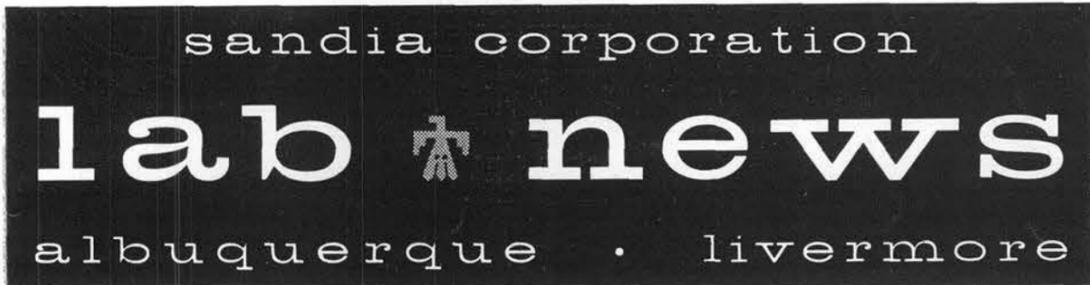


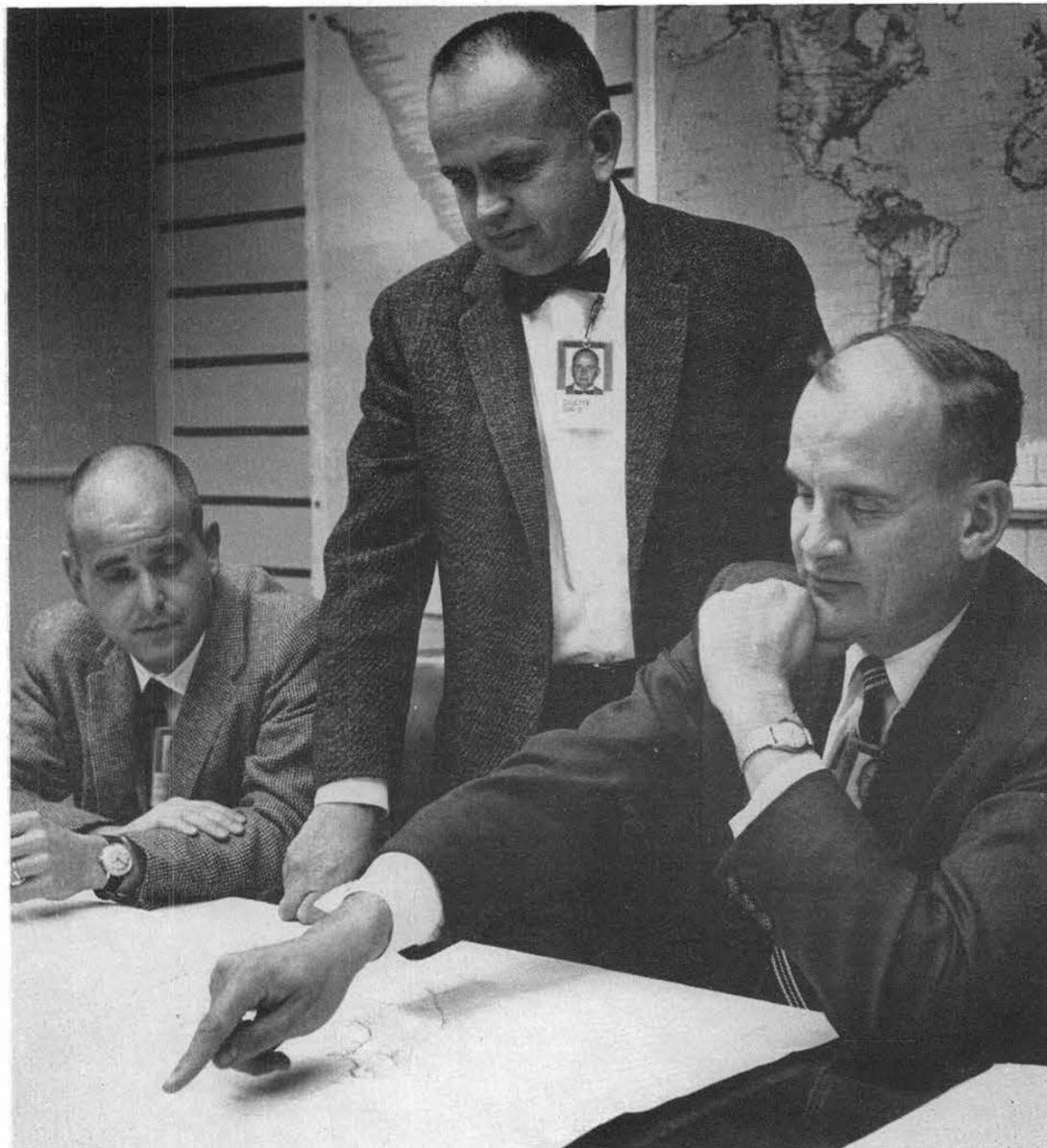
# Sandia Sharing Full-Scale Test Responsibilities



VOL. 14, NO. 9

Published every other Friday for the employees of Sandia Corporation, contractor to the Atomic Energy Commission

APRIL 27, 1962



DISCUSSION preceded many phases of Sandia Corporation's preparations for the Project Dominic test series scheduled to begin in the Pacific this month. Don B. Shuster, Commander of Sandia Corporation task unit in the Pacific, (center) examines map of test area with C. G. Scott (left), Deputy Program Director, and J. C. Eckhart, Deputy Commander of the Sandia task unit.

Sandia Corporation's Albuquerque and Livermore Laboratories have joined forces in a task unit of Joint Task Force 8 to share responsibilities with the AEC's Nuclear Physics Laboratories for the full-scale tests scheduled to begin in the Pacific.

Sandia's task unit is headed by Don B. Shuster, Director of Field Testing for the Corporation. His deputies in the task unit are L. E. Hollingsworth of Sandia's Livermore Laboratory, and J. C. Eckhart and J. H. Scott of the Sandia Laboratory.

Sandia's responsibilities in the Pacific tests will include:

1. Fuzing and firing systems for certain test devices;
2. Telemetry instrumentation in rockets and other test devices;
3. Meteorology and microbarograph studies;
4. Tracking radar and tracking mounts for optical instrumentation.

These activities are similar to the responsibilities handled by

Future issues of the Lab News will contain reports on contributions made to the tests by other Sandia Corporation organizations.

Sandia Corporation in prior full-scale tests. It is estimated that 275 employees of the Corporation may be involved in forward area tests, although not all at the same time. As in the past, the Field Test organization supplements its staff for these temporary assignments by drawing personnel from other groups within the Corporation.

Meanwhile, both Sandia and Livermore Laboratories are continuing at-home preparations for the test series. One Sandia Lab organization, Packaging-Shipping and Commercial Inspection Division 4624, has been especially busy preparing and shipping a large bulk of material and equipment—

(Continued on Page 3)

## W. Lee Hancock Appointed to Head Atomic Section, UCF

The appointment of W. Lee Hancock, Manager of the Sandia Area Office, U. S. Atomic Energy Commission, to head the Atomic Section for the 1962 United Community Fund campaign has been announced by F. C. Childs, 1962 campaign vice chairman in charge of Soliciting Division No. II.



The Atomic Section includes: Headquarters, Field Command, Defense Atomic Support Agency; Sandia Base Command; Manzano Base Command; Kirtland Air Force Special Weapons Center; the Atomic Energy Commission; Sandia Corporation; ACF Industries, Inc.; and Carco Air Service, Inc. This area of responsibility encompasses 19,000 people.

"Although the campaign is not until Fall," Mr. Hancock said, "we're making plans now for the Atomic Section's program. In last year's campaign, the Atomic Section raised 111.8 per cent of its particular quota, so with this precedent to spur us on, we really have our work cut out for us this year. I'm sure the people covered

by this section will do even better next year and they know that as Albuquerque grows, so grows the need."

Mr. Hancock came to Albuquerque in 1956 from Washington, D.C., where he had been Chief of the Regulations Unit of the Commission's Division of Civilian Application since September 1955. Prior to that time, he had been Assistant Director of the Security Division in Washington since February 1952.

He was born in Herman, Nebr., attended schools there, and was graduated from the Law School of Creighton University in 1937.

He immediately joined the Federal Bureau of Investigation as a special agent, and served in Atlanta, Ga.; Chicago, Ill.; Washington, D. C.; St. Paul, Minn.; Kansas City, Mo.; Oklahoma City, Okla.; and Columbus, Ga., before he resigned in 1946 to become an executive assistant to the General Manager of Trans World Airlines.

He left the airline in 1949 to operate his own business in Denver, Colo., and lived there until he was employed by the Commission in 1952.

Mr. Hancock is a member of the United Community Fund Board of Directors.

## Personnel's Activities Affect Life of Each Sandia Employee

Third in a series of articles describing the work of Sandia Corporation's general organizations appears here. These articles will appear from time to time in the Lab News and it is hoped that these non-technical explanations will help all employees better understand the task undertaken by the Corporation.

This article concerns the organization headed by W. C. Scrivner, Personnel Director 3100.

Personnel representatives are usually the first official contact a new employee has with Sandia and also the last upon his termination or retirement. In the intervening period, members of the 3100 organization play an important role in an employee's life at Sandia Laboratory.

Under W. C. Scrivner, Personnel Director 3100, are such varied activities as employment, employee records, training and education, personnel development, secretarial services, benefits and services, and wage and salary administration.

During the year, Sandia recruiters are visiting colleges, universities, and technical institutes throughout the country. "Once employee requirements for the year are outlined," Mr. Scrivner said, "we try to fill them with the best candidates available."

Nowadays the most emphasis at Sandia Laboratory is in re-

cruting candidates with PhD degrees. Some 50 PhDs in the line organizations do the actual recruiting, however, 3100 coordinates this activity. To date this fiscal year, 29 acceptances have been received compared to 24 in 1961. "The increasing complexity of Sandia's mission requires that we continue to place major emphasis on the recruitment of highly qualified candidates at the advanced degree level," explained R. W. DeVore, who heads Employment Department 3150.

The second type of campus recruiting is for candidates at the BS and MS degree levels. This recruitment includes Technical Development Program candidates, administrative prospects, and specialists who collectively guarantee Sandia an infusion of the latest technical and management sciences from the campuses.

At the present time recruiting is

also underway at 20 technical institutes. These employment candidates have an associate degree of engineering technology representing two years of study. Mr. DeVore said, "We have 475 such employees as Staff Aides, representing one of the largest Tech Institute cadres in the United States." These employment candidates are trained in the fields of electrical, mechanical, and chemical engineering technology; and drafting, photography, chemistry, and health physics.

The employment representatives of 3150 also screen applications for summer employment. The 1962 summer staff program will include 45 graduate students, 13 college faculty members, and 15 high school and Tech Institute teachers.

Speaking of Sandia employment trends, Mr. Scrivner said, "There will be some shifts in employment through 1963 such as an increase in research and advanced development and some counterbalancing in the form of reductions in other areas. The employment picture through that period and beyond

(Continued on Page 4)



EVERY NEW EMPLOYEE at Sandia Laboratory is greeted by the receptionist in the Personnel Building. Marie Therkildson (3151) is taking some basic information from a prospective employee before sending her on to an employment representative interview.

**Editorial**

**Law Day Observes Freedom Heritage**

Every American citizen enjoys certain rights set forth in the Constitution and protected by law. These individual liberties distinguish our free society from the totalitarian systems. The preamble of the Constitution refers to them as "unalienable rights," among them life, liberty and the pursuit of happiness.

Your rights under the law include the right to equal protection of laws and equal justice in the courts; to be free from arbitrary search or arrest; equal education and economic opportunity; to choose public officers in free elections; to own property; to have free speech, press, and assembly; to attend the church of your choice; to have legal counsel of your choice and a prompt trial if accused of a crime.

With your rights as a citizen go individual responsibilities of obeying the laws, respecting the rights of others, being informed on issues of government and community welfare, voting in elections, serving on juries if called, serving and defending your country, assisting agencies of law enforcement, practicing and teaching the principles of good citizenship in your home.

