

special

ENROLLMENT

NOV. 1-30

health care

Plan

COVERAGE EFFECTIVE DECEMBER 1

DESIGNED TO PROTECT YOU AND YOURS AGAINST HIGH COST OF MEDICAL CARE



S. P. Schwartz

### S. P. Schwartz Marks 30 Years With Bell System

Completing 30 years with the Western Electric Company on Nov. 15 will be S. P. Schwartz, vice president and general manager of Sandia Corporation.

Mr. Schwartz first was employed by Western Electric as an engineer. He subsequently held various supervisory positions with those organizations of the Company responsible for the manufacturing and installation of communications equipment and later became associated with the air defense projects which the Company was doing under contract to the U. S. Air Force. He has held his present position at Sandia since 1957.

Mr. Schwartz was born in Hazelton, Pa., and attended Lehigh University in Bethlehem, Pa., where he received his degree in electrical engineering in 1926.

## Health Care Enrollments High, Open Through November

As the Sandia Lab News went to press early this week, enrollments for Sandia's Health Care Plan were coming in rapidly. Jack Maffit, supervisor of Services and Benefits Section 3122-1, which administers the plan, reported that prior to the opening of the special enrollment 68.8 per cent of all Sandia employees were enrolled in the plan and that as of the end of the first week of enrollment, this

figure had risen to 72.3 per cent. Some 2500 employees not presently enrolled in the Health Care Plan are being given the opportunity to do so during this special enrollment period which will extend through the month of November.

In addition, employees already enrolled may add dependency coverage at this time if they wish. Employees desiring to enroll are

urged to contact their division supervisors who will provide enrollment cards and explain features of the plan. Personnel of 3122 are also available, ext. 52136, for Health Care Plan counseling.

Monthly cost of the plan to the employee is \$2.24 for single coverage, \$11.24 for employee and one dependent and \$12.40 for employee with two or more dependents. Sandia Corporation pays an ad-

ditional \$2.00 of the monthly premium for each employee enrolled. Payments are made by payroll deduction.

Main feature of the plan is payment of 80 per cent of medical costs, within the plan's provisions, for covered employees.

Coverage will start Dec. 1 for employees who enroll during this month.



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ALBUQUERQUE, NEW MEXICO

NOVEMBER 13, 1959

## Construction at Sandia Booms, \$4,300,000 in Projects Going

The face of Sandia Laboratory changes daily.

In the lobby of Bldg. 800 a new reception area is completed and refurbished. New metal and glass gate houses stand at the entrances to the Tech Area. In Area III a giant hole has been gouged in the earth and a two story reactor vessel waits to be installed. A Radiant Heat Facility, Complex Wave Facility, Acoustical Test Facility and Vibration Facility are under construction.

In Tech Area I a new three story environmental laboratory, Bldg. 861, is ready for partitions and installation of equipment. Bldg. 841, a new specialties building for The Development Shops, grows with steel girders daily. New sidewalks and paving run throughout the area.

In Coyote Test Area a new field headquarters building is almost ready for occupancy.

Dozens of other projects are under way. A reclamation facility, Bldg. 870, is almost complete. Additions are being made to the Van de Graaff facility, Industrial Hygiene Bldg. 868 and to Medical Bldg. 831. A new metal cutting facility in Bldg. 851 is being built.

A hundred other smaller projects ranging from a new console room in the Wind Tunnel Facility Bldg. 865 to a masonry wall around substation No. 2 are under way.

Total cost of construction currently (Continued on Page 4)



HUGE HOLE in the earth marks location of Sandia Engineering Reactor Facility in Area III. Workmen are currently pouring concrete base for the reactor pressure vessel. In the background can be seen the partially constructed cooling tower.

### Sandia All-Stars Clash With Base Thursday, Nov. 19

Sandia Corporation's All-Star football team will be battling to retain possession of the traveling trophy they won two years ago from the Sandia Base Military All-Stars when they tangle again Thursday night, Nov. 19.

Game time is 7:30 p.m. on the Sandia Base football field which is located west of the Provost Marshal's office. The traveling trophy will be presented to the winners at the end of the game.

Jack Dyer (3121) has been named head coach for Sandia's team. Assisting him will be Ron Zottnick (3111), backfield coach, and Jim Brock (1612), line coach.

Employees selected to represent Sandia Corporation are as follows: Jack Thompson and Milton Stackhouse (both AEC), Joe Costales (4153), Pat Moore and Joe Teague (both 1332), Joe Abbott (1521), Julian Lovato (4411), Clyde Hughes (4412).

Ron Bump (5523), Gil Andersen and Allan Ness, (both 4413), Jerry Cole and Tom Tormey (both 4254), Dan Power (5241), Jim Johnson (5243), Charles Salazar (2722), Seyfred Toledo (2711), Buddy Sanchez (3464), Sonny Sanchez (3461), Lon Kracko (1652), Mal Woodward (1614) and Jack Karcher (1612).

### TV Show Will Feature Sandia's 'Sandy Mobot'

"Sandy Mobot," Sandia Corporation's robot mobile remote handler, will be featured on the television series "Johns Hopkins File 7." John Colp (1626) will demonstrate the robot.

The half-hour program will be presented over KOAT-TV, Channel 7, at 3 p.m. on Sunday, Nov. 15.

Sandy, to be used at Sandia's nuclear reactor facility, will dominate the 30-minute program, showing off his many intricate abilities.

