

PLAN CONFERENCE—Sandians are participating in the planning for the AEC/NASA symposium on "Instrumentation and Automation in Contamination Control" scheduled here Sept. 12-14. From left are W. L. Garner (3413), arrangements committee; W. L. Clement (2543), technical paper committee; R. F. Utter (3132), arrangements; and H. D. Sivinski (2570), symposium chairman. They are inspecting one of the contamination control facilities at Sandia which symposium delegates will tour.

H. D. Sivinski to Chair AEC-NASA Contamination Control Symposium

Sandia Laboratory will play an important role in the forthcoming AEC/NASA symposium on "Instrumentation and Automation in Contamination Control," to be held in Albuquerque, Sept. 12-14.

Several hundred representatives from the AEC, NASA, their contractors, and industry at large have been invited from throughout the nation to attend the conference.

H. D. Sivinski, manager of Planetary Quarantine Department 2570, is symposium chairman and has been assisted in arrangements by numerous other Sandians. Nine Sandia technical papers will be among the 26 presented at the meeting. Symposium participants will be invited to tour the Laboratory's contamination control facilities.

Sandia is known for its pioneering work as developer of the laminar air flow clean room and holds a NASA contract for a continuing technical program of research, development and engineering services in support of the space agency's planetary quarantine program.

The meeting will open with a welcoming address by President John A. Hornbeck and an introduction by R. W. Henderson, vice president 2000. The banquet speaker on Sept. 13 will be A. Y. Pope, director of Aero Projects 9300, who will discuss "Recent Sandia Field Operations—Brazil and Palomares."

Technical speakers and their topics will include:

F. W. Oswalt (2564), "The Solvent Purity Meter and its Application to Precision Cleaning"; D. M. Davis (2564), "Surface Contamination Generated by Materials of Construction"; J. A. Kenagy (4224), "A Unified Cleaning Facility in a Class 100 Clean Room"; L. K. Jones (1133), "Review of Surface Cleanliness Tests."

G. L. Krieger (1315), "Principles of Operation of the Indium Adhesion Tester Used for Surface Contamination Measurement"; S. L. Smith (2564), "The Indium Adhesion Test Applications"; L. J. Klammer (2564) and M. I. Tillery, Lovelace Foundation, "A Study of HEPA Filter Efficiency in Sub-Micron Particle Range"; M. E. Morris (2564), "The Vacuum Probe for Removing Micro-organisms for Counting"; and C. A. Trauth, Jr. (2571) "A Systems Approach to Contamination Control."

Panel discussions will follow the five sessions on contamination in liquids, radiation monitoring, surface contamination, contamination in air and gases, and microbial contamination.

Apprentices Develop System to Move Pendulum

At the center of Sandia's Sphere of Science a 350-pound, lead-filled aluminum ball hangs from the ceiling on a 43-foot wire. The ball swings slowly to and fro depicting Foucault's pendulum demonstration relating to the earth's rotation.

There is a serious fault in the exhibit. The pendulum is supposed to keep swinging, but it doesn't. There is a problem of friction where the wire is anchored to the ceiling of the Sphere.

James J. Reck, supervisor of Electronic Apprentice Section 4233-2, assigned the problem to Joseph E. Brown and Clifford C. Condit, Jr., two electronic apprentices who graduated this month from Sandia's four-year apprenticeship program.

They found a book of scientific experiments which contained an article describing the principles involved in an electromagnetic system that would keep the pendulum swinging.

After considerable experimentation, the two electronics apprentices developed a system consisting of air-core (doughnut-shaped) coil, a variac and capacitor.

In operation, the coil is placed about an inch beneath a steel pendulum bob, which is then manually swung on its arc. The coil's magnetic pull attracts the steel bob as it approaches the coil on its downward swing. This slight pull is sufficient to overcome friction which would normally damp the initial momentum of the swinging ball. As the bob passes over the coil's center, the pull rapidly decreases.

The Sphere's pendulum exhibit will be redesigned incorporating the electromagnetic system and a new steel ball.

SANDIA LAB NEWS



VOL. 19, NO. 18, SEPTEMBER 8, 1967

SANDIA LABORATORIES

ALBUQUERQUE, NEW MEXICO
LIVERMORE, CALIFORNIA

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

JTF-8 Safeguard Exercise To Start In Mid-September in Pacific Area

A joint Department of Defense-Atomic Energy Commission test readiness exercise, similar to that held in October 1966, will be conducted by Joint Task Force Eight in the Pacific area from mid-September through mid-October.

As in the 1966 exercise, B-52 aircraft will drop instrumented test-simulators while other aircraft in the drop areas gather simulated nuclear effects data. Several instrumented and test simulator-equipped rockets will be launched from Johnston Atoll and Kauai, Hawaii, as part of the exercise. No nuclear weapons are involved in any part of this exercise.

Approximately 170 Sandia Laboratory personnel will participate. L. E. Hollings-

worth, director of Field Testing 7200, will serve as commander of Joint Task Force 8.1.4.

Project officers from Sandia include: A. B. Cole (7256), test vehicle operations; A. F. Hutters (7255), diagnostic aircraft operations; J. E. Stiegler (7251), systems engineering and coordination; P. F. Jones (1544), fuzing and firing safety.

J. C. Eckhart, manager of Upper Atmosphere Projects Department 9220, will be commander of Joint Task Group 8.1.4A for high altitude events. Project officers for rocket launching activities will be R. L. Eno (9222) at Johnston Atoll and R. R. Moore (9221) at Barking Sands Launch Site on Kauai. The rockets will carry instrumented payloads for LASL, LRL and Sandia.

Sandia personnel will be involved in operational control, instrumentation and data gathering, and rocket launch activities. Others will be aboard the NC-135A diagnostic aircraft. The planes will conduct operations in the drop areas to gather simulated nuclear effects data.

4 Sandia Papers at International Meet

Four Sandia technical papers will be presented during the International Union of Theoretical and Applied Mechanics Symposium, Sept. 11-15, in Paris, France.

The symposium will deal specifically with behavior of dense media under high dynamic pressure. A total of 69 papers will be presented.

C. D. Lundergan (1141) will be chairman of a session on Sept. 13 which will include technical papers from Russia, France, the Netherlands and the United States.

Sandia authored papers include: "Spallation in 6061-T7 Aluminum" by B. M. Butcher (1141), which Mr. Lundergan will present.

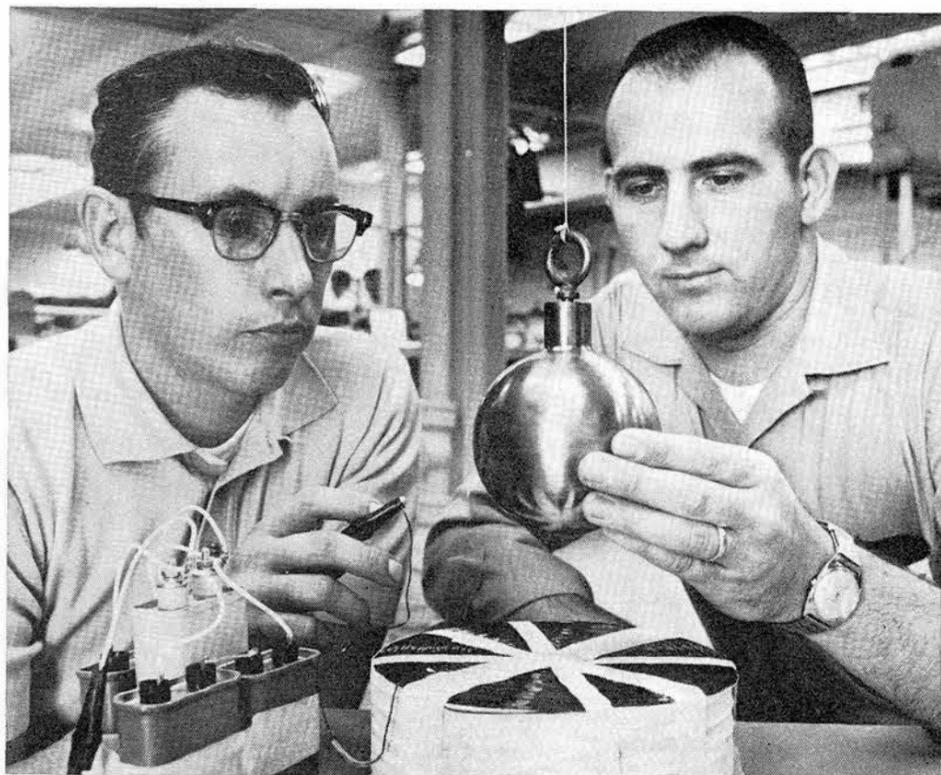
"Fine Structure of Compressive and Release Wave Shapes in Aluminum Measured by the Velocity Interferometer Technique" by L. M. Barker (1141).

