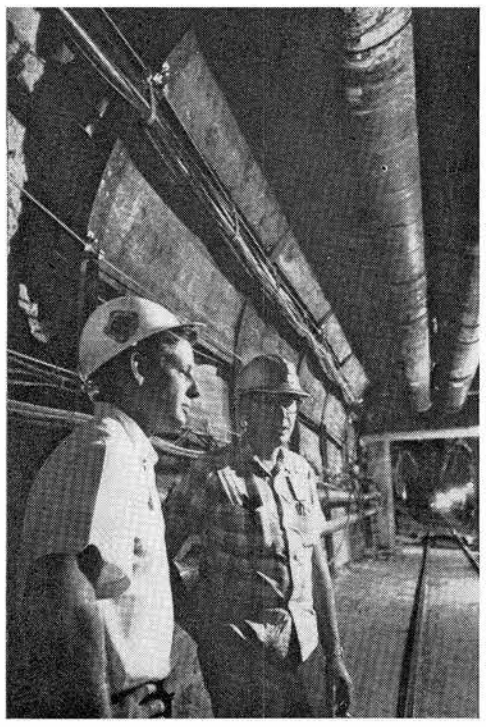


TEST TUNNEL and radiation monitoring instrumentation installation is checked by Pete Schroeder (7261-1), left, Sandia resident supervisor at NTS, and Harold Rarrick (3312), radiation safety officer for the test.

At Nevada Test Site

Sandia Provides 'Rad-Safe' Science

Since the signing of the limited test ban agreement in August 1963, the United States has conducted an extensive program of underground nuclear testing at the Nevada Test Site.

Key clause in the treaty bans testing in the atmosphere, outer space, or under water. Underground detonations are permissable provided they do not cause "radioactive debris to be present" outside the territorial limits of the nation under whose control the testing is conducted.

These considerations, plus the Atomic Energy Commission's vigorous safety policies concerning radioactive materials, have resulted in an important and demanding assignment for Sandia's Environmental Health Department 3310.

The AEC in cooperation with the DOD, along with the AEC's Los Alamos Scientific Laboratory, Lawrence Radiation Laboratory, and Sandia Laboratory, are the agencies with prime responsibility for nuclear testing.

For all Department of Defense underground nuclear effects tests, Health Physics Division 3312 provides technical management for radiation safety and monitoring control. Instrumentation and analysis are provided by other groups of Department 3310.

Along with the technical planning of a nuclear test, those in charge ask continually, "What is the worst possible thing that could happen?" and then they make plans to cope with such a situation.

Sandia is part of this planning. Along with radiation safety activities performed by Sandia, B. F. Murphey, manager of Atmospheric and Underground Sciences Department 5230, often serves as scientific advisor for Department of Defense tests.

As a member of the AEC Test Manager's panel, the scientific advisor contributes to the decision-making processes which go into the execution of a nuclear test. One of the primary responsibilities of the scientific advisor, along with his technical responsibilities, is safety. No test is given the green light to proceed until all aspects of safety and test ban treaty compliance are assured.

For the radiation monitoring and safety

Continued on Page Four

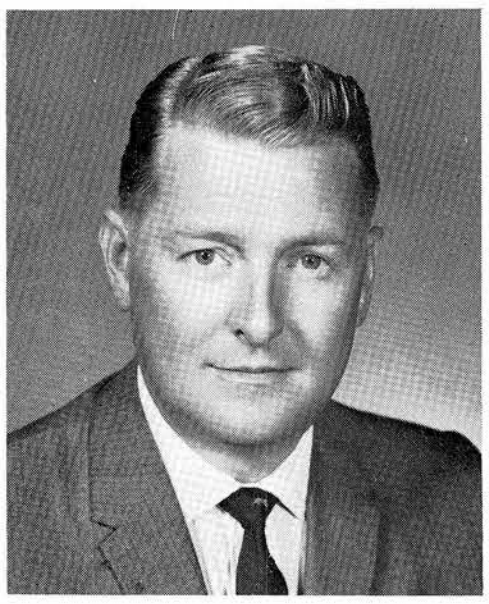
SANDIA CORPORATION

PRIME CONTRACTOR TO THE ATOMIC ENERGY COMMISSION

ALBUQUERQUE, NEW MEXICO • LIVERMORE, CALIFORNIA

LAB NEWS

VOL. 18, NO. 16, AUGUST 12, 1966



D. R. Cotter Appointed to DOD Post

Donald R. Cotter, former Director of Advanced Systems Research 5500, has been appointed Special Assistant for Southeast Asia, U. S. Department of Defense.

The appointment, effective Aug. 16, was announced this week by John S. Foster, Director, Research and Engineering for the Department of Defense.

Mr. Cotter's assignment is to identify research and development requirements for the Department of Defense and to aid in conducting the conflict in Southeast Asia.

Since April, Mr. Cotter has served as a consultant to the Department of Defense and has been visiting South Vietnam, Thailand, and Malaysia for briefings by the military organizations.

During his service with the Department of Defense, he is on a leave of absence from Sandia.

Mr. Cotter joined Sandia in 1948. He became a division supervisor in 1950, manager of the System Engineering Department in 1957, and Director of Advanced Systems Research in 1961.

Before coming to Sandia, he had served a year as a radar technician with the U. S. Signal Corps and as a development engineer with the Lansdale (Pa.) Tube Company, a subsidiary of Philco Corp.

G. C. Newlin Serves As Student Exhibit Judge at WESCON

G. C. Newlin (6011) will be one of the judges for student exhibits at the WESCON (Western Electronics Show and Convention) sponsored by the Institute of Electrical and Electronics Engineers in Los Angeles Aug. 23-26.

The student competition, part of the IEEE's program to stimulate science education, is for high school students who have competed in State Science Fairs or have been selected by local IEEE chapters. The students exhibit their experimental projects with subject matter related to electronics. Presentation of a technical paper is also part of the competition.

Mr. Newlin has served as chairman of the Albuquerque IEEE Awards Committee for the past eight years. He has been active during this time in promoting science education among high school students and has served as a judge in local, regional, state, and national Science Fairs.

'Sky-Hook' Balloon Developed

Series of 1000-Pound HE Detonations Starts in Coyote Canyon for Sandia Plowshare Project

SKY-HOOK—New prototype balloon flies above the head of designer H. G. Laursen (7242) in Coyote Test Field. The 72-foot-long balloon will support strings of air blast pressure gages.

Last week, the blast of 1000 pounds of conventional high explosives in Coyote Test Field signaled the start of another Plowshare project by Sandia Laboratory. "Plowshare" designates the program conducted by the Atomic Energy Commission to investigate various applications of nuclear explosives for peaceful purposes.

The current project is one of a series of experiments to study air blast and cratering phenomena conducted by J. W. Reed and L. J. Vortman of Underground Physics Division 5232.

Mr. Vortman, in describing the purpose of the experiments, said, "In these experiments using 1000-pound charges buried at depths between 10 and 17½ feet, we hope to pinpoint the factors in air-blast-caused damage at long distances from the detonation. These are the blast forces which erupt upward at almost vertical angles when gases vent through the mound of earth lifted by shallow detonations.

"These upward-angled waves penetrate to high altitudes and are propagated back to earth by the troposphere and ozonosphere to possibly cause damage at long distances from ground zero. Although no damage will be created by the Coyote Test Field experiments, the results will be used for planning similar measurements on any Plowshare project which would use nuclear explosives.

"To accurately describe the source strength and geometry of the upward kind of blast wave and the way it changes with burial depth of the charges, we will make measurements using gages supported by balloons over the cratering explosion as well as gages along the ground. Measure-

Continued on Page Two

Certified Professional Secretary Rating Earned by Jean Langston

Jean A. Langston, secretary to the Director of Physical Research, is the fifth Sandia woman to qualify as a Certified Professional Secretary.

To become a CPS, a secretary must successfully complete a six-part examination on Personal Adjustment and Human Relations, Business Law, Business Administration, Secretarial Accounting, Secretarial Procedures, and Secretarial Skills. This year 260 secretaries in the U.S. were certified under the program, including three from New Mexico. Twenty-eight persons have become Certified Professional Secretaries in the State.

Jean was hired by Sandia 11 years ago as a typist. She had previously completed two years of study in business administration at the University of Washington and had worked in California as a hotel cashier and a bank bookkeeper. After coming to work here, Jean took a correspondence course in Speedwriting and later enrolled in noon-hour courses in English, economics, technical writing, and shorthand speed-building.

"My college courses, Sandia-offered classes, and books suggested for preparing for the examination were all a great help," she said. "I'd like to encourage more secretaries to study and take the test."

Jean has been a director's secretary for the past three and a half years.

Additional information about the CPS examination may be obtained from Helen Walsh (5140), who is chairman of the CPS committee, local chapter, Nat'l Secretaries Assn. The Certified Professional Secretaries at Sandia are Helen Walsh, Josephine Hanna (4000), Winifred Sandusky (6000), and Betty Pickel (4300).

SANDIA'S FIFTH Certified Professional Secretary is Jean Langston (5100), who recently received the high national rating.

Editorial Comment

A while back, a Sandia employee was having dinner with his family at home. His two cars were parked in the driveway. It was early evening—the sun had not yet set.

Following his meal, the Sandian left his home to run an errand. He noticed the trunk of one car was a bit open. Discovered that the spare tires had been stolen from both cars.

Broad daylight. His own driveway. No neighbor or passer-by had noticed.

The cars' trunks were unlocked.

Some people leave car keys in the ignition. Many don't lock their cars.

A car is easy to steal with the keys. It's not difficult to steal a car without the keys. It's easiest to steal items left on the seat, in the glove compartment, or in the trunk of an unlocked car. It happens every day in broad daylight, in a driveway, or even on a busy street or parking lot.

The Albuquerque Police Department encourages people to lock their cars. (Most of us have seen the bumper-type red stickers "LOCK YOUR CAR".) They don't like to see crime made easier.

Car thefts are reported (in Albuquerque 946 were stolen in 1965, about 700 so far in '66). Stolen items from unlocked cars may or may not be reported depending on value, hope of recovery, and whether the owner wants to be "bothered." Nonetheless, the police tell us there were 1462 reported thefts from cars in 1965, and roughly 400 so far this year. (These figures don't include thefts of hub caps and other exterior items.)

Only the broadest insurance policies will reimburse for items stolen from an unlocked car.

Of course a car can be broken into. But let's make it a bit rougher for the thief. Let's not invite crime.

Reactor Cleaning Done With Care

Last week, two members of Sandia Laboratory's janitorial staff were on a bridge crane high above the SERF reactor. Carefully and thoroughly, they were cleaning the ceiling surfaces, beams, and light fixtures.

The operation is part of the cleaning schedule devised by Health Physics Division 3312 to prevent buildup of contamination in either the SERF or SPRF facilities in Area V.

The men assigned to the job — Vince Gallagher and Joe Gutierrez of Janitor Service Division 4574 — have performed the cleaning for several years.