## All-Time Safety Record of 116 Days Without Injury Achieved

An all-time record of 116 days worked without a disabling accident has been achieved by Sandia Corporation employees. This is 4,088,000 employee-hours on the job without a lost time injury.

"This is a record of which every employee may well be proud," A. B. Metzger, manager of Safety Engineering Department 3210, says. "It indicates what can be accomplished by the combined efforts of us all and extends beyond that. It also shows that our people have been spared the pain and suffering which results from unnecessary chance-taking.

"The sole objective of the Corporation's safety policy is to preserve life and limb and prevent suffering. The record serves only to indicate how closely the Corporation's policy is being followed."

According to National Safety Council statistics on industries performing work comparable to Sandia Corporation, Sandia's out-

standing safety record shows that Sandia employees, through personal exercise of caution, have been spared 1,648 days of suffering and consequent lost time. Some 28 disabling injuries at work have been prevented. Not only have employees benefited by this accomplishment but Sandia Corporation has gained 1,648 additional days of productive work,

according to the statistics.

"Sandia employees have demonstrated what can be done by exercising care and this should prove to be an inspiration to continue the safe practices," Mr. Metzger said. "Through the continued application of reasonable care, we should be able to continue this splendid record for many months to come."



Sandia Corporation Has Worked 116 Days Without a Disabling Injury

HERE'S WHY...

Because Sandians don't bank on common misconceptions such as: accidents always happen to the "other fellow" or that accidents are the inevitable price of progress.

## Sandia Technical Papers Sent To AEC Information Service

Sixty-eight technical papers by Sandia Corporation authors were sent during the past three months to the Technical Information Service at Oak Ridge, Tenn., for use in the Civilian Application Program of the Atomic Energy Commission. The papers were given standard distribution and made available to the public through the Office of Technical Services, Department of Commerce, Washington 25, D. C.

Among those not previously reported in the Sandia Lab News were the following: "Subsurface Nuclear Explosion For Seismological Studies During International Geophysical Year," W. R. Perrett (5112); "Electrical Operations Manual For The Sandia Corporation Twelve-Inch Wind Tunnel," M. G. Baker (5142); "Folded Wire Structures As Receiving Antennas," C. W. Harrison, Jr. (1423);

"Analysis of Wind-Tunnel Dynamic Stability Testing Methods and Data Reduction" and "Pressure Calibration Of A Reflection Plane In The Sandia 12-Inch

Transonic Wind Tunnel," R. N. Leach (5142); "The Construction Of Geothermal Steam Power Plants Utilizing Nuclear Explosives," R. H. Carlson (5112); "A Study of The Error Involved In The Near Use Of A Radia Interferometer," G. J. Simmons (5243); "Ignitron Firing," F. M. Stolt (1265); "A Summary Of Available Information On The Vertical Motions Of Air In The Troposphere," B. N. Charles (5121);

"Cushioning Materials for Packaging—A Sandia Corporation Bibliography," Frances Strachwitz (3421); "Transport Theory and Spectral Problems," G. M. Wing (5126); "Microbarograph Instrumentation," H. E. Hansen (1231);

In addition to those listed above, the following papers have been added to the Sandia Reprint and Monograph Series: "High Time Resolution Telemetry By Microwave RF Link," C. E. Ingersoll (5231); "Accuracy and Reliability of the Sandia 220-mc Telemetry System," J. H. Scott (5255).

Back from Military

Back from military duty, Larry Alton returned to his job in Section 8143-2. He was inducted into the Army at Fort Ord, Calif., where he took his basic training last June, then took a four-week advanced infantry training course. His period of training ended Oct. 11.

Larry first joined Livermore Laboratory in June 1958 and was assigned to a project engineering division.

Happy Memories

F. G. Shaw (2711-2) and his wife celebrated their 30th wedding anniversary Nov. 9 with a dinner at Robin Hood Inn. They were accompanied by their two sons who are in military service.



Rose Hainlen (4152)

Formula for Health Care Protection

\$15,000  
\$26.88 per year = 558.04 years

Maximum benefit under Sandia's Health Care Plan is \$15,000. It would take a single employee paying a monthly premium of \$2.24 (or \$26.88 annually) 558 years to pay this amount into the plan.

This is a lot of protection for very little money. In addition, Sandia's health care plan will reinstate the \$15,000 maximum credit after \$1000 in benefits has been received, provided the employee receives approval from Sandia's Medical Department to return to work.

Medical costs can be staggering. Major surgery and a stay in the hospital could easily cost \$1,000 or more. Extended illness and hospital care would triple this amount.

Sandia's Health Care Plan is tailor-made to take care of these catastrophic costs. Within the provisions of the plan, 80 per cent of your medical bills would be paid.

Look at it this way: while you enjoy good health now, budget a little each month through the Health Care Plan to take care of the costs of illness or accident should it strike. For very little you can buy a lot of peace of mind.

Party Scheduled

Organizations 4100 and 6000 will hold a joint Christmas party on Friday, Dec. 11, at the Coronado Club. Activities will start at 6:30 p.m. with a buffet dinner, followed by dancing to 1 a.m. to the music of Al Hamilton. "Tiny" Garrison will be master of ceremonies. Tickets are now on sale at \$3 per person.

Memorial

A check for \$70 has been presented to the local unit of the American Cancer Society in memory of Gisela Cultreri, wife of Elio Cultreri (3211-1), who died last month. The money has been contributed by friends of the couple and Elio's co-workers.

Double Luck

Mexico beckons to Jacob Isoma (4221-4) at vacation time. His most recent trip was a motor tour to Mexico City, Cholula, Puebla, Cuernavaca and Taxco with four days in Acapulco before his return via the west coast.

