

Sandia Corporation LAB NEWS

ALBUQUERQUE, N. MEX. • LIVERMORE, CALIF.

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APRIL 14, 1961

Six-Mile Holloman Sled Track Used in Special Sandia Tests

One Sandian stations himself in a large room filled with banks of telemetry receivers, tape and paper recorders, and an oscilloscope or two. While his eyes scan dials and his ears are alert to the amplifier of a small, two-way communications set, four or five other men are in the room making final adjustments to the instrumentation. Occasionally he picks up the microphone of this set and speaks a few words of confirmation or acknowledgement.

A second Sandian is alone in a more confined area, but is likewise surrounded by banks of telemetry receivers, recorders, and a similar two-way communications set.

In the large room, which is the Midway Instrumentation Station at Holloman's 35,000-foot rocket sled track, is Robert W. Male, supervisor of Sandia's Section

7244-3, stationed at Holloman Air Force Base.

The second Sandian is William F. Farmer, who mans the instrumentation in the Sandia trailer, located behind a concrete blockhouse at the impact end of the six-mile sled track.

Two Successful Runs

Last month a Sandia designed and developed rocket sled made two successful runs on the Holloman track. These firings were the first under a new AEC-ARDC (Air Research and Development Command) contract.

A total of 18 components being tested for effects of high initial acceleration were carried by the sled in the two firings. On both runs the sled was allowed to coast to a stop (rather than being braked) in order to strain components resulting from rapid deceleration of the sled. The sled

coasted to a stop more than 11,800 feet from the firing point; therefore, this test could not have been conducted on Sandia's 3000-foot sled track.

Bob Male and Bill Farmer coordinate Sandia operations at Holloman with the ARDC's Air Force Missile Development Center personnel. For a sled firing, Bob and Bill arrange the firing date with track personnel, make any necessary last-minute modifications or repairs to the sled or its telemetry instrumentation when the sled arrives from Sandia Corporation, and run telemetry check-outs when the sled is placed on the track.

At about X-minus-two-hours Bob goes to the Midway Instrumentation Station to observe the final telemetry check-outs, and if necessary to give the "no-go" to the Firing Control Center. A "no-go" order is given if any of the transmitting channels carrying vital data from the sled should malfunction.

At the Sandia trailer Bill Farmer turns on the telemetry receivers to record supplementary data for "quick look" use. This data can be examined immediately after the sled firing to determine the measure of success of the test. The availability of these data is important in preparing for subsequent firings in the same test program, which may occur in a few hours or days—too brief a period to allow Sandia's Data Services Department 7240 to reduce and distribute the complete

(Continued on Page 3)

Sandia Life Insurance Programs Pay \$363,000 During Calendar 1960

During 1960 beneficiaries of Sandia Corporation employees participating in the group life and supplemental life insurance programs became eligible for death claims totaling \$363,000.

There were 28 deaths of active and retired Sandia employees during the year. Twenty-seven of these had supplemental life insurance coverage totaling \$215,700, while 22 had \$147,400 in coverage from the basic group life insurance program. Five of the 28 employees were retired.

Since the start of Sandia's group life insurance program in April 1951, there have been 124 employee deaths. Of these, 98 were covered under the group program and beneficiaries received payments totaling \$418,000.

Supplemental life insurance was first offered to employees in September 1958. Beneficiaries of 47 employees covered under this program have received payments totaling \$385,000, which includes \$23,000 in accidental death benefits.

Coverage under the group life insurance program is free to all full-time Sandia employees and goes into effect after six months of employment. Eligibility in the supplemental life insurance program also begins after six months of employment. Employees may purchase at very low cost life insurance equal to one year's pay rounded to the next highest thousand. Currently 96 per cent of all eligible employees are enrolled in this program.



WESTERN ELECTRIC employees are moving into the Company's new office building at Broadway and Fulton Street in New York City. The new 31-story structure is nearing completion opposite St. Paul's Chapel, which is Manhattan's oldest public building.

Western Electric Moving Into New Manhattan Building

Occupancy of the new Western Electric Building at 222 Broadway in New York City, began April 3.

The move of Western Electric employees is being conducted in stages as space becomes available in the new building, which is nearing completion on lower Broadway, at Fulton Street. Meanwhile building trades workers are finishing other parts of the structure.

About 4000 Western Electric people will work in the building when it is fully occupied by June. The Company's headquarters will remain, however, in the building of the parent American Telephone and Telegraph Company, across the street at 195 Broadway, which has been Western's center of operations for more than 40 years.

The new structure rises to 393 feet above Broadway. It has a

gross area of 759,545 square feet in 31 stories.

Exterior walls are constructed of two colors of glazed brick; one is a soft grey and the other a soft pink.

The new building will consolidate most of the other New York offices of the company, which have been situated in leased quarters in downtown buildings.

Among the features of the building will be an automatic, inter-office mail delivery system, which will direct and deliver mail to departments on different floors. There will be a cafeteria for employees on the fifteenth floor, with vista windows on three sides. All mechanical functions within the building will be monitored from a control center, at which an attendant will be able to control the heating, cooling and ventilation at any point, and communicate with all floors and elevators.

Sandia Authors Have Papers Accepted for Meeting, Publication

C. W. Harrison, Jr., and D. H. Denton, Jr., (both 1424) have had a paper accepted for presentation at the International Scientific Radio Union and Institute of Radio Engineers spring meeting to be held in Washington, D.C., May 1-4.

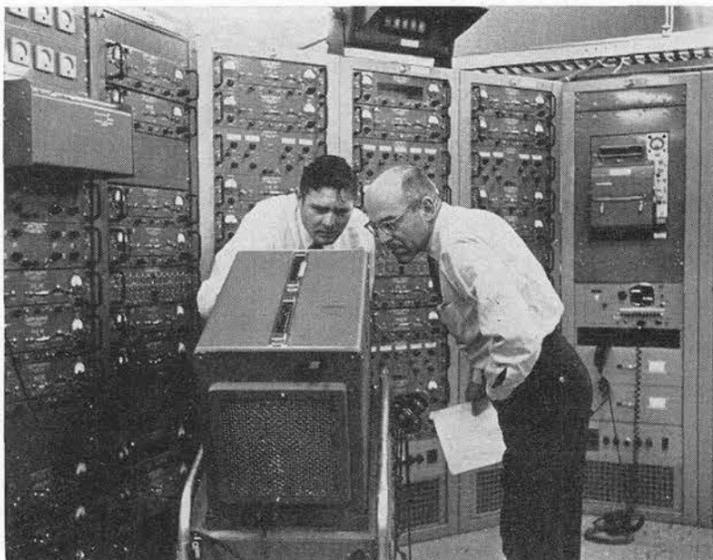
Title of the paper is "The Electrically Short Antenna as a Probe for Measuring Free Electron Densities and Collision Frequencies in an Ionized Region."

Mr. Harrison is also co-author with R. W. P. King (Sandia Consultant), of two papers which appeared in the March issue of the IRE Transactions on Antennas and Propagation. They are "Cylindrical Shields" and "Folded Dipoles and Loops."

Sandia Papers Read At Cratering Meet In Washington, D. C.

Two members of Nuclear Burst Physics Department 5110 prepared technical papers for the recent Cratering Symposium in Washington, D. C. The meeting was held at the Geophysical Laboratory at Carnegie Institution.

B. F. Murphey presented a paper entitled "Explosion Craters in Desert Alluvium" and L. J. Vortman prepared a paper on "High Explosive Craters in Tuff and Basalt."



MIDWAY INSTRUMENTATION STATION—Bob Male (right) and Al Britt, chief of FM/FM telemetry unit, monitor wave forms on an oscilloscope just before a Sandia rocket sled firing.



SEVERAL SANDIANS inspect a sled following its run on the six-mile Holloman sled track. The rocket sled reached a velocity of 1300 feet per second (885 mph) before coasting 11,838 feet to a stop.

R. B. Powell Will Be Brotherhood Dinner Chairman

R. B. Powell, Vice President, Personnel, will be chairman for the annual Brotherhood dinner, sponsored by the local members of the National Conference of Christians and Jews.

Invitations have been sent to numerous civic leaders for the dinner, to be held May 4 at 7:15 p.m. at the Coronado Club.

The dinner helps to raise funds to be used to further better understanding. Featured speaker will be Dr. Lewis Webster Jones, president of the National Conference of Christians and Jews.

Base Kindergarten Taking Registrations For Fall Session

Pre-registration for the fall kindergarten classes at the Sandia Base nursery will be May 1-12 from 9 a.m. to 4 p.m.

To be eligible for the classes children must reach their fifth birthday by Dec. 31, 1961. The nursery is for the convenience of parents either employed or living on Sandia Base.

For additional information call base ext. 20113 or 34120.

Sandian Who Serves . . .

S. L. Swysgood Active in Knights Templar Fight Against Blindness

This is another in a series of articles describing the community activities of Sandia employees.

"From darkness unto light" is the motto of the Knights Templar Eye Foundation, Inc. Locally S. L. Swysgood (7125-2) is active in



S. L. Swysgood (7125-2)
—Prevention of Blindness—

helping to locate individuals who qualify for assistance.

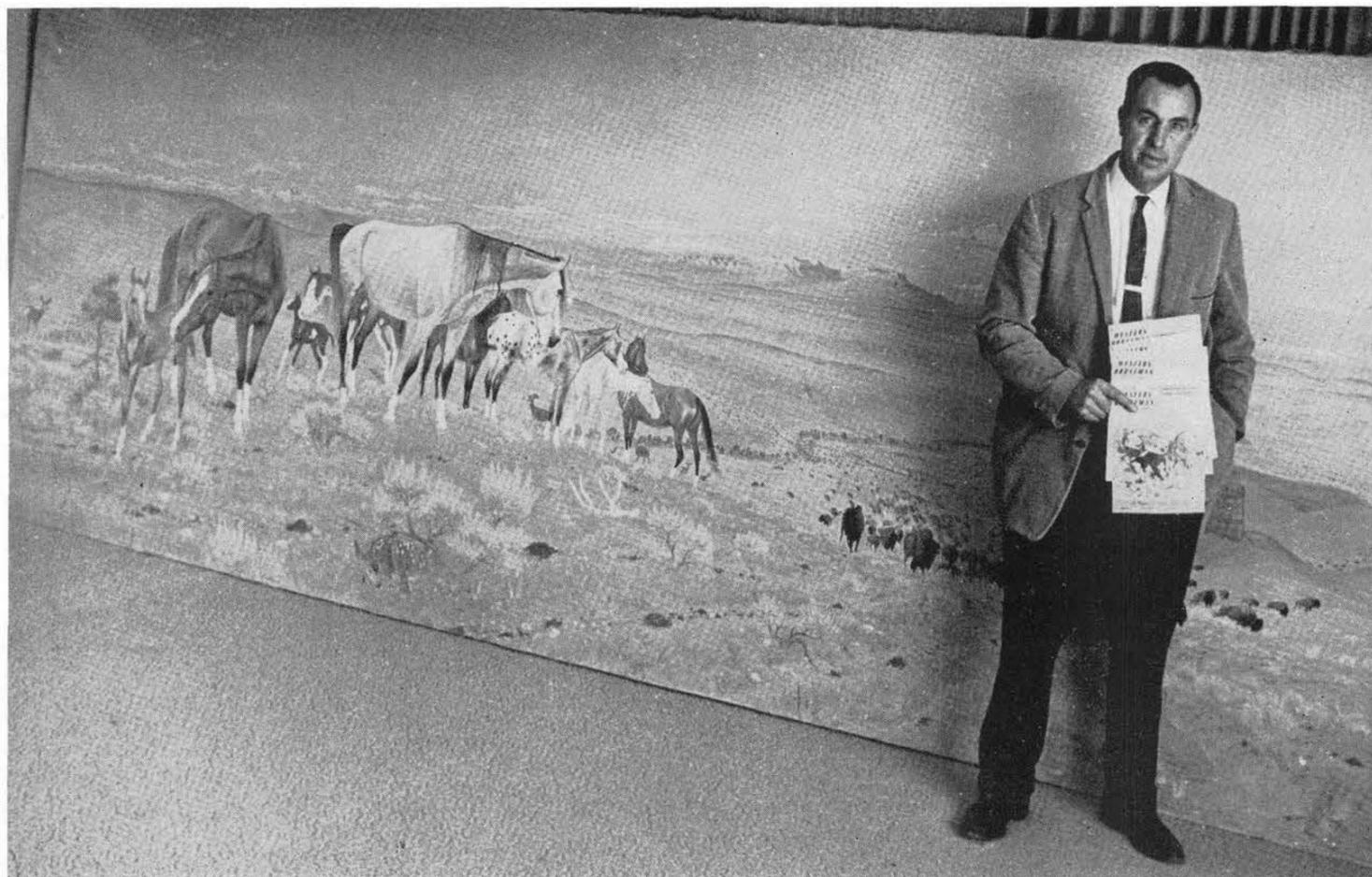
"This foundation was created for research, treatment, and/or hospitalization for diseases or injuries of the eye in an effort to prevent blindness," he explained. The treatment of patients is free and limited to persons unable to pay regardless of race, creed, color, age, or sex.