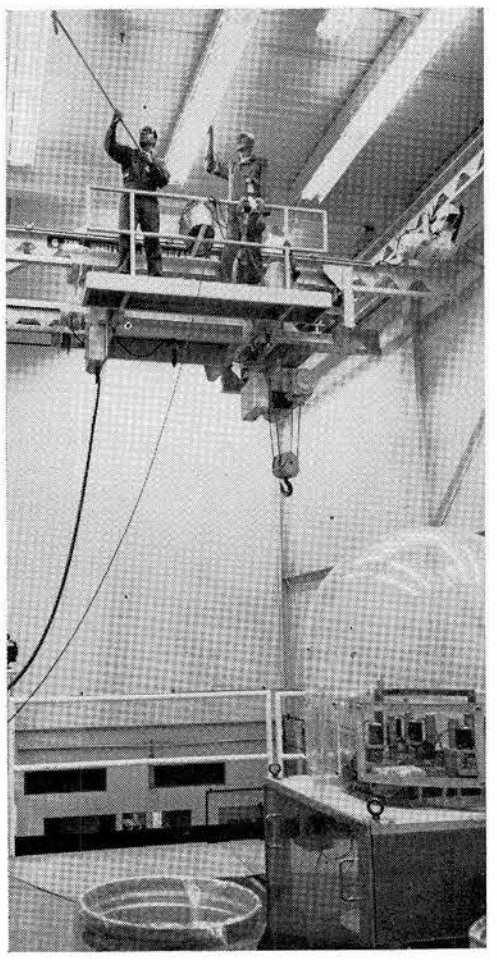
"With the care these men put into the job, Sandia maintains two of the cleanest reactors in the country," Frank Statzula of Health Physics Division says. For other than routine cleaning, the men wear protective clothing and work under the contamination control supervision provided by Health Physics.

Head man for janitorial services in Area V is Roy Furrow (4574).

Division 3312 provided special training for several members of Division 4574 who work in the reactor area.

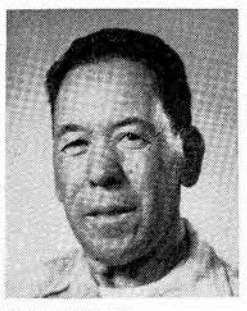
The cleaning work, however, is primarily the responsibility of Vince and Joe. The ceiling cleaning is performed about every 10 months and prevents the buildup of dust. Other areas of the reactor facilities are thoroughly cleaned according to schedule.

"We take the proper precautions," Vince Gallagher says, "and we do the job right. There is a lot of activity here, but everyone cooperates. That makes our job easier."



CEILING above the SERF reactor is cleaned by Joe Gutierrez and Vince Gallagher from a bridge crane. The reactor area cleaning is performed according to a schedule set by Health Physics Division 3312.

Retiree . . .



Benino Jinzo of Vehicle Maintenance Section 4573-2, retired the end of July. He has worked in the Motor Pool Organization since he joined Sandia Laboratory in February 1948, as he says, "a real old-timer with the Company."

Mr. Jinzo says his retirement plans include "resting, taking life easy, and doing a little farming." He owns 45 acres of farm land at Cedar Crest, N. M. His children, five sons and one daughter, all live in the Cedar Crest area. One son, Delfinio, works in Organization 4614-2.

Mr. and Mrs. Jinzo will continue to live in Albuquerque at 2834½ Moya Rd. NW.

Sandia Speakers

R. R. Prairie (2153) and W. J. Zimmer (5263), "Fractional Replications of 2^p Factorial Experiments with the Factors Applied Sequentially," annual American Statistical Association meeting, Aug. 15, Los Angeles.

E. L. Devor (2563), "Value Engineering Applications," Amarillo Chapter of the American Society for Quality Control, July 28, and members of supervision of Mason & Hanger-Silas Mason Co., Pantex Plant, July 29, Amarillo.

Albert Narath (5150), "Nuclear Magnetic Resonance and Relaxation in Metals," Gordon Research Conference on Resonance Phenomena in Metals, July 11-15, Enumclaw, Wash.

L. S. Nelson (5234), "Combustion of Metal Droplets Ignited by Flash Heating," 11th International Symposium on Combustion, Aug. 14-19, Berkeley, Calif.

WHILE CONTRACTOR CREWS disconnect present laboratory equipment during daylight hours, other crews move lab and office equipment into the newly-completed building at night. The move of 250 Sandians into the building should be completed within two months. Construction of Bldg. 807 started in November 1964. Construction cost was $3,780,000. It contains 88,000 square feet of space.

Move Into Bldg. 807 Starting; Occupancy to Require Two Months

The long-anticipated move by about 250 Sandians into Bldg. 807 began this week. This laboratory building contains 88,000 (gross) square feet of space and has been under construction since November 1964. It forms the left arm of a U-shaped complex created by Bldgs. 805, 806, and now 807.

Contractor crews are disconnecting present laboratory equipment during daytime hours and are making all moves into the building at night in order not to interfere with installation of utilities and new laboratory equipment. Occupancy has started on the top floor with the location of organizations 5141 and 5154 moving from Bldgs. 824 and 806. Also scheduled for third floor occupancy are Divisions 1313 and 1315, to move next week to Bldg. 802, and starting about Aug. 22, Divisions 1311 and 1312, also from Bldg. 802.

The occupancy schedule calls for completion of the move into each of the three floors and basement of Bldg. 807 in two-week periods starting from the top and working down. The entire occupancy is expected to be complete within two months.

Occupying the second floor of Bldg. 807, in addition to the 5200 Directorate office, will be laboratories and offices of organizations 5232, 5241, 5242, 1314, 1333, and 1324.

Located on the first floor will be organizations 1310, 1330, 1411, 1414, 1332, 1334, plus a branch machine shop from organization 4250, a drafting group from 2210, and an instrument service facility from 4610.

In two basement rooms, Bldg. 807 will have two special laboratories of Division 1414.

The space vacated from other buildings will be used generally to consolidate administrative organizations into Bldg. 802, a move that will open space in Bldg. 880 for expansion of Field Test, Special Projects, and Computing operations.

Accounting organizations 4130 and 4150 will be transferred into the first floor of Bldg. 802. Organization 3110 will move into the second floor of Bldg. 802 along with organizations 3210 and 6010.

The moves into 802 and 807 will vacate four temporary buildings that have been in use for a number of years in Tech Area I—Bldgs. 820, 821, 856, and 810. These buildings will be torn down and removed from the tech area.

Follow-up moves after the 807 occupancy is complete will be made during the remainder of the year, according to the schedule prepared by Plant Engineering Department 4540. Plant Engineering is now preparing plans for reoccupancy so that, as areas are vacated, modifications can be made to meet the new occupants' requirements.

Continued from Page One . . .

Sandia Plowshare Project

ments are also being made of craters and material ejected from the craters."

J. R. Cejka of Field Test E&C Group is the test director of the current Plowshare project.

Seven more 1000-pound conventional high explosive charges will be fired in Coyote Canyon periodically through September. H. G. Laursen of Blast and Earth Motion Division 7242 is the project engineer for instrumentation for the series.

In addition to the scientific objectives of the project, Mr. Laursen is also developing an advanced balloon-carried instrumentation system during the series of shots.

Sandia has used balloons in the past as a "sky-hook" from which to hang strings of instruments. For the Pre-Schooner II project in Idaho last October, Sandia flew a 150-foot-long, aerodynamic balloon to carry the instruments. The huge balloon was necessary to support the instruments and the steel cables which anchored the balloon. Most of the weight was in the cables.

The big balloon was difficult to handle, slow to inflate, and required substantial support equipment. In remote locations, these problems sometimes create delays.

For the current series, Mr. Laursen has designed a 72-foot-long balloon, 21 feet in diameter, which is filled with 17,000 cubic feet of helium. It was built to Sandia specifications by G. T. Schjeldahl Company. Skin covering is a polyurethane-coated Dacron.

Much of the heavy steel cabling has been eliminated by using a new type of plastic coated fiberglass cable which provides high strength with little weight. In addition, new instrument design has reduced the weight of the gages.

These advances have provided a system that will lift 400 pounds to high altitudes.

For the series of conventional explosive blasts, Division 7242 will measure air blast pressures at various altitudes up to 500 feet. Two strings of instruments will hang from the balloon. On the ground, other gages will measure the blast pressure from ground zero and at various distances up to 800 feet.

The series of eight 1000-pound HE detonations will be climaxed in late September with the detonation of 30,500 pounds of HE. This charge will be buried at a depth of 48 feet in Coyote Test Field, the optimum depth for this size charge to form a large crater. Photometrics Division 7226 will provide full photographic coverage of the event, concentrating on throwout formation and displacement.

Other Sandia organizations participating in the project include Field Test E&C Group 7263, A&F Field Support Division 7262, and CTF Operations Section 7343-1.

SANDIA CORPORATION

LAB NEWS

ALBUQUERQUE, NEW MEXICO • LIVERMORE, CALIFORNIA

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PUNCHED OR "VENTILATED" BADGE inserted into a badge reader automatically logs in two visitors (left) as they arrived at Livermore Laboratory's Badge Office for a recent meeting. W. F. Hodges and J. McMinn (right) of Security Administration and Operations Division 8241 say that the system avoids "bottlenecks" when large groups of "cleared" visitors arrive for meetings within the Laboratory.

LIVERMORE NEWS

During Non-Operational Hours

Automated Badge System at SCLL Speeds Access to Restricted Areas

Livermore Laboratory's automated badge log-in system eliminates a sign-in bottleneck for cleared visitors, contractor personnel, and for some employees during non-operational hours.

The system uses punched badges, a "reading" machine, control console, receiver, and Livermore's central computer.

Badges used with the system are code punched with 10 digits of numerical information which indicate employee or badge number, area access, and whether the individual is a visitor, employee, or contractor personnel.

The badge is inserted into the reader which transmits information from the badge to a console at Guard Headquarters in Bldg. 911. The console adds the date and time and passes the information on to the receiver unit. Here the information is punched onto paper tape which is fed into the central computer. Information printouts are available from the computer whenever needed.

The system was introduced at SCLL in January 1965 for use by guards, janitors, boiler plant operators, and certain computer personnel who regularly needed access to the technical area during non-operational hours. By using the punched badges the employees were not slowed down by the usual sign-in and logging procedures.

Later the system was expanded to include all cleared contractor personnel during both operational and non-operational hours.

Last November, the system was installed in the Badge Office and eliminated the signing-in procedure for all cleared visitors.

"It used to take several minutes to get a visitor logged in," says Wesley F. Hodges, supervisor of Visitor Control and Traffic Section 8241-1, "now it takes just seconds. Hours of clerical effort are saved in the handling and filing of paper and in the processing of visitors.

"Another benefit of the system is the legibility of the logging data. When visitors arrive, they're in a hurry to get to their appointment or meeting, and many of them write very rapidly as they sign-in —it was almost impossible to decipher some of the scrawls on our log-in pages. With the system we're now using, the logging data is typed out from the computer and the illegibility problem is completely solved.

"Finally," Wes adds, "the system is a convenience to the visitor, and a tremendous help when we have large groups arriving to attend conferences and meetings."

Jim McMinn, supervisor of Security Administration and Operations Division 8241, notes, "The success of this system, even in its limited use, indicates that it is certainly applicable for incorporation in the Laboratory badge change-over scheduled for late fall of this year."

Welcome Newcomers

July 5-28

California
- Robert B. Anderson, Hayward 8252
- Robert E. Badger, Alameda 8254
- Bobbye J. Goodman, Livermore 8235
- Randall G. Gummus, Livermore 8235
- Donna L. Lindbloom, Livermore 8235
- Glenna M. Nieto, Livermore 8235
- George F. Rafal, Livermore 8235
- Albert L. Reichmuth, Manteca 8252
- Daniel D. Ross, Fresno 8122
- *Carl A. Wackerly, Livermore 8253

Colorado
- Jack D. Wagner, Boulder 8166

Illinois
- Paul R. Kalata, Chicago 8155
- Michael T. Torgersen, Chicago 8131

Utah
- *James G. Pergrossi, Provo 8252

*Denotes rehire

Livermore Notes

Livermore Councilman Gilbert (Gib) R. Marguth (8127) has been named as the city's representative to the Arroyo Del Valley Planning Committee. The committee, comprised of representatives from local governmental agencies, is being formed in an effort to preserve the land adjacent to the Arroyo Del Valley creek bed for development of a residential area and recreational facilities.

