113), "The Influence of Stress History on Time-Dependent Spall in Metals," American Institute of Aeronautics and Astronautics National Summer Meeting, June 16-19, Los Angeles. Mr. Butcher will make the presentation.

F. F. Eichert (4410), "Dimensioning and Tolerancing Concepts for Drawings and Measuring Systems," annual alumni meeting of architects and engineers, May 10, Ohio State University, Columbus.

Bruno Morosin (5151), "Structural Aspects of Crystal Field Theory," Chemistry Department seminar, May 10, University of New Mexico.

E. S. Roth (2564), "Product Definition and True Position Tolerancing," combined ASQC-ASTME meeting, May 15, Denver, Colo.

R. C. Marsh (2564), "Adaptability of Laminar Air Flow for Contamination Control," West Coast Chapter of the American Association for Contamination Control, May 22, Los Angeles.

Service Awards

15 Year Pins



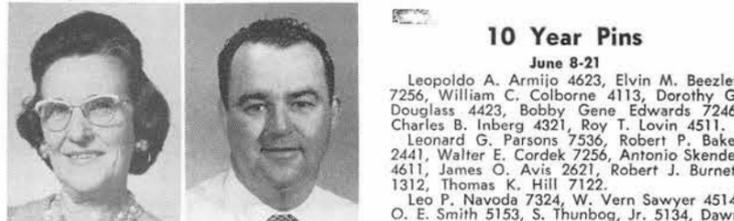
Frank N. Gurule 2624 June 1, 1948 Beulah Sutherland 7241 June 7, 1948 Delfino Jinzo 4614 June 9, 1948 Robert G. McBride 3242 June 9, 1948



George A. Arnot, Jr. 1422 June 14, 1948 Jack Babb 7532 June 14, 1948 James W. Dillon 7532 June 14, 1948 Rolland A. Glenn 7222 June 14, 1948



Joseph A. Teresi 7522 June 14, 1948 Everett Cowan 4221 June 15, 1948 Alfred M. Hoge 1331 June 15, 1948 Jack W. Reed 5414 June 15, 1948



Marie M. Ream 3100 June 21, 1948 Robert A. Ware 8161 June 21, 1948

10 Year Pins

June 8-21

Leopoldo A. Armijo 4623, Elvin M. Beezley 7256, William C. Colborne 4113, Dorothy G. Douglass 4423, Bobby Gene Edwards 7246, Charles B. Inberg 4321, Roy T. Lovin 4511, Leonard G. Parsons 7536, Robert P. Baker 2441, Walter E. Cordek 7256, Antonio Skender 4611, James O. Avis 2621, Robert J. Burnett 1312, Thomas K. Hill 7122, Leo P. Navoda 7324, W. Vern Sawyer 4514, O. E. Smith 5153, S. Thunbrog, Jr. 5134, Dawn A. Calek 4100, Richard C. Hildner 5422, Geneva M. Howell 3462, Margaret D. Harper 3462, Edith F. Jolly 3133, Charles G. Sain 7332, and Alma A. Mischke 4152.

College Degrees Conferred On Several Sandia Employees



K. D. Christian



John Koehler



E. D. Zaffrey

A number of Sandia Laboratory employees will receive Bachelor's and Master's degrees during commencement exercises at the University of New Mexico June 12, and elsewhere. Some have received assistance under Sandia's Educational Aids Program.

Those receiving Master's degrees include:

Keith D. Christian (1323), MS degree in mechanical engineering. He received his BS in ME from the University of Minnesota and has been at Sandia nearly two years.

John Koehler (7145), MS degree in mechanical engineering. He was awarded his BS degree in ME from the Polytechnic Institute of Brook-

lyn and has worked at Sandia Laboratory two years.

E. D. Zaffrey (1323), MS degree in electrical engineering. His BS degree in EE was conferred at the University of Florida (Gainesville). He has been at Sandia two years.

Those receiving Bachelor's degrees included: Benny M. Garcia (4611-3), BA, business administration, St. Joseph's College; and George W. Cosden (2341-1), BA (with honors), business and management, Hofstra College, Hempstead, N. Y.

Others will be reported in forthcoming issues of the Lab News.

IEEE Reliability Training Course Draws Engineers From Across Nation

Registrations from across the country have been received from persons intending to attend the Reliability Training Course to be held from June 10-14 in Santa Fe. Local chapters of the American Society for Quality Control and the Institute of Electrical and Electronic Engineers are hosts.

L. J. Paddison, Director of Product Test Equipment Development 2040, will give the welcoming talk Monday at noon. He is chairman of the IEEE professional technical group on reliability.

Tuesday afternoon J. H. Findlay, Director of Electronic Component Development 1400, will speak on "What A Design Organization Needs From A Reliability Organization." The following afternoon A. D. Swain (1443-2) will discuss "Human Factors."

C. F. Bild, Director of Materials and Process Development

1100, has chosen "The Physics of Failure from a Materials Point of View" as the subject of his talk on Thursday afternoon.

Thursday evening, R. A. Bice, Vice President, Engineering for Manufacture, 2000, will speak on "Problems in Procurement of Reliable Systems."

One of the "outside" speakers will be Dr. Paul Darnell of Bell Telephone Laboratories, Whippany, N. J., whose topic will be "Telstar Reliability."

Sandians who are serving on the local host committee are Chairman J. M. Wiesen (1440), W. W. Westman (2442), D. D. Sheldon (2561-2), L. J. Paddison (2400), and Jean Gillette (3121).

Several similar training courses have been held in other parts of the country during the past four years.

