



A CHECK for \$1,313.67 is presented by Fred Eichert (2210), committee chairman for the Employees Contribution Plan, to Brigadier K. John Bawden, commander of the Albuquerque Salvation Army, for the agency's local Christmas charity projects. The check is the 1967 ECP reserve fund.

ECP Reserve Fund Of \$1313 Given To Salvation Army

The reserve fund of the 1967 Employees Contribution Plan — a total of \$1313.67 — was presented to the Salvation Army for its local Christmas charity projects. The ECP committee made the allocation last week and officially closed the books on the 1967 ECP.

A total of \$263,102.83 was distributed this year to the 29 agencies of the Albuquerque United Community Fund and eight other health and welfare agencies.

The distribution was as follows:

United Community Fund	\$215,912.62
American Cancer Society	13,209.64
New Mexico Heart Assn.	9,208.64
Arthritis Foundation	4,493.47
Easter Seal Society	7,901.98
Multiple Sclerosis	3,706.26
Cerebral Palsy	2,627.24
Muscular Dystrophy	3,152.79
Cystic Fibrosis	1,576.42
Reserve Fund (Salvation Army)	1,313.67

\$263,102.83

The 1968 ECP will be a record year. At the close of the drive in October, Sandia employees had pledged a total of \$280,000 to the plan. The distribution of ECP funds is determined by the ECP committee using a percentage formula based on the fund raising records of the agencies. The reserve fund is held for emergencies or special needs.

Sandia Peak Tramway Will Be Used in Special Terrain Measurement Project

The Sandia Peak Tramway—normally used for transporting skiers and sightseers to the Crest—will be utilized for special Sandia Laboratory studies beginning next week.

C. R. Blaine, supervisor of Advanced Radar Development Division 1423, explains that one of the tramway's 60-passenger coaches will be used as a stable platform for experimental equipment.

"We plan to measure the radio frequency return signal from uneven terrain and determine its characteristics," he says. "The measurements being made are part of Sandia's continuing program in terrain return characteristics, and will be taken at an RF telemetry frequency assigned to Sandia for experimental use."

"In the past we have used helicopters for such experiments; but the tramway will be more stable and safer than helicopters, and it is more convenient."

A small generator will be mounted atop one of the coaches in preparation for the tests. Two racks of electronic gear will be carried inside the coach, and a movable antenna will be suspended in front.

Mr. Blaine estimates that the terrain measurement project will last from 3 to 10 weeks, depending on results of data reduction and availability of the tramway. Division 1423 will work closely with the tramway company to avoid inconvenience to the public.

"We are tentatively planning to use the tramway between 7 and 10 a.m., once or twice a week," he says. "This will depend on skiing conditions."

The tramway, the longest in North America, is 2.7 miles long and ascends 3878 feet from the base terminal to the 10,378-foot summit of Sandia Crest. At one point, the coach is suspended 1300 feet above the canyon floor.

Water-Jet Catapult Tests SNAP Units

SANDIA LAB NEWS

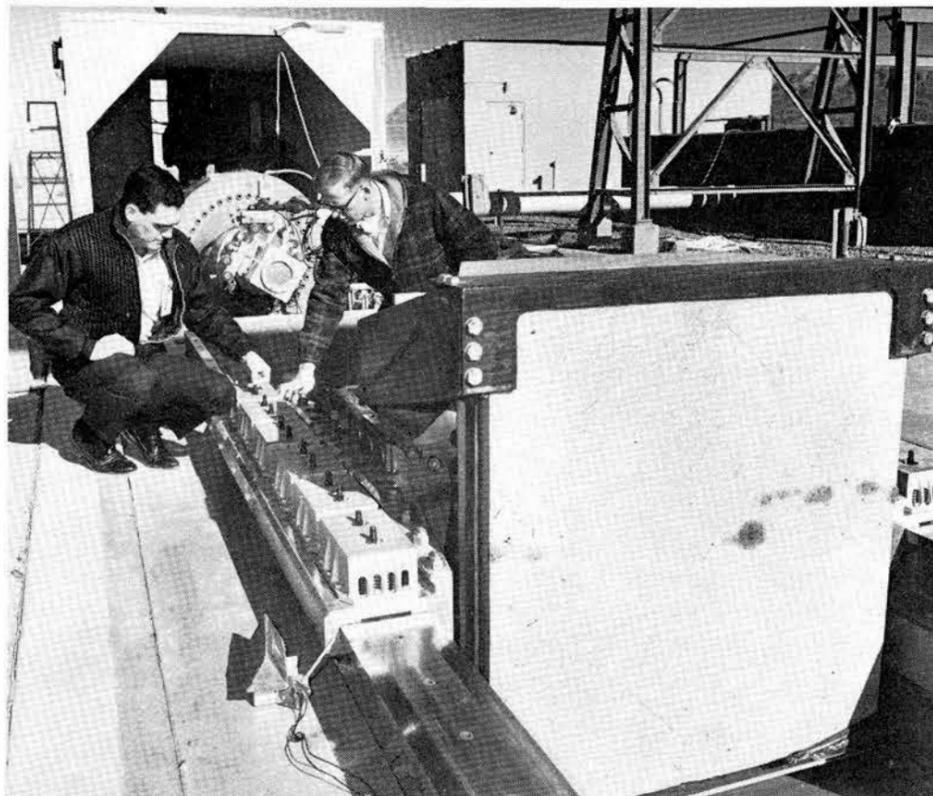


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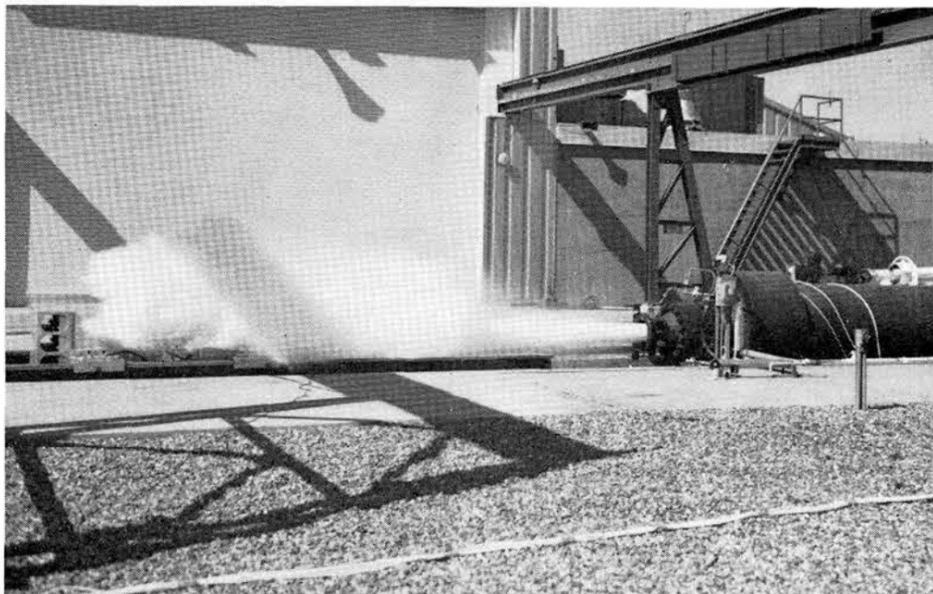
SANDIA LABORATORIES

ALBUQUERQUE, NEW MEXICO
LIVERMORE, CALIFORNIA

OPERATED BY SANDIA CORPORATION FOR
THE U. S. ATOMIC ENERGY COMMISSION



WATER-JET CATAPULT carriage with 4400-pound granite block on front will smash into a SNAP-29 target configuration. Project leader Bob Benham and test engineer John Austin (both 7342) check air pressure brakes used to stop carriage. In background is the facility's water chamber and jet stream nozzle.



HIGH-ENERGY jet stream of water propels 8500-pound carriage down 150-foot track to smash into SNAP-29 target block. Velocities up to 250 feet per second are achieved.

