



John McLay

John McLay Heads New Department at Bell Telephone Labs

John McLay, Jr., returned to Bell Telephone Laboratories on July 16 to head the new Submarine Cables Repeaters Department at Murray Hill, N. J.

Mr. McLay had been on loan to Sandia Corporation for nine years and had been manager of Electronic Systems Department 1420 for the past three years.

A member of Bell Labs since 1946, his initial work was on the technical staff of the Military Electronics Department at Whippany, N. Y. His new assignment, as the department name implies, will include design and development of transistorized repeaters for submarine cables. He will work under E. T. Mottram, director of the Submarine Cable Laboratory.

While at Sandia, Mr. McLay was elected to the Coronado Club board of directors twice and was currently serving as president. He had been a member of the Heights YMCA board of directors since its inception and was chairman of the membership committee. He was also past president and on the board of directors for both the Albuquerque Figure Skating Club and the Duke City Aquatic Association.

NORAD Commanders Play at Coronado Club Tomorrow Evening

The NORAD "Commanders" will play at the Coronado Club tomorrow night, 9 p.m.-1 a.m. Tickets are \$2 per person, but be sure to call the Club office to see if tickets are still available.

Fall bowling leagues will be organized at a meeting in the La Cana Room at 7:30 p.m., Thursday, Aug. 9. Men's, women's, and mixed leagues will be scheduled at this time.

Plan now to reserve Friday, Aug. 24, for an evening of dancing to the music of Perez Prado. Price per couple—\$5.

ISA Members Elect J. H. McCutcheon President of Section

James H. McCutcheon (1321) was recently elected president of the Albuquerque Section of the Instrument Society of America.

The other newly-installed officers are: Dave Dimick (Minneapolis-Honeywell), vice president; Ray Rachbowski (Western Engineering), secretary; and John Smalley, Sr. (5311), treasurer.

The outgoing president, John Patrick (7312), reported on growth of the Section over the past year, and the success of the Educational Seminars sponsored in Albuquerque by the ISA. A. P. Gruer (7530) told of progress to date of the International Telemetry Conference of which he is North American chairman.

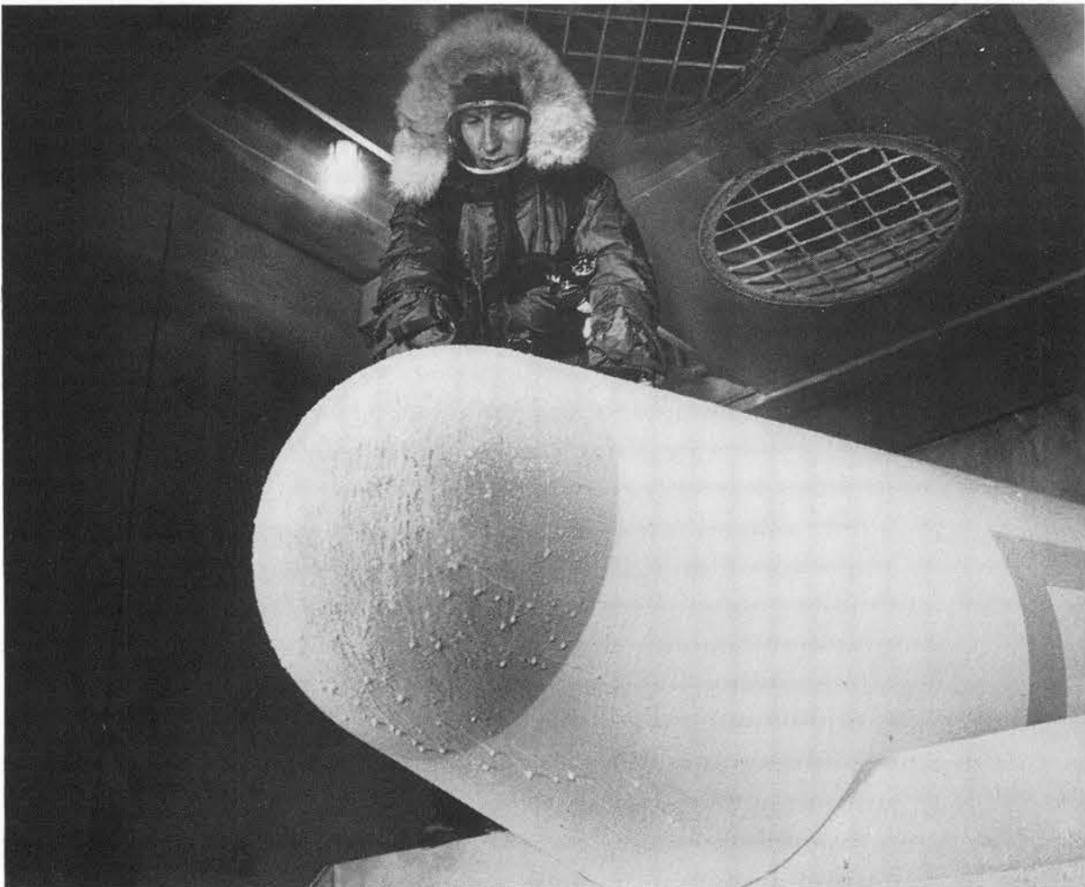
The ISA, a national technical society, represents the instrumentation field in this area. Locally it is a member of the Council of Technical and Scientific Societies, and nationally it is affiliated with the National Engineers Joint Council.

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SURFACE condition of sample nose cone undergoing extreme low-temperature test in environmental test chamber is checked by M. B. Sanders (7323-2). He wears protective clothing and warm-air apparatus.

Experiments Run Both Hot and Cold In Climate-Controlled Test Chamber

A huge metal door groans upward, yawns open, and a wall of fog falls from behind it and spreads in a white delta along the floor. You can feel a chill around your ankles as the frigid air spreads.

The unit is a climatic test chamber operated in Bldg. 6630, Area III, by Climatic and Acceleration Section 7323-2. As fog rolls out of it, the blunt end of a sample nose cone, crusted with white rime, emerges to view. The temperature of the chamber interior: -100°F. As the surface of the cone is shocked by the warm air of the room, flakes of hoarfrost drop in a miniature snowfall from its underside.

Three men—Robert W. Galbraith, David A. Rice, and Maynard B. Sanders (all 7323-2)—operate the chamber. "Statistics give some idea of its versatility," Bob Galbraith commented. "Temperature in the chamber can range from 100 degrees

below zero to 250 degrees above." The chamber is refrigerated by four 100-hp compressors. Electricity is used for heating.

The size of the chamber—it is as big, literally, as a small barn—doesn't lessen its versatility. A typical temperature change for the empty chamber—surrounding temperature to -100°F.—can be made in two hours. Further, altitudes from 2,500 ft. below sea level to 100,000 ft. above can be simulated.

"Although tests aren't run with people in the chamber, we have protective clothing and breathing apparatus to allow a man to enter for short periods, if necessary," Bob continued.

The size of the chamber: 10 ft. by 10 ft. by 35 ft. long. It can be divided in half by a door which seals it into two separate compartments. Conditions in these compartments can be separately controlled. For example, one half can be cooled to subzero temper-

ature; the other can be heated. The center door can be rapidly lifted, and the test item moved from one environment to another. In this way, climatic shocks can be inflicted on the test sample.

Near the chamber is another large structure lined with refractory brick. It is an oven, capable of attaining a range of temperature up to 1400° F. It can be used with the other chamber to increase the amount of temperature shock on a sample. Gas burners heat the oven.

"The two facilities provide good variable sets of temperature and altitude," Elmer White, supervisor of Section 7323-2, concluded. "They can be controlled with great accuracy."

Remote control of the chamber and oven is possible from another building in Area III. Closed-circuit television and complete remote controls provide operators with nearly as much control as they would have if they were present in Bldg. 6630.

A. M. Hill Elected MIT Club Head

The MIT Club recently elected Arthur M. Hill (3131-2) president for the coming year.

The other new officers include: Billy Caskey (7125-2), vice president; T. J. Raftery (8243-1), secretary-treasurer; and Col. Leo A. Kiley, Jr. (DASA), executive committee member.

The group has an informal luncheon at the Coronado Club on the second Thursday of each month. All Massachusetts Institute of Technology alumni are welcome; no reservations are required.

Average Sandia Employee Is 38 Years Old, Has Worked for Corporation Seven Years

Insight into Sandia Corporation may be gained through study of statistics released by Employee Records and Processing Division 3153.

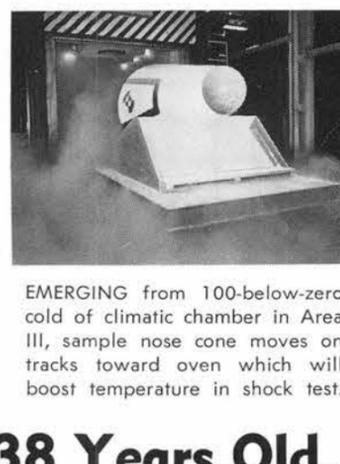
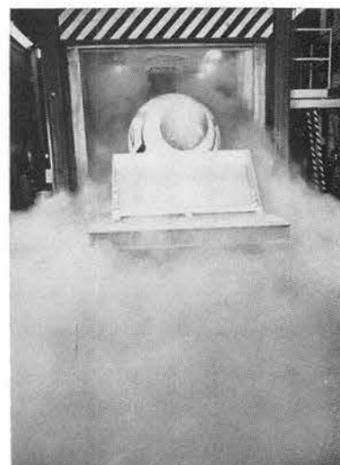
In fact, it might be possible to spot the average Sandia Corporation employee who is 38 years and seven months old and has worked at Sandia for seven years.

At Sandia Laboratory there are

6736 employees. Livermore Laboratory has 1005 employees, and 190 employees are at Tonopah Test Range and sites.

Not all employees are old hands, however, as 686 have been with the Corporation less than a year. On the other hand, there are 961 employees with 12 or more years of service.

Academic degrees abound at Sandia—136 employees have doc-



EMERGING from 100-below-zero cold of climatic chamber in Area III, sample nose cone moves on tracks toward oven which will boost temperature in shock test.

tors degrees, 598 have masters degrees and 1804 have bachelors degrees.

There are 1974 technical staff members and 1326 technical staff aides. In addition, there are 276 draftsmen staff assistants. Sandia has 510 administrative staff members, 208 administrative staff assistants, 275 additional non-graded employees and 3371 graded employees.

Editorial Comment

It's Everybody's Baby

Recently we heard someone talking about the image Sandia Corporation has in the community. He thought it was good and we do too, but we know it's always susceptible to change. The comment prompted us to put down these thoughts.

While the Public Relations Department has the function of bringing about public understanding of the Corporation, in actuality our public impression, corporate image, or public reputation is basically in the hands of the employees.

A good name that has taken years to gain can best be maintained by continuing practices which established it in the first place. These actions can reaffirm the Corporation's good name and make new friends for Sandia; for, it is a fact, every employee influences. Whether or not he is consciously trying to influence, the effect of his attitude, or the lack of it, does register.

Sandia employees make friends during the hours when their automobiles with identifying decals occupy a good bit of street space. Good driver manners pay off. Even when a Sandia employee-owned car is alone in traffic it is making, for better or worse, a Sandia Corporation image.

Then too, Sandia employees help maintain friendly community relations for their company by maintaining sound personal financial relationships with business firms. Of course, the individual's public image is made at the same time.