"A Shock-Wave Stress Gauge Utilizing the Capacitance Change of a Solid Dielectric Disc" by R. A. Graham and G. E. Ingram (both 5132).

"Hall Effect Measurement in Shock-Loaded Semiconductors" by J. D. Kennedy (5131).

The Joint Task Force Eight (JTF-8), made up of Department of Defense and Atomic Energy Commission personnel, is the organization responsible for maintaining our nation's readiness capability to perform testing in the environments now prohibited by the Nuclear Test Ban Treaty. The Administration informed the Senate that this test readiness capability would be maintained when it submitted the Limited Nuclear Test Ban Treaty for approval in 1963.

All such exercises are designed to help maintain facilities, resources and personnel proficiency in a state of readiness to begin promptly nuclear tests in the atmosphere, if ever required. The United States earnestly and sincerely hopes that the limited nuclear test ban treaty will not be abrogated, and that its atmospheric nuclear testing capability will not have to be used. It is nonetheless essential that such a capability be maintained, in the interest of national security.



ELECTROMAGNETIC SYSTEM to keep pendulum swinging is checked in the electronic apprentice shop by (l to r) Clifford C. Condit and Joseph E. Brown, both electronics apprentices who graduated recently. They developed the system to keep the pendulum in Sandia's Sphere of Science swinging for long periods of time.

If You Win, Call Us

Any Sandian who takes a prize in the New Mexico State Fair competitions is asked to contact SANDIA LAB NEWS office, Bldg. 800, Rm. 112, tel. 264-7841.

Editorial Comment

During the 1966-67 school year, it is estimated that some 900 high school students quit school in Albuquerque. Another 900 or so dropped out during 1965-66. These figures indicate that nearly one of every 16 Albuquerque high school youngsters leaves school before earning a diploma.

There are many reasons given by the dropout for not continuing his education. In some cases a youngster leaves school because his family cannot subsist without his fulltime income or because he is failing in his studies. Too often the causes are less rational: a desire to earn more money at an early age, boredom with school routine, the yearning for freedom from authority, or laziness.

Most of the youngsters are "confident" of their ability to get by. If they even seriously consider the future, they're sure that things will "work-out." In the years ahead, however, they will be forced to recognize the error of their decision to quit school. There will be fewer jobs available for them. These jobs will be hard to get and may be menial, dull and without hope for advancement. Economically, they will find that the youngster with a diploma earns 15 percent more (and if the dropout didn't get past the eighth grade, 27 percent more).

If we know of a dropout, we should encourage him to continue his education. In a land where an excellent education is available to all, it is tragic for a youngster to turn his back on his future.

Dropout is a sad word.

G. J. Simmons to Present Tech Papers In Italy and Hungary

G. J. Simmons (5612) will present technical papers on coding theory at international meetings in Italy and Hungary this month.

He will discuss "The Algebraic Theory of the Two-Sided Correlation Function for Binary Codes" at the 1967 International Symposium on Information Theory to be held Sept. 11-15 in San Remo, Italy. This meeting is sponsored by the Institute of Electrical and Electronics Engineers and the Union Radio Scientific International; therefore, the technical papers will be oriented toward engineering aspects of communications, signal detection, etc.

The second meeting will be the International Colloquium on Information Theory, held at the Kossuth Lajos University in Debrecen, Hungary, Sept. 19-24. This colloquium is sponsored by the Bolyai Janos Mathematical Society and the emphasis will be on the mathematical foundations of communications and information theory. Mr. Simmons' paper is entitled "Correlation Properties of Binary Code Sequences," and is devoted to the construction of correlation code dictionaries. There will be speakers at both meetings from West Germany, Italy, Czechoslovakia, Hungary, France, Japan, Russia and the United States.

Mr. Simmons began working on the correlation of binary codes in 1958 when there was a need to develop a way for the Vela satellite to store information and then relay usable data back to earth in a compact form. By digesting the information and temporarily storing the results, long strings of numbers which had to be synchronized for ground based decoding could be transmitted. When certain sequences of numbers from the satellite matched a number series in a receiving filter, synchronization was established and was possible. The continuing problem has been to find other codes with desirable synchronization characteristics.

Speakers

C. D. Lundergan (1141), "Research on the Dynamic Behavior of Solids in the Research and Development Laboratory," Symposium on the Mechanical Behavior of Materials under Dynamic Loads, Sept. 6-8, San Antonio. He will also be chairman of a session.

C. H. Karnes (1142), "The Plate Impact Configuration for Determining Mechanical Properties of Materials at High Strain Rates," Symposium on the Mechanical Behavior of Materials under Dynamic Loads, Sept. 6-8, San Antonio.



A DISPLAY of radiological protective clothing and equipment was provided by Environmental Health Department 3310 for a recent nuclear weapons fire protection symposium held on Sandia Base. L. H. Sanders (3312) adjusts a face mask for the display mannequin.



EQUAL EMPLOYMENT OPPORTUNITY COMMISSIONER Samuel C. Jackson (center) recently addressed a meeting of Albuquerque's Human Resources Council. With Commissioner Jackson are (left) Tom E. Robles, area director, EEOC for Colorado and New Mexico; and W. G. Funk, manager of Employment and Personnel Department 3150 and chairman of the Human Resources Council.

Designed for Use in Future Aircraft

Isotopic Fuel Capsule Subjected to Safety Tests on Sled Track & at TTR

Aerospace Nuclear Safety Department 9310 has completed a series of drop and impact resistance tests on an inert isotopic fuel capsule. The capsule is being considered for use in an advanced aircraft system.

The aircraft which will carry the capsule is expected to fly as fast as two and one-half times the speed of sound and have an unrefueled range of about 10,000 miles. The corrosion-resisting capsule with its promethium fuel, may be used as a heat source to maintain operational temperatures for the aircraft's navigational system.

Forty-nine rocket sled impact tests in Area III and 19 drop tests (at Tonopah Test Range) were conducted using models of the two-inch, almost spherical, capsule. The tests demonstrated that the capsules should be able to contain the fuel (keep it from scattering on impact) under all but the most adverse conditions.

In the sled tests, the container with simulated fuel was impacted into granite, concrete and soil at velocities up to 675 feet per second. Two capsules impacted simultaneously in each of the final tests.

Target materials were carried on the sled to impact against the capsules that were mounted alongside the track. To recover the capsules after impact a catch box was installed around the target material. An opening was cut in front of the catch box to permit the capsule and its mounting pedestal to pass freely into the box and impact against the target. Impact and rebound of the capsule were filmed through plexiglass windows.

A unique method of determining the terminal velocity of the uninstrumented capsules was used during the drop tests at Tonopah. In these tests the one-and-three-quarter-pound insert capsules were dropped

from altitudes of 7500, 12,500 and 17,500 feet.

The plane's altitude at the time of release was determined by radar. Then the capsule's time of fall was obtained by comparing the interval between a radioed release signal and the impact signal recorded from seismic detectors placed in the impact area. The capsule's velocity was then computed by using distance of capsule's fall and time of fall with established free-fall curves.

Sandia fabricated models for the drop tests and preliminary impact tests. Battelle Northwest Laboratories of Battelle Memorial Institute fabricated the fuel capsules for the final phases of the impact tests and cut the capsules into sections for study.

The studies were conducted in conjunction with Sandia's responsibilities in the Aerospace Nuclear Safety Program. Project engineers were W. J. Dalby (9312) for the impact tests and F. L. Baker (9312) for the drop tests. Tests were conducted by Sandia's environmental and field testing organizations.