Gib was elected a member of the Livermore City Council in April of this year.

* * *

The Thunderbird El Toro Sailing Club awarded two trophies recently. Glen Brandvold (8132) won the Flatlander's Regatta held at Vasona Lake, and Bob Schaefer (8132) placed first in the club's Fifth Annual Regatta held at Woodward Reservoir.

John Anderson (8155), awards chairman, presented the trophies to the winners. In addition, Bob's name will be engraved on the large perpetual trophy on display in the Bldg. 911 trophy case.

* * *

Pat O'Brian (8161) shot a net low score of 64 to win the first place trophy in the Sandia Employee Golf Club tournament July 23. The straight handicap tourney was played at the Tilden Park Golf Course in Berkeley.

Jackie Garrett (8121) took second place with a low net of 66, and Greg Young (8156) and Elmer Smith (8118) tied for third with scores of 67. A special award was won by Al Skinrood (8132) for coming closest to the pin at the fifth hole.

Noontime Movies Resumed At Livermore Laboratory

Noontime movies are again being shown weekly at Livermore Laboratory.

The films are offered every Friday through arrangements made by Employee Benefits Division 8212. All of the movies are in color and run approximately 35 minutes. They are shown in Rm. 185, Bldg. 912, beginning at 12:05 p.m. Seating is on a first-come, first-served basis.

Films this month include: "Highlights of Pennsylvania," Aug. 16; "Bay of Gold—San Francisco," Aug. 23; and "Happy Holidays—Camping in the Smokies," Aug. 30.

Movie schedules are posted weekly on bulletin boards throughout the Laboratory.

Congratulations

To Mr. and Mrs. Bert Barker (8144), a son, James Berton, July 29.

Sympathy

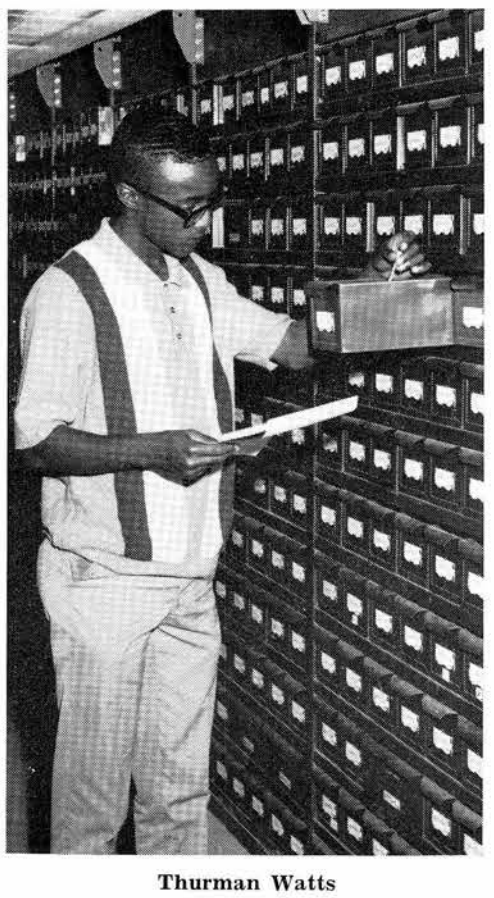
To Ralph Jaeger (8231) for the death of his mother in Los Gatos, July 28.

To Jim (8252) and Marie Dremalas (8232) for the death of Marie's father in Stockton, July 23.

To Jerry Uhlig (8121) for the death of his grandfather in Klamath Falls, Ore., July 18.

To Anne Ritchie (8152) for the death of her father in Portland, Ore., July 25.

James Alviso



Thurman Watts

Beatrice Morris & Gladys Kimberling (8244-1)

Youth Opportunity At Livermore Lab

A variety of assignments are handled by summer employees hired at Livermore in support of President Johnson's Youth Opportunity Campaign. This is the second year Sandia has participated in the national program launched last year.

(Lower left) Thurman Watts, junior at Hayward High School, fills material requisitions in General Stores. (Upper left) Chabot College freshman James Alviso operates a copying machine. (Center) Beatrice Morris, left, a junior at California State Polytechnic College, receives instructions in maintaining SCLL General Stores catalogs from Gladys Kimberling (8244-1).

(Upper right) Rita Garcia, left, secretarial services major at Chabot College, discusses data processing procedures with Jill Roach, Fresno State College sophomore back for her second summer at SCLL. (Lower right) Deanna Correa of Chabot College reviews Purchasing's filing procedures with Price Hennan, supervisor of Section 8243-1.

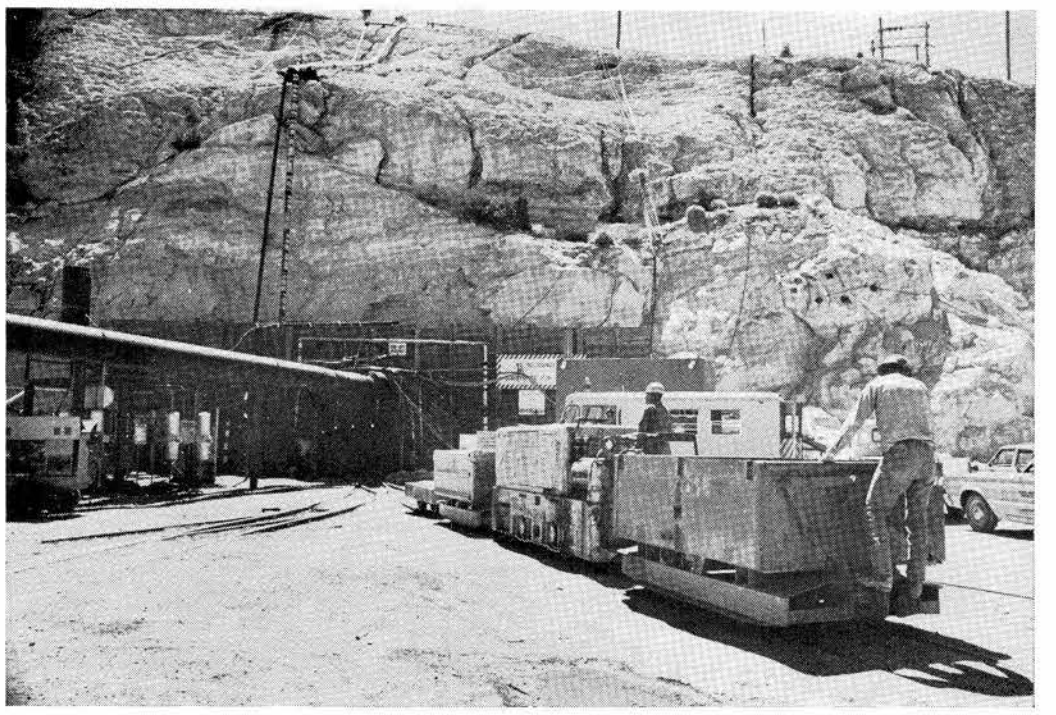
Summer jobs such as these provide meaningful work and training opportunities for students between the ages of 16 and 21.

Other youths returning to SCLL for their second summer, but not pictured, are Linda Light and Arnold Birr, Chabot College; Ross Hoblitzell, University of Hawaii; and Gregory Drummond, 1966 graduate of Livermore High School who plans to attend electronics school this fall.

Rita Garcia & Jill Roach

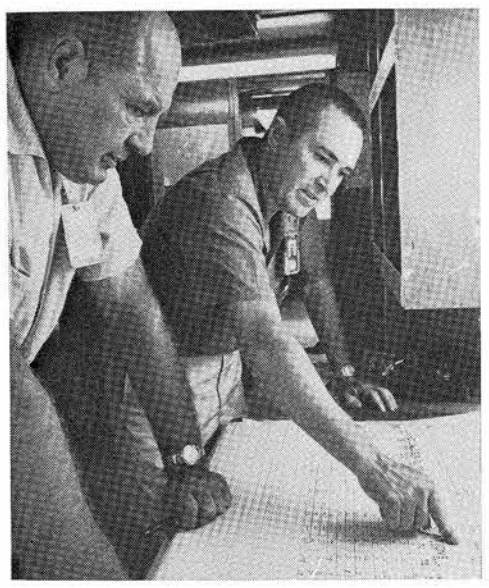
Deanna Correa & Price Hennan (8243-1)

B. F. MURPHEY (5230), left, scientific advisor for nuclear testing, conducts meeting of the Test Manager's Advisory Panel. Meteorologist is discussing wind currents over the Nevada Test Site. Second from left is C. R. Mehl (5231).



ENTRANCE to a tunnel site prior to an underground test is scene of massed activity as miners shuttle equipment into the tunnel and engineers check cables and instrumentation. Large pipe leading into the tunnel is part of the Sandia-designed air filtration system.

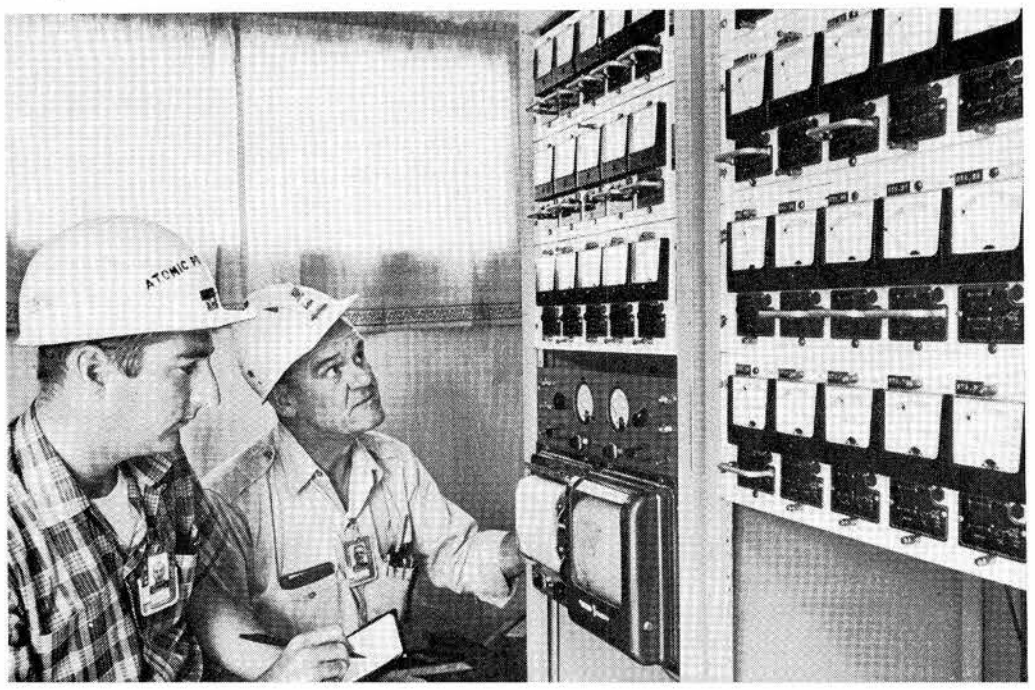
READOUT AND ANALYSIS of data from radiation monitors positioned around the tunnel site is performed by Paul Matthews (3312), Don Coleman (3313), and Tom Crites (3312).



W. H. KINGSLEY (3310), right, confers with Cliff Penwell, REECO Radiation Sciences superintendent, on the status of the site.

LIAL BREWER (3311) checks the gas chromatograph instrument which enables remote sampling and analysis of tunnel gasses following detonation.

JOHN ASHWORTH, left, and Don Coleman (both 3313) check readouts from the monitoring instrumentation. The station is in a trailer at the forward control point and displays readings from all the remote sensors.