Sandia people have established a good reputation for community service. The folks who work at Sandia are generous with their time. Church, service groups, charitable organizations, schools, and youth organizations can attest to the community service record of employees.

It's easy to keep a good public image; let's continue to practice the Golden Rule. Building and maintaining good public relations is not limited to the Public Relations Department. It's everybody's baby.

Progress in Highway Safety

Safety experts are becoming alarmed at the outpouring of blood-curdling statistics concerning highway accident injuries and fatalities. They claim these figures are obscuring the true progress in highway safety.

From a high of 11.5 deaths per 100 million vehicle miles in 1945, the rate was slashed to 5.3 in 1960 — and the rate was reduced even more in 1961. This outstanding progress was made during the 15 years since World War II. In those 15 years the number of cars, trucks, and buses on America's streets and highways soared from a little over 31 million to a bit more than 74 million.

There's no minimizing the importance of highway safety. Nobody wants to. But what makes better drivers is not horror but help, not scares but suggestions, not terror but teaching.

Fall Is Approaching Now It's Time for Flag Football

Services and Recreation Section 3122-2 has announced the organization of the Sandia Laboratory Flag Football Association for the 1962 season. Play is scheduled to begin Aug. 26.

Employees interested in playing flag football are requested to contact O. J. Foster or Seyfred Toledo (both 3122-2) at ext. 29157 for information.



Daphne McPeters (7164)

Take a Memo, Please

You can prevent accidents by watching out for the other person. Courtesy, kindness, consideration are all safeguards against accidents.

Two Articles Written By R. I. Ewing in Technical Publications

Articles by R. I. Ewing (5152) have appeared in recent issues of two technical publications.

"Current Guarding of Biased Electrodes" was included in the Notes Section of the May issue of Review of Scientific Instruments.

The June issue of Transactions on Nuclear Science of the Institute of Radio Engineers included his other technical article. It was entitled "Response of Silicon Surface Barrier Detectors to Hydrogen Ions of Energies 25 to 250 KEV."

LASL Scientist Speaks at Sandia Research Colloquium

Sandia Lab Research Colloquium on Aug. 8 will feature a talk by D. F. Petersen of Los Alamos Scientific Laboratory on "Biological Dosimetry in Nuclear Critical Accidents."

Mr. Petersen is a staff member in LASL's molecular radiobiology section, and is a former instructor at the University of Chicago.

Appointments to consult with the speaker may be made through R. G. Elsbrock (3211-1).

The colloquium will be at 10 a.m. in Bldg. 815. No tickets are required.

Congratulations

Mr. and Mrs. Gene Carter (1431) a son, Brian Laine, on July 18.

Mr. and Mrs. J. A. Lipham (2344-3) a daughter, Lisa Anne, on July 17.

Mr. and Mrs. Edward H. Gallegos (4152-1) a son, Christopher Frank, on July 17.

Mr. and Mrs. A. L. Stevens (7311-2) a son, Craig Aldred, on July 24.

King of the Mambo Plays at Coronado Club Friday, August 24

Perez Prado will play at the Coronado Club on Friday, Aug. 24, 9 p.m. to 1 a.m. Tickets will be \$5 per couple.

Perez Prado, known as "El Rey del Mambo," has a repertoire of Latin American "beats." His music is equally effective for listening as well as for dancing.

Prado, who was born near Havana, Cuba, has combined the rhythms of Cuba and Brazil with the Puerto Rican "Plena," and the Spanish "Paso Doble."

The Mambo is a creation of Perez Prado. He is equally at home with the Cha Cha, Rhumba, Bolero, Tango, and La Chunga.

F. C. Alexander Completes 33-Week Armed Forces Course

The Economics of National Security, a 33-week correspondence course of the Industrial College of the Armed Forces, was recently completed by F. C. Alexander (4133).

The course is regularly taught at Fort Lesley J. McNair, Washington, D. C., for officers of the military services and for civilians in government-related occupations.

The course covers economic and industrial aspects of national security. Special emphasis is given to interrelated military, logistical, administrative, scientific, technological, political, and social factors.

Supervisory Appointments

EDWARD G. DYLO to Senior Buyer, 4341, Subcontract Department III.



Ed has worked in expediting or purchasing most of his 10 years at Sandia. He was promoted to section supervisor six years ago.

Prior to coming to Sandia, he was in cost accounting for four years with Bethlehem Steel Co. in Buffalo, N.Y.

Ed received his Bachelor of Science degree at the University of Missouri.

During World War II, he served three and a half years in the Army.

JAMES R. GOODLOE to Buyer, 4371-2, Subcontract Department IV.



Jim has been at Sandia five years and during that time has worked in Purchasing Departments 4320, 4330, and 4340.

Immediately prior to employment here, he was graduated from Kansas State University with a BS degree in business administration.

Jim served four years in the Air Force, three of those years stationed at Manzano Base.

JOHN W. JUSTUS to Buyer, 4341-2, Subcontract Department III.



A Corporation employee for three and a half years, John has been assigned to the Purchasing organization the entire time.

Prior to coming to Sandia, he had been attending Law School at the University of New Mexico for a year and a half. His BA degree in business administration was awarded at New Mexico Western College.

He served two years in the Air Force.

Security Report Shows Status of Sandia's 'No-Infractions' Efforts

How're we doing? Frequently that's the question. It refers to "my department's" security record. At Sandia there's more than casual interest in security. There's enthusiastic approval for the absence of security infractions. And great satisfaction, too.

To let Sandia employees know "how they're doin'," the Lab News accompanies this article with a table telling the story. It reports the number of days each depart-

ment has gone without a security infraction since the start of the report period, Jan. 1, 1961. An infraction-free record (573 days with no infractions) is shown with an asterisk. The numbers indicate the days since the last infraction.

To help make equitable comparison, departments have been listed in three groups—each group having approximately the same exposure to violations. Group "A" has high exposure, Group "B" position would be rated as medium, and "C", low.

As of Friday, July 27

Days Without Infractions

GROUP "A" HIGH		GROUP "B" MEDIUM		GROUP "C" LOW	
Dept.	No. Days	Dept.	No. Days	Dept.	No. Days
1330	*	3310	*	3110	*
2620	*	4120	*	3120	*
2630	*	4330	*	3130	*
4170	*	5310	*	3150	*
7180	*	5330	*	3210	*
7520	*	5410	*	3220	*
7120	550	6020	*	3230	*
4410	457	6030	*	3240	*
7510	427	8220	535	3320	*
9120	388	2420	515	3330	*
9130	388	4610	497	3340	*
3450	334	5150	494	3430	*
2640	294	4210	485	4220	*
7250	276	7310	471	4250	*
7160	259	2560	431	4350	*
7320	217	1430	387	4360	*
2530	213	7230	348	4510	*
1420	209	4310	339	4540	*
4420	201	7220	337	4570	*
1440	196	5130	325	4620	416
2540	195	6010	295	4230	266
2310	188	4320	261	8240	226
8110	170	2410	238	1110	148
1410	158	4150	219	4110	133
2320	121	5420	193	4630	121
8120	118	2340	148	1120	56
7210	110	2450	145		
7130	107	4340	115		
1310	105	4130	111		
3440	79	8140	105		
7240	69	8150	101		
3460	50	8210	46		
2330	45	2440	43		
7530	43	5320	7		
3420	39				
7140	34				
7110	33				
8230	21				
1320	16				
8160	3				

*No infractions since Jan. 1, 1961
†This department organized July 1, 1961

Sandia Supervisors Assist in Workshop Presented by University

Several Sandians contributed to the program of the 1962 Custodian Workshop at the University of New Mexico July 26-27. The annual workshop is presented for custodial staffs of public schools and government agencies.

Hadley H. Rowe, supervisor of Janitor Service Section 4574-1, discussed "The Care and Washing of Carpets." "Cleaning and Scrubbing of Office Space" was presented by James H. Hall, Jr., supervisor of Janitor Service Section 4574-5. Florencio Baca, supervisor of Janitor Service Section 4574-2, presented "Cleaning and Sanitation."

One session of the two-day meeting was held in the Coronado Club's La Cana Room. During this session Frederick O. Carleton, an industrial psychologist in Personnel Research and Testing Division 3133, discussed "How to Pick Custodians." Lloyd R. Wilson, supervisor of Janitor Service Division 4574, presented "Training and Development of the Custodian." Mr. Wilson also participated in a panel discussion on general custodial subjects.

Back Issues of Lab News Needed

The Lab News office has urgent need for extra copies of two recent issues: Vol. 14, No. 12, dated June 8, and Vol. 14, No. 7, dated Mar. 30. If you have spare copies, please send them to Division 3432, Bldg. 610.

Robert E. Evans Died July 26

Robert E. Evans, a draftsman in Design Definition Division B 4412, died July 26 after a lengthy illness. He was 33.

He had been employed by Sandia Corporation for 11 years.

Survivors include his widow, three sons, a daughter, his parents in Columbus, O., and two sisters.

Sympathy

To W. D. Ingram (5133) for the death of his mother July 13.

To W. B. Benedick (5133) for the death of his sister-in-law.

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Atomic Battery Has Been in Earth Orbit for Year

The atomic age observed a milestone recently—the first anniversary of the world's first use of nuclear power in space.

The source of this power is a five-lb. "atomic battery"—the first to be used in a space satellite.

The experimental nuclear device, developed by the Atomic Energy Commission, continues to operate successfully after a year of orbiting the earth. It is generating electricity for two of the four navigational transmitters of the Transit-4A satellite launched June 29, 1961, at Cape Canaveral in a flight test.

The device is a small, lightweight thermoelectric generator fueled with Plutonium 238. It is approximately 5 in. in diameter and 5½ in. high—about the size and shape of a grapefruit—weighs 4.6 lbs. and generates 2.7 watts of electrical power. (Solar cells are providing the power for the other two navigational transmitters.)

The nuclear generator is instrumented so that its performance in space can be monitored by transit tracking stations. At the end of its first year of operation, the generator has produced 23,650 watt hours of electrical energy, the equivalent of the energy from about 2,000 lbs. of storage batteries.

Every 104 Minutes

The satellite is circling the

earth every 104 minutes in a 67 degree orbit. The log at the end of the first year of operation shows about 142,000,000 miles in 5,000 orbits. The satellite whirls 540-620 miles above the earth.

The generator was developed for the Atomic Energy Commission by the Nuclear Division of The Martin Company, Baltimore. The thermoelectric assembly was developed by the Minnesota Mining and Manufacturing Co., St. Paul. The plutonium fuel was produced at the AEC's Savannah River Plant, Aiken, S. C., and Hanford (Wash.) Works, and was loaded in a rugged capsule by the AEC's Mound Laboratory, Miamisburg, Ohio, operated by the Monsanto Chemical Co.

The plutonium-fueled capsule is located in the center of the sphere. Because the plutonium has a "half-life" of about 90 years (i.e., its radioactivity, and therefore its heat generating capability, will drop by only 50 per cent during that period), the generator has the potential for powering a space transmitter for decades.

In the generator, the spontaneous decay of the Plutonium 238 generates heat in itself and is transferred to the containment block surrounding it. Thermocouples convert some of this heat directly into useful electrical energy. The generator has no moving parts.

The operating data is being re-

laid by the tracking stations to the Johns Hopkins Applied Physics Laboratory, Howard County, Md., which developed the satellite, one of a series, for the Navy's Bureau of Naval Weapons.