May 8—21 Years Ago—Again to Be Recalled by Lexington's Survivors

May 8 is a significant date for two Sandians. On that date in 1942 Bob Martin (8121-2) and Guy W. Robinson (1512-2) were among 2700 sailors who went over the side from the aircraft carrier Lexington after it was torpedoed in the battle of Coral Sea.

On June 27 of this year, many of the survivors of the Lexington and earlier members of the ship's crew will gather in Oakland, Calif., to reminisce about their ship and shipmates. The occasion is the annual reunion of the CV-2 Minutemen's Club, an organization made up of Lexington crew members. The reunion will be held at the Doric Leamington Hotel in Oakland, June 27-30.

Bob and his wife, Trudy (8212-2) plan to attend but Guy will be

unable to be there. Also on hand will be E. A. Romine (8124-2), a member of the Lexington crew from 1936-39, and his wife, Blanche (8232-1).

The Lexington, struck by five torpedoes dropped by Japanese planes, and hit by an untold number of bombs, was finally sunk intentionally by an American destroyer. On board this destroyer, the USS Phelps, was Frank E. Bell (3420), the ship's communications officer. During the battle, the Lexington's guns and planes downed 140 enemy aircraft, and helped account for the loss of one Japanese aircraft carrier, three heavy cruisers, one light cruiser, two destroyers, several smaller vessels and severe damage to more than 20 ships.



ELECTRON PROBE MICRO-ANALYZER, operated by Dave Boknecht, provides a valuable research and development tool for Sandia Laboratory. The instrument is used by Chemistry and Spectroscopy Division 1122.

Sandian Travels Far To Be At Class Reunion

A class reunion after 25 years highlighted the recent vacation of Lorayne Carico (8212-2) and her husband Carl.

The reunion, which featured a dinner-dance, was held at Arlington Heights, Ill., near Chicago. Sixty-five of the original 87 graduates from the 1938 class of Arlington Heights Township High School were on hand. Five of their teachers attended.

Class annuals for the graduates' four years of high school, and messages from those unable to come were displayed. Lori was presented with a sterling bud vase for being the graduate who traveled the farthest distance, over 2000 miles, to attend the reunion.

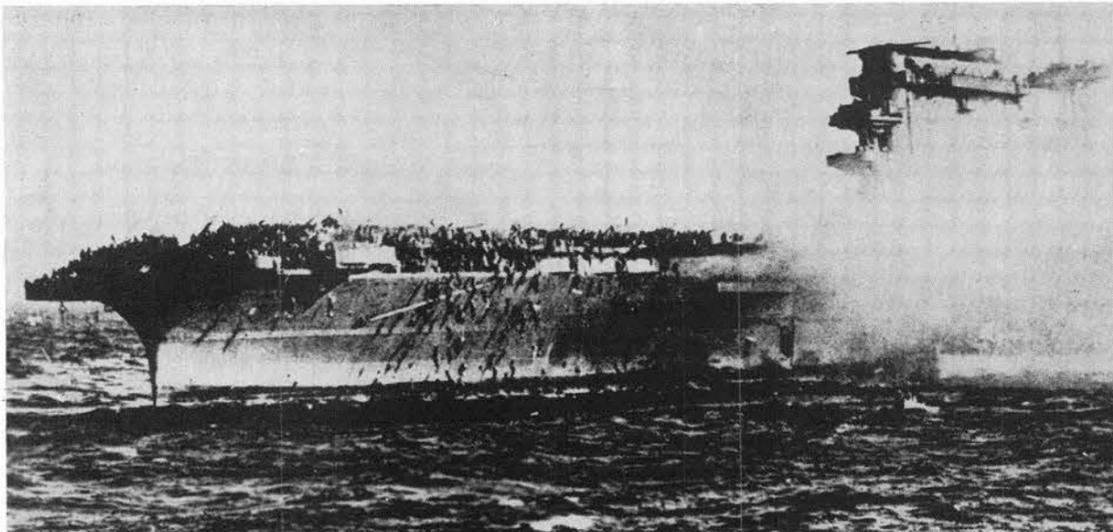
"It was fun to see everybody again after so many years," said Lori. "I didn't think the teachers changed a bit, but I did have difficulty recognizing many of my classmates, especially the men. They seemed to have aged so much more than the women."

The reunion had meant a little something special to Lori. While he lived, her father was the principal of Arlington Heights Township High School.

Welcome Newcomers

May 1-16

California	
Charles A. Hannes, Fairfield	8232-2
Vera M. Chandler, Livermore	8212-3
Hazel L. Willyard, Livermore	8213-3
Lyla B. Duey, Pleasanton	8232-2
Iowa	
John L. Freie, Waterloo	8122-3
Pennsylvania	
Lawrence A. Behrmann, Allentown	8118-1
Washington	
Emory E. Padgett, Seattle	8223-1



LAST OF THE LEXINGTON is well remembered by two Sandians, Guy Robinson (7124-3) and Bob Martin (8121-12), who were among the many sailors shown clamoring over the sides in this photograph. Bob will join other survivors at a reunion this month in Oakland, Calif., of former Lexington crew members.

Study of 'Microlandscape' Is Possible With Micro-Analyzer

The "microlandscape" of a highly-polished metallic specimen, when viewed by means of Sandia Laboratory's electron probe micro-analyzer, can be as weird and dramatic as the surface of the moon.

The instrument produces and focuses a thin electron beam (one-half micron in diameter) onto the surface of a specimen. The electron beam "excites" the atoms of the specimen and causes them to emit X-rays. The wavelength and intensity of the X-ray lines can be measured by the instrument to determine the elements present in the specimen as well as their relative concentration.

