SANDIA CORPORATION
PRIME CONTRACTOR TO THE ATOMIC ENERGY COMMISSION
ALBUQUERQUE, NEW MEXICO • LIVERMORE, CALIFORNIA

LAB NEWS

VOL. 16, NO. 10 / MAY 8, 1964

ABBIE WILLIAMS (3153) is the first contact with Sandia Laboratory for many "outsiders." Providing Sandia's locator service, Abbie averages over 500 calls daily.

Locator Service Telephone Rings 500 Times Daily

For many people, first contact with Sandia Laboratory is through the pleasant voice of Abbie Williams.

Abbie handles the Sandia Laboratory locator service providing telephone numbers of employees to persons needing the information. The number 264-4546 is possibly the busiest on Sandia Base. Abbie averages between 500 and 600 calls each day.

The service was recently improved by the installation of a rotary system on the locator number. If the first line is busy, the call is automatically switched to a second, and if this line is busy, to a third line.

With this system, Abbie can ask the second and third persons calling to hold for a moment until she finishes the first call. Calls to the locator requesting information are usually brief. Abbie has at her fingertips a tabulation of all employees' telephone number, organization, building, room, and home address and home phone. Most questions are answered quickly.

The ones that take time are from people who are confused about the many organizations on the Base—military, AEC, civil service, Lovelace Foundation, contractors, and suppliers.

"And then, there are the ones who call in and ask, 'Is Bill there?'" Abbie says. "Last week someone wanted to talk to the carpenter on top of Bldg. 836. Sometimes, it takes a while but if we have some specific information, we can usually locate the person."

The tough ones, Abbie says, come from small children who want to talk with their "Mommie" or "Daddy." Usually, these calls are switched to Sandia's locator by the Sandia Base operator. Since Sandia Laboratory has the most employees of any organization on the Base, most requests with sketchy information are relayed here first.

"Children should be carefully instructed about their parent's telephone number," Abbie says. "They can be terribly vague about last names. It's hard for me to tell a crying child that I can't find his mother or father for him."

During the past two months, since Abbie has provided the locator service, she has received several emergency calls for employees. For this reason, she urges all employees who change their work location or their telephone number to inform the locator. Changes in home address or home phone should also be reported to the locator. Emergency calls that come in after hours are answered by Sandia's Security organization and it can sometimes be vital to have an employee's home telephone number listed correctly.

The locator position is considered an "entry job" by Employee Records and Processing Division 3153 which provides the service. Women who handle the job usually move up in grade within a year depending on job openings and their qualification, according to Bernice Sanders, 3153 Senior Clerk.

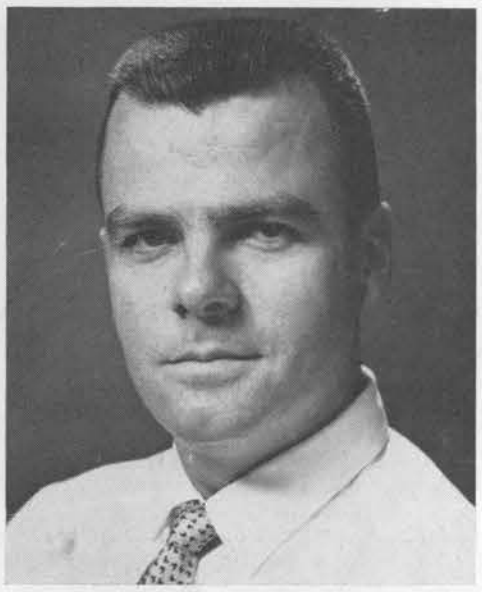
Employees still on roll who have formerly held the job include Andrea Breckenridge, Glorianne Garcia, Mary Ann Griego, and Lillian Hayes of the Personnel organization. Others include Jane Lord (3421), Lucille Stewart (7520), Margaret Jarvis (4624), and Cynthia Harris (4432).

Missouri ASQC Elects Roy Allison Section Chairman

The Joplin-Springfield (Mo.) Section of the American Society for Quality Control recently elected Roy Allison, a Sandia Corporation employee, as 1964-65 chairman.

He was installed at a dinner meeting Apr. 16 at which the featured speaker was J. A. Mauldin (2341-1), whose topic was "Acceptance Inspection Procedures as Related to Quality."

Mr. Allison has been with Sandia since October 1957, assigned to Field Acceptance and Extension Standards Laboratories Division 2341. He has been stationed at Joplin for the past two years.



Arthur J. Arenholz

Sandia Employee Earns High Honors As UNM Graduate

Each year, Delta Sigma Pi, Business Administration honorary, awards a Scholarship Key to "that male senior who upon graduation ranks highest in scholarship for the entire course in commerce and business administration." This year, at the University of New Mexico's Honors Day Assembly, the key went to Arthur J. Arenholz (2563-2).

But it's only one of several honors Art has attained in his academic career. He's also a member of Phi Kappa Phi, a scholastic honorary. Among the members of the UNM graduating class, he ranks fourth scholastically, with a total grade point average of 3.89. He's been on the College of Business honor roll every semester during his college career. He's held a Southern Union Gas Company Scholarship for the past two years, and has received a scholastic prize presented by the Women's Auxiliary of the New Mexico Certified Public Accountants. This semester, he won one of five cash prizes in a scholastic competition among graduating accounting seniors sponsored by the New Mexico CPA's.

"I give credit to my family," he says. "For a married student, pursuing a college degree is really a family endeavor."

Art and his wife have five children—two girls and three boys. The Arenholz family came to Albuquerque in 1955, when Art was stationed at Sandia Base in the Army. After he was discharged from the service, they decided to stay here; then, Art started his studies at UNM. After three years, he came to Sandia, and continued college under the Educational Aids Program.

He's hesitant to commit himself about continuing work toward a graduate degree at this point. "I'm studied out at the moment," he says. "But things will probably look considerably different in a few months' time."

New Type Ignition System 'Next Best Thing to Wings'

How can you improve a modern automobile short of adding wings?

Friend K. Bechtel (7252) has a gimmick which doesn't add wings but instantly puts a white hot spark into the ignition system. It cuts wear on points and spark plugs, economizes fuel consumption, and extends the time period of top performance between tuneups.

The gimmick is an electronic ignition system, no stranger to the auto accessories market, but Friend's device is different. He uses a capacitor discharge to create the spark and switches it with a silicon controlled rectifier.

The system uses all of the conventional components in an ignition system except the capacitor and ballast resistor. He built the system for less than $40.

Friend's unit stores a charge up to 600 volts and dumps this across the coil, but the points break less than 50 milliamps. Much faster rising spark voltage is produced. The spark plug gapping is less critical and the point wear is drastically reduced. Points carry less than 1/100th of the conventional current load.

This all means sure starts in cold weather and better gas mileage at high speeds.

Cold weather starting is a cinch. A multiple-fire provision comes in during starting. It provides not only the first spark, but also succeeding sparks at one millisecond intervals as long as the points are open.

First working unit was assembled in the fall of 1962 and it worked well except for some difficulty with the silicon controlled rectifier. This was replaced with a higher current unit.

The present system has been in operation about a month. He is making several other units to install on the automobiles of friends — this will give a test of day-to-day usage by several drivers in several kinds of vehicles.

Friend is an electrical engineer, a graduate of Iowa State University, and currently is in Sandia's Technical Development Program at the University of New Mexico. He first started thinking about an electronic ignition system as a senior at Iowa State. The assignment was to "design a circuit." He started work on the capacitor-discharge system at that time but did not produce a working unit until after graduation.

Electrical engineers have known for a long time that a capacitor discharge ignition system would be more efficient than a conventional system. The problem was to build one. Using the silicon controlled rectifier for the rapid switching requirement solved one of the problems. A special transformer which took six hours to wind by hand solved another.

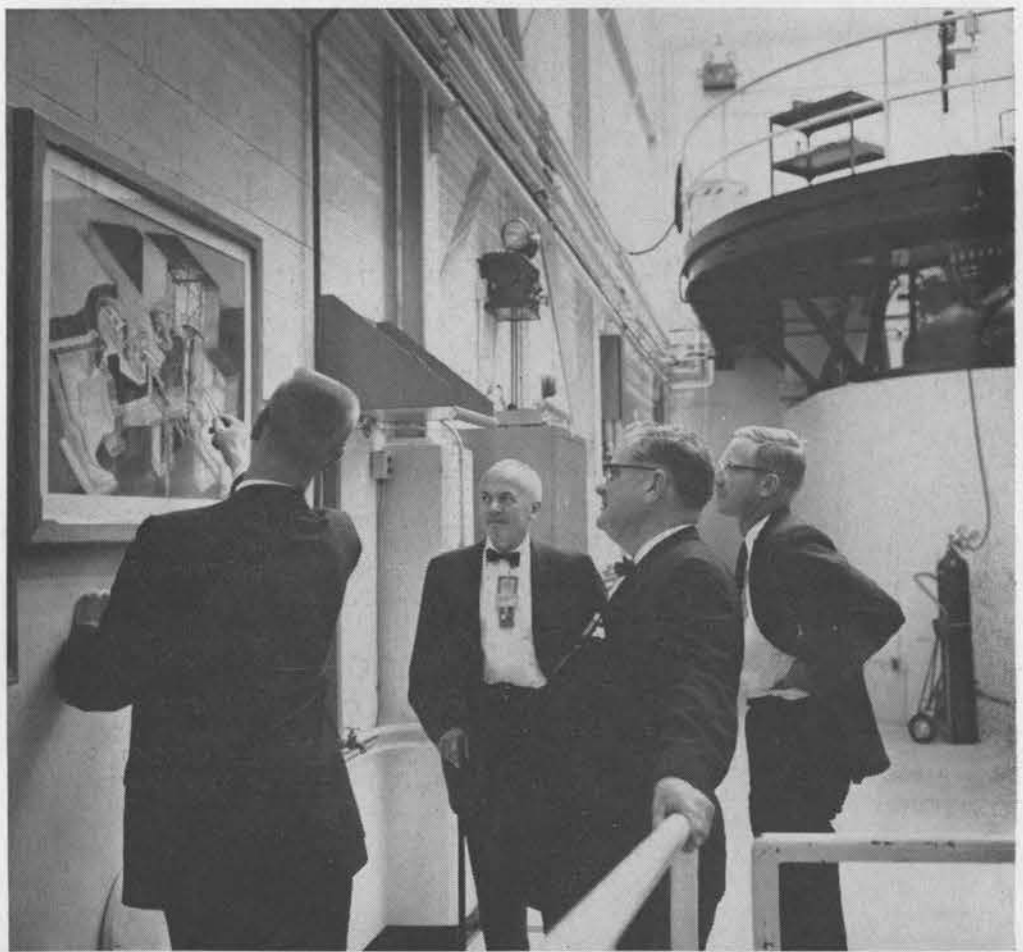
FRIEND R. BECHTEL (7252) displays his unique capacitor discharge electronic ignition system. The unit delivers a white hot spark for cold weather starts and cuts wear on plugs and points while economizing fuel.