At Mazatlan Jake caught two seven-foot 110 lb. sailfish from the fishing boat Yaqui. The tackle battles were recounted many times after his return to co-workers in Bldg. 840.



SAILFISH, BEWARE of Jacob Isoma (4221-4). These two seven-footers didn't heed the warning and were landed off Mazatlan, Mex., by the Sandian.

Pius X Spaghetti Dinner

If leftover turkey begins to pall your appetite by Nov. 29, several Sandians are helping to arrange the third annual spaghetti dinner of the Pius X Home and School Association for the benefit of the school's athletic program.

Walter Westman (1541) and George Porter (3131) are co-chairmen and sub-committee heads include Robert Kindley (1284) and Robert Duke (4122).

The dinner will be served Sunday afternoon and evening in the school with tickets for the general public at \$1 for adults, 50 cents for children.



HONORED GUESTS at a recent Salton Sea buffet party were (l to r): Mr. and Mrs. Chenault Davison (4582) and Mr. and Mrs. Sylvan Harris (4580). The affair was held at San Felipe Lodge.

Engagement

Joyce L. Paul (8212-3) announced her engagement to Harold J. Kleve of Mission San Jose recently. The couple plans to be married in January.

Joyce has been with the Livermore Laboratory since August 1959.

Back at Work

Department 8220 is glad to see Karl Tucker (8224-1) back at work after an extended illness.

Betty Pickel (4300) returned to work this week after recent illness.

Sunshine-Bound

Three Sandia employees are attending the national meeting of the Operations Research Society of America in Pasadena, Calif., this week. They are Don Peterson (5122), Stoughton Bell (5122) and Dallas Sasser (5121).

Moving Time

Mr. and Mrs. D. R. Wilkinson (1263-1) recently moved into their new home at 3804 Hilton NE.

Their First Home

Best wishes are extended to Curtis M. F. Anderson (4233) and his bride, the former Erleen Filsinger, who are now at home at 340 Espejo NE. The couple was married Oct. 3 at the First Congregational Church.

Sick List

Co-workers of Wanda Shult (8213-2) wish her a speedy recovery from her recent illness.

Wishes for a quick recovery are also extended to Norman Jackson (8152-2), who recently underwent an operation.

Another Sandian on the sick list is Laurene Dubuque (5125), who has been off work since September.

3460 Dines, Dances

Graphic Arts and Classified Records Department (3460) will hold their annual dinner-dance at the Coronado Club, Saturday, Nov. 21. A buffet dinner will be served at 6:30 p.m. followed by dancing to the music of Tommy Kelly and his band.

Committee for the event includes Gail Ward, chairman, Nellie Sanchez, Dee Fenstermacher, Betty McKenzie, Wayne Hancock and Doris Welch. H. W. Maglidd is honorary chairman of the group.

Indians Dance

Devotees of Indian lore will have ample opportunity during November to observe several traditional dances. Nov. 13-15 Zuni pueblo, south of Gallup, will celebrate its annual fiesta.

Sweet Tooth

The Camp Fire Girls fifth annual candy sale in Albuquerque will be held through Nov. 22 with Dwayne Mozey (1224) serving as chairman of the candy sales committee.

"The girls hope to sell 55,000 boxes this year," Dwayne said, "with the proceeds going into the summer camp development fund."

The candy will be sold door-to-door and are two varieties: pecan patties or an assorted creme box. Dwayne notes, "Placed in a freezer, the candies later may be used for Christmas presents."

Sympathy

To Nyrah Marchant (2721) on the death of her father on Oct. 25 in Ft. Scott, Kan.

To Victor Gabaldon (2721) on the death of his brother on Oct. 19 in Belen.

To Glenn Haughness (2721) on the death of his mother on Oct. 27 in Albuquerque.

To Hugh Lewis (2721) on the death of his father-in-law on Oct. 27 in Corning, Ark.

To Anna Averyt (4131) on the death of her mother Nov. 3 in Wilson, Okla.

Speaking of Reporters

Nine Year Service at Sandia Helps Rose Hainlen Perform Reporters Duties

This is another article telling of the volunteer reporters who contribute to the Sandia Lab News.

Rose Hainlen has only been the Sandia Lab News reporter for Cost and Accounting Department 4150 since last January, but she maintains "I've been at Sandia since the year one!"

Despite the gross exaggeration Rose has become well acquainted with employees in the different organizations during her nearly nine years at the Corporation.

Her son, John, was employed in Sandia's Services and Benefits Division before entering military service four years ago.

Rose is from Trinidad, Colo., and she still makes frequent visits there. She and her husband

used to do lots of hunting and fishing but now, she says, "I leave it all up to him. Target shooting or eating trout is more to my liking."

Bowling, golf, swimming and knitting are Rose's main interests. She bowls in a major league and a handicap league. "Gardening," she says, "is also a favorite occupation, but I'm not a rose grower."

Congratulations

Born to:

Mr. and Mrs. Sidney B. Gasser (3111-2) a son, David Frederick, on Oct. 27.

Mr. and Mrs. H. O. Pierson (1625) a son on Oct. 29.

Mr. and Mrs. W. F. Stearns (1625) a daughter, Susan Diane, on Oct. 28.

Mr. and Mrs. Keith Wilson (3423-1) a daughter, Kristen Mavournin, on Oct. 20.

Mr. and Mrs. E. E. Ives (1264-2) a son, Jeffery Lankford, on Oct. 28.