Sandia Laboratory's water-jet catapult in Area III, a unique instrument designed by Sandia for impact testing, is currently being used for a series of SNAP fuel-capsule safety tests. SNAP (Systems for Nuclear Auxiliary Power) isotopic fuel capsules will provide long-lived electrical energy for satellites. The system undergoing test is the SNAP-29 heat source, which is a configuration of 24 fuel capsules mounted in a one-inch-thick graphite block 32 inches wide and 37 inches long.

The impact tests will determine what might happen to the fuel capsules when the system re-enters the atmosphere and hits the earth after a rocket abort or after the satellite has completed its orbits. For the test series, simulated fuel capsules are being used. None are radioactive. The fuel capsules must meet stringent safety requirements, which are developed by Sandia for all SNAP programs.

The tests are being performed by Sandia for Martin-Marietta, Baltimore. Sandia's water-jet catapult was chosen for this task because it could perform the tests more economically than could a rocket sled, the other means to meet requirements for this series of impact tests. In addition, Sandia was the only organization that could provide the necessary impact and velocity measurement instrumentation, a major part of the test requirements.

The tests will simulate the worst possible impact conditions — the graphite heat source hitting on granite.

To achieve the impact necessary for the tests, the water-jet catapult propels an 8500-pound carriage down a 150-foot track at velocities up to 250 feet per second. Contributing a little more than half the weight of the carriage is a 4400-pound granite block mounted on the front.

The flat face of this granite block smashes into the target fuel block which hangs suspended at the required angle over the track. This is like "bringing the mountain to Muhammad" since in actual use the fuel block will be moving to impact on the "stationary" earth. By suspending the target, however, various precise angles of impact can be tested. The granite will hit the corners of the fuel block, the edges, and possibly hit flat plane to flat plane.

The catapult creates a high-pressure jet of water to propel the four-ton carriage down the track. Stored in a 500-gallon chamber, the water is forced by a piston powered by compressed air through a five-and-one-half-inch-diameter nozzle at velocities up to 700 feet per second. The jet stream enters the rear of the carriage through one end of a U-shaped pipe and exits out the other, completing a 135-degree turn in the process. The 36-inch-diameter piston, which has a maximum stroke of eight and one-half feet, discharges about 60 cubic feet of water.

Four air accumulators, connected to the water chamber by means of a fast-opening valve, have a total capacity of 280 cubic feet of air. A maximum pressure of 3500 pounds per square inch can be maintained.

After impact, air-pressure brakes will stop the carriage before it reaches the end of the track.

Preliminary calibration of the instrumentation was completed last week. The current series of tests call for four calibration runs into simulated target blocks and six tests of granite impacting on the SNAP-29 heat source.

After this series, more tests of the graphite block are contemplated for the next two years.

For some of the future graphite block tests, the targets will be heated to 1500°F. to duplicate the heat generated during re-entry. A furnace will heat the target and be pulled away just before impact.

Bob Benham is project leader for water jet catapult testing. John Austin is test engineer. Bill Duggan, Wilson Payne and Stan Kurowski are responsible for the instrumentation. All are in Area III Shock Division 7342 under Don Bauder.

Extensive photographic data is being provided by Photometrics Division 7226.

Don Spatz of Isotope Projects Division 9331, the SNAP-29 project director, is also assisting in the current test series. Sandia is responsible for overseeing technical development of SNAP isotopic power units for space use as well as being responsible for development of safety criteria for SNAP devices used in space.

Organization Christmas Giving Includes Food, Socks and Shoes

Many Sandia Laboratory employees were happy that they were able to assist some families in Albuquerque during the holiday season. Instead of exchanging cards with co-workers, many employees preferred to donate to charitable projects organized within their own group. In addition to projects previously reported in the LAB NEWS, here are several more such activities.

Chairman D. D. Belden (2432) reports that members of Quality Control Department 2430 donated \$357 which were used to purchase 65 pair of shoes for needy children attending the John Marshall elementary school.

Divisions 3252 and 3253 collected cash donations which went toward purchase of three pair of socks for each youngster at

the Boy's Ranch in La Joya. Each package was personally addressed to the boy and also contained peppermint candy. Arrangements for the project were made by Bernice Sanders (3252).

Design Information Center (2200) organization held its annual food basket fund drive. Some \$321 were collected and used to purchase food for 35 families. Distribution was through the Salvation Army. Gene Jeys (2211) was chairman of this project and was assisted by one representative from each section in 2200. "We scouted around for good prices and believe we got good value for our money," Gene says. The baskets included chickens, bread, potatoes, sugar, cocoa, cereal, canned vegetables and fruit, soup, eggs, bags of candy for the children, and numerous other staples.

Editorial Comment

Sierra Club Marks 75th Anniversary

Of all our resources, the most crucial is man's spirit. In this complex and industrialized world of steel and concrete, man's spirit is greatly sustained by immersion into the beauty of our natural resources: our parks, wilderness, forests and wild life.

To preserve these sanctuaries for man's enjoyment is a primary goal of the Sierra Club. Founded in 1892 to help people explore, enjoy and protect our natural resources, the Club has taken a leading role in helping to secure these places for the present and future generations.

Conservationists fear that too many of our natural resources are in danger of being destroyed in the name of industrial progress. Recently, they led a successful fight to prevent the Grand Canyon from being dammed.

They also believe that some resources should be protected by law. Along with other interested national organizations, the Sierra Club has been working for the establishment of a Redwood National Park.

We owe the Sierra Club and like organizations a word of gratitude for their efforts to preserve values that once lost are almost never regained.



AT&T LONG LINES EXECUTIVES visited Sandia Laboratory recently as part of "Operation Understanding" sponsored by the military services. Business executives tour various military installations and receive briefings on methods and missions. Shown with President John Hornbeck are, from left, Robert E. Huber, general manager, AT&T western area, San Francisco; L. L. Leger, vice president and general manager, New Mexico, mountain states area, Albuquerque; Thomas W. Scandlyn, general manager, AT&T eastern area, Washington, D.C.; Mr. Hornbeck; Roy D. Watson, general manager, AT&T central area, Chicago; and Gordon C. Bill, general manager, AT&T southern area, Atlanta.

SANDIA LAB NEWS



SANDIA LABORATORIES
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UNM-Sandia Colloquium On Meteorite Research

"Recent Advances in Meteorite Research" will be the subject of the next UNM-Sandia Colloquium to be held Wednesday, Jan. 10, at 8 p.m. in Rm. 122, Geology Bldg., UNM.

The speaker will be Brian H. Mason, research curator, Division of Meteorites, U.S. National Museum, Washington, D.C. He holds degrees from the University of New Zealand, Oslo University, and the University of Stockholm (PhD in mineralogy).

Mr. Mason has worked as a petroleum geologist in Batavia and has taught in New Zealand and at the American Museum of Natural History. He is a former president of the Mineralogical Society of America and the Geochemical Society and holds memberships in New Zealand, Swedish and Norwegian Geological Societies. His publications include a book on geochemistry and another on meteorites.

Retiring



William E. (Doc) Rehbeck will retire Dec. 30 after more than 21 years with the Laboratory. He was one of the 13 people who came from Los Alamos Scientific Laboratory in April 1946 to form the nucleus of Sandia Corporation.

As an electrical engineer, Doc spent many years in the engineering group, the inspection organization, and for the past seven years has been with Tool Made Sample Engineering Division 2562. Prior to 1946, he was in the Signal Corps for five years teaching radar.

Mr. and Mrs. Rehbeck have two married children and six grandchildren. Their daughter lives in Albuquerque and their son in Denver. Doc has a "flock of hobbies" and is pleased to be able to devote more time to them. They include gardening, camera work, electronics and rock hounding. One room in his home is used exclusively as a work room and is well equipped for lapidary work.

Doc has numerous retirement plans. One that he is especially anticipating is a trip to Australia to visit the opal mines. The Rehbecks will spend some time in Hawaii with Mrs. Rehbeck's sister, and will also visit Ceylon, where Doc says you'll find the finest gem gravel in the world.