Friend's system solves a different kind of problem in automotive ignition. At highway cruising speeds, conventional ignition systems start losing spark voltage as higher speeds are achieved. Gasoline consumption goes up.

Friend's system produces a constant spark voltage through 15,000 rpm in an eight-cylinder engine. It was bench-tested to this speed before spark degradation occurred.

"So the open road looks good," he says. "If the system proves itself over a period of time to be as good as these early indications, who knows where we will go from here?"

VISITING SANDIA LABORATORY recently was J. R. Townsend, consultant to the Department of Defense and formerly Sandia's Director of Materials Research. He is shown above (second from right) touring Sandia's Engineering Reactor Facility. From left are J. A. Moeller (5331), E. H. Draper (1000), Mr. Townsend, and James W. Easley (5300).



(Editorial Comment)

Cost Awareness—Not Someone Else's Job

One year ago the **Lab News** ran an editorial about "Ingenuity and Economy." It pointed out that the job we're doing at Sandia is an important one and generally an expensive one. But, our job is also a major area in which to exercise our ingenuity, wherein we can take pride in developing more economical ways to achieve our objectives.

Important jobs, on the other hand, do not need to be expensive ones, and important savings don't have to be big ones.

The last issue of the **Lab News** presented excerpts from a keynote address by S. P. Schwartz, on the subject of President Johnson's request to intensify our cost reduction activities. Mr. Schwartz stated, "We at Sandia, operating on a no-profit basis, must be doubly aware of doing everything possible to get a dollar's VALUE for every dollar spent." Along with this plea was an article announcing the start of Sandia Corporation's Value Engineering Education Program. Then, on Apr. 27, R. W. Henderson outlined Sandia's objectives on cost awareness to Vice Presidents, Directors, Department Managers, and Division Supervisors in organizations with primary and immediate concern.

Cost awareness begins with the individual and we Sandians are all responsible for devoting some thought to the prudent use of the money our Government places at our disposal. Glenn T. Seaborg, Chairman of the Atomic Energy Commission, summarized his interest in a letter to his fellow employees. He said, "Today, I call on each of you to participate in these efforts and to assume personal day-to-day responsibility for devising and proposing ways for improving performance and reducing costs in your assigned areas. I should like you to approach this undertaking in the spirit that no economy measure is too small or too large for consideration and action."

You will hear more about Sandia's cost savings program and one of the most powerful tools to effect reduction in costs, without compromising reliability, schedules, safety, or quality—Value Engineering.

1963 Sees New Record Set (but don't rejoice)

Of all the grim records of violence and death down through mankind's long history, perhaps the strangest and most tragic is the story of the automobile and its annual array of victims.

Since the first horseless carriage chugged down the cobblestone streets, more than 60,000,000 Americans have been killed, crippled, and maimed in automobile mishaps. Last year had the grimmest death toll recorded in history—42,700 men, women, and children died in accidents on our streets and highways. This is more Americans than were killed in the entire Korean War.

Incredibly, more persons have died on our nation's highways than in our nation's wars.

No solution has been found to this national disgrace. Statistics, pledges, and slogans have seemingly had little effect on the American public.

When will things improve? Frankly, no one really knows.

Perhaps no significant improvement can be expected until the great majority of us learn to look on the problem as a **personal** challenge rather than one which is up to the other fellow.

EMPLOYEES in Bldg. 880 are accustomed to seeing the weather forecast in pictures outside room 45. George Shelton (4611-2), left, has just completed a new set of watercolors which depicts the varying weather conditions in New Mexico (except those days when every possible extreme occurs). Meteorologist Tim Raftery (7243-1) likes the results and has started to use them.

Secretary Award Makes Office Record Perfect

The Albuquerque Chapter of the National Secretaries Association honored Edith Blum (4200) as "Secretary of the Year," during a luncheon Apr. 18.

Edith has been with Sandia for 12 years and has been secretary to R. J. Hansen, Director of Development Shops, for the past eight years. Mr. Hansen was named "Boss of the Year" by the same chapter last year.

The award takes into consideration secretarial ability as well as participation in NSA activties. Edith is currently recording secretary for the local chapter.

The luncheon at the University of New Mexico Student Union was held in connection with this year's Secretarial Institute, sponsored by NSA. Approximately 150 women attended the institute.

Another Sandia secretary who previously received the honor is Joanne Rush (4600).

EDITH BLUM (4200) was recently named "Secretary of the Year" by the Albuquerque Chapter of National Secretaries Association.

TV Spectacular To Have Country's Top Entertainers

Albuquerque will be one of 40 cities on the closed TV circuit for "Freedom Spectacular," featuring stars of Broadway and Hollywood. The show is sponsored by the National Association for the Advancement of Colored People, and marks the 10th anniversary of the U.S. Supreme Court decision on school segregation.

The Albuquerque showing will be in the Civic Auditorium starting at 8 p.m. on May 14. The program lasts two hours.

The program will include Steve Allen, Harry Belafonte, Tony Bennett, Nat King Cole, Dick Gregory, Lena Horne, Mahalia Jackson, Fredric March, Edward G. Robinson, Academy Award winner Sidney Poitier, and many others.

Tickets are $1 for students, $2 for general admission, $3 for reserved seat, and $10 for a Patron's ticket (which admits two adults). They may be obtained from Katheryn Lawson (5151), tel. 255-1492; Leslie Theard (5322), 298-3376; Walt Rosenburg (4360), 299-3418; James A. Johnson (7243), 298-1150; and Howard B. Durham (1422), 256-6284.

Judy Elder (3463)

Take a Memo, Please

Plan ahead to avoid accidents. An ounce of prevention gives a good return.

Sandia Speakers

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

A. R. Sattler (5311), "Level Structure of Mo^{92} by the Zr^{90} (alpha, 2n) Mo^{92} Reaction," American Physical Society meeting, Apr. 27-30, Washington, D.C.

R. M. Curlee (1111), "Minimizing Possible Separation between Encapsulation Materials and Integral Plastic Housings," Western Electric Company 1964 Casting Resin Conference, Apr. 29-30, Indianapolis, Ind.

J. M. Wiesen (1440), "Quality Control and Reliability in a Research and Development Facility," Iowa State University Quality Control Course, Apr. 15, Ames, Ia.

D. W. Ballard (2564), "The Unique Role of Nondestructive Testing in Development Programs," ASME Design Engineering Conference, May 11-14, Chicago, Ill.

R. O. Campbell (8242-2), "Noise Measurements and Control," ALO Contractor Health Protection Conference, May 13-14, Kansas City, Mo.

Sympathy

To T. J. Chiado (3242-6) for the death of his father in Albuquerque, Apr. 24.

To James H. Elder (4212-2) for the death of his mother in Oklahoma, Apr. 16.

Welcome Newcomers

Apr. 1-May 1

Albuquerque	
Winnifred H. Andrick	3126
John A. Baldwin, Jr.	5311
Judith M. Cox	2642
Marjorie L. Eyerly	7612
Neita K. Fitch	3126
Edward M. Gullick	3413
Isias Gutierrez, Jr.	4574
Don S. Lovato	4574
Beatrice C. Martinez	4431
Ermenio C. Mata	4574
Barbara J. Mitchell	3427
Kenneth Sellers	2341
Linda L. Ward	3126
John M. Wilson	2323
Arizona	
Andrew J. Phillips, Mesa	4341
California	
Frederic T. Hawes, San Diego	2322
Georgia	
Raymond T. Medlock, Atlanta	2123
Illinois	
A. David DeMattos, Chicago	4112
Clarence Washington, Chicago	7246
Maryland	
James P. Griffing, Tacoma Park	7331
Michigan	
William J. Vaughn, Dearborn	4114
Missouri	
Lawrence M. Ford, Trenton	4631
Ohio	
Thomas L. Brake, Columbus	1314
William D. Brake, Columbus	5312
Robert G. Pressler, Columbus	1411
Pennsylvania	
Richard M. Elrick, III, Bethlehem	5414

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MATHEMATICS is the chief interest of co-op student Dick Tone (8153-1), who is completing his second work period at Livermore Laboratory. Here he prepares a computer program for use in statistical analysis of data distribution.

JOHN STULL (8123-3) is spending his second year in the co-op program at Livermore Laboratory where he has been assigned to work in environmental testing. Here he prepares to place a projectile in the Laboratory's electro-magnetic shock facility. He has also designed and developed an automatic timer and operating control.

THE DRAFTING DIVISION is the assignment of Charles Sonntag (8114-3), who is spending his first work period in the co-op program working on electronic circuit diagrams. Charles is a candidate for an electrical engineering degree.

LASERS occupy the interest of Jeff Edixon (8151-1), who is completing his last period in the co-op work-study program at Livermore Laboratory. The laser is being developed for use as an interferometer, a sensitive measuring instrument.

Sandia-U. of Calif. Co-op Student Ends Work

Bob Lamb (8154-2), one of the first University of California students to be hired at Livermore Laboratory under the Cooperative Work Study Program, will "graduate" from Sandia this summer when he completes his third six-month work period.

Under the program, students earn while they learn, combining alternate periods of academic experience with practical work experience. Bob started at Sandia in Livermore in 1961 when he was assigned to Environmental Testing. He is finishing up this year in a project division, doing design analysis.

Students enrolled in the program receive job assignments in their sophomore year. By attending summer school, and going to school full time six months out of the year, they can complete the program and graduate in a total of five years.

Bob is highly enthusiastic about the program, remarking, "The work experience has given me an opportunity to see what engineering is like. I was impressed with the entire program, and it has been a help financially, as well." He will receive his BS degree in engineering physics when he graduates from the University of California in June 1965.

Graduating with Bob will be Jeff Edixon (8151-1), another co-op student who spent his previous work periods at Aerojet-General in Sacramento, working on aspects of large booster rockets. At Sandia this year he is investigating techniques to prevent light frequency drift in lasers. The program, under the guidance of Jack Foster (8151-1), is aimed at developing lasers for use as interferometers in making highly accurate measurements.