The nuclear generator was developed in the Commission's systems for nuclear auxiliary power (SNAP) program. Aim of the program is the development of compact, lightweight, reliable nuclear electric devices for spacecraft and other uses. Sandia Corporation is responsible for the safety as part of the SNAP Program.

Seaborg Statement

Following is a statement by Chairman Glenn T. Seaborg on the occasion of the first anniversary of the world's first use of nuclear power in space:

"Our nation is observing a most significant milestone—the first anniversary of the world's first use of nuclear power in space. The source of this power—a tiny five-lb. atomic battery developed by the Atomic Energy Commission—is orbiting the earth on a Navy navigational satellite. The device is powering instruments which are transmitting data back to earth—doing the job which at one time would have required thousands of pounds of batteries.

"The use of nuclear energy in space is comparatively new. Its development has been accelerated

by the need for lightweight, compact power sources to operate over long periods of time.

"The atom is already providing electric power for thousands of homes. It has gone to sea and to remote areas of the world to provide man with new dimensions. Now the atom is demonstrating that it can broaden our horizons beyond the earth.

"I firmly believe that nuclear energy provides the most feasible means of accomplishing long voyages in space and many other ambitious missions of our national space program. The Atomic Energy Commission is working with several government agencies on ways to make this possible.

"We are developing, for example, a power source in support of a mission to explore the surface of the moon. There is also the fascinating prospect that nuclear-powered generators can be used in a series of satellites to provide a world-wide television network. And perhaps one day there will be a nuclear-propelled manned spacecraft spiraling out from earth on its way to Mars.

"Because of the exciting panorama of applications, the development of nuclear energy for space is most important. Mankind is only on the verge of the space age. Nuclear power will take us into this age—and close to the planets."

Sandia Speakers

Following is a list of speakers, titles, and places of presentation for talks by members of Sandia Corporation.

J. L. Colp (7112-1), "The Aerospace Nuclear Safety Program," Seminar on Applications of Nuclear Power in Aerospace, University of Michigan, Ann Arbor, July 23.

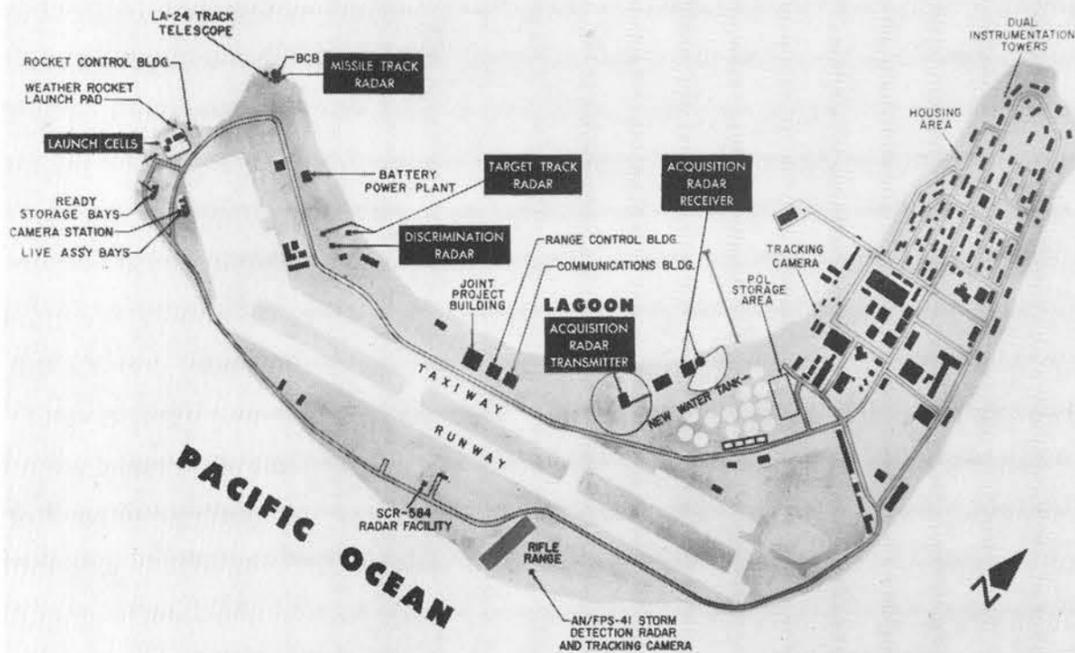
W. A. Gardner (7300), "Environmental Testing with Judgment," American Society for Quality Control, Western Regional Joint Aircraft and Missile Conference, Seattle, Wash., Aug. 16-18.

R. P. McKnight (2412-2), "A Direct Reading Voltage Divider with Standard Cell Reference," 1962 International Conference on Precision Electromagnetic Measurements, Boulder, Colo., Aug. 14-16.

C. A. Denney, C. L. Mavis, and C. J. Still (2412-2), "Microwave Pulse Power Measurements," 1962 International Conference on Precision Electromagnetic Measurements, Boulder, Colo., Aug. 14-16. Mr. Mavis will make the presentation.

M. A. Elich (2313) and H. L. Webster (2411), "Measurement Standards Personnel Training and Evaluation at Sandia Corporation," National Conference of Standards Laboratories, Boulder, Colo., Aug. 8-10.

KWAJALEIN



Nike Zeus Intercepts ICBM In Anti-Missile System Test

The Department of Defense announced July 19 that the United States on that date made the first successful intercept of a special target vehicle launched by an Atlas intercontinental ballistic missile from California. The intercept was made by the Army's Nike Zeus missile.

This successful intercept test is a part of a continuing development series to determine the full capabilities of the Army's Nike Zeus anti-missile system.

The Nike Zeus installation used in the test is on the island of Kwajalein in the southwest Pacific.

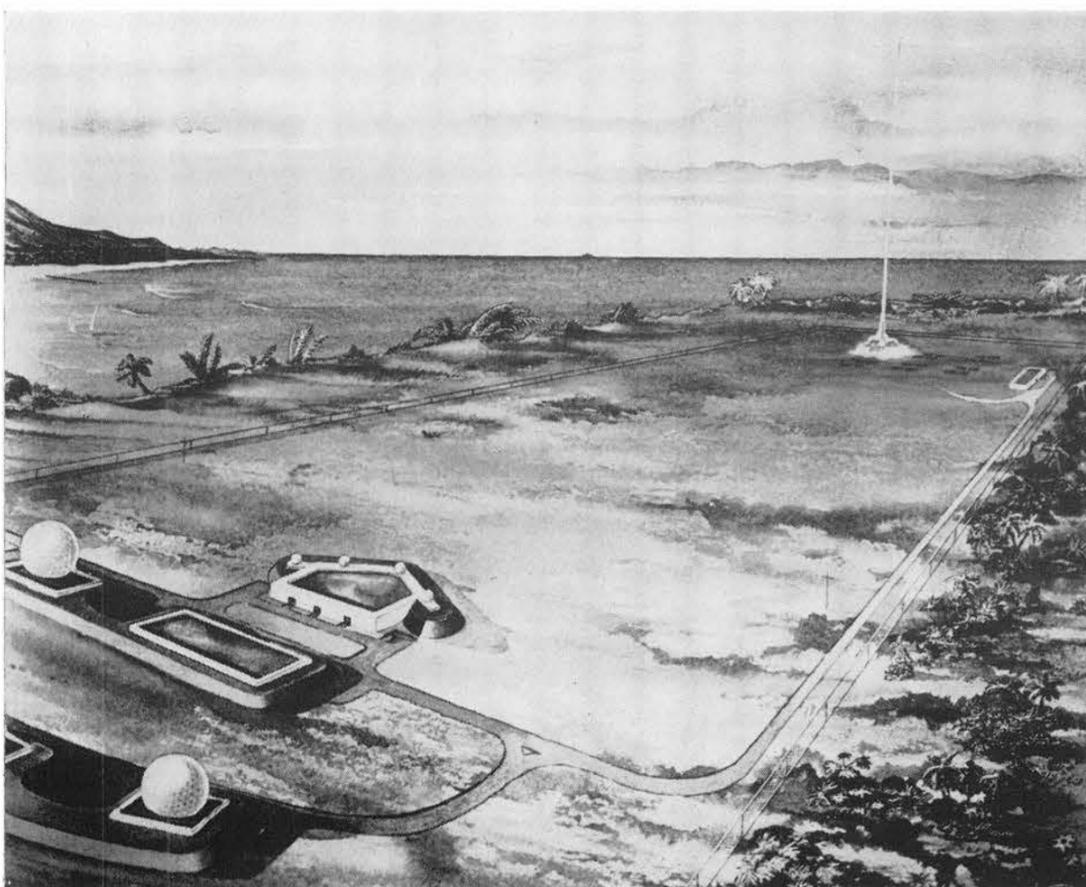
The ICBM re-entry target vehicle for the test had been launched into an ICBM trajectory at ICBM speed using an Atlas intercontinental ballistic missile booster launched by the U. S. Air Force at Vandenberg Air Force Base, Calif.

Neither the intercepting missile nor the target carried a nuclear warhead. The intercept test used extremely precise tracking equipment.

Secretary McNamara said: "This event evidences the extensive and continuing nature of the United States program to understand the capabilities and limitations of anti-missile systems. It shows that we speak of such matters from knowledge.

"Concurrently and in a coordinated fashion, the United States has been carrying out a program to insure that our missiles will penetrate anti-missile systems which might be encountered.

"These programs give us confidence that our missiles would be able to penetrate any such system which has been developed by anyone."



KWAJALEIN, largest atoll in the world and renowned battleground for American troops in World War II, measures about three and one-half miles long by one-half mile wide. The Western Pacific outpost is destined for an important role in the Nike Zeus test program. The Army plans to fire more Zeus missiles from Kwajalein against ICBM-boosted target vehicles launched from Vandenberg Air Force Base, California. This drawing shows the location of Zeus facilities including acquisition radar, target track radar, missile track radar, and launch cells. Personnel of Western Electric, Bell Laboratories, and sub-contracting companies are working as a team at the Kwajalein site.

A NIKE ZEUS system is depicted in a schematic drawing at left showing the Zeus Defense Center and a single battery, including the computer areas used for data processing. The Zeus system has but seconds to act if a warhead came hurtling through space at about 15,000 miles an hour. Such an encounter is imagined in this artist's concept where, at the lower left, an ever-alert acquisition radar detects an enemy warhead and informs a nearby computer center which, in turn, flashes the information to a Zeus battery many miles away. There, antennas lock on the incoming warhead and at the instant indicated by the target intercept computer, a Nike Zeus missile is dispatched to intercept the "enemy" warhead at a safe distance from its intended target. The U. S. Army's Nike Zeus anti-missile missile system is the only anti-ICBM system under advanced development in the free world today. Western Electric Company is the prime contractor. Bell Telephone Laboratories is directing design and development of the system for the Army Ordnance Missile Command, Huntsville, Alabama.

They See ECP Dollars Work

Sandia Laboratory employees are continuing their visits to organizations receiving help from the Sandia Laboratory Employees' Contribution Plan. These reports on where your ECP dollars go were told to the Lab News by Alfred Montoya (4573-1) and Peter Rospopo (4253-2). Their visits were to the Christina Kent Day Nursery and the Martineztown House of Neighborly Service.