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Sandia Performs Radiation Safety

control activity, Sandia provides technical direction and the vital instrumentation which makes the "assured safety" a reality. Manpower for the activity is provided by Reynolds Electrical and Engineering Company (REECO) which is a contractor to the AEC's Nevada Test Site organization.

Harold Rarrick, supervisor of Health Physics Division 3312, serves as Radiation Safety Advisor for the DOD events. He attends the early meetings and briefing sessions for the event—contributing his experience and knowledge of radiation physics and helping with the physical planning of the shot.

In a typical tunnel test, a horizontal drift is dug about 3000 feet into the side of a mountain. The nuclear device is placed at the point of deepest penetration into the mountain.

Design of the tunnel is such that it closes itself with the blast pressure created by the detonation of the device. A "stemming" design uses great amounts of sand to help seal the tunnel.

In the milliseconds following detonation, the performance data from the exposed experiments are telemetered to recording stations, cameras film the action, and other instruments record the myriad information required from the test.

Division 3313 personnel design the array of monitoring instrumentation which is placed inside the tunnel, at the portal, at the trailer and instrumentation site near the entrance to the tunnel, on top of the mountain, and for several thousand feet around the detonation site. These instruments consist of radiation detectors, explosive gas monitors, and a gas chromatograph. In addition, pressure, temperature, and geophone (a seismic activity monitor) instrumentation are installed.

After the detonation, these instruments tell the story.

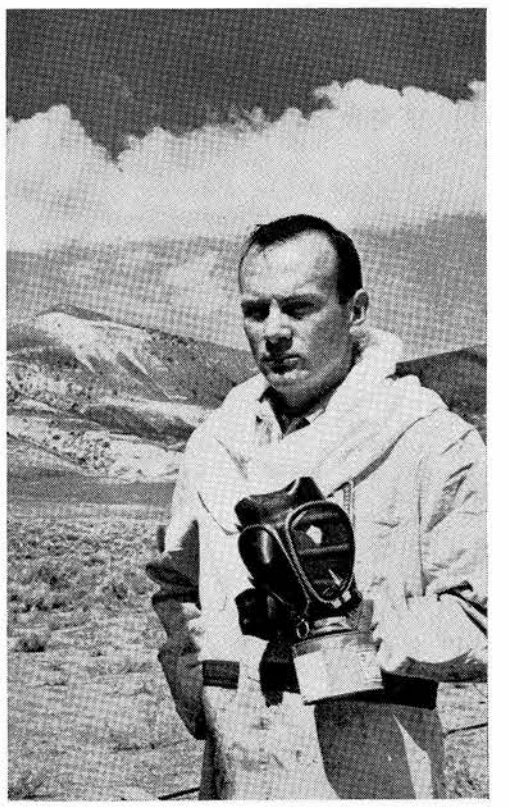
Radiation levels reported by all instruments are displayed on a panel at the forward control point where the test director and Harold Rarrick have instant access to them. The decision to return to the portal area and retrieve the film data from the instrumentation trailers is their responsibility. For the first hour after the detonation, Harold watches the radiation readouts and other measurements. The readings are broadcast throughout the forward control and observation areas, and to the NTS control point.

The test personnel wait. The rad-safe crew, led by George Wenz (3312), dressed in orange rad-safe outfits, rubber boots, gloves, headgear, and breathing apparatus, prepare to enter the area to make the first inspection.

The crew waits.

Harold weighs all the factors—radiation levels, if any, outside the tunnel; wind information reported by the site meteorologists; the need to recover film; and the continuous concern for safety.

Finally, after Harold is convinced it is safe, he advises the Test Director that the re-entry party can inspect the site and retrieve the film. The men in the orange coveralls speed up the long dusty road to the site. Each is a specialist in his job, and each carries an accurate, reliable radiation counter. As they progress to the site, they relay any readings.



GEORGE WENZ (3312), wearing rad-safe suit and holding breathing apparatus, waits to lead reentry party to the site following detonation. In the background is the mountain containing the test tunnel.

Their journey is brief. Harold allows only a few minutes for the first trip and urges the party to hurry.

After the first inspection and the radiation sensitive film is recovered, the remainder of the re-entry plans are approved. Experimenters will enter the area to recover instruments and data from the trailers.

For George Wenz and the other Sandians—Paul Matthews, Tom Crites (both 3312), Don Coleman, John Ashworth (both 3313), and Lial Brewer (3311)—the nuclear test represents one long continuous period on the job. They grab a couple of hours sleep in between sessions at the monitor readout boards. No one relaxes until the film data is recovered, radiation levels drop, and the re-entry mission is completed.

Harold and W. H. Kingsley, manager of Environmental Health Department 3310, confer constantly with the DOD Test Director and the REECO Radiation Sciences superintendent, Cliff Penwell, on the status of the site after the detonation.

Decisions are made as to when it will be safe to perform normal operations at the portal site.

Report writing for the event will take a while. More analytical sessions will be held. The men of Environmental Health Department will check the site from time to time, but it's history now.

Other events are coming up. Studies are being made, better instrumentation is being developed, and the work continues.

Faculty Members and Graduate Students Join Sandia for Summer

Seventy-five teachers and graduate students left some 40 campuses throughout the country this June to join the Laboratory staff for several months of summer work.

Now carrying out job assignments throughout the Laboratory are 23 university faculty members, four technical institute faculty members, 36 graduate students, and 12 local high school science and math teachers.

This is the twelfth year of the Sandia staff summer hire program which generates numerous benefits for both Sandia and the summer employees.

The program benefits Sandia in a number of ways, according to Larry D. Ferree (3151), coordinator of the staff summer hire program.

It provides high caliber technical manpower to do important work for Sandia; it generates interest in possible future regular employment among graduate students; and it engenders better relationships between Sandia and the colleges and institutions across the country.

The program also provides graduate students and faculty members with gainful employment in an effort to encourage their further study or teaching, and it provides faculty personnel with information on industrial needs to aid them in their teaching.

For the university professor, the program provides an opportunity to participate in current engineering projects, according to James D. Iversen an associate professor of aerospace engineering at Iowa State University.

Prof. Iversen, who holds a PhD degree in aeronautical engineering, is currently working on aerodynamic stability of unusual shapes and on the reduction of wind tunnel experimental data in Advanced Weapon Aerodynamics Division 9325. This is Prof. Iversen's second summer at Sandia.

He has participated in several other industrial summer programs and enjoys working at Sandia. The job assignments, he says, often stimulate ideas for research projects and broaden one's horizons.

Sidney C. Larson, who is an associate professor of electrical engineering at the University of Minnesota and holds a PhD degree in electrical engineering from the University of Wisconsin, is working on advanced development of radar systems in Division 1423 this summer.

"Personal benefits of the program," Prof. Larson says, "include the broadening of one's industrial experience. A person tends to get rather narrow if he confines his activities to teaching, but programs such as this help us keep pace with industrial needs and electrical engineering in a rapidly changing world."

Work at Sandia is an excellent opportunity for teachers to get actual experience which they can then communicate to their students," Leland Gion, a math teacher at Harrison Jr. High School, states with conviction.

"Too frequently," he adds, "teachers in technical related fields enter the teaching profession immediately after completing their schooling and they lack the industrial experience about which they should be knowledgeable. My Sandia co-workers and supervisors are well informed and very cooperative. It's a stimulating atmosphere."

Principally concerned with designing a rotary switch and solenoid tester in Product Tester Design Division 2451, Leland is working his first summer at the Laboratory.

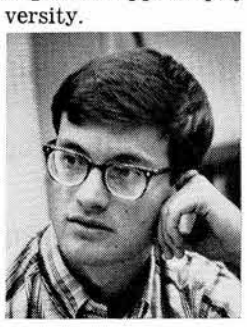
Graduate student Lewis Thigpen is enthusiastic about his current job assignment in Terradynamics Division 9327. He is analyzing shock impact data.

This is the third consecutive summer at the Laboratory for Lewis, who has completed two years toward a PhD degree in mechanics at Illinois Institute of Technology.

"I have gained a lot of valuable research experience at Sandia," he states. "Here we have the experimental data which we can use to come up with the theoretical."

Lewis shares a room in town with Archer S. Mitchell, a Carnegie Institute graduate student, during their summer employment here. Archer, a second year summer hire, is working in Electrical Devices Division 7332.

David Eitelbach, another graduate student summer hire, is working for a PhD degree in applied physics at Stanford University.



"The opportunity of using equipment that I have never seen before is one of the advantages of working at Sandia during summer vacations," Dave comments. "I like it very much. Instead of merely writing the information down on paper, you actually get to work with the equipment."

Assigned to Solid State Research Department 5150, Dave is looking for nuclear hyperfine resonance in copper fluoride dihydrate.

Graduate students are contacted for summer employment by Sandia's college recruiters on the campus. University faculty members are frequently introduced to the Laboratory by their former students who are at Sandia. High school faculty members apply for Sandia summer employment through the school administration.

NEW DIRECTORS of the Coronado Club elected at the annual meeting recently are, first row (l to r), O. B. Tjeltweed (5632), J. W. Carroll (4315), C. R. Andes (4137), and William Jackson (ACF). Standing in the second row are J. H. Kelly (3112), and T. A. Sellers (9211).

P. A. Nicovich Chairman of National Standards Subcommittee

P. A. Nicovich, supervisor of Design Definition Division B, 2212, has been appointed chairman of the American Standards Association's Y-14.5 subcommittee as well as ABC (American-British-Canadian) correspondent on drafting practices.

The subcommittee was formerly known as the Joint Industry-Military Standard Committee and was created to develop a single standard on dimensioning and tolerancing based on three existing standards (those of the Society of Automotive Engineers, the American Standards Association, and the Department of Defense).

Mr. Nicovich and F. F. Eichert, manager of Design Definition Department 2210, played significant roles in the creation of this new American standard on dimensioning and tolerancing for engineering drawings. It is expected to be published in the very near future.

The Y-14.5 subcommittee is now charged with keeping the standard up to date as new ideas develop and practices change.

D. M. Olson Elected President of Coronado Club

Six new members of the Coronado Club Board of Directors were elected at the annual meeting Aug. 1. Elected were William Jackson (ACF), J. H. Kelly (3112), C. R. Andes (4137), J. W. Carroll (4315), O. B. Tjeltweed (5632), and T. A. Sellers (9211).

At its first meeting D. M. Olson (1510) was elected president of the board; Mr. Andes was named vice president; E. D. Herrity (4330), secretary; and Mr. Carroll, treasurer.

Both Mr. Olson and Mr. Herrity are "carryover" members of the board. Others include Pearson Crosby (AEC), J. H. Selby (4252), C. W. Dickinson, Jr. (3120), and D. P. Dickason (AEC/SAO).

The new president praised the work of M. M. Newsom (5611), past president, and board members. He said the Coronado Club is in a very strong financial position, improvements have been made in the facilities during the past year, more are planned, and programs have been expanded. He asks for continued support of Club activities by the members, the key ingredient in the Club's success.

Unusual Events Mark Urevitch's Travels in Arabian Countries

A country in revolt, secret service agents, and a lonely spot on the Israeli-Jordan border. "Man from UNCLE"? Nope, a Sandia couple from Albuquerque.

No tour through the countries of the eastern Mediterranean is routine; there's too much to do and too much to see that's unique.

Awaiting the tourist are the pyramids and Sphinx of Egypt, the Biblical fascination of Israel, and the streets of Damascus which claims to be the oldest inhabited city in the world.

But Joanne (7510) and Stan (4212) Urevitch had experiences which helped to heighten the intrigue of these ancient lands.

When they arrived in Damascus, Syria, they found the main square bore the scars of an unsuccessful revolt against the Syrian government. "The bodies of the rebels killed in the uprising had been removed from the square just two days before we arrived," Stan said. "They had been left in the square for days to warn others of the consequences of revolution.