In their second work period at Livermore Laboratory are Dick Tone (8153), and John Stull (8123-3). Dick, who hopes to obtain his degree in Engineering Mathematical Statistics, has been assigned to reliability studies and mathematical programming work. John, an electrical engineering major, is working in environmental testing. John and Dick both agree that the program offers invaluable experience difficult to obtain in a classroom. Both hope to go on and obtain advanced degrees in their subject fields.

In his first year, Charles Sonntag (8114-3), is the fifth co-op student currently enrolled in the program at Sandia. Like all newcomers to the program, John has been assigned to the Drafting Division where he is working on wiring diagrams. As he continues in the program, he will be assigned to work in other areas of the laboratory. His current ambition is to obtain his BS degree in electrical engineering.

SENIOR MEMBER of the co-op students employed at Livermore Laboratory is Bob Lamb (8154-2). Bob has worked at Sandia for three six-month periods, while enrolled in the University of California's work-study program. He is shown here working on an instrument to measure velocity, acceleration, and displacement, for use with the Laboratory's electro-magnetic shock facility. He developed the instrument last year during his second working period at Sandia.

Sandia's Own Baedeker

Careful Plans Help Assure Success Of Your Family's World's Fair Trip

Planning a visit to the N. Y. World's Fair this summer? If so, here are some tips that may save you time and money:

The World's Fair Housing Bureau, 30 Rockefeller Plaza, New York, N. Y., is offering to help people in finding hotel and motel accommodations. The Bureau has announced that 380 hotels and motels have signed contracts to provide guaranteed, fair hotel prices to visitors.

Reservations can be made in advance by calling the Bureau (area code 212 CI 70100).

If you drive to New York and plan to take your car to the Fair via New York's improved highways and parkways, there will be four parking areas bordering the fairgrounds with a capacity of 29,000 cars. In addition, when Shea Stadium, the new home for the Mets baseball team, is not in use, its 9,000-car parking lot will be available to fairgoers. The charge for all-day parking at any of these locations will be $1.50. Flushing airport, a short bus ride away, will also provide facilities at the same price.

For those who plan to get to the Flushing Meadows site from Manhattan by public transportation, a variety of ways will be available. You can drop a 15-cent token into a turnstile and ride any of three subway lines—the IRT, the IND, and the BMT—to within a five-minute walk to the fairgrounds. The New York Transit Authority has purchased 430 new subway cars to whisk fairgoers from the Port Authority's midtown Manhattan bus terminal to the fairgrounds in about 20 minutes. The special Fair-bound cars are gray and blue with large picture windows to give travelers a view of the city as the 10-car trains race along tracks that will be elevated most of the way. Directions in the subways to and from the fairgrounds will be marked by blue arrows.

Fairgoers can board special trains provided by the Long Island Railroad, leaving from Pennsylvania Station, 33rd and Eighth Avenue in Manhattan. The fare will be 50 cents each way, and the ride will take about 12 minutes.

Those who are well-heeled can hop aboard a helicopter at the Port Authority heliport, Pier 6 at the Battery in Lower Manhattan or at La Guardia and Kennedy International airports and land on the roof of the Port Authority building on the fairgrounds six minutes later. The tab from the Battery: $9.00 one way.

Others can sail to the Fair on public or private boats. Two modern double-decked passenger boats will shuttle back and forth between the Fair and docks in Edgewater, N. J. For $3.50 adults can take an hour and 15 minute, 12-mile trip through the Hudson and Harlem rivers, past Hell Gate and Rikers Island, landing finally at the Flushing Bay Marina docks, which are near the fairgrounds. The fare includes a return trip to Edgewater. There will also be other fleets of commercial passenger boats serving New Jersey and Manhattan. The marina itself will have a capacity of 2,000 boats for those who plan to use their own craft.

Fairgoers may also take a bus or taxicab to the fairgrounds. The bus costs 15 cents within New York City. Cabs charge 25 cents for the first one-fifth of a mile and 15 cents for each additional one-fifth of a mile. From midtown Manhattan, a taxi ride to the Fair (barring a traffic jam) costs approximately $4.00, not including tip.

Take Note

Elfran Aragon, Reclamation Division 4622 secretary, is a winner in the "Private Secretary Tip" competition, sponsored by the National Foremen's Institute, a division of Prentiss-Hall, Inc.

Her tip was to use typewriter plastic cleaner for cleaning date stamps.

The suggestion was accepted and a check for $10 was sent to Elfran.

TOUR DEVELOPMENT SHOPS — Thirty-six members of the Eastern New Mexico University Industrial Arts Club visited facilities of Sandia Laboratory's Development Shops recently. L. W. Stouder (4251) points out features of Sandia's numerically controlled "Omnimil." The group also viewed ceramic, miniature machine shop, scientific glass, printed circuitry, and foundry operations.

Supervisory Appointment

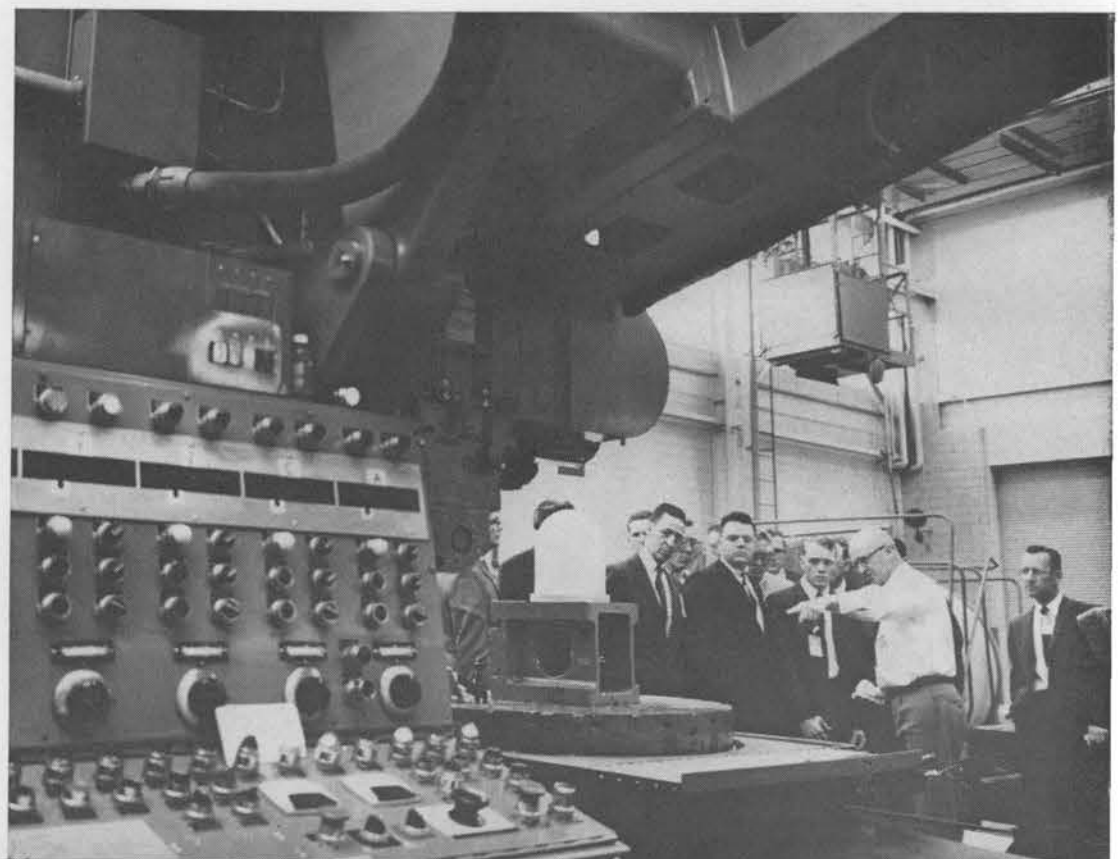
STOUGHTON BELL to supervisor of Systems Analysis Division II, 5423, Mathematical Research Department.

Sto has been at Sandia since 1955 and has worked in the same organization the entire time.

Previously, he was at the University of California at Berkeley where he received his AB, MA, and PhD degrees in mathematics.

He has been a visiting lecturer at the University of New Mexico since 1956.

His memberships in professional groups include the American Mathematical Society, Mathematical Association of America, American Statistical Association, and Operations Research Society of America.



SILVER BOWLS awarded Bill Wagoner, Gordon Snidow, and Jim Walston (center to right) in recent Society of Technical Writers and Publishers competition in Huntsville, Ala., are admired by Gene Lloyd and Bill Entwisle, who received honorable mention. All are Technical Art Division 3463.

Tech Artists Win High Honors in Competition

Sandia Corporation artists have submitted some of their regular work and have earned awards in two recent national exhibits.

The Technical Illustrators Management Association (TIMA) exhibit was held in the Los Angeles Museum of Science and Industry. Last year the exhibit attracted more than 150,000 visitors during the month-long showing.

The second competition was sponsored by the Society of Technical Writers and Publishers (STWP) and was held in Huntsville, Ala.

Gordon Snidow (3463-3) won both second and third awards for visual aids (slides) in the TIMA competition. There were 13 pieces of artwork submitted to the TIMA exhibit that did not win awards, but were selected by the jury for display—an honor in itself for such national competition. Those whose work was displayed are: Ben Aiken (8233-2), Bill Entwisle (3461-1), Ray Leri (8233-2), Gene Lloyd (3463-3), Gordon Snidow, Bill Wagoner (3463-3), and Jim Walston (3463-3).

In the STWP show, Bill Wagoner won a first award for his Employees' Contribution Plan campaign literature, Gordon Snidow received a first prize for a black and white illustration, and Jim Walston was presented an Award of Merit (equivalent to second prize) for a security poster. Honorable mentions went to Bill Wagoner, Gordon Snidow, Gene Lloyd, and Bill Entwisle.

Additions to Be Made On Several Buildings At Tonopah Test Range

The J. B. Sooy Construction Company of Redlands, Calif., is apparent low bidder for a building addition at Tonopah Test Range, the Atomic Energy Commission has announced.

Sooy's bid of $238,000 was the lowest of six received for the work, which includes additions to an electronic and camera repair building, a warehouse, and a high explosives disassembly building. All additions will be prefabricated rigid frame metal buildings on concrete slabs.

John C. Snowdon (4543-3) is the Plant Engineering Department project engineer.

SECRETARIES throughout the Company were honored recently during National Secretaries Week. Typical of the period's events was the observance in Projects Division 1523. Left to right: Helen Walsh, Division Supervisor Walter E. Treibel, Gladys Lydic, and Jane Everett.

