



To
All
Employees

This issue of the **Sandia Lab News** directs our attention once again to the work of the agencies whose existence is so dependent upon our financial support.

Read through the list of agencies included in the ECP Campaign at Sandia Laboratory and the Bay Area Crusade at Livermore Laboratory and think about the services they render to the communities. You will agree that all of us benefit, either directly or indirectly, by the fact that they do exist and have the financial support necessary to do their jobs.

Each year we progress toward our goal of one hundred per cent participation by Sandia employees in contributing one hour's pay per month. Let's make this the year in which we reach the goal.

S. P. Schwartz
President

GSA Adopts Standard Based On Whitfield Clean Room

Federal Standard No. 209, "Clean Room and Work Station Requirements, Controlled Environment," prepared by Sandia Corporation, has been accepted by General Services Administration. The standard will become effective upon publication which is expected in early November.

The standard will control all general clean room procurement and will ultimately result in the saving of millions of dollars.

"The problem has been one of different specifications," J. Gordon King, supervisor of Advanced Manufacturing Development Section II, 2564-2, says. "A supplier producing devices for the Air Force would build a clean room according to Air Force specifications. It might not meet the requirements of other government agencies. New contracts would call for building entirely new, and expensive, facilities. None of the agencies used the same criteria."

Aspects of this problem were discussed during a Clean Room Conference held at Sandia Laboratory April 9-10 earlier this year. Introduction of the Whitfield Clean Room, invented by Willis J. Whitfield (2564-2), had brought a new concept into ultra dust-free clean rooms. For the first time, it became feasible to standardize specifications using Whitfield's laminar air flow concepts. A proposed draft of a federal standard was presented at the conference.

Preparing Agency

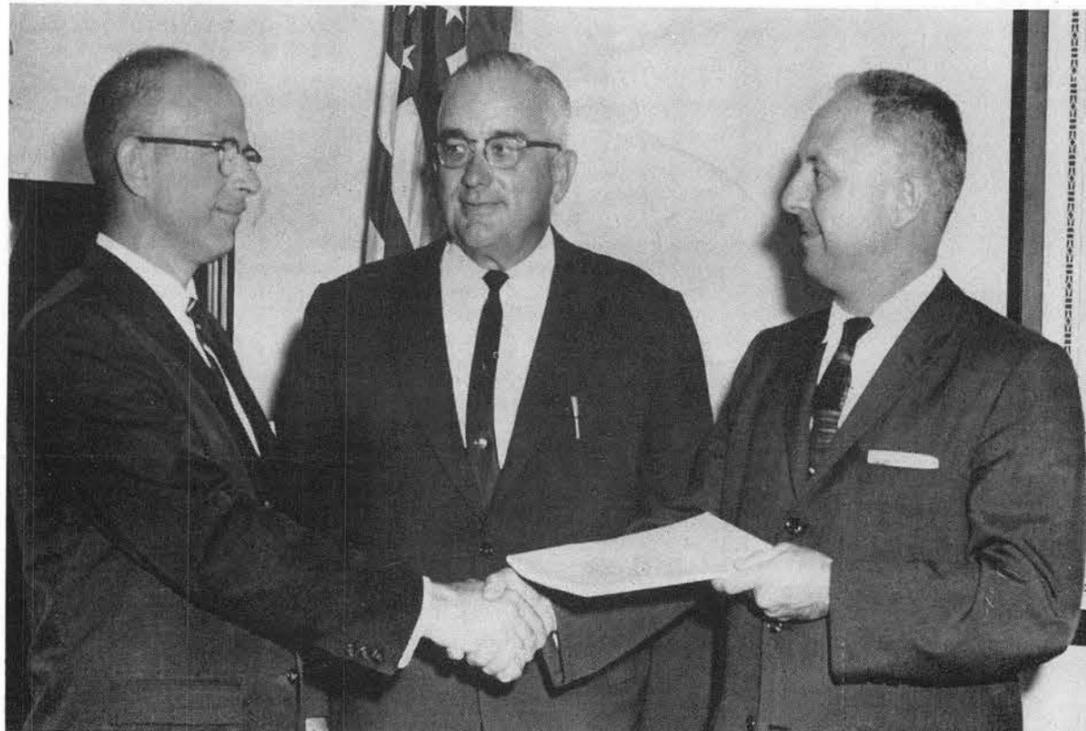
Responsibility for developing the standard was assigned by General Services Administration to the Atomic Energy Commission naming Sandia Corporation as the preparing agency. A working group was appointed at the Clean Room Conference at Sandia with Mr. King as chairman.

First draft of the proposed standard was prepared by Mr. King, Mr. Whitfield, R. Claude

Marsh (2544-2), Chris Lagiss (8116-2), Arthur G. Everitt (4421), Frank Camparell, Chief, Standardization Branch, Field Command, DASA, and J. A. Paulhamus (2564-2), working group secretary.

Working group members met for their first session May 6-7 in Boston following a national convention of the American Association for Contamination Control. After review and revision, the proposed standard was distributed to members of AACC, government agencies, Aerospace Industries Association, contamination control professionals, and

(Continued on Page Three)



PRESENTS STANDARD — J. Gordon King (2564-2), chairman of the working group that prepared a Federal Standard on clean rooms, presents the document to George W. Ritter, Assistant Commissioner, Federal Sup-

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lab news

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SEPTEMBER 27, 1963

In California, New Mexico

Sandia Employees' Pledge of One Gift Works Many Wonders

Monday, Sept. 30, almost 7000 Sandia Corporation employees will face a decision. For most Sandians, the decision will be a matter of how much to increase their payroll deductions to the Employees' Contribution Plan or the United Bay Area Crusade. For a few others, the question will be whether or not to join with the majority of their fellow employees and support the community service work of the agencies.