"It is an extremely useful instrument," David C. Boknecht says. "It does a job quickly and efficiently that otherwise might not be possible." Dave is a physicist in Chemistry and Spectroscopy Division 1122. Merton M. Robertson of the Division also uses the electron probe micro-analyzer in research projects and analysis of materials.

"We use this micro-analyzer in many different ways ranging from manufacturing problems to matters primarily of scientific investigation," Dave says. "One example of an investigation for which the microprobe was uniquely adapted involved a failure analysis of a component in production. This required identification of a particle clogging a stainless steel nozzle. In this instance, all possible sources of the contaminating par-

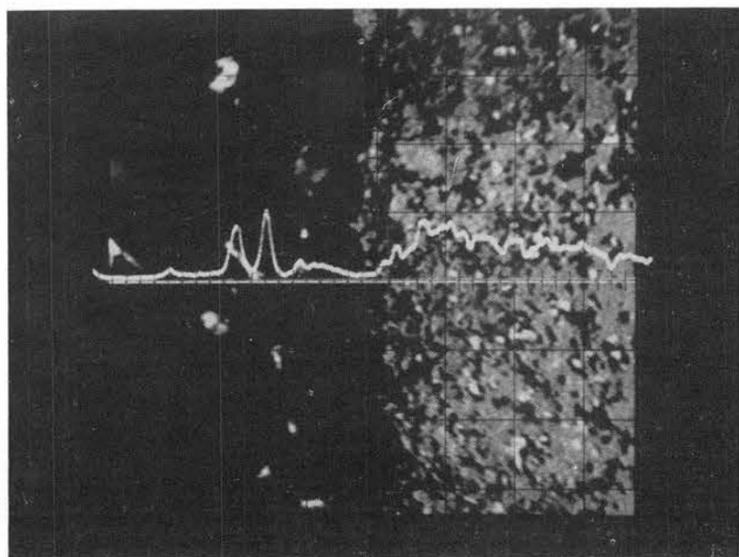
article were also stainless steels. The source was easily determined, however, since each of the materials contained some different elements that could be identified by the probe. The particle was very small and it would have been extremely difficult, if not impossible, to identify it by any other method."

Much of the lab's work is in solving such problems. The probe is used to investigate flux occlusions in soldered joints, strength of micro-circuitry welds, composition of thin films, intermetallic structure, and actual chemical composition.

The probe is also used in studies of the mechanism of corrosion, ultrasonically welded joints, evaporated metallic films, and impurities in materials such as litharge.

"The probe is particularly adapted to the study of inclusions (impurities trapped in metal during solidification) and the distribution of elements in materials," Dave says. "In this category could be included the structure of ferro-electrics, alloys, diffusion couples, semiconductors, superconductors, etc."

"This instrument provides Sandia Laboratory with an aid in research and development programs," Dave says, "as well as a means of troubleshooting manufacturing problems. Applications for the electron probe are limited only by the imagination of the researchers."



"MICROLANDSCAPE" of a lead-zirconium-titanium ceramic material is recorded by Sandia's electron probe micro-analyzer. The area shown is 360 microns square and represents the specimen surface as displayed on an oscilloscope by back-scattered electrons. White line indicates the distribution and relative quantity of lead present in the specimen.

Early Interest in Journalism Helps Test Engineer Report for Lab News

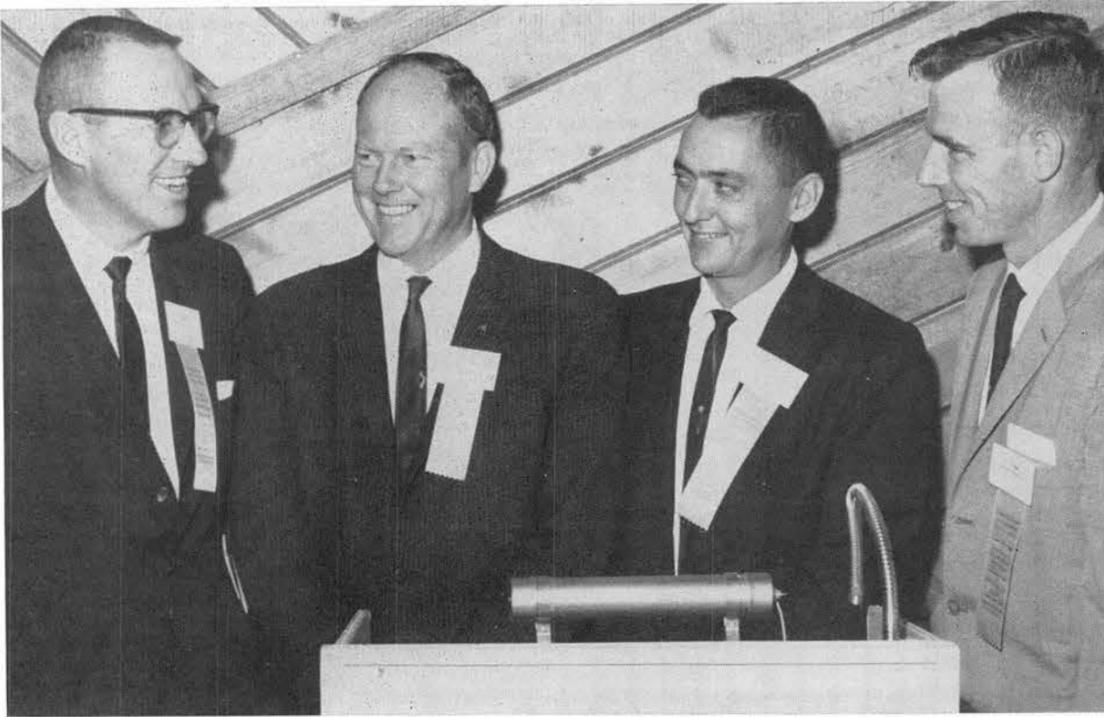
This is another in a series of articles telling of the Sandia Lab News' volunteer reporters.