Visitors to See Reentry Vehicle

Sandia Laboratory's RFD-1 reentry vehicle will be on display as part of Armed Forces Day observance Saturday, May 9. Events will be centered at Kirtland Air Force Base where military organizations plan a spectacular show beginning at 9 a.m. Activities will continue until 3 p.m.

Sandia's exhibit, prepared by Community Relations Division 3143, will be part of the contractor's display in Hangar No. 482. The RFD-1 reentry vehicle was designed to test "burnup" of nuclear reactors returning to the atmosphere after orbiting. It is part of the Aerospace Nuclear Safety program.

Armed Forces Day events will include a demonstration by the Army's Golden Knights parachute team and the Navy's "Chuting Frogmen"; an underwater demonstration in the KAFB pool; aerial "flyovers" by a variety of jet aircraft; static displays of missiles, infantry and artillery weapons; and various tanks and vehicles. An F-100 will simulate a maneuver with an explosive charge detonated by a ground crew.

Highlights for the children should be a ride on an armored personnel carrier and an opportunity to fire a machine gun with blank ammunition. All events of Armed Forces Day are open to the public. Cameras will be permitted.

On Friday evening, May 8, the U. S. Marine Band and Sea School Pageant Group will present a concert at 8 p.m. in the auditorium of the New Mexico Union, University of New Mexico campus. The Marine Band and Pageant Group will climax Saturday's activities with another concert presented at 8 p.m. at the Civic Auditorium.

Sandia Laboratory's Bus Line Is A Boon to Weary Walkers

Sandia Laboratory's bus line is long on service offered.

There are two routes: one winds through Area I and extends to AEC/ALOO's entry on every other run; and a second route serves Area III.

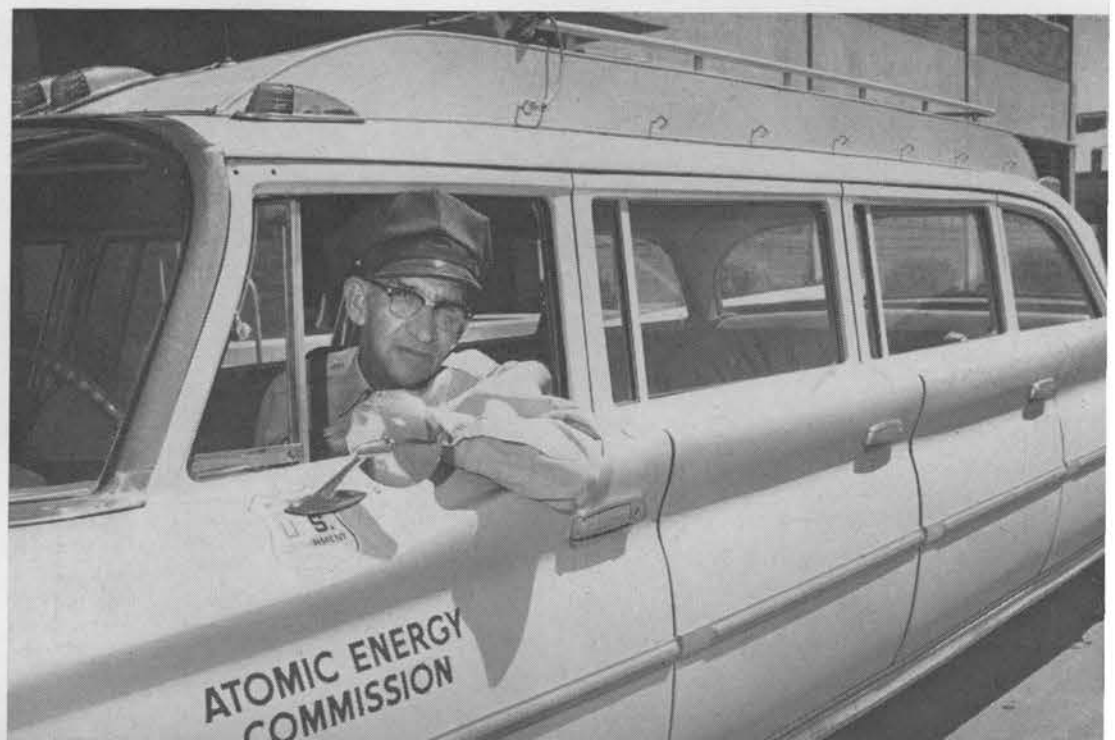
The individual routes are changed as the need arises (usually due to a shift in building population). The service is part of Motor Pool Division 4573.

The Area I bus averages about 660 runs per month. Rather than having fixed bus stops, O. B. Trujeque picks up his passengers, at the wave of a hand, anywhere along the tech area route. Mr. Trujeque has been driving the bus since 1958 and says his greatest number of passengers are when it's "windy, snowing, or real hot."

The Area III station wagon goes from Bldg. 860 to the Area III gate on a half hour schedule and will stop at Area II on a call basis. It averages 308 runs per month. Joe Garcia is the present driver. In the morning and evening there is also station wagon service from the parking area outside Area III to the various buildings within Area III. During the day, however, a carryall is assigned to Area III to provide a shuttle service between the widespread facilities as needed.

ART CHACON (pictured here) and Joe Garcia (both 4573) share the assignment of driving this station wagon. Mr. Garcia normally has the Bldg. 860/Area III route.

FRIEND OF THE PEDESTRIAN in Tech Area I is O. B. Trujeque (4573), whose bus circles among the buildings every 15 minutes.



Deaths . . .

William H. Cross, supervisor of Component Test Division 7332, died May 4. He was 38.

A Corporation employee for 12 years, Mr. Cross had been a division supervisor since October 1962.

Survivors include his widow, three sons, and his mother, all in Albuquerque, and a brother in St. Paul Park, Minn.

Elbert J. Quail, a retired Sandia Corporation employee, died Apr. 22. He was 67.

At the time of his retirement in 1961, Mr. Quail had been with Sandia 10 and a half years and worked in the heating plant.

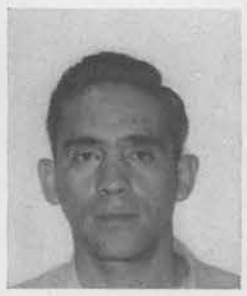
Survivors include his widow, four daughters, seven grand-children, and six great-grand-children.

Burial was at Hillcrest Cemetery in Gallup, his former home.

Cecil C. Gulley, supervisor of Explosive Services Section 4614-1, died Apr. 25. He was 52.

Mr. Gulley had been at Sandia since 1947 and had worked with explosives since 1939.

Survivors include his widow, and daughter, Norma; his mother, and two brothers and two sisters, most of whom live in Tennessee.

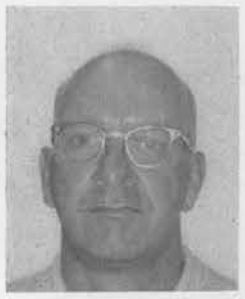


Joseph G. Tafoya, a Sandia employee for nearly seven years, died Apr. 15. He was 41.

Mr. Tafoya was a chartist in Procedures Section 2563-1.

A World War II veteran, Mr. Tafoya was buried at the National Cemetery in Santa Fe.

Survivors include his widow, three daughters, two brothers, and four sisters.



Everett O. Smith, a Sandia employee for more than 12 years, died Apr. 27 in Rochester, Minn., where he had been receiving specialized treatment. He was 50.

Mr. Smith was a dispatcher in Administrative and Vehicle Control Section 4573-4.

He is survived by his widow, an employee of AEC/ALOO.

AEC Seeks Contractor To Enlarge Laboratory Steam Facilities

The Atomic Energy Commission's Albuquerque Operations Office will invite bids soon for an addition to Sandia Laboratory's steam plant, Bldg. 605. Bids for the project, set aside for small business firms only, will be invited about May 8 and will be opened about June 19.

Work will include construction of a 161,000-cu.-ft. addition with site and electrical power service improvements and installation of a 5,000-barrel fuel oil storage tank and transfer facilities.

The project will include provisions for a steam production system and diesel engine generator, and 100,000-lbs.-per-hour addition to the existing steam production system. The steam generator will be furnished and installed under a separate contract.

Work is to be completed within 180 days after the contractor is asked to proceed. Carl Whitcomb (4545-2) is the Plant Engineering Department project engineer.

Employees Give Career Talks at Local High School

Nineteen Sandia Laboratory employees participated in the annual Career Day at Valley High School, held Apr. 29.

The Sandians and their subjects were: F. F. Norris (4541-1), Civil Engineer and Construction Engineer; S. E. Whitcomb (5136), Physicist; R. M. Dayhoff (7412-2), Aeronautical Engineer; D. M. Fenstermacher (7224-1), Optical Engineer; A. Troum (1112-2), Chemical Engineer;

C. W. Jennings (1113), Chemist; G. L. French (4412-1), Draftsman; T. S. Church (1410), Electrical and Electronic Engineer; M. O. Murphy (1423-1), Electronic Technician; W. C. Elskes (4511), Electrician;

M. I. Weinreich (3421), Linguist; F. H. Dausses (3132), Machinist; G. P. Steck (5425), Mathematician; D. L. Krenz (7331-1), Mechanical Engineer; R. M. Jefferson (5332-2), Nuclear Fields;

B. K. Laskar (3142), Photographer; J. D. Shreve (5414), Research; B. C. Brown (4224-3), Sheet Metal Worker and Welder; and J. E. Mitchell (3141), Public Relations.

In addition, students at Albuquerque High School on Apr. 28 heard talks by C. A. Corbin (4224-3) on Welding, F. A. Dausses (3132) on Machinist, and M. A. McCutchan (3132) on Electronics.

Recent presentations, at Madison Jr. High School, were made by F. F. Norris (4541-1), Architecture; and H. R. Shelton (3132-1) and M. A. McCutchan (3132), Engineering Technician. Cleveland Jr. High School students heard Mr. Shelton speak on "Technical and Professional Employment," and S. E. Whitcomb (5136) on "Science."

HOLE-IN-ONE — Charles Whitmer (4212-3) shot his first hole-in-one recently on the University golf course. It was on the 140-yd. No. 2 hole. Not too excited, he went on to score 38 on the nine-hole UNM course.

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

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**
8. **Housing listed here for rent or sale is available for occupancy without regard to race, creed, color, or national origin.**

FOR SALE

BOY'S 20" bicycle, $15; Hotpoint automatic washer; Hollywood bed, springs and mattress. Houghton, 299-3386.

ANTIQUE CHEST, 3 drawers, butternut, brass pulls, $75. Lambert, 344-9012.