Take Note

C. J. McGarr, director of Materiel Management 4600, is serving as general chairman for a "no-nonsense" profit seminar for New Mexico businesses, beginning Sept. 14 in Albuquerque.

The seminar is sponsored by the New Mexico Business and Manufacturers Association, and invitations and registration forms have been sent to more than 10,000 firms throughout the state.

The program will include talks by R. T. Lassiter (4382) on "Purchasing for Profits" and R. S. Cox (4152) on "Accounting for Profits."

Preretirement Counseling Starts Sept. 19; Eight Lectures Planned

Invitations have been issued to employees to attend a series of pre-retirement counseling lectures to be presented by Employee Benefits Division 3122. The series will start Tuesday, Sept. 19, at the Coronado Club.

"Early planning is the key to successful retirement," R. A. Quelle (3122), Sandia's retirement counselor, says. "This series is designed to provide basic information for important retirement planning. A number of experts in various fields will be featured as speakers and will answer individual questions."

The new series will mark the eighth year that the program has been offered at Sandia Laboratory. About 1200 Sandians and their spouses have attended. During the year that employees reach age 55, they are invited to attend the sessions.

The meetings will be held each Tuesday evening starting at 7:30 p.m. for eight weeks.

Speakers and their topics will be as follows:

"The Social Picture: Adapting to Change," Jack L. Dyer, professor of sociology, UNM, Sept. 19.

"Obtaining Benefits While Continuing to Earn," F. E. Doughty, claims unit supervisor, Social Security Administration, Sept. 26.

"Things to Watch for in Planning Investments," Charles Roskell, manager, Better Business Bureau of New Mexico, Inc., Oct. 3.

"The Satisfaction of Free Time," Lynn E. Castle, retired Sandia training supervisor, Oct. 10.

"One Family's Plans with a Travel Trailer," F. A. Goss, Jr. (1342), Oct. 17.

"The Challenge of Keeping Fit," Dr. W. A. Schoen, Jr. (3330), Oct. 24.

"Figuring Your Sandia Benefits," R. A. Quelle, Margaret Platt, and P. E. Brewer (all 3122), Oct. 31.

"Financial Planning," Richard Heim, former president, American Savings and Loan Association, now serving on Senator Clinton P. Anderson's staff, Nov. 7.

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Operated for the United States Atomic Energy Commission by Sandia Corporation

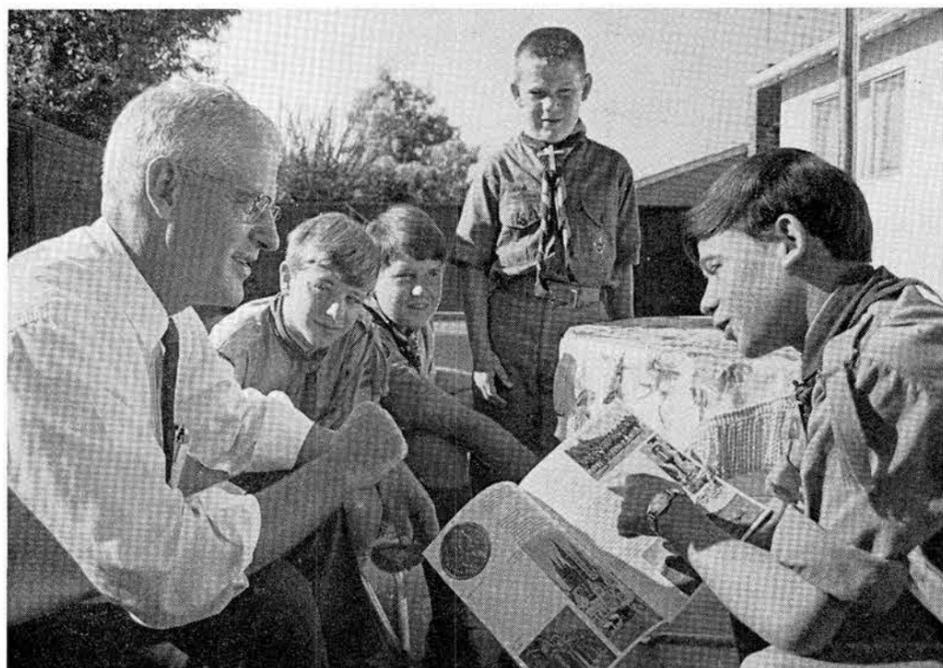
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BELGIAN BOY SCOUT Michel Ericum, right, discusses his country with his Livermore host Jack Bolen (8152), left. Others from left are scouts Phillippe Bottin, also from Belgium, and Jack's two sons, Richard and Roger. The foreign scouts were in this country to attend the XII World Boy Scout Jamboree at Farragut State Park, Idaho, last month.

Sandians Host Boy Scouts Attending World Jamboree

Six Livermore Laboratory employees and their families were hosts to visiting Boy Scouts and scout leaders who were in this country last month to attend the XII World Jamboree at Farragut State Park, Idaho. This was the first time the World Boy Scout Jamboree had been held in the United States.

The nine-day event highlighted world scouting's 60th anniversary, marked from Lord Robert Baden-Powell's first experimental encampment with 22 boys on Britain's Brownsea Island in 1907. A re-creation of the Brownsea Island Camp was featured at the XII World Jamboree.

Under the theme "For Friendship," the Jamboree was not only a showcase of international skills in camping, outdoor craft and folklore, but a living example of scouting's fellowship and brotherhood that transcends national boundaries.

Over 14,000 scouts and leaders from the scout associations of almost 100 nations and territories attended to make one of the free world's largest non-sectarian, non-military, international youth gatherings. Some 26 languages were spoken at the Jamboree.

To provide the visiting scouts with a warm welcome and feeling of friendly hospitality, a national program was developed to accommodate the scouts in homes of American scout families. In the local area, the program was sponsored by the San Francisco Bay Area Council of Boy Scouts.

Michel Ericum, 15, of Liege, Belgium, and Phillippe Bottin, 14, of Stembert, Belgium, stayed with the Jack Bolen (8152) family in Livermore.

The boys spoke French but very little English, although Michel had taken two years of English in school. With the help

of a French/English dictionary and as a result of Jack's military assignment in Europe 20 years ago, they were able to communicate to some extent.

When asked if America was different from what they had pictured, Michel conferred with Phillippe, then pointed to the word "laugh" in the dictionary — "Americans are quick to laugh," he explained. They felt people here are also "quick to receive and make other people very welcome."

Before arriving in the Bay Area, the two boys visited Yellowstone National Park, the Grand Tetons, Salt Lake City, Las Vegas, the Grand Canyon, Zion National Park, Los Angeles and Disneyland. They commented that Disneyland was one of the highlights of their trip. Both especially enjoyed the monorail, or "aero-train" as they referred to it.

The boys thought the United States very modern compared to Belgium — the buildings, houses, automobiles, businesses — but were most impressed with how much progress there is with automation and things electrical.

Other Sandians who quartered foreign boy scouts include: Rich Cline (8124)—Tor-Peter Lesch, 17, and Ilpo Nuotio, 15, both of Helsinki, Finland; Bob Frost (8164)—Tapio Palsi, 16, Sajaneimi, Finland, and Anton Brukner, 17, Heidelberg, Germany; Joe Vanderpoorten (8124)—Guy Vanhaverbeka, 15, Roeselere, West Flanders, Belgium; and Herb Zenger (8255)—Hannu Immonen, 16, and Martti Lillak, 14, both of Maantiekyl, Finland.

George Ruzicka (8117), hosted two Flemish scout leaders, Hugo Van Akeleyen, 21, from near Antwerp, Belgium, and Chris Surinx, 22, of Limbourg Province, Belgium.



THREE SANDIANS collaborated on the preparation of the first of a series of lecture-discussions on Modern Manufacturing Processes to be held at Livermore Laboratory. J. W. Dini, left, and H. R. Johnson, center, (both 8141) made the presentation. Prior to the presentation, H. N. Pouliot (8137) reviewed the material for applicability to the problems of the Sandia engineer.

SCLL Lecture Series Begins on Modern Manufacturing Processes

The first of a series of lecture-discussions on Modern Manufacturing Processes was held at Livermore Laboratory, last month.

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.