Law Day USA — to be observed Tuesday, May 1 — is an annual education-patriotic observance established by Congress and by official proclamation of the President of the United States. Its purpose is further understanding of our national heritage of freedom under the law.

The President's proclamation calls on Americans to rededicate themselves to "the ideals of equality and justice under law in their relation with each other as well as with other nations."

**Congratulations Greensboro**

H. I. Romnes, Western Electric Company President, sent the following telegram recently to the superintendent of Western Electric's Greensboro Shops:

"I am informed that the Greensboro Shops completed Sunday its tenth consecutive year without a single disabling injury, and that you have amassed more than 28 million accident-free hours since the last such injury occurred on Apr. 8, 1952. This is truly a remarkable safety achievement. Please extend my personal congratulations to all Greensboro employees.

"The job of safeguarding our human resources is our first and most important responsibility. That Greensboro has performed this task efficiently must be a source of real satisfaction to you and your people. Your record continues to be an inspiration to the entire Bell System."

**A. J. Chabai to Give Paper in Minneapolis**

A. J. Chabai (5112) will present a paper, "Synthesis of Shock Hugoniot for Rock Materials," at the Fifth Rock Mechanics Symposium to be held at the University of Minnesota in Minneapolis May 3-5.

**Space Paper Read**

"Logic Modules for Space Applications" was the title of a technical paper presented by F. E. Thompson (7232-2) before a Joint IRE-AIEE student group meeting at the University of Oklahoma last month.

**A. F. Cone Gives Paper**

A. F. Cone (7510) presented a paper, "Evaluating a Quality Control Program," last month before the Valley Subsection, Los Angeles Chapter, of the American Society for Quality Control.

**Tennis Anyone? League Play Begins Apr. 28**

Sandia Laboratory Tennis Association singles and doubles, for use in establishing a rankings ladder, will be played on the Beverly Courts, Louisiana at Indian School Road, at 7:30 a.m., Apr. 28-29 (singles) and May 5-6 (doubles). Applications for doubles play are still available from O. J. Foster (3122-2), Bldg. 610, ext. 29157.

**Ruth Brown Rolls Even 600 Series**

Ruth Brown (4211-1) rolled a 179-194-227 for a 600 total during women's bowling league play at San Mateo Lanes Apr. 12.

"My first game was so low I wasn't even watching the score," she said. "It really came as a surprise."

Ruth has been bowling six years and is currently playing in three women's leagues. She usually scores in the high 580's.

**Silvano C. Gallegos Retired April 20**

Silvano C. Gallegos, a janitor (4574) at Sandia Laboratory for the past 11 years, retired Apr. 20.



Mr. Gallegos plans to remain in Albuquerque at 1101 1/2 Santa Fe SW; however, he hopes to visit his brothers and sisters in Los Angeles. He has seven children.

In his spare time, Mr. Gallegos enjoys hunting small game and birds.

**George Jaramillo to Retire from Sandia End of This Month**

Retiring Apr. 30 will be George Jaramillo of Motor Pool Division 4573 who has been at Sandia nearly 12 and a half years.



He plans to remain in Albuquerque where he and his wife own an acre of land and home at 1011 Stover SW.

Mr. Jaramillo will do a little gardening and hopes to take a vacation trip to Los Angeles. But mostly, he admits, "My grandchildren keep me busy all the time." The Jaramillos have seven children, six of them live here, and 21 grandchildren.

**AEC Couple Takes Bowling Tourney**

The First Annual Coronado Club Mixed-Doubles Handicap Bowling Tournament was held Apr. 7-8. Placement money was paid to better than one of every four entries, with first place, trophies, and cash prize of \$20 going to Harold and Arlene Held (AEC-ALO). Second place, cash prize of \$20, was won by Louis (7124) and Phyllis Mecklenburg.

**Effective Presentations Alumni Organizing Into Speaking Club**

Many members of the pilot group for Sandia's Effective Presentation course found this training in idea communication something that required continued practice of the skill. So, they've organized.

Called the "Effective Oral Presentation Club," the group now numbers 10 and could be doubled in size. Requirements for membership include completion of the in-hours Effective Presentation course offered by Division 3131.

The idea for the club originated when John Coleman (2442), for his final talk in the course, chose the topic "Let's Not End It Here." The group meets Monday nights at 7 p.m. in the southwest conference room of Bldg. 610. Each week four speakers present seven-to-ten minute talks on topics of their own selection (usually job-related subjects). There are two evaluators for each speaker. Afterwards everyone attending the meeting must give a two minute speech on a subject assigned to them.

Bill McConnell (4411), newly-elected president, invites anyone who would like to practice his Effective Presentation speaking skills to attend the meetings. Further information may be obtained from John Coleman at ext. 48168.

**Sandian Who Serves . . .**

**Sandian Teaching English Class For Puerto Ricans in Pennsylvania**

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

An English class to help Puerto Ricans overcome the language barrier is a volunteer project of M. J. L. Gallegos, Jr. He is assigned to the New York Area (2341-1) of Field Inspection Division located in Lancaster, Pa.

Mr. Gallegos and his wife are natives of Albuquerque and are bilingual in English and Spanish. While visiting the various Cath-



M. J. L. Gallegos  
"—problems are many—"

olic Churches in the Lancaster area nearly a year ago, a priest suggested that the couple might be able to contribute to a project of great interest to the church and of importance to the city of Lancaster.

During the last decade there has been a large influx of Puerto Ricans into the larger cities of the Eastern seacoast. More recently some have tried to establish themselves in smaller communities and as a result approximately 900 Puerto Ricans now live in Lancaster.

A committee of several families was organized by Rev. Mercurio Fragapane, Assistant Pastor at St. Mary's Parish, to help the Puerto Ricans adjust to their new surroundings and, where possible, to improve upon their existing abilities. Mr. and Mrs. Gallegos became members of this committee.

Mr. Gallegos said, "The problems confronting these people are many. There are problems of social readjustment, employment, and the language barrier to mention just a few. Language is of particular importance. I feel this

**Joanne Boyd Honored with Title 'Secretary of the Year for 1962'**

"Secretary of the Year for 1962" was the title bestowed upon Joanne Boyd (4600) last Saturday by the Albuquerque chapter of the National Secretaries Association.

Members nominated Joanne for the honor in view of her education, experience, and work in the chapter. This is the first time that the title has been presented to a Sandia Laboratory secretary. The certificate was presented to Joanne during a luncheon at the Albuquerque Country Club.

The "Secretary of the Year," who is also completing her second term as president of the Albuquerque NSA chapter, made several appearances on radio and TV shows recently marking National Secretaries Week.



"SECRETARY OF THE YEAR" certificate was awarded Joanne Boyd (4600) last week by the Albuquerque Chapter of the National Secretaries Association.

**Easter Bunny Arrives Early**

The Easter bunny came early to Sandia Lab. Last week in Receiving Section 4623-3, Joe Apodaca was checking a van-load of equipment that had just arrived from Salton Sea Test Base. Strange noises came from out of the crates of equipment. Joe and Security Guard Benny Anaya, who was escorting the van inside the Tech Area, investigated and turned up a diminutive bunny about four inches long.

"He was kind of cute," Joe said, "but not too friendly. We turned him loose."

**Sandia Psychological Paper to Be Presented**

"Performance Dimensions of Engineering Positions," a technical paper written by S. H. Peres and J. R. Garcia (both 3133), will be given during the 34th annual meeting of the Midwestern Psychological Association in Chicago May 3-5. Mr. Peres will make the presentation.

**Congratulations**

Mr. and Mrs. T. S. Trybul (7183) a daughter, Diane, on Apr. 11.

Mr. and Mrs. Sidney B. Gasser (3451) a son, Stephen Owen, on Apr. 10.

Mr. and Mrs. R. W. Jones (4413-2) a daughter, Janet Lynn, on Apr. 8.

Mr. and Mrs. R. L. Ewing (2563) a daughter, Miriam Kathleen, on Apr. 4.

Mr. and Mrs. D. K. Franklin (2542) a daughter, Leslie Anne, on Apr. 2.

**Sympathy**

To E. L. Deeter (2440) for the death of his mother in Norton, Kan., Apr. 19.

To C. E. Sisson (7182-2) for the death of his mother in Chicago, Apr. 18.

**Welcome Newcomers**

Apr. 9-20

|                                   |      |
|-----------------------------------|------|
| <b>Albuquerque</b>                |      |
| Marion P. Apodaca                 | 3444 |
| Darlene B. Blaylock               | 3452 |
| Luciano Chavez                    | 4574 |
| Barbara C. Garcia                 | 4113 |
| *Ralph E. Hendrix                 | 4574 |
| Dora L. Johnson                   | 3423 |
| Frances J. Krommenhock            | 4135 |
| Daphne J. McPeters                | 3126 |
| Frank M. Pena                     | 3446 |
| *Polly A. Pine                    | 4333 |
| Marcia Ring                       | 3126 |
| *Wilbur D. Walters                | 3441 |
| <b>Maryland</b>                   |      |
| Thomas W. Anderson, Silver Spring | 7164 |
| Louis J. D'Orazio, Tacoma Park    | 7164 |
| <b>North Carolina</b>             |      |
| Robert D. Seelye, Durham          | 1112 |
| * Denotes rehired                 |      |
| <b>Returned from Leave</b>        |      |
| Dorothy R. Cory                   | 3126 |
| Nancy J. Jacklin                  | 3126 |
| Helen P. Maurer                   | 4333 |
| Delores M. Molina                 | 4151 |

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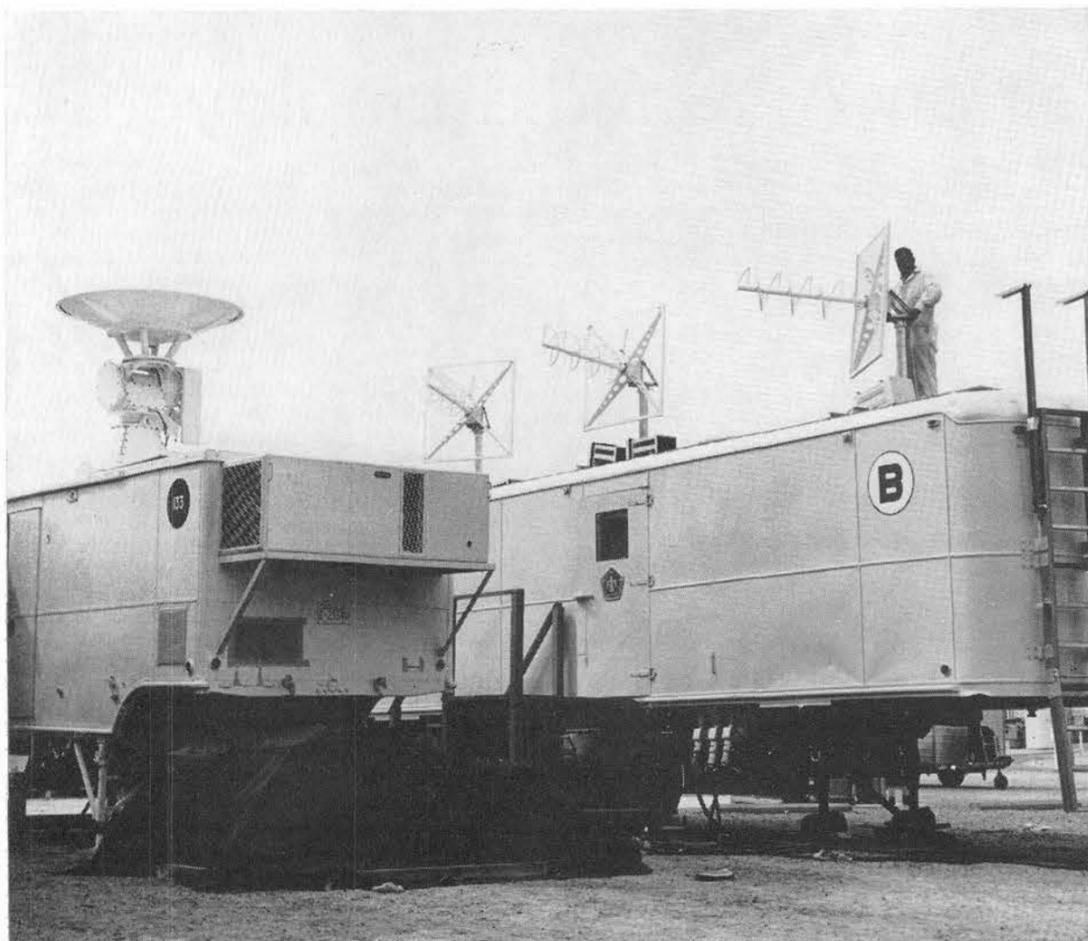
OFFICE OF PUBLICATION

**LIVERMORE LABORATORY**  
Publications and Public Relations Section 8233-1, Bldg. 912  
Sandia Corporation, Livermore, Calif.  
Telephone Hilltop 7-5100, Extension 2395

**SANDIA LABORATORY**  
Employee Publications Division 3432, Bldg. 610  
Sandia Corporation, Albuquerque, N. Mex.  
Telephone 256-4411, Extension 54241

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Deadline: Friday noon of the week prior to publication



INSTRUMENTATION TRAILERS, scheduled for the journey in storage area near Bldg. 880. Many transport to Pacific testing area, are readied for trailers were towed to point of embarkation.