"There have been 15 uprisings in Syria in the past 17 years," he added.

During our first day at the Nile Hilton," Joanne commented, "we turned the wrong way as we left our room. Instead of heading toward the elevators, we were walking away from them. Suddenly we were surrounded by men—Secret Service or whatever they call them in the Arab nations."

It seems that some Arab officials were in Cairo for a high-level meeting. One of these officials was staying in the room next to the Urevitch's, and anyone strolling around that area was persona non grata. Stan and Joanne explained the error of their way, and were escorted to the elevators.

The "lonely spot on the Israeli-Jordan border" was found during the trip from Jordan to Israel. "After viewing the historic sights in Jerusalem, Jordan," Stan says, "we were driven to the border. The driver got our luggage, dropped it on the border, and left. We stood there, waiting for an official to appear. No one came, so we picked up our suitcases and walked over to a building at Mandelbaum's Gate on the Israel side of the border. The officials in the building were startled and asked us where we'd come from."

After explaining that they were tourists, the Urevitchs were allowed to pass. It seems that going from an Arab country into Israel (and vice versa) is most unusual.

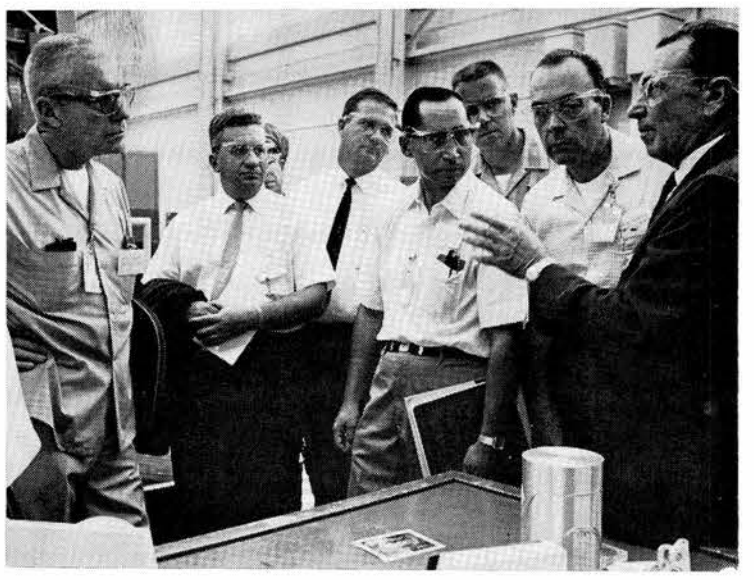
"We saw many, many things—had a real education—and wouldn't give up this trip for the world, but we were happy to get back to the USA. There's no place like it in the world," Joanne concluded.

Welcome Newcomers

July 25 - Aug. 5

Albuquerque
Mary Cleo Fernandez 3126
Lillian V. Podvin 4362
*Lois E. Rector 3421
Betty Jo Rivera 3241
Frankie M. Weldon 4333
Mary M. Wood 3126
California
Patricia C. Farrell, San Diego 3421
James F. Schulze, Berkeley 5222
Illinois
Gladys E. Rowe, North Aurora 3421
Maryland
Marvin L. Price, Silver Spring 5530
Missouri
Samuel E. Bolin, Kansas City 1333
New Mexico
George L. Davis, Las Cruces 5000
New Jersey
Russell T. Hurlburt, Princeton 9000
New York
Richard L. Shepardson, Bemus Point 2521
Oklahoma
John L. Lemmons, Hominy 3312
Texas
Francisco Gonzalez, El Paso 5223
*Denotes rehire.

AFTER 35 MILES across the Egyptian desert by camel, Stan Urevitch (4212-2) could hardly move, but then he had never even ridden a horse. His wife Joanne (7510) was less enthusiastic about the idea, but gave camel transportation a try during their recent vacation.



TOUR SANDIA—Thirty local school principals and counselors, attending a three-week Vocational Guidance Institute at UNM, toured Sandia's Development Shops recently. Purpose of Institute, sponsored by Plans for Progress companies, was to more fully acquaint school counselors with employer viewpoints and hiring requirements so they in turn could more effectively counsel students. In photo at left, L. W. Stouder (4251) discusses a machined part made by the programmed Omnimil machine. At right, R, J. Hansen (4200) discusses mission of Sandia's Development Shops.

Sandia Group Will Present One Complete Session at WESCON Meet

A complete technical session at the WESCON (Western Electronics Show and Convention) meeting in Los Angeles Aug. 23-26 will be presented by a group of six Sandians.

The session is titled "Piezoelectric Ceramic Devices and Applications" and will present some significant developments in this field, according to C. E. Land (5142), who initiated and organized the session.

Conducted annually by the Institute of Electrical and Electronics Engineers. WESCON is usually attended by 40,000 or more scientists and engineers.

O. M. Stuetzer, manager of Technical Physics Research Department 5140, will be chairman of the Sandia session. The session will present a comprehensive account of recent Sandia advances in piezoelectric ceramic materials, device technology, and analytic methods which have led to the development of a number of new devices.

The papers include a description of new hot-pressing techniques for the production of improved ceramics, the results of recent studies of the switching and poling characteristics of these materials, a new theory for analysis of the small-signal response of ceramic monolithic multielectroded devices, and a description of a number of new ceramic devices, including a discussion of device characteristics and fabrication techniques.

The papers to be presented and their authors are:

"Improved Ceramics for Piezoelectric Devices," G. H. Haertling (1132); "Switching Properties of Polycrystalline Ferroelectrics," R. H. Plumlee (5142); "The Theory of Linear Multielectroded Piezoelectric Plates," R. W. Holland (5142); "Ferroelectric Ceramic Logic and NDRO Memory Devices," D. G. Schueler (1433); and "Small-Signal Applications of Monolithic Multiport Piezoelectric Devices," by Mr. Land.

Gene Frye Builds 19-Ft. Sailboat in Four Months of Spare Time Work

Gene Frye (1112) designed and built the Mary Ann in four months of spare-time activity. The boat resembles a New England catboat, a type of fishing vessel which has a single sail, a broad beam for stability, and a retractable centerboard.

The Mary Ann is 19 feet long, 8 feet wide, and draws 4½ feet when the centerboard is extended. The hemlock mast is 24 feet high and the main boom is 16 feet long. The cabin sleeps four comfortably.

Gene grew up in the Great Lakes region and learned to sail when he was a boy. It was one of the things he missed most when he moved to Albuquerque in 1954.

About five years ago, a friend convinced him that a sailboat was feasible in the Southwest and so Gene decided to build one. He was a pretty good do-it-yourselfer, having built two houses in Ohio, and performed much of the finishing work on his present home.

He investigated various kits available on the market, but nothing seemed to be just right. He searched for plans and did some research on sailing boats. Finally, he decided that the New England catboat was about what he wanted, so he drew his own plans.

The next step proved to be significant—he built a model from the plans. He tested the model in the backyard fish pond and on the basis of the model's performance, he made a number of major revisions in the plans.

He started construction in April 1960 and launched the boat with a champagne christening at Elephant Butte four months later.

"There are not many moments like that," Gene says. "She floated high in the water and looked beautiful. We ran the sail up and she moved out smartly, handled as well as any boat I've ever sailed, and performed . . . well it was a thrill."

Since then, Gene has sailed the boat every summer at Elephant Butte. It has weathered a couple of bad storms and some minor damage, but still performs beautifully.

This winter the family will take the boat to the Gulf of California and sail off Guaymas.

Basic construction material for the hull is mahogany and oak covered with plywood planking and coated overall with fiberglass. The only power tool Gene used was a borrowed bench saw.

The boat is named after his daughter, Mary Ann, who was most enthusiastic about the project. She sewed the huge sail when she was 13.

"Sailing is different from other kinds of boating," Gene says. "The man at the tiller feels the wind in the sail, the water, and the response of the boat. He's part of it all, and it's a good feeling—especially at night under a clear sky full of stars."

SAILBOAT designed and built by Gene Frye has brought many hours of recreation to his family. Daughter Mary Ann (in background) sewed the huge sail. Gene also designed the trailer. Mast folds and the booms come in when the boat is being hauled. The model boat shows original cabin line and extended centerboard underneath.

FTS Is Easy to Use When Instructions Are Followed

Sandia has been tied into the Federal Telecommunications System (FTS) since the first of the year. Enough time has passed for an assessment of how successfully the system is working, where the problems are, and what improvements can be expected.

J. H. Porter, supervisor of Communication Systems Division 3416, summarized the situation in this way, "The system is working very well with 'on-net' numbers, but Sandians are still having trouble reaching 'off-net' numbers, mainly because it's difficult to reach Assistance Operators in other cities. There just aren't enough of them."

There are several important things to remember in using FTS:

1) The agency identification for Sandia Corporation in Albuquerque is 83-8954 (it is different at other company locations). Your name and this number are the only identification which should be used.

2) If you don't know the number of the office or individual you want to call, dial 9 (for outside line), 112 (for Direct Distance Dialing), the area code of the city you are calling, and 555-1212 (the Universal Information Number). There is no charge for such calls. After you obtain the information, hang up and dial the FTS Assistance Operator for the city you are calling. She cannot serve as an "information operator."

3) Don't try to make "off-net" to "off-net" calls. The system is not designed for that purpose.

"FTS was set up for government agencies with the cost of the leased wire prorated among the users. It is not a free long distance telephone service," Mr. Porter explained. "We are billed a flat fee which is adjusted periodically according to the calls we make. A letter or TWX message should be used when time permits."

Objections to the system heard most frequently are: the line is always busy and/or you have to dial so many numbers! There is a reason why you frequently hear a busy signal after dialing "7." There are only 39 FTS "trunk lines" serving Sandia at the present time. The number of lines will be expanded to 60 as soon as additional switching equipment is received.

FTS directories are distributed to each supervisor with extra copies sent to department offices. Additional copies may be obtained from Division 3416.

There are some peculiarities in the system. Livermore Laboratory has direct inward dialing on FTS but on toll and tieline calls the extension has to be given to the laboratory switchboard operator who completes the connection. (The tieline should be used to Livermore and other areas in preference to a toll call if FTS is busy.)

The operator may challenge an "off-net" call if it is to a non-commercial number and she may refuse to complete an obviously personal call. A record may be made of "off-net" calls and a listing may be returned to Sandia for explanation.

"Once you become familiar with the system, it is really very simple," Mr. Porter noted, "but please read the instructions on page 2 of the company telephone directory before trying FTS."

Sandians Participate In Third Naval Reserve Research Seminar

Sixty military officers involved in research activities throughout the nation are attending the third Research Reserve Seminar in Applied Research which ends today at Sandia Base.

Sponsored by the Office of Naval Research in conjunction with Naval Reserve Research Company 8-7 of Albuquerque, the two-week seminar started July 31. Included on the agenda are technical sessions and tours of laboratories and testing facilities.

Edwin F. Johnson (9331) is the seminar chairman. Other Sandians serving on the committee are F. T. Owens (7511), program chairman; R. P. Baker (2441), Sandia session coordinator; C. B. Rogers (9227), session coordinator; and H. M. Willis (3130), public information coordinator.

S. P. Schwartz, Sandia president, addressed the group Monday on "Sandia Laboratory, Its Mission." Other Sandia speakers were A. Y. Pope (9300), "Project REB"; A. J. Clark, Jr. (9330), "Aerospace Isotopic Power Supplies"; J. C. Eckhart (9210), "Sandia Activities in Support of Joint Task Force Two"; R. W. Henderson (2000), "Early Experiences in the Manhattan Engineering District"; O. M. Stuetzer (5140), "Extreme Physics"; J. D. Shreve (5234), "Probing Aerospace, How and Why"; and B. F. Murphey (5230), "Modern Weapons Effects."