DAKOTA SE, buff brick, 3-bdr, 1¾ bath, $16,000; fireside modern birch dining set, $75. Wagoner, 255-9974 evenings and weekends.

KELVINATOR refrigerator, 12 years old, cheap. Cox, 298-4885.

'52 BUICK, new transmission, radio. Ryan 256-1546.

HAMMOND chord organ with bench, walnut finish, $475. Walkup, 256-0150.

'54 DODGE, 4-dr., $110; 1956 Cadillac, 4-dr., $700. Lyle, AL 6-0010.

APT. SIZE refrigerator, 24" wide, $35. Koletar, 255-4751.

LAWNMOWER, reel-type, Sears Craftsman, 18", $30. Freyermuth, 299-2053.

'55 FORD Ranchwagon, R&H, V-8 w/OD, $200. Hurt, 282-3675 after 5 p.m.

HOUSE, 2-bdr., den, AC, new carpet, landscaped, sprinklers, walled yard, garage, near base. Salazar, AL 6-1064.

BABY CRIB, hardboard end panels, double-drop sides w/foot release, 4-position link spring, plastic teething rails, casters, natural finish, $15. Angel, 298-0384.

'60 FALCON, 4-dr, std. trans., $650. Krahling, 268-8126.

3-BDR house, Snow, 10612 Snow Hts. NE, den, FO shelter, hobby room, double garage, patio, fireplace, extra storage, $16,500. O'Nan, 299-1803.

1½ ACRES on east Hiway 66, 2 miles from Hiway 10; septic tank, 300-gal. Griego, AX 9-4043.

TENT umbrella, 9x9', $20; sleeping bags, $5; insulated camping ice chest, $10. Maglidt, 268-7601.

18" REEL mower, $12; 18" rotary, $15; Eureka upright vacuum, $15; two metal Venetian blinds, $3 each. Horner, 256-9316.

'59 MERCEDES Benz 220S, 4-dr, low mileage, pre-selector transmission, R&H, power brakes, $1600. Pliner, 6210 Bellamah NE, 256-1907.

REFRIGERATED air conditioner and dehumidifier, used less than one summer, $100. Doyal, 299-5688.

CEMENT MIXER, small batch, less motor, $12; dinette table with four chairs, $9. Bentz, 299-3448.

FM TUNER, ancient Heathkit, $5 or best offer. Sayers, 344-8597 after 5:30.

KENMORE washer, $50. Kohut, 298-0695.

PARTS for 1956 Ford 4-dr. HT Victoria, 1955 Plymouth 4-dr. Armijo, 264-6075.

KELVINATOR automatic washer, $35. Barela, 299-3825.

TWO SIAMESE kittens, two months old, housebroken, $5 each. Uhl, 268-1855.

TWO GARAGE doors 7' x 9', one piece overhead, wood; drafting desk, 36" x 60"; four drawer file, letter size. Calek, 282-3285.

SPEAKERS, two walnut corner enclosures with 12" coaxial speakers, $120 for pair. Stirbis, 299-5363.

AUTOMATIC washer, Frigidaire Imperial, 5 years old, needs some repair, $35. Young, 299-7339.

EXACTA camera, Penta prism and waist-level viewer, 35, 50, 135mm lens, extension tubes, $230, Exa camera body, $17.50. Denney, AM 8-0004.

GOLF CLUBS, Wilson Middlecoff, 8 precision balanced irons, 3 woods, putter, bag, $125; Philco 17" mahogany TV-record player (3-speed), $75. McKelvey, 256-9787.

ONE WHEEL luggage trailer, spare tire and two types of bumper hitches; pair 8:00 x 14 w/w tires. James, AX 8-0709.

SW VALLEY, 3-bdr., den, 26' LR w/vigas, 2 fireplaces, carpeted, 1¾ bath, double carport w/storage, 2000 sq. ft., less than appraisal. Roth, CH 3-7049.

SEARS 1-ton refrigerated air conditioner with heat pump (115 volt), used two seasons, $125. Wahlenmaier, 255-9953.

ROOM AIR conditioner, deluxe, three speed. Parsons, 298-5280 after 5.

LAWNMOWER, hand type w/grass catcher: bed, ¾ rollaway; headboard for full-size Hollywood bed. Burken, 255-8534.

2-BDR house, small, private shady backyard, two blocks Nob Hill, walking distance to University. Blair, AL 6-6414.

CARVED OAK armchair (circa 1885), a monster that may fit in an adobe. First reasonable offer. Frauenglass, 345-0119.

11 CU. FT. Hotpoint refrigerator, $50; 2 bird cages with stands, $5 each. Drury, 898-0667.

15" BARBECUE, hood, spit w/motor, $5; American Foundry table-top saw, 8" blade, w/table (no motor), $25. Norton, 898-0667.

GARRARD model 210 changer with Pickering 380 C cartridge, originally $85, take best offer over $35. Tassia, 299-8503.

TWO FORMALS, size 9-10, one white and one pale yellow, $6 each. Brummell, 324 Manzano NE, 256-2283.

4-BDR, 1¾ bath, den w/fireplace, double garage, sprinklers front and back. Will lease. See at 10820 Cordova NE. Burns, CH 2-2407 after 5.

SEWING MACHINE, domestic console, zig-zag, all attachments, reasonable price. Kelley, 728 Shirley NE, 298-1107.

COSCO high chair, playpen; formica top dinette table; two large table lamps. Anderson, 344-8919.

WORLD BOOK encyclopedia, 1959 edition, plus year books, $90. Work, 299-8104.

TABLE LAMP, $2; corner lamp table with step, $5; regulation pool table and accessories half-price Grotberg, 299-1704.

NORTHEAST, Mortensen Beach, 3-bdr, 1¾ baths, paneled den, fireplace, dishwasher, carpeting, drapes, AC, sprinklers, near schools. At appraisal. Larson, DI 4-9191.

BASSET HOUND, six months old, male, registered AKC, good pet for children. Chavez, AX 9-2718.

TWO BICYCLES, one girl's Huffy, $2.50, boy's English racer, $10. Reed, 299-7425.

12 VOLT transistor car radio, $10; VW sedan wheel, $5; apt size Frigidaire refrigerator, $60. Gallo, 298-8572.

3-BDR, carpet, drapes, AC, built-ins, garbage disposal, landscaped, washer rough-in, close to Sandia. At FHA appraisal. Dunaway, 299-1422.

50 SQ. YARDS of used cotton carpeting with pad, very cheap. Williams, AL 6-6008.

WASHER-DRYER combination, needs timer repair, $75; largest covered luggage carrier, $29; coffee and end tables; other misc. items. Jennings, 299-5965.

OR TRADE, 3-bdr., dining room, garage, carpet, drapes, AC, circle drive, sprinklers, landscaped, $14,950. 924 Jefferson NE. Syme, 268-1334.

'53 PLYMOUTH sedan, radio, needs body work, good fishing car, $65. Arenholz, 344-4945 after 6 p.m.

'61 PLYMOUTH station wagon, 4-dr, white top over blue, new tires, six, $1100. Erwin, 299-2418 before noon.

TRADE 67 pc. set of china, worth $360, for freezer. Carter, 344-6563.

TRADE for old coins, air-o-ear radio model 711-wn AM-LF-ACFT-VHF; two clock radios; assembled Knight-kit FM tuner model KG-35. Morewood, AX 9-1734.

NEXT
DEADLINE
FOR SHOPPING CENTER ADS
Friday Noon, May 15

'59 FORD 4-dr, power brakes, power steering, auto. trans, much below retail. Morgan, 256-7994.

ALUMINUM umbrella-type clothes line set up. First offer. Corll, 255-5683.

SEARS gasoline 18" reel mower w/magic handle, $39; BC-221, modulated w/ power supply and manual, $25; complete 2-meter station, $75. Bassett, 898-1840.

NEW BOX springs and 6" foam rubber mattress, cost $93, sell for $70. Double size. Ludwick, 243-6544 evenings and weekends.

INDIAN HILLS, 40 acres, $325 per acre. DeHaan, 344-4805 after 5:30.

'60 VESPA, low mileage, windshield, buddy seat, reasonable offer. Streeter, 298-3566.

STUDENT PILOT interested in joining or forming a flying club. Budge, 256-2002.

COUNTRY LIVING, new 3-bdr. home, 1¾ baths, ½ acre fenced, carpeted, electric range, soft water. Cummings, 298-5173 after 5.

3-BDR and den, 2 baths, small equity, can go FHA, GI, or conventional. Armijo, DI 4-4496.

'64 MGB, must sell immediately. Overton, 298-4459.

SINGER SEWING machine in desk cabinet, includes accessories, $25. Paris, 298-2939.

'57 CHEVROLET BelAir, 4-dr sedan V-8 engine, std. trans., R&H, 2-tone paint, whitewall tires, $495. Case, 299-2055 after 5 p.m.

'54 FORD V-8 stick, 56,000 miles; 1960 Mustang cycle, recently overhauled; aluminum bow. Jarvis, AX 8-1113 after 5 and weekends.

3-BDR, 1½ bath, hardwood floor, landscaped, low down payment and assume loan, 416 59th SW. Lopez, CH 3-7356 evenings or weekends.

'63 IMPALA 4-dr. hardtop sedan, all power accessories including factory air conditioning, asking $2975; 1957 T-bird. Browning, 255-9358.

REFRIGERATOR, Crosley apt. size, $50; gas stove, apt. size, $50; lawn mower, rotary, 2-cycle, 20", $40. Beadersted, AX 8-4590.

ALUMINUM Lone Star boat, 14 ft. with trailer, $125. Feliciano, 299-0434.

15 CU. FT. upright freezer; swing set; 20" girl's bicycle. Ryanczak, AX 9-3527.

'50 OLDS 98, 4-dr, R&H, Hydramatic, V-8 engine, $90. Moody, 282-3466.

KITTENS, long-haired, housebroken. Osterby, 299-4606.

'59 SPRITE, 1200 miles since engine & trans. overhaul, new paint, front-hinged hood, ammeter, top, tonneau, $825. Doak, 299-5766.

3-BDR HOFFMAN brick on corner facing improved park, new roof, custom closets, brick patio, assume FHA $16,750. Shaum, 299-5333.

100 FT. white picket fence, 36 in., cost $35, sell for $15. Allen, 243-7085.

HOTPOINT electric range with automatic timed oven and outlet, $45; bunk beds or twin beds, $25; bassinet, $2. Field, 345-1470.

'62 MOBILE home, 10 x 55' w/20 x 6' expando, carpeting, refrig., oven, range, awning, AC, drapes, washer, disposal, storm windows. Dusek, 299-7087.