Continued from Page One . . .

## Full-Scale Test Responsibilities —

1,338,877 lbs., or 143,004 cu. ft.— to the overseas test area.

Purchasing Organization 4300 contributed to the effort by ordering the material. Traffic Division 4335 arranged shipping schedules.

"We've sent off equipment by the car-load, trailer-load, and plane-load," W. A. Otero, supervisor of Division 4624, commented recently. "And we've done it in six weeks. During previous test series, we've had as long as six months to gather together, prepare, and ship equipment and material."

Materials to be packaged ranged from stationery for use in field offices to delicate and complex computers and other electronic instruments. All of the material was packed for "export" shipment. Crates were carefully reinforced and lined with moisture-proof materials. Packages were designed to protect contents from climatic changes.

"Trailers loaded with delicate electronic and telemetering equipment had to be carefully shored and braced," Mr. Otero continued. "Several instrument trailers were pulled, on their own wheels, cross-country to the point of embarkation, and then loaded aboard a ship for the overseas journey. We had to pack the trailers for protection against damage during both phases of travel."

The shipment of materials involved the efforts of several Sandia Lab organizations. Engineering Research and Production Support Department 2640 arranged for expedition of material to Division 4624. In addition, Department 2640 wrote the purchasing requisitions, scheduled all requirements, established the material plan, and worked out the required schedule. Division 4624 was aided by personnel from Receiving and Reclamation Department 4620 in the packing operation.

The fabrication of boxes and crates for the material was handled by Carpentry and Painting Division 4513. Explosives and Materials Handling Division 4614 was responsible for packaging and transport of explosives.

In addition to packing activities, Division 4624 prepared necessary paperwork for the shipment of materials via motor van, air, and railway express.

"The test preparations depended on teamwork of many Sandia and Livermore Lab organizations for their success," Mr. Otero concluded. "Our part of the preparatory work — the packaging and shipping of materials — went smoothly. And we're proud of the fact that we did it in six weeks."

At Livermore Laboratory, Device

Support Department 8130 is handling service support for the Pacific Test series. Leo Gutierrez, acting 8130 department manager, said that the entire laboratory is involved in the design, fabrication, shipping, scheduling, and movement of equipment to the test area.

"Everyone went overboard to help," Mr. Gutierrez said. "The inspection people, expeditors, purchasing, outside suppliers, machine shop, plant maintenance, and the production and instrumentation labs were just a few of the many organizations that pitched in."

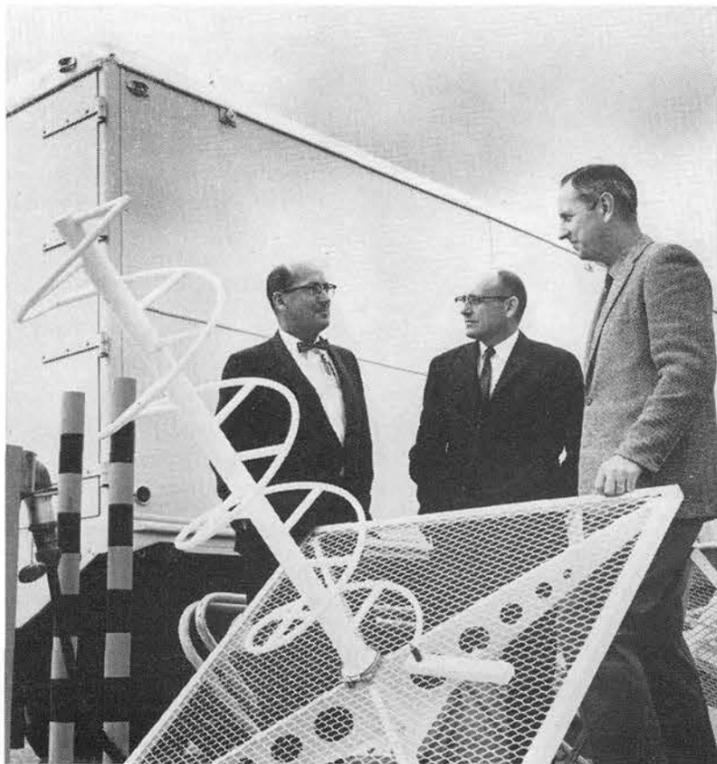
All material shipped from Livermore Laboratory went through the Supply Services Division II (8214), headed by R. E. "Smokey" Maxwell. "The crating, boxing, strapping, and packaging work was done by two people in our Division," Mr. Maxwell said, "and the first shipment went out two weeks ahead of schedule."

Shipments included completely equipped instrumentation trailers as well as smaller items such as electronic supplies. "We even shipped three metal buildings which were bought, assembled, painted, stocked, and shipped in four weeks," Mr. Maxwell said.

Perhaps the most unusual items sent to the tropical staging area were six electric heaters. "These were needed," Mr. Maxwell said.



L. E. HOLLINGSWORTH, Deputy Director of the Sandia Corporation Task Unit, examines map of Christmas Island prior to his departure from Livermore Laboratory to the Pacific Test Area. Mr. Hollingsworth is manager of the Device Support Department at Livermore.



PART of large bulk of material shipped by Sandia Laboratory to Okeefe, Supervisor of Pacific testing area is examined by (l to r) C. B. O'Keefe, M. L. Kramm, Program Directors for two of Sandia's projects.

## Supervisory Appointments

JOSEPH A. GREGORY to supervisor of Field Services Section I, 2332-1, Field Force Department.



Joe has worked as a field engineer in the Military Liaison organization since February 1952 when he was hired at Sandia.

His previous experience includes two years in Civil Service as a training specialist in radar repairman's courses at Keesler Air Force Base, Miss.; a year as a plans and cost estimator for a building contractor in Camden, Ark.; and a year as a general assembler on B-25s for North American Aviation at Englewood, Calif.

During World War II, Joe served three and a half years in the Air Force.

He attended Arkansas Agricultural and Mechanical College and Louisiana Polytechnic Institute, where he received a BS degree in electrical engineering in 1949.

W. G. GRISHAM to supervisor of Joint Task Group Section 2311-2, Weaponry Training Department.



"Grish" has worked in the Military Liaison organization since he started with Sandia Corporation in June 1954.

Before coming here he was in the Air Force for eight years, first as a pilot, and later as a weather forecast analyst.

Grish studied engineering at Trinidad (Colo.) State Junior College and at the University of Colorado. He received BS degrees in mechanical engineering and business from the latter school in 1954. He is a member of Pi Tau Sigma, mechanical engineering honorary, Sigma Tau, engineering honorary, and the American Society for Mechanical Engineers.

JOHN R. TOLMIE to supervisor of Field Services Section II, 2332-2, Field Force Department.



John has worked in Field Services during his 11 years at Sandia. Previously he was with the Air Force Technical Training Command at Keesler Air Force Base, Miss., for three years as an instructor in an atomic energy training course. He was also a training specialist for the U.S. Veterans Administration in Texas for a similar period of time and had earlier been an Air Force instructor at Amarillo AFB, Tex.

During World War II, John served two and a half years in the Navy.

He received a BA degree in mathematics from the University of South Dakota and took graduate work there and at the University of Montana.

## Russian Language Study Club Now Being Organized

A Russian Language Study Club is being organized among Sandia Laboratory employees to provide an opportunity for conversation in Russian during the summer months.

The club, sponsored by Technical and Trades Training Division 3132, will meet three times a week from June 25-Aug. 31. The primary purpose of the club will be conversation, however, there will be some reading and some learning of Russian script. Marcel Weinreich (3421-1), E. P. Quigley (2564-1), and George Volda (1112-2) will be discussion leaders.

Members will be required to have completed one or more semesters of Scientific and Technical Russian or the equivalent. Members will furnish their own 35-cent copy of the textbook, "Getting Along in Russian."

For further information call M. A. McCutchan (3132) at ext. 31261 or Jean Miller (3132-1) at ext. 48138.

## Speaks to Reservists

"Environmental Testing" was the title of a talk given last month by M. R. Madsen (7324) before the U. S. Naval Reserve Research Company 8-7, at the Naval Reserve Training Center.

## Service Awards

### 15 Year Pin



Robert Hepplewhite  
4210  
May 9, 1947

### 10 Year Pins

Apr. 27-May 11

J. A. Balaban 8158, R. B. Barry 7321, S. B. Cook 7311, Amado Padilla 4614, Estelle Richardson 2440, W. W. Bach 2341, C. D. Box 2313, L. F. Desmet 4518, W. H. Allen 2441.

R. R. Beach 2542, C. A. Fawver 4422, Ricarda Gallegos 3423, J. A. Sisler 3428, J. D. Baldonado 4253, Shirley Cleary 4335, Elizabeth F. Six 4330, Mollie C. Miller 3121.

Vernon L. Barcafar 7311, L. F. Denton 7512, George Gleicher 7213, H. J. Salazar 4252, G. B. Drummond, Jr. 8234, C. E. Longfellow 4411, Phil Meekins 4221, J. A. Ozmina 4632.