"Since it was established in 1958 eight cases have been treated in New Mexico. On a national basis assistance has been given 2296 individuals. We need the help of Sandia employees and others in locating these children and adults who face blindness if not given proper treatment," Mr. Swysgood said.

The project is financed by annual fixed assessments from approximately 400,000 members of this Masonic order and voluntary contributions. There is no public appeal made for funds. To date some \$487,500 has been granted to the Department of Ophthalmology of 20 medical institutions for research in this field.

Prevent Blindness

Since the aim is prevention of blindness, the foundation does not provide eye glasses (unless after or part of surgery), correct crossed eyes, or give financial assistance for diseases or illnesses other than those pertaining to the eye. There is no provision for expenditure for surgery or hospitalization



VARIOUS BREEDS OF RANGE HORSES are represented in this 6 ft. x16 ft. mural by Wyoming artist Bob Carothers which George Rodgers

(1424) has purchased. The mural covers most of one wall. Scenery is typical of the western slope of Big Horn Mountains.

Giant Painting Brings Drama Action Into Rodgers' Home

It may seem strange to see a 16 ft. mural in a 19 ft. long living room, but that doesn't bother George Rodgers (1424). But he is sorry that so few are able to enjoy the painting in his own home. "This is a painting that should be shared," he says.

The six ft. high mural depicts a small band of wild horses watching the approach of a great herd of buffalo. The area is the western slope of the Big Horn Mountains in Wyoming. The colors are primarily soft pastels.

The huge oil painting was created by Bob Carothers of Shell, Wyo.

"Bob and I went to grade school together," George says. "I think he must have started painting and drawing when he was born although it has only been since 1953 that he has sold any of his canvases."

The huge mural required 10 months of intensive work. "I saw it last summer when I drove to Shell to pick up another painting of Bob's," George says. "Later I decided to purchase it."

The artist and neighbors took the canvas off the stretcher, padded it with blankets and rolled it on a wooden spool. Bob drove it to

Albuquerque in the back of a pick-up truck. At the Rodgers home the mural was again mounted on the wooden frame and the final coat of varnish was applied.

George and his family enjoy studying the detail in the painting. "Amid the thousands of buffalo we found an albino the other night. In the lower right corner are several white wolves. These are now extinct, but were known to follow buffalo herds in the pioneer days of the West. Most of all I enjoy looking at the Wyoming rangelands I knew so well as a boy," George says.

Appears in Rodey Show

Jack Scheerer (4411-3) will play two bit parts in the forthcoming production of "The Visit" at the University of New Mexico. The play will be presented at Rodey Theatre April 27-May 2. Tickets go on sale at the boxoffice Monday.

Jack formerly appeared in several plays presented by the Sandia Base Little Theatre Group and in the UNM production of "Abe Lincoln in Illinois."

Skaters Sought

Ice skating and hockey enthusiasts are urged to attend a meeting tonight at 7:30 at the Albuquerque National Bank's Hospitality Room (East Central and Washington). Plans will be outlined for a proposed ice rink, according to Charles Runyan (4220) of the recently-formed Polar Plaza, Inc. The Figure Skating Association, headed by N. A. Smith (3111-2), has endorsed the plan.



Betty Bosworth (2644)

Take A Memo, Please

Safe living is a lifetime proposition.

Secretaries Honor Bosses at Dinner

A dozen Sandia men were guests at the annual "Boss of the Year" luncheon of the local chapter of the National Secretaries Association.

Joanne Boyd (4600), who is the chapter president, was mistress of ceremonies. Co-chairmen for the luncheon arrangements were Jo Hanna (2630) and Betty Pickel (4300).

On April 26 Joanne will discuss National Secretaries Association and the qualifications of Certified Public Secretaries before a luncheon meeting of the American Business Club, a group of Heights businessmen.

Sympathy

To Robert Gentzler (7243-1) for the death of his sister recently.

To Beulah E. Sutherland (7241-4) for the death of her sister recently.

To Roy R. Jensen (7242-2) for the death of his father recently.

To Glenn E. Anderson (4254-1) for the death of his wife on March 31.

Congratulations

Born to:

Mr. and Mrs. Tommy D. Donham (2451-2) a son, Brent Lane, on March 25.

Mr. and Mrs. G. W. Rolloson (7223) twin daughters, Terri Jo and Shelli Ann, on March 30. Quzenne formerly worked in 6021.

Mr. and Mrs. William H. Chandler (3221) a son, William H., Jr., on April 4.

Mr. and Mrs. J. J. Michnovicz (3465) a daughter, Karla, on March 30.

Mr. and Mrs. Kenneth L. Wiley (7532) a son, Jerry Lee, on March 31.

Mr. and Mrs. Winston Alm (8114-2) a son, Kevin Douglas, on March 12.

Mr. and Mrs. Chet Thompson a son, Mark Andrew, on March 26. Dorothy is on leave from 8241-3.

Mr. and Mrs. Joe Portolese (8224-2) a son, Brian Joseph, on March 27.

Mr. and Mrs. W. F. Stearns (1121) a son, James Edward, on April 4.

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Odes Caster Retires From Sandia to Mountainair Farm

Odes Caster (4574) will retire April 28 after eight years with Sandia Corporation.



During his years at Sandia Mr. Caster has stayed in Albuquerque during the week but returned to his farm near Mountainair on week-ends. Now he plans to live in Mountainair with his wife and two of their seven children; and work on his acreage whenever he feels like it.

The couple will undoubtedly make frequent trips to Albuquerque to see their nine grandchildren.

Aubrey Hanks Will Retire April 28

Aubrey Hanks (4573) will retire April 28 after 10 years with Sandia Corporation. He has worked as a chauffeur in the Motor Pool Division except for his first year and a half here.



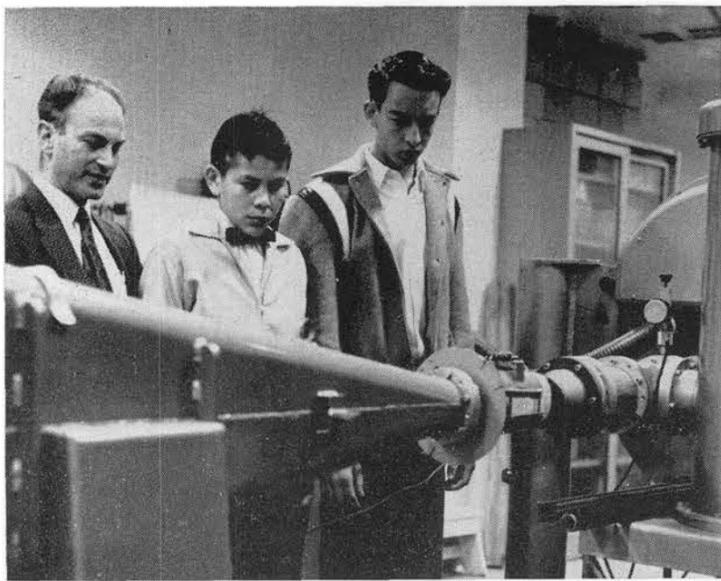
Mr. Hanks and his wife plan to remain in Albuquerque at 824 Alvarado SE. They have always enjoyed traveling and may possibly take a trip to Alaska later. For the present they will visit their son and daughter in Oklahoma.

In coming months Mr. Hanks also hopes to devote more time to trout fishing.

Welcome Newcomers

March 27-April 7

Albuquerque	Points
Beulah Akerstrom	3126
Violet M. Fogleman	3126
C. Darrene Mickel	6011
Harry E. Morris	7535
*Shirley J. Smith	3126
Clara L. Wallace	3126
Janet A. Wood	3126
California	Points
Donald D. TerHaar, Santa Clara	5150
Florida	Points
Richard V. Foster, Orlando	3465
Illinois	Points
James E. Malloch, Evergreen Park	7223
Texas	Points
Everet H. Beckner, Houston	5151
Virginia	Points
David L. Durgin, Arlington	7118
* Denotes rehired	
Returned from Leave	Points
Bernadette S. Cervantes	3423
Clarence L. Gamble	4614
David A. Paschal	4233



INTERESTED JUNIOR high school students Boleslo Romero (center) and Doug McDonald (right) were given special tour of Van de Graaff facilities and pulsed reactor by Howard Sander (5432), who was impressed by teenagers' science fair exhibits.

Personal Tour of Sandia Given To Two Young Science Students

Two ninth grade students received a special tour of the Van de Graaff accelerator and pulsed reactor facilities recently as an outgrowth of their exhibits in the regional science fair.

Boleslo Romero, 14, of Garfield junior high, received a first prize from the Institute of Radio Engineers for his display, which explained the principles of the linear accelerator. Doug McDonald, 15, son of G. C. McDonald (2530), received third prize in the junior category and first prize for his model of a Van de Graaff accelerator.

Howard Sander (5432), one of the judges for the IRE, was so impressed by the youths' work that he invited them to Sandia Laboratory for the personally conducted tour.

At Bldg. 803 Elmo Hirni (5151) discussed the theory of the accelerator and explained its operation. Later in the morning the boys were taken to Area III where Paul O'Brien (5413-2) explained the technical aspects and operation of Sandia's new pulsed reactor, which will produce intense bursts of fast neutrons and gamma rays for use in radiation effects studies.

Boleslo has been interested in physics since seventh grade. A regular reader of "Science World," "Scientific American" and other semi-technical magazines, his work on a linear accelerator has been mainly of research nature so far. "I plan to build a model,"

he said, "but its size will depend upon parts I can obtain." His science teachers have spurred his interest.

Doug has had his accelerator model in operation, but he added, "One night it works and the next it doesn't. I guess humidity makes the difference."

He decided to build an accelerator model after seeing plans for a single terminal generator kit.

After Area III, Howard took the boys for a noontime visit to Sandia's salvage yard where he offered to help them purchase any surplus parts they might need for their projects.

Both Boleslo and Doug qualified for the State Science Fair in Socorro April 8.

Livermore Lab Plans Two Golf Tournaments

Livermore Laboratory Employee Services (8212-2) has announced April and May golf tournaments for Sandia employees.

April 22 is the date set for a best-ball twosome tournament to be held at the Pleasant Hills golf course in San Jose. Starting time will be 8:30 a.m.

On May 6 a best-ball foursome tournament will be held at the Tilden Park golf course in Berkeley, with starting time at 10 a.m.

A trophy will be awarded to the low net scorer in both events, with other prizes for runners-up.

Deposits for both tournaments must be submitted to Lori Carico (8212-2) by April 17.



SANDIA'S BUILDING at Holloman Air Force Base contains an office, storage space, and a telemetry instrumentation bay. In the foreground are Phil Farmer (left) and Bob Male, both of 7244-3.

Continued from Page One . . .

Holloman Sled Track

hensive data recorded by track personnel.

Others Are Present

During most test operations Bob Male and Bill Farmer are joined by representatives from Organization 7230, 7244, 7250, and/or 7100.