REBUILT piano, light grey, $200 or best offer Novak, 298-1182 after 6.

'53 CHEVROLET 2-dr., straight trans. cheap transporation. Burks, 268-5613.

CHILD'S WARDROBE; high chair, stroller, and buggy combination. Eisenhour, AX 9-7202.

MANKIN HOME, 3-bdr, hardwood floors, central forced heat, patio, landscaped, walled yard, pitched roof, 10224 Betts Dr. Chavez, AX 9-2718.

PIANO, modified upright w/mirror, $150; portable air cooler, 3 gal., 2-speed motor, $15; car cooler, evaporative type, $5. Amos, 298-4470.

BEGINNER'S guitar outfit, $25; rotary lawn mower, $25; 1 yr. old registered Appaloosa filly, roan color. Tolbert, 282-3438.

OR SWAP, Sandia Knolls lot 115, power and water. Nogle, 299-3863.

REVERE 8mm movie outfit, CA2 camera w/case, P-90 projector, tripod, screen, complete $150; misc. household items. Brookshire, 255-3196.

BELGIUM schipperke, female, 6 weeks old, father AKC registered, mother full-blooded but no papers, $40. Barnfield, 256-6972 after 5.

HORNET triband (10-15-20 m), 1 kw, gamma matched beam, $35; HO gauge model train set w/track layout and access. Martin, AX 8-2064.

MOUNTAIN CABIN, south of US 66 near Highway 10, fully insulated, $3850, your terms; Mossman 3-bdr, 1¾ baths, near good schools and shopping. Kane, 255-8137.

"IDLER" auto cooler, 6 volt, floor type, $15. Waggoner, 299-9014 after 5.

'55 FORD 4-dr. sedan, 2 seat belts, best offer. Miller, AL 6-6020.

'58 CHEVROLET 6 cyl., overdrive, new overhaul, R&H, $500. Garcia, 877-4745.

BE A two-car family. 1952 Studebaker, six cyl., R&H, $99. Schneider, 2817 Espanola NE, AX 9-3769.

TWO 5-acre tracts, Frost Road, 4½ mi., 3½ mi. E of US 10 North, will trade for other property. Bauhs, 282-3497.

'53 FORD 6, 4-dr., OD, R&H, $100; 2-seat stroller, $10; child's jumper chair, $3; ¾ size box springs, $3. Hughen, 298-2900.

'57 BUICK 4-dr., R&H, auto. trans., AC, tach, low mileage. Vickers, 256-1418 after 5.

SWIMMING POOL, 15 ft. Doughboy w/cover, filter, and maintenance kit. Used one year, $145. Love, 255-7918.

'60 FALCON six, 2-dr., auto., R&H, seat belts, Riner, 268-6900.

5 PC DINETTE set; portable cooler; large fan; other items. Zottnick, 299-6339.

AWNING for travel trailer, 9'6" x 7'10", practically new, $40. Summer, 1115 Morris NE, 299-1912.

TRAILER jacks; 48" bird cage; pair airlifts w/hoses; 15" Ford wheel, side-view trailer mirror; 17" TV; black firescreen. Erni, 255-8350.

WHITE FORMAL; lady's clothes size 12, boy's size 4; table lamps; camera; Lucky Claim check book. Ozmun, 299-1222.

'57 AMERICAN mobile home, 45' x 8', 2-bdr, awning, AC; Wright car cooler, $20. Gluvna, 299-8027.

'59 NASSAU Pidgeon motor scooter, windshield, helmet, and '64 tags, make offer. Anthony, 298-4389.

SELL OR TRADE for fairly new piano, complete new 8mm Keystone zoom camera, projector outfit. Atkinson, 299-3250.

'49 IHC ¾-ton 4-speed; or 1959 Plymouth station wogon, V-8, AT, R&H, recent overhaul. Looney, 832-4491 (Moriarty).

AUTO AIR conditioner, Frigiking, brackets for 1959 Ford V-8, $50. Brace, 299-6755.

'59 OLDSMOBILE station wagon Super 88, auto. trans., PB, PS, $350 below book. Brewster, 299-8731.

AUTO AIR conditioner, Allstate, $100. Dauphinee, AL 5-6367.

CAPTAIN'S chairs, 2, maple, $10; upright Singer vacuum cleaner, $25, Drexel pine double headboard w/twin metal bed frames, $30. Raftery, 268-4266.

'56 OLDSMOBILE, major overhaul last eight months, $425. Anderson, 255-9298. Weekdays only.

'61 FALCON six, 2-dr. sedan, stick shift, 11,000 miles, only $300 over wholesale, no trades or credit. Ager, AL 6-1451.

AUTOMATIC IRONER, can iron any type, press and steam, unit is new, below original cost, $175. Conklin, AM 8-6050.

'60 AUSTIN Healey Sprite, book value $745, will sell $650, blue w/white top, seat belts, radio, side curtains, turret cover. Fawver, 299-1820.

SWING SET contains two swings plus glider, $7.50. Gillespie, 255-6421.

TRAILER, aluminum, 18 ft., sleeps 6, $795. Eversgerd, 256-6345.

TWIN-SIZE mattresses, used one month, misc. items. Piraino, 255-5126.

'54 DODGE pickup, 3-speed, $170, outboard motor, 5½ hp Evinrude, $10. Vermillion, 268-8981.

TROMBONE with case and music stand, $65. Gorney, 299-8901.

NORTH VALLEY, 4-bdr., and den, 2 fireplaces, carpeted, FHA appraisal $17,000. $700 down. Sanchez, 2430 Iris Rd. NW, 243-2032.

STORKLINE crib, 6-year size w/foam mattress, $25. Rollosson, 256-1259.

TOY MANCHESTER puppy, six weeks old, AKC registered, perfect markings. Kelley, 255-6531.

REFRIGERATED air conditioner, Fedders, 1½ hp, $100; stereo tape recorder w/tapes, $98; AM-FM clock radio, GE, $40. McIntire, 298-6145.

COMPLETE citizens band station, two transceivers, two antennas, power supplies, $100. Laskar, 299-1024.

3-BDR, den, large corner lot 75' x 150', SW Valley, $11,000. Sanchez, 247-9460.

'55 DESOTO 4-dr. sedan, factory AC, power steering, power brakes, Mikkelsen, 268-1485.

.22 CAL. Ruger semi auto. pistol w/ holster. Wilde, DI 4-6079.

'62 PHILCO 30" pushbutton electric range, $95. Smith, 256-0375.

TENT TRAILER, Wards, 4' x 7', makes into 7' x 15' tent w/floor, bed, storage, cabinets, cost $400, used 2 weeks, take $250. Littrell, 256-3720.

3-BDR. 1¾ bath, large paneled den w/fireplace, over 1800 sq. ft. plus utility room and garage, tiled kitchen w/electric range, $16,900. Sinnott, 1718 Utah NE, AX 9-1300.

WANTED

TO RENT, tent trailer for week of June 15-21. Fjelseth, 299-4539.

RIDE FROM vicinity of Louisiana and Constitution to Area 3 gate. Flowers, 256-1656.

GIRL'S 16" or 20" bicycle with or without training wheels. Garcia, 256-7606.

TO JOIN car pool or ride from Southern and Tennessee to Bldg. 880. McPike, 255-0476.

RIDE FROM Paradise Hills (5732 Alegria NW) to vicinity Bldg. 805. Gilbert, 264-6631.

GIRL'S BICYCLE, 20" in first class condition, with coaster brake and kick stand. Kerr, 299-7527.

ANY model Crosley, chassis, engine, and/or running gear. De Ruyver, 298-5332 or P. O. Box 1185.

RIDE OR riders from Belen. Haaland, 264-2636.

USED Craftsman 12" metal lathe. Beaudet, 299-0849.

RIDE for summer months from Summer and San Mateo NE to Bldg. 892. Avallone, AL 6-0403.

TO RENT pickup camper last two weeks of July and first two weeks of August. Westman, 255-6048.

SMALL TWO-wheel trailer, must be in good condition. Wilde, DI 4-6079.

FOR RENT

2-BDR NE, nice for couple, draped and carpeted, $90 per month. Whitlock, 298-6638 after 5.

NEW 2-BDR unfurnished apt., carpet, drapes, individual patio, stove, refrig, garbage disposal, Palomas and Zuni, $110. Hughes, 255-4628.

1-BDR house, corner of Virginia and Trumbull SE, refrig, and stove, $55 month. Sanchez, 298-7103.

LOST AND FOUND

LOST: BPOE pin on chain; tan silk scarf w/brown border; beige sandal (new); lady's fabric glove w/beige cuff; 2 keys on ring; prescription safety glasses. LOST AND FOUND, 264-2757.

FOUND: rosary beads; St. Christopher medal on keyring w/cross. LOST AND FOUND, 264-2757.

Scientists to Use Reports Gathered On 1527-ft. Tower

Installation of a meteorological instrument and recording system on three towers at the Nevada Test Site started last month, according to the Atomic Energy Commission. The meteorological data acquisition system will be installed on the 1527-ft. BREN (Bare Reactor Experiment, Nevada) tower, a satellite 60-ft. tower, and a remote 500-ft. tower.

Scientific Director for the project is Jack W. Reed (5414). The system will provide more detailed wind and temperature information for the NTS safety program. Mr. Reed is Chief of the Blast Prediction Unit of the AEC Test Manager's Staff, Nevada Operations Office. Blast prediction for underground nuclear tests is a Sandia responsibility.

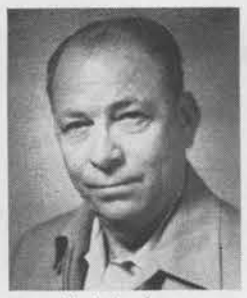
The unique all-digital wind data system will record integrated wind information from 14 levels ranging from four ft. to 1500 ft. and temperature information from 22 levels. The automatic system will continually record data from the towers and provide readout on paper tape for direct data reduction by computer.

Sandia also requires meteorological information and data for studying blast effects from underground detonations and conventional high explosive cratering experiments. Additional information on cratering experiments is desired to determine whether blast effects might be a limiting factor in peaceful uses of nuclear explosives for earthmoving or canal excavation projects.

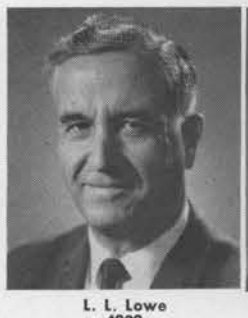
Missouri Research Laboratories, Inc., of St. Louis, Mo., developed the data acquisition system under contract to Sandia Laboratory. The system will be operated by the U.S. Weather Bureau.