* * *



William O. Smith, supervisor of Material Services Division 4611, is retiring from Sandia today. He joined the Laboratory in August 1948 as an assistant engineer. Bill worked with several different groups before he was made division supervisor of the inspection organization in 1952. In addition, he has held supervisory jobs in purchasing and reclamation, and has been in his current position since 1962.

Mr. and Mrs. Smith plan to continue their residence in Albuquerque at 8607 Menaul Blvd. NE.

Bill cited Sandia's retirement plan as a great incentive for taking early retirement. "This program and the excellent health care program provide employees the opportunity of enjoying extra retirement years," he says. "The Corporation is a wonderful place in which to work."

Bill expressed his future plans like this: "During the next 25 years, with God's help, we intend to relax, sleep late and travel to the far corners of this wonderful free country of ours."

* * *



Louis G. Stewart, a staff member in Energy Components Division 2134, will retire from Sandia Jan. 5. Mr. Stewart was employed by Sandia in November 1950 and has been with the Quality Assurance organization the entire time. Before joining Sandia he was an engineer with Western Union Telegraph Co., in New York City for 13 years. He also served three years in the U.S. Army, and was service manager for Packard Manufacturing Co. in Indianapolis.

Mr. and Mrs. Stewart have two children, both living in Gallup. Their daughter is married and has six children. Their son is an attorney and serves as legal counsel for the Zuni Indian Tribe.

The Stewarts recently purchased a 22-foot Airstream travel trailer. Their immediate plans include a trailer trip to visit Mr. Stewart's brother in Tampa, Fla. They will also attend an Airstream travel club rally near Miami during February. "We plan to return to Albuquerque about the first of April," Mr. Stewart says. "We like to travel, but we also like to be near our grandchildren. We will probably spend most of the summers in this area and travel during the winter. I do a lot of fishing and small game hunting with my son-in-law, so we'll be spending more time at Gallup and near-by lakes in New Mexico and Arizona."



Edith B. Blum, secretary to the Director of Development Shops 4200, will retire from Sandia the end of this month. She is ending a secretarial career spanning 39 years with only two employers. Before coming to Sandia, Edith had worked 23 years for the Union Trust Company Bank in Pittsburgh. She joined the Laboratory in December 1951 as a division secretary, was promoted to department secretary in 1952, and assumed her present position in July 1956. For the entire 16 years she worked in the Development Shops organization in Bldg. 840.

Edith's husband Vernon, who works for the New Mexico State Highway Department, is also retiring this month. "Vernon and I have been making our retirement plans for the past several years," Edith says. "I think Sandia's early retirement plan is just fantastic. This policy has made it possible for me to retire at the same time my husband does and for us to make definite plans for our future."

Mr. and Mrs. Blum will do a little traveling to areas of this country they haven't seen before, and will visit with relatives in the East. Sometime in the future, they plan to attend a Bible College for a year's concentrated Bible study. They are active in patriotic and church activities and will continue these interests.

"I've enjoyed my years at Sandia," Edith says. "I've always been happy with my work and the people I've worked with. I'm looking forward to retirement; in fact, I'm very excited about it."

* * *



Frank A. Goss, Jr., a Bell Telephone Laboratories employee on loan to Sandia, will retire Feb. 10 with just a few months short of 39 years with the Bell System. He joined BTL in July 1929 in New York City where he helped develop the first instruments to plot sound decay in rooms. In 1932 he transferred to Whippany where he worked in broadcast transmitter design and development. Frank returned to New York City in 1939 and worked with the telephone filter group. From 1942-52, Frank worked in radar and bombing computer development at Whippany and Graybar Varick.

Frank was granted a leave of absence from BTL in January 1953 for assignment at Sandia Corporation. He did some systems analysis work and then became section supervisor in vacuum tube development. In 1955 he was promoted to division supervisor in Component Development Division. Subsequent re-organizations resulted in Frank's being appointed supervisor of the Explosive Components Division 1342.

Mr. and Mrs. Goss live in a mobile home at 1907 Buena Vista SE (Box 17). They also own a 26-foot Airstream travel trailer and are members of an international club organized by Airstream owners. Frank served as president of the New Mexico group for two years and is presently an officer in the regional group. He is enthusiastic about the club. "This is an excellent program for travel," he says.

Next on the agenda is a three or four month trip. In February they will join the travel club for a rally near Miami, then move on to New Orleans for the Mardi Gras. Frank is also busy with groundwork for a rally to be held in the Four Corners area in 1968.

"We have been a 'camping family' since 1935," Frank says. "We've gone from tents through trailers, depending on our needs." Mr. and Mrs. Goss have two children and four grandchildren. Their daughter and son-in-law (A. T. Marrs, 7215) live in Albuquerque, and their son and his family live in Nashville, Tenn., where Frank's son is Professor of Medicine at the Vanderbilt Medical School.

"My wife and I are looking forward to retirement," Frank says. "We'll do a lot of traveling and I'm also going to do a small amount of consulting relating to reliability and design of explosive components. We hope to have many years before we arrive at the rocking-chair stage, and when we get there we'll sure have a lot of pictures to look at."

Civic-Minded Sandian Selects Students for Foreign Study

Since 1962, John E. Miller (8243) has served on the Selection Committee of the Americans Abroad program of the American Field Service (AFS). The committee—which John presided over as chairman in 1965 and 1966 — selects students from Livermore's high schools who will live and study in a foreign country.

The American Abroad program was started in 1950 by students from other countries who had studied in the United States. These students wanted to offer young Americans the kind of opportunity they had been provided in the United States.

Placing an American student with a family who lives in a country such as Swaziland or Sweden requires careful examination of a candidate's qualifications. U. S. citizenship is a must. So is excellent health. Usually the candidate is 16 years old, a junior in high school, has shown academic proficiency, and has taken at least two years' instruction in a foreign language.

The student selection process calls for hard work, imagination and insight according to John. "We have found," he says, "that students with above average grades in school have the motivation and sense of responsibility to make their stay abroad meaningful to themselves and their host country." He further emphasized how personality traits should complement each other to assure mutual enjoyment and learning. "After all," he continued, "they're sharing the day-to-day existence of their 'adopted' family. And that includes their language, their culture, their emotions, work and leisure."

A review of school records and talks with a candidate's past and present teachers provide the academic information needed for student selection.

Analyzing personalities is quite another matter.

"In order to find out much as possible about the candidates," relates John, "the committee starts by conducting at least two interviews with all the applicants present. The group interviews give us a clear idea of the candidate's ability to get along with his contemporaries and how each person contributes to a group situation.

"Home interviews follow with the families of the candidates. These sessions can reveal information vital to the final student selection. Home environment and the interplay of reactions and attitudes among family members are valid indicators of the candidate's ability to adjust to unfamiliar surroundings."

As many as 20 candidates a year have been screened for study abroad. Only four, however, will have their names submitted to the New York City headquarters of AFS for final selection. (Livermore can select two candidates from each high school providing each school has accepted a student from abroad the previous year.)

"Organizing the information and preparing reports of the committee's impressions are tasks in themselves," says John, "and it usually is done within a six-week period during the Fall. Of course there are also campaigns to raise the \$750 necessary to send each student abroad. Not all AFS Chapters offer complete financing for the student's year abroad, but Livermore's Chapter has agreed to do this."

Why do all this work?

"It is a gratifying experience to work with people who give their time and talent to promote a fine program like Americans Abroad. When the work is done, we feel assured that we've selected the right student to represent the United States abroad."

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SANDIA LAB NEWS

DECEMBER 29, 1967



REVIEWING THE PATENT PAPER that describes their process for nickel-plating metallic uranium are Phil Anderson (8141), left, Lou Berry (1130), center, and Paul Coronado (8141).

Patent Awarded For Uranium Plating Process

The AEC has received Patent No. 3,341,350 in the names of Philip D. Anderson (8141), Louis M. Berry (1130) and Paul R. Coronado (8141) for providing a simple, economical and practical means to prepare metallic uranium for a protective metal coating. Previous methods developed to coat the toxic and corrosive substance have proved impractical and expensive from a production standpoint.