Mr. and Mrs. John C. Lucas (8121-2) a son, John Charles, on Oct. 23.

Mr. and Mrs. Bob Guerin (4113) a son, David Vincent, on Oct. 29.

Mr. and Mrs. Sam Gaeto (4113) a son, Paul Joseph, on Nov. 1.

Mr. and Mrs. Charlie Chavez (3442) a son, Norman Gerard, on Oct. 14.

Mr. and Mrs. B. H. Anderson (1625) a son, Scott Hamilton, on Nov. 4.

Mr. and Mrs. Ernest Wolff (2622) a son, Ernst Paul, on Nov. 2.

Mr. and Mrs. E. T. Schreiner (2561) a daughter, Ellen Annette, on Oct. 22.

Mr. and Mrs. J. S. Souza (2543) a son, Stephen Allen, on Oct. 27.

Mr. and Mrs. B. M. Stringer (2543) a son, Brian, on Oct. 29.

Mr. and Mrs. J. Luna (2543) a daughter, Priscilla, on Nov. 1.

Mr. and Mrs. William Brady (4424-2) a daughter, Sarah Ann, on Sept. 25.



Wilma Parsons (3126)

Take a Memo, Please

It's not old-fashioned to be safe. At the same time, don't expect another person to obey a rule you violate. Set a good example by being safety conscious.



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# Climbing Steep San Francisco Hills By Cable Car Unique Thrill for 15 Cents

Many of us who live in this modern technological age sometimes wonder how it would be to live back in the "good old days" in the era of the gaslight, horse and buggy, and other symbols of the recent past.

Livermore Laboratory employees who may have this desire are fortunate in living close to San Francisco where one of the world's oldest systems of mechanized public transportation is still in operation—the cable car.

## Busman's Holiday

A Sandia Corporation engineer, Paul Rowe, supervisor of Product Engineering Division 8143, recently took a busman's holiday in San Francisco to learn about the workings of this quaint mode of transportation. Paul was recently transferred to Livermore from Albuquerque and cable cars were new to him. Here is what he found.

Inaugurated in 1873 by a Scotch inventor named Andrew Hallidie, "Hallidie's Folly" has been in service ever since. Paul discovered, in fact, that some of the original equipment is still in use at the power house to haul the 26 cars up the steep grades of the city, operating 20 hours a day, seven days a week.

Paul, who has a bachelor's degree in mechanical engineering and a master's degree in aeronautical engineering, was surprised to find that a single 750 horsepower motor is enough to operate the entire system. The motor drives a shaft on which the power wheels revolve. These wheels, some in use since the system was first put into operation, pull the cables through ten miles of underground troughs beneath the tracks.

## Friction Device

A friction device in the cable car, operated by a "grip man," engages the moving cable and propels the car at a top speed of nine miles per hour up and down hills, some with grades in excess of 19 per cent.

Cars running downhill help to pull other cars up the hill, but perfect balance is seldom achieved. A car struggling up Powell Street, loaded with 35 seated passengers and 40 strap-hangers, doesn't gain much assistance from a nearly empty car clanging down the other side of the hill. The motor back at the power house makes up the difference.

Occasionally the grip fails, as it did while Paul was riding on a car. To prevent the car from careening down San Francisco's precipitous slopes, the grip man has four methods of stopping the car. If the cable is intact and the grip



**CABLE CAR** manpower was supplied by Paul Rowe (8143) when he toured San Francisco's famed cable car system recently. Here, as passengers frequently do, he helps turn car on turntable at the foot of Market and Powell at the beginning of the line.

is working he can tighten up on the cable and thus prevent the car from going more than the nine miles per hour speed of the cable.

## Wheel Brake

He also has a conventional wheel brake in which a metal shoe clamps down on the wheel rim. A third technique utilizes a wooden block which presses against the track surface. These blocks, made of pine, must be replaced every three days.

An emergency brake is used as a last resort. This brake consists of a metal wedge which is driven into the cable slot in the street. It not only stops the car immediately, but usually requires a welding crew to melt the brake from the slot.

The 19-strand cables, wound around a rope core, have a tensile strength of 130,000 pounds, and seldom break from wear. When one does break, a temporary splice is made in the street and the cable is slowly reeled into the

powerhouse where it is woven together with a splice 55 feet long. The giant splice must conform to the diameter of the cable. Fortunately the cables are replaced only once every six or eight months.

## Last Stronghold

San Francisco, the first city in the world to use cable cars, is now the last stronghold of the little hill climbers. At one time the city had 600 cars in operation on 10 lines. Today only 26 cars and three lines remain and their future is somewhat precarious, depending for their existence on sentimental San Franciscans who have long waged a battle cry with city officialdom to preserve the dwindling lines.

But for 15 cents Paul found he could still climb aboard a rickety, yet jaunty, conveyance and be treated to roller-coaster thrills, marvelous views, and the strange tunes tapped out by the grip men on the cable car bells.

## Meteorological Paper Printed

B. N. Charles (5121) is the author of a technical article appearing in the October issue of the Journal of Meteorology, a bi-monthly publication of the American Meteorological Society.

The paper is entitled "Empirical Models of Inter-level Correlation of Winds."

# Sandians Spend Summer Helping Improve La Madera Skiing Area

Avid skiers traditionally spend the summer months talking about skiing, but La Madera ski area has turned into a year-round haunt for some Sandians.

The ski talk has been mixed in with calculations of rise and lifting power, snarls at balky jeeps, buzz of portable saws, crash of timber and occasional yowl of pain.