E. J. Tavasci 4212, Alice T. Marks 3463, R. C. Mueller 4112, H. C. Psillas 2541, J. L. Sanchez 4624, L. O. Romp 8133.

## Promotions

Florencio Romero (4574) to Janitor  
Juan F. Zuni (4231) to Technician  
Jean A. Kirby (3126) to Teletypewriter Operator  
Bobby R. F. Collins (3444) to Messenger  
Robert L. Gabaldon (3444) to Messenger  
Lois T. Quinn (4153) to Accounting Clerk  
Gordon R. Kibby (8223) to Technician  
Paul D. Shoemaker (4413) to Draftsman  
Richard C. Cooke (4413) to Draftsman  
Richard J. Eisold (4413) to Draftsman  
Cecil W. Tucker (4413) to Draftsman  
Jerry L. Hitchcock (4413) to Draftsman  
William B. Nelson (4413) to Draftsman  
S. L. Humphrey (4413) to Draftsman  
Rand R. Rozelle (4413) to Draftsman  
Eugene V. Hawkins (4413) to Draftsman  
Jack E. Cannon (7324) to Laboratory Assistant  
Royal V. Winter (2413) to Staff Assistant—  
Technical

Elizabeth L. Frost (1442) to Staff Assistant—  
Technical  
Britt-Marie Manrow (8123) to Staff Assistant—  
Technical  
John J. Simpson (4424) to Staff Assistant—  
Administrative  
M. J. McLaughlin, Jr. (7522) to Staff Assistant—  
Administrative  
C. A. Davidson (2632) to Staff Member—  
Administrative

Carlton E. Sisson (7182) to Staff Associate—  
Technical  
Bobby A. Roane (4233) to Serviceman  
Carl R. Wersonick (3444) to Document Clerk  
Judith N. Jones (3126) to Secretarial  
Stenographer  
Cynthia J. Harris (3446) to Document Clerk  
P. B. Archibeque (3452) to Tabulating  
Equipment Operator  
George Martinez (3452) to Tabulating  
Equipment Operator  
Sylvia J. Lopez (8213) to Record Clerk  
Pearl R. Johnston (8224) to Stock Record Clerk  
Lorraine W. Torres (3441) to Document Clerk  
James M. Haines (4251) to Machinist  
B. Bernardine Ross (3444) to Document Clerk  
William T. Huntsman (3231) to Staff Assistant—  
Administrative  
Lucile E. Dunlap (4362) to Stenographer Clerk  
A. Emiliano Sanchez (4224) to Cleaner  
A. A. Apodaca (7241) to Data Reduction Clerk  
George T. Chapman (4542) to Order Analyst  
Dorothy T. Capes (5320) to Secretary

### Supervisory Lateral Transfers

G. V. Porter, Jr., from 3122-1 to 3131-2  
F. E. Bell from 3131-2 to section supervisor  
assignment in 3420  
B. C. Benjamin from 7241 to 7251  
H. S. North from 7245 to 7241  
J. R. Holpp from 2311 to 2342  
R. L. Schneider from 2342 to 2413  
H. B. Evans, Jr., from 2311-1 to 2331-2  
J. B. Arnold from 7322-3 to 7324-3  
R. L. Ault from 7325-1 to 7324-2  
C. Endres from 7324-2 to 7325-1  
J. S. Maxon from 2412 to 2414

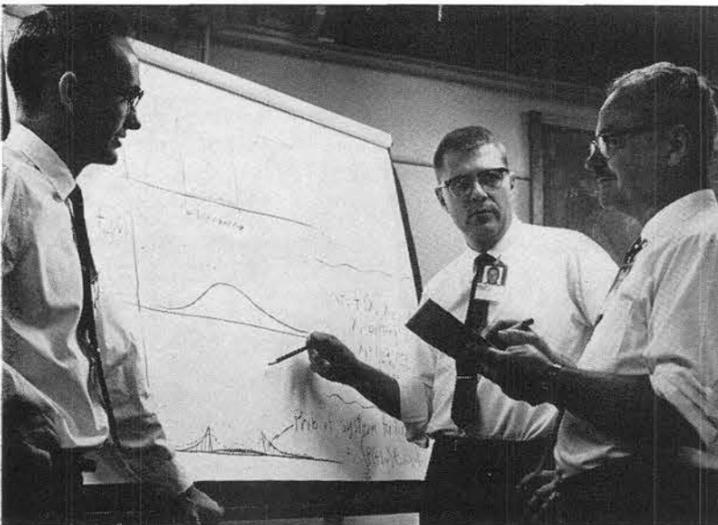
# Personnel Activities Felt on All Sandia Employees



**PERSONNEL RECORD CARDS** for all Sandia Laboratory employees are speedily located by use of this motor shelf retrieval system. Jane Lord (3153-1) pulls a card folder from shelf.



**RETIREMENT PLAN** is one of Sandia's benefits administered by Department 3120. C. R. Meister (4542) is receiving counseling from R. A. Quelle (3122) as he checks off on his safety helmet the remaining working days before retirement Apr. 30.



**PILOT CLASS** of a Reliability Technology course completed last week is typical of the many in-hours courses offered by Department 3130 in co-operation with other Sandia organizations. (L to R) Instructors William Sundt and Frank W. Muller (both 1443) are discussing the new course with Wilbur Miller, 3132-2 supervisor.



**ONE OF THE SURVEYS** conducted by Wage and Salary Practices Division 3113 is discussed by 3113-1 Section Supervisor Paul Péwé (left) and Truman L. Daniel, division head.

heavily depends upon AEC guidance and actual approval of programs now in preliminary approval stages."

### Records Revamped

Pre-employment and on-roll personnel data are gathered and maintained by Employee Records and Processing Division 3153. During the past year and a half this function has been completely revamped.

Working with Department 3450, Personnel is using the 7090 computer to record and reproduce all personnel actions which in turn provides an automated current printed personnel record as well as an accurate historical employee data tape. In addition, personnel statistical reports and studies are programmed on EAM and the 7090. Special reports of much greater flexibility are prepared more quickly from this automation of personnel data.

Records of terminated employees are currently being microfilmed for Personnel by Department 3440 and permission has recently been received to film active records as well. This method allows the Corporation to maintain detailed records of all present and past employees with a tremendous savings in space and increased operational efficiency.

The personnel representatives of Personnel Development Division 3121 help specific line organizations to locate qualified people for placement as openings occur. Division 3121 also uses the 7090 service to good advantage to keep track of diverse skills of employees. "At the same time, they encourage employees to broaden their skills and abilities so as to be prepared to fill better jobs," noted W. G. Funk, manager of Personnel Development, Benefits and Services Department 3120. In

addition, this division is responsible for keeping employees informed of job openings and opportunities through their supervisors or through the posting and bidding procedures.

### Progress Reviews

Periodic progress reviews of non-graded and some graded employees are also handled by personnel representatives. Following discussions with their line supervisors employees may discuss their jobs, their attitudes, and any serious problems concerning their work.

Benefits and Services Division 3122 administers Sandia Laboratory's extensive program in these fields. Some major benefits are the annual 24 days vacation, holidays, sickness absence, rest periods, health care plan, insurance, and educational aids. In terms of percentage, the annual vacation plan is the most valuable benefit; however Mr. Funk pointed out the long term value of the retirement plan. "Take for example," he said, "an employee who, upon retirement at age 65, has put \$3600 into the retirement plan. He will receive \$100 a month for the rest of his life. To purchase the annuity for this individual, the Corporation will pay over \$11,000 out of the employer's portion of the retirement fund."

### Health Care Plan

At the present time 6918 employees are enrolled in the Health Care Plan. An additional 16,790 dependents are covered by the group plan making a total of 23,708 persons who are protected by the plan's provisions. Here also the 7090 has helped greatly to analyze our plan and to anticipate problems that may arise.

"We feel ours is a good over-all plan," Mr. Funk said. "We realize that the plan does not necessarily represent the perfect plan from each employee's viewpoint, but it gives more employees greater protection against catastrophic medical expenses which, after all, is what we expect from group health insurance."

Also in this Department is Secretarial Services Division 3126, headed by D. E. Irvin, which includes more than 300 secretaries and typists, and provides office assistance throughout Sandia Laboratory. Mr. Irvin said, "The flexibility of this set-up helps us meet unusual and unexpected demands without a lot of delaying paper work. I marvel at the industriousness and calmness with which the girls move into office crises."

There is a constant examination of jobs filled from the Secretarial Services Division to determine if any could be consolidated with others or made more effective. "Then when new projects and programs are developed," Mr. Irvin said, "we hope to have girls available for the new jobs. When the demand gets ahead of us (and this occasionally happens), we must borrow girls assigned to other organizations. Often the girls in other secretarial positions (not included in the secretarial organization) give us a welcome hand." Much has been accom-



**SECRETARIAL SERVICES** Division Supervisor Dean Irvin (3126) proudly thumbs through the many commendatory letters received from other supervisors regarding job performance of typists or secretaries assigned to their organization.

plished in this manner to meet increased workloads with the same number of employees.

### Educational Programs

Perhaps the best-known educational programs administered by Personnel Research, Training and Education Department 3130, headed by D. J. Jenkins, are the Educational Aids Program, Out-of-Hours Courses, and Technical Development Program. EAP offers partial tuition refund and time off work for those meeting certain requirements. Of the 375 Sandians attending the university under EAP this semester, 164 employees are enrolled for their Bachelor degree, 126 for their Master's, and 38 for the Doctoral degree. Staff Training and Education Division 3131 also works with the University of New Mexico and College of St. Joseph in helping the schools schedule evening credit courses of interest to Sandians.

The Technical Development Program, a two-year training program, combines part-time work with attendance at UNM. This June, 64 members of the 69 initial TDP candidates plus four "on roll" candidates in Class I will complete the program. Most of these also expect to receive their Master's degrees in electrical or mechanical engineering at the same time. The 59 members of Class II will also complete their first year of study then, and in the Fall a third class of 60 will begin attending UNM.

Since organized in its present form in 1956, the Out-of-Hours Program has offered 99 different non-credit courses not available at the local schools at convenient time with subject matter ranging from a university-level course in Metallurgical Crystallography to special courses in Efficient Reading. These classes meet during the noon hour and after working hours, and are designed to assist employees in self-development through job-related courses taught by specialists. Technical and Trades Training Division 3132 develops courses and curricula and makes the necessary arrangements for: instructors (most of whom are Corporation employees), meeting room, enrollment, classroom equipment, and other details. During the past four years, course completions have totaled 6268 with many employees successfully finishing more than one course.

### Management Development

Among the major activities of Department 3130 is the continuing development of Sandia's management and supervisory staff. This is accomplished primarily through special courses, designed to help the supervisor improve his knowledge and skills in such areas as employee development, budget planning, labor relations, salary administration, job evaluation, communications, planning, organizing and controlling, and decision making.

Division 3131, which is directly responsible for these activities, also is charged with the broad development of Staff Members, especially in those basic personal skills, philosophies and practices which contribute so heavily to the success of a Staff Member's job. Members of the Corporation's staff have completed such courses as Leading Staff Meetings, Staff Interview Training, Technical Writing, and Effective Presentations.

The Technical Orientation Program is offered at regular intervals and is presently being revised to shorten the length of the presentation, to offer the material on a functional rather than organizational basis, and to show by film much of the material. Correspondence courses in mathematics and engineering subjects are being developed for Sandia personnel at remote sites.

In addition, members of the organization have been in liaison with representatives of Highlands University, Eastern New Mexico University, and New Mexico State University in connection with establishment and operation of Technical Institute Programs.

The major objective of Personnel Research and Testing Division 3133 is to undertake studies pertaining to employee effectiveness within normal Sandia Corporation working-life situations. These studies are tailored to add to the knowledge of industrial human behavior and can later be applied to benefit employees at all organizational levels.

Research performed by the division covers many areas of industrial management, such as employee selection, performance evaluation, morale and job satisfaction, placement and training evaluation, and leadership identification.

Studies are initiated by the division, based on line organization needs and discussions with management. The division also participates in cross-company research with AT&T, Bell Laboratories, and Western Electric on problems of mutual interest in the industrial management area.

### Wage and Salary

The primary objective of Wage and Salary Administration Department 3110, managed by L. E. Fuller is to compensate all employees equitably for services rendered.

Job Evaluation and Classification Division 3111, W. H. Chandler, supervisor, is called upon to study both new and revised tours of duties to establish the proper occupational designation and level of complexity. In addition, the job analyst must decide if the job is exempt or non-exempt under the Fair Labor Standards Act and whether the job is union represented or non-represented.