After a briefing by A. F. Huters (7255), the group toured Sandia's NC-135A diagnostic aircraft at Kirtland AFB on Tuesday. Later that same morning they toured the centrifuge, sled track, radiant heat, vibration, and drop tower facilities in Area III.

This is the third time the event was held on Sandia Base. Each year the Office of Naval Research sponsors the research seminars for the two-week active training period of Naval Reserve officers. Participants include Air Force, Army, and Navy officers from throughout the United States.

RICHARD MARQUEZ (4221) would rather fight than switch his safety glasses. They saved his eyes when he was hit in the face with a softball.

Safety Glasses Save Richard Marquez from Serious Eye Injury

It was a pleasant Sunday afternoon. Richard Marquez (4221) and his wife went for a walk in Hurley Park. They stopped to chat. Behind them some kids were playing softball.

"Watch out!" someone yelled.

Richard turned to see what was happening, and was hit full in the face with the softball.

His glasses were bent by the impact. They were pushed down against his face and the rims cut his cheeks. They didn't shatter, for Richard was wearing safety glasses.

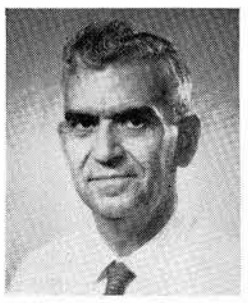
Later, he developed a couple of beautiful shiners. The areas around his eyes turned a deep purplish black.

"But I was lucky," Richard says. "I think the lenses of ordinary glasses would have broken and I could have been seriously injured. It was enough of a shock to get a softball in my face. Broken glass would have been too much."

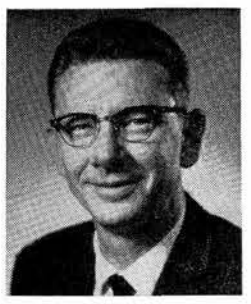
Richard thinks the moral of this story is obvious: wear your safety glasses on the job and off the job. You never know when they might be the most important thing in your life.

Service Awards

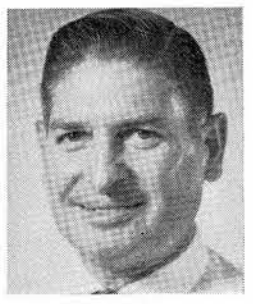
20 Years



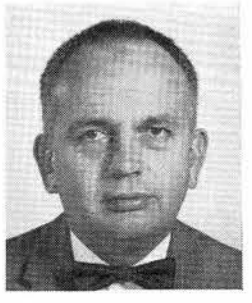
J. H. Fuqua
7262



J. O. Muench
2151



L. P. Ortiz
3463



D. B. Shuster
9200

T. L. Wallace
1411

15 Years

Frank Bachicha
4613

Abe Bertholomey
4252

F. B. Brumley
1316

R. M. Caster
7255

John Chavez
4573

A. B. Cole
7256

W. L. Drake
4253

V. M. Field
8132

K. E. Finders
8254

N. J. Gonzales
4622

L. B. Holcomb
4212

I. J. Honeycutt
4213

Andres Landavazo
4514

J. M. Lopez
4514

W. E. Melegan
2213

L. B. Neeley
7255

Jimmie Otero, Jr.
4513

C. P. Rindone
8252

Kay Scranton
7331

O. V. Short
4252

C. J. Smith
1411

J. S. Souza
1521

Adin Sponseller
2431

K. E. Sutton, Jr.
3222

J. E. Taylor
4224

10 Years

Aug. 12-25

R. O. Letourneau 1542, H. H. Dykema 2213, O. J. Foster 3121, M. G. Chavez, 4151, D. R. Wilsey 8233, Frances M. Shaeffer 2234, C. L. Haynes 4221, Ann R. Hawk 4234.

L. H. Ivy 9422, C. M. Encinias 4518, C. L. Schuster II, 7212. W. E. Price, Jr. 9221, J. C. Newton 1413, Ellera J. Corwin 3111, F. D. Snyder 8232, H. A. Guerin 4252.

R. E. White, 2131, K. J. Shumway 2225, O. T. Schurr 4514, and L. E. Heames 5134.

Atmospheric Rocket Data Presented in Tokyo, Japan

"Atmospheric Rocket Measurements Above 30 Kilometers Over the Hawaiian Islands" is the title of a presentation to be made by L. B. Smith (5241) during the 11th Pacific Science Congress to be held in Tokyo, Japan, Aug. 23-Sept. 2.

This organization, of purely scientific nature, was founded in 1920 and is constituted of countries bordering the Pacific. The various countries are represented by delegates from research councils, national academies, or similar scientific organizations.

The group meets every four years. Previous sessions have been held in Australia, Java, Canada, New Zealand, the Philippines, Thailand, and the United States (Honolulu and San Francisco).

The meeting will convene at the University of Tokyo with afternoon sessions devoted to discussions of two major topics—Population Problems in the Pacific, and Air and Water Pollution in the Pacific. During the morning symposia, technical papers will be presented on some 60 topics of interest.

Mr. Smith's paper is based upon meteorological measurements made from rockets fired from the Hawaiian Islands. He will describe the site and instrumentation used, and will show data obtained from the tests.

Sandia has fired about 1000 meteorological rockets (mainly small-size chaff rockets) since 1958. The early vehicles soared to 300,000 feet, but since 1962 the area under study has ranged upward to a million feet.

Promotions

Bivens Lovest (8232) to Library Assistant
Lois J. Strandin (8200) to Secretary
Alan Bolles (9222) to Staff Associate Technical
Albert P. Disch (1333) to Staff Assistant Technical
Margarette Davis (2432) to Staff Assistant Technical
Merejildo Gallegos (7216) to Staff Assistant Technical
Roy L. Zimmerman (2212) to Staff Assistant Draftsman
Paul D. Shoemaker (2213) to Staff Assistant Draftsman
Herman Kaneshiro (3462) to Reproduction Equipment Operator
Florence Smythe (4234) to Assembler
Malery Jones (4574) to Janitor (Leadman)
Keva L. Williams (3126) to Typist Clerk
John R. Jewell (3415) to Mail Clerk
Garry C. Tolbert (3415) to Mail Clerk
Joyce S. Hoch (3126) to Secretary Steno
Eloise Inberg (3126) to Secretary Steno
Nancy J. Wallace (3126) to Secretary Typist
Patricia Bartolucci (4622) to Service Clerk
Enid P. Morton (4153) to Accounting Clerk
Naomi Gallegos (2234) to Service Clerk
Arthur P. Leyba (3465) to Micro-reproduction Equipment
Ed L. Strance (2555) to Order Analyst
Robert L. Tirnetta (8245) to Stockkeeper
Charles Sage (8245) to Stockkeeper
Keith A. Oatney (8235) to Messenger
John Barnhouse, Jr. (8245) to Transportation Dispatcher
Clarence T. Gutierrez (4574) to Lampman
Cornelia Rey (3151) to Record Clerk
Roscoe Williams (3153) to Record Clerk
Ronald G. Cheek (2211) to Draftsman
Kay Campbell (2213) to Draftsman
Floyd Hursh (7522) to Staff Associate Administrative
James D. Wade (4211) to Staff Assistant Technical
Grover J. Uhl (4213) to Inspector
Joe Ferguson (4512) to Welder
James F. Hudson, Jr. (3132) to Staff Member Technical
William Meador (4632) to Staff Assistant Technical
Gerald L. Williams (9231) to Staff Assistant Technical
Vincent J. Curran (8161) to Staff Assistant Administrative
Doris L. Guntrum (8213) to Staff Assistant Administrative
F. G. Sanchez, Jr. (9426) to Staff Assistant Administrative
Erineo Armijo (4573) to Truck Driver
William C. Iorg (4212) to Toolkeeper
Alexander Trujillo (4212) to Toolkeeper
Alveo Gendreau (4514) to Oiler
Frank Baros (4514) to Oiler
Jose P. Sanchez (4511) to Helper
Traber Gatewood (4512) to Helper
Sharon Mackel (3126) to Secretary Typist
Barbara Loftus (3421) to Library Assistant
M. French Stewart III (2552) to Property Clerk
Edmund Starr (2522) to Order Analyst
Harold J. Wild (2551) to Order Analyst
G. June Ferreri (8243) to Steno Clerk
Marjorie Mederios (8122) to Secretary Typist
Marion E. Houk (8161) to Service Clerk
Lillian J. McCullar (3341) to Secretary Steno
Edwina Manzanares (5530) to Secretary
Bill Casias (7321) to Laboratory Assistant
E. Ruth Barth (3463) to Technical Illustrator
Fred Callahan (4153) to Investigator

Sympathy

To Louis F. (6011) and Marian Jacot (3153) for the death of his father in Dorchester, Mass., July 26.

To R. A. Erickson (2411) for the death of his father in McAlester, Okla., July 17.

SHOPPING CENTER • SHOPPING CENTER • SHOPPING CENTER • SHOPPING CENTER • 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

UPRIGHT CABLE PIANO; twin bed, metal headboard, springs, mattress; cast iron sink, enamel finish, double bowl; garbage disposal. Alden, 255-4827.

EMERSON 17" television w/roll-about stand, working condition, $10. Giddings, 298-6221.

COLT .25 automatic, $37.50; United States and German World War helmets, trade for old hunting knives. Smitha, 299-1096.

DINETTE SET, table w/6 chairs, $35; studio couch, $35; Baby Tenda, needs seat pad, $5. Gourd, 2830 Palomas, 256-6852.

TENT w/exterior aluminium interlocking frame, 8'x8'x7', green, $28. Dalphin, 500 Princeton SE, No. 1.

CESSNA 172 Flying 8 Club membership available, $5 per hour wet. Kreitler, 299-8494.

FORD ½-ton pickup, 6-cyl., custom cab, 4-spd., Positraction, heavy springs, 6-ply tires, heater, $1175. Reck, 344-4123 after 5:30.

½-TON pickup, 4-spd. Chavez, 268-0850.

FOLDING BED, single width, mattress and mattress cover. Farrell, 265-4627.

'62 CORVAIR SPYDER, 4-spd., 150HP, $690. Aker, 298-2743.

'64 YAMAHA YDS-2, 250cc. 5-spd., recent paint job, $300. Dingman, 344-1052.

'65 VOLKSWAGEN 9-pass. deluxe sta. wag., radio, sunroof, rear seat or 60x60" foam bed, 14,000 miles. Benson, 296-1056.

'66 YAMAHA Trailmaster, YG1TK, 900 miles, $275. Rosenberg, 268-1098.

CEMENT MIXER. Sears' 2½ cu. ft., w/motor; 4 ea. 16" Ford pickup 5-hole wheels, $4 ea. Schuetz, 282-3486.

4 1/3 ACRES of prime South Valley land under irrigation, in the vicinity of Blake and Foothill. McKay, 255-5658.

WINCHESTER MOD. 77 .22 auto. rifle, nicely figured wood, spare magazine, $45, offers and trades considered. Svensson, 344-7700.

21" RADIO Craftsman TV, customized chrome plated chassis for built-in installation, complete w/remote control tuner. Hollowwa, 255-6938.

GOLDEN HOLZ SKIS, 6'9" w/Cubco bindings and straps. skis used part of one season; '58 Ford ½-ton truck, V8, AT, overload springs, shocks, Wilson, 282-3225.

GUN RACK, 4 place, w/drawer, $5; seat recliner for VW. Cassidy, 255-5940.

OFFICE DESK. Bustamante, 298-3327.

DRAPES for 8 and 12' windows, fully lined, freshly dry cleaned, dark blue. Norton, 898-0667.