The "blood and sweat" routine was assumed on week-ends by many Sandians and other volunteers to make possible a longer ski lift and better trail conditions.

The main project was clearing the line for installation of a 2100 ft. T-bar tow above the existing lift. The tow opens the upper area for skiing to an elevation of 10,100 ft. The new lift has a rise of approximately 400 vertical feet and a capacity of 300 skiers per hour.

Construction engineer has been Art Lawrence (1614) with assistance given by Don Cotter (1260), Ralph Deltre (5224), Bob Loncharich (5144), Don Rigali (5142) and Ray Harrison (1285).

The other big project was determining location for a trail system, feeding off the top of the new lift, and then clearing the timber and

brush from the trails. Ed Long (3422) served as trail designer and his crew included Gurdon Miller (5111), Ken Kerns (1240), John Shunny (3423), Dick Claassen (5150), Jim Manweller (1246), Keevin Moriarty (4121), Tom Sedgwick (5143), Paul Delker (3132) and Leon Smith (1310). Manager of La Madera is Ben Abruzzo (formerly of 5512).

The new upper area will permit skiing through May (there was an average of 40 inches of snow in the upper area May 15, 1959) and will disperse the crowd, expected to be larger than ever this year due to improved highway conditions.

The new Aspen Trail is one-half mile long and ends in the upper bowl. There is also a connecting trail from Aspen Trail to Ridge Trail. The new run is 20-30 ft. wide and is suitable for intermediate and advanced skiers and for controlled racing.

Another welcome change at La Madera is a mid-point loading area at tower five of the main lift. This will allow novices fuller use of the lower area yet better facilities and more room for more advanced skiers on the upper slopes.



**SIGHTING IN** on target four Sandians prepare to fire on the FBI small arms range at Camp Parks. They are (l to r) Neil Givens 8233-1, Lurl Ostrander (8231-1), Al Alford (8234-2), and Matt Connors (8231-1). Eight Livermore Sandians took the course.

# Salton Sea Gives \$800 to Valley Fund Campaign

The first Imperial Valley United Fund drive conducted at Salton Sea Test Base resulted in a total contribution of \$803.

Solicitors contacted 103 Sandia Corporation employees and 15 employees of the Prophet Company. The final figures included \$150 donated by the Corporation.

Last year 11 towns in the Imperial Valley were consolidated for United Fund drive purposes. Participation by Sandia employees was relatively small because the Base was not solicited until late in the drive. This year 62 employees are contributing on a year-round basis through regular payroll deductions.

The drive was spearheaded through the efforts of the Community Council. The council's chairman, Roger L. Kurlinski, also served as drive captain.

The solicitors were: organization 4581—D. S. Cain, R. E. Mobley and B. L. Workman; organization 4582—I. V. Beall, J. A. Culver, R. E. Fair, S. R. Pickens and Edward Sehn; organization 5262—M. J. Boyer, E. R. Dirnberger and R. L. Kurlinski, and San Felipe Lodge—Lillian Farrants.

# Material Developments To Be Discussed at Research Seminar

Four speakers from Los Alamos Scientific Laboratory will discuss "Recent Material Developments and Applications" at a Development Seminar Thursday, Nov. 19, at 9 a.m. in Bldg. 815.

The men and their fields of work are James Gore, electrochemical; Gale Hanks, fabrication; James Church, plastics, and Stephen Stoddard, ceramics. All four are from the Chemical and Metallurgical Group.

Tickets are not required for the meeting, according to Fred Sweet (1621), who is in charge of arrangements for the seminar.

# Livermore Sandians Complete Pistol Class

In the event of a national disaster or emergency at the Livermore Laboratory a group of Sandia "minutemen" will be on hand to help maintain security.

Under the guidance of Lurl Ostrander, supervisor of the Physical Security Section (8231-1), five Sandia employees selected by the security division have completed the rigorous FBI small arms course. Three more Sandians will fire the course in the near future, Lurl said.

The first group to qualify on the course were Hal Watson (8212-1), Ken Finders (8221-2), Neil Givens (8233-1), Don Wheaton (8224-1) and Al Alford (8234-2). Firing with them were three members of the Security Division (8231). They were Lurl Ostrander, Matt Connors, and Jim Spirup. Still to fire are Howard Cole (8121-2), Carter House (8213-2), and Arnold Schuknecht (8213-2).

The FBI course requires that each shooter fire 50 rounds in six minutes and 10 seconds, using various firing positions at distances ranging from seven to 60 yards from the target. Guns used for the course were .38 caliber revolvers. The group used a pistol range set up at nearby Camp Parks.

High score in the group was attained by Ken Finders, with a total of 98 out of a possible 100 per cent.

# Military Reservation Open to Hunters

Sandia Corporation employees will be permitted to hunt deer, birds and rabbits on Sandia Base Reservation on designated days during the hunting season.

Any person wishing to hunt must go to the Military Police Duty Officer or Desk Sergeant, Building 220, at least 24 hours prior to hunting. He must show a valid New Mexico license and furnish the following information: name, organization, place of employment, estimated time of departure for withdrawal area, destination within withdrawal area, and estimated time of return.

The withdrawal area will be identified to hunters when they check in with the Military Police prior to hunting.

Following are the type of game and authorized dates for hunting: Deer—bucks only, with rifle, now through Nov. 22, 1959; migratory waterfowl—Nov. 20, 1959 through Jan. 8, 1960; ring-necked pheasant—Nov. 28-29, 1959; quail—now through Jan. 8, 1960; rabbits—anytime.