Clem Gragg (1525) has been an environmental test engineer at Sandia Laboratory for four years and has been a volunteer Lab News reporter for his organization about half of that time.

Clem's interest in journalism dates back to his school days when he was a reporter and photographer for the high school paper. "In fact," he said, "I considered studying journalism in college before deciding on engineering."

His hobbies are widely varied: bridge, raising a special strain of guppies, roller skating (he has medals for dancing and figure skating), and gardening — mainly growing watermelon and popcorn.

Clem is married and has two sons, aged three months and three years.



"INSTRUMENTATION for Nuclear Ordnance" was the title of a talk presented by G. A. Fowler, Vice President, Development, during the recent National Telemetering Conference held in Albuquerque. Mr. Fowler,

second from left, talks with A. E. Bentz (7113), conference chairman, left; T. J. Hoban, Jr. (7212), program chairman; and J. E. Hinde (7213), program co-chairman, right. Conference attracted about 1200 delegates.

Sandia Wives Eligible For Sanado Club

Mrs. George Dennis, recently installed president for the Sanado Women's Club, reminds wives of Sandia Corporation and AEC employees that they are eligible for membership in the organization.

Prospective members may obtain further information from Mrs. Howard Romme, AX 9-8765, or any member of the Sanado Club.

The new chairmen for the standing committees for the 1963-64 year are: Mrs. Jack N. Colquitt, publicity; Mrs. R. J. Dye, interest group publicity; Mrs. James E. Baylor, reservations; Mrs. Stanley Brooks, hospitality; Mrs. J. A. Anderson, scrapbook; and Mrs. Ted B. Morse, editor of the newsletter.

coronado club



June 7 - June 22

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
9	10	11	12	13	14	15
	Duplicate Bridge 7 p.m.	Ladies Bridge 1:15 p.m. DOLLAR NITE Beer, Burgers & Potato Salad — \$1.00 Members Only 5-7 p.m.		Social Hour—4:45-7:30 Combo Chicken Buffet \$1.25 Adults \$1.00 Children	Social Hour—4:45-7:30 Combo Italian Buffet \$1.25 Adults \$1.00 Children	Dance Class Graduation Ball Dinner 7 p.m. Reservations Free Dance 9 p.m.
16	17	18	19	20	21	22
	Duplicate Bridge 7 p.m. Buffet 6 p.m. Reservations Required	Game Night 8 p.m.		Social Hour—4:45-7:30 Combo Fish Buffet \$1.25 Adults \$1.00 Children	Social Hour—4:45-7:30 Combo Fish Buffet \$1.25 Adults \$1.00 Children	FREE Teen Age Swim Party—Plus Record Dance 6:30-10:30—\$.25
						Showboat Dance McCloskey's Dixieland All-Stars Buffet

EVENTS

SHOPPING CENTER

CLASSIFIED ADVERTISING
Deadline: Friday noon prior to week of publication unless changed by holiday.

RULES

1. Limit: 20 words
2. One ad per issue per person
3. Must be submitted in writing
4. Use home telephone numbers
5. For Sandia Corporation and AEC employees only
6. No commercial ads, please
7. Include name and organization

FOR SALE

- FRIGIDAIRE WASHER, 1957, needs repair, new motor, \$20; Westinghouse dryer, 1960, all equipment for \$20, \$70. Bratton, 9800 Salem NE.
- GIRL'S 26" and 28" bicycles. Marker, 268-0717.
- ADMIRAL REFRIGERATOR w/full width freezer and store-more door; lined oak double bed frame. Libby, 299-5948.
- FRENCH POODLE, standard, AKC, all shots, \$75. Gallo, 255-9129.
- IRONER, Maytag, 30" \$25; sheepherder stove, \$5. Brown, AX 9-5405.
- POWER MOWER, reel type, 1.5 HP, \$40; HO train layout complete w/dual power pack, \$60. Wacek, 268-8579.
- HARVARD CLASSICS, 52 books including a Reader's Guide, new. Miller, 298-2850 after 5.
- AIRCRAFT PARTS: 2 new 6.00x6 nylon aircraft tires, \$10 ea.; altimeter, \$12; computer, \$3.50; plotters, \$1.25; log books, \$1. Gubbles, 298-3528.
- '54 PLYMOUTH SAVOY semi-auto., needs work, best reasonable offer. Burns, AX 5-3737.
- MILK GOAT, 6 years old, \$35. Pierson, BU 2-3229.
- METAL STORAGE CLOSET w/vanity and mirror; round 42" playpen, nylon net; Sunbeam automatic toaster; stroller and walker. Whelchel, AX 9-1134.
- CARTOP CARRIER, half price, \$16.50; Heath base and pre amplifiers, FM tuner, \$45. Johnson, 255-5427.
- DINETTE SET, chrome, gray formica table, 4 chairs, gray plastic, \$15; table, gate-leg, walnut finish, \$20. Skidmore, 737 Lama Vista Dr., NE, 256-2176.
- GREAT DANE PUPS, blacks and harlequins, AKC registered, 6 weeks old. Holt, AX 9-5943.
- KENTUCKY RIFLE; Springfield 1845 musket; Sharps carbine; trade for old flintlock pistol or German Luger. Smitha, 8607 Menaul, AX 9-1096.
- REFRIG UNIT for auto, \$100 or trade for guns. Carl, 298-3383.