Topic for the first two-hour session was "Chemical and Electrochemical Coatings," prepared and presented by J. W. Dini and H. R. Johnson of Materials Application Division I 8141. H. N. Pouliot of Advanced Development Division 8137 reviewed the presentation for applicability to the problems of the Sandia engineer. Handouts, including a bibliography, were provided at

the conclusion of the session to enable attendees to explore the topic in depth.

Plans for future sessions include speakers from outside supplier firms and integrated contractors.

The lecture series has been established through the efforts of the Livermore Education Advisory Committee, whose members are: G. W. Anderson (8140), chairman; J. F. Barham (8119), M. O. Jones (8124), J. D. Gilson (8137), J. M. Brierly (8141), A. S. Rivenes (8152), E. A. Aas (8161), M. A. Pound (8214), J. F. Bryson (8223), D. C. Spencer (8233), E. E. Alford (8245), J. H. Marit (8251) and W. L. Miller (8214), secretary.

The training division 8214 is coordinating the series.

SCLL'S United Crusade Drive to Start on Sept. 25

M. L. (Marv) Glaze (8243) has been named chairman of the Livermore Laboratory Campaign Committee for the 1967 United Bay Area Crusade. The Crusade drive will be held at SCLL during the week of Sept. 25.

"Our objective is realistic," said Marv. "If everyone gives a 'fair share,' we will more than meet the goal at Livermore Laboratory."

"I am sure employees are aware that the costs to maintain the existing services of the United Bay Area Crusade continually rise," he commented. "Funds are also necessary to meet additional needs and difficulties arising from the rapid population increase taking place in the Bay Area. There are 176 agencies in the Crusade fulfilling vital needs of the youth, family and health services activities."

Bob Johnson (8117) is vice chairman. Other campaign committee members include Joe Amrulevich (8213), treasurer; Jan Purchase (8213), auditor; and Lorena Schneider (8235), publicity.

The theme for the United Bay Area Crusade for 1967 is "People Need Help."

Welcome . . . Newcomers

Aug. 15 - Aug. 28

California	
Harry E. Hathhorn, Livermore	8114
Charles D. MacDonald, San Carlos	8252
Clyde Taylor, Fairfield	8125
Indiana	
Eugene F. Moore, West Lafayette	8131
Washington	
Bennie C. Odegaard, Jr., Seattle	8142
Transfer from Albuquerque	
Clifford S. Selvage	5510

Register Sept. 13 for Chabot College Courses Scheduled in Livermore

Chabot College will offer credit courses in Livermore again this fall. Late afternoon and evening classes are scheduled at both Granada High School and Lawrence Radiation Laboratory.

Registration for new and continuing students will be held on Wednesday, Sept. 13, 6:30-9:30 p.m., in the Multipurpose Room at Granada High School. Instruction begins the week of Sept. 18. A schedule of courses is posted on SCLL bulletin boards.

High school graduates or nongraduates, who are 18 years of age or over, are eligible to enroll. There is no tuition charge for residents of California, but students must purchase their own books and supplies.

Take Note

Classes in square dancing will be held on Tuesday evenings, 8-10 p.m., beginning Sept. 12, at Marilyn Avenue School in Livermore. The instruction is sponsored by the Valley Travelers Square Dance Club and the Livermore Area Park and Recreation District. Further information may be obtained from Wayne Janssen (8243), ext. 2743.

Sympathy

To Coralyn McGregor (8231) for the death of her father-in-law in San Gabriel, Calif., Aug. 17.

To Don Yearout (8164) for the death of his father-in-law in Loomis, Calif., July 30.



M. L. GLAZE
Chairman

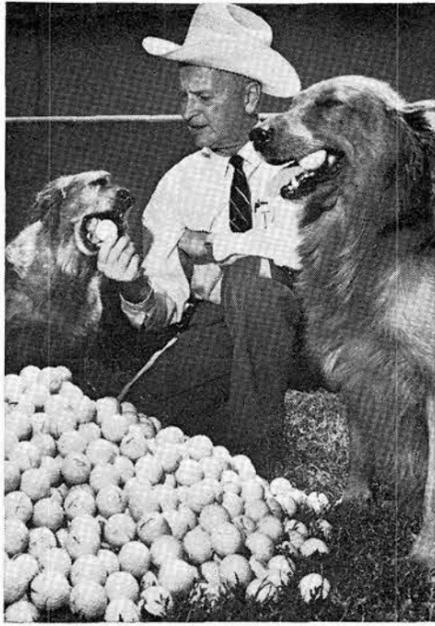


R. H. JOHNSEN
Vice Chairman

"ALTHOUGH THE NEEDS OF THE UNITED BAY AREA CRUSADE CONTINUE TO GROW, OUR ABILITY TO GIVE ALSO CONTINUES TO GROW. EACH YEAR, WE ARE ASKED TO SHARE A SMALL PORTION OF OUR GOOD FORTUNE WITH THOSE LESS FORTUNATE THAN OURSELVES."

PEOPLE NEED HELP





GOLF-BALL RETRIEVERS Mee Chea (left) and Jud with non-golfer Lowell Stouder (4251-1).

Retrievers Switch from Birds to Golf Balls After Hunting Season

Mee Chea and Jud are golden retrievers trained to find and carry downed birds to their master, Lowell Stouder (4251-1), during hunting trips. But, for the last year and a half, they have been retrieving downed and sometimes butchered golf balls for non-golfer Lowell.

In all, the dogs have retrieved several hundred balls during their exercise strolls through the brush surrounding Arroyo Del Oso Golf Course. Some of the balls are discolored and others are scarred, and they were all found on the outskirts of the course.

The dogs, who are not permitted to stray onto the course, have found balls up to 200 yards from the nearest fairway. Lowell also watches the course to make certain the dogs don't retrieve a ball recently hit into the rough or out of bounds.

Currently, Lowell would welcome the name of a school, health or welfare agency that might be able to use the golf balls.

Perhaps Mee Chea and Jud think the bird season is too short. Then again they may view golf balls as eggs and snatch at them with an attitude of "get them before they hatch."

Lowell offers the most plausible explanation. He says the dogs are very responsive to attention and affection.

It all started after some duffers had played on the course last year. During an evening romp, Jud galloped back and nudged his master's hand. When Lowell saw the first retrieved golf ball in the dog's mouth, he took the ball and complimented Jud with a pat.

Mee Chea, Jud's seven-year-old-mother, hurriedly demonstrated her skills to receive the same recognition. Gathering golf balls is now an off-season avocation for the pair.

Asked to comment on his golf-ball retrieving activities, Jud was unreliably reported as saying, "Some fellows claim a birdie after they hit these things. We make the same claim when we retrieve them."

Daniel M. Garst Appointed To Governor's Committee For Economic Development



Daniel M. Garst (2572) was recently appointed to the Governor's Committee for Economic Development. The committee members represent many types of business in industry throughout the state. It is an independent body,

working with the Governor and the State Department of Development.

Objectives of the committee are to develop and expand the economic potential of New Mexico.

Dan is a member of the American Institute of Industrial Engineers and recently helped organize an AIEE symposium on industrial expansion. He is a former vice president of a manufacturing company and served as industrial chairman of a chamber of commerce in Ohio.

In Sandoval County

Two Sandians Serve on Poverty Board

Sandoval County has a new look these days. The town of Bernalillo has new sidewalks and a park. At Algodones, there's a stone archway and wall around the cemetery. At Peña Blanca, Placitas and other communities in the 3700-square-mile county, projects such as parks, water systems, road improvements, landscaping and other community improvements are underway.

These are Office of Economic Opportunity projects administered by the Sandoval County Economic Opportunity Corporation. Gordon Ross (3152) is president of the organization. Joe Lobato (2221) is vice president. Both Sandians were elected to the Board by residents of their communities and were named to their positions in July. R. G. Elliott (AEC/ALOO) is also a member of the Board.

In addition to the community improvements listed, the corporation is involved in youth and adult education programs, and a wide range of programs embracing services to pre-school children through senior citizens.

The Sandians share with the 19-member Board of Directors the corporation's responsibility for the operation and effectiveness of the programs. Both men devote from 30 to 40 hours a month to the work of the corporation.