Sandia Laboratory employees in their program of cooperation with the community established the Employees' Contribution Plan several years ago. Most contributions by employees are made the year around through the use of payroll deduction. Their giving effort is a 12-month matter. It is only the solicitation which comes once a year.

Here are the first-hand observations of Mr. Montoya and Mr. Rospopo.



WOOD-WORKING projects at Martineztown House of Neighborly Service keep young participants in the summer program busy. Peter G. Rospopo (4253), center, who recently toured House, kibitzes their activities.

I found busy, enthusiastic kids . . .

As told by Peter G. Rospopo

The thing that impressed me most during my visit to the Martineztown House of Neighborly Service was the enthusiasm of the children taking part in the summer program there. The kids had a tremendous willingness to participate in their projects. I left with a lasting impression: everyone was busy.

The director of the House, Miss Myrtle Walmsley, met us when we arrived and took us on a tour of the activities carried on there. She explained that the children who attend spend part of their time at a day camp in the mountains, and part in town, where they're occupied with various crafts.

The purpose of the House is twofold: to foster neighborliness among the people of Albuquerque and Martineztown, and to maintain a program to develop Christian character and citizenship by helping meet the health, educational, recreational, social, and spiritual needs of the neighborhood.

Miss Walmsley said that although the House is supported in part by the United Presbyterian Church, it is nondenominational. It accepts children of any faith in its program.

This summer, 36 children from the 4th through 6th grades are enrolled in the summer program. At the House they carry on projects that enable them to use hand tools, to paint, and to exhibit their work. We watched a group of boys wood-working in the shop. Girls were working on a similar project. Another group was rehearsing for a television program. But the impressive thing was, everyone was busy on something constructive.

The group makes day-long outings in the mountains, and one overnight camping trip is scheduled. Visits to the zoo, and to various Albuquerque industries are also on the schedule of activities.

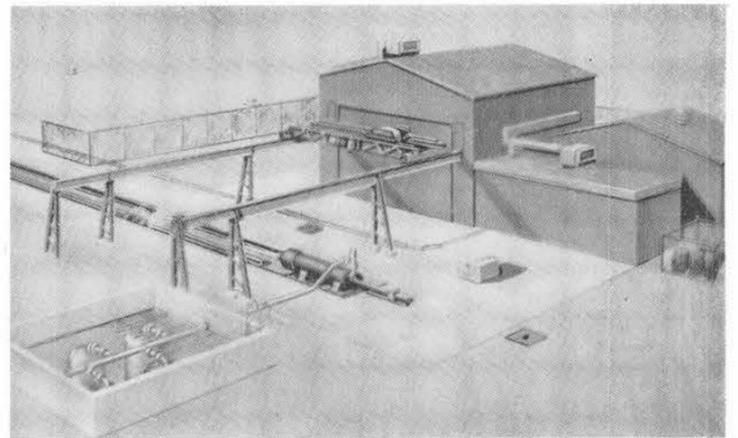
The director pointed out that the House also sponsors a program for adults of the neighborhood. It's divided into interest groups which include sewing, ceramics,

choral singing, and home nursing.

Part of the financial support comes from the UCF, to which Sandia employees contribute through the Employees' Contribution Plan. Another part comes from church support and contributions. One thing I found especially interesting was that the families who participate in the House's activities also contribute to its support.

Group activities are supervised by trained personnel. Some of the workers at the House are volunteers.

In summary, the Martineztown House of Neighborly Service, located at 808 Edith Blvd. N.E., is a worthy member of the group of agencies receiving support through the UCF and the ECP. The children at the House were busy and happy. They were working in a wholesome, pleasant environment. The House deserves all of the support that employees of Sandia Laboratory can give to it through their ECP contributions.



ARTIST'S SKETCH shows arrangement of new Dynamic Stock Test Facility planned for Sandia Laboratory's Area III. In the center, underneath the bridge crane, is a sled being propelled down the 180-ft. track.

Water-Jet Propelled Sled Test Unit To Be Built in Sandia Area III

A water-propelled sled capable of hitting 270 mph within 100 ft. is the newest environmental test facility planned for Area III. According to an announcement by the Atomic Energy Commission, Rutherford Construction Company was awarded the construction contract. The Company's bid was \$587,700.

The project will include a water jet catapult, 180-ft. sled track, 130-sq.-ft. reinforced concrete building, 1800-sq.-ft. metal building, 640-sq.-ft. metal building, large reinforced concrete pit, and associated ventilation, plumbing, heating, and air systems.

Installation of communications, instrumentation, lighting systems, fencing, and concrete paving, round out the job requirements.

The water jet catapult will consist of a 396-in.-diameter chamber containing a piston with a maximum stroke of eight and one-half ft. and four air accumulators which provide the air to activate the piston. The accumulators, connected to the chamber by means of a fast-opening valve, will have a total capacity of 360 cu. ft. of air held at a maximum pressure of 3500 lbs. per sq. in.

The piston will eject a five-and-one-half-in.-diameter jet of water from the chamber at 600 to 700 ft. per second. The jet will

enter an opening in the rear of the sled and emerge after a turn of about 180 degrees. A full stroke of the piston will discharge about 60 cu. ft. of water.

The jet will exert about 300,000 lbs. force on a stationary sled. A loaded sled weighing 3000 lbs. can be accelerated to about 270 mph in 100 ft.

The sled will strike a 20,000-lb. steel and lead block at the end of the track; or with the block removed, the sled can be braked suddenly, causing the test item to fly forward into concrete, dirt, or water barriers. The block will be covered with cushioning materials of varying types and thicknesses to simulate various shocks a weapon might encounter during handling or delivery.

The catapult differs from other impact test facilities in several respects, according to Lewis H. Mason of Facilities Engineering Division 7311. It can provide greater velocity than drop towers but less velocity than rocket sleds. Rocket sleds, however, require a longer track and telemetry for recording test data.

"The shorter distance which the water-propelled sled will travel will make it possible to record data by wires attached directly to the test unit," Mr. Mason said. "This will improve the acquisition of data at high levels of acceleration. The new facility will also allow more precise control of the angle and velocity of the test item at impact."

According to the contract, construction of the project is to be completed by July 22, 1963. Plant Engineering Department project engineer is C. M. Morrisett (4542-3).

Service Awards 15 Year Pins



Vernon M. Brewster
7241
Aug. 5, 1947

W. O. McCord, Jr.
1430
Aug. 8, 1947



Ray L. Bishop
4224
Aug. 11, 1947

Donald D. Wader
4234
Aug. 11, 1947

10 Year Pins

Aug. 4-17

E. C. Connelly 2641, J. E. Duffy 4332, R. E. Henderson 2532, J. A. Larson 2561, D. V. Lotz 7534, L. R. Myers 8121, B. E. Shea 4121, C. E. Drew 4632, J. J. Johnson 4611.

J. M. Mata 7322, R. V. Phillips 4135, Raymond Saiz 4573, C. Z. Mitchell 4511, F. C. Rivera, Jr. 2643, K. L. Hankins 4412.

E. C. McNeely 2451, J. P. Shurter 4151, Severn Starzynski 7125, Carl Endres 7325, Orelia Montoya 1112, G. W. Randle 7122, D. M. Ellett 7182, D. B. List 7251, H. O. Howe 4234, and L. M. Spivey 8164.



POOLING artistic skills, Alfred Montoya (4573-1), center, who recently visited Christina Kent Day Nursery, and youngster at left create a joint crayon project, while the little girl at right wonders what it might be.

They were well behaved . . .

As told by Alfred Montoya

When I came to the Christina Kent Day Nursery, the children were just finishing a period on the playground. While we waited, they came in for a mid-morning snack. Kids are always appealing, but these—from two to six years old—were especially so.

As they came in the door they were very lively. But when they saw us waiting for them with the nursery supervisor, Mrs. Leona McDaniel, they put on their best behavior. They became very quiet and proper. I've never seen a large group of children behave as well, and still be as cute as they were.

While they were having a bite to eat, Mrs. McDaniel told us about how they spend their time. Some arrive in time for breakfast at the nursery. After everyone arrives, there's an informal health inspection. After that, if the weather is nice, they're sent outdoors for a playground period.

Some of the children are of kindergarten age, and they attend classes taught by a qualified teacher. Everyone enjoys the playground and a large number of indoor pastimes provided by the nursery. Things are planned so that the children have plenty to keep them busy.

After the group had finished their snack, they went back to the playground and Mrs. McDaniel took us to see the nursery building. As we visited the classrooms, dining room, and kitchen (which is very clean and orderly), she

told us about the financial support and administration of the nursery.

Financial support comes from the United Community Fund, to which Sandia employees give funds through the Employees' Contribution Plan. Other financial support comes from parents' fees.

The nursery cares for children whose mothers have economic need to work outside the home. Parents are charged a fee for care of their children, based on their ability to pay. The maximum fee is \$4 per week for each child.

Mrs. McDaniel told us that the nursery is open to children of all races and creeds. It works closely with other community, state, and national agencies. Health requirements at the nursery conform with city and state laws.

The children at the nursery receive excellent care. The staff of the nursery is highly-qualified. Mrs. McDaniel herself is a trained and qualified kindergarten teacher. She's certainly kind, and she understands children.

The nursery is located in a two-story stone building at 423 Third St. S.W. It contains modern, well-maintained facilities. I noticed when I entered that the furniture is built child-size. I had the feeling that everything is provided for their comfort and safety.

After we toured the building, the children were ready to come in for lunch. We would have enjoyed seeing them again, but time was short, and we had to leave. One of them waved from the playground as we shut the car door. They were happy children, and still on their best behavior.



AIR NATIONAL GUARD F-100 streaks in for a landing at Kirtland. Ken Sarason checks returning planes as they approach to make sure landing gear is down. The "buddy system" helps avoid possible landing mishap.



R. R. ROZELLE (5513) loads 20-mm cannon rounds into F-100.



PAUL M. STANFORD (4122) is Finance Officer for Guard unit.

Paul Greenblatt Died July 21

Paul Greenblatt, a Corporation employee for eight years, died July 21. He was 44. Mr. Greenblatt was an electrician in Electrical, Refrigeration and Air Conditioning Division 4511.



Survivors include his widow, two children, two brothers, and a sister.

H. T. Bowman Died July 20

H. Thomas Bowman, a staff assistant in Program Material Control Division 8234, died suddenly July 20. He was 50.

Mr. Bowman joined Sandia Laboratory in Albuquerque in June 1952 as a machinist. He transferred to Livermore Laboratory in January 1961. Before joining Sandia, he spent 14 years as a machinist, working for government agencies and private firms in the United States and Central America.

He was a member of the American Society of Tool Engineers.

The only surviving relative is a niece, Ruth Bey, of Barto, Pa.