Cleaning the part to be plated is essential. Generally, degreasing it with trichloroethylene vapor or soaking it in acetone is adequate. Following this, immersing the part in a nitric acid and distilled water solution removes the oxide film usually found on uranium.

To provide a microscopically rough surface to which the nickel will adhere, the part is given a tin bath treatment (in a solution of stannous chloride, nitric acid and water). The interaction of the uranium with tin in the solution is believed to deter the formation of a thin, black uranium hydride film which has caused inferior plating in the past.

The tin bath treatment creates a unique surface condition on the uranium (possibly an extremely thin layer of tin-uranium alloy is formed). This surface — free of uranium hydrides and oxides — can then be nickel-plated with good adhesive qualities.

Take Note

A television program describing the Sandia-developed rolamite will be shown on Channel 6, KVVU-Sacramento, on Dec. 31 from 6:30-7 p.m. and again on Jan. 3, 1968, from 12:30-1 p.m.

The program — part of an educational television series entitled "Innovations" — features a demonstration of rolamite by its inventor, former Sandian Donald F. Wilkes. Dr. Richard Brinneman of Los Angeles moderates a discussion of the device with his guests Elmer N. Leslie (1322) and Donald D. Eulert (3413).

Sandia Laboratory's Public Information Division 3431 provided liaison for the video-taped production.

A. D. Andrade (8223-5), T. N. Casson (8138), J. W. Dini (9141) and L. D. Humphreys (8113) collaborated on the presentation of the fourth of a series of lecture-discussions at Livermore Laboratory on Modern Materials and Processes. Topic for the session was "Printed Wiring Boards."

The series is designed to help SCLL engineers keep up-to-date on the properties and uses of modern materials and the capabilities and limitations of modern manufacturing processes.

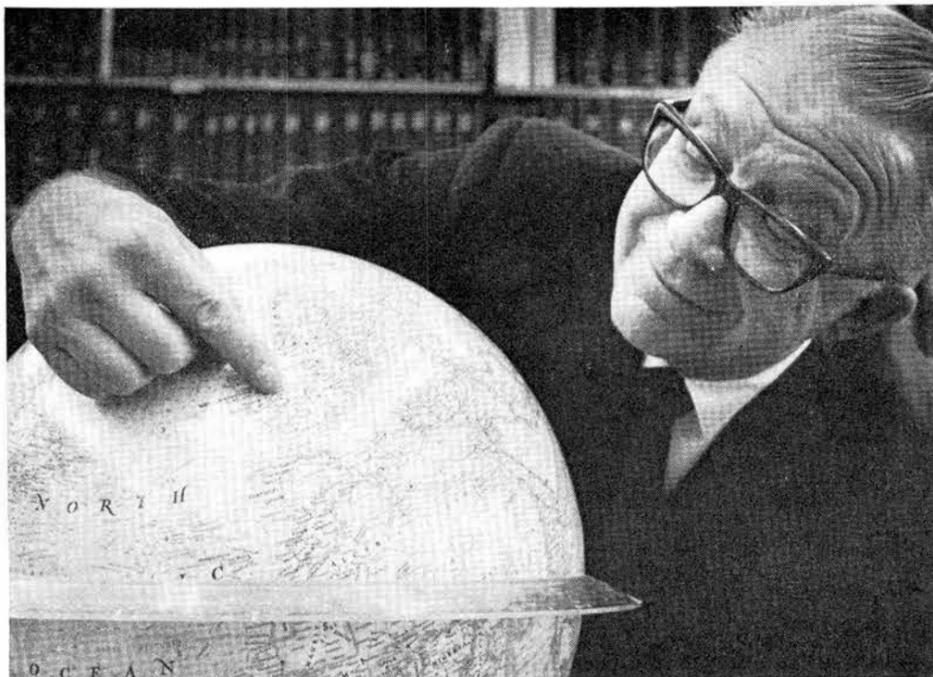
J. W. Dini, H. R. Johnson and J. R. Helms, all of Materials Application Division I 8141, were authors of an article published in the December 1967 issue of PLATING, the Journal of the American Electroplaters' Society. Title of the article is "Effect of Some Variables on the Throwing Power and Efficiency of Copper Pyrophosphate Solutions."

Al Skinrood (8158) won the first place trophy in the Dec. 9 Sandia Employees Golf Tournament played at the Willow Park golf course in Castro Valley. He finished with a low net score of 69.

The tourney was played on a straight handicap basis with participants divided into two flights. M. E. Houk (8161) was the top winner of the first flight (handicap of 20 or less) with a net score of 71, and Jack Dini (8141) won the second flight (handicap of 21-36) with a net score of 70. A special award went to Bob Schaefer (8158) for coming closest to the pin at the No. 13 hole.

The next SEGC tournament will be played at the Silver Pines Golf and Country Club in Newark. Those interested should contact M. E. Houk, ext. 2329; or Joe Genoni (8235), ext. 2433.

D. E. Gregson, manager of Preliminary Design Department 8130, has been named chairman of the board of directors of the Livermore Area Recreation and Park District for the year 1968. He has served on the board for the past three years, having been elected to the post in the November 1964 Livermore election. He was vice chairman of the board last year.



ENGLAND MARKS THE SPOT where a student from one of Livermore's high schools lived and studied for a year. John E. Miller (8243) and other Selection Committee members of the American Field Service's Americans Abroad program select the students who live and study abroad.



MEMBERS OF THE DOWNTOWN DEVELOPMENT COMMISSION (DDC) and city officials of Livermore hear Marv Becktell (8161) explain how the Program Evaluation and Review Technique (PERT) can be applied to coordinate the work of the various committees of the commission. The DDC was formed to plan, finance, and put into effect projects

to revamp the downtown area. Pictured (l to r) are Daniel L. Gillice, finance director—DDC; Burt H. Duke, planning director—DDC; William H. Parness, city manager; John A. Lewis, city attorney; Daniel J. Lee, city Public Works director; Joseph W. Steenblik, city Public Works assistant director; Dr. John B. Shirley, chairman—DDC.

Sandia Highlights

A Year in Review - 1967

The year in retrospect is always interesting. It offers a chance to recall important events and often provides a unique opportunity to relate individual activities to the overall responsibility of Sandia Laboratories. This was 1967.

January

A Second Supplemental Group Life Insurance Program was announced for employees. Low group rates allow employees to supplement private insurance programs. In another benefit plan change, employees were offered a chance to place a part of their retirement accrual and/or future retirement accruals into a variable annuity form (common stocks selected for the plan by Prudential Insurance Company of America).

More than 8800 cubic feet of records were purged at Sandia Laboratory from office files and storage in a concentrated response to an appeal by President Johnson and the Atomic Energy Commission to reduce the cost of maintaining stored records. Classified material was marked for destruction and office reference material was consolidated and removed to Central Technical Files.

Two Livermore Laboratory employees developed a color technique for preparing multilayer printed circuit board drawings. A different color for each layer reduces the number of drawings to one, rather than a drawing for each layer.

Livermore Laboratory's experience in network analysis helped in programming new construction for the Livermore schools. Employees conducting the analysis were members of the Livermore Technical Panel for Community Service. This panel offers volunteers from science, engineering, mathematics and other technical fields a chance to apply their professional skills to community programs.

In competition with 151 American and Canadian industries, Sandia Laboratory won the grand award in the 1966 National Fire Prevention Contest. The award was based upon the Laboratory's low annual damage from fire and an aggressive fire prevention program.

February

Conventional high-explosive blasts were continuing on dry lake beds at Tonopah Test Range (Nevada) to develop laws for excavating with explosives. The ultimate aim of the program is to predict the amount of excavation possible in a specific situation using nuclear explosives.

Three directorates and 29 departments were presented United Community Fund silver plaques in recognition of achieving the equivalent of 90 percent employee participation in the Employees Contribution Plan and 75 percent "fair share" contributions.

A new hazardous material handling facility was completed at the Livermore Laboratory. The facility is used to decontaminate test units and field specimens which have been exposed to toxic or radioactive environments. Both wet and dry decontamination capabilities are provided in close proximity.