- '55 PONTIAC HT. Cericola, AX 8-2426.
- 35 HP ELECTRIC START Johnson outboard motor, 1958 model. Meikle, AX 9-4640.
- 36" WIDE SCREEN DOOR, white w/grille and lock, \$5. Harper, AX 8-0146.
- '57 VOLKSWAGEN; 1000 watt self excited 110 VAC generator. Foster, ext. 27231 or Box 198, Escabosa Star Rt., Tijeras, N. M.
- '62 VOLKSWAGEN CAMPER, will sell for \$2395, 15,000 miles, will consider fairly new sedan in trade. Hamilton, 268-0400 after 5:30 p.m.
- REGISTERED SIAMESE KITTENS, Seal or Chocolate Point males, 9 weeks old. Schreiner, AM 8-4159.
- REFRIGERATOR, 11 cu. ft. Crosley Deluxe, \$40; cornet, \$125. Hayes, 298-4682.
- STORAGE CABINET, metal, 12 x 24 x 60 inches, white, 5 shelves; cedar chest. Gary, AL 6-7325.
- '59 ZOREX motor scooter, \$125. Montoya, CH 2-6729.
- GAS ROTARY LAWN MOWER, \$25; baby bed and mattress, \$20. Gonzales, DI 4-9832.
- ROTO TILLER, 4 HP, 4 cycle, Briggs and Stratton, used one season. Monette, AX 9-3517.
- TWO FIESTA DRESSES, size 14-16; Lionel Standard Gauge train set; short wave receiver with power supply. Campbell, 299-4830.
- REFRIGERATOR, 9 cu. ft. Coldspot, \$50; blond formica corner step table. Dieter, 255-8056.
- 26" and 24" BIKES for sale or trade, need boy's 20" bike. Jimenez, 1509 Shirley NE, AX 9-7203.
- '54 JEEP STATION WAGON, 4-w. dr., Warren hubs, recently overhauled, \$675 or best offer. Stronach, 242-6543.
- COLLARD RECORD CHANGER, \$10; drafting table, \$15. Halliday, AL 6-6685.
- 2 WHITE MICE; 5-gal. aquarium w/filter; birdcage w/stand; Robertson gasoline lawn mower. Heidrich, 345-1472.
- VACUUM; window fan; portable cooler; camera kit; AKC pedigreed male dachshund; lamps, step tables; formica coffee table; misc.; free kittens. Durgin, 298-3581.
- '63 RCA MARK 8 color TV with antenna installed, \$650. Jones, AM 8-1215.
- AIR CONDITIONER, refrigerative, powerful window unit, 220 current, used 4 summers, make offer. Carden, 298-3035.
- CAST 44 cal. bullets. Need lyman powder measure, Lyman lubricator bullet sizer and single shot Savage .22 pistol. Bourgeois, 255-6345.
- MOVIE CAMERA, 8 mm Wittnauer "Cine-Twin" includes projector and everything for home movies. Karpen, ext. 25235.

NEXT DEADLINE
FOR SHOPPING CENTER ADS
Friday Noon, June 14

- CRAFTSMAN riding lawn mower, \$65. Cary, 865-9303.
- COLLIE pups, AKC registered, tri-colored or mahogany sable, championship stock. Linn, BU 2-3986.
- KNIGHT stereo outfit w/matching speakers, \$150. Rauch, 268-0232.
- MOSSMAN 3-bdr., ceramic bath, hardwood floors, fp, close to schools, landscaped, a/c, near base, \$13,000, FHA appraisal. Barba, AX 9-5832.
- GAS RANGE, \$25; portable room air cooler, \$10. Elson, 299-6309.
- SOFABED, modern beige nylon frieze, matching chair; record changer; hi-fi 20 watt amplifier; matching tuner. Best offers take. Berger, 298-4234.
- TWO '63 Rambler Americans, 330 two door sedan \$1600 cash, and 220 two door station wagon \$1900 cash. Perkins, AX 9-0177.
- TABLES; chairs; rugs; bed frames; 78 rpm player and albums; prices range from \$25 to 25 cents. Frankel, 298-6265.
- SHELTIE (toy collie) puppies, AKC registered champion stock. Schneider, AX 9-6243.
- SPARTAN MOBILE home with portable room attached, fireplace and 200 sq. ft. of area in room, reasonable. Fulton, ext. 43164.
- RCA 17" TV in operating condition, \$35. Christopher, AX 9-5712.
- ROOM AIR conditioner, Frigidaire, refrigerated window style. Rael, AM 8-3111 after 5 p.m.
- 1/6 HP MOTOR, Westinghouse, 110 v., one speed. Smith, CH 3-5054.
- '57 FORD, country sedan, R&H, 6 cyl., good tires, \$550. Martin, 299-1748.
- SIAMESE KITTENS, \$10. Walter, AX 9-2900.
- '48 WILLYS Jeepster, completely rebuilt, \$650 or trade for antique guns. Mabie, AX 8-1535.
- '62 T-BIRD with air conditioning and power extras. Chandler, 298-5069.
- NEW MOUNTAIN HOME, accessible year 'round, 3 baths, four fireplaces, country kitchen, screened porch, terms to suit. Roberts, BU 2-3496.
- MOSSMAN 3-bdr, w/fp, hardwood floors carpeted, walled, separate walled patio, \$14,900 with terms flexible. Qualle, 3200 California NE, AM 8-2827.
- COLDSPOT REFRIGERATOR, 6.5 ft. \$40; Coldspot deep freeze, 14 ft., \$90. Granum, CH 3-1491.