"There is much criticism of war on poverty programs at the moment," Gordon says, "and it was my own skeptical attitude that got me involved in the beginning. As a taxpayer, I wanted to see where my money was going, so I attended some meetings of the Algodones community association. One thing led to another and my enthusiasm for the programs finally pushed me into a position of responsibility. I'll tell you, we are getting our money's worth. The programs are answering human needs. Sandoval County is a better place to live."



DISCUSSING War on Poverty plans underway in Sandoval County are Joe Lobato (2221), left, and Gordon Ross (3152). Gordon is president and Joe is vice president of the Sandoval County Economic Opportunity Corporation.

Joe Lobato agrees. He became involved when a neighbor of his in north Bernalillo needed help and didn't know where to go. He was shuffled from one agency and office to another.

"Information and education are our prime purposes," Joe says. "In a county like Sandoval with a Spanish heritage of 400 years, we have proud people who do not accept handouts, who do not want to get involved in red-tape bureaucracy. Still, in a county with 2700 families, 58 percent have a total annual income of \$3000 or less.

These people need some help in finding opportunities and even taking advantage of such rights as social security. Our legal aid program with individual counseling services has provided tremendous help in this area.

"In addition to direct legal aid, the program provides individual counseling and a consumer education program. It channels people to the right agencies to solve their particular problems."

Gordon reports the "awakening" of the people of Sandoval County, the new feeling of pride in the area. These are a direct result of community action, of being able to see positive results from working together, he says.

"Americans are an impatient people," Gordon continues, "and they want quick results. Well, we've got some to show for our efforts. But these are minor when compared to the long range aims of our organization. Our hopes are with the kids. Our youth programs will produce productive citizens."

"And this pride in the area will grow," Gordon says. "Sandoval County is one of the most historically important areas in the nation—ancient Indian pueblos and the early Spanish settlements. Nearby anthropological diggings are expected to supply missing information about the transition of early Indian cultures. The significance of this in terms of tourism has never been fully exploited. Agriculture and ranching in the county could be more fully developed. We could use industry. We need museums, libraries, cultural centers, and jobs for our people."

"But first we need community cohesiveness and direction. OEO programs are helping provide these. This is my greatest source of personal satisfaction from the work of the OEO group."

Lab Innovation Provides Motion Pictures of Falling Vehicle

A Sandia innovation now makes it possible to obtain a close view of a vehicle's behavior during its fall from an aircraft.

To obtain close-up sequences, Rocket and Recovery Division 9324 attached a movie camera to a nylon line which trailed behind the falling vehicle. One end of the line is secured to the vehicle and the other end is attached to a two-foot-diameter ribbon parachute that stabilizes the line. The chute's skirt is reduced to a diameter of ten inches so its drag will not significantly decrease the velocity of the vehicle.

A parachute bag, containing the line, camera and chute, is attached to the plane. When the vehicle is released, the line follows — pulling the camera and chute from the bag which remains with the plane. The specially-designed camera survives the impact.

This method of obtaining a close-up motion picture of the vehicle's earthward flight was successfully used for visual documentation of a recent soil penetration study conducted by Terradynamics Division 9327 at Tonopah Test Range.

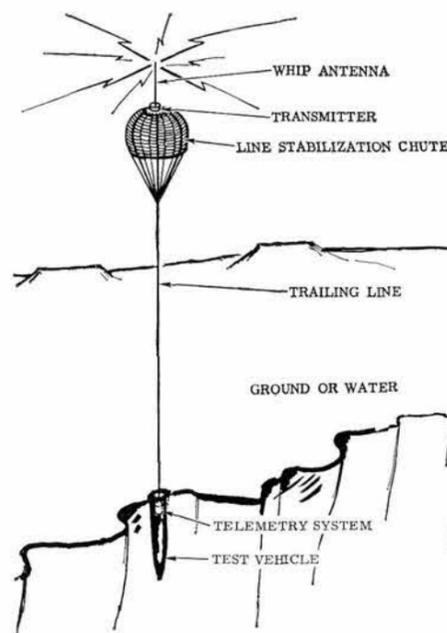
Trailing line technique was first conceived at the Laboratory in 1958. In August 1961, there was a need for a recovery line to serve as an antenna in transmitting deceleration data from vehicles as they penetrated soil and to assist in the recovery of vehicles embedded underground.

To make the trailing antenna, Division 9324 personnel stitch two tubular nylon lines together laterally. Steel aircraft cables, 1/16 of an inch in diameter, are then pulled through each of the adjacent hollow lines. The line is then preloaded to 1000 pounds by pulling. After tension is relaxed, the cable "accords" to provide slack which keeps it from breaking during deployment.

A permanently-reefed two-foot-diameter ribbon chute is attached to one end of the line for stabilization and the forward end of the line is secured to the vehicle.

When a trailing telemetry transmitter is used, the one-pound transmitter is bolted into a reinforced section of the chute.

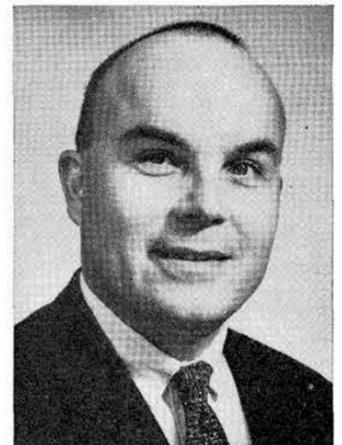
Sandia has used 50 to 1000-foot-long



ARTIST'S CONCEPTION of nylon trailing line antenna.

trailing antenna lines at various deployment velocities from zero to 1000 feet per second in many of the earth penetration studies conducted since 1961.

In addition, the trailing line technique is useful in immediately gauging a vehicle's penetration distance by checking length marks on the line, locating and retrieving a vehicle that has burrowed into the earth and as a communications link between a submerged vehicle and the surface.



C. R. Carlson

Carl R. Carlson Named to AEC's Combined Operations Planning Group in Oak Ridge

Carl R. Carlson, department manager in Advanced Systems Research 5590, is Sandia's first resident representative to the newly formed Atomic Energy Commission Combined Operations Planning (AECOP) group in Oak Ridge.

The AEC Combined Operations Planning group has been established to assist the AEC in analyzing and planning its operations to achieve optimum use of its multi-billion dollar production and weapon facilities and resources.

Under the direction of Mr. John Shacter, formerly of the New York offices of Union Carbide, AECOP will ultimately have a professional staff of about 30 including permanent contractor staff plus AEC and contractor representatives on resident assignment from the weapon laboratories and major materials production facilities.

Mr. Carlson has been with Sandia some 11 years in the areas of systems analysis, weapon studies and research. He was promoted to manager of Advanced Systems Research Department II 5520, in January 1965. In 1955-56 he was on special leave of absence for 18 months to serve as special weapons consultant with the Heidelberg, Germany, Field Office of the Operations Research Office, Johns Hopkins University.

He holds bachelor's and master's degrees in physics from Purdue University and has also done doctoral studies there.



H. L. Crumley
4362



J. P. Taylor
4253

Service Awards

20 Years



F. H. Deiber
2211



R. E. Fisher
1124



Lee Toliver
2231

15 Years



T. G. Banks, Jr.
9232



O. C. Braune
2133



Bonnie Chavez
9411



E. W. Coomes
7322



W. L. Cyrus
2234



F. C. Elder
4331



A. C. Ellingson
2435



A. D. Ford, Jr.
8168



P. I. Gaither
2525



Hilario Garcia
4212



J. H. Hall, Jr.
4574



W. J. Halpin
5133



E. D. Herrity
4330



J. R. Holpp
2434



Robert Lowery
2122



E. D. Machin
1431



J. J. Marron
1314



Betty Pickel
4300



Elsie Sandy
2562



R. E. Thompson
4112



J. H. Vondreele
1324



G. S. Wallace
4214



R. A. White
1313



Louis Yannoni
4622

10 Years

Sept. 8-21

R. D. Bentz 1424, W. C. Wilson 7132, E. T. Oakes 7255, E. E. Skidgel 8127, Jane G. Thompson 3110, R. A. Leighninger 1424, V. W. Christy 3211, J. L. Kiker 7111, John Rogers 8255, Fredrick Schelby 9321, J. F. Bewley 2211, and N. R. Nichols 2212.

Sympathy

To Eileen Fitzmorris (3126/1630) for the death of her husband in Albuquerque, Aug. 24.