During the "Clean-Out" Campaign at Livermore Laboratory, 1700 cubic feet of records were either destroyed or transferred to Central Technical Files and Records Retention. The figure represented a 20.2 percent reduction in record holdings.

March

A dozen employees participated in a month-long scientific expedition to an antarctic region and along the equatorial path around the world to gather data on the auroral spectrum (northern and southern lights) and cosmic rays.

Two Field Test Divisions were designated to provide arming and firing system designs and to perform earth motion studies for Project Gasbuggy—the nation's

first experiment using a nuclear explosion to stimulate natural gas production. The detonation of a 20-kiloton nuclear device would occur at a depth of 4200 feet in a low-permeability gas producing formation 55 air miles east of Farmington.

A time-sharing computer system was installed at Sandia Laboratory to evaluate the advantages of using remote consoles at various locations throughout the technical area connected to a central processing computer in Bldg. 880, which in turn would be linked by long-distance telephone lines to computers in Los Angeles and Phoenix.

A new method for depositing thick, pure nickel by an electroless plating process was developed by two employees in the Materials Application Division at Livermore Laboratory. They defined a chemical solution and a set of operating conditions which will coat brass or steel with fine-grained, 99 percent pure nickel up to 10 mils thick.

April

Sandia Corporation's Board of Directors met at Livermore Laboratory March 30.

Byron F. Murphey was named director of Underground Experimentation 7100. The newly-created organization included Test Sciences Department, Nevada Test Site Instrumentation Department and Nevada Test Site Engineering Department.

Two improved Vela nuclear-detection satellites were launched from Cape Kennedy—the fourth pair to carry Sandia and Los Alamos Scientific Laboratory instruments. Additional solar panels to supply power made possible a larger payload in the newest pair.

New 20-month contracts were signed with three unions at Livermore Laboratory—the International Association of Machinists and Aerospace Workers (IAMAW), District Lodge No. 115, AFL-CIO; Sheet Metal Workers International Association, Local No. 216, AFL-CIO; and the Building and Construction Trades Council of Alameda County, AFL-CIO.

Some 200 outstanding high school science seniors were invited to visit Sandia during the Laboratory's 11th annual observance of Science Youth Days. The program is designed to encourage young people to pursue science and engineering careers. Talks, movies and stops at various laboratories were included in the tour.

A new cafeteria was opened to serve the 370 employees in Area III, Area V and Coyote Canyon. The facility features a complete luncheon cafeteria service plus a carryout selection of sandwiches and packaged snacks.

May

Two more promotions to Director were announced, effective May 1. C. R. Barncord was appointed director of Design Information Center 2200, succeeding T. T. Robertson who planned to retire. C. R. Pritchett was promoted to director of Purchasing and Traffic 4300, succeeding K. S. Spoon who also planned to retire.

Nike-Apache rockets were fired from Barking Sands launch site in Kauai in the Hawaiian Islands as part of a continuing study of high altitude winds. The rockets carried trimethylaluminum which produced luminous trails between 50 and 100 miles above the ocean.

The new 5000-foot track in Area III was termed "a complete success" after some 75 rocket sleds streaked down the rails at speeds up to Mach 5.5.

Development of the first sampling device known to be designed specifically for assaying microbial contamination on large surfaces of spacecraft hardware was announced. The vacuum probe sampler was developed for use in ultra-clean environments, such as the laminar-flow clean room.

A year-long study of material control operations in Livermore Laboratory's

warehouse resulted in a new look and greater efficiency. Storage capacity was increased by 40 percent. Also 12 percent of the floor space in the General Stores area was released for other functions.

June

Two new security contracts for Livermore Laboratory and Tonopah Test Range were awarded. Under terms of the contracts, a force of about 60 security officers will be provided at the two locations.

The first extensive modification to Livermore Laboratory's underground electrical facilities in 10 years was completed. In addition to installing extra conduits for supplemental intrusion alarms, fire alarms, telephone lines and public address systems, the project provides conduits for stand-by electrical power in Bldgs. 911 and 912 for future use by communications and computer facilities.

Work was being completed on a Sandia-designed data processor which will become part of a system at Tonopah Test Range to record test data and reposition tracking instruments.

The 49 members of the 1967 Technical Development Program class completed their one- or two-year programs of advanced study at the University of New Mexico and received congratulations from President Hornbeck during a luncheon. The TDP participants work at regular engineering assignments half the day, attend classes the other half.

For the third year, Sandia participated in President Johnson's Youth Opportunity Campaign to provide temporary summer jobs and training experience for students returning to school in the fall. During the month, 110 students joined the company at Albuquerque, Livermore and Tonopah.

July

Commissioner James T. Ramey, in behalf of the Atomic Energy Commission, expressed "deep appreciation for the great contributions" made by Sandia Corporation in the Vela Satellite Program. He noted that the design and performance of optical and electromagnetic pulse detectors and of the space-based data processing electronics for the payload "clearly demonstrate the technical skill, professional competence and dedicated effort" of the Laboratory personnel.

Cost improvements achieved during fiscal year '67 were estimated at \$6,221,000 by Value Engineering and Cost Improvement Division 2563.

Announcement was made that a high-speed multi-processing UNIVAC 1108-II computer would be installed at Sandia Laboratory later in the year. The system would include 40 remote time-sharing teletypewriters, 10 remote time-sharing display devices similar to television screens, and two satellite computers. It will incorporate the latest improvements in the computer field, including faster speeds, larger mass storage, multi-programming, multi-processing and time sharing. The system is expected to meet the Laboratory's anticipated computing needs at least until 1971.

Air-drop tests at Tonopah and Coyote Canyon proved the effectiveness of a Sandia designed Para-Foil to guide a rocket payload from an altitude of 100,000 feet and to provide a "sky hook" for instrumentation cables. In free flight, the Para-Foil was combined with an automatic homing system to bring rocket payloads down to a ground station transmitter.

Some 350 tests have been conducted by Terradynamics Division 9327 during the past year to determine the resistance of various earth materials to penetrating vehicles. Projectiles have impacted at velocities from 100 to more than 1000 feet per second into target materials including ice, gypsum, clay, water, granite, desert alluvium, and welded agglomerate. The information is important to various programs including SNAP (Systems for Nuclear Auxiliary Power).

School and city officials from the local area attended a presentation at Livermore Laboratory to learn about principles of the Program Evaluation and Review Technique (PERT) for application to current projects in Livermore and Pleasanton school districts and city governments.

August

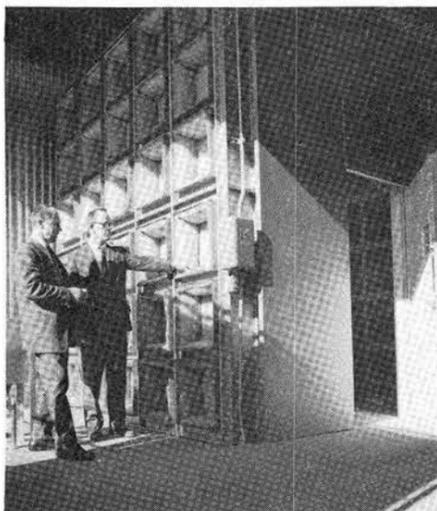
Sandia's newest reactor—the Annular Core Pulse Reactor (ACPR)—was put into operation. As with SPR-II (pulsed reactor) it will be used to determine the effects of



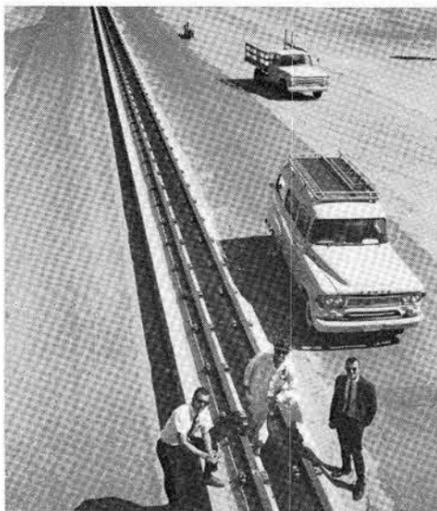
Rolamite, a new concept.