Newcomers

July 16-27

Albuquerque	
Mary A. Bordenave	3126
Ruth M. Fuller	3126
Sydell P. Gold	5426
Florence M. Hawley	3126
Billie A. Hayes	3126
Donna M. Hodges	3452
Robert C. Jaramillo	3444
Frank A. Kohut	4332
Geraldine J. Layne	3126
Penelope J. Lewis	5426
Calixto Sifre Soto	3444
Christine N. Stone	3126
*Thomas V. Torney	4253
Colorado	
Walter L. Bishop, Denver	3121
Georgia	
Paul A. Weber, Jr., Atlanta	2561
Massachusetts	
Charles Stein, Cambridge	1121
Michigan	
John L. Wirth, East Lansing	5321
New York	
C. Jean Rogers, Andover	7223
Richard L. Schwaebel, Ithaca	5151
Nancy L. Starrett, Andover	2411
William E. Warren, Cortland	5121
Ohio	
James A. Corll, Cleveland	5132
Pennsylvania	
Donald E. Glivna, McKees Port	4412
Stanley L. Love, Reading	7522
Leslie H. Osmond, Jr., Pittsburgh	4411
John C. Stohler, Ephrata	7184
Wisconsin	
Gerald D. Phaklides, Milwaukee	2421

* Denotes rehired

Sandia Air Guardsmen Fly Jet Fighters in Training Missions; Prepare for Real Thing

As the F-100 flies, it is just 15 minutes from the flight line at Kirtland Air Force Base to White Sands Missile Range. Coming out of the sun over the range, a flight of four F-100's descends on a long white target towed by a slower T-33. The F-100's are piloted by Sandia citizen-soldiers, members of the New Mexico Air National Guard.

One at a time the F-100's peel out of formation and make a quick pass at the target. The pilots have about two seconds to track the target and another two seconds to "squirt" off a burst from their 20mm cannon. After several passes each, the F-100's head back to KAFB. Another gunnery mission is completed.

As the flight lands at Kirtland, maintenance men are making preparations to refuel the supersonic jets and reload the guns. The roar of the engines fills the ANG operations area. Part of the group's training stresses speed. The men take pride in the fact that the planes are ready to go again in a matter of minutes.

Check Scores

Thirty-two Sandia Laboratory employees are members of the unit. Some of them are waiting at the end of the flight line for the T-33 target plane to wheel in. The pilots, distinguished by bright orange flight suits, come over to check their scores.

The target, peppered with holes, is spread on the ground. Traces of various colors of paint are distinguishable around the holes. These tell the individual scores.

Top gun of the New Mexico Air National Guard is H. A. Mullin (7124). He recently scored 60 per cent hits of all the rounds fired. A score of 17 per cent qualifies a pilot as a "marksman," 26 per cent earns a "sharpshooter" rating, and 35 per cent is classed as "expert."

The New Mexico ANG has always scored high since its organization in 1947. The unit flew 1435 combat missions over Korea and accounted for six MIG's destroyed. In 1954, the unit took first place in gunnery competition among all ANG units, and came out second and third the following year competing against top Air Force teams. In 1957, the New Mexico group received the Spaatz Trophy as the number one Air Guard unit in the United States and territories. The next year, the group was the first in the

nation to be assigned the supersonic F-100's.

Sandia Laboratory pilots who fly with the group are Hank Mullin, Hugh R. Bowers (7322), James A. Gilbert (1124), David E. Henry (7232), Ira T. Holt (7134), Bobby G. Neeld (1323), David L. Quinlan (7124), and Kenneth A. Sarason (7183).

Hank Mullin joined the ANG back in 1948 when he was 17 years old. He spent two years in the Air Force in 1951-52 as an aircraft mechanic stationed in Long Beach, Calif. In 1955 he took a year's leave of absence from Sandia to attend regular Air Force pilot training. He has been flying jets in the ANG ever since.

Bobby Neeld is another Sandian who took a leave of absence to attend Air Force flight school as a member of the ANG. In 1946-49 he was an aircraft mechanic in the Navy. He has been a member of the ANG since 1955.

Jim Gilbert is on leave of absence attending Air Force pilot training now. He had no previous military service when he joined the ANG in January 1960.

Hugh Bowers flew P-38's with the 15th Air Force in Italy during World War II. He has been a member of the ANG for eight years. He flew the F-100's for three years but is currently piloting the T-33 target tow planes for the ANG.

Dave Henry was a B-24 navigator in Italy during WW II. After the war, he remained in the Air Force and became a pilot. He joined Sandia in 1953 and became a member of the ANG in 1955.

Ira Holt flew F-84 fighter-bombers for 100 missions in Korea. He was in the Air Force for four years and joined the California ANG after his discharge. He transferred to the New Mexico unit when he came to work at Sandia Laboratory in May 1957.

Dave Quinlan flew jets in the Air Force during 1955-58. He joined the ANG in October 1958 while attending the University of New Mexico. He has been at Sandia since July 1961.

Ken Sarason was a B-24 copilot during WW II. He spent three years in the Air Force as a member of a training command at Harlington Air Force Base in Texas.

Around-the-Clock Alert

The New Mexico ANG unit is part of the Air Defense Command and maintains an around-the-clock, 365-day-a-year alert. Pilots, planes, and support personnel

are prepared, if the need arises, to put the fighters into the air, combat ready, in short order.

Their "territory" includes the U. S. southern border from Arizona to the middle of Texas. Their mission is to repel air threats to the nation's security.

Helping to provide maintenance, armament, communications, and radar activities for the group are these Sandia Lab employees:

D. J. Adkins (7322), Amado U. Chavez (7321), James A. Dyer (3446), Neil B. Gholson (4611), Dennis B. Hayes (5112), Marvin E. Bush (7244), David W. Miller (1432), Walter E. Myers (4252), David A. Paschal (4233), Rand R. Rozelle (4413), Joseph A. Ruggles (4411), Louis A. Sanchez (4233), Cecil W. Tucker (4413), James E. Uhl (7324), Lenard H. Wilhelmi (4413), Paul W. Baker (3441), and John C. Kanode (7312).

Administrative duties are performed by the following Sandians: George R. Edgerly (4233), Robert Gabaldon (3444), Joe R. Mah-



DAVE MILLER (1432) checks in-board radar equipment on F-100.

boub (3242), Norris R. Rose (3121), Paul M. Stanford (4122), Lewis A. Suber, Jr. (2533), and Orlando Vigil (4153). Members of the ANG are required to train a minimum of two full days per month and in addition attend a 15-day summer encampment each year. Pilots must meet the same flying requirements as regular Air Force pilots.



CHECKING tow target to tally scores are ANG pilots (l to r) Ira Holt, Ken Sarason, and Hank Mullin. Hank is top gun of the Guard since his recent score of 60 per cent of all rounds fired at target were hits.

There's variety aplenty . . .

Security Inspector's Job Is More Than Checking Area Badges



CHECKING badges at Gate 1 are Jim Hiser, left, and John Toler, (both 3242). Controlling access to technical areas and exclusion areas is a duty of security inspectors during normal working hours.

Papers in hand, a Sandia employee walks in the sunlight toward a tech-area gate. As he approaches the gatehouse, a security inspector steps out to meet him. The Sandian stops and presents his badge.

"Anything classified, sir?" the inspector asks.

"Nothing classified," the man replies. Then he walks on.

For many, this brief encounter is the only contact with Sandia's security inspectors. But their duties are varied, and they are seen doing different jobs by different people.

"Controlling access at area gates and to exclusion areas is our most important duty during regular work hours," C. A. Weaver, supervisor of Patrol Division 3242, commented. "But our duties change during usual non-working hours, week ends, and holidays."

The security inspector's day begins at either 7 a.m., 3 p.m., or 11 at night. Before reporting for duty, he goes to the locker room in Bldg. 801 where he changes to his uniform. After changing, he goes to a weapons room, where he is issued a .38 cal. pistol, and, if his shift is during darkness, a flashlight. Raincoats, parkas, and foul-weather gear are available if needed.

"The guard loads his pistol in a loading bay near the weapons room," Lt. M. N. Orrell, supervisor of Patrol Section 3242-4, continued. "Our men are well-trained in firearms technique, and they're careful about loading. They also periodically visit a small-arms firing range."

Reports to Sergeant

After loading his pistol, the se-

curity guard reports to the shift sergeant. Then he proceeds to his assignment at the regular shift-change time. If he has gate duty, he rides to his gate with other guards. During the ride, he has a moment for small talk or for instructions from the patrol sergeant. Their talk is easy, relaxed, but it stops when the guard reaches his post.

"We have peak hours for checking badges at the gates," Sgt. J. W. Ethridge continued. "But even during the rush, the people we check have time for a smile, a 'good morning,' or a 'good night.'"

The security inspector checks material passes on shipments leaving the various tech area gates. He may be assigned escort duty to accompany shipments into the tech areas. If he is on duty at the Area 5 gate, he checks employees' badges and sees that they have a film badge.

If he is controlling access to an exclusion area, the inspector checks employees' badges and issues supplementary badges to persons not previously cleared for access who have been approved by a supervisor in the area.

Other security inspectors are assigned escort of uncleared visitors to Sandia's security areas. They also escort workers at construction sites in the tech areas.

During non-working hours, holidays, and week ends, the nature of the inspectors' work changes. "Some men are assigned patrol duty," Lt. W. W. Littrell, super-



CHECK of safe security is part of night patrol duty carried out by Ralph Hamilton (3242). He checks security of safe locks and sensitive areas on his route.

visor of Patrol Section 3242-3, continued. "Before leaving on their patrol, they receive a recording clock which records their arrival at clock stations on their route."

Patrolling inspectors check for security infractions and fire and safety hazards. "Night patrolmen are seldom lonely," Lt. Littrell commented. "They're in contact with guard headquarters in Bldg. 801, both by telephone and short-wave radio."

The life of a security inspector is as interesting as it is diverse. "We meet a lot of people," Lt. Littrell concluded. "And the variety of duties makes our jobs far from dull."



RECEIVING .38 cal. pistol before beginning guard shift is Sgt. James S. Hinson (3242), left. Supply room attendant H. F. Chavez (3241-2) uses proper weapon-safety method to hand over the pistol.



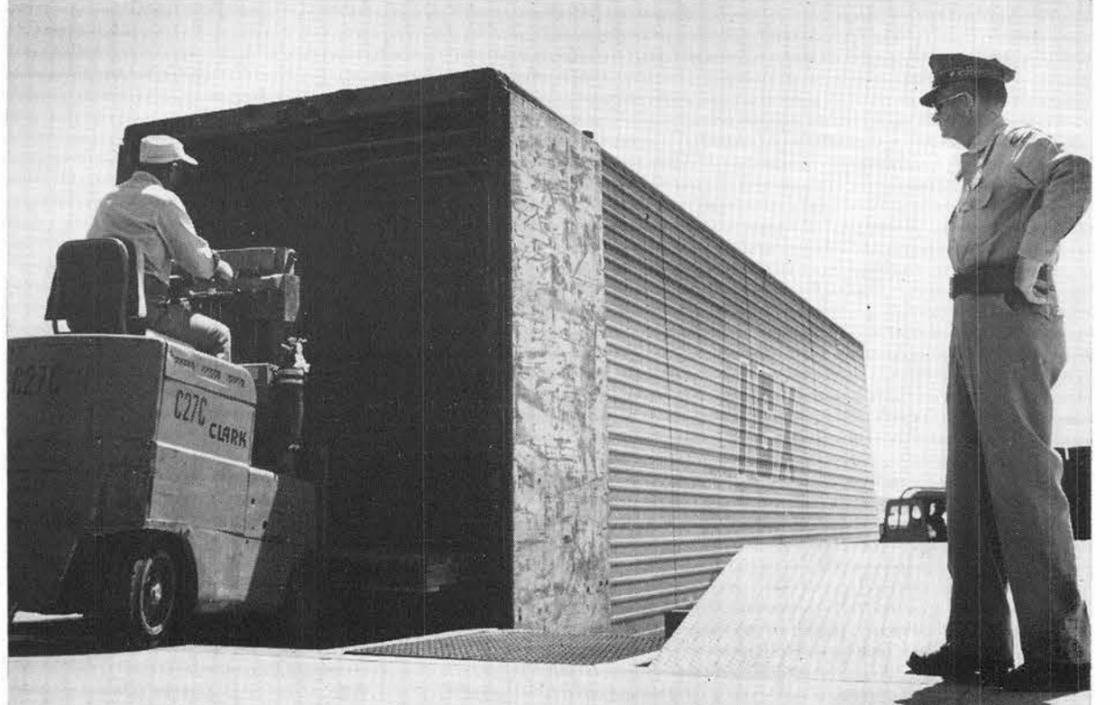
EMPTY HALLS are the province of security inspector on night patrol. Ralph Hamilton checks security of second floor room in Bldg. 802.