### Job Review

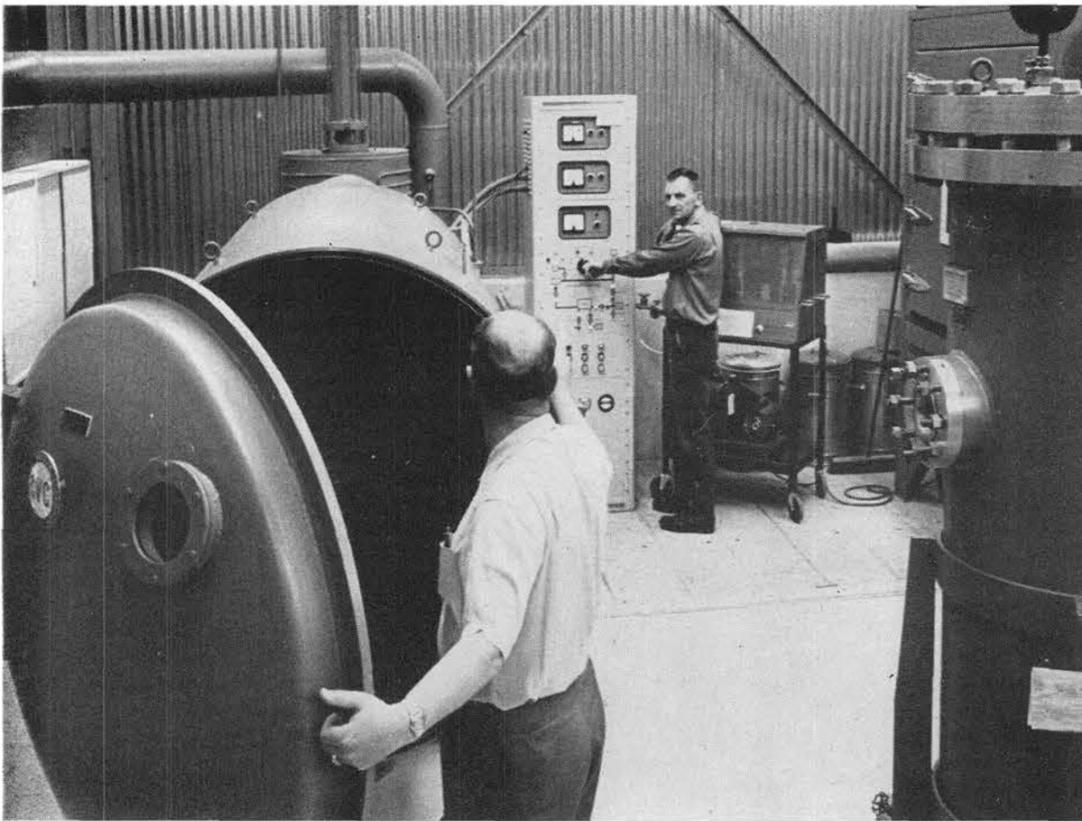
The determinations made by Division 3111 are subsequently reviewed and approved by line supervision. Those jobs that are union-represented are, in turn, scrutinized by a management-union committee. This committee, called the Joint Job Grades Study Committee, is composed of three union representatives and three management representatives, and they discuss each new or revised job grade classification.

This division also has an audit function in periodically reviewing jobs throughout the company.

To determine the adequacy of wages and salaries with respect to the general market, Wage and Salary Practices Division 3113, headed by Truman L. Daniel, conducts a number of surveys. Among these are a survey of other AEC contractors, surveys of the Albuquerque and San Francisco Bay areas, and a national survey of professional-level administrative salaries. In addition, Sandia participates in a wide variety of surveys conducted by other concerns. The results of these surveys, along with recommendations, are submitted to Management for their consideration.



**MICROFILMED** copy of personnel records of a terminated employee is checked by Glorianne Silva (3153). Records of on-roll employees will also be placed on microfilm rolls.



STEEL DOOR of large vacuum chamber is closed by J. R. Martin as Bob Coates (8121-2) operates vacuum pump. The chamber is to test items too large to place in hats. Connected to the chamber is a leak detector, seen at Bob Coates' right, which measures helium escaping from item in chamber.



J. R. "BOB" MARTIN (8121-2) prepares metal "hats" for leak detection tests. Item to be tested can be seen in center of metal separator disk which will be enclosed by the hats shown at the sides of the disk. Hats are then bolted together; one filled with tracer gas and the other evacuated. Any gas passing through the test material will be drawn into leak detector (right).

### At Livermore Lab

## 'Sniffer' Helps Detection of Escaping Gas Particles

A slow leak in an automobile tire can be annoying. In nuclear weapon systems, an air leak could cause oxidation and corrosion. Leak detection experts at Livermore Laboratory are testing countless sealing materials to make sure that these units will remain airtight during long periods of storage.

These men are called upon daily to answer such questions as: will it leak? How much will it leak? Where does it leak, and why?

Finding leaks is no simple task. For unlike a leaky tire, a weapon system cannot be immersed in a tub of water to locate escaping air bubbles. Some leaks are so small that even after many years no appreciable loss of pressure could be detected.

To find these tiny leaks, Livermore Laboratory leak detection experts are using helium gas. The gas is introduced under pressure into the part being tested. If the presence of helium is detected on the surface of the item, the leak is pinpointed and measurements are made of the leak rate.

#### Helium Used

Making these tests at Livermore Lab is J. R. "Bob" Martin of Natural Environment Section 8121-2. "We use helium for our tests because there are such small amounts of it normally present in the atmosphere, making it easy to detect. Argon and neon too can be used for this purpose and we're investigating these gases as well."

Bob uses an instrument called a "sniffer" to detect minute quantities of leaking helium. The sniffer, an ultra-sensitive probe, "inhales" the air around the material under test, and if any helium is present it can be read out on a meter.

The sniffer is attached to a mass spectrometer, which is used to determine the rate of the leak. "The spectrometer is so sensitive that we can detect and measure an amount of leaking gas which, at the end of many years, would fill a container slightly smaller than a cube of sugar," Bob said.

A typical test works like this: a metal plate with a hole bored through it is plugged by the material to be tested. The plate is then sandwiched between two metal cups, or "hats," which are bolted tightly together. One hat is filled with helium and the other is drained of air, creating a vacuum. Helium leaking through the material being tested is then measured for amount and rate of leak by the mass spectrometer.

#### Everything Leaks

The mass spectrometer, connected to the evacuated hat by a hose, pumps out of the vacuum

many of the gas molecules which may be present. Some of these molecules are given an electrical charge and "bounced" against a metal sensing plate which records the charges. By comparing these charges with leak rate standards, the leak rate can be computed.

"Everything leaks to some extent," Bob said, "but we're interested in how much they leak." By way of explanation, he pointed out that if a glass bottle was filled with helium and sealed, the helium would still escape through the glass walls of the bottle. The gas molecules "intermingle" with the material in the glass, he said, and finally find their way through the walls of the bottle. "This diffusion of molecules is normal and is not to be confused with an actual hole in an object."

Items too large to be tested in hats are filled with helium and placed inside a large vacuum bell jar. Leaking gas is then drawn directly from the jar to the spectrometer. Very large objects are tested in a vacuum chamber, which is 86 in. long and 48 in. in diameter.

When extreme testing is called for, items are sometimes placed in special containers having walls of steel two inches thick. Components have been subjected to pressures up to 1500 pounds per square inch, using these containers.

"We test all kinds of materials used in sealing parts, both organic and metal, and in all environments," Bob said. "Some components may form a tight seal at room temperature, but break down under hot or cold conditions. Lead, for instance, makes an excellent seal at room temperature, because the fittings seat tightly in the soft metal. But when it gets cold, it could leak like a sieve."

To find the best materials for sealing purposes, Materials Application Division 8115 is investigating a variety of organic and inorganic substances such as metals and elastomers. Information from these studies is being passed on to interested design groups at Livermore Laboratory.

Making these studies is Joe Darginis (8115-3). Joe has used a variety of gases, including helium, argon, and hydrogen, to determine the permeation rates of these gases through materials.

Joe has also investigated new methods of leak detection, designing his own vacuum fixtures to check unusual shapes for leaks. "For example," he said, "we had to design one special fixture to find out if the object we were testing was leaking, or whether the gasket sealing it to the test fixture was leaking. It ended up

looking like a plumber's nightmare, but it did the job—we found that the sealing gasket was faulty."

Although leak detection is a commonly used industrial technique, manufacturing specifications vary considerably from one supplier to another, according to Joe. To correct possible discrepancies in leak rate specifications, Joe and Chris Lagiss of Specification and Standards Section 8116-2, are working with Organizations 2532-3 and 2411-2 at Sandia Laboratory to establish a new set of standards for use on Sandia Corporation products manufactured by AEC integrated contractors and Sandia suppliers.

"We hope that this will be an answer to a lot of our problems," Joe said.

### C. J. McGarr Will Speak in Denver

C. J. McGarr, Director of Service Operations 4600, has been invited to present a talk before a General Services Administration seminar on Economic Ordering Quantity being held in Denver, Colo., Apr. 24-May 4.

Mr. McGarr's presentation on May 1 will be "Sandia Corporation General Stores Application of Economic Ordering Quantity." The meeting is expected to be attended by 30-35 persons, mainly from AEC installations.

### N. J. Eich Will Give 'Casting Resins' Talk

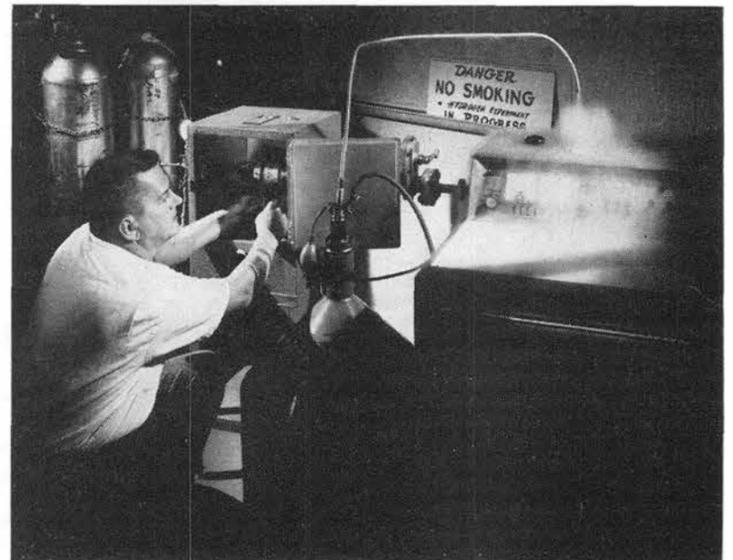
"Casting Resins at Sandia" will be discussed by N. J. Eich (1111) at the Bell Telephone Laboratories-Western Electric Company Interworks Casting Resins and Reinforced Plastics Conference to be held May 25-26 at Winston-Salem, N. C.

### Two Sandians to Attend WE Statistical Meet

Two Sandians will be participating in the Western Electric Third Interworks Statistical Quality Control Conference to be held at the Indianapolis Works May 1-3.

D. D. Sheldon (2561-2) will take part in a panel discussion at the Failure Clinic.

J. E. Taylor (2564-1) will present a paper entitled "Quality Improvement Through Audio-Visual Methods."



TEST SET-UP to measure permeation rate of hydrogen through silicone rubber is adjusted by J. P. Darginis of the Materials Application Division 8115. The rubber being tested is placed between two "hats" in small temperature chamber and hydrogen gas is passed through it into spectrometer (right) where permeation rate is computed. Liquid nitrogen, pumped into spectrometer from container (center) forms cold trap to obtain a test vacuum.

### IRE Transactions to Publish Papers by C. W. Harrison, Jr.

Two technical papers by Charles W. Harrison, Jr., (1424) have been accepted for publication in the IRE Transactions on Antennas and Propagation. They are: "On the Receiving Characteristics of a Dipole in Proximity to Two Intersecting Conducting Surfaces" and "Scattering Error in a Radio Interferometer."

### Appoint Assistant To Staff in ALO Information Office

Wrenn Timberlake of Syracuse, N. Y., has assumed his duties as Information Assistant in the Office of Information of the Atomic Energy Commission's Albuquerque Operations Office.

Mr. Timberlake has been information and public relations director at Syracuse, N. Y., for the Mutual Federation of Dairy Cooperatives since 1955. Prior to 1955, he was a member of the information staff at Colorado State University, and a reporter in Colorado Springs.

### F. T. Cole to Give Accelerator Talk To Colloquium

One of the speakers scheduled for the Sandia Laboratory Research Colloquium in May is F. T. Cole, head of the Theory Section of the Midwestern Universities Research Association.