# Paper Published

The October issue of the Journal of Geophysical Research, published by the American Geophysical Union, contained a technical article jointly written by C. E. Abraham and W. H. Bradford (both 5122).

The article was entitled "Extension of a Definition of Constancy to Noncircular Normal Distributions."



**QUICK AND READY** reminders of open safes are these magnetized, plastic cards which were recently distributed by the Security Operations and Information Division 3422. Julie Bode (1283-3) places one of the red, white and black signs on the safe in her office.

# Building Projects

rently progressing at Sandia Laboratory is \$4,321,600. Total of completed construction for the year will reach about \$4,269,600. The pace will continue through 1960. On Jan. 1, it is estimated that \$4,967,500 in construction projects will be under way.

Sandia's Plant Engineering Department 4540 is carrying a tremendous load riding herd on the many construction jobs.

Plant Engineering Department submits budget figures to the AEC on all Sandia Laboratory construction projects and generally plans the construction. On the majority of projects such as new buildings, Plant Engineering prepares design criteria and preliminary layouts for use by architect-engineering firms employed by AEC Construction Branch, ALO, and contracts for the construction are let by ALO.

On smaller projects, usually totaling no more than \$15,000, Plant Engineering handles all details. Contracts are let through Sandia's Purchasing Organization 4300.

The Department also performs inspection of all construction before acceptance from contractors.



**REACTOR PRESSURE VESSEL** stands in Area III undergoing inspection prior to installation. Sandia's Engineering Reactor Facility is currently under construction and scheduled for completion early in 1961. Cost of construction is placed at \$1,808,600.



**RADIANT HEAT FACILITY** in Area III takes shape as workmen work on the inner walls of the environmental test facility. Construction will cost \$279,990 and will be completed in January.



**NEWLY ENLARGED AND REFURNISHED** reception area in Bldg. 800 is shown in this photo. Desk at left is reception counter for the many supplier representatives who visit Sandia Lab.



**NEW SPECIALTIES BUILDING** for the Development Shops (Bldg. 841) is under construction in Area I. Steel framework of the new building is shown in this photograph. Valued at \$977,700, construction project is scheduled for completion about June 1960.



**NEW ENVIRONMENTAL TEST LABORATORY** Bldg. 861 is virtually completed with only installation of partitions and equipment remaining to finish the project. Here I. N. Humble (4541-1), Plant Engineering Department project engineer for construction; C. F. Bild, manager of Materials Standards Department 1620; B. S. Biggs, director of Materials and Standards Development 1600, J. F. Reid (4543-3), Plant Engineering project engineer for occupancy of the building, and H. C. Biggs, manager of Physical and Electrical Standards Department 1650, inspect the second floor of the east wing of the building. The three story building is valued at \$1,642,000 and includes cost of moving.

## Sandians in Tonopah Help Rescue Efforts to Reach Trapped Miners

Sandia men stationed at Tonopah Ballistics Range in Nevada last month assisted in attempts to rescue three miners trapped in a shaft of the Mowhawk silver mine, 50 miles to the northwest. A. P. Gruer, manager of Test Range Department 5260, made arrangements for installation of a single sideband two-way radio system and a supplemental electric generator.

Ben Edwards and Al Bolles (both 5261) worked through the night after the radio was in operation to provide communications between the remote minesite and Silver Peak, 28 miles away where the nearest telephone was lo-

cated. They took orders for shoring timber and other equipment to be hauled to the scene of the rescue operation.

Later the Sandians helped set-up field telephones in different parts of the mine and the mine office at Silver Peak where relatives and friends of the victims were gathered.

The three miners were trapped 300 feet inside the mine when a cave-in occurred Oct. 16. More than 50 volunteer miners from California and Nevada worked in shifts in attempting to reach the trio. Their attempts were called off by safety engineers Oct. 29 due to extreme danger from further cave-ins.





**FLAG FOOTBALL STARS**, the Sandia "T's", are shown after beating the Sandia Rejects 13 to 7 recently. Kneeling (l to r) are Daren Bainter (8232-1), Jack Simpson (8114-1), Hanloy Quock (8114-4) and Dave Rierson (8114-1). Standing (l to r) are Don Wagner (8212-2), Hal Watson (8212-1) and team co-captains, Marlin Pound (8212-1) and Mike Ferrario (8114-1). Not pictured are: Ray Gott (8115-2), Ron Puckett (8114-3) and Lee Nation (8114-3).



**T. A. KANNEMAN** (1264-2) working under the Educational Aids Program for a Master's degree in electrical engineering will complete the requirements by June 1960. He said, "I feel it is a necessity for a person in a technical field to study different approaches to his chosen pursuit and to remain proficient and up-to-date. Although formal schooling is not the only way to accomplish this, for myself it seems the best method."



**C. J. MacCALLUM** (5150) is currently in his fifth semester under the Educational Aids Program and nearing completion of work for a PhD degree in physics. He said, "Primarily because I desire a PhD degree. While this is not important as it affects my present job, it may be important in the future. I like to keep in contact with academic life and will probably maintain some connection even after obtaining my degree."



**LEO H. BRESSAN** (1652) is currently enrolled in an Electronics V class in the Evening School. In the past he has completed other courses in the Evening School and at the University of New Mexico. He said, "My reason for going to night school is to gain additional knowledge and experience beyond the requirements of my job. I find the classes interesting and beneficial. If you don't grow as an individual, you're wasting your time," he added.