INTRUSIONS of alarmed buildings, repositories, and other sensitive areas during non-working hours are indicated immediately on this panel in Bldg. 801. Danny Stringfellow (3242) takes a call from a security inspector while switching off a panel light.



CONSTRUCTION work at Sandia Lab requires escort by security inspector. Ben Valencia (3242) escorts operator of trenching machine during installation of steam lines near Bldg. 805.



ESCORT of driver of freight truck being unloaded. Steve Zdunek (4623) operates forklift. Security inspectors escort uncleared visitors into tech area. Marshall Ludlam (3242) is duty at Bldg. 894.



R. G. Elsbrock C. C. Fornero J. C. Mick E. T. Ronan

Coronado Club Members to Elect Six Directors at Aug. 6 Meeting

At their annual meeting Aug. 6 at 7 p.m., Coronado Club members will elect six directors to the board. Three organizations, whose employees belong to the Club, will be represented on the board: Sandia Corporation; ACF Industries, Inc.; and the Atomic Energy Commission's Albuquerque Office. The meeting will also include reports by directors on the year's activities at the Club.

According to the Club's bylaws, Sandia Corporation, AEC, and ACF employees will be represented on the board in direct proportion to the number of Club members from each company. Each of these employee groups will be represented by at least one of the 10 elected directors.

The Club's board of directors has nominated the following:

C. C. Fornero (3153), an active Club member for several years. He is 40 years old, is married, and has two children.

R. G. Elsbrock (3211-1), who is also active in Club activities, is 55 years of age, is married, and has three children.

James C. Mick (4251), currently a board member, has been nominated for re-election. He is 40 years of age and is married.

E. T. Ronan (7133-3), also a board member nominated for re-election, is 39 years old and is married.

Other members to continue on the board include W. G. Funk (3120); T. B. Miller, AEC/SAO (both appointed members); R. E. Berry (7112); J. A. Woodley (2343-1); and P. H. Arnold (3451-

1). They are serving the second year of two-year terms.

Other nominees for the board include Peter Creagh, AEC/ALO, and Wallace Brown, ACF Industries. Mr. Creagh has been at AEC/ALO for five years. He is 51 years of age, a widower, and has two children. Mr. Brown is 32 years old, is married, and has two children. He has been at ACF five years.

Of the six directors elected, four will serve two-year terms. Additional nominations will be accepted from the floor during the meeting.

Would-Be Students Reminded to Place Admission Requests

Sandians planning to work toward college degrees this fall and who did not attend school during the Spring Semester, are reminded that applications for admission or readmission will be necessary.

The applications must be in the Office of Admission at the University of New Mexico by Aug. 13, and at the College of St. Joseph by Sept. 10. Non-degree enrollments will be accepted at either school as late as the day of registration.

Applications for Educational Aid will be accepted by University Education and Liaison Section 3131-2 through Sept. 3 for the College of St. Joseph and through Sept. 13 for UNM.

All-Star Players Chosen for Annual Intrabase Tourney

Selection of the All-Star roster is announced by the Sandia Laboratory Softball Association. The players will participate in the third annual All-Star Intrabase Softball Tournament Aug. 7-10 against teams of Kirtland AFB, Manzano Base, and Sandia Base.

Members of the Sandia Lab team are B. B. Womack (4411), C. D. Longrot (1414), J. L. Hay (4513), William Drosdick (4411), C. J. Cron (1122), R. C. Lawwill (1312), D. H. Weingarten (1422), R. K. Bump (7523), J. K. Fjelseth (3452), D. L. Mangan (1413), R. A. Hanson (7523), and C. E. McCarty (1413).

Sandia Lab's first game in the double-elimination tournament is scheduled Tuesday, Aug. 7, at 8 p.m. against Sandia Base. All games will be played at Bowler Field, KAFB.

Trybuls Find Fun, Adventure in Two Weeks of Mexico Sightseeing

"I guess the keynote for our trip was variety," T. S. "Ted" Trybul (7183-3), commented. "We're still amazed that we were able to do it at all in two weeks."

Ted and his wife, Barbara, recently returned from a vacation trip to Mexico. They spent time in Mazatlan, Mexico City, Guadalajara, San Miguel, and several other locations south of the border. During the trip, they fished, skin-dived, painted, and visited with a former Sandia Corporation employee they found in Mazatlan.

"Our guide on the fishing trip was Bob Chesnut (formerly 3126), a retired Sandian who operates the Sands motel in Mazatlan," Ted continued.

The Trybuls are skin-diving enthusiasts. "In Mazatlan," Ted said, "we dived for sunken trea-

Mountain Club Invites Visitors to Join Them In Two Peak Climbs

Sandians will lead climbs to Lake Peak and Wheeler Peak during the coming two weekends. The trips are sponsored by the New Mexico Mountain Club and guests are welcomed.

Hans Baerwald (5132) will lead the trip Sunday (Aug. 5) to the rocky 12,000-ft. summit of Lake Peak, above the Santa Fe ski basin.

On Aug. 11-12, Zelma Beisinger (5426) will be trip leader for a weekend pack-in to Williams Lake (northeast of Taos), which is at the foot of 13,151-ft. Wheeler Peak, the highest point in New Mexico. Reservations must be made by Aug. 8.

Both trips start from Nob Hill at 7 a.m. For further information call Hans at AX 8-1526 or Zelma at AL 5-3117.



Meet Your Reporter

Elizabeth Gary has been a Lab News reporter for Environmental Health Department 3310 for a year and a half. Her contributions have been extensive — everything from stories about a wounded pigeon to the visit of an outstanding Japanese physicist and issue of a new type of film badge.

"Liz" has worked for W. H. Kingsley since coming to Sandia three and a half years ago.

During leisure time, Liz loves to write and has submitted several short stories to magazines. Gardening is her other hobby, and her 16-year-old son, Mike, brought in from the desert a number of boulders that add "character" to her rock garden.

Seek Another Team For Handicap League

The Sandia T-Bird Handicap League has space for one five-man bowling team. Team average cannot exceed 825. The league bowls on Friday nights at 6:45 at Holiday Bowl. For further information call Jim Tichenor (4224-1) at AL 5-2815.

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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

EXTENDING mahogany table w/6 chairs, buffet, \$100; green occasional chair, \$20; drapes, turquoise-brown, lined, 96x44", traverse rod, \$12. Campbell, AX 8-4446.

INEZ BRICK 3-bdr., 1 1/4 bath, carpeting, drapes, dishwasher, sprinklers, selling below appraisal, \$877 down to present FHA loan. Scott, 7722 Leah, N.E.

3-BDR., 1 1/4 bath, h/w floors, carpeting, electric kitchen, den, patio, walled, attached garage, near schools, for appraisal price. Frankel, AM 8-0100.

'57 CHEVY, Bel-Air, 2-dr. sedan, V-8, auto., R&H, orig. owner, 35,000, \$850 cash. Maginnis, AX 9-0068 after 5 p.m.

'54 FORD V-8; bedroom and kitchen sets; baby crib; youth bed; other misc. items. Novak, DI 4-7718, AX 9-5396.

GENERAL ELECTRIC portable TV, 14", \$60. Mitchell, 299-8647.

SERVEL REFRIGERATOR, 10 cu. ft., \$50; Fold-a-bed, 48" side, w/mattress and two pillows, \$15. Alvino, AL 5-6339.

SCREEN DOOR w/hardware, 32"x6'8", wood, painted white, \$5. Fortman, AL 6-4514.

BABY FURNITURE: bassinet, \$5; bathinette and crib, \$5 for both. Lamoria, AL 6-4545.

TELEVISION, 21" Westinghouse table model, \$45; 17" Raytheon table model. Nelson, AL 6-4002.

KITTENS, tricolor, black w/white boots, and a tiger stripe long hair, part Angora, part Siamese. Smailer, 6508 Ponderosa NE, AL 9-8413.

20 GAL. KENMORE laundry tub. Williams, AX 8-2671.

NANCY HAMILTON bustle-back party dress, size 7, hat and shoes, maid-of-honor set, nite green, separately or as set. Wyer, AL 5-8190.

CORNER LOT, R-1, curb, gutter, paving paid, Columbia and Thaxton SE. Burns, CH 2-2407.

'58 CUSHMAN EAGLE. Harper, AL 6-1657 after 5 p.m.

3-BDR., 1 1/4 bath, fully carpeted, fireplace, garage, a/c, low maintenance landscaping, \$17,500. Landrum, 4022 Alta Monte NE, DI 4-3940 weekends.

KENMORE Gold Seal ironer, 25. Harper, AX 8-0146.

ALUMINUM STORM DOOR, self storing, 36x80", \$10; solid wood door w/hardware, 30x80", \$7. Miller, AM 8-5992.

BRIGGS & STRATTON reel type mower, \$35 or best offer. Monette, AX 9-3517.

CAMPER for pickup, sleeps four, over-cob, butane stove, ice box. Smith, DI 4-0361.

'55 DE SOTO 4-dr., PB, PS, \$250 cash; portable power saw, electric, 5 1/2", Craftsman, \$20. Pitti, AL 6-1629.

'59 CHEVROLET Biscayne 2-dr., auto. trans., 6-cyl, R&H, 14,000 miles. Schmitt, AM 8-0866.

WATER WELL PUMP, Jensen jack, 300' tubing, motor, complete accessories, almost new. Pierson, BU 2-3229.

GIRLS' 26" bicycle, \$15. Ostlund, AL 5-6493.

CAMP TRAILER, 14', water, gas and lights, Foldunder hitch included, \$695. Gilbert, AX 9-9141.

2 LOTS, 1/2 acre each, adjoining, in Sandia Knolls, numbers 200 and 201, lights, water, phone available. Kasparek, 299-0506.

'49 OLDS convertible, \$100 cash. Caskey, AX 8-1146.

BATHINETTE, \$8; baby jump-chair, \$5; and walker, \$3, or all three for \$14. Williams, AM 8-0045.

17" GE table model TV, \$30. McMaster, 6308 Kiowa, AM 8-8062 after 5:15 p.m.

REFRIGERATED auto air conditioner. Miller, 2137 Madeira NE, AM 8-7176 after 5:30 p.m. or weekends.

NESCO CHEF COOKER, 220 volt w/oven, broiler, storage space, ideal for mountain cabin, \$15. Gary, AL 6-7325.

ENGLISH Springer Spaniel puppies, purebred, registered AKC. Barth, BU 2-3134.

3-BDR, 1 1/4 bath, built-in oven, range, disposal, pitched roof, attached garage, \$14,000 total, GI 4 3/4, \$90 per month. Miller, 1732 Martha, 298-0667.