Para-Foil tests.



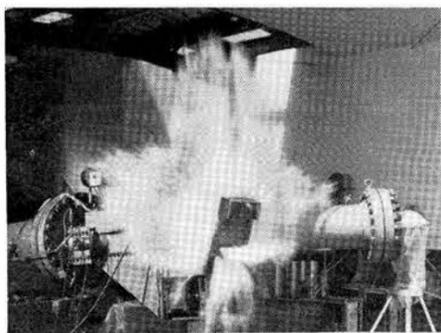
SCLL's hazardous material handling facility.



5000 ft. rocket sled track.



Electroless nickel-plating process.



"Squirt gun" for environmental testing.



High-explosive excavating studies.

(Continued on Next Page)

1967 Sandia Highlights

radiation on various materials, components and systems.

The Sandhawk, a single-stage rocket system capable of carrying a 200-pound payload to a 100-mile altitude, was developed by Carrier Development Division 9224. The first of four such vehicles planned for Sandia's diagnostic rocket program, the Sandhawk replaced three-stage rocket systems which required more time to assemble and were generally less reliable.

Unattended Seismological Observatory (USO) units were reported operating successfully in desert and permafrost environments. The units were developed by Sandia at the request of the Advanced Research Projects Agency (ARPA) of the Department of Defense to aid in detecting, locating and identifying seismic events.

Livermore Laboratory engineers used frozen peas to measure water velocity in an SCLL-designed Pressure Velocity Generator ("squirt gun"). The peas, mixed with water in the gun, provided the means for high-speed cameras to record the speed of the water during tests on a data-recording capsule.

September

Some 170 Sandians participated in the joint Department of Defense-Atomic Energy Commission test readiness exercise in the Pacific area. They were involved in operational control, instrumentation and data gathering, and rocket launch activities at Kauai, Hawaii, and Johnston Atoll. Others were aboard the NC-135A diagnostic aircraft which gathered simulated nuclear effects data in the drop areas. No nuclear weapons were used in any part of the exercise.

Employees at Livermore Laboratory contributed a record \$24,053 to the United Bay Area Crusade, surpassing their \$22,000 goal by \$2053. This was an increase of 23 percent over last year's contribution. The average gift per contributing employee was \$29 with 79 percent of the employees participating. Fair share contributions also increased from 50 in 1966 to 80 this year.

A series of drop and impact resistance tests were conducted on an inert isotopic fuel capsule being considered for use in an advanced aircraft system. The series included 49 rocket sled impact tests in Area III and 19 drop tests at Tonopah Test Range using models of the almost spherical capsule.

Total value of construction projects underway at Sandia Laboratory, Livermore Laboratory and Tonopah Test Range was estimated at \$6.4 million upon completion. These are in addition to the \$7 million in construction projects that were completed during FY 1967.

A small group of employees from Sandia Laboratory were in northwestern New Mexico to install underground instrumentation for Project Gasbuggy.

October

T. B. Cook, Jr., director of Physics and Mathematics Research, was elected Vice President 5000 to succeed R. C. Fletcher who was returning to Bell Telephone Laboratories.

Development of rolamite, a nearly frictionless fundamental mechanical device, was announced. The engineering concept is believed to be so basic that it would have potential application in many devices ranging from household appliances to inertial switches for spacecraft.

Discovery of unique electro-optic properties of certain ferroelectric ceramics led to design of a number of prototype devices for computer information storage and display. The ceramics also appeared adaptable for other uses, such as information display screens, light modulators, and possibly television sets without picture tubes.

More than 500 persons attended an "open house" at Tonopah Test Range, Nev. The occasion marked the 10th year of operation of the range. Visitors saw radar and telemetry facilities, tracking telescopes and high speed cameras, rocket vehicles and launchers, drop-test targets, and a film on Range operations. Guests included landowners and residents from the area, local community leaders, Nevada state and county officials, and families of Range personnel.

The \$279,957 pledged at Sandia Laboratory to the current Employees Contribution Plan marked a seven percent increase over the previous high. Some 6114 employees or 86 percent contributed. Average gift of donors was \$45.79.

November

Western Electric Company President P. A. Gorman and J. B. Fisk, President of Bell Telephone Laboratories, were among

members of the Sandia Board of Directors attending briefings in Albuquerque. Although not a member of this board, H. I. Romnes, Chairman of the Board of AT&T, was also present.

Fourteen employees flew to the Arctic Circle aboard specially-instrumented aircraft to continue a study of atmospheric phenomena. The men were primarily interested in the aurora borealis, cosmic rays, and the twinkle phenomena (scintillating effect of stars). The studies were made during night flights over Tungsten, District of Mackenzie.

Two buildings were constructed in Livermore Laboratory's Area 8. Building 967 will be used for the cleaning and assembling of items scheduled for test in the pressure testing facility. Building 977, a prefabricated steel structure, will be used for the assembly of test pieces and for the storage of special jigs, fixtures and instrumentation.

December

AEC/Sandia Area Office presented an Award of Merit to Livermore Laboratory in recognition of 1,292,740 man-hours worked by employees without a lost-time accident. The period covered was from Oct. 24, 1966 to June 30, 1967. Livermore Laboratory has received previously five Awards of Merit and an Award of Honor from the AEC.

A series of impact tests were conducted on Sandia's water-jet catapult in Area III. Graphite fuel blocks containing 24 simulated fuel capsules of a SNAP-29 isotopic power supply were the targets. SNAP (Systems for Nuclear Auxiliary Power) units must meet stringent safety requirements, a Sandia responsibility in SNAP programs.

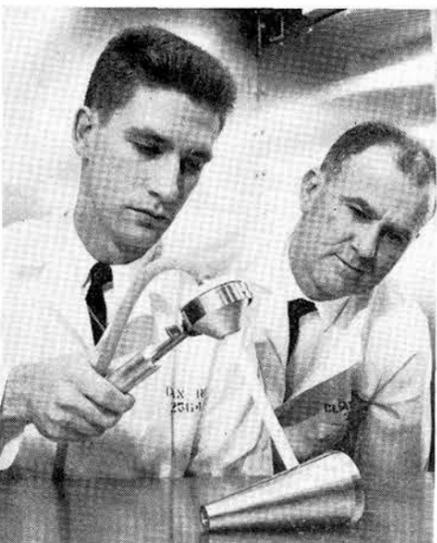
A U.S. Navy distinguished service award, the "Forty-One for Freedom" award, was presented to Livermore Laboratory in recognition of SCLL's contribution to the Navy's Fleet Ballistic Missile weapon system, better known by the name of its missile, Polaris.



Optical memory element.



"Open House" at Tonopah Test Range.



Vacuum probe sampler.

Speakers

W. A. Scranton (2222), "History of Magic," Van Buren Junior High School, Dec. 18, Albuquerque.

C. W. Harrison, Jr. (1425), three seminars in applied physics at Stanford Research Institute, Jan. 8 and 9, Menlo Park, Calif.

J. W. Guthrie (1415), "Calibration of Vacuum System Volumes by Molecular Flow Leak-Mass Spectrometer Techniques," New Mexico Section of the American Vacuum Society, Dec. 5, Los Alamos.

F. L. English and M. K. Parsons (both 5143), "Inhomogeneities in the Resistivity of Various Single Crystal Semiconductors," Arizona State University Physics-Chemistry Colloquium, Dec. 7, Tempe, Ariz.

C. M. Percival (5133), "Rolamite, A New Kinematic Concept," Brigham Young University Mechanical Engineering Seminar, Dec. 7, Provo, Utah.

K. J. Shumway (2225), "Automation of the Configuration Management Information System at Sandia Corporation," local chapters of the American Institute of Architects and the Construction Specification Institute, Dec. 12, Albuquerque.

R. M. Jefferson (5224), "The Future of Nuclear Energy," Duke City Civitan Club, Dec. 28, Albuquerque.

Albert Narath (5150), "Effects of Electron-Electron Interactions on Nuclear Spin Lattice Relaxation Rates in Metals," Cornell University, Dec. 5, Ithaca, N.Y.