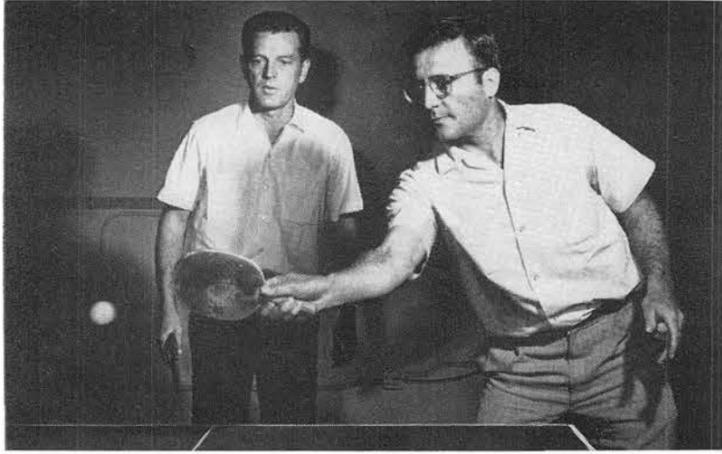
His address, "New Concepts on High Intensity Accelerators for Research Purposes," will be presented Wednesday, May 9, at 10:30 a.m. in the Sandia auditorium, Bldg. 815. Tickets are not required, according to Colloquium secretary Diane Martin (5132).

Mr. Cole has been with MURA since it was organized by 16 Midwestern schools in 1955 to develop advanced accelerators for the AEC. He previously taught physics at Cornell University and the University of Iowa.

### Sandians Authors of 'Honeycomb' Article

The May-June issue of the *Journal of Applied Polymer Sciences* will carry an article co-authored by R. M. Lacey and J. E. Smith (both of 1113-1).

The technical article is entitled "A Comparison of the Static and Dynamic Strengths of Several Phenolic and Epoxy Impregnated Paper and Cloth Honeycombs in Compression."



DOUBLES CHAMPIONS of Sandia Laboratory's table tennis tournament are shown during a heated moment of final play last week. Milt R. Madsen (7324), left, and Larry J. Woolrich (7322) defeated Asher D. Kantz (5314) and John A. Snyder (5313) four out of six.



Jean Kirby (4333/3126)

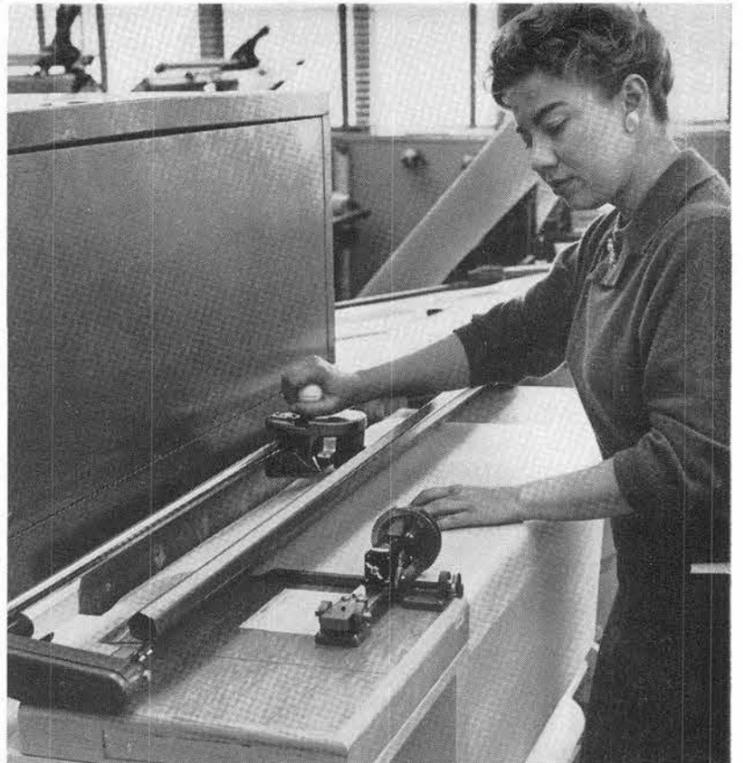
Take a Memo, Please

Ladders present many accident potentials unless care is exercised. Keeping this in mind is a good form of safety insurance.



A BLOSSOMING TREE and a pretty girl make nice symbols of summer. Arlene Long, a teletypist in Section 4333-2, is the girl.

The Sandia Scene



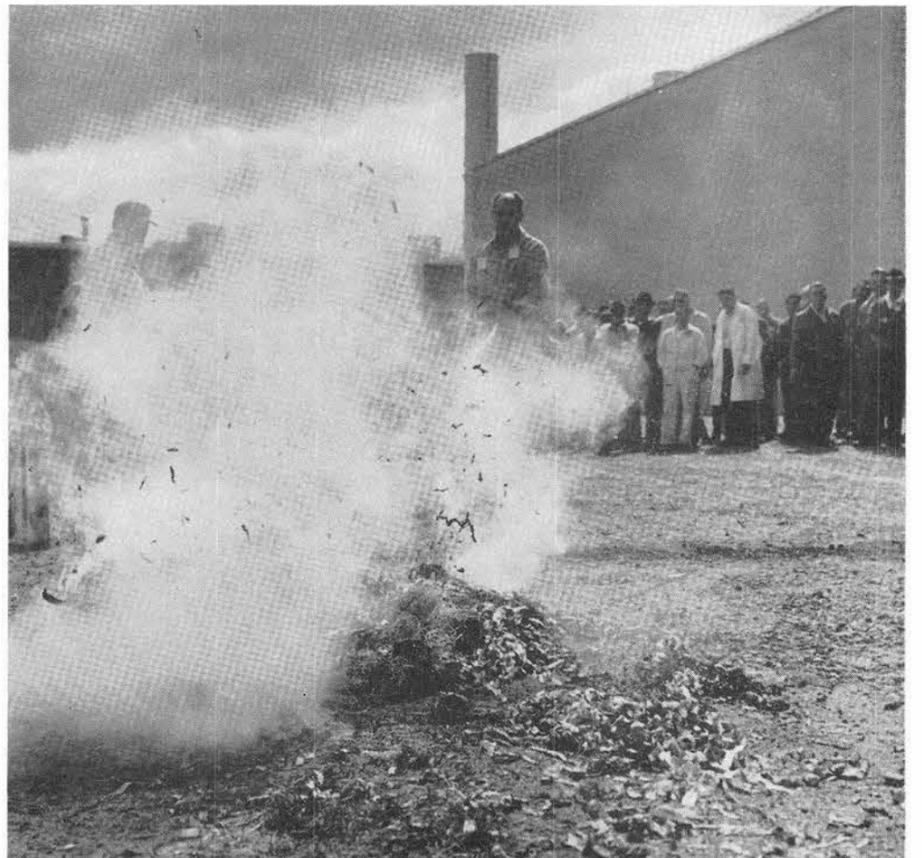
HANDY CUTTING DEVICE is demonstrated here by Vonna Burroughs to cut and measure plastic drawing material used by Sandia Lab draftsmen. The combination of cutter, counter, storage cabinet, and rack was designed by Daniel J. Alvino, Gabriel C. Beatrice, and Donald N. Cox of Division 4412. Assembled from modified readily-available parts, it saves time, prevents waste.



WINNERS of a recent Sandia Laboratory golf tournament held in Socorro display prized trophies. Standing from left are Wendell A. Nelson (4115), low gross champ; A. Milton Fellows (retired), most accurate drive; Richard Kidd (2533), closest to pin; and Joe P. Gaynor (2631), low net champ. In center is tournament director Fred K. Silva. Some 92 Sandians participated in Saturday tourney.



EMERGENCY FIRE CREW members of Bldgs. 840, 841, attended a fire extinguisher demonstration recently conducted by T. A. Rosenwald, above, of Plant Engineering Department's Inspection Section 4542-1. Various types of extinguishers and their uses were explained during the short training session.



SMALL FIRES, rubbish and flammable liquids, were put out with extinguishers by fire crew members during the demonstration. Fire crews have specific duties assigned in case of emergency situations such as evacuation of personnel, securing classified information or emergency shutting off of machinery.

# New Mexico Great for Boating Fans Say Sandia Members of 'Los Huajolotes' Club

"When it comes to boating, many people think of New Mexico as being mostly beach," D. D. "Dolly" Dollahon (4362-2) commented recently. "But the truth is that New Mexicans own more than 8000 boats, and there are dozens of places in the state for boating activities."

Dolly is commodore of a boating club called **Los Huajolotes**—"The Water Dogs." The club is dedicated to the encouragement of water activities for the entire family.

"Our objectives include encouragement of fishing, cruising, water skiing, and other water sports," Dolly commented. "We work for increasing access and use of state waters by family groups, strive to further good will and comradeship among people who wish to enjoy the nation's waterways, and provide water safety instruction."

### Dry-Land Cruises

The Water Dogs hold monthly meetings—called "dry-land cruises"—during which instruction in trailer-boating techniques is presented, club business is performed, and future club cruises are organized.

The club makes monthly lake cruises, including some in winter months. "Last year, we organized a summer cruise to Lake Mojave, Ariz., involving an overland portage of more than 1400 miles round trip," Dolly said. "We cruised up the Colorado River canyon to within a mile of Hoover Dam, a round-trip distance of some 150 miles from our starting point." In addition to long trips, shorter cruises on El Vado, Santa Cruz, Conchas, and Elephant Butte lakes are made by club members.



**COMMODORE of LOS HUAJOLOTES boating club, D. D. Dollahon (4362-2), Mrs. Dollahon, and their family are proud of their 18-ft. cruiser. Dolly built the Fibreglas-and-plywood craft in eight months of spare time. Boat is powered by 70-h.p. outboard engine.**



**EMBLEM of LOS HUAJOLOTES depicts the water dog for which the boating club is named. Club encourages family participation in water activities—cruising, water skiing, fishing.**

### Program Chairman

Program chairman for **Los Huajolotes** is J. D. "Jack" Burkhardt (1322-1). Jack's wife, Barbara—a yeoman, 2nd class—is corresponding secretary. "Before each cruise, the cruise master appoints assistants whose duty includes picking a route to the waterway, organizing

the boat-trailer caravan, and getting everyone safely to the water," Jack commented. "After arrival at the water, club members choose their own activities, although we provide instruction in fishing, water skiing, and water safety for everyone, including the children," Jack said. "And we organize various family get-togethers. But members of the club have plenty of free time for their own activities."

Many of the boats owned by club members are of the 14-ft. runabout class to the 21-ft. cruiser class, but there are no limitations on boat size or type. "Members aren't even required to own a boat," Dolly explained.

The Water Dogs are currently interested in increasing their membership. Persons interested are invited to contact D. D. Dollahon, 3628 Georgia N.E., tel. AX 9-8107.

## 7300 Team Takes Volleyball League

Final standings of teams participating in Sandia Laboratory volleyball play have been announced by Services and Recreation Section 3122-2:

| Teams     | Wins | Losses |
|-----------|------|--------|
| 7300      | 13   | 0      |
| 1300-1400 | 11   | 2      |
| 2500-2600 | 9    | 4      |
| 7100      | 7    | 5      |
| AEC       | 4    | 7      |
| 4500      | 3    | 9      |
| 7200      | 1    | 11     |
| 3100-3400 | 1    | 12     |

The champion team from Organization 7300 managed by Harry Blechinger (7325-1), will represent Sandia Corporation in the 1962 Inter-Base Tournament to be held at Kirtland AFB May 1-3. Participating will be teams from Sandia Laboratory, Sandia Base, Kirtland AFB, and Manzano Base.

## Toastmasters Offers Speechcraft Course

An eight-week course in Speechcraft will be offered by Sandia Toastmasters Club 765 beginning May 10. It will be a short comprehensive course in speech fundamentals, according to Al E. Hall (4221), Toastmasters president. Enrollment will be limited to 20. The class will meet each Thursday evening in the Sandia Base NCO club from 6 to 8 p.m. Further information is available from Mr. Hall, tel. AL 5-9740.

## New Pump House

Fallout shelter? Gate house? In case you've wondered, the new construction underway just north of the West Gate of Sandia Base is neither of the aforementioned. The building houses a booster pump for a base water line.

## Sandia Woman Helps Present Appaloosa Show This Sunday

Appaloosas, the prized breed of horses of the Nez Perce Indians, will have an opportunity to show their many abilities and qualities during the second New Mexico All Appaloosa Horse Show, to be held Sunday, Apr. 29.