'55 PLYMOUTH 2-dr. sedan, V-8, R&H, auto. trans., \$350. McKinley, AM 8-4779.

21" TV, \$35. Kraft, AX 9-2157.

STEREO RECORDER: 1/4 track, 4-track stereo record and play, has manufacturer's guarantee, retail \$257.45, sell \$178; pair matched speakers, \$75. Browning, AX 9-6384.

HIGH CHAIR, \$6; playpen, \$8; 6-yr. crib, \$10; innerspring mattress, \$5; youth bed innerspring mattress, \$10. Arenholz, AX 8-1724.

AUTO COOLER, evaporative floor model, 12-volt, 2-speed fan, \$20; twin stroller, collapsible, w/basket, canopy, seat cushions, \$20. Schuster, AX 9-1072.

POWER LAWN MOWER, 18" reel type, newly overhauled motor, \$25. House, AL 5-2646.

METAL high chair, \$5; '61 Ford Galaxie, 4-dr., sedan, R&H, air, cruiseomatic, low mileage. Gelwicks, AX 9-3909.

PORTABLE Blizzard evaporative room cooler, 2 separate squirrel cage fans, w/portable stand, \$25. Hachigan, AX 8-1414.

VIKING MODEL 75 monaural tape deck; 25 reels tape; E. V. ceramic mic., \$100. Class, 256-4861.

WORLD'S FAIR TICKETS, save 20%, includes admissions, rides, performing arts, fine arts and guide book. Richardson, AX 9-3673.

SLIDE PROJECTOR, 35mm, Bell & Howell, TDC headliner 303 model, 300-watt, semi-automatic, \$25. Deeter, AL 5-5789.

'55 OLDS SUPER 88, 4-dr. sedan, Hydro-matic, radio, PS, PB, 2-tone, original owner. Mills, AX 9-2130.

CHROME KITCHEN SET w/4 chairs; large wooden desk, 60x34" top, best offer buys. Clark, 299-6410.

NEXT DEADLINE FOR SHOPPING CENTER ADS Friday Noon, Aug. 10

CRAFTSMAN radial arm saw, accessories, stand, \$225, cost over \$300; 40-gal. truck gas tank, \$15. Browne, AX 9-7124.

NEW BUSTER CRABBE POOL, liner style, 16x32, 7' to 3' deep, has filter and everything, \$600. Milligan, CH 2-2959.

SIX WROUGHT IRON dining room chairs, \$3 each; high chair, \$3. Pliner, 6210 Bellamah NE, AL 6-1907.

PICKUP TRUCK, '49 Studebaker 1/2 ton, \$150. Starkey, TR 7-0905.

GAS RANGE, stainless steel top w/griddle, O'Keefe & Merrit 36", \$85 or best offer. Berger, 298-4234.

11 METER citizen's band 2-way radio, Pearce-Simpson CBD-5, 5-channel 12V DC/115VAC w/4 crystals, 2 antennas, 2 car brackets, \$140. Luxford, TR 7-1756.

BABY BED and other baby equipment. Jennings, AL 5-5950.

'61 WHITE THUNDERBIRD hardtop, V-8, a/c, PS, PB, leather upholstery, auto. trans, R&H, Crosby, 343-3098.

ROBERSON HOME, 1364 sq. ft., 4 yrs. old, \$16,500, 9619 Towner NE. Cordova, AX 9-3460.

TWIN SIZE BED, Hollywood frame, coil springs, and mattress, \$15. Galbreath, DI 4-4306.

REBUILT overdrive transmission, fits '52 thru '56 Ford, \$35; \$35 Goodyear nylon 6.70x15 driven 200 miles, \$20. Clark, 268-9414.

'55 FORD RADIO, \$15; '56 Ford radio, \$20; complete power steering system for '56 Ford, \$35. Ernst, 268-9414.

SOLID OAK kitchen set, oval table, extra leaf, 4 chairs, \$35; 2 screen doors w/grills, \$5. Campbell, AX 9-4830.

14" ALUMINUM RUNABOUT, windshield, remote controls, 25hp Mercury motor; gator trailer w/8" wheels, \$475. Cyrus, DI 4-9538.

SMITH-CORONA typewriter; Hy-Standard 22 pistol; 8' insulated aluminum truck camper; 58-gal. gasoline tank; butane lights. Alvarez, CH 2-3821.

NEW 20" boy's or girl's bicycle, coaster brakes, lights, training wheels, \$20. Sircic, AX 9-8916.

SELLING BELOW original price, 3-bdr., Princess Jeanne Park, 1 block to school, \$11,200, \$300 down, \$83 month. Lovato, AX 9-8635.

CHROME dinette set, \$40. Koetter, AM 8-1009.

3-BDR HOUSE, SE, extra large livingroom and kitchen w/dishwasher and disposal, landscaped, sprinklers. Reynolds, AL 5-4263.

3-BDR, pitched-roof, redecorated, carpeted, drapes, select h/w floors, a/c, landscaped, corner lot, SE location. Beeson, 255-3249.

GAS FIRED KILN; 3 1/4 cu. yd. concrete mixer w/electric motor; electric hand saw; electric sander. Calvery, 255-9545.

'57 PLYMOUTH station wagon, 4-dr., R&H, auto. trans., trailer hitch, one owner, \$775 or best offer. Strome, 1811 Lafayette Dr., NE, AL 6-3324.

'52 DODGE, 4-dr., R&H, single owner, \$300. Heckes, AX 9-6022.

3-BDR, a/c, den w/fireplace, 1 1/4 bath, walled corner lot, 1600 sq. ft., \$16,500, FHA or GI. Ray, 11017 Phoenix NE, AX 8-0408.

'56 FORD Fairlane Victoria, R&H, automatic trans., low mileage, \$595. Arterburn, AL 5-3487.

22 CAL. PISTOL, frontier style, 6-shot and single action, \$22. Krogh, AX 9-8879.

MOWER, manual, 2 yr. old. Rivera, AM 8-3627 after 5 p.m.

'58 LAMBRETTA motorscooter, model 150LD, \$180. Cordova, 247-2428 or 243-4042.

'58 FIAT 1100 series, \$550. Selph, 299-7691 or 299-6833.

4-BDR house in SW valley, close to school and shopping center, \$8000. Disch, AX 9-1201.

PROFESSIONAL-STYLE golf bag w/protective hood and individual pockets for clubs, 59. Johnson, 298-1011.

WASH BASIN; water closet; 2 steel sash crank-type windows; 2 doors. Robinson, AX 9-3933.

UMBRELLA TENT w/poles and stakes, 9x11, sewed in floor, \$30. Thayer, AX 9-3127.

GIRL'S 24" bike, \$20. Rodocovich, AX 9-3123.

'62 NORGE automatic washer, used 9 months, \$160, will consider trade; nylon parachute, sell or trade. Westfahl, 298-4716 after 5:30 p.m.

'52 RAMBLER station wagon, R&H, OD, fold-down rear seat, 2 new tires, \$195 or best offer. Gutscher, AX 9-9398.

DANISH modern divan, beige-brown, seat and 2 bolsters are foam, \$40; Sherwood hi-fi amplifier, 36 watts, model 5 1000 II, \$60. Markowitz, 898-2991.

TWO 16" wheels for Chev. 1/2-ton pickup, \$3 each. Causey, AX 9-0089.

4-BDR, 1 1/4 bath, family room, living room, w/fireplace, carpet, utility room, shop, dishwasher, a/c, NE heights, FHA appraisal. Matthews, AX 9-4200.

SEVEN all metal drive-in fence posts, \$5. Cummings, 299-5907.

ANCIENT but usable Underwood typewriter, \$10; 78-speed radio-phono combination w/table, \$10. Southerland, 8903 Claremont NE, AX 8-1647.

MOTEL RESERVATIONS for 2 in Seattle 3 days—Aug. 13-15. I can't use them, can you? Rose, DI 4-8592.

CUSHMAN - 60 Super Eagle. Krahling, AM 8-8126.

KID'S SWING SET, sell or trade for ping pong table. Sweetman, AL 6-0300.

'59 FIAT 500 convertible, 18,000 original miles, \$300. Radman, AM 8-8970.

3-BDR 1 1/4 bath, separate utility room, a/c, flagstone patio, landscaped corner lot, near schools, \$12,000. Benderman, AX 9-5831.

EVAPORATIVE air conditioner, portable, 2-speed, recirculating, can be used anywhere in house without water connections, \$20. Summers, AX 9-4674.

REFRIGERATOR, \$45; electric range, \$45; Royal typewriter, \$35. Dixon, AX 9-6886.

GREEN covered chair, \$10, baby car bed, \$5; single bed, \$20; will trade diamond bridal set for Polaroid camera or \$100. Naumann, 298-1953.

KROHLER SOFA and chair, used, \$50. Wladika, AL 5-9166.

20-GAL. BUTANE tank. Wilson, BU 2-3225.

3-BDR, family room, 1 1/4 bath, carpet, drapes, a/c, \$13,300, 1516 June NE. Cannon, AX 9-1280.

COLT, Match Target Woodsman, .22 auto. pistol, \$65. Stephenson, AX 9-3914.

'47 STUDEBAKER Champion, OD, \$65 cash. Adams, AL 6-7265.

WANTED

AQUARIUM, 10 or 15 gal. capacity, any usable equipment for aquariums. Wolfe, AM 8-0428 after 5 p.m.

LARGE METAL TRUNK, footlocker type. Wood, CH 7-4501.

TO CONTACT PEOPLE interested in learning about Great Books Discussion groups, i.e., reading and talking about literary classics. Pardee, AL 5-1998.

USED CRASH HELMET for scooter riders. Also .44 Magnum single action. Pritchard, AM 8-6430.

RIDERS to Galveston, Texas, leaving Aug. 16, returning Sept. 2, share expenses and help drive. Heimer, AX 9-4501.

USED ELECTRIC RANGE, 20 to 30 inch, for mountain cabin. Stevens, AX 9-6086.

MEMBERS for car pool from vicinity 10324 Paseo Del Norte NW (Rio Vista) to vicinity bldg. 800. Dehon, 898-2219.

GOOD HOMES for three longhaired Angora kittens, 2 white, 1 gold and white. Pfarrer, 298-3206.

HOME for two 6-week-old puppies. Ogurchak, 629 Pennsylvania SE, 268-9991.

BICYCLE, 24 or 26 inch, any condition. Piiner, 6210 Bellamah NE, AL 6-1907.

OLD INDIAN ITEMS such as artifacts, rugs, beadwork, knives, guns, or war items, will pay cash. Smitha, AX 9-1096.

HOME for two male kittens, playful, beautiful. Norton, DI 4-4973.

PANEL TRUCK, 1949 or later model. Smith, CH 3-5054 after 5 p.m.

500 USED BRICK (in appearance). Wilson, BU 2-3225.

RIDE from 1200 Wilmore SE—1 block from Yale. Davis, 243-2315.

INFANT CARE in my home, Mon.-Fri. Long, AX 9-1271.

FOR RENT

UNFURNISHED duplex w/stove and refrig., water paid, \$65 per month. Milligan, CH 2-2959.

BEDROOM with kitchen and laundry privileges, to middle-aged lady, \$50 per month. Rappleyea, AM 8-7787 after 5 p.m.

3-BDR HOUSE, den, near Emerson and Holy Ghost Schools. Hansen, DI 4-8985.