The rocket sled track at Holloman (officially called the "captive missile sled track") first existed in 1949 as a 3500-foot track, made of standard railroad rails. The length of the track was increased to 5000 feet in 1951 to enable Col. John Paul Stapp to pursue his human environment studies.

The present track, constructed in 1957, consists of two rails, each four inches wide and six miles long. The 39½-foot sections of steel rail, shipped from Bethlehem, Pa., were fused and welded into 10,000-foot lengths. These lengths were then stretched, tied, and married to form the continuous track.

The track is anchored to a concrete trough which holds the rails securely some seven feet apart. The south end of the track is 36 feet higher than the north (firing) end to compensate for the curvature of the earth.

Incidentally, there is enough steel in the two rails to build almost 2000 cars, and enough concrete in the track bed to build a sidewalk—four feet wide and four inches thick—from Holloman to Santa Fe (more than 200 miles).

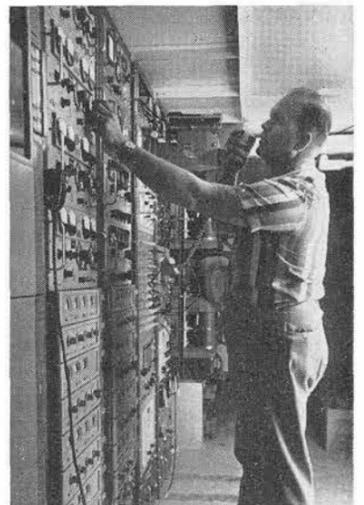
Some 185 civilian and military personnel, headed by Lt. Col. D. H. Vlcek and Lt. Col. L. M. Bogard, operate the track facility and its related recording instrumentation. Senior project officers Capt. Morris Haven and Capt. Sidney Johnston work closely with the Sandia personnel.

Not Newcomers

Sandia is not a newcomer to Holloman; in fact, Bill Farmer has been at Sandia's Holloman installation for nine years (after spending four years at Sandia Laboratory). Before the construction of Sandia's sled track—1000 feet long in 1954 and increased to 3000 feet in mid-1956—Sandia sleds were fired on the track at Holloman. During the past six years Sandia-developed components that required environmental tests possible only on Holloman's six-mile track were included on sleds being fired for other AEC or DOD contractors.

And, although the additional operations will cause Sandia to increase its personnel at Holloman from two to four men, activities by Section 7244-3 encompass more than sled track tests. Support is given to Holloman drop tests from aircraft and rocket firings when Sandia items are aboard. In addition, telemetry checks and recordings and the possible "no go" order is given for Sandia-involved drop tests at the Air Force's Stallion Range some 45 miles north of Holloman.

Several other Sandia sled tests which cannot be done on Sandia's



DISCRIMINATORS in the Sandia trailer, near Holloman track, are checked by Bill Farmer.

3000-foot track are already scheduled for the Holloman track; for example, in late May there will be a series of research vehicles tests, and in mid-summer a series of rain-erosion tests will necessitate two sled shots per day for about 12 consecutive days.

Walt Dzugan Team Wins 1st Livermore Bridge Tournament

A Livermore Laboratory duplicate bridge team, captained by Walt Dzugan (8212-1), won top honors in the first duplicate bridge tournament to be held at the Laboratory.

Walt's team, made up of Don Wagner, Dick Ballard, and Ray Huston (all 8212-2), with Phil Leiserson (8212-2) and Jim Thorpe (8212-1) as alternates, won 21 out of 29 matches.

In second place, with 19 wins and one tie, was a team headed by Frank Cupps (8233-1).

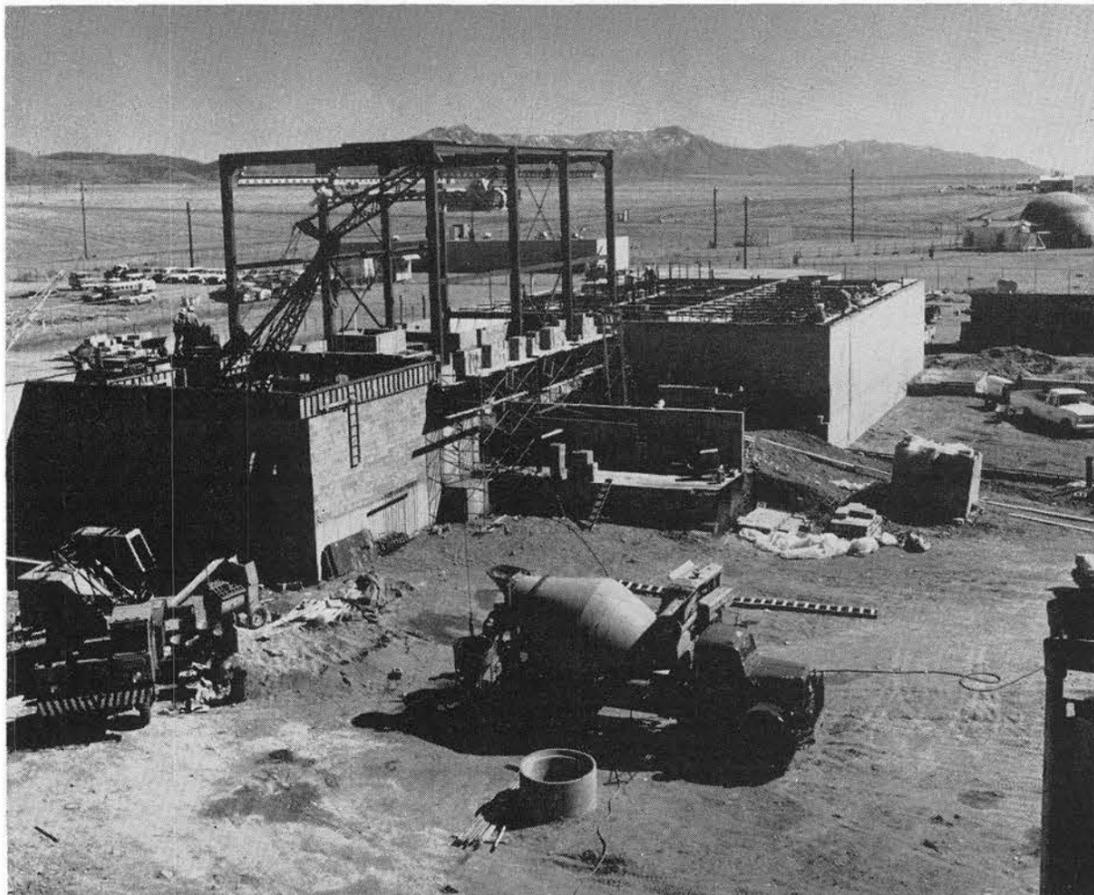
League director for the six-week duplicate bridge tournament was Herb Turnbull (8142-1).

Other team captains and team scores were: Frank Murar (8165), 13 wins, 2 ties; Hal Becker (8125-2) 13 wins, 2 ties; Stew Ingham (8122-2), 13 wins; Jim Mesnard (8141-1), 12 wins, 1 tie; Barney Goncher (8241-1), 11 wins, 1 tie; and Dan Pegan (8165-1), 10 wins and 1 tie.

Business Fraternity To Meet April 22

The University of New Mexico Chapter of Delta Sigma Pi, international business fraternity, will hold its second semester initiation activities on April 22 from 1 to 5 p.m. at Carlisle-Bennet Post No. 13, American Legion.

In the evening a dinner dance will begin at 8 p.m. at the Sandia Base Officers Club. Alumni are invited to both events. For further information contact Emery Postenrieder (2563-2), ext. 34344.



SERF SITE—Most underground construction for Sandia's new Engineering Reactor Facility is nearing completion. Concrete block walls are now being laid on the upper floors. In background, right, is the concrete hemisphere which houses the recently completed Sandia Pulsed Reactor facility.

Sandia Colloquium Speaker to Talk On Power-from-Earth Possibilities

"Kilauea Iki and Power from the Earth" will be discussed by Donald E. Rawson, Lawrence Radiation Laboratory, at a Sandia

research colloquium on Wednesday, April 19, at 9:30 a.m. in Bldg. 815.

His presentation is a preview of a paper which he will give at a United Nations meeting in Rome. The paper is entitled "New Sources of Power: Geothermal, Wind, and Tide." It deals with a program of drilling into molten lava at Kilauea Iki, Hawaii. Part of the talk will be speculation on possibility of building and using lava pools in other parts of the world.

Prof. W. M. Elsasser will speak on "The Interior of the Earth" at a colloquium on Wednesday, April 26, at 9:30 a.m. in Bldg. 815. Prof. Elsasser is head of the Physics Department at the University of New Mexico.

A Sandia Corporation-University of New Mexico joint colloquium will be held in the Sandia Base Little Theater on Friday, April 28, at 3 p.m. Alfred G. Lande, professor emeritus at Ohio State University, will speak on "Quantum Mechanics, from Dualism to Unity."

Tickets are not required for any of the meetings. For further information contact G. W. Anderson, colloquium chairman, ext. 49164.

Cancer Crusade Starts; Sandians Give \$8900 To 1960-61 Campaign

The 1961 Cancer Crusade for the Bernalillo County unit of the American Cancer Society will be held during the month of April. Sandia Corporation employees have already donated \$8900 to the health agency through the 1960-61 Employees Contribution Plan.

The county goal this year is \$50,000.

E. H. Draper Will Preside at ASME Region VIII Meet

The American Society of Mechanical Engineers will hold its Region VIII Regional Administrative Conference in Denver April 20 and 21. E. H. Draper, Vice President, Development, who is currently regional vice president, will preside. The national president of ASME, William Byrne, and the national secretary, O. B. Schier, will also attend.

The conference is one of 10 held by the national professional organization to discuss policies on a regional basis and recommend courses of action to the national council of ASME. John W. McKiernan (7147) serves the region as secretary and will attend along with New Mexico Section Chairman A. J. Clark (7125) and Vice Chairman Don Williams (7311) as delegates. G. C. McDonald (2530) and E. K. Gardner (2541) will attend as chairmen of the regional publication and building fund committees.

Region VIII of ASME includes the states of New Mexico, Colorado, Utah, Wyoming, Montana, and parts of Idaho and Texas.

Four professional sections and 10 university student sections form the participating groups. Following the RAC meeting, the Rocky Mountain Student Conference will be held at the University of Colorado to hear and select the outstanding student paper from those prepared for presentation at the conference.

Tommy Kelly Takes Table Tennis Lab Championship for Fifth Time

For the fifth consecutive year Tommy Kelly (2442) is champion of the Sandia Laboratory singles table tennis tournament.

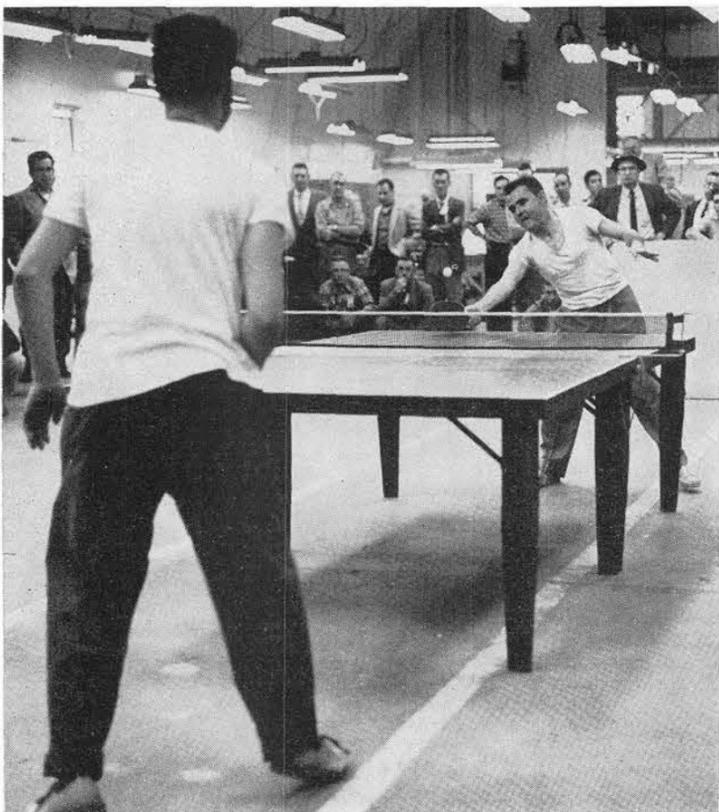
"This was the last time I'll enter a tournament," Tommy said. "I lucked out on this one. Competition was very tough. From now on, I'll just sit on the sidelines, relax and enjoy being a spectator. Five years is enough."