Service Awards

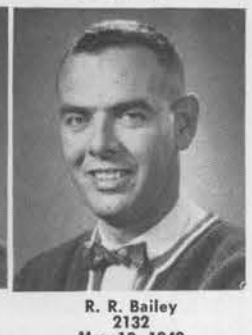
15 Years



V. L. Brockway
4512
May 9, 1949

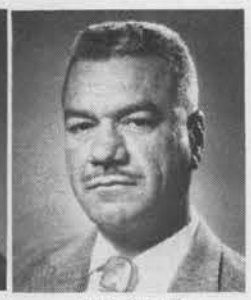


L. L. Lowe
4232
May 12, 1949

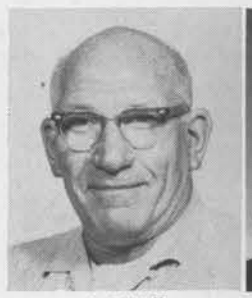


R. R. Bailey
2132
May 13, 1949

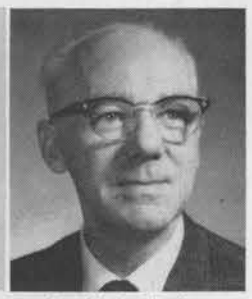
G. L. Morrisroe
2625
May 17, 1949



L. D. O'Neal
3415
May 20, 1949



L. E. Hall
2642
May 24, 1949



Francis Cunningham
8153
May 25, 1949

Technical Conference Tours Sandia Laboratory Facilities

Approximately 75 participants in the AEC-Associated Rocky Mountain Universities Technical Conference toured Sandia Laboratory facilities on Apr. 22. The Conference, which concerned Radiation Effects on Materials and Radiation Biology, was held at the University of New Mexico, Apr. 22-25.

The group visited Sandia's SERF and SPRF reactors, as well as the Activitation Analysis, Electron Microprobe, and X-Ray Diffraction Facilities. Other conference tours included visits to Los Alamos Scientific Laboratory and the Lovelace Foundation.

Sandians participating in the conference included J. W. Easley, Director of Radiation Physics 5300, who discussed "Research Reactor Utilization in Radiation Damage Studies"; R. S. Claassen, Director of Physical Research 5100, who participated in a panel discussion on "University-AEC Lab Cooperation"; B. T. Kenna (1122-2), "Activation Analysis With 14-Mev Neutrons"; F. M. Smits (5310), "Dependence of Neutron Displacement Damage in Silicon on Neutron Energy and Neutron Flux"; Ruth E. Whan (5311), "Optical Studies on Oxygen Defect Complexes in Germanium"; A. W. Snyder (5320), "Photoconductivity in Insulators"; and K. R. Jones (5322), "Inter- and Intra-Molecular Energy Transfer in Gamma-ray-irradiated Alkylbenzines and Related Hydrocarbons."

The conference was held in Albuquerque through the efforts of D. J. Jenkins and members of his department—Personnel Research, Training, and Education.

VISITORS to Sandia Laboratory during AEC-ARMU Technical Conference heard E. J. Graeber of Analytical Section II, 1122-2, discuss X-Ray diffraction techniques. They also visited SPRF and SERF reactors, and other Sandia facilities. Tour was Apr. 22.

Congratulations

Mr. and Mrs. Thomas Mickey (4221-4), a daughter, Maureen Ann, on Apr. 20.

Mr. and Mrs. R. C. Gauerke (1553), a son, Eric Reinhart, on Apr. 15.

Mr. and Mrs. James L. Hay (4254-4), a son, James Michael, on Apr. 23.

Mr. and Mrs. Ben Harris (4212), a daughter, Vicki Jean, on Mar. 22.

Mr. and Mrs. Bill Wagoner (3463), a son, on Apr. 30.

Big Cut Made in Time Needed To Place Stock-Item Orders

A new program for speeding up and simplifying purchase of stock items was recently placed in operation by Sandia's Purchasing Organization 4300. Time for placement of purchase orders is reduced from an average of 16 days to 24 hours or less. Accompanying reductions in manual and clerical effort also are realized.

About four years ago, Sandia's Commercial Purchasing Department 4360 and General Services Department 4610 initiated a computer program for processing orders for General Stores items. Nearly 13,000 items are now on contract and approximately 1,800 more will be added in the next three months. A potential 8,000 more items in other stock accounts were not included in commercial contracts because the stock accounts were not automated.

"For the past three years we've experienced large, steady increases in the number of orders we've placed, as well as in the dollar volume of the orders," W. R. Rosenburg, Assistant Purchasing Agent and Manager of Commercial Department 4360, reports. "Under this pressure, we increased our search for a way of expediting our operations and reducing our workload to manageable size."

A way to extend contract coverage to stock accounts utilizing the Teletype Procurement Cycle System rather than a computer program was found by Commercial Department 4360, Purchasing Administration Department 4330, System and Procedures Department 4110, and Model Shops Control Department 4210. "It's been a cooperative operation all the way," Mr. Rosenburg continued, "and we feel that all four organizations should take equal credit for the new program."

"In the past three years, purchase order volume has increased 27 per cent, and the value of purchases has increased 98 per cent," D. D. Dollahon, Purchase Service Buyer 4362-2, adds. "But our personnel have increased only one per cent in the same period. The new program enables us to utilize our time much more productively."

As a first step in the program, large "classes" of items are prepared; for example, plastic rod, sheet, and tube stock would be placed in the same class. Then, a single contract with a manufacturer who is able to provide the whole array of items in the class is negotiated.

"Contracts under the new program are negotiated once yearly," J. W. Hughes, Contract and Purchase Service, 4362, explained, "rather than separately negotiated on each individual order during a year. Our experience with contracts covering General Stores stock indicates that it's reasonable to expect a cost reduction of about 14 per cent. And our savings in order placement, clerical, and filing time will be very significant."

As contracts are awarded, Teletype program tapes are prepared by Purchasing for use on Teletype equipment located at the ordering organization. These tapes, together with copies of the contracts, are forwarded to the ordering organization.

The stock record card of the ordering organization is coded to show the association of stock numbers by contract, and includes such information as price, unit of issue, shipping weight, and minimum order quantity.

Each item's contract number and price are posted to the ordering organization's stock ledger card. As reordering becomes necessary, all of the stock cards applicable to a contract are sorted and the package of cards is marked with the contract number. The ordering organization's Teletype operator, using the program tape for that contract, prepares a requisition for internal approval.

At the same time that the requisition is being prepared, a tape is punched in purchase order format and is held by the ordering organization until the requisition is approved. The ordering organization then places the final tape in their Teletype transmitter and purchase orders rather than purchase requisitions are transmitted to Purchasing. The purchase order, complete in every detail, is received, ready for the buyer's signature.

Take Note

Medalist in the first two tournaments of the season for the Sandia Laboratory Employees Golf Association is Dick Kidd (1513). Dick shot a low gross of 81 to take the Socorro Tournament and a 78 to earn honors at the Spring Classic Partnership Tournament at the University of New Mexico last Saturday.

Low Net winner at Socorro was A. M. Watson (3234) who shot a 70. Tom Kelly (1551), Ed Stang (2313), Gus Krause (1321), and W. D. Jones (2561) were the winning team with a low net of 311.

Partnership winners at the Spring Classic were Jim Leonard (7419) and A. G. Carter (7419) who took the Class A low net honors with a 62. Class B winners were Doug Lacoss (1411) and L. P. Robertson (1414). Mr. Robertson also took the low net crown with a 64.

* * * *

The Albuquerque Amateur Radio Club will meet Wednesday, May 13, with two Sandians presenting the program. Speaker will be T. G. Banks, Jr. (7433-1). E. L. Hansen (7253-2) will demonstrate a new piece of amateur equipment, a Swan 400 transceiver.

The meeting will begin at 7:30 at the School for the Visually Handicapped, 2200 Yale Blvd. SE, according to John P. Hoice (1423-3), president.

* * * *

Quality Managers for Atomic Energy Commission Albuquerque Operations Office contractors met last week at the Kansas City Division of The Bendix Corporation. Representing Sandia Corporation were H. E. Lenander, Director of Manufacturing Development 2500; J. R. Sublett, manager of Manufacturing Development Quality Control Department 2560; and L. E. Davies, manager of Engineering Support Department 8110.

Back Injuries Sustained By Two Employees

Two strained back injuries recently downed Sandia Laboratory's safety record.

The first injury occurred when an employee started to lift a mud-covered rubber floor mat from an outside entrance. The second occurred when an employee attempted to push an empty jack-tongue box skid across an aisle.

Both men were treated by Sandia's Medical organization and have since returned to work.

At the time of the first injury, Sandia Laboratory employees had worked 32 days or 1,120,000 man-hours without a disabling injury.

Sandia's Safety Record

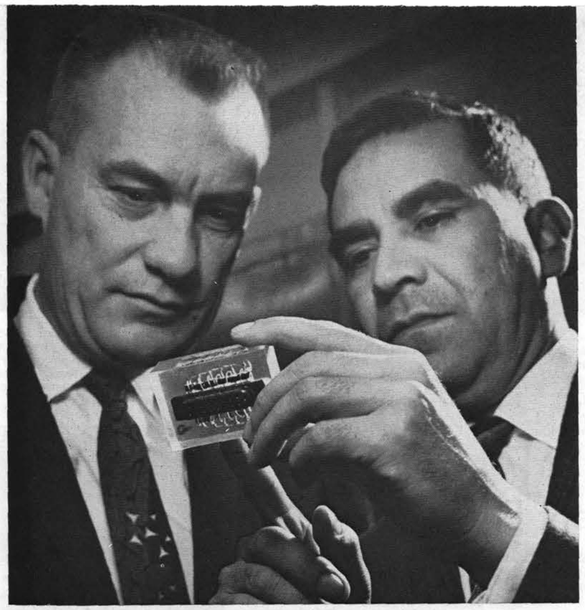
Sandia Laboratory

HAS WORKED 245,000 MAN HOURS OR 7 DAYS WITHOUT A DISABLING INJURY

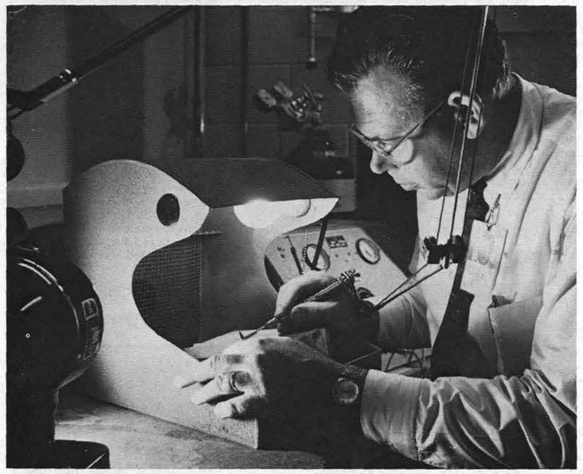
Livermore Laboratory

HAS WORKED 566,000 MAN HOURS OR 105 DAYS WITHOUT A DISABLING INJURY

'QA'--Key to Quality And Reliability



COMPONENT of a recoverable instrument package to be used in a QA-DOD joint missile firing program is examined by Carl M. Frantz (2121-1), left, and Benito Marquez (2122-3).