SPACE HEATER, oil, 70,000 BTU w/thermostat, down-draft, cap and pipe; 2 metal bird cages w/stands, perches, cups. Drury, 898-0667.

LARGE MODERN mountain house w/2 or 7 acres, kennel buildings, suitable for horses, Highway North 10 at Cedar Crest. Barth, 282-3451.

REGISTERED QUARTER MARE, $800; Broodmare, "kid" horse, hunting horse, $175 ea.; youth saddle, $29; baby bed, $10. Bassett, 898-1840.

'59 CADILLAC sedan DeVille, AC and all Cadillac accessories, full power, new tires, $895. Vandi, 255-0685.

'62 CHEV. 6-cyl., 4-speed, ½-ton pickup, stepside, $975. Freund, 299-3716 after 5.

FOOTBALL SHOES, size 9, 1 pr. low cut, $9, one pair high top, $5. Houghton, 299-3386.

KENMORE WASHER, Maytag dryer, about 7 yrs. old, $25 ea. Syme, 268-1334.

'59 WESTINGHOUSE refrigerator, $35; '59 Frigidaire washer, $35, both for $60. Smith, 243-3292 after 5.

14' ELGIN fiberglass boat, 18 horse Johnson motor, trailer, $450 or best offer, 1309 Luthy Circle NE. Pino, 299-3425.

DBL. BED, frame, springs, mattress, $10; painted wooden chair, padded seat, $3; white Naugahyde bucket chair, $7; infant table chair, $1. Davis, 298-8559.

BOY'S bicycle, new, won as prize, AMF Sting Ray, Roadmaster Renegade, bronze leopard banana seat, orange tiger head handlebar grips. Best, 268-4776.

10-INCH radial saw w/stand, Craftsman, $125. Cole, 296-4265 after 5.

OLYMPIC combination stereo, TV, radio, AM-FM; oval glass-top coffee table w/drift wood type legs. Aira, 298-4685.

'56 CHEV. Tudor V8, model 210, new battery and clutch, rebuilt generator, cheater slicks, R&H, $350; 10-spd. Schwinn bicycle, $40. Savage, 299-7130.

WINDOW, steel, 51x53, complete w/screens for both openings, $20. Sundt, 256-3220.

VACUUM CLEANER, '60 Singer cannister, all attach., $30. Kenna, 298-6059 after 5.

CAMPING TRAILER, Montgomery Ward tent type, as is, $100. Hobart, 282-3983.

3-TON hydraulic jack w/fluid, $9; 3-ton jack stands $3; auto creeper, $2. Palmer, 842-8985 after 5.

'48 CHEVY COUPE, new paint job, $250. Trujillo, 298-4260.

ACRE LOT, residential, suburbs Hilo, Hawaii, $1495. Risk, 299-7205.

3-BDR. ROBERSON, family rm., covered screened patio, all electric kitchen, near schools and shopping, appraised at $18,450, sell for $17,500, 3504 Pitt NE. Wright, 299-6458 after 5:30.

20' HOLLY TRAVEL TRAILER, '58 modern, 2 butane tanks; 3-ton refrigerated air conditioner for home use. White, 282-3452.

THREE FREE TIGER kittens, approx. 6 wks. old, weaned, personality plus, and they like people, will deliver. Swartz, 898-3086.

HIGH fidelity equipment, monaural, amp., preamp., tuner, turntable. Schmitt, 296-3267.

'47 CHRYSLER 6-cyl. Lucero, 877-3405.

4-PIECE beige sectional, $150; 4-piece turquoise sectional, $75. Jarvis, 298-2697.

'50 CHEV. convertible, less than 10,000 on engine and auto. trans., $150. Ouellette, 299-9266.

MOUNTAIN HOME, 10 mins. from Sandia, 2-bdr., den, fp, 1½ baths, carpeting, drapes, venetian blinds, dbl. garage, view. Moran, 298-3860.

SELL OR TRADE: set oak bunk beds, no mattresses; small evap. cooler, window fan; 2 boxes .303 Savage ammo; new Eumig 8mm camera and projector. Harris, 299-6664.

24" LAWNMASTER rotary mower, 3 HP Clinton engine, $30; hand lawnmower, $3; 1½ HP Briggs and Stratton engine, $10. Gluvna, 299-8027.

COMET station wagon, 4-dr., '61, rebuilt engine, new tires brakes, generator, starter, AT, $650. Meyer, 298-4825.

SWIMMING POOL, 20'x4', filters, ladders, cleaners, etc., highest bidder. Robinson, 268-8281.

BRICK 3-bdr., 1¾ baths, den, dbl. garage, patio, fp, AC, carpeting, built-ins, corrals, 5 acres, South, $36,000, additional 5 acres optional. Bushmire, Los Lunas 636-2872 after 6.

BABY GRAND PIANO, retail $1000, sell for $850. Foster, 296-2358.

6-YR. CRIB, mattress, $10; maple high chair, $5; wagon, $2; available Aug. 26. Iversen, 9010 Woodland NE, 298-4967.

'63 CHEV. II, 4-dr. Nova Deluxe, R&H, AT, 19,000 miles. Edwards, 299-1618.

BLACK POODLE PUPPIES, 3 mos. old, excellent pedigree. Schafer, 299-4634 after 4:30.

MISC. furnishings, rugs, lamps, sectional, drapes. Morrissey, 247-1130.

'65 OLDSMOBILE 442, 4-spd., factory air, PB, PS, 22,000 miles, new Sieberling tires, take over payments plus $200 cash or best offer, payoff $2225. Brittelle, 299-8472.

AKC white adult male miniature poodle, shots, house broken, $50. Buccheri, 2625 Quincy NE, after 6.

SIMMS RANCH, Los Pablanos Estates, 3-acre residential lot, w/old trees, paved road, terms, evenings and weekends. Stein, 242-2967.

SINGLE HOLLYWOOD maple bed w/innerspring mattress, matching 5-dwr. chest. Lonner, 243-5765.

'49 FORD, 6-cyl. ½-ton pickup, 4-spd., heater, $175; playground slide, $3. Hiller, 299-7573.

'59 CHEVROLET, 348 engine, 3 deuces carburetion, R&H, new battery, generator, regulator and plugs, w/s tires, $450. Schofield, 268-0956.

'65 16' self-contained travel trailer. Barack, 255-8521.

YAMAHA 80cc '66 model, used 6 mos., adult driver, 1600 miles, $295. Sorrels, 298-1702.

PIANO, Spinet, Story & Clark, dark mahogany, $300. Benson, 255-6004.

'64 VW BUS, big engine, radio, front seat belts, $200 down, take over payments, $1500 balance. Vallejos, 242-8735.

'51 PONTIAC 4-dr., $50. Morosin, 298 - 0994.

60' CHAIN LINK FENCE w/concreted poles, 5 ft. high, $30. Davis, 298-6944.

COLUMBIA UNIVERSITY speed reading course, 13 volumes, complete w-pacer, used only once, $15. Brown, 255-0566.

WESTINGHOUSE DRYER, $25; two steel sash windows, 29x39" and 51x118". Mavis, 299-4872.

BABY EQUIPMENT: playpen, $5, baby changing table, $5, bassinet, $2, Taylor Tot stroller, $8, jump chair, $2. Bader, 299-9459.

'62 BONNEVILLE 2-dr. HT, full power and air; '52 Jeep 4wd wagon, 6 cyl., hubs, all new recap tires, $395. Netz, 282-3607.

ELECTRIC RANGE, "30" Frigidaire. $50. Baczek, 1917 Florida St. SE, 255-3429.

FRIGIDAIRE REFRIG., 24"x57", LH door, $45. Lee, 299-5418 after 5.

'64 SUNBEAM Alpine, roadster, wire wheels. Bice, 5717 Gilmer Pl. NE, 255-5613.

21"RCA Victor TV w/matching roller base. Love, 299-0956.

SPANIEL PUPPIES, 9 wks. old, 1 white, 1 black, $5 ea. Corll, 255-7993.

3-BDR., 1¾ bath, carpeted, drapes, garage, covered patio, completely landscaped, $15,500. Donham, 412 Gen. Stilwell NE, 299-0028.

ROBERSON 3-bdr., 1¾ bath, family rm., new carpet and drapes, AC, fp, dbl. garage, landscaped, view, $14,500, 5725 Paradise Blvd. NW. Kull, 898-2263.

'60 PLYMOUTH 9-pass. station wagon, AC, $375. Tjeltweed, 299-0032.

'54 FORD 2-dr., 6, OD, $100; '57 Cushman Eagle, needs repairs, $20. Tuffs, 255-9663.

$800 DOWN on $14,500 brick, 3-bdr., 1½ bath, attached garage, pitched roof, assume GI, $99 monthly. Letourneau, 299-5529.

SOLID MAPLE bedstead w/innerspring mattress, box spring, double bed size; foam mattress, box spring, double bed size. Pitts, 299-0271.

SUBSTANTIAL savings entire apt. furnishings, Tomlinson sophisticate dining set, Henredon, Oxford pieces; king and twin bedroom, TV, organ, misc. Machen, 298-1698 evenings.

$11,300, 3-bdr. house, NE Heights, no qualifying, low monthly payments, carpeting, drapes, 1½ baths, attached garage, walled yard. Bowen, 255-8195.

2 ADJACENT R1 lots vicinity of Moon and Comanche, terms. Sutton, 265-8964.

MOTOROLA 23" console TV, $100; baby bed w/-mattress; high chair; infant seat; training chair; car bed. Allen, 256-3234.

'59 FORD pickup, new tires, 4-spd., $475. Stronach, 550 Arvilla NE.

NEW SCREEN DOOR 36"x81", $5; lamp, orange w/white shade, $5; buffet, walnut, contemporary, $15; Dreamaster mattress, $10. Bliss, 255-7980.

WESTINGHOUSE refrigerator-freezer, $60; Kenmore 600 portable dishwasher, $75; console ironer, $35; stroller-sleeper, $8; play pen w/pad, $9; high chair, $8; misc. Allen, 298-9437.

OLD TRAILER, $5; new ping pong table, standard ⅝" plywood top, no staples, storage size 4½'x5', $30. Stixrud, 298-0478.

4200 CFM Signature 2-spd. evaporative cooler, window mount, used less than one season, $75. Lamb, 298-1385.

GE refrigerator, 10 cu. ft., 6 yrs. old, $50 or best offer. Liguori, 256-3613.

APT. SIZE refrigerator, $30. Browne, 344-9675.

SEARS' electric hedge clipper, $5; handmade patchwork quilt, $20; Kenmore automatic washer, works but needs some repair. $15. Loemker, 344-0278.

COLDSPOT 19' freezer, $95; white iron table w/-seats, $30. McCord, 247-2774 after 5.

CLARINET, Bundy, used 1 yr., $80; Remington standard typewriter, $20; '65 YAWA 250cc motorcycle, 1100 miles, $375. Shock, 877-3728.

AUTOMATIC WASHER, $25. Breitenbach, 344-7584.

'57 PONTIAC, $400. Brubaker, 268-0875.

'66 YAMAHA, 80cc w/oil injection, blue and chrome, $289. Barton, 298-1240.

BOY'S deluxe Sting-Ray Schwinn bicycle, coppertone color, chrome fenders and rims, 2-speed, coaster brake, hub, $60. Fisher, 268-6633.

WANTED

RIDE from 320 Parsifal NE, vicinity of Eubank and Central, to Bldg. 804. Rogers, 298-1617.

ROTTEN HAY, straw or sawdust, by bale or truckload, for mulching, will haul. Maak, 282-3482.

RIDERS for car pool originating vicinity of Dartmouth Ave. between Lomas and Central; have two riders, want three more. Johnson, 256-3473.