Tommy edged out Ben Garcia (4611) four out of seven games in the finals last week. The tournament was played during noon hours with an estimated 1000 employees participating in the pre-

liminary superintendency tournaments.

Organizational winners who competed in the finals were:

George Williams (AEC), Orié Montoya (1100), Bill Meikle (1300), Gene Glaze (1400), Don Emrick (2300), Walt Hewitt (2500), Jake Chavez (2600), Lou Larson (2700), Dave Hill (3100), Pat Sanchez (3400), Gene Chavez (4100), Leo Paxton (4200), Bill Lutgen (4400), Leo Cordova (4500), Bill Palmer (6000), Earl Morris (7100), Dave Trapp (7200) and Ernie Gurule (7300).



TOMMY KELLY, far end of table, is winner of Sandia Lab table tennis tourney—for the fifth consecutive year. He edged out Ben Garcia 4-7 to win. About 1000 employees participated in the tourney.



QUALITY CONTROL personnel from Western Electric plants throughout the country met at Sandia Corporation last week to study problems of training quality control engineers. Quality Control Department 2560 and Training Department 3130

participated from Sandia. Shown above (l to r) are Mel McCutchan (3132-2), George Hawley (2561-3), Wilbur Miller (3132-2), Bonnie Small, from WE's Allentown, Pa., plant, and Larry Snodgrass (2561). They met in Coronado Club's La Cana room.

Supervisory Appointments

WILLIAM A. SHINNICK to supervisor of Engineering Methods Section II, 4111-3, Business Methods Department.



Bill has been assigned to the Quality Assurance organization during his four and a half years at Sandia.

Previously he worked three years as an industrial engineer for the Gardner Board and Carton Company, Middletown, O., and then two years as assistant plant manager for the company's paper-making subsidiary in Akron, O.

Bill holds a BS degree in mechanical engineering from Northwestern University and an MS degree in business and engineering administration from Massachusetts Institute of Technology.

He served three years in the Air Force.

GEORGE W. ANDERSON, JR., to manager of Electrochemical Development Department 1310.



A Corporation employee since June 1953, George was promoted to division supervisor in January 1956 and has recently headed Applied Research Division 5132.

Prior to coming to Sandia he was at the University of Minnesota where he received a Bachelor's degree in mathematics and his MS and PhD degrees in physics.

George is a member of the Institute of Radio Engineers, American Physical Society, Sigma Xi, and Phi Beta Kappa. He has served as chairman of the Sandia Laboratory Colloquium since January 1961.

Lorenzo Rivera to Retire April 28

Lorenzo Rivera (4251-2), a Corporation employee for 10 years, will retire April 28.



Mr. Rivera has been on sick leave during recent weeks and plans to enter the Veterans Administration hospital in Sausalito, Calif., after his retirement. Future plans will depend upon his health.

A native of Socorro, Mr. Rivera was one of the first World War I volunteers from that area and saw service in France. Last year he was honored for 35 years of active participation in the American Legion.

OSCAR Awards Presented During Birthday Party for Data Machines

Long before Analysis Section 7512-2 acquired its two "OSCARs" last year, members of the section had given personalities to the two semi-automated oscillogram record readers.

The machines automatically read oscillograms, transcribing data into IBM cards.

When the two machines finally arrived, there was a celebration in the section. Birth announcements were sent out, and supervisor Phil Bircher brought in a box of candy.

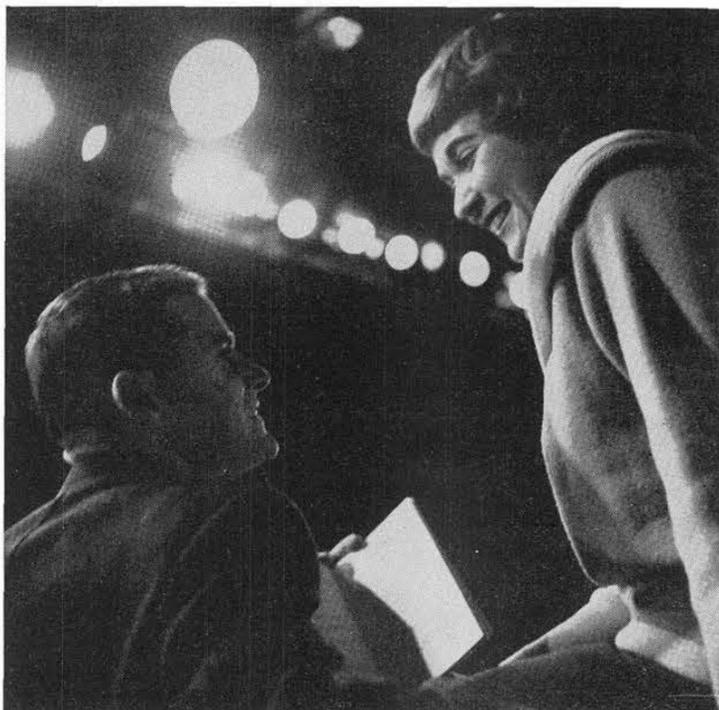
Last week, the OSCARs had their first birthday anniversary. To celebrate the occasion, the section had a party. Certificates were presented to four persons

who work closely with the machines.

Phil Bircher received the title of OSCAR "daddy." Trouble-shooter Carl Smith earned an award as OSCAR "doc." An OSCAR "fireman" award was given to Ed McGarvie, who comes running if the machines overheat.

Bob Isidoro, who once said "you have to take data reduction methods on faith," received a certificate for his faithfulness to the OSCARs.

In the background of this little party was a picture of a stork bringing a new OSCAR to Sandia Corporation. It's due to arrive any day.



SPOTLIGHTS will shine tonight through Sunday on Ed Reilly (3465-1), left, and Carol Leiby during the Albuquerque Little Theatre's production of "The Pleasure of His Company."

Ed Reilly Has Comedy Role in Current Little Theatre Show

Ed Reilly (3465-1) is a featured player in the current Albuquerque Little Theatre's production of "The Pleasure of His Company." Ed's characterization of a harried prospective bridegroom contributes many of the comedy highlights of the show.

At rehearsal recently Ed was jubilant. "This is a good play," he said, "and I'm enjoying my part tremendously. We amateurs are in theatricals because it's fun."

Ed has been interested in theatre "ever since high school." His major at the University of California was cinematography. "This made me interested in what happens in front as well as behind the camera," he said. "Acting, direct-

ing, writing and producing all add up to the same thing—theatre."

"When I came here I was happy to learn of the Albuquerque Little Theatre," he continued. "So I joined the group quickly."

Stars of the Albuquerque production are Dorothy Stone and Charles Collins, who have appeared on the Broadway and London stage and on national television.

Three more performances are scheduled at the Little Theatre—tonight, Saturday, and Sunday. "Reservations for tickets may be made by calling CH 2-4750," Ed reminds theatre-goers, "and curtain time is 8:30 p.m."

Technical Arts Division Submits Entries for National Judging

Technical Arts Division 3463 has again submitted artwork created by its personnel in connection with Sandia Corporation projects to the eighth annual Technical Illustrators Management Association exhibit.

Twenty pieces of work in six categories were sent for judging to the Museum of Science and Industry of California in Los Angeles. Of the entries received from throughout the U. S. and Canada, approximately 250 will be chosen for display in the museum April 19 through May 28.

Categories in which Sandia has entries are: illustrated parts breakdown, operational handbook, special applications, transparency illustrations, commercial illustration, and sales and promotional literature.

Last year Sandia entered six pieces of work and five were exhibited. Jim Walston won second place for an industrial cartoon and Ted Baggett received honorable mention in the illustrated parts breakdown category.

More than 112,000 persons visited the exhibit last year.

H. C. Rumm Gives Reliability Talk

Henry C. Rumm (2544-2) spoke at a meeting of manufacturing and design engineering personnel from Micro Switch Division of Minneapolis-Honeywell Regulator Company in Freeport, Ill., on April 3.

Title of his talk was "Why Reliability?"

Fishing, Travel Planned By Jack Redburn; to Retire This Month

Jack Redburn, a mechanical inspector in 4212, will retire from Sandia Corporation on April 28. He started work at Sandia in July 1949 in the machine shop, and later became an inspector.



Mr. Redburn and his wife plan to return to Michigan and build a home on Saginaw Bay. "We'll be so close to the water that we can fish right from our front door," he says.

The couple also wants to travel to Florida and other places, perhaps taking along a trailer and staying where it's warm during the winter months.

They have a daughter who lives in Indianapolis, Ind., and a son living at home, and one grandchild.

Mr. and Mrs. Redburn's new address will be 1308 Avon St., Saginaw, Mich.

Livermore Committee Starting Christmas Planning Early

Only 255 more days remain until Christmas and the newly-formed Livermore Christmas Dance Committee is busy making plans.

Seem a bit early? Not at all, says the committee. A check of suitable locations has revealed that choice spots are rapidly being booked.

To assure a good date and suitable facilities, the committee has tentatively chosen the first or second weekend in December at the Claremont Hotel in Berkeley for the Christmas dance.

Soon to be decided will be whether or not the affair will be a dinner dance. Any suggestions will be considered by members of the dance committee, who are:

Dorothy Wiemken (8212-3), Peggy Flindt (8114-1), Evelyn Bachman (8232-5), Marilyn Lorenson (8212-2), Max Schell (8141-4), Dick Dickson (8233-1), Mike Ferrario (8114-1), Whitey Sorensen (8125-2) and Dave Dickie (8121-2).

Russell Schaefer, Retired Sandian, Died Here April 2

Russell E. Schaefer, Sr., who retired in April 1958 after nearly 42 years service with Western Electric, died April 2 in Albuquerque.

Mr. Schaefer had been in the accounting organization at WE's Hawthorne Works

until 1951 when he was assigned to Sandia Corporation (Supplier Audits Division 4122).

Funeral services were held April 5 followed by interment in the National Cemetery in Santa Fe.

Survivors include his widow, a daughter and son in Chicago, and a second son, Warren C. Schaefer (2642).

Singles Club Organized

Single persons between the ages of 35 and 50 now have their own club—appropriately called "The Singletons."

The private club sponsors activities such as dances, dinners and outings. It is operated on a share-the-expenses basis only for the social events attended by each member.

For additional information about club membership contact Margaret Bernhard (7242) at AX 9-6597 or ext. 39273.



EXCHANGE OF BOOKS under the inter-library loan plan finds Earlene Brinegar (3421-1) making frequent trips to the University of New Mexico library, and also to Kirtland AFB's technical library.

In Special Libraries

Inter-Library Loan Service Available Throughout Nation

National Library Week, April 16-22, is being used by the Sandia Laboratory technical library as an opportunity to publicize inter-library loans.

Ida Mae Gutierrez (3421-1) is chairman of the National Library Week committee of the Special Libraries Association which is emphasizing exchange of information between the 13 special libraries in New Mexico and public libraries. Final result will be a central file of subjects of special collections which will be distributed to public libraries in selected areas of the state.

"Since special libraries are usually not open to the public," Mrs. Gutierrez explained, "this list will enable public libraries to know what we have on our stacks and will emphasize our willingness to loan to them." Sandia is also sending a listing of its periodicals to the Library of Congress so that the titles may be included in a list which receives nationwide distribution.

Borrow From Each Other

"The advantage of this loan system is that it allows our library to borrow from another library a title which is out of print or an old journal which may be otherwise not available," Mrs. Gutierrez continued.