POST-MORTEM INSPECTIONS of defective components are part of the job performed by Quality Engineering Department 2120. Such investigations demand care and skill, as well as frequent use of unusual equipment. W. D. Harwood of Component Evaluation Section B, 2123-2, uses dental drill to search for reasons of defect found in component under test.

"It is the responsibility of the Quality Assurance Organization to establish adequate assurance that weapon material for which Sandia Corporation is assigned the design function is of satisfactory quality and conforms with design intent," L. E. Lamkin, Director of 2100, states. "This responsibility relates not only to material submitted by production agencies for AEC acceptance, but also includes quality of material throughout its stockpile life."

Department 2110, managed by A. F. Cone, has responsibilities in several important areas of the Quality Assurance function. Primarily, these responsibilities center on establishment and implementation of quality procedures; on receival, processing, analysis, and storage of inspection information; and on the reporting of quality results.

In the first area, the department provides procedures and methods for the systematic operation of the AEC nonnuclear Quality Assurance Program, as it is outlined in agreements with the AEC. This responsibility extends to the establishment of requirements for reporting the results of verification inspection (AEC) and field inspection (Armed Forces) operations. Department 2110 also provides statistical recommendations to Organization 2100 regarding the design of experiments and the development of sampling plans, reliability studies, and data analysis procedures.

Quality data form the cornerstone of the Quality Assurance Program; and the transformation of these data into meaningful estimates of product and weapon quality is a function of Department 2110. Personnel of this department are responsible for the collection, editing, processing, and analysis of quality data from verification inspections, from field operations, and from tests performed as a part of New Material System Test and Stockpile Sampling Programs and Quality Engineering Projects. These data are stored for prompt retrieval as the need may arise. In the handling of the information, the QA Department makes use of such modern data reduction and processing equipment as its own OSCAR's (Oscillogram Analyzers and Readers) and the CDC 1604 and IBM 7090 in Sandia's Computing Organization 7600. Each month, thousands of punched cards and hundreds of tab runs and magnetic tapes are utilized by the Department in the analysis activities by means of which its personnel maintain a continuing evaluation of the quality of each weapon system.

OVER-ALL PLANNING of the AEC Acceptance Program is the responsibility of Systems Planning Division 2121. In the foreground, E. M. Hodges, supervisor of Systems Planning Section C, 2121-3 (left), reviews the program for a specific weapon with J. Norman Baker of Section 2121-3.

As an end product, the Department issues regular and special quality reports to Sandia management, the AEC, and certain DOD organizations. These reports provide, as appropriate, summary or detailed quality rating results; descriptions of observed defectiveness and information on corrective action taken; and the results of analyses of variables data obtained from system tests of sample weapons and from quality engineering evaluations of specific weapon components.

* * * *

Quality Engineering Department 2120, managed by George H. Roth, administers weapon evaluation programs to ensure that the components and assemblies conform to design intent at the time of production and throughout stockpile life.

"These programs are designed to supplement production and field inspections to ensure that subtle defects, incompatibilities and deterioration do not affect stockpile reliability or life," Mr. Roth states.

New or rebuilt weapons submitted for AEC acceptance are sample checked by inspection procedures (QAIP's) prepared by this department to non-destructively verify that the material meets design specifications and is free from significant defects. Data from each lot is used to confirm that that lot is suitable for AEC stockpile.

Quality Engineering also obtains typical new components for thorough laboratory environmental and functional tests to check their adequacy for extreme storage or use conditions and to verify the efficacy of production drawings and processing.

Quantities of certain components are set aside for later periodic tests to assess through statistical techniques the effects of aging on weapon reliability. Defective components found in the field are submitted to rigorous scrutiny and tests as part of the post-mortem investigations conducted in Quality Engineering's electrical and mechanical laboratories.

During the last six years, the Stockpile Sampling and New Material System Test programs administered by this organization in cooperation with Los Alamos and Lawrence Radiation Laboratories have periodically monitored the readiness of old and new weapons in stockpile. Automated test equipment is designed to laboratory test as complete a weapon system as feasible. Samples of each weapon type are checked at the time of production and at intervals thereafter to evaluate the seriousness and frequency of system problems. Corrective action is recommended whenever serious problems are found through Quality Engineering's study of these test results.

Quality Engineering coordinates its stockpile testing programs with those performed on missile subassemblies by the Army, Navy, and Air Force, and prepares joint reports on their findings.

To provide more realistic testing conditions for typical stockpile subassemblies, for more than two years, Quality Engineering has worked with the various armed forces in planning and conducting joint missile firing programs. These tests verify the compatibility and functioning of the AEC and DOD components used together in typical missile flights.

Findings of all these Quality Engineering programs are continuously provided to weapon designers to aid in future weapon plans and in improvement of the existing stockpile weapons.

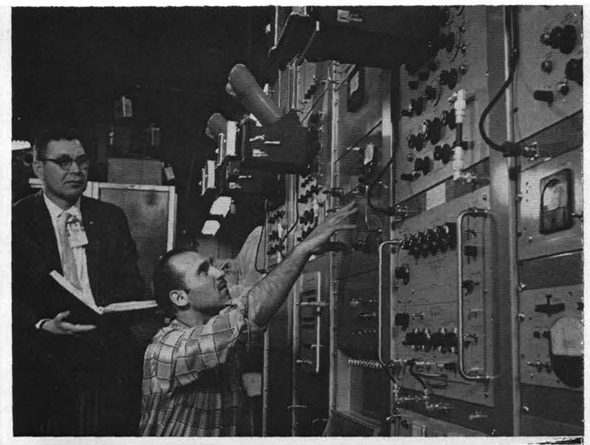
* * * *

Quality Assurance Operations Department 2130 is managed by A. P. Gruer. This organization conducts operations to test weapons and components in compliance with the aforementioned stockpile sampling plans. In addition it operates the Quality Assurance Inspection Agencies. Data gathered from both these functions are submitted to the other Quality Assurance Departments for further reduction and analysis. Department personnel also conduct diagnostic tests of weapons which are returned for repair.

The Mod Center Surveillance Division 2136, supervised by D. E. Murphy and operated at Medina Base, San Antonio, Tex., is typical, in its activities, of the field operations carried out by Department 2130. It is here that the SSP, NMST, and joint firing preparation operations take place. These quality operations require skillful operation of special, complex test equipment along with complete objectivity. Support for field operations involving planning and logistics is provided by a division within the department based at Albuquerque.

Additional assurance of weapon quality is achieved through the Quality Survey activity of Organization 2130. This activity is concerned with the manufacturer's ability to produce high quality materiel and his compliance with the quality policy of the AEC. The Survey Division, in conjunction with the prime contractor and AEC, conducts surveys at the prime contractor and supplier plants to review all factors affecting the quality of weapon materiel.

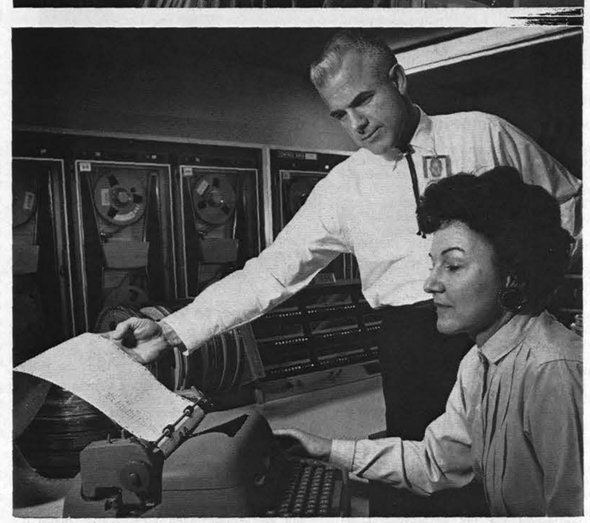
As for the future, Organization 2100 is looking forward to improved methods to assure product quality and reliability. To meet this objective, Quality Assurance can be expected to develop new and improved techniques in such areas as statistical analysis, sampling plans, rating methods, quality surveys and quality engineering evaluations on systems and components.



LONG TERM SURVEILLANCE TESTING capabilities of the Quality Tester 151, designed and developed by Jim Hillman and Richard Swanigan (2124-1), right, are reviewed by Ray Oliver of Section 2141, on the left.

THESE MEN travel coast to coast and border to border surveying production plants and auditing specific weapon designs and processes for QA Operations Department 2130. J. W. Windsor (center) a member of Planning Section 2134-2; W. B. Fears (left) and W. B. Fleming, members of Survey Section 2134-1, discuss an auditing trip to a sub-contractor.

QUALITY ASSURANCE INSPECTORS use this dummy equipment — fondly designated "W-99-O" — to test their skill in finding discrepancies in real weapons or weapon components. W-99 in no way represents a real weapon or component, nor does it contain any explosive or other dangerous material, but it does embody discrepancies — missing or malformed parts, poor solder connections, etc. — that inspectors must watch for. E. R. Clark of Quality Assurance Reports Section 2112-2 (left) and L. K. Hungate of Systems Analysis Section III, 2113-3, examine circuit continuity tester. They use such equipment in indoctrinating inspection personnel who will be conducting Quality Assurance inspection.



COMPUTER ANALYSIS of data plays a large part in the activities of Quality Assurance Department 2110, which compiles hundreds of tabulations of data on weapon quality. Bruce F. Coleman of Systems Analysis Section II, 2113-2, examines readout of program run on the CDC 1604 computer by Wilda Ward of Sandia's 1604 Operations Section 7612-1.

"OSCAR," a semi-automatic oscillogram reduction machine, is operated by Roma S. Kessler of Statistical Development Section 2112-2. In reducing the oscillograms, which come from system testing of weapons, OSCAR produces a punched IBM card and printed readout. The cards then go to Sandia's Computer Organization 7600 for statistical analysis on computers.