To Pierre Chevalier (7214) for the death of his brother in Dallas, Aug. 24.

Sandians Coaching Teams in Young America Football Play

An expanded Albuquerque Young America Football League kicks off its 1967 season tomorrow. Twelve games will be played each Saturday for the next seven weeks. Game times are 9 a.m., 10:30 a.m., 1 p.m. and 2:30 p.m. at Hoffman Park, Columbus Park and the Heights Community Center.

Several Sandians were instrumental in organizing the league last year—Cliff Kinabrew (7122), Tony Lopez (4212), and Joe Dal Porto (1131) were coaches and Everett Massey (2114) and Dick Clark (2112) helped officiate games.

With the League expanded from 8 to 24 teams and from two weight divisions into three, a number of other Sandians are active in coaching this year. About 600 youngsters from the fifth through eighth grades are participating.

Other Sandians engaged in coaching activities include Bob Dosch (1121), Pete Thoma (1113), Ken Kutac (7334), Tom Towne (5133), Seyfred Toledo (2555), Dave Chavez (1142), Tom Spindle (4224), Charlie Salazar (4254), Jim Freese (5234), Preston Herrington (9226), Charlie Huff (9328), Tom Rathke (7334), Al Watts (7332), Jim Rogers (1514), Roy Brett (3242) and Phil Alarid (4315).

Authors

E. R. Dunaway (1144), "The Application of Transducers and Sensors to Dynamic Testing," June issue, RESEARCH AND DEVELOPMENT.

E. H. Beckner (5142), "Behavior of the P-N Depletion Layer Following Injection of Intense Density of Carriers," September issue, JOURNAL OF APPLIED PHYSICS.

L. E. West, C. J. Fisk and D. L. Caskey (all 9424), "ACCEL—Automated Circuit Etching Layout," September issue, ELECTRONICS MAGAZINE.

R. A. Hill (5122), "A Sum Rule Analysis of the Interacting (2,0,0) and (1,0,1) States of H₂Se," September issue, JOURNAL OF MOLECULAR SPECTROSCOPY.

E. J. McGuire (5233), "Atomic Photoionization Cross Sections from a Semi-Empirical Central Potential," September issue, PHYSICAL REVIEW.

D. A. Northrop (5154), "Vaporization of Lead Zirconate-Lead Titanate Materials," September issue, JOURNAL OF THE AMERICAN CERAMIC SOCIETY.

O. M. Stuetzer (1420), "Secondary Stresses in a Stress Pulse Activated Piezoelectric Element," September issue, JOURNAL OF APPLIED PHYSICS.

R. K. Traeger (1111), "Physical Properties of Rigid Polyurethane Foams," September issue, JOURNAL OF CELLULAR PLASTICS.

C. W. Harrison Jr. (1425), "Response of Transmission Lines in Proximity to a Cylindrical Scatterer," September issue, RADIO SCIENCE.



Rosemary Montoya (3126/2432)

Take a Memo, Please

Housewives who remove their rings before starting household tasks are following a very good safety practice. Wearing rings can be directly responsible for the loss or injury to fingers. Rings get snagged on machine fixtures, hooked on revolving shafts, and get caught on shelving or other equipment. Remove your rings before working on any hand tasks.

Events Calendar

- Sept. 8—Harvest dance, San Ildefonso Pueblo.
- Sept. 7-10, 14-17—Lorca's folk drama "La Zapatera Prodigiosa" (in Spanish). Old Town Studio, 1208 Rio Grande NW.
- Sept. 14—Apache celebration, Horse or Stone Lake on the Jicarilla reservation.
- Sept. 16-17—San Pedro Parks area east of Cuba. N.M. Mountain Club, leader Dr. John Tyson, tel. 256-6200.
- Sept. 17—Football, UNM vs. Idaho State. University stadium.
- Sept. 19—Dances at Taos Pueblo.

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 SALE REAL ESTATE

- 3.1 ACRES in Rancho de Placitas, water & power available. Rudolph, 298-0941.
- 3-BDR., den, utility rm., 1123 Elizabeth NE. Rufsold, 268-5970.
- 3-BDR., garage, hw floors, carpeted, walled yard, new roof, Wilson Jr., Holy Ghost. Bases, below appraisal, open, 724 Cagua SE. Gallagher.
- 2-BDR., hw-carpet, drapes, fp, AC, CFA, screened patio, utility rm., walled landscaped lot, schools, shopping. Martin, 255-6946.
- LOT 190'x150' (2/3 acre) SW valley between Arenal & Blake, 2 blocks east of Foothill. Benton, 877-2473.
- BOSQUE FARMS ranch style home, 4-bdr., 3 baths, corrals, barns, 3 1/2 acres. Gallagher, 636-2742.
- 3-BDR., lg. kitchen, 1 1/2 bath, 1 block from school, 3 blocks from Winrock, 1705 Hoffman Dr. NE. White, 298-2838.
- 3-BDR., 1 1/4 bath, den, fp, dbl. garage, total \$19,150, \$2200 equity or terms, 516 Hillview Ct. NE. Watkins, 298-3667.
- 3-BDR., SE Heights, near base and schools, den, 1 1/4 baths, carpeting, drapes, many extras, \$900 down. Hawley, 295-0332.
- COUNTRY HOME on 4 1/2 acres, dbl. fp, 50 apple trees, loaded w/extras, 3 miles SE of Belen. Sanchez, 864-8494.

4-BDR., 3 1/2 baths, 2800 sq. ft., \$36,000, in Highland High district, will trade for smaller house same district. Wyly, 265-0763.

MOSSMAN Sacramento model, 3-bdr., den, or 4-bdr., built-in electric kitchen, lg. covered patio, carpeting, landscaping. Randall, 256-1859.

3-BDR., fp, lg. garage, would consider trade for trailer house. Clark, 268-4843 after 5:30.

CORRALES, sell or trade, 3-bdr., den, separate apt., 3 fp's, beam ceilings, adobe, walled, patios, corrals, one acre. Swiss, 898-2083.

3-BDR., 1 1/4 bath, newly decorated, corner lot, lg. fenced back yard, AC, carpeted, dbl. garage, laundry rm., storage area. Fox, 296-5660.

3-BDR., 1 1/4 tile baths, built-ins, carpeted, hwf, garage, \$14,000, 4301 Hilton Ave. NE. Hipsher, 299-0673.

NOB HILL, 3-bdr., 1 1/4 bath, utility rm., den, fp, carpet, built-ins, AC, dbl. garage, huge patio, lg. walled yard. Johnson, 268-9625.

'52 CHEVROLET 4-dr., mechanically sound, snow tires on rear, R&H, body rough, \$90. Maglid, 268-7601.

'66 BARRACUDA, Formula S, 4-spd. trans., tachometer, heavy duty suspension, \$1995 or best offer. Vath, 299-1448.

'66 CHEV. 1/2-ton, 3-spd., V8, R&H, gauges, HD bumper, 6-ply tires. Weldon, 255-8313.

'65 PLYMOUTH Satellite red convertible, 383 engine, 4-spd., bucket seats, Crager mags, \$1700. Smith, 296-1280.

'59 MERC. 2-dr. Montclair, all power, air, orig. owner. Crumley, 299-5293.

MODIFIED '53 MG w/'64 Corvette engine, 3-dual carb. Houghton, 299-3386.

'62 CHEVROLET pickup, 4-spd., 6-cyl., transistorized ignition system, R&H, other extras. Conklin, 255-4170.

'59 OPEL station wagon, \$270. Vleck, 298-5397.

'51 CHEV., 2-dr., stick shift, 50,000 miles, \$175. Lowry, 296-3326.

'59 FORD station wagon, \$295. Crompton, 299-5569.

'59 FORD 1/2-ton LWB V8, 3-spd., mileage all on main highways, \$475. Schafer, 299-6217.

'58 FORD 4-dr., R&H, AT, \$300 or best offer. Vytlicil, 265-0435.

'65 FORD Galaxie, 2-dr. HT, auto., fac. air, PS, etc., 20,000 miles, below book at \$1995. Treon, 298-4459.

MISCELLANEOUS

WESTINGHOUSE electric range, \$25. Rudolph, 344-5868.