At the present time Earlene Brinegar (3421-1) makes one trip a week to the University of New Mexico library, to the technical library at Kirtland AFB, and frequently to Lovelace Clinic to borrow and return books. Books and periodicals have also been loaned to Los Alamos Scientific Laboratory, Highlands University and Michigan State University.

At Livermore Laboratory, Elizabeth Kennedy (8233-2) visits Bay Area libraries on an average of once a week to borrow specialized books and periodicals requested by Laboratory personnel. Chief sources for these documents are the University of California Library at Berkeley, the Lawrence Radiation Laboratory Library and the Oakland Public Library.

Sometimes locating the library source of hard-to-find titles requires numerous letters or a gen-

eral knowledge of the work of research laboratories.

Sources for such borrowing have included the Goodwyn Institute Library in Memphis, Tenn., New York Public Library, Bell Telephone Laboratories Library, National Library of Medicine in Washington, D.C., Mellon Institute Library in Pittsburgh, Harvard University, Aluminium Laboratories Ltd., Kingston, Ontario, Institute of Textile Technology in Charlottesville, Va., Waterways Experiment Station in Wicksburg, Miss., American Academy of Arts and Sciences, Shell Oil Research Laboratory and the Stanford Research Institute Library.

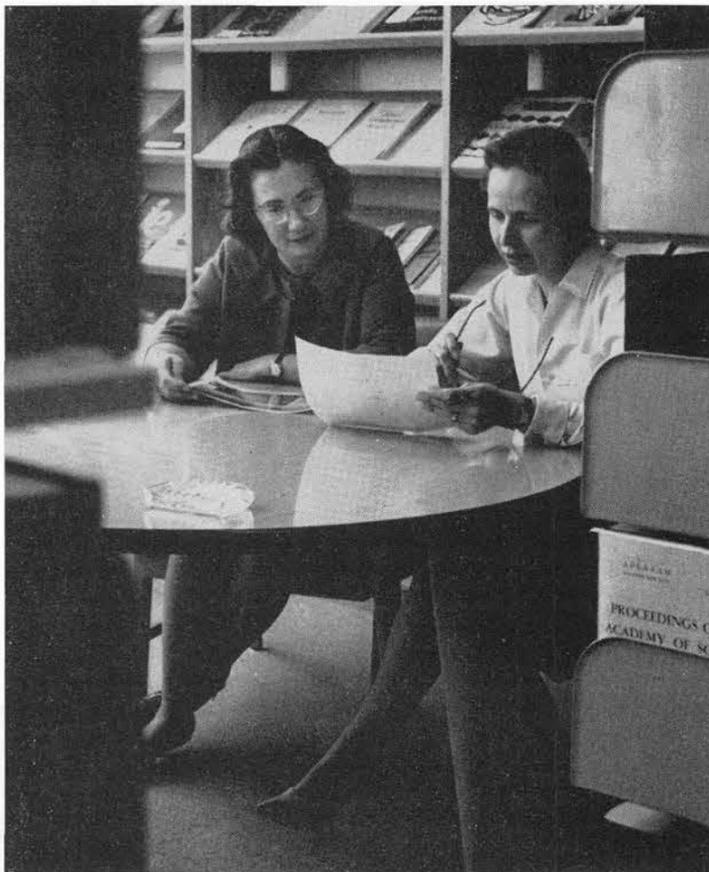
Other National Library Week activities of the Special Libraries Association, headed by William H. Richardson (3421-1), include working with the Albuquerque Public Library on a display for the Public Service Company Building. Ruth Farley (3421-1) will discuss the use of special libraries and their use in science at a science classroom program at 6:30 p.m. on April 20 on KNME-TV. The program will be repeated for daytime classroom periods throughout the week.

In addition, the Albuquerque Public Library has sent letters to 75 civic organizations regarding National Library Week and will serve as a speakers bureau for SLA. SLA state publicity for library week is being handled by Lee Parman (3421).

Sandian's Daughter Wins California Essay Competition

Rosalie Baca, daughter of "Skip" Baca (8232-2), has entered a national essay contest after her entry, "For What Avail . . . If Freedom Fail," was judged the best of all those submitted in the state.

The state contest was sponsored by the California Society of the Daughters of the American Revolution. For her prize-winning essay, Rosalie was awarded the Society's Good Citizenship Award for 1960-1961.



LOCAL OBSERVANCE of National Library Week will include a display, talks on special libraries, and publicity about inter-library loans of books and periodicals. Members of the library week committee included Ida Mae Gutierrez (left) and Ruth Farley.

Coronado Club Calendar Features Monthly Buffet, Dance April 22

The "Manjotars," a trio consisting of mandolin, banjo, and guitar, will be featured at the Coronado Club's monthly buffet dinner-dance on Saturday, April 22.

Buffet lines will be open from 6 to 8 p.m., the Manjotars will entertain at 8:15, and dancing to the music of Jack Shearing's orchestra will start at 9.

Cost is \$2.60 for club members, \$3.60 for guests. Tickets should be purchased at the club office by April 19.

A KQEO disc jockey will emcee the Teenage Record Hop on Saturday, April 15, from 8 to 11 p.m. Tickets are 25 cents and may be picked up in advance at the

club office or purchased at the door by parents only.

Tommy Kelly's combo will play for the Saturday night dance on April 29. Tickets for the dance, which lasts from 9 to 1, are \$1 for members, \$1.50 for guests.

Family Night on Sunday, April 23, will feature the movie, "Son of Ali Baba." As usual, free cokes and popcorn will be served during the show which starts at 6 p.m.

Live music for Friday evening activities at the club will be provided by Eddie Chavez tonight, Frank Chewiee on April 21 and George Davies on April 28. The \$1.75 buffet will be served from 6 to 7:30 p.m. and music for dancing will continue until 8:30.



JOYFUL REUNION — Marie Davidson (center) embraces Catherine Rogalla, former Sandian, and Verne McNabney (8241-3). They helped save her life when seriously injured in an auto wreck.

Accident Victim Thanks Verne McNabney for Helping Save Life

A Santa Monica woman, who spent more than a year in the hospital recovering from an automobile accident, recently visited Verne McNabney while on a pilgrimage through California to find and thank those who helped save her life.

The story unfolded when the victim, Marie Davidson, approached the receptionist at Livermore Laboratory and asked for Verne McNabney. Verne now works in the Health and Safety Section (8241-3). He was the ambulance driver who answered an emergency call on Nov. 17, 1959, at Salton Sea Test Base, and met Mrs. Davidson for the first time. Her car had collided with one driven by a young soldier. He was killed and Mrs. Davidson, her mother and her cousin, were injured. Mrs. Davidson most severely. Verne took the injured to the Brawley hospital.

When she got out of the hospital

she decided to find the people who helped her and thank them. It wasn't an easy task to find Verne or the other persons who were present at the accident scene. But Mrs. Davidson located him through Salton Sea Test Base personnel. Accompanying her to Livermore was Catherine Rogalla, who was the SSTB nurse who was in the ambulance with Verne. Miss Rogalla now works at San Diego County Hospital.

"I don't believe I've ever been so surprised," Mac reports. "You hear many stories about people whose lives have been saved, but this is the first time I've heard of someone going to all this trouble to say thanks."

Mrs. Davidson told Verne she is still looking for a truck driver who stopped to help. She's confident that she can locate him even though she doesn't know his name or for whom he works.

Theater Arts Center Offers Wide Cultural Activity; Sandians Help

Sandians are helping promote community cultural growth through participation in the Albuquerque Theater Arts Center.

The Center was organized a year ago as a non-profit civic corporation, and is comprised of four separate performing groups.

The Choral Art Society, which succeeded the 16-year-old Albuquerque Civic Chorus, presented the Christmas Oratorio and the recent Brahms festival. The 100-voice chorus includes basses Clinton Purdue (2422), Vernon Henning (3151), Robert Betz (6010), and Bruce A. Caskey (7182). Earl Minor (7522) and Don Rost (3211) sing tenor and, in addition, Don serves as a member of the society's board of advisors. Joyce Miller (3133) and Calla Ann Crepin (3151) are members of the alto section.

In June the Choral Art Society will perform Gilbert and Sullivan's light opera "The Mikado."

The Patio Players have presented two one-act plays, a full length play and two other one-act plays are planned for May.

The Municipal Opera Company has scheduled the English version of Gian-Carlo Menotti's "The Telephone" and "The Medium" for April 28. Earlier this winter the group presented Cole Porter's "Kiss Me, Kate."

Perhaps the best known group is the Bel Canto Singers, a chorus of 24 men and women who have performed a wide variety of selections, from jazz to classical, before Albuquerque civic and social organizations.

Peggy Howe, secretary for the Sandia Laboratory office of the Minnesota Mutual Life Insurance Company, has participated in the Choral Art Society, Bel Canto Singers and Municipal Opera Company as a leading soprano.

Sandians are also found behind the scenes of Theater Arts Center productions. Alexander Jack (3311-1) has applied his imagination and extensive background in the theater in his job as scenic designer. Brian Finley (3111) has been responsible for administrative organization of the center.

Any person may take part in the Center's activities. For further information contact Norman Russell Bell, director, at P. O. Box 3125 or by telephone at AX 9-6616.

Annual Sandia Laboratory Spring Clean-Up Campaign Begins Monday

Clean-up at Sandia Laboratory begins Monday.

A program of the 4500 and 4600 organizations, the clean-up will clear work areas of unwanted or unused equipment and also reduce fire hazards.

Grounds Maintenance Section 4575-3 is already concentrating on clean-up of outdoor areas. The "big push" inside starts next week. "All employees are asked to help," Sam Johnson, Division 4542 supervisor, says.

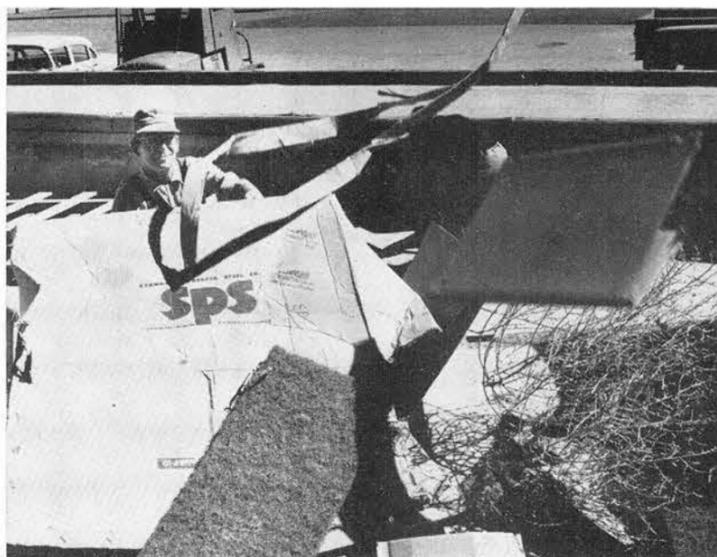
Next week, material may be sent to reclamation without paper work. Call ext. 54208, Material Handling Section 4614-2, to make arrangements for pick up of unwanted material.

If accounting credit is desired for items sent to reclamation, attach a tag with the individual's name, organization number, and telephone extension. Organization 4622 will prepare the DTR form and arrange credit. Refer questions concerning this to ext. 26171.

Employees are advised to clean out desks, storage cabinets, and work areas. Small trash should be put in dumpsters. Large bulky trash should be placed near a dumpster for pickup.

Cardboard cartons are available from Division 4624, ext. 44144.

"Have only a one-day's supply of flammable liquids in buildings," Sam suggests. "Discard partially used cans of paint, lacquer or thinner. Store acetone, alcohol or other flammable liquids in ap-



OUT IT GOES—Trash is tossed into the truck by Ramon Bernal (left) and Pat Garcia (in shadow) of Grounds Maintenance Division 4575. It is all part of a campaign to clean up Laboratory areas.

proved safety cans. Place used rags in approved containers."

Fire prevention inspectors will be checking all buildings next week. Fire hazards will be reported to supervisors for correction.

"In recent weeks," Sam reports, "inspectors have noticed excess material in most laboratory areas. Idle equipment to be used in the future should be placed in storage." Call ext. 54208 to arrange for transportation to storage. Ma-

terial going to storage will require a completed form 6370-F. Only limited space is available in Warehouse Services Division 4612.