- 3 BDR Mesa Village, 3 blocks shopping, garage, drapes, refig., stove, 220 wiring, immediate occupancy, \$12,000, \$400 down. Lenz, 298-0478.
- '60 STUDEBAKER Lark deluxe V-8, 4-dr. station wagon, R&H, ww, seat belts, OD, 21,000 miles; 100 lb. barbell set, new. Over, 255-9459.
- HALF SIAMESE kittens, 6 weeks old, free; 17" table model TV in wood cabinet, \$25. Schultz, AX 8-2731.
- 3 BDR home, carpet, a/c, wall, corner lot, GI loan, \$250 down. Ahr, AM 5-0653.
- PICNIC TABLE, redwood w/attached benches, folding, \$20; ping pong table, folding, \$20; 24" barbecue w/stainless steel hood, grill, spit, \$15. Haaland, 256-1289.
- '56 FORD V-8, four-door town sedan, auto. trans., 225 hp motor, one seat belt, R&H, \$350. Jewett, AX 9-1008.
- MATERNITY CLOTHES, size 12-14; nurse's maternity uniform; basinette w/pad, liner, skirt; man's and woman's Chicago roller skates w/cases. Morrow, AX 8-1762.
- DINETTE SET, chrome, 4-chairs and table, \$35. Delnick, 298-5276.
- STEEL CASEMENT window, 9 lite complete with glass and screens, needs crank, \$5. Williams, AL 5-4109.
- 3-BDR, den w/fireplace, 1 3/4 bath, carpeting throughout, drapes, a/c, sprinklers, double carport, \$14,500. Wentz, 1816 Blume NE, AX 9-3402.
- WARD'S camping trailer, tent type, used twice, \$300; 3 girl's bicycles, various sizes, \$10 each. Carroll, AX 9-5358.
- CAR COOLER, evaporative, 12-volt floor model, Sears, nearly new. Smith, 268-2141.
- SCREENS, two ea. 6' x 8', two ea. 6' x 6' with 1" x 2" frames and copper screen, ideal for patio, \$10. Calvery, 255-9545.
- PLAY PEN, Cosco, \$12; high chair, \$6; Yogi Bear walker, \$3; chrome bread box, \$3. Jones, DI 4-9393.
- POWER LAWNMOWER, 4 cycle horizontal Briggs & Stratton engine, recoil starter, 18" reel, 5 blade, just sharpened, half price. Quinlan, AM 8-5665.
- CONVENTIONAL WASHING MACHINE and drain tub; 2 blond end tables, \$5; Bundy B-Flat clarinet; need stroller. Bechtel, 268-7409.
- '57 CHEVROLET sedan delivery w/R&H. Robinson, AL 6-2903.
- MANKIN 3-bdr, carpet, drapes, stove, refrigerator, forced air heat, a/c, corner lot, \$13,000, 1101 Walker NE. Melancon, 298-2006.
- ROBERSON 3-bdr, 1 3/4 bath, pitched roof, built-ins, a/c, carpet, drapes, walled, front sprinklers, fireplace, near schools. Bytheway, 1837 Greta NE, 299-2791.
- 3-BDR. BRICK, 1 3/4 bath, \$800 FHA plus closing, or pay equity and assume 4 1/2% GI. Poore, 2713 Valencia NE. AM 8-2036.

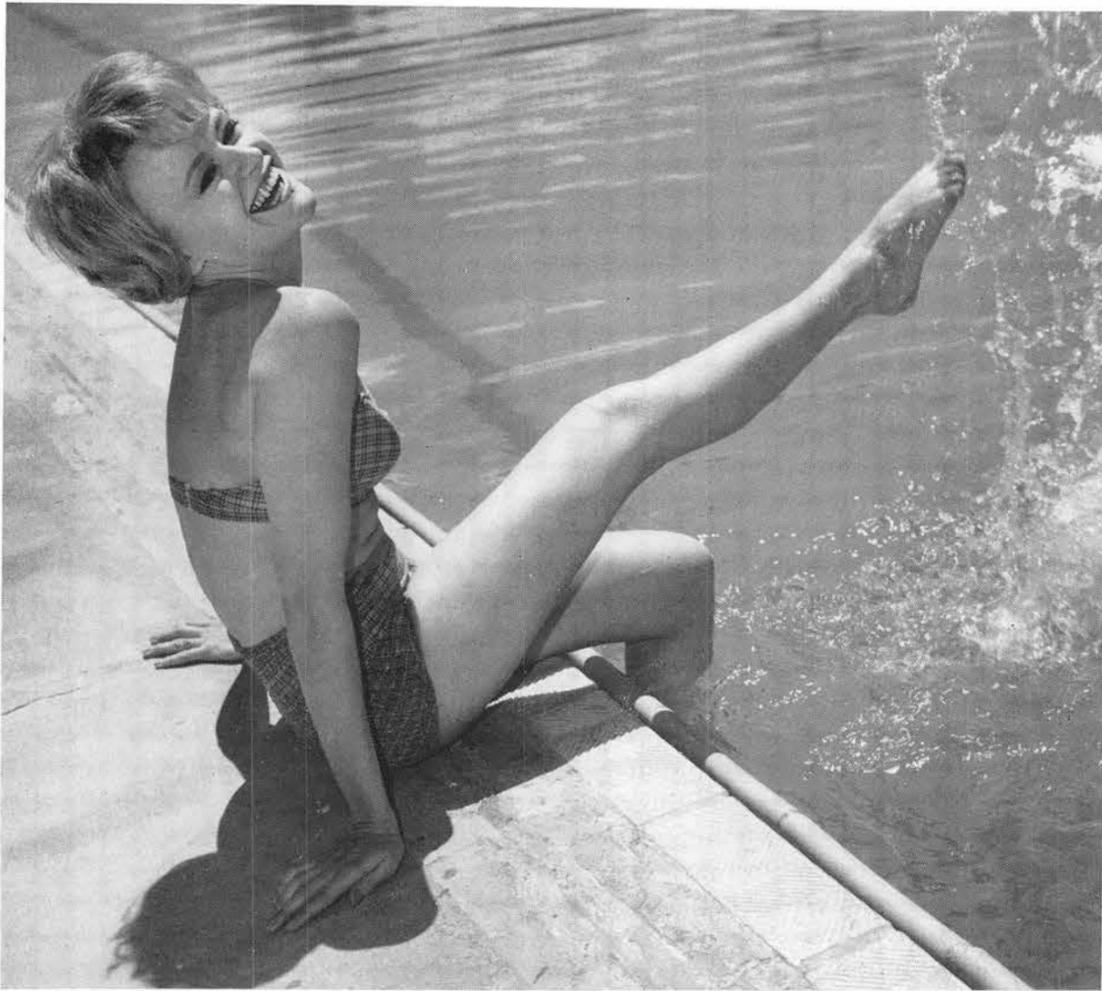
'58 RAMBLER V-8, Custom 4-dr. sedan, standard transmission w/OD, \$545. Holmes, AX 9-4167.