ONE PERSON to join car pool to and from Bosque Park. Iverson, 264-6258 or Fuller, 264-3341.

BABY SITTING in my home, part or full time, NE Heights area. Need playmate for my 3-yr. old boy. Orth, 296-3236.

GOOD HOME in country for beautiful male b&w Eng. and Irish setter, good watch dog, no small children. Smythe, 242-1595.

RIDE from vicinity of Candelaria and San Mateo to Bldg. 880. Bevans, 344-2426.

MUSICAL drum set or separate pieces; small motor suitable for go-cart; table tennis table. Davis, 299-9079.

RADIO for pickup, 12 volt transistor, tell me what you have and I'll tell you if it will fit. Coleman, 299-2377.

RIDE from vicinity of 10,000 block California SE to parking area south of Bldg. 892. Stromberg, 255-6131.

HOME for male cat, about five mos. old. Webb, 298-8139.

GI GAS CAN and holder. Windham, 256-9455.

SET WARN or other hubs for Universal Jeep. House, 255-2646.

LOOM, 4 harness, wide enough to weave 36" material. Bircher, 268-0726.

FOR RENT

FURNISHED room w/ or wo/kitchen privileges. Carlson, 299-6610.

$85/MO., 2-bdr. furnished apt., AC, separate storage, fenced yard, off-street parking, water and garbage paid, 3441 Eastern SE, see Mgr., Apt. 1. Cotter, 265-8631.

5-BDR. HOME, 3 baths, dbl. garage, electric kitchen, NE heights. Goodman, 299-3652.

PLACITAS, large remodeled old adobe house, all utilities available, spring water, new electric pump, trees, fruit, garage, corral. Illing, 299-7378.

4-BDR. HOME, large family rm., $170 per month w/lease. Robertson, 296-4613.

2-BDR. HOUSE, furnished, near base, 1900 Madiera NE. Pitti, 256-1629.

2-BDR. furnished apartment near base at 308 Rhode Island SE, $115/mo., all bills paid. Jordan, 265-4552.

LOST AND FOUND

LOST—Keys w/white disc w/Jean, gold charm bracelet w/three charms — one w/name Sandy, small black notebook, 10" slide rule, key, SC green tinted bifocal safety glasses, locker keys on plain ring. LOST AND FOUND, tel. 264-2757, Bldg. 610.

FOUND—6" slide rule w/initials L.W.P., locket w/infant photo, tan tobacco pouch, lady's Elgin watch, man's Hamilton watch, pink lipstick. LOST AND FOUND, tel. 264-2757, Bldg. 610.

FILET MIGNON FRUG, invented especially for the Coronado Club's French dinner and go-go event scheduled Aug. 20, is performed with gusto by Tony and Connie (3151) Rey. It may or may not become the new dance sensation, but the lavish French menu will be a historic event.

Coronado Club Activities

French Menu, Go-Go Set Aug. 20; Water Carnival at Club on Aug. 27

Saturday, Aug. 20, will bring a new twist to the Coronado Club. A lavish French menu is planned featuring filet mignon, pate de foie gras, French onion soup, French fried potatoes, French pastry, etc., followed by an adult go-go with a group of female rock 'n roll musicians, the Feebeez.

Dinner starts at 7 p.m. and the go-go at 9. Cost to members is $3, guests $3.50. Tickets must be picked up by 9 p.m. Aug. 19.

* * *

A reminder that summer is almost gone is the annual Water Carnival scheduled Saturday, Aug. 27. Free to Club members, the Carnival will feature fun, games, races, etc., beginning with open swimming at 10 a.m., races from 1 to 4, and open swimming after 4 p.m. The races will be by age group—boys, girls, and adults—with some special adult relay events planned around a potato sack as a handicap.

The twin Coronado Club pools will be open for recreational swimming through Labor Day, Sept. 5.

* * *

Following the Water Carnival on Aug. 27 will be a gala Las Vegas Night in the main ballroom. Play money will be issued to all, but the big winner will reap real prizes, including an expense-paid weekend in Las Vegas as a door prize.

Action starts at 8 p.m. The Estancia Valley Boys will play for dancing from 9 to 1 and sandwiches will be served. Cost to members is $1, guests $2. No reservations needed.

Social Hours

Tonight, Tommy Kelly will be on the bandstand. The Club's popular chuckwagon roast beef and shrimp buffet will be served. Cost to adults is $1.75, $1.50 for kids.

On Friday, Aug. 19, Rex Elder will provide the happy music for the Mexican buffet. Price is $1.25 for adults, $1 for children.

Social Hour on Friday, Aug. 26, will feature the Lamplighters and the Club's special seafood buffet.

Bowling

The Coronado Bowling Club still has openings in men's, women's, and mixed doubles' leagues. For information call Bill Weinbecker (4252-1) after work at 299-3700, Ken Carmichael (4135-1) after work at 255-1358, or the Club at 264-4561.

ALL SET for a big splash at the Coronado Club's annual Water Carnival is Mary Margaret Mead (2211-5). The fun starts at 10 a.m. Saturday, Aug. 27, at the Club's twin pools. Free admission for members. Swim season ends Labor Day.

Congratulations

Mr. and Mrs. Jasper Hadady (4253-1), a son, Eric Scott, July 27.

Mr. and Mrs. William R. Hale (7211), a daughter, Diana Marie, July 24.

Mr. and Mrs. Jerry F. Cunderman (5241), a son, Jerry F., II, July 29.

Mr. and Mrs. R. R. Boade (5232), a son, Harold Rodney, July 31.

Take Note

Veteran performers Gene Ives (5634) and Phil Mead (3412) are featured in the current Albuquerque Light Opera production of "Guys and Dolls." Gene is cast as the male lead while Phil performs as a harassed Broadway gambler. Gretchen Vogel (student summer-hire, 3110) is wardrobe mistress and makeup artist for the producton.

"Guys and Dolls" opened last night at the Opera Theatre, 113 Alvarado NE. Performances will be held at 8 p.m. on Aug. 12, 13, 18, 19, and 20. Reservations may be made by calling 255-0077 or 255-5111.

* * *

Advance registration for children of kindergarten age for the Sandia Day School Nursery will be held Aug. 15 and 16 beginning at 8:30 a.m. Military personnel will register their children on Aug. 15 and civilian (including Sandia Corporation) employees may register their dependents on Aug. 16.

Monthly tuition for the nursery school is $17. The kindergarten will open Sept. 6.

* * *

Sandia Showmakers will hold tryouts for their next production, "Bell, Book and Candle," at 2 p.m. Sunday in Bldg. 204 on Sandia Base. Auditions are open to members of the Showmakers, Sandia personnel and their families. The cast includes three men and two women. Anyone who wishes to work backstage in the technical and production areas may also report to the theater at tryout time.

* * *

A number of Sandians are expected to exhibit rare and curious coins at the Albuquerque Coin Club's annual coin show to be held from 9 a.m. to 5 p.m. Saturday and Sunday in the Crystal Room of Diamond Jim's at Winrock Center. Admission to the show is free and trophies will be awarded for the best of show, best adult U. S., best adult foreign, and best junior exhibit. R. C. Jackson (2221) is a member of the Albuquerque Coin Club's board of directors.

Events Calendar

Aug. 12-14, 19-20—"Henry IV," Corrales Adobe Theatre. (W. F. Carstens, 3410, is a member of the cast.)

Aug. 12-13, 18-20—"Guys and Dolls," Light Opera Playhouse, 113 Alvarado NE.

Aug. 12-14—Inter-Tribal Indian Ceremonial at Gallup.

Aug. 12—Corn Dance at Santa Clara Pueblo.

Aug. 12—"Rigoletto" at the Santa Fe Opera; Aug. 13, 17, 25—"Tosca"; Aug. 18—"Cinderella"; Aug. 19 and 24—"Wozzeck"; Aug. 20—"Rigoletto."

Aug. 13—Peralta Canyon loop trip. N.M. Mountain Club, leader George Hankins, tel. 344-4644.

Aug. 13-21—Exhibit of the Air Force Art Collection, Town Hall Bldg., Coronado Center.

Aug. 14—Olympic-sanctioned bicycle road race, 30-mile finish at Madrid (about 10:30 a.m.), 70-mile finish at Sandia Crest (about 4 p.m.). Entrants from 39 states and Mexico.

Aug. 14—through September—"New Mexico Craftsmen," International Folk Art Museum, Santa Fe.

Aug. 18-21, 24-28—"Picnic," Old Town Studio, 1208 Rio Grande NW, for reservations tel. 242-4602.

Aug. 19—Reservations due for YWCA Durango-Silverton narrow gauge train trip on Sept. 3-5. For information, tel. 247-8841.

Aug. 20-21—Pecos Falls backpack. N.M. Mountain Club, leader Marjorie Lenth, tel. 256-0282.

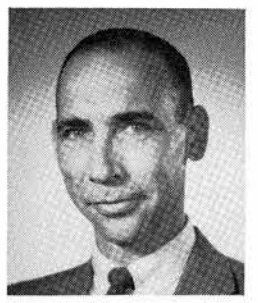
Strained Back Breaks Sandia Safety Record

An employee working in the Development Shops suffered a strained back July 26 which downed Sandia Laboratory's safety record. The record had climbed to 55 days or just under two million man hours worked without a lost time injury.

The employee was helping clean up an area of the machine shop when the injury occurred. He was removing some lumber from the area. A 2x12 board, some 5 feet long was resting on the floor under a work table. The employee got on his knees to remove the board and as he pulled it toward him, he felt a sharp pain in his lower back.

The pain became progressively worse, and he reported to the Sandia Medical Organization for examination and treatment. The next day, he was referred to a specialist who recommended rest at home, where the employee is still recuperating.

Supervisory Appointments



CHARLIE R. BLAINE to supervisor of the newly created Advanced Radar Systems Division 1423, effective Aug. 1.

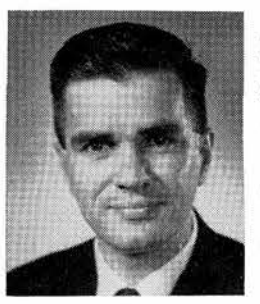
Charlie came to the Laboratory in June 1956. He has worked on advanced development of radar systems for the past 10 years.

Before joining the Sandia staff, he was an instructor in the electrical engineering department at the University of Idaho from the Fall of 1954 to the Spring of 1956. From 1953-54, he was an engineer in General Electric's rotational training program in Schenectady, N. Y.

Charlie received both his BS and MS degrees in electrical engineering from the University of Idaho in 1953 and 1956.

He served with the U. S. Army from 1946-47, mostly with the occupational forces in Korea.

Charlie is a Registered Professional Engineer in the State of New Mexico and a member of Sigma Tau.



RICHARD C. HECKMAN to supervisor of Thermal Properties Division 1134, effective Aug. 1.

Dick joined Sandia in February 1961, in the inorganic science group where he worked mainly on thin films for about a year. Since then he has been working with rare earth hydrides. For the past five months he has been the materials coordinator for Aerospace Nuclear Safety and Space Isotope Power Departments.

Before coming to the Laboratory, Dick conducted solid state research for the Charles F. Kettering Foundation and was also a member of the faculty at Antioch College, Ohio, from 1955 to 1961.

He received his BS degree in physics from Antioch College in June 1951, and his MS and PhD degrees in physics from Duke University in 1953 and 1956 respectively.

He is a member of the American Physical Society and Sigma Xi.

Sandia's Safety Scoreboard

Sandia Laboratory:

13 DAYS

455,000 MAN HOURS

WITHOUT A

DISABLING INJURY

Livermore Laboratory:

57 DAYS

278,300 MAN HOURS

WITHOUT A

DISABLING INJURY