As part of the clean-up campaign, a movie "Fire Prevention" will be shown to Sandia employees next week.

"We have had no fire loss this year," Sam points out. "Sandia has been fortunate. The record can be continued through the cooperation of all employees."

Livermore's Chad Shanabarger Explores Caves for Recreation; Likes Them 'Wild'

"Watch out for that first step—it's 180 feet straight down!"

"That's what they told me when I started into the 'Hellhole,'" said Charles Shanabarger (8151-1).

The Hellhole, located in West Virginia, is a "wild" cave, one which has not been developed for commercial purposes. The term "wild" is also applied to undiscovered caves. While the Hellhole wasn't the most unusual cave "Chad" investigated, it was one of the most difficult to enter.

The only way into the Hellhole is a sheer drop through a hole in the ground to the cave floor 180 feet below. "We used two ropes in descending," said Chad. "We lowered ourselves with one rope, and tied the other around our waists as a safety measure."

Chad has investigated about 50 wild and commercial caves since he took up "spelunking," a sporting cousin to speleology, the study of caves.

Most of Chad's cave adventures took place before he came to California, in West Virginia, Pennsylvania, Ohio, and Kentucky, where caves abound.

During the Civil War Confederate and Union forces manufactured ammunition and uniforms in many of these caves. Other spelunkers have come across their old sewing machines and casting molds.

The first wild cave Chad explored was the Sinit Cave in West Virginia.

"We had to pick our way up a steep talus escarpment just to get

to the entrance," said Chad. "After entering, we crawled, climbed, walked, and stumbled through mazes of stalactite and stalagmite formations, squeezing through crevices and openings for what seemed miles into the cave, until we finally emerged into a gigantic room."

"There was complete quiet and total blackness; you could just feel the vastness of the room. It was an unearthly sensation. As our eyes grew accustomed to the dark, we could make out huge boulders scattered like pebbles around the room."

Chad started as a spelunker in 1950 when his son "Mickey," then 11, developed an interest in geology. In helping Mickey, Chad became engrossed in rock formations and explorations himself. His entire family now belongs to the National Speleological Society, a non-profit organization dedicated to the promotion of speleology and the protection of cave formation.

Chad plans to attend the 1961 annual reunion of the society, to be held this spring at the Carlsbad Caverns.

Since caves offer rare and beautiful natural photograph spectacles, especially in color, Chad, like most spelunkers, is a camera enthusiast. He has taken hundreds of photographs in caves and once won a prize for one of his shots at a society reunion.

"Cave exploring can be a real tight squeeze," said Chad. "One time a member of our party was crawling on his stomach through a very narrow passageway when he got claustrophobia. His body began to swell from fright and he couldn't move forward or backward. We had to keep talking to him calmly for about 20 minutes before he was back to normal size and could wiggle out."

Since Chad joined Livermore Laboratory in 1959, he has only explored one cave in California, Bear Cave not far from Livermore, but he plans more extensive spelunking.

"I'm a little wary of Bear Cave, though," said Chad. "After my first visit there, I went back three months later and found part of the roof caved in."



EMERGING from an underground cave is Charles Shanabarger (8151-1), Livermore Laboratory speleology hobbyist. "Chad" has explored some 50

caves during the past 10 years, taking hundreds of photos. This picture, which he took of himself, won a prize at a National Speleological Society reunion.

15 Years



Otis L. Wright
4610
April 15, 1946



William E. Rehbeck
2342
April 17, 1946



Edmund J. Zachewicz
4221
April 17, 1946



James E. Palmer
7221
April 18, 1946



Henry W. Moeding
4314
April 22, 1946



C. E. Katzenberger
4132
April 23, 1946

10 Years
April 15-28

S. A. Chemistruck 7532, Lorenzo D. Duran 4221, Lloyd E. Fuller 3110, Harry R. Holmes 1121, Truman L. Daniel 3113, Tony R. Lopez, Jr. 4212, William R. Perret 5112, Robert J. Dineen 1321, Dorothy Ham 3231, Fred Brown, Jr. 4623, Gilbert L. Eggert 1121.
Harry A. Gelwicks 4221, Tomas Hernandez 4511, Bennie D. Padilla 4513, Leslie B. Johnson 4252, Nick T. Pavletich 2644, Ivan H. Lavalley 7213, J. L. Tischhauser, Jr. 7242, Ralph W. Ambrose 4542, Louise M. Klopolsky 3126, Dan W. Wood 1432.

Mountain Club to Ski

A ski mountaineering trip this weekend, sponsored by the New Mexico Mountain Club, will be led by Hank Tendall (7115). The trip is planned for those who like snow camping, cross country skiing, and exploring in the high country of New Mexico. Cars will leave Nob Hill at 8 a.m.

Chet Tarne Heads Toastmasters Club At Livermore Lab

Three Sandians were elected new club officers for the Livermore Toastmasters Club and were installed at a meeting held this week. Chet Tarne (8163-1) was elected president for the coming six month term, Carl Lundbom (8116-3) was elected treasurer, and George Ruzicka (8161-2), secretary.

The club is open to all Livermore residents and new members are welcome. Interested parties may attend meetings, held the second and fourth Mondays of the month at the Livermore Bowl, or contact any club member for details.

A. J. Peterson Promotes First Aid with Help of Box of Snakes

"Snakes are terribly misunderstood critters," A. J. Peterson (7254-2) says. "Take this bullsnake here, you couldn't ask for a nicer pet."

"Pete" gently stroked the writhing reptile's head. Its beady eyes glittered. In the background, inside a sturdy wood, wire and glass box, a number of rattlesnakes provided a musical accompaniment.

"The rattlers? Oh, I have respect for the rattlers. They have dignity and a definite point of view. You have to respect them," Pete says.

As chairman of the First Aid committee for the Bernalillo County Chapter of the American Red Cross, Pete is concerned with arranging programs on first aid and first aid instruction. He presents several talks monthly to church groups, youth organizations and civic clubs on various aspects of first aid.

Snakes and snakebite lectures are his favorite subjects. He's been interested in snakes since he was a boy back in Illinois. "I've had a couple of bullsnakes around the house for pets," he says. "Lately, however, I've had to turn them loose. Not enough mice around to feed them."

Pete keeps his rattlers in the special cage out in Coyote Canyon. Most of the rattlers were trapped in Sandia's Coyote Test Field area.



BULLSNAKE DEMONSTRATOR—A. J. "Pete" Peterson believes in realism when he lectures on snakes and first aid procedures. Pete is first aid chairman for the Bernalillo County Chapter of the American Red Cross. Rattlers are confined in the sturdy cage.

"We did it carefully," Pete says, "with a great deal of respect for the rattler. A rattlesnake bite is not pleasant to contend with. Best policy is leave them alone. However, if you're hiking in snake country (and most of the southwest is snake country) be prepared with a snakebite kit. Know

how to use the kit and always have one handy. This means in your pocket, not your car. Don't panic if you're bitten and follow instructions in the kit. You'll be all right."

Any group interested in learning more about snakes or any phase of first aid should contact Pete at AX 9-3366 after 5 p.m.

SHOPPING CENTER

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CLASSIFIED ADVERTISING

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

RULES

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

FOR SALE

- VACUUM CLEANER, RCA Whirlpool with attachments including power driven rug brush, reasonable. Weidman, CH 2-5006.
- TRAILER, wood sides, no springs, \$10. Stephenson, AX 9-9114.
- REFRIGERATOR, Crosley-Shelvardor, perfect for cabin, \$15. Strawderman, AX 9-7548.
- POODLES, standard AKC registered, brown or black; available April 22 at six weeks age. Stump, AM 8-7754.
- ITHACA 12 & 16 gauge, \$80 each; custom 270 cal. w/scope, \$175; 30-30 Winchester, \$65; gun cabinet, \$50; entire lot w/some ammo, \$425. Ives, AX 9-7003.
- REFRIGERATOR, 6 ft. Westinghouse; '53 Ford, \$350. Silva, 1416 Edith SE, CH 2-4934 or AL 6-4935.
- '60 CUSHMAN Super Eagle with extras, \$250. Smoli, AX 9-0023.
- 3 BDR HOME, corner lot, carpeting, near elem. and Jr. high schools, walls, landscaped, \$700 down, \$11,900 total. Baca, AL 5-8452.
- HOTPLATE, two burner, three speed, used four times, \$7; maple coffee table, needs refinishing, \$3. Jewett, AX 9-1008.
- TV 21", GE, mahogany finish console, \$50. Nelson, AL 6-4002.
- COLD AIR DUCT, 11 x 14", 14 ft. long, \$4; charcoal grill, 18" bowl, \$3. Sherwin, AL 5-8866.
- '53 BUICK special, 4 dr., one owner, \$250. Gilpin, AX 9-1100.
- TRAILER 21', sleeps 5, gas-electric complete kitchen, bath, 10-ply nylon tires, hydraulic brakes, extras. Long, AL 6-0262 after 5 p.m.
- '55 CHEVROLET, 2 dr. station wagon, 6 cyl., stick shift, R&H, \$500. Parks, AM 8-0875.
- '51 NASH Tudor Statesman, five good tires, \$225. Thompson, AX 9-2273 after 5 p.m.
- STEEL OFFICE DESK with typewriter drawer, \$125. Barker, AX 9-2365.
- '58 LAMBRETTA scooter, model 125. Sandgren, AX 9-5007.
- SMALL FRIGIDAIRE, ideal for cabin, \$20; gas dryer, \$50; 17" TV; portable electric heater; 3 venetian blinds. Benson, Corrales, DI 4-4892.
- PISTOLS, 2 .45, S&W revolver and model 1911 auto, \$30 each; complete shell-loading outfit, \$15. Stephenson, AX 9-3914.
- TIRE, Gulf Crown 750-14 tubeless, new, \$10; Sears one-wheel trailer, \$25. Llamas, AL 6-2480.

NEXT DEADLINE FOR SHOPPING CENTER ADS Friday Noon, April 21

- 3 BDR Roberson, den, screened porch, fireplace, corner lot, double garage, extras, \$18,500, \$1000 down, 2117 Martha NE. Weir, AX 9-1160.
- ROPER GAS RANGE, \$35. Campbell, AM 8-8272.
- '54 CHEV., stick shift, \$395; oxyacetylene welding outfit as is \$25. Grymkoski, AX 9-4053.
- 3 BDR HOME, original owner, 1 1/4 bath, double garage, extras, sprinklers, landscaping, slightly above FHA appraisal to cover extras. McCampbell, AL 6-4156.
- LARGE 3 BDR HOUSE, 1 1/4 bath, fireplace, forced air heat, air conditioned, pitched roof, landscaped, good location. Randle, AL 6-1747.
- '52 STUDE., 2 dr., R&H, OD, make offer; 17" TV console, needs picture tube, \$15. Navratil, AX 9-3355.
- '58 KARMANN GHIA, AM & FM radio, wsw, Abarth muffler, back-up light attachment, 19,000 miles, best offer over \$1400. Bode, AM 8-2157.
- OLD Navajo and Apache Indian items for sale or trade for German luger, or old hunting knives. Smitha, AX 9-1096.
- BANDSAW-Craftsman, 12" throat, 1/4 hp motor, extra blade, stand, \$50. Whitfield, AL 8-6347.
- 3 BDR HOME, 1 1/4 bath, HW floors, WB fireplace, kitchen built-ins, utility room, near base schools, shopping, \$16,800. Peterson, AX 9-5921.
- VIKING "75" top deck, preamp, amplifier & speaker all in mahogany cabinet, \$135; Knight general purpose 5" scope. Reinman, AL 6-9737.
- SWING SET, includes glider, two swings and a bar, \$10. Wheeler, AL 6-6230.
- GIRLS 20" BIKE, Schwinn, puncture proof tubes, basket, \$25. McCullar, AX 9-0638.
- LAWN MOWER, hand powered, heavy construction, \$6; piano accordion twelve base, Toselli, \$30. Himes, AX 9-7828.
- FREEZER, 300 lb. capacity, upright, \$145. Renfro, AX 9-7146.
- HEADBOARDS and frames for Hollywood beds, \$10 per set. Kohut, AX 9-9092.
- COMPLETE SKI OUTFIT, used one season, Lund 6'9" skis, Cubco poles and bindings, size 9 mens ski boots, \$50. Cope, BU 2-3240.
- 1 HP AIR CONDITIONER, refrigerated, cools 600 sq. ft., \$150; 6' casement window w/2 screens, \$25; screen door, \$4. Belden, AX 9-3867.
- '57 VOLKSWAGEN deluxe sedan, sky blue, leatherette interior, radio, wsw, new battery, 31 mpg in town, \$1045; Cushman motor scooter, \$95. Johnson, AX 9-8980.
- '58 FAIRLANE "500," power brakes and steering, 4 dr., \$1000 or will take '55 or '56 Buick on trade. Pritchard, AM 8-6430.
- BABY BED and mattress, 2 year old size, \$15; sterilizer, \$1. Arning, AL 6-9229.
- '52 KIT CUSTOM Trailer House, 29', 2 axles, cooler, \$1250; or \$1325 w/TV, outside antenna. Baerwald, 6600 Cochiti Rd. SE, AL 6-2530.
- REFRIGERATOR, Wards Deluxe 1954 model, \$40. Rogers, 1312 Alcazar NE, AL 6-6341.
- '56 OLDSMOBILE, Hydromatic, 4 dr., R&H. Benton, 435 Lafayette Pl. NE, AL 5-4466.
- GAS RANGE, 4-burner, \$25. Breitenbach, AM 8-7900.