Halter and performance classes will start at 9 a.m. at the Albuquerque Horsemen's Association arena on Pajarito Road, SW, according to Betty Tatum (3321-1), who is publicity chairman for the show.

Appaloosas were considered by tribes of Central Asia as their most valuable war horse. In America they served as work horses for early trappers and were used for war purposes, racing, and buffalo hunting by the Nez Perce. After

the defeat of this Indian tribe, the breed nearly became extinct. In the mid 1940's only 250 Appaloosas were registered, but they have increased in popularity until more than 16,000 are registered today. Many cattlemen in the Pacific Northwest consider Appaloosas the world's top "rough country" stock horse.

Betty and her husband, Thomas, will sponsor one of the performance classes which will require both horse and rider to be attired in authentic period costumes and trappings appropriate to a particular era in Appaloosa history.

In addition to Western pleasure and reining classes, there will be a Nez Perce Stake Race and Camas Prairie Stump Race, both run in traditional Indian fashion.

### 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

**FOR SALE**

24" RCA TV w/wrought iron swivel stand, black finish, \$100 or best offer. Lewis, AX 9-2322.

'54 OLDS 88 Super Deluxe, \$150. Leslie, 298-4730.

'55 FORD, 4-dr., 2-tone, \$375. Smith, DI 4-0361.

SELL OR TRADE girl's bike w/training wheels, 16" or trade for 20" boy's bike, \$10. Roth, CH 3-0522.

'59 TRIUMPH T 20 S scrambler, lights, muffler, speedometer, rear foot pegs; Bach cornet. Hayes, 298-4682.

KITCHEN DINETTE w/leaf and 4 chairs, \$25. Hart, AL 6-2811.

OVERSTUFFED SOFA, \$25, and chair, \$20, with slip covers. Fornero, AL 5-9879.

REVOLVER, K-22, Smith and Wesson, stag grips, wide trigger and hammer, fired 100 times Shunmy, AX 9-2787.

FREE PUPPIES, 1/2 Springer Spaniel. Westman, AL 5-6048.

WILSON'S YOUNG CHAMP golf club set including bag, for 10 to 16 year olds, cost \$59, take \$25. Kennedy, AX 9-8938.

3-BDR, den w/fireplace, 1 1/2 baths, sprinklers, no qualifying, immediate possession, assume 5% GI loan w/payments of \$110/mo., \$14,500. Kavet, 1840 Blume NE, AX 9-1793.

FOUR HILLS 3-BDR HOUSE, ww carpeting, drapes, fully landscaped, dbl. garage, trade considered, financing available at \$129/mo. Hunter, AX 9-1089.

FREE BLUE-GRASS SOD, you dig. Turner, DI 4-7082.

WINCHESTER MODEL 88, cal. .308, w/case and receiver sight, like new. Nott, AX 9-2232.

TWIN BEDSTEAD, solid Hardrock Maple, \$25; electric steel guitar w/amplifier, \$50; Stauffer reducing couch, \$50, all items like new. Metz, AM 8-7989 after 5 or weekends.

'58 AMERICAN house trailer, 8x38", 2-bdrs. Wilson, Box 120, Corrales Rd., Alameda.

FREEZER, 23 cu. ft. upright Quikfrez, \$275. Syme, AX 9-4100.

AUTOMOBILE AIR CONDITIONER, universal type, now installed in 1960 Ford, \$150. Day, AL 6-6360.

WHITE DOUBLE BED, triple dresser, spring, mattress, \$125; lawn mower, gas, 18", \$15. Barth, AX 9-2668.

3-BDR ROBERSON, family rm w/fireplace, 1 1/2 baths, a/c, built-ins: gas range, oven, 16-cu.-ft.-refrig, w/125# freezer, 2-car gar., walled, sprinklers, 3508 Parsifal, NE. Bradley, AX 9-5091.

4-BDR HOUSE, 2 baths, built-in range, landscaped, patio, a/c, carpet, drapes, sprinklers, at FHA appraisal, \$16,500. Schowers, AL 5-9279.

MALE AND FEMALE Miniature Poodles, silver grey, 2 months old, AKC registered, \$100 each. Sanchez, CH 2-7910.

EICO 5" scope, two osc., VTVM, ratio bridge, used, many parts, \$150. Young, between 1 and 5 AL 5-1611, ext. 319.

PUREBRED GERMAN SHEPHERD pups, three months old, only two left, \$15 each, no papers. Gregory, Algodons, UN 7-2432.

AIR COOLER, portable 3-speed console model w/recirculating pump, water control valve, and twin blowers, used two months, half price. Zanetti, 299-4639.

EXHAUST FAN, 9", ceiling or wall, Thermod, cost, \$25, will sell for \$14, never installed. Linn, BU 2-3986.

'61 STARLINER FORD, super-stock 401, 3 factory carbs, 11,000 miles, like new. Cornwell, AL 6-7680.

'56 PLAZA PLYMOUTH, 6-cyl, 4-dr., OD, best offer. Bouchard, 1617 Anderson Pl. SE, AL 6-1495.

'56 OLDS-88 Holiday coupe, new tires, transmission, \$690; '50 Jeepster, new tires, top, paint, upholstery, recent engine overhaul, \$585. Kane, 299-0382.

GIVE AWAY Calif. Privet hedge for your digging, 1915 Dakota NE. Gary, AL 6-7325.

REFRIGERATOR, 11 cu. ft. Crosley; electric range, large oven; hooded electric barbecue. Calvery, 255-9545.

SOAP BOX wheels, \$5; hand loading tong tools; empty brass .35 Winchester; .32 SW, others. Want old duck stamps. Pritchard, AM 8-6430.

LIONEL O-gage Santa Fe freight layout, \$85, will sell separately; child's mosaic playhouse, 6x10", eight windows, \$50. Rayner, AM 8-1705.

KITCHEN DINETTE, glass top w/4 chairs, \$20. Boyd, CH 7-9448.

MOUNTAIN CABIN, 2 lots, Pine Springs subdivision, title insured, cabin needs work, \$1995, sell or trade for Albuquerque property, real estate contract, etc. Ogden, CH 3-4723.

BOY'S 24" bicycle, \$10. Stewart, AX 9-7530.

TENT, umbrella type w/side room, 9'x11', enclosed side porch, sewn in floor, aluminumized top, \$30. Clenney, UN 4-8394.

THAYER drop-side birch crib, needs mattress, \$6; folding baby stroller, \$5; birch play pen, needs pad, \$6; Presto deep fry, \$10. Brion, AX 8-1761.

**NEXT DEADLINE**  
 FOR SHOPPING CENTER ADS  
 Friday Noon, May 4

12' MARINE PLYWOOD fishing boat w/ fibreglass coating, weight 90 lbs., sky blue color, paddle included, \$65. Shock, TR 7-3728.

'57 CHEV., 4-dr., RH, 40,000 miles; '57 4-dr., Hd Top conv. Chev., 35,000 miles. Pinkerton, AL 5-2505.

LAWN MOWER, Sears deluxe, 2.25 HP, 18" rotary, practically new, \$65. Campbell, AX 9-8071.

'57 PONTIAC Safari Super Chief station wagon, 4-dr., 6-pass., \$695. Class, 299-6648.

'55 FORD Fairlane, 4-dr., auto. trans., R&H, all reasonable offers considered. Riggins, AX 9-7778.

FREE PUPS, 6 weeks old on May 18, present quantity, 9 ea. Weber, AX 8-1564.

'58 FORD Custom 300, 6-cyl., R&H, one owner, \$635. Coughenour, AX 9-0914.

3-BR ROBERSON, 1 1/2 baths, Hotpoint kitchen, a/c, paneled den, fireplace, walls, sprinklers, landscaped, 2-car garage, carpeted, drapes, 1809 Greita NE, Martin, AX 9-4814.

CRAFTSMAN 18" rotary mower, 2 hp, 3 yrs. old, gas engine, motor just overhauled, used 2 hours. Burnnett, 298-4291 after 4:30 p.m.

FLOOR-LENGTH wedding gown, veil, hoop, \$50; white and yellow long formals; white short formal, \$5-\$10, size 9. Denton, 255-9519.

COUCH AND CHAIR, white plastic w/walnut legs, \$60; walnut end table and coffee table, \$10 each. Harden, AM 8-3108 after 5 p.m.

GE RANGE, push-button controls, 40" wide, automatic oven controls, \$110. Lilly, 298-2560, 1129 Orieta NE.

STATION WAGON TOP CARRIER, metal frame, wood slats, \$15. Lloyd, AX 9-5170.

BLOND DINING ROOM SET, table w/built-in drop leaf, 6 chairs, 2 w/arms, buffet, \$65 or best offer. Vath, AX 9-1448.

'55 CHRYSLER, 4 dr., Windsor, R&H, auto. trans., w/w tires, \$475. Randall, 298-1381 after 5 p.m. or weekend.

SINGER Featherweight electric portable sewing machine w/case and all attachments, \$50; 5-piece set copper-bottom Reverwear, \$15. Wangerin, AM 5-0106.

HALF PRICE, new Wards Riverside 7:10x15 tire with tube, mounted on wheel which fits '54 Ford. Brathovde, AM 5-0783, 3515 Monte Vista.

MOSSMAN RESALE, 3-bdr, den, 1 1/2 baths, fireplace, a/c, extras, 1/2 block to new elementary-junior high school. 1025 Lester NE, Boling, AX 9-1346.

PETERSON STROLLER, green and white, folding, \$15. Morse, 299-5978.

3-BDR, den, 1 1/2 bath, a/c, h/w floors, fireplace, near Winrock and schools, below appraisal for cash or low down FHA. Tolbert, AM 8-0747.

'55 DODGE V8 1/2-ton pickup, 7 1/2' box, 116" wheel base, R&H, new tires, new battery. Hanson, AX 9-6421.

GOLF CLUBS, bag, cart, \$60; lined drapes, 84", 4 panels; 3/4 violin, \$75; swing set, \$10. Copeland, AL 5-4688.

'58 BEL AIR 4-dr., HT, w/pg, ps, seat belts, R&H, factory air, \$1195. Alvino, AL 5-6339.

RECORD TURNTABLE and arm, Bogen 12" turntable, plays all speeds between 16 and 78 rpm, less cartridge, \$20. Bader, AX 9-9459.

6 1/2' PROVINCIAL wing-back couch, like new, upholstered in brown, beige, aqua, \$85; dress form, fully adjustable, \$75. Galbreath, DI 4-4306.

4 ORIGINAL EQUIPMENT 7:00x13 tires, 12,000 miles, no punctures, no damage, lots of tread, \$35 or best offer. Carpenter, AX 9-3519.

BICYCLE, boys 26" Schwinn, new tires, \$25. Newman, AX 9-2729.

'59 LARK SIX 2-dr. w/OD, R&H, priced below book value. DePew, AL 5-3231.

6 HP WIZARD outboard, \$50. Stuart, AM 8-2943.

'58 LAMBRETTA SCOOTER, chrome skirts, new clutch, \$150. Arenholz, AX 8-1724.

ROTARY POWER MOWER w/catcher, \$35. Vaida, AM 8-8397.

'60 CUSHMAN SCOOTER, Super Eagle w/extras, low mileage. Krahling, AM 8-8126.

WALNUT DINING ROOM SET, 7 pieces. Gregory, AX 9-2461.

STEREO AMPLIFIER, 20-watt w/self contained pre-amps, \$35. Moore, AL 5-7891.

'51 CHEV. PICKUP, 1/2-ton, overhauled motor. Baca, AL 5-8452.

'55 PLYMOUTH Plaza 4-dr. sedan, \$350; '57 Plymouth Belvedere, 4-dr., HT, R&H, auto. trans. \$625. Vinovich, AX 9-1979 after 5 p.m.

'53 PLYMOUTH 4-dr., R&H, wsw, full wheel covers, 57,000 miles, complete overhaul at 53,000 miles. Pollett, 255-6828 after Saturday.

UPRIGHT Bungalow piano. Hainlen, AL 5-6988 after 5 p.m.