## Calendar

### Scientific and Technical Meetings

**Scientific and Technical Meetings**  
**Nov. 16**  
 American Institute of Industrial Engineers  
 Sandia Base Officers' Club  
 Social Hour: 6 p.m.  
 Dinner: 6:45 p.m.  
 Technical Meeting: 8 p.m.  
 Speaker: J. P. Molnar, President, Sandia Corporation  
 Topic: "The Industrial Laboratory"  
 For reservations contact J. W. Sims (4111), Ext. 31173

**Nov. 16**  
 IRE Professional Group on Space Electronics and Telemetry  
 Hospitality Room, Albuquerque National Bank, Washington and Central NE  
 Technical Meeting: 7:30 p.m.  
 Speaker: Lt. Col. James L. Beaver II, Kirtland AFB  
 Topic: "AFSWC High Altitude Rocket Sounding Systems"

**Nov. 16**  
 Society for Nondestructive Testing, Los Alamos Section  
 Los Alamos Golf Club  
 Dinner: 6:30 p.m.  
 Technical Meeting: 8:15 p.m. at Los Alamos Health Research Laboratory Auditorium  
 Speaker: E. W. Milburn, Manager, Western Zone Sales, X-ray Dept., Industrial Section, General Electric Co., San Francisco, Calif.  
 Topic: "Non-Radiographic Applications of X-rays"  
 For more information call K. MacMillan, Los Alamos 799

**Nov. 17**  
 American Meteorological Society  
 Room 253, Administrative Bldg., UNM Campus  
 Technical Meeting: 7:30 p.m.  
 Speaker: Dr. William C. Spreen  
 Topic: "Air Weather Service Climatic Center"  
 Refreshments will be served. Public invited.  
 For more information contact B. N. Charles (5121), Ext. 48161

**Nov. 17**  
 Institute of Radio Engineers Section Meeting (Sponsored by PGNS)  
 Radiation Laboratory, Lovelace Clinic  
 Technical Meeting: 8 p.m.  
 Speakers: Drs. White, Grossman and Lovelace  
 Topic: "The Medical Aspects of Radiation"  
 For more information contact R. C. Spence (5223), Ext. 23249

**Nov. 17**  
 Instrument Society of America  
 Western Skies Hotel  
 Luncheon: 12 noon  
 Tour of Ideal Cement Co. Tijeras Plant 1 to 2 p.m.  
 Speaker: Robert Biggs, Plant Manager, Ideal Cement Co., Tijeras Plant  
 Topic: Operation and Process Control of the Tijeras Plant  
 For reservations contact Victor Meyers, AX 9-4149 or AM 8-2474

**Nov. 17**  
 Society of Technical Writers and Editors, Albuquerque Chapter  
 Coronado Club, Staff Dining Room  
 Meeting: 7:30 p.m.  
 Speaker: Arthur P. Lites (5320)  
 Topic: "The March of Lithography"  
 Also two film subjects on photo lithography: "How To Make a Good Impression" and "A Better Run for Your Money"  
 For more information contact Jim Murray or Dick Jackson (4421), Ext. 39238

**Nov. 18**  
 American Society of Mechanical Engineers  
 Triangle Restaurant  
 Dinner: 6 p.m.  
 Technical Meeting: 7:30 p.m.  
 UNM EE Bldg., Room 201  
 Speaker: Murray Kaness, Director of Engineering, Friez Instrument Division, Bendix Aviation Corp.  
 Topic: "Instrumentation for Global Weather Observing and Forecasting"  
 For more information contact Art Clark (1232), Ext. 46131.

**Nov. 19**  
 American Society for Metals  
 Hoyt's Dinner Bell  
 Social Hour: 6 p.m.  
 Dinner: 6:45 p.m.  
 Technical Meeting: 8 p.m.  
 Speaker: Earl R. Parker, National Trustee of ASM  
 Topic: "Recent Development in Materials Research"  
 For more information contact H. R. Holmes (1621), Ext. 31258

**Nov. 19**  
 American Society of Safety Engineers—American Welding Society—Joint Meeting  
 Leonard's Restaurant  
 Dinner: 6:30 p.m. (ladies invited)  
 Technical Meeting: 7:30 p.m.  
 Speaker: Robert Mitchell  
 Industrial Hygiene Group, Health Division, LASL  
 Topic: "Health Hazards in Welding"  
 For more information contact V. G. Nelson (1621), Ext. 32246

**Nov. 19**  
 American Society of Tool Engineers  
 Leonard's Restaurant  
 Dinner: 7 p.m.  
 Technical Meeting: 8 p.m.  
 Speaker: E. S. Roth (2562)  
 Topic: "Positional Tolerance and Maximum Material Condition"  
 For more information contact Doug Spence, CH 7-0361, Ext. 457

**Nov. 24**  
 Institute of Aeronautical Sciences  
 Kirtland AFB Officers' Club  
 Social Hour: 6 p.m.  
 Dinner: 7 p.m.  
 Technical Meeting: 8:15 p.m.  
 Speaker: Alan Pope (5140)  
 Topic: "Aerodynamic Research in Europe"  
 For more information call Roger Tate (5144), Ext. 39254

**Amateur Radio Caravan Club of New Mexico**  
 Lovelace Clinic Radiation Lab  
 Meeting: 8 p.m.  
 Program: Discussion of new plans and programs for coming year. Presentation of prize to winner of treasure hunt on Nov. 11.  
 For more information call Bob Foster (1651), Ext. 27231.

This information compiled by New Mexico Council of Scientific and Technical Societies.