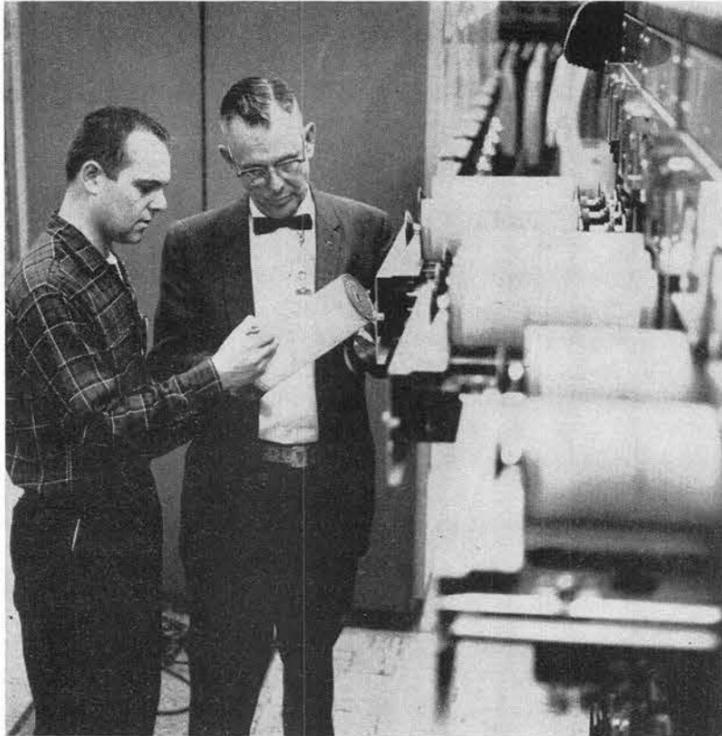
- REFRIGERATOR, Frigidair, 10.5 cu. ft., 40 lb. freezer compartment, \$80. Randall, AX 9-3935.
- MOUNTAIN ACRE, Holiday Hills, electricity and community well. Peecher, AM 8-6186.
- 2 MOUNTAIN ACRES, Holiday Hills, electricity and community well. McWherter, AX 8-0879.
- THAYER 6 yr. crib, blond, teething rail all around, no mattress, \$12. Fleming, AX 9-6833.
- BABY CRIB, Junior Line, maple color finish, \$8. Lambert, AL 6-2043.
- 17" TV, Hoffman, \$30. Kash, CH 2-3721.
- '50 CHEV., 2 dr., good 2nd car, \$140 or best offer; 10" table saw, less motor. Stoever, AL 6-2439.
- LUGGAGE, men's 4 piece Samsonite, brown, \$55. Hopkins, DI 4-4925.
- OUTBOARD MOTOR, 30 hp Mercury, \$180; also racing lower unit and bronze propellers for 16 hp Mercury. Patterson, AX 9-5152.
- CHIHUAHUA-POMERANIAN, mixed breed, spayed female, black short hair, 11 months old, \$10. Adams, AX 9-0454 after 5 p.m.
- '59 OLDS, dynamic 88, 2 dr., HT, R&H, power brakes, steering, low mileage, will consider smaller car. Fawver, AX 9-1820.
- 12 YEAR old sorrel male w/saddle, bridle, halter, \$225; 4 year old white mare w/saddle, bridle, halter, \$225. Baker, ext. 54137.
- RIFLE, 30.06, Nato "60", 4 x scope, \$100; pistol, .22 automatic, Ruger, w/shoulder holster, \$30. Sharp, AX 8-2702.
- LAMBRETTA motor scooter. Ruff, AM 8-9969.
- 20 ACRES in Manzano mountains, pine trees, joins national forest, electricity on property, title insurance, \$90/acre cash. McKinley, AM 8-4779.
- 16' BOAT, fiberglass, lights, 45 hp Mercury electric start generator, Imperial tilt trailer. Bourne, AX 9-0788.
- '59 METROPOLITAN, \$950; '56 Volkswagen deluxe, new trans., brakes, \$800. Trumble, AM 8-7477.
- VACATION TRAILER, 19' self contained, \$1300; 5 piece dinette, \$30. Roane, 2909 Garcia NE, AX 9-1761.
- 3 BDR HOUSE, 1 1/2 baths, corner lot, \$11,500, will trade equity or handle R.E. contract. Cejka, AX 9-2441.
- DINETTE SET, chrome, pearl gray table 30" x 52" including 10" extension, four red chairs, \$25. Clark, 9913 Leyendecker NE, AX 9-4819.
- AKC registered Dachshund puppies, red, 2 months old. Neel, 3617 Espejo NE, AX 9-9309.
- LIMED OAK furniture, dining table and 6 chairs; speaker enclosure with Knight KN800 speaker. Goen, AL 6-6385.
- 9' x 12' early American style "Pioneer" rug by Waite, reversible, pad included, \$45. Mehl, 1604 Boyita Lane NW, DI 4-9103.
- '52 TUDOR CHEV., std. shift. Melancon, AX 8-2006.
- '56 FORD, 4 dr., fardomatic, R&H, \$550. Womack, AL 6-0642.

- COOLER, 4000 cfm, \$75; play pen, folding, \$7.50; complete baby bed, folding, size 6 mo., \$7.50. Burkhardt, 299-1798.
- KENMORE 30" gas range, w/griddle, wide oven, timer; Blizzard "300" portable air cooler; Wizzard evaporative type car cooler. Amos, 298-4470.
- '58 FIAT "600", \$550; Quick-Kamp camping trailer, \$175. Everett, 9627 Towner NE.
- TRAILER, one wheel, steel box, custom tubular canopy frame w/canvas cover, \$125 including hitches. Mortley, AL 5-1420.
- '58 BOAT, fiberglass, 15-ft., remote control, cover, floating cushions; Mastercraft trailer; 35 hp Johnson, 2 pressure tanks, used 40 hrs. Swain, 298-5018.
- 4 SEARS 670-15 1st line whitewall tires, \$50; 2-speed exhaust window fan, \$15; umbrella-type clothes pole w/line, \$10. Miller, AM 8-1939.
- 18" HAND LAWN MOWER w/catcher, Sears best, \$16. Littrell, 2820 California NE, AL 5-4620.
- SIGNAL GENERATOR, Superior TV-50, \$25; also '49 Jeepster, make offer, Phillips, AX 9-3177.
- AUTO PULSE fuel pump, 12 volt, \$15. Loncharich, AX 9-0835.
- '55 OLDS 98, 2 dr., full power. Leonard, AL 5-4825.
- '53 PLYMOUTH, 4 dr., sedan, \$300. Gasser, AL 5-4562.
- '47 CHEV. panel truck, four-speed transmission, \$150. Cihlar, AX 8-0948.
- 17" TV, table model on rolling stand, \$40 or best offer. Richter, AX 9-0409.
- '57 MERCURY, 4 dr., R&H, power steering and brakes, one owner, \$995. Day, AM 8-8038.
- '58 EAGLE scooter, extra parts; '59 Cushman, \$185; Polaroid w/flash \$85; sewing machine, \$85; GE double oven, button controls, \$125. Brown, DI 4-6831.
- NO QUALIFYING, assume GI loan, 3-bdr., 1 1/2 bath, pitched roof, attached garage, near schools, shopping, \$13,500; 17" RCA TV, \$35. Howell, AX 8-4001.
- BICYCLE, boys, 24"; play pen, wooden, \$5. Schreiner, AM 8-4159.
- '57 DODGE Sierra stationwagon, all powered, 9 passenger, must sell, \$785. Katzenstein, DI 4-1931.
- 3 BDR, den, 1400 sq. ft., fireplace, screened patio, drapes, carpet, below appraisal, \$500 down, \$14,500. Thunborg, 1837 Britt NE, DI 4-2089.
- '60 ZENITH 21", blond console model TV. Hanson, AM 8-9428 after 5:30 p.m.
- 16' VACATION TRAILER and hitch, sleeps 4, \$150 or best offer. Norwood, AL 5-4639.
- BATHINETTE, Honeysuckle, \$11; Craftsman wood lathe, 8 1/2" swing, 8 tools, \$24; Porta-cooler, evaporative, \$12; electric lawn mower, \$12. Riedel, DI 4-5652.
- DRAPERY MATERIAL, 12 yds. with a geometric pattern, cost \$2.30 yd. will sell for \$1 yd. Hoagland, AX 9-7097.

- TRADE, electric Kenmore clothes drier, never been used, 3 years old; for gas drier. Tatum, TR 7-0997.
 - TRADE city corner lot for what have you? Chavez, AL 5-5461.
 - ADULT DUCKS (white), 1 male, several females; small evaporative, portable cooler, suitable for one room. Palmer, DI 4-5342.
 - PIANO, upright, reasonably priced; call Saturday or Sunday. Alderman, CH 2-6077.
 - TO JOIN CARPOOL or ride from vicinity of Girard and Indian School Road NE to Bldg. 800. Miller, AL 5-1324.
- FOR RENT**
- 5 ROOM HOUSE, University area, kitchen, LR, bdr., bath & DR, air conditioned, water-garbage paid, \$65. Glory, CH 2-1586.
 - 2 BDR HOUSE, furnished, many built-in features, knotty pine panelling, 2-car garage, workshop, water-garbage paid, \$100. 423 Cornell SE, Leonard, AX 9-4083 after 5:30 p.m.
 - HOUSE at 10713 Claremont Ave. NE, 3 bedrooms and den. Carpenter, AX 9-4436.
- LOST AND FOUND**
- LOST: Gold woman's wedding band w/leaves carved on it, silver/turquoise earring, tan nylon rain coat, gold earring w/pink and maroon pearls, glasses w/black rims and rhinestone, red Bank of NM checkbook, round brown coin purse, hand-tooled leather wallet, safety-dark glasses. Lost and Found, ext. 26149.
 - FOUND: Green gloves, brown tobacco pouch, safety glasses, gold wedding band. Lost and Found, ext. 26149.
- LIVERMORE FOR SALE**
- OLSEN Reversible rug and pad, 12 x 17, taupe tweed, \$125. Walker, HI 7-4887.
 - BUZZ SAW attachment for Black & Decker 1/4" home utility drill, \$8; blue serge suit, coat 36, pants 28"-30", L 31", \$20. Overturf, HI 7-4669.
 - 3 BDR HOUSE, 2 baths, wall-to-wall carpeting, draperies, copper-tone kitchen, built-in range, oven, refrigerator, freezer, garbage disposal, insulation, \$21,500. Glaze, HI 7-4167.
 - '53 CHEVROLET, club coupe, ww tires, R&H, new seat covers, standard shift, \$200. Brown, Ext. 2281.
 - WOLLENSAK Tape Recorder, hi-fi stereo, model T-1515-2, weight 20 lbs., 10-watt amplifier, with tape microphone and cords, \$127. Farmer, HI 7-4407.
 - WESTINGHOUSE refrigerator, \$40, gas stove, 4-burner, full size, \$40. Henderson, HI 7-4417.
 - '59 EL CAMINO, Corvette engine, rebuilt, 303 cu. in., 3 two-barrel carbs, bored and balanced, polished heads, new running gears. Harban. Ext. 2392.
 - WEBCO REGENT tape recorder, original price \$239, selling price \$125. Knudsen, Ext. 2509.
- LIVERMORE WANTED**
- FEMALE BOXER PUP, up to six months old, registered preferred. Dominguez, HI 7-4463.
- LIVERMORE FOUND**
- FEMALE TABBY CAT, "calico" colored. Watson, HI 7-5017.
 - SUNGLASSES, dark green glass, gold rim on top, found in Sandia parking lot 3/24/61. Employee Services, Ext. 2252 or 2253.