LOST AND FOUND

LOST—Man's diamond ring (reward) lost in 880 parking lot, charm bracelet w/bowling scores, black frame sun glasses, lt. brown glass case marked Dr. Felter. Lost and Found, Ext. 29157.

FOUND—Safety glasses w/rubber nose piece and black elastic band, gold bracelet, black cuff link w/silver dancing girl. Lost and Found, Ext. 29157.

LOST July 5, 1962, vicinity of Bldg. 880, man's diamond ring in gold setting, reward offered. Wright, AL 5-6006.

Telstar Steals News Headlines While Performing to Perfection

One of the most discussed news events of the day is Telstar — a satellite, not quite three feet in diameter and weighing only 170 pounds.

Why is this satellite attracting so much international attention?

Telstar is the brightest star on the horizon of worldwide voice. Put in orbit by a Delta rocket launched by the National Aero-

navics and Space Administration, Telstar is testing the actual use and reliability of active satellites for the transmission of broadband microwave radio signals.

Telstar is a product of the American Telephone and Telegraph Company. The Bell System has spent millions of dollars on this first active communications

satellite — the Cape Canaveral launch itself cost A.T.&T. \$3,000,000.

In all, Telstar is measuring and reporting on 115 items as it swings around the earth at an average speed of 16,000 miles per hour. Telstar's first experiments tested transmission of voice, data, and pictures between the satellite and earth stations at Andover, Maine and Holmdel, New Jersey. Soon thereafter came the thrilling United States-to-Europe live television broadcast. Then the equally exciting Europe-to-United States live telecast.

Some 400 Bell Telephone Laboratories people are responsible for the design, construction, and experimental operation of the satellite and ground stations in Maine and New Jersey. BTL developments like the transistor, the solar battery, traveling wave tube, the maser, the waveguide, and the horn antenna make Telstar possible.

The Long Lines organization of the Bell System headed construction of the Andover site and, with BTL, is operating and maintaining the station. Long Lines also is providing special long distance circuits for the project.

The New England Telephone and Telegraph Company installed telephones and electronic equipment at Andover. Similarly, New Jersey Bell and Southern Bell have performed the key roles in operating the Bell System facilities at Holmdel and Cape Canaveral.

Sandia Heads State Committee for O. U. Dedication Conference

Howard W. Benischek (4343-2) has been appointed chairman of a committee to represent New Mexico at a dedication conference to be held at the University of Oklahoma, Sept. 28-30.

Other committee members from Sandia Laboratory include R. L. Alvis (2452-3), M. L. Dawson (2531-2), J. W. Ellis (7243-1), R. C. Henneke (2542-1), and J. A. Hood (1431-3). All committee members are graduates of the University of Oklahoma.

Graduates of OU, former students, and interested persons from Sandia Corporation and the Albuquerque area are invited by the university to attend the conference. Registration will begin Friday, Sept. 28, Friday evening, Dean W. H. Carson, retiring after a career of 37 years with the university, will be honored at a dinner for conferees. He has served as Dean of the College of Engineering for 25 years.

Saturday, Sept. 29, groundbreaking ceremonies will be held for the university's new \$2,750,000 engineering center.

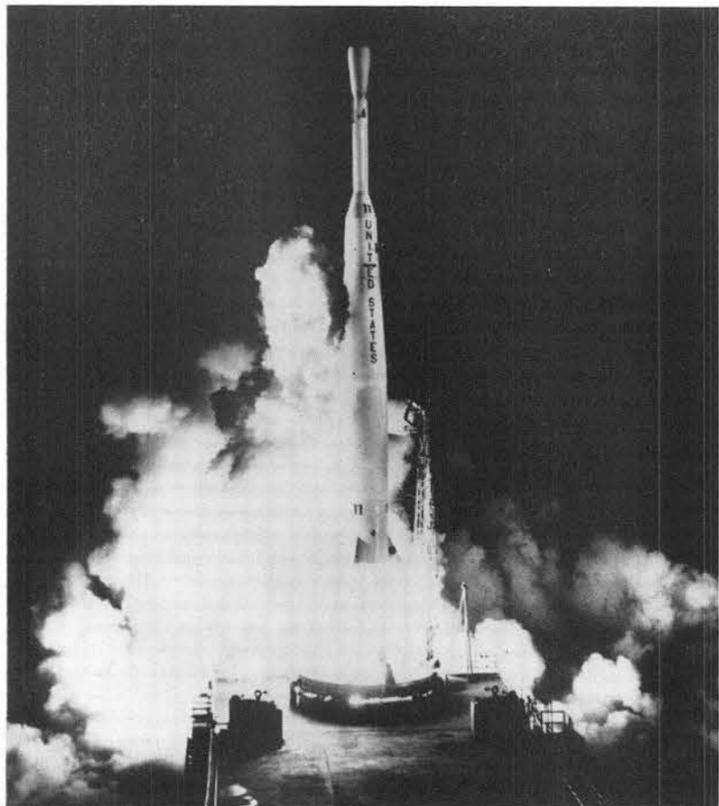
Employees of Sandia Corporation who are graduates of the university will be contacted by one of the committee members.

Safety Record Slips

Sandia Laboratory's safety record fell last week when a laboratory employee inhaled ethyl bromide fumes. At the time, the incident seemed minor but she later developed bronchitis and entered a hospital for observation. After three days in the hospital, the employee convalesced at home.

Booklets Distributed

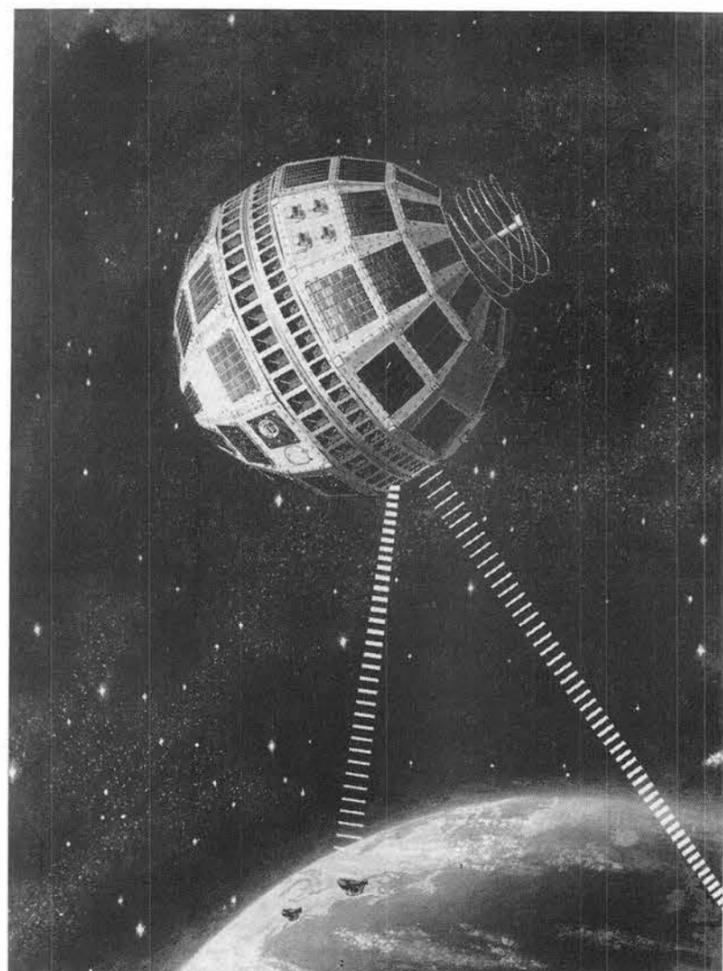
Benefits Section 3122-1 recently distributed revised copies of the Retirement and Health Care Plan booklets to participants in the Plans. Any Sandia Laboratory employee who failed to receive a booklet may call ext. 39246 for a copy. At Livermore Laboratory, employees may call Employee Services and Record Section 8212-2, ext. 2253.



TELSTAR was thrust into orbit by a multi-stage Delta rocket at Cape Canaveral, Florida. NASA received \$3,000,000 from A. T. & T. to put the satellite into space. Telstar went into the predicted orbit.



CONVERSATION VIA TELSTAR — Frederick R. Kappel, A. T. & T. Board Chairman, talked to Vice President Lyndon Johnson in the first telephone conversation through Telstar. Mr. Kappel was at the ground station, Andover, Maine, and Vice President Johnson was in Washington.



IN ORBIT AND ACTION — An artist's version shows Telstar transmitting messages over the Atlantic Ocean. Power for Telstar comes from 19 nickel-cadmium cells charged by solar cells which convert sun's energy.

More Reports Issued By AEC On Tests at Operation Gnome

The Atomic Energy Commission has issued seven new reports on individual experiments or operational procedures conducted in conjunction with the Dec. 10 Project Gnome nuclear detonation near Carlsbad, N. Mex. The reports—four final and three preliminary—are available from the Office of Technical Services, U.S. Dept. of Commerce, Washington 25, D.C.

Preliminary reports include:

"Stress History Measurements with Piezoelectric Crystals," 32 pp., 75 cents, a report of the Lawrence Radiation Laboratory experiment resulting in recording of stress waves from a nuclear detonation.

"Timing and Firing," 75 cents, describing timing and firing instrumentation provided by Edgeron, Germeshausen and Grier, Inc., for the Project Gnome event.

"Hydrologic and Geologic Studies for Project Gnome," 54 pp., \$1.25, summarizes the U. S. Geological Survey's program to obtain information on pre- and post-shot characteristics of the salt and

other rocks affected by the explosion.

Final reports include:

"Monitoring Vibrations at U.S. Borax and Chemical Company Potash Refinery," 22 pp., 50 cents, a report by Sandia Corporation of ground motion at the U.S. Borax and Chemical Company Potash Refinery near Carlsbad.

"Off-site Radiological Safety Report," 102 pp., \$2.25, a summary report of U.S. Public Health Service off-site radiological safety activities during Gnome to protect the public from radiation.

"On-site Radiological Safety Report," 28 pp., 75 cents, a report describing Reynolds Electrical Engineering Company's on-site radiological safety program for the Gnome project.

"Pre- and Post-shot Mine Survey," 28 pp., 75 cents, a report of the U.S. Bureau of Mines on its program to assess the effects of the Gnome detonation on underground mine workings near the site.

Gnome Project on Caretaker Basis With Two Activities Continuing

Ernest Wynkoop, Atomic Energy Commission Support Director at Carlsbad, said today that the Burgett Drilling Company of Carlsbad was apparent low bidder for drilling a 780-ft. well at the Gnome Site for continuing hydrological studies.

The Gnome Project is now on a caretaker status, following the conclusion in June of all underground work with completion of six cored holes into the detonation cavity or its vicinity. The

holes were made from a drift, horizontally to the bottom, center, and top of the cavity. They were surveyed by magnetic hole survey techniques and logged to obtain radiation and temperature profiles.

There are only two continuing activities. One consists of hydrological and geological studies conducted by the U.S. Geological Survey. The other is the site weather station operated by the U.S. Weather Bureau.

Sandia's Safety Record

**Sandia
Laboratory
HAS WORKED
140,000 MAN HOURS
OR 4 DAYS
WITHOUT A
DISABLING INJURY**

**Livermore
Laboratory
HAS WORKED
206,000 MAN HOURS
OR 40 DAYS
WITHOUT A
DISABLING INJURY**