WANTED

- BACHELOR to share two bedroom furnished house, Call after 5:30 p.m. Arasim, 604 Princeton SE, 242-6285.
- PICKUP BED, any make, 8 ft. long, sweep-side model; snow plow for Jeep pickup; trade 2 ton chain hoist for oxy-welder. Aaron, 282-3124.
- HOMES FOR free kittens, weaned and trained, six weeks old. Hansen, AX 9-0357.
- MOTORCYCLE, inexpensive, lightweight, or motor scooter suitable for commuting from Sandias. Brathovde, 282-3259.
- CURTA calculator, used, must be in good condition. Nokes, 299-8753.
- RIDE from 1004 Madeira SE to bldg. 836. Davis, 265-4882.
- TRADE '60 Triumph station wagon for good pickup or panel truck, also want welding equipment. Pritchard, 268-9618.
- SIDE MOUNT SPARE TIRE RACK for pickup truck, type that does not require a dimple in rear fender, Baxter, DI 4-7601.
- DRIVER to share expenses on trip to New York City, leaving Aug. 22, return Sept. 8. Gottlieb, 345-1009 after 6 p.m. or weekends.
- TO RENT unfurnished 2-bdr. house, young couple w/no children. Schmitt, AM 8-0866.
- REESE TRAVEL LITE frame hitch 400/lbs. without overloads. Padilla, DI 4-3245.
- RIDERS to join car pool from vicinity 10324 Paseo Del Norte NW (Rio Vista) to vicinity bldgs. 800-806. Dehon, 898-2219.
- GIRL SCOUT UNIFORM, size 8, used; sell or trade; drapes; both full-length and shorties. Marsh, CH 3-2767.
- BABY CRIB with or without mattress. Peckum, 256-3363.

FOR RENT

- 3 BDR brick, 1 3/4 baths, carpeting, double garage, near Winrock, 2 blocks to schools, below FHA appraisal, low down. Bailey, 7401 Morrow Rd. NE, AX 9-9245.
- NEW 1-BDR. APT, electric kitchen, w/w carpet, drapes, a/c, private patio, unfurnished, adults, no pets, \$97.50. Cahill, 1100 Eubank NE, 298-6247.
- ONE OR two bedroom apartment, stove, refig., cooler, carpeted, private patio, new, NE area. Bentz, AX 9-2961.
- HOUSE, 3 bdr., den, 1 3/4 baths, garage, walled, landscaped, near schools and Winrock. Seay, AX 9-5270.



SWIM SEASON at the Coronado Club's twin pools opened last week. Faye Spellman (4413) was one of the first to report that "the water's fine." Season tickets (adults \$8) are available at the Coronado Club office.

AEC Presents Safety Award of Merit To Livermore Laboratory Employees

The AEC last week presented Livermore Laboratory employees an Award of Merit for working 1,101,540 hours without a disabling injury. The award was for the period beginning Aug. 31, 1962, and ending Mar. 28, 1963.

The award, a bronze plaque, has been added to the display of seven earlier awards from the AEC and the National Safety Council which are hanging in the lobby of Bldg. 911. An eighth award is located in the Safety office in Bldg. 916.

The award was presented to Livermore Laboratory by Frank Abbott, Assistant Area Manager for Administration and Security, Sandia Area Office, AEC-ALO. Accepting the award at Livermore Laboratory was G. L. Rhodes (8242).

Accompanying the award was a letter to B. S. Biggs (8000) from W. Lee Hancock, Area Manager, Sandia Area Office. In it Mr. Hancock quotes from a statement by R. E. Hollingsworth, Acting General Manager of the Atomic Energy Commission:

"It is upon safety performances such as this that the Commission relies to maintain its leadership in industrial accident prevention. Please extend the Commission's appreciation and my personal con-

gratulations to the employees for this outstanding safety performance."

The letter concluded with a note from Mr. Hancock expressing his congratulations and those of K. F. Hertford, Manager, AEC-ALO, for the Laboratory's contribution to the safety effort.

AEC Seeks Bids for Remodeling Bldg. 884

The Atomic Energy Commission called for bids last week to modify Bldg. 884. Interior alterations, to be completed within 60 days after the contract is awarded by the AEC, will be made to approximately 3000 sq. ft. of the building.

The modified space will provide additional offices for Physical Sciences Research Department 5150 and offices and production facilities for Graphic Arts Department 3460.

Included in the work will be electrical and mechanical modifications, partition construction, floor covering, and painting. K. D. Harper (4543-3) is the Plant Engineering Department project engineer.