DOUBLE BED, mattress, box springs, like new. Barham, AX 8-2553.

PORTABLE STEREO radio-phonograph, almost new. Tapia, AM 8-0691 after 5 p.m.

ACCORDION, 120 bass, Italian made, like new, sell or trade for tape recorder. Strauch, AL 5-1873 after 5:30 p.m.

THREE 2-brl. carbs and manifold, complete, fits 272-292-312 engines from '55 thru '57. Walkup, 255-2578.

'57 T-BIRD, all power, 312 engine, \$2400. Rotesberg, 255-2578.

NORTH VALLEY, enclosed 8-room adobe-style, big trees, coral, garden irrigation, \$5000 equity, partial contract or swap for acreage. Frauenglass, 345-0119.

MOSSMAN, 4-bdr, den, 1 1/2 bath, steel fallout shelter, other extras. Delnick, AM 8-2530.

TWO old bicycles, 1 girls, 1 boys, \$5 each. Grey, AX 9-7349.

PORTABLE COOLER, 2-speed motor, used 1 month, \$25. Martinez, AX 9-8649 after 5 p.m.

'53 JEEP 4-wd station wagon, rebuilt motor, hubs, \$625; '42 Dodge 1/2-ton pickup, 4-wd, \$325; '42 Dodge 3/4-ton Carryall, 4-wd, \$550. Seavey, AL 5-5071.

'57 FORD, 6-cyl, 2-dr. sedan, R&H, OD, 38,700 miles. Higgins, AX 9-5149

**FOR RENT**

FURNISHED MOUNTAIN COTTAGE, modern, suitable for 1 or 2, 20 min. from Base, \$60/mo. McMillin, BU 2-3226.

3-BDR, Princess Jeanne home, electric range, refrig., drapes, carpeting, \$90/mo. Pinkerton, AL 5-2505.

FURNISHED APT., newly decorated, a/c, midtown, 1/2 blk. to bus, 216 Princeton SE, \$60/mo. Lopez, CH 2-3986.

2-BDR and den furnished house from June 10 thru Labor Day, close to base, water paid, \$115. Graham, AX 8-0686.

UNFURNISHED HOUSE, 3-bdr, paneled den, carpeted, draped, built-in oven and dishwasher, double garage, landscaped, 11501 Baldwin NE, Blaylock, AX 9-0470.

**WANTED**

UTC OUTPUT transformer, either HA 135 or LS-57. Cline, AX 8-1796.

CHILD CARE in my home, NE heights, Webber, AL 6-7545 after 6 p.m.

TWO OR THREE drivers to join car pool from South Valley, Hwy. 47, Tome, Valencia, Peralta, Bosque Farms. Clenney, UN 4-8394 or O'Connor, UN 4-3623.

HAVE GIRL'S 26" bicycle, would like to trade for boy's 24" or 26" bicycle. Knorr, DI 4-6623.

BOY'S BIKE, 20". Roth, CH 3-0522.

RIDE from 65th and Churchill SW to south gate Sandia Base. Salazar, 242-9474.

WILL CARE for child in my home, enclosed yard. Torres, 2803 Jefferson NE, 255-3162.

RETIRED LADY for light housekeeping, board and room, plus small salary, downtown location. Roberts, CH 3-0188.

CONDENSER CHECKER, Heathkit C3 or equivalent. Coleman, AL 5-7480.

1 DOZ. well-rooted yellow-white climbing honeysuckle; 1 doz. large leaf English ivy cuttings. Hill, CH 3-3493.

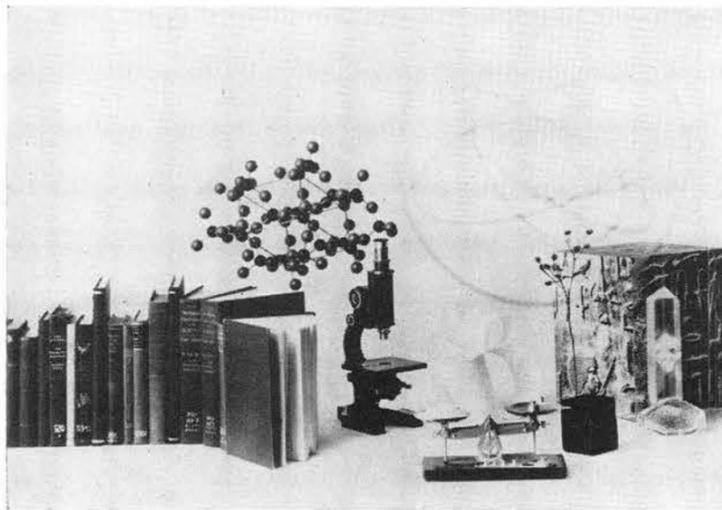
HOMES for 5 long-haired kittens, housebroken. Osterby, AX 9-4606 after 4:30 p.m.

TO JOIN car pool from 1000 block 57th St. NW, across river, to gate 7 and 10. Lucero, CH 3-7517.

RIDE from vicinity Manual and Pennsylvania, 7516 Prospect NE to Corp. Garcia, 298-3924.

SMALL 2-MAN TENT in good condition and reasonable price. Adams, AL 6-7265.

RIDE to gate 7 or 10, from vicinity of Louisiana and Claremont NE. Bortniak, 298-5093.



## Science For Everyone Found In Clearly Written Books

"Books are man's memory and his aspirations,  
The link between his present and his past,  
The tools he builds with."

—Stephen Vincent Benet

Through history men have recorded the fruits of their study and experimentation for future generations, in the hope that what they leave behind will grow into a fuller understanding of the physical universe. It is difficult, however, in this age of increasing specialization, to record the fruits of scientific study in a way that those who follow will easily understand.

This list of books has been compiled as a sampling of clearly written scientific material. Each book was selected as an example of material available to the layman. All are either in the Sandia Lab Technical Library or on order by the Library Division.

Asimov, Isaac

**The Intelligent Man's Guide to Science.** N.Y., Basic Books, 1960, 2 volumes.

This book is intended for persons who want to know what science is all about, how it came to be, and who are some of the people responsible for its development. Volume I covers the physical sciences and Volume 2, the biological sciences.

Barnett, Lincoln

**The Universe and Dr. Einstein.** 2d ed., N.Y., William Sloane Associates, 1957, 127 pages.

A popularly written account of the main ideas of the theory of relativity. Characterizes the present state of knowledge in physics. Dantzig, Tobias

**Number; the Language of Science.** 4th ed., N.Y., Macmillan, 1954, 340 pages.

A critical survey written for the non-mathematician who has a capacity for absorbing and appraising ideas. It deals with symbol and form and with the ideas which are back of each.

Gamow, George

**Matter, Earth, and Sky.** Englewood Cliffs, N.J., Prentice-Hall, 1958, 593 pages.

A discussion of the physical laws governing our surroundings. Organized in three sections which deal first with the things our size, secondly with things much smaller, and finally with things much larger than ourselves. Treats difficult aspects of modern physical

science in as simple a way as possible.

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Hanson, N. R.

**Patterns of Discovery.** Cambridge, The University Press, 1958, 241 pages.

A philosophical view of scientific inquiry. Particle physics is used as the lens through which the perennial problems of observation, facts, causality, and theories are observed.

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Pedoe, Dan

**The Gentle Art of Mathematics.** N.Y., Macmillan, 1959, 143 pages.

Written for laymen who wish to know what mathematics, and especially modern mathematics, is about. This is not a comprehensive account but instead covers those topics which the author feels are of interest.

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Peierls, R. E.

**The Laws of Nature.** N.Y., Charles Scribner's, 1956, 284 pages.

Outlines current knowledge of the structure of matter and the underlying physical laws. Demonstrates the evidence which has led to our current understanding of these laws. This book assumes no previous knowledge of physics.

\* \* \*

Pfeiffer, John

**The Changing Universe.** N.Y., Random House, 1956, 243 pages.

A well-written popular comprehensive survey of the comparatively new field of radio astronomy. Written by a prominent science writer.

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Pierce, J. R. and David, E. E.

**Man's World of Sound.** Garden City, N.Y., Doubleday, 1958, 287 pages.

An interesting discussion of man's speech and hearing and their use in the code of communication which is language. Intended for the non-specialist reader.

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These are only a few of the books dealing with general sciences which can be understood by the layman. They are by no means the only material available. Perhaps they will only serve as stepping stones to a greater understanding of the scientific world.



SANDIA TOASTMASTERS Club 765 installed new officers recently. From left are Al E. Hall (4221), president; J. T. Wheelis (2542), sgt.-at-arms; C. F. Kyger (2544), educational vice president; P. C.

Hernandez (7212), treasurer; and Tom Edrington (7147), secretary. Not available for picture were Roy McCrary (U.S. Army), administrative vice pres.; Nate Wineberg (former Sandian), historian.

## Self Improvement and Fun Are Appeals of Toastmasters Club



J. T. Wheelis (2542)

Self improvement along with a lot of good-natured fun is a hard combination to beat. This is the appeal of Sandia Toastmasters Club 765 which is still going strong after 13 years of continuous activity.

First organized in November 1949, the club has met regularly once a week ever since to give its members an opportunity to learn to speak before a group.

"Toastmasters presents a program of speaking-skills development to its members," says Al E. Hall (4221), newly-elected president of Club 765. "From a basic training manual through a step-by-step progression, the Toastmaster becomes a skilled communicator. He learns to present ideas effectively, to use his voice, gestures, and expression to get his message across to the audience.

"The member learns to think on his feet — many times he is called upon to talk on the spur of the moment. Then, too, the member regularly presents prepared speeches. Members also learn parliamentary procedure and leadership — we change officers and committees every six months."

Al and his fellow new officers were installed during the annual Ladies Night of the club recently. C. F. Kyger (2544) is educational vice president, Roy McCrary (US Army) is administrative vice president, T. S. Edrington (7147) is secretary, P. C. Hernandez (7212) is treasurer, and J. T. Wheelis (2543) is sergeant-at-arms. Nate Wineberg, a former Sandia employee, is club historian.

Program for the evening was little changed from a regular meeting, except that wives of



Dick Howell (7325)



Lew Hanchey (7147)

members were given the opportunity to speak.

Topicmaster for the evening was Rudy L. Baca (2643) who proposed several subjects for comment by speakers. A gavel was passed around the table and anyone wishing to speak could do so when the gavel reached him.

Practically everybody did. "Unaccustomed as I am to speaking in public . . ." is a private joke in Toastmasters.

"One of the first things a member learns in Toastmasters," Al



Chuck Kyger (2544)

says, "is to overcome shyness or fear of speaking. In the relaxed atmosphere of the meeting, speaking to the group becomes easy."

Pete Hernandez told a story which illustrates the point. It seems that a little man had a tremendous inferiority complex. He was scared to talk to people, he was embarrassed about his size, and his life was miserable. Finally, Toastmasters convinced him that the only size that mattered was the bigness of his thinking. He felt much better, so good in fact, that he thought all little men could benefit from this message. He was determined to tell the world, become a missionary for big thinking.

"But before he could get started," Pete said, "he was eaten by a pussycat."

Jokes come quickly at Toastmasters meetings but there is a serious side. "If a man can't take criticism, he doesn't belong in the organization," Al says. "Part of every evening is spent in helpful, positive evaluation of the speakers. Speakers get specific ideas to improve their ability. And, in turn, the evaluators are evaluated. Everybody learns."

Sandia Toastmasters Club 765 is part of the International Toastmasters organization which has some 3500 clubs with more than 100,000 members. There are 12 Toastmaster groups in Albuquerque.

Currently Sandia Toastmasters Club 765 has openings for 10 new members. Anyone interested in joining the organization is invited to call Al, ext. 22141.

## Sandia's Safety Record

**Sandia  
Laboratory  
HAS WORKED  
735,000 MAN HOURS  
OR 21 DAYS  
WITHOUT A  
DISABLING INJURY**

**Livermore  
Laboratory  
HAS WORKED  
884,000 MAN HOURS  
OR 153 DAYS  
WITHOUT A  
DISABLING INJURY**