GIUITAR, Kingston Classic, \$19.50; clothes dryer, Universal, gas operated, new belt and pulley, \$29.50. Summers, 299-4674.

CARPET, Lees muffin beige nylon, 13 x 15. Bircher, 268-0726.

HIGH Quality stereo audio equipment, sell or trade for electronic test or photo equipment; 55 lb. bow, arrows. Stesinger, 299-4626.

TROMBONE, Reynolds Contempora 8 1/2 inch bell, w/stand, case, & assort. music, 5 yrs. old. Magruder, 255-2078.

.410 SHOT GUN, \$20; hunting bow, \$20; 10x12 Sear's tent, \$60; adjustable tent heater, \$5. Klett, 344-9021.

MOTOROLA 3-spd. HiFi phonograph, \$20; hanging lamp, \$5; swivel bar stool, \$6. Nissen, 298-9166.

BICYCLE, girl's 24", includes basket, spotlight, mirror, bell, \$22.50. Savage, 256-7263.

3/4 SIZE Anton Becker violin w/case; 3-spd. 26" Hercules bicycle. Duke, 298-3972.

GERMAN SHEPHERD puppies sired by champion Lavaland's Fritz and out of Villella's Frauhen Belle, top show quality, guaranteed. Villella, 298-7955.

'65 HONDA 160CB, excellent for trail use, 6000 miles, \$330. Adams, 299-2121.

CAR TOP CARRIER, 36x42 w/cover, \$10. Brace, 299-6755.

PIANO, upright Shattuck w/new pads and keys, \$125. Kyger, 299-6398.

HAYDON automatic transmission cooler for trailer towing; 15-gal. plastic water tank; 36x72" drop leaf folding picnic table. Maxon, 255-3134.

EICO VOM, model 555, 20,000 ohms per volt DC, \$22. Anderson, 264-4050.

CAMP TRAILER, 14', empty except butane bottle and gas ring, \$85. Carrick, 4204 Hahn Ct. NE, 344-0568.

VIKING crash helmet, size large, newly painted. Entwistle, 296-3379 after 5.

20 GAUGE FRANCHI (Italian made) automatic shotgun, used 1 yr., cost \$185, sell for \$95, guaranteed perfect. Geibel, 299-0275.

PET garter snakes one month old, 75c ea., Bray, 298-2334.

BUCO SAFETY HELMET, Snell approved, full coverage, size 7 1/4-7 1/2, \$17.50. Hudson, 265-1674.

REFRIGERATOR, 12 cu. ft. Coldspot, needs some repair, \$40. Hayes, 296-3909.

FURNACE, janitorial horizontal type, rebuilt w/new heat exchanger, 150,000 BTU input, make offer. Kidd, 256-1020 after 5.

ACCORDION w/case, \$75; roll-a-way bed w/mattress, \$35; blond baby chest, \$20. Schelby, 344-5522.

TRIUMPH Cub T-20, 200cc w/recently overhauled engine, dome head, Amal carburetor, etc., \$175 or best offer. Murphy, 296-5092.

HEATHKIT Apache and SB-10 sideband adapter, \$125; Collins TCS-12 160, 80, 40M AM-CW w/power supply, \$35, no Sunday calls. Huddle, 0233-6248.

VW luggage rack, \$15; trailer hitch, \$10; 2 snow tires, Mohawk, mounted on VW wheels, \$35. Souder, 282-3121.

ELECTRIC printed calculator, Remington Rand Mod. 97, \$50. Griego, 299-0426.

BICYCLE, man's Schwinn 10 spd., used 2 months, \$65. Beck, 256-3350.

ROYAL portable typewriter, \$15. 816 Val Verde SE, Pope, 255-6702.

3 USED CHAIN SAWS, \$45, \$70, and \$80; will trade for electric welder or guns. Ernst, 344-8694.

14' WOOD and fiberglass boat w/25hp motor and trailer, \$500 or trade for 60 hp outboard motor. Erdman, 298-3097.

'64 NORTHWEST COACH "Little Dipper" 14' trailer w/elec. brakes, new 6-ply tires, includes equalizer hitch, spare tire, \$950. Burrell, 299-0233 after 5:30.

FLUTE, Reynolds, \$50. Thayer, 299-3127.

DISHWASHER, Kenmore 600 portable, 2 yrs. old, \$75. Kidd, 299-0035.

17" PORT. TV, blue/ivory cabinet, \$40; Hoover upright, \$20; 4-pc. silverplate coffee service, \$15; elec. football game, \$5. Felsen, 296-1138.

SHELL CAMPER, 4'x8'x5 1/2', 12 & 110v, jacks, \$510; Remington typewriter, \$49; Savane 12-ga. auto. shotgun, \$68; bighorn saddle, \$85; hackamore, \$17.50. Elliott, 264-6938.

HEATHKIT tube stereo HiFi, 28w preamp AA-111, preamp AA-141A, AM-FM stereo tuner AJ-32, \$125 for all three. Sullivan, 268-5130.

ROCKING CHAIR, \$9; metal luggage rack, \$8; window cooler, \$7. Mauer, 255-7201 after 6.

GO CART, 2-cycle engine, new paint, \$85; 21" Hoffman TV-radio combination, \$35; tape recorder and camera equipment. Shinn, 299-6238.

CHILD'S wrought iron table, 20"x30" formica top, 2 matching chairs, \$10. Armbrust, 298-3666.

SPEED-QUEEN automatic dryer to highest bidder, minimum \$35. McMaster, 268-8062 after 5.

1963 EDITION Encyclopedia Britannica w/walnut bookcase, make offer. Paneboeuf, 268-8605.

BUNDY clarinet, \$40. Irwin, 268-2170.

SOFA BED and matching swivel rocking chair, \$60. Carriere, 265-0460.

CLARINET, Schreiber & Sohne, \$75. Schreiner, 268-4159.

SKI RACK, trunk type, Barreccrafter, used one yr., cost \$18.95, sell for \$10; two boot trees, \$1.50 ea. Dippold, 296-3873.

WANTED

SWING SET, Corli, 255-5683.

4 OR 5HP four-cycle engine w/horizontal shaft; folding music stand. Cave, 299-5066.

JOIN or form car pool from vicinity of Moon and Indian School NE to Tech Area I. Martin, 299-2649.

HOMOLITE or McCollough chain saw, 16" to 19", good condition. Lewis, 299-2322.

UTILITY cargo trailer. Chavez, 298-5091.

TO LEASE: winter pasture for 15 head of cattle and 2 horses, require about Nov. 1. to Mar. 15. Causey, 299-0089.

CAMOUFLAGE parachute for hunting purposes, condition unimportant. Geibel, 299-0275.

TRADE: Kimball grand for spinet piano in top condition. McCord, 255-2638 after 6.

RIDE vicinity Griegos-N. Second to Gate 10, 894. Garrett, 165 Tyrone NW, 344-1490.

RELAXASIZOR or Prozier or other type electronic exerciser. Roberts, 255-9527.

LOST AND FOUND

LOST—Prescription sunglasses in case, white gold engagement ring, Polaroid sunglasses, sunglasses w/black frames. LOST AND FOUND, tel. 264-2757, Bldg. 610.

FOUND—Pocketknife, prescription glasses. LOST AND FOUND, tel. 264-2757, Bldg. 610.



SOCIAL HOUR BUFFETS this month feature something for everyone. From left, Judy Shoudt (4314) advocates the Virginia ham buffet set Sept. 22; Susan Walsh (4333) prefers the seafood spread scheduled Sept. 15; Pete Klemm (4614) says Wisconsin cheese on tonight's menu is the greatest thing in life; and Joe Laval (3465) holds out for Italian food scheduled Sept. 29. Social hours start at 5:15 p.m. each Friday at the Club.

Coronado Club Calendar Provides Something for Everyone This Month

Something for everyone is the idea with this month's calendar of events at the Coronado Club. A variety of buffets are planned for social hours, an informal dance is scheduled tomorrow, a special bus to the Lobo game is planned, Theater Night is set and teenagers will go-go later in the month.

Informal Dance

Excellent dance music provided by the MBC trio is the feature of tomorrow night's informal dance. Social hour starts at 6:30 and sandwiches will be available from 7:30 until 9 when the dancing starts. Admission is free to Club members, guests 50 cents.