WANTED

- CARPPOOL from New Hampshire and Aztec (Dellwood Addition) to 880/892. Sundberg, AX 9-2177.
- GOOD quality 8" H.F. speakers. Newman, AX 9-2729.
- RIDE or join carpool from 4312 Goodrich NE to bldg. 880. Shieler, DI 4-8617.
- TO TRADE equity in 2 Bdr. trailer for equity in 3 Bdr. house in heights. Constant, AM 8-7014 after 5 p.m.



PROGRAMMING DRUMS control radiant heat facility tests. Test time, temperature, heat flow and power are represented as a line on the drum. Instruments "read" these lines. At left: D. F. McVey with A. R. Elwell. Tests rarely last more than 20 seconds.

Sandia Host to Research Groups At Upper-Air Sampling Symposium

Representatives from a dozen government and private research organizations participated in the Upper-Atmosphere Sampling Symposium held at Sandia Laboratory this week at the request of the AEC Division of Biology and Medicine (DBM).

The welcoming address was given by C. F. Quate, Vice President, Research, after which J. Z. Holland, Chief, Fallout Studies Branch of DBM, outlined the motivations and purposes for the meeting.

All meeting arrangements and direction of the technical program were the responsibility of J. D. Shreve (5111).

During the opening session on Debris Dispersal Computations, a joint technical paper was presented by Harold Davis (5152) and J. R. Banister (5153). The afternoon session on Meteorological Forces included a discussion of "Effects of Large Diurnal Density Changes on Outer Atmosphere Circulation" by H. W. Church (5111) and a paper entitled "A High Altitude Wind Observation from Nuclear Explosion 'Teak,'" given by J. W. Reed (also 5111).

D. Q. Matejka (7131), J. R. Banister and D. J. Rigali (7132) participated in a joint presentation of the Theory and Proposed Experiments for Study of Diffusive Collection. Mr. Banister also moderated the panel discussion of Sampling Principles and Rockets, in which H. R. Vaughn (7131) served as a panel member.

Other sessions included the major topics: Instrumentation and Experiment Philosophies, Adequacy of Radio Assay Techniques, and Debris Measurements and Interpretations.

Feature of the banquet on April 12 at Kirtland Officers Club was an address by E. A. Martell of the Air Force Cambridge Research Laboratory on "Scientific Implications of an Upper-Atmosphere Sampling Capability."

In addition to Cambridge Research Laboratory, other govern-

ment agencies and laboratories represented included the U. S. Weather Bureau, AEC Division of Reactor Development, Los Alamos Scientific Laboratory, Lawrence Radiation Laboratory, Argonne National Laboratory, and the Air Force Special Weapons Center.

During the final day J. D. Shreve moderated a round robin discussion to evaluate the degree of interest of represented agencies in sampling air above 100,000 ft. This is above the ceilings for balloons or U-2 planes, which are currently used for stratospheric samplings.

Two Leagues Open To Softball Players

Frank Duggin (4314) has been elected president of the Sandia Laboratory Men's Softball Association which will be composed of two leagues.

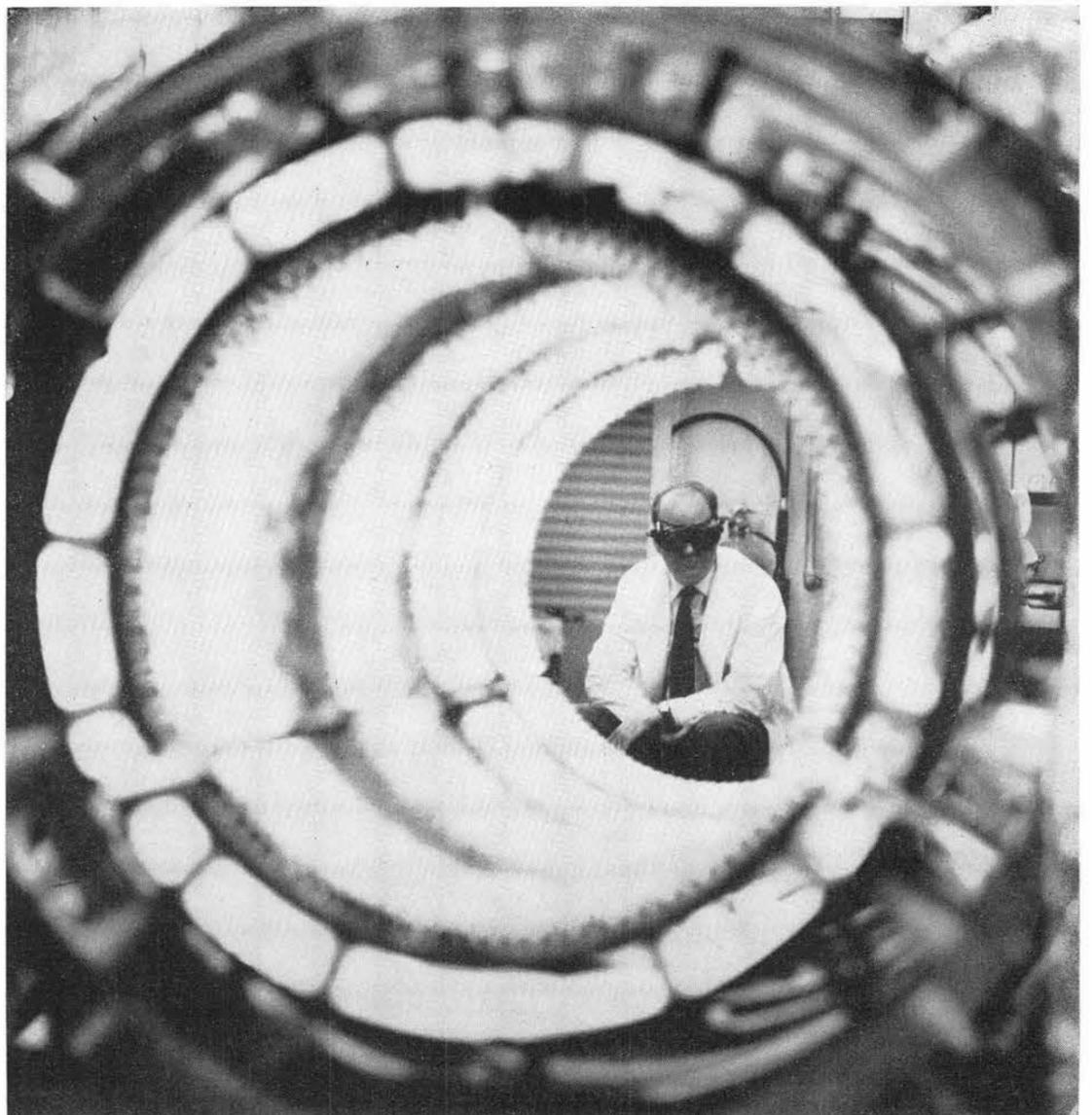
Gene Glaze (1432) and Ron Bump (7523) will represent the American League, and John Souza (2543) and Earl Morris (7164) will represent the National League.

Anyone interested in joining either league should contact Ken Guerin or Fred Romero (3122), ext. 29157. Play will begin about May 1.

Twisted Knee Downs Sandia Safety Record

Last week Sandia Laboratory's safety record tumbled with the near fall of a janitor. The man was sweeping stairs in Bldg. 802 and as he reached the bottom step he lost his balance. He grabbed a hand rail to prevent falling but he did twist his knee in the process. The injury required hospitalization.

At the time of the accident, Sandia Laboratory's safety record had climbed to 40 days or 1,400,000 employee hours without a lost-time injury.



GLOWING QUARTZ LAMPS yield temperatures up to 5000° F. J. A. Barber is seen through the area where test units will be mounted. He is shown checking heater for burned out lamps.

Sandia Radiant Heat Facility Provides White Hot Re-entry Environment

As a missile descends from space and enters the thin air of the earth's upper atmosphere, friction causes it to glow white hot.

Sandia Laboratory's radiant heat facility in Area III duplicates the heat developed in this event much the same as the real thing, both temperature-wise and time-wise.

Inside the earth-covered building heating "arrays" create temperatures up to 5000° F. in approximately one second and are able to heat the test specimen to 3000° F.

"How fast a unit heats up depends upon the size, density and nature of the material," says A. R. Elwell (7323-4). "Several factors must be considered when the test is planned.

"For example, the facility must

heat a test sample at a certain rate to a certain temperature, and must hold it there for a certain length of time. Also, control curves must be plotted and transferred into programs for the automatic control equipment. And the design of the heating array must take into account the physical limitations of available power and the performance characteristics of the quartz infrared lamps," Mr. Elwell says. "We spend as much as three months planning a series of tests on a single type of test specimen."

A. R. Elwell, J. A. Barber, and D. F. McVey are responsible for designing tests. A. E. Astorga, D. C. McFall, J. M. Stomp, M. B. Sanders, J. E. Breitenbach, D. R. Rice, and James Brandolino prepare test specimens, arrange test

setups and conduct the tests. All are in High Temperature Section 7323-4. Supervisor is Elmer White.

The heart of a re-entry environment test is the heat generating equipment — a circular arrangement of hundreds of tubular quartz infrared lamps and reflectors. Water is circulated around the electrical terminals to prevent melting of the terminals while a blast of compressed air cools the reflector and quartz lamps.

The heat-generating units are built in Sandia's Development Shops. The lamps are purchased commercially.

Experiments have also been performed using graphite heating elements instead of the lamps. "We have achieved a temperature of about 6200° F. with graphite," Mr. Elwell says, "but so far we have not been able to precisely control the time element, which is a prime factor in this kind of environmental testing."

A test rarely lasts more than 20 seconds. Most tests are aimed at determining the unit's ability to withstand quick temperature changes. A few have been conducted to study performance of components inside the missile during the heating.

The facility has power channels and control equipment to handle eight separate heating arrays which pull approximately 20 million watts.

Sandia to Participate In Volleyball Tourney

Second annual invitational volleyball tournament for Sandia Corporation, Kirtland Air Force Base, Sandia Base and Manzano Base will be held next week at the Sandia Base gym.

On April 17 and 18, two games will be played each night, starting at 7 and 8 p.m. The final three games of the double elimination tournament will be played on April 19, 20 and 21. Game time will be 7 p.m. each night.

Twelve players have been selected to represent Sandia Corporation in the tournament.



INTENSE HEAT makes necessary insulation and cooling measures in the radiant heat facility. Working on the unit are J. E. Breitenbach and James Brandolino of High Temperature Section 7323-4.

Sandia's Safety Record

**Sandia
Laboratory
HAS WORKED
385,000 MAN HOURS
OR 11 DAYS
WITHOUT A
DISABLING INJURY**

**Livermore
Laboratory
HAS WORKED
4,729,000 MAN HOURS
OR 1881 DAYS
WITHOUT A
DISABLING INJURY**