Total Score of 3043 Wins Top Position in Men's Bowling Roll-off

The Second Annual Sandia Lab Men's Championship Bowling Roll-off has been completed. Eight teams participated in the tournament.

The Stromberg's team from the Sandia Majors League took first place with a total score of 3043. In second place was the Sandia Memory Garden team from the Sandia Lab Handicap Division II League, with a total score of 2915. Third-place winner, with a total score of 2870, was the Van Guards team from the Coronado Club Satellite League.

Other participating teams and their total scores—in order of Roll-off standing—were the Rascals (Missile League), 2815; Eddie's Barber Shop (Sandia T-Birds), 2786; Team No. 3 (Sandia Lab Handicap Division I), 2760; Cherokee (Coronado Club Indian League), 2726; and the Watusi (Coronado Club Jungle League), 2708.

No job is so important and no service is so urgent that we cannot take time to perform our work safely.



FRANK ABBOTT, center, AEC-SAO, presents AEC Award of Merit to Livermore Laboratory for working more than one million man hours without a disabling injury. Accepting is G. L. Rhodes (8242). Others present were (l to r) F. R. Moon (8240), B. S. Biggs (8000), Mr. Abbott, Mr. Rhodes, and C. H. DeSelm (8200).

Supervisory Appointments

GEORGE H. DONALDSON to supervisor of Special Device Test Division 2453, Component Test Equipment Development Department.

George started working for Sandia more than 10 years ago and in February 1957 was promoted to supervisor of Radar Field Testing Section. The past several years he has been concerned with product testers.

Previously he was a civilian engineer for five years with the Navy Electronics Lab in San Diego. George also worked eight months as a field engineer with the Civil Aeronautics Administration in Alaska.

He served three years in the Navy.

He has a BS degree in electrical engineering from the University of Colorado, where he was a member of Pi Mu Epsilon and Eta Kappa Nu, honorary societies. George is a registered professional engineer in New Mexico.

GINO CARLI to supervisor of Electronic Device Test Division 2451, Component Test Equipment Development Division.

Gino has been at Sandia Laboratory 12 years and has been a section supervisor for nine years. He has worked on military field test equipment, automatic data systems, and product acceptance equipment.

Previously, Gino graduated from the University of Kentucky with a BS degree in electrical engineering. He has done some graduate study at the University of New Mexico.

He is a member of Sigma Pi Sigma, Tau Beta Pi, and Eta Kappa Nu, honorary societies, the Institute of Electrical and Electronic Engineers, and is a registered professional engineer in New Mexico.

JAMES L. ROGERS to supervisor of Techniques Development Division 2423, Automated Data Systems Development Department.

Jim has been at Sandia since September 1953 and has been a section supervisor since February 1957. He has been with the same department the entire time except for six months last year when he was on assignment in Advanced Systems Studies Organization 9100.

Previously Jim had been with the American Telephone and Telegraph Company since 1941—with time out for military service. He was mainly assigned to the New York area engineering office doing microwave radio relay link work.

He served three and a half years in the Navy.

Jim has a BS degree in electrical engineering from the University of Colorado and is a member of Pi Mu Epsilon, Sigma Tau, and Eta Kappa Nu honorary societies. He is a registered professional engineer in New Mexico and belongs to the Institute of Electrical and Electronic Engineers.

GEORGE W. ANDERSON, JR. to manager of Preliminary Design Department 8140, Livermore Laboratory.

George joined Sandia in June 1953 as a staff member in physical research. He was promoted to division supervisor in January 1956 and to manager of Electromechanical Development Department 1310 in April 1961. In September of that year he transferred to Livermore Laboratory to head Preliminary Design Division 8142.

Before coming to Sandia, George was a student at the University of Minnesota. He received his Bachelor's degree in mathematics from the university in 1948, and was awarded his MS degree in physics in 1950 and his PhD in physics in 1953.

During World War II he served as an ensign in the Navy, participating in Operation Crossroads, the first nuclear test series at Bikini in 1946.

He is a member of the Institute of Electrical and Electronic Engineers, the American Physical Society, Sigma Xi, and Phi Beta Kappa. While in Albuquerque, he served during 1961 as chairman of the Sandia Laboratory Colloquium.

ROBERT G. CLEM to supervisor of Section 8141-3, Preliminary Analysis Division, Livermore Laboratory.

For the past year and a half, Bob has worked in Preliminary Design at Livermore Laboratory. Previously, he worked briefly as a design engineer for the Aerojet General Corporation in Sacramento, Calif. He originally came to Sandia at Livermore in 1958 following his graduation from college. He was assigned to a project group, and was promoted to section supervisor in a project engineering division in October 1960.

Bob received his BS degree in mechanical engineering from Washington State College at Pullman, Wash., in June 1958.

From 1953 to 1955 he served in the Army. While stationed in Austria, he was in charge of a Signal Corps Telephone and Telegraph Center.

He is a member of Sigma Tau and Tau Beta Pi, engineering honorary societies.

Social Planning Council Elects Dickson President

Dick Dickson (8233-1) was elected president of the Livermore Area Council of Social Planning at a recent meeting of its board of directors. He will serve for the 1963-64 term.

Dick, who took over the post from outgoing president Bill Jenkins (8233-1), has been active in community activities since transferring to Livermore from Albuquerque in 1959. He has been a member of the board of directors of the Council of Social Planning since early this year, and has served on United Crusade committees for the past three years.

Sandia's Safety Record

Sandia Laboratory HAS WORKED 1,120,000 MAN HOURS OR 32 DAYS WITHOUT A DISABLING INJURY

Livermore Laboratory HAS WORKED 220,000 MAN HOURS OR 40 DAYS WITHOUT A DISABLING INJURY