Lobo Game Bus Service

Starting Saturday Sept. 16 (the first University of New Mexico home game) the Coronado Club will provide bus service between the Club and University stadium. The Lobos will face Idaho State. The bus service will continue throughout the season for each home game leaving the Club one-half hour before game time. It's a great way to avoid driving in the stadium traffic.

Social Hours

Tonight's social hour will feature music by Phil Graham and a buffet spread with an assortment of Wisconsin cheeses. Pat Reich and piano will entertain in the main lounge. The buffet costs \$1.75 for adults, \$1.50 for children.

On Friday, Sept. 15, a fisherman's seafood buffet will be offered. Frank Chewiwi will make the happy music.

A Virginia ham buffet is planned for social hour Sept. 22 while the Rhythm Masters are on the bandstand.

Italian food will be featured for social hour Friday, Sept. 29. Bud Fischer will be on the bandstand.

Coming Events

Mark your calendar now to attend Theater Night Saturday, Sept. 23, when the Albuquerque Light Opera Company will present "Show Stoppers and Stuff." The Missing Links will play for the Teenage Go-Go Saturday, Sept. 30. The annual Oktoberfest Hofbrau is planned for Saturday, Oct. 21.

Bridge

Mixed Team of Four championship dinner will be held Monday, Sept. 11, at 7 p.m. Duplicate bridge meets Monday, Sept. 18, at 7 p.m. ACF bridge meets Wednesday, Sept. 20, at 7 p.m. Ladies bridge meets at 1:15 p.m. Thursday, Sept. 21.

Swim Team Wins

The Coronado Club Swim Team wrapped up the season recently by sinking the Sandia Base Army-Navy-Air Force team 823 to 620. Coronado swimmers took 30 out of 58 first place awards but racked up the impressive point lead with team depth. More than 100 swimmers participated in the AAU meet.

The age 13 years and under Coronado girls water polo team took the championship honors at a recent Junior Olympic meet in Socorro.

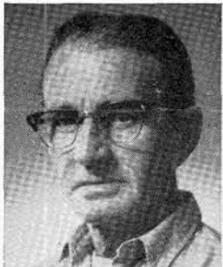
Sanado Club Luncheon

Hector Garcia, classical guitarist, will provide the program for the monthly sherry luncheon meeting of the Sanado Club. The meeting is set Tuesday, Sept. 12, at 1:30 p.m. at the Club. For reservations, contact Marion Nelson, 265-1072.

Junior Bowlers to Organize

Organizational meeting of the Coronado Club Junior Bowling League will be held tomorrow morning at 9:30 at the Eu-Can Bowl. Practice games, registration and formation of teams are planned. League play will start Sept. 16. All bowlers under 16 years of age whose parents are members of the Coronado Club are invited. For additional information, call Jan Nelson, 298-9231.

Retiring



Juan B. Pedroncelli will retire from Sandia Laboratory the end of this month. He joined the Company in February 1952 in the plastics shop, where he worked for seven years. Since 1952 he has worked as a heavy laborer in Labor Support Section 4575-1.

Mr. and Mrs. Pedroncelli have three sons—two who are married and one adopted four-year-old. "He keeps us on the go," Juan says. They also have 10 grandchildren. They live at 3834 Pedroncelli Rd. NW (named after Juan's father who at one time owned a large amount of land in the area).

Juan's retirement plans are indefinite. He has been in ill health for some months. "I want to regain my health first," he says, "but I can't just sit around. I'll work around the house and yard and do whatever I'm able to."

Personnel Statistics

Average Sandian Has Worked Here 9.9 Years; Is Age 40.7 Years

Sandia Corporation was born in November 1949 when Western Electric Company was asked by the Atomic Energy Commission to assume operation of Sandia Laboratory. The Company will be 18 years old in a couple of months.

There are, however, 124 employees who have service records of more than 20 years. These employees were granted credit for time worked for Los Alamos Scientific Laboratory under the University of California.

The average length of service for Sandia's 8240 employees is 9.9 years. The average age of Sandia employees is 40.7 years.

We are still a young company with a young work force.

As a matter of fact, 82 of our employees are under 21. There are 587 employees age 21 through 25. From age 26 through 30, we have 960 employees. From age 31 through 40, we number 2264 employees, and there are 2809 employees age 41 through 50. From age 51 through 60, we have 1374 employees, and 164 Sandians are over age 60.

The educational achievement of Sandia employees is impressive. There are 281 Sandians with PhD degrees, 891 with master's degrees, and 1704 with bachelor's degrees. Another 1442 employees have had some college training.

Some 797 Sandians are graduates of technical institutes. Another 1361 Sandians have received significant training or hold certificates from technical or trade schools. Another 89 have two-year certificates from non-technical institutes.

Sandia employees are classified into four categories—staff members, 2753; staff aides (including staff associates and staff assistants), 2096; other staff (executive secretaries, general supervisors not staff members), 293; and graded personnel, 3098.

O-Positive Blood Needed for Wife Of Sandia Man

Since 1948 Mrs. Muriel Newfield, wife of Ed J. Newfield (2555), has needed a transfusion of a pint of blood each month. She is suffering from a rare blood disease called either Cooley's or Mediterranean anemia. She is able to perform normal activities as long as transfusions continue.

"The problem is finding donors," Ed says. "We must find persons with type O-positive blood, but not all O-positive blood is compatible."

"We are deeply grateful to many persons who have helped in the past. They are still helping, but this compatibility requirement changes seemingly from transfusion to transfusion, and it is necessary to continually find new donors."

Anyone with O-positive blood and willing to be a donor is urged to contact Ed, 264-6304.

There are 1488 women on Sandia's work force, 6752 men. Married employees total 7129 with an average of 1.75 dependent children. There are 654 bachelors, 457 single women.

Some 331 employees have retired since formation of the Company.

One final personnel statistic: 4098 Sandia men have served in the armed services, 26 women.

Kenneth S. Spoon to Serve On Seven-Member AEC Procurement Study Group



Kenneth S. Spoon, who retired June 30 as director of Purchasing and Traffic 4300 after 42 years of service with Western Electric Company, has been appointed to a seven-member Atomic Energy Commission group

to study the overall procurement process in the AEC program.

AEC Commissioner James T. Ramey, who was instrumental in initiating the study, has expressed concern that AEC cost-type contractors may be losing some of the procurement flexibility intended to be theirs under the AEC contracting system. According to him, the study will be aimed at "assuring that the Commission continues to get quality performance of its programs through the use of quality contracting."

The study group will prepare a comprehensive report to the AEC with specific analysis of the AEC's procurement process. They have been asked to study and evaluate such considerations as AEC's controls on contractors' procurement practices, AEC's decentralized approach to contract administration and the necessity of each step in the procurement process.

Wallace B. Reynolds, former managing engineer and business manager of Lawrence Radiation Laboratory, is chairman of the study group. Other members are W. J. Catacosinos, assistant director, Brookhaven National Laboratory; P. H. Gantt, chairman, AEC Board of Contract Appeals; David Saxe, vice president for administration, Atomics International; Arthur Shoenhaut, deputy controller of the AEC; and A. B. Greninger, general manager, Nuclear Technology Department, General Electric's Vallecitos Atomic Laboratory.

Sandia Safety Signals

Power Tools

The way to keep from cutting the electric power line on a mower or clipper is to put the line over your shoulder. This method keeps the electric line in back of the tool.

Keep Bathroom Floor Clear

Serious injuries often result when a person slips and falls against a glass shower door or tub enclosure. Use skid-proof mats on the bathroom floor and keep the floor dry.

Children's Eyes

Each year more than 161,000 American school-age children suffer eye injuries. Many of these are the result of accidents in school chemistry laboratories, industrial arts and vocational workshops. When the school year begins, check to be sure your children have eye protection and are not risking their eyesight every time they enter a school lab or workshop.



CHEER THE LOBOS the easy way Saturday, Sept. 16, when the UNM team faces Idaho State. A special bus leaves the Coronado Club at 7:30 p.m. for the stadium, returns after the game. No traffic problems. Above, Oscar Goodwin (3465) watches half-time activity of cheering Carol Roth, daughter of G. H. Roth (7320).