H. H. Wicke (5261), "On a Theory of Non-First-Countable Topological Structure," Kempner Colloquium, Nov. 27, Boulder, Colo.

R. I. Ewing (5235), "Atoms, Radiation, and Things," Van Buren Junior High, Dec. 4.

O. L. Wright (4610), "History of Sandia Base," Sunrise Optimist Club, Dec. 5.

G. W. Hughes (7224), "Astronomy," Navajo Elementary School, Dec. 6.

H. H. Patterson (9230), "The Challenge of Vietnam," Downtown Optimist Club, Dec. 15.

Sympathy

To C. W. Harrison, Jr. (1425) for the death of his mother-in-law in San Diego, Calif., Dec. 17.

Shopping Center

CLASSIFIED ADVERTISING
Deadline: Friday noon prior to week of publication unless changed by holiday.
A maximum of 125 ads will be accepted for each issue.

- 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
 8. Housing listed here for rent or sale is available for occupancy without regard to race, creed, color, or national origin.

FOR RENT

2-BDR., partly furnished, house, attached garage & den, 706 Delmar Ave. NW, Valdez, 268-6135.

FOR SALE

MISCELLANEOUS

- CRIB, car bed, high chair, car seat. Summers, 298-298-1001.
- HARMONY electric guitar, case, epiphone amplifier, never used, \$150. Ryan, 299-3518.
- 6-CYL. Continental engine, disassembled, cleaned, have all parts including accessories, except cam shaft, fits Jeeps, Kaiser's, \$100 or trade for 2-w. steel trailer. Courtney, 255-4663.
- TIRE CHAINS, 1 pr., 7:00-16 7/8-15, new \$7; gas can, 8-gal. w/flex spout, \$3. Love, 299-0956.
- SELF PROPELLED Sunbeam electric reel type power mower, motor needs repair, best offer. Boesflug, 298-5236.
- ONE SET tire chains, fit 6:70-15 to 8:00-14, \$4. Allen, 256-3234.
- NORITAKE china, 48 pieces, \$39.95; other dishes, odds & ends, \$5. Elbert, 255-9433.
- FORTABLE COOLER, \$20; portable heater w/fan, \$5; electric coffee pot, \$5. Troy, 268-9079 after 5.
- HUTCH corner cupboard, rock maple, \$90; bathette, \$8; Polaroid w/attachments & case, \$40. Browne, 344-9675.
- MONAURAL HI-FI, complete \$180; Knight 30-watt amplifier, \$40; FM-AM tuner, \$40; electrostatic speaker system \$80; Garrard 4-spd. changer, \$40; AM-SW table radio; GE toaster; Remington shaver. Church, 299-2175.
- ELDON DRAG STRIP racing set, lots of extra track, cost \$50, sell for \$25. Cox, 2946 Morningside NE, 268-2068.
- SCANDALLI ACCORDION, 48-bass, w/case, \$50. Watkins, 299-0411.
- WINCHESTER, new Canadian Centennial 30/30 rifle, cold engraved, trade for other guns, Nazi items or old knives. Smitha, 299-1096.
- 1 SET lug-reinforced tire chains for 5:60-13, 5:90-13 or 6:00-13, \$7. Mattox, 296-4149.
- COUCH, charcoal brown, 90" long, \$25. Wischnmann, 298-7386.
- 16' GLEN L. boat kit, hull is completed, have enough material to finish deck & all fiberglassing. Irving, 299-1969.
- AKC Pomeranian puppy, female ready Jan. 9, \$100; formica table \$10; gunrack, \$10; linemans boots, size 9C, \$5; Duncan Phyle chairs. Stuart, 265-7315.
- AKC English Springer pups, wonderful hunting dogs, good nets for children. With, 243-3294 after 5.
- SWIVELING stuffed rocker; maple chair; portable outdoor double grill; recently recovered couch; few other good things. Seligman, 298-1993.

Service Awards

20 Years



H. L. Odell
8233

E. J. Whitmore
4574

15 Years



G. W. Abbott
3114

W. R. Atkins
1613

R. M. Betz
6010



R. L. Burgess
1315

S. G. Cain
8125

J. A. Garcia
4517



D. R. Knapp
1631

F. L. Mastin
7135

H. C. Olson, Jr.
1514



E. G. Paboucek
2213

J. A. Rohrer
2565

R. J. Rudolph
9221



F. Shoemaker
7132

J. C. Southall
4221

C. B. Torres
4221



Bernice Umland
4545

J. C. Weydert
9224

10 Years

Dec. 29 - Jan. 11

Carlos Laguer 8112, C. I. Lowe 9411, P. L. Baca 4624, and N. E. Harrell 1611.

CARS & TRUCKS

- '56 STUDEBAKER pickup, 1/2-ton V8, AT, R&H. Sandy, 299-0980 after 5:30.
- '59 TRIUMPH TIGRE CUB w/racing carburetor, engine recently overhauled. Shock, 877-3728.
- CHASSIS-mounted 15 1/2' Krager Kustom Coach on '66 GMC 1-ton truck, \$6500. Isidoro, 877-4440.
- '63 FORD Galaxie fastback XL390, power & air, \$1195. Arter, 298-7946.
- '65 FORD LTD. 352 engine, all extras, \$2270. Gallo, 298-1089.
- '60 VOLKSWAGEN SEDAN. Jarvis, 298-1113.
- '60 FALCON station wagon, R&H, ST, many mechanical & interior repairs recently made, \$375. MacDougall, 299-8496.
- '61 FORD Ranchwagon, R&H, ST, AC, original owner, 4 new tires, \$490. Monson, 298-7969.
- '51 DODGE 1/2-ton, 4-spd., long bed, needs paint, \$150. Fisher, 298-7858.
- '67 VOLKSWAGEN squareback, radio, w/w, 7 mos. old, consider clean trade, \$2230.50. Geilenfeldt, 256-7532.
- '57 CHEVY 4-dr. sedan, guaranteed 45,000 miles, one elderly owner. Maak, 282-3482.
- ENGLISH Ford Consul, std. trans., 4-cyl. engine, 28 mph, \$150. Sinnott, 299-1300.
- '63 CHEVROLET Supersport, 327 cu. in. V-8, 4-spd., bucket seats, R&H. Van Hauen, 296-2531 after 5:30.

REAL ESTATE

- BOSQUE PARK, 4-bdr., 1 3/4 baths, 2-car garage, 2000 sq. ft., 1 acre, fenced, corral. Downs, 295-4710 or 265-0217.
- TRADE 3-bdr., den, Roberson on 5-bdr., den, dbl. garage, pay difference in cash. Butler, 299-5626.
- SELL OR RENT: 3-bdr., fp, hw floors, available Feb. 1, 624 Amhurst Dr. SE. Denish, 265-4666.
- UNUSUAL: exposed beams, flarstone family room, two fireplaces, large recreation room, 3-bdr., 1 3/4 baths, extras, Zia Fatima school's. Hill, 268-1420.

WANTED

- EL VADO LAKE front property; shotgun; Rollicflex camera. Butler, 299-5626.
- RENT GARAGE for boat storage. Gallo, 298-1089.
- OAK SWIVEL office chair in good to excellent condition. Wilson, 282-3225.
- USED clothes dryer, preferably electric. Shurter, 898-0771.



CELEBRATE New Year's Eve Saturday, Dec. 30, at the Coronado Club's gala party. Joyce Costello (7113) demonstrates confetti and noisemakers. Sol Chavez plays upstairs and Tommy Kelly downstairs for dancing starting at 9 p.m. Champagne and breakfast are included in the admission price.

Coronado Club Activities

New Year's Party Tomorrow

Wrap up 1967 in grand style tomorrow night at the Coronado Club. The annual event starts with dancing at 9 p.m. Two bands will make the happy music. Sol Chavez will be upstairs raising the roof while Tommy Kelly downstairs blasts the foundation. Hats, noisemakers, confetti, champagne and a hearty breakfast come with the \$7.50 per couple admission charge. Tickets are available at the Club office.