### The Inquiring Reporter Asks

# Why Do You Continue School While Having a Full Time Job?

Some 1,369 Sandians are currently enrolled in classes in three educational programs sponsored by Personnel Research, Training and Education Department 3130.

This is 19 per cent of employees at Sandia Laboratory. Such a large scale "urge to learn" is the result of the special climate at Sandia. Sandians participating in the work of the nuclear weapons program utilize a tremendous accumulated technical knowledge. The work itself has long been labeled "on the frontier of knowledge."

The result is a drive for self-improvement, an effort to gain more knowledge for use on the job and as a satisfaction to the individual employee.

Coupled with this drive is an active policy of the Corporation to encourage employees to expand their education. Under the Educational Aids Program employees are encouraged to continue university work. Sandia pays half of tuition costs, with some time off the job provisions for students to attend classes. Five hundred Sandians are currently enrolled in this program.

The Sandia Evening School provides facilities and instructors for many courses of special interest to employees that are not available elsewhere in the community. Typical of these courses would be electronics, blueprint reading, and welding. Employees currently enrolled in this program number 465.

Staff Technical courses are conducted out-of-hours, mainly during the noon hour. Corporation employees are instructors for these college level studies that include such courses as machine design, analytical geometry, differential equations, technical Russian, and fundamentals of tran-



**DENNIS HAYES** (3462) working under the Educational Aids Program for an electrical engineering degree said, "I go to school because my real interest is in a field that requires a college education. I'm fortunate to be able to work a night shift in Sandia's print shop and take classes during the day. My job is a good one but my ambition is doing research in electrical engineering or physics."



**G. C. BEATRICE** (4412) who has taken Evening School courses since Sandia began the program is currently enrolled in Welding II and Shop Metallurgy. He said, "My experiences have taught me that with new advances in all fields of work you must keep up with new and better methods of doing things. Attending school is the one way of obtaining this."

sistor applications. College credit is not given for these courses but successful completion is recorded in the employees personnel record as in the case of students in the Evening School. Some 404 Sandians are enrolled in this program.

Benefits to the employee for participating in the program are many and varied. Foremost is the satisfaction of self-improvement and educational growth of the individual.

At Sandia it's recognized that

experienced employees, who develop skills and knowledge on the job and through additional study, are better prepared to take on more responsibility and advance when opportunities occur.

Typical of Sandians furthering their education are the five interviewed here. Most of them are married and have families but still find time for the necessary study at home. Although varying slightly their answers point to the reasons for continuing school when they work full time.

## Welcome Newcomers

Oct. 26-Nov. 4

Albuquerque	
Anna I. Carlin	5544
Lois W. Class	3423
Alfredo Chavez	4574
J. D. Creek	5536
William C. Crosley	4111
Sally M. Donovan	3126
Phyllis A. Eskew	3126
Mary A. Fergesen	3126
Marjorie A. Geisler	3126
Diego Gonzales	4574
*Thomas J. Hoban	5213-2
Helen M. Johnson	3126
Harriette J. Melton	3461
Marilyn N. Overton	4132
Emery Postenrieder	3466
M. Frances Robards	3126
Donna J. Seibold	3126
Dick M. Shead	4413
Arizona	
Darrel E. Riggs, Tempe	3452
California	
Bobby G. Allen, Santa Cruz	8232-1
Barbara J. Dolstra, Pleasanton	8212-3
Harry B. Aiken, San Diego	8114-5
Ronald A. Johnson, Hayward	8232-1
Helen M. Bond, Livermore	8224-2
Jam's R. Grund, Pittsburg	8222-1
Ralph W. Yarbrough, Livermore	8222-1
John A. Manrow, Jr., Livermore	8223-1
Robbie L. Myers, Livermore	8212-3
Illinois	
Walter Selig, Chicago	8115-2
Indiana	
Franklin L. Paris, Jr., Lafayette	5141
Ohio	
Wayne G. Ebaugh, North Canton	4411
Oklahoma	
Cecil M. Morrisett, Oklahoma City	4543
Wisconsin	
Howard C. Phillips, Janesville	4254
* Denotes Rehired	
Returned from Leave	
Margalee M. Parkhurst, Albuquerque	4413
Larry R. Alton, Livermore, Calif.	8143-2

### Christmas Fast Approaching . . .

# Organizations Planning Charity Projects

The Christmas season of giving is fast approaching and Sandia employees are again planning their annual charity projects in lieu of exchanging cards with co-workers.

The Salvation Army, Department of Public Welfare, Catholic Charities and Elks Club will cooperate in locating families needing help. Their needs will then be listed with the Albuquerque Council of Social Agencies, which will

again serve as a "clearing house" for donors and recipients.

As was the case last year, the names of individuals and families in need of food or clothing will not be given out in order to avoid embarrassment to individuals and to insure privacy for those who do not wish to be identified as objects of charity.

Another Council service will be to help extend the benefits of December giving through the

other 11 months of the year. It was pointed out that there is a year 'round need for imperishable food and clothing to be distributed to less fortunate families.

Cash contributions are especially welcomed by the Council or any of the four agencies coordinating the Christmas program. Oftentimes special food or clothing is needed and must be bought.

Many Sandia organizations are already appointing committees to

handle details and plan the type of donation for their particular groups.

Last year, ideas for Christmas giving were abundant and included food baskets, toys, clothing, CARE packages, and cash donations. Many groups gave cash and gifts to the Bernalillo County-Indian Hospital, All Faiths Home, St. Anthony Boys' Home and others. One organization provided milk for a family for a year.