Social Hours

With the Club back in full operation after the remodeling, social hour will again be held in the ballroom area Fridays from 5 p.m. until 8 p.m. Tonight Rex Elder will be on the bandstand. The Coronado Club chicken buffet will be served: \$1.25 for adults, \$1 for kids.

On Friday, Jan. 12, Tommy Kelly will play for dancing while the chuckwagon beef buffet is spread. Cost for adults is \$1.75, \$1.25 for children.

Sol Chavez and the Duke City Brass will be on the bandstand Friday, Jan. 19. The Mexican food buffet will be spread.

Bridge

Duplicate bridge meets Mondays at 7 p.m. Ladies bridge meets Thursday, Jan. 18, at 1:15 p.m.

Tom C. Garcia Named to National Advisory Post

Tom C. Garcia (4631), a member of the State Personnel Board, has been appointed to a national advisory committee by John W. Gardner, Secretary of Health, Education and Welfare. Tom is one of 12 members of the Federal Advisory Committee on Merit System Standards.



He has attended one meeting of the group in Washington, D.C., and will continue to meet with the committee once a month.

The committee will provide general policy recommendations on the personnel standards applicable to state and local agencies receiving federal grants in aid.

Saturday Nights

For the next three nights, the main lounge will feature informal dancing to a jukebox. A portable dance floor will be set up and a relaxed atmosphere will prevail. All the makings for sandwiches will be on hand. Try it for fun.

Dance Classes

A new series of basic and advanced dance instruction starts Monday, Jan. 8, at the Coronado Club. The basic class will meet from 7 to 8:30 on Mondays, the advanced class from 8:30 until 10 p.m. Enroll at the Club office prior to the first meeting.

Sanado Luncheon Set at Club Jan. 9

William E. Baldwin, professor of psychology, Eastern New Mexico University, will speak at a luncheon meeting of the Sanado Woman's Club Tuesday, Jan. 9. Title of his talk is "Clubbers and Clobbers."

The luncheon starts with sherry service at 1 p.m. in the Coronado Club ballroom. For reservations, call 265-1072.

Events Calendar

- Jan. 1—Indian dances at Cochiti, Taos, San Juan and Zia Pueblos.
- Jan. 1—Annual "slosh" up La Luz trail to Sandia Crest. N.M. Mountain Club, leader Bill Grohe, tel. 243-1051.
- Jan. 3—Community Concert Series presents Jacob Lateiner, pianist. Civic Auditorium.
- Jan. 6—The Bill Cosby Show, 8:15 p.m., University Arena.
- Jan. 6—King's Day dances and installation of new Pueblo officers at Cochiti, Jemez, San Ildefonso, Taos, Tesuque, Sandia, San Juan and Zia.
- Jan. 6—Snowshoe climb to Lake Peak. N.M. Mountain Club, leader Walter Herrmann, tel. 299-6571.
- Jan. 11-14—UNM Opera Workshop presents Gian Carlo Menotti's "The Bishop of Brindisi" and "The Medium." Recital Hall, 8:15 p.m.
- Jan. 11-13—Dorothy Lamour in "Hello Dolly." UNM Concert Hall.
- Through January—skiing at all areas in the state.

Take Note

C. J. McGarr, director of Materiel Management 4600, was installed this month as vice president of the New Mexico Business and Manufacturers Association. His term of office is one year.

He was general chairman of the profit seminar held by the association last September for businessmen from throughout the state.

Jay W. Hughes (4331) has been appointed editor of COLP News, a publication of the National Association of Purchasing Agents devoted to outstanding programs of local associations throughout the country. Mr. Hughes has been an active member of the New Mexico Association and is presently vice chairman of District Two.

A tuition scholarship to the University of New Mexico for the second term of this academic year is offered by the Sandia Women's Club to a first or second year student. Students applying must be legal dependents or wards of the following Sandia Base personnel: military, civilian employees and employees of Sandia Corporation or the Atomic Energy Commission. The award will be made on the basis of academic achievement, financial needs and recommendation of faculty advisers. Application forms are available at the Bank of New Mexico (Sandia Base Branch), and they should be returned to the Student Aid Office of the University of New Mexico before Jan. 10, 1968.

Congratulations

Mr. and Mrs. Adenago B. Perea (4512-4), a daughter, Pearl Margaret, Dec. 11.

Mr. and Mrs. J. B. Gerardo (5122), a daughter, Gina Beth, Dec. 11.

Mr. and Mrs. David Caskey (9424), a daughter, Laura Suzanne, Nov. 22.

Authors

F. J. Conrad (2134) and B. T. Kenna (1121), "Neutron Activation Analysis of Manganese in Polysulfide Materials," December issue, TALANTA (published in England).

A. D. Bridegam (2211), "Understanding, Acceptance and Training," December issue, GRAPHICS SCIENCE.

Deaths



Alex Padilla Thomas A. Baca

Alex Padilla, a staff assistant in Warhead Test Planning and Evaluation Division 1546, died Dec. 17 in a hospital in Alamogordo from injuries received in the crash of a light plane. He was 35.

He had worked at Sandia Laboratory since October 1955.

Survivors include four brothers, all of Albuquerque.

Thomas A. Baca of Labor Support and Grounds Maintenance Division 4575 died Dec. 18 after a long illness. He was 56.

He had been employed at Sandia Laboratory since March 1951.

Survivors include his widow and four children.



A. F. (Doc) Cone, manager of Quality Control Department 2430, died suddenly Dec. 20. He was 58.

Mr. Cone joined Sandia in October 1949 and has supervised programs in quality control and quality assurance. Active in the American Society for Quality Control, he was elected to the rank of Fellow last June. He served as chairman of the local ASQC chapter and held various positions in the national ASQC organization.

Survivors include his widow, a son, a daughter and five grandchildren.



DEERSLAYER TROPHY, assembled by the Sandia Archers, was presented to Dick Anderson (1111), right, for bagging two deer this season with a bow and arrow. The unique award was presented by Alan Swain (2152), left, Sandia Archers treasurer.

A unique trophy, assembled by the Sandia Archers, was presented to Dick Anderson (1111) recently for bagging two deer with a bow and arrow. Of the 43 members of the Archers who went bowhunting during the season, only six were successful. The remarkable thing about Dick's success is that this season was the first time he had hunted with a bow.

He practiced, however, on the Sandia archery range during the noon hours with other members of the group. The Archers meet several times a month for practice sessions and tournaments. Anyone interested in joining the organization should contact Alan Swain (2152), tel. 265-0098, for additional information.

N. J. DeLollis (1133) was recently re-elected president of the Memorial Association of Central New Mexico, and R. W. Gray (1415) was elected to serve his second term as treasurer. They were also re-elected to the organization's board of directors. The association is a non-demonominational society to encourage simple, dignified funerals.

It was a big decision to make: when shall we go to Paris? Springtime, naturally, won out. A local grocery chain offered a trip to the French capital for the winner of a drawing. The lucky ticket was held by Mary Lou Forsman, wife of Einar V. Forsman (1343).

The prize includes round-trip air transportation from Albuquerque to Paris, tickets for a Broadway show and hotel accommodations for one night in New York City, seven nights lodging and meals at a Paris hotel, and \$100 spending money.

Can spring come soon enough?

Sandia Safety Signals

Medic Alert:

Many individuals who have health problems or are allergic to certain medicines, wear a bracelet or a necklace with a tag reading "Medic Alert." Look for this emblem when you aid someone in need of medical treatment. Read instructions on back.

Winter Falls

The National Safety Council made a study of 80,000 employed adults and found 2,300 had received disabling injuries from falls.

To avoid falls it was suggested that shoes be worn that are in good condition and that overshoes have a good tread. When walking on ice or snow, take short steps (shuffle) and lean forward in a slight crouch; keep weight off of heels. Hold onto the railing when going up and down stairs. Clean off the bottom of shoes before entering a house or building. If you start to fall, relax and "roll with the punch."