Either way, the decision is really not simple. Too much is at stake.

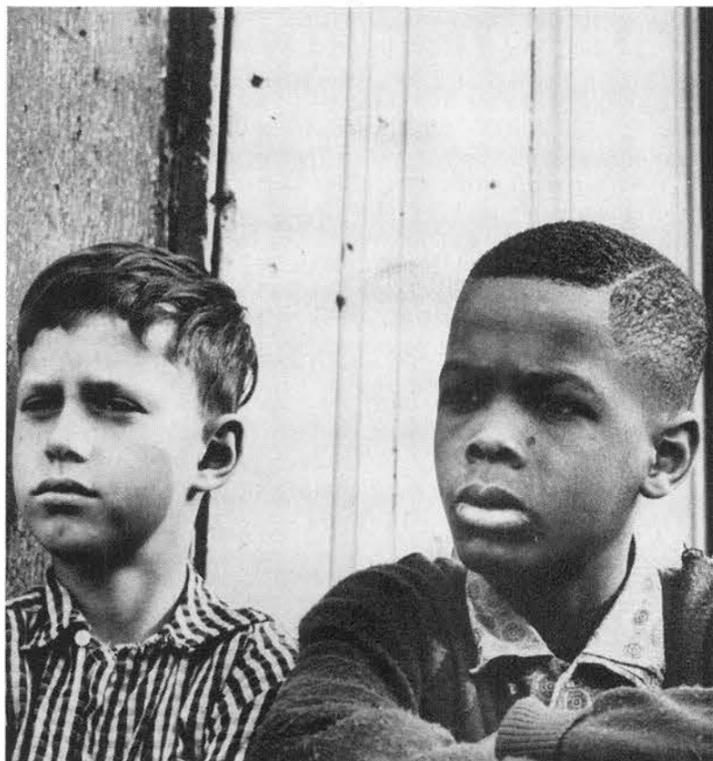
In Albuquerque, ECP supports 36 agencies—the 29 agencies of the Albuquerque United Community Fund and seven other health and welfare agencies. In Livermore, employees contribute to the 80 Crusade agencies that serve Alameda County and six other local and national health agencies.

"Vital" and "necessary" are words that are used to describe the services provided by the agencies. This is hard to understand for many Sandians whose life is free of tragedy and disease. In their everyday living, there is little contact with the desperate need faced by those getting agency aid.

"Ten per cent of Sandia Laboratory employees have not given any amount to ECP," Ray Schultz (7320), chairman of the EPC committee, says. "I firmly believe that if they could personally see and understand the work of the agencies, there would not be a single non-contributor. You can't deny human need, and watching the agencies work, you realize that they are doing a tremendous job. They are doing the job well and making every penny of our money count."

At Sandia Laboratory, members of ECP will receive payroll deduction cards in company mail. Only those Sandians who do not belong to the plan will be personally contacted by volunteer solicitors. The drive will start Sept. 30 and end Oct. 2. A minimum of one hour's pay per month is asked of each Sandia Laboratory employee as his fair share contribution.

At Livermore Laboratory, every



DON'T PASS THEM BY — Imagine how frightening it is to a child to see the world passing by and know he or she is not really part of it. How would it be to be looking out from a sick bed, or a room in a home for the handicapped or the emotionally disturbed? You can extend a helping hand. Your privilege of service is the Employees' Contribution Plan at Sandia Laboratory and the United Bay Area Crusade at Livermore.

employee will be contacted by a solicitor from his own section. George Mincks (8222), Crusade Chairman, says, "We hope to achieve our \$13,000 goal through a program to stimulate the 25 per cent of our employees who did not contribute in the 1962 campaign."

At both Laboratories, the drives beginning Monday will be the only in-plant solicitation held during the year.

After the drive, contributors will receive receipts, membership cards, and a window sticker to display on their front doors.

United Community Campaigns are

a unique American solution to the problem of taking care of our own. It is a voluntary solution. The agencies are privately operated and supported by private citizens. Success of the system depends entirely on the conscience of individuals, like each of us, who realize our obligation to our communities and exercise our privilege of service.

Engineer-in-Training Review Offered by UNM This Fall

An Engineer-in-Training Review will be offered by the University of New Mexico beginning Oct. 29. Designed as preparation for the Engineer-in-Training examination which is a prerequisite to the professional Engineers examination, the review class will meet Tuesdays and Thursdays through Mar. 17.

The course will review mathematics and the fundamentals of engineering including engineering physics, statics, strength of materials, dynamics, thermodynamics, fluid mechanics, engineering economics, electricity, and chemistry. Tuition for the course is \$45.

For registration information, contact M. H. McMichael, Assistant Director, UNM Division of Extension, tel. 243-8611, ext. 208.

Sphere of Science To Be Open Sept. 28 To Employees' Families

Sandia employees and members of their families will have an opportunity to visit the Sphere of Science Saturday, Sept. 28.

The exhibit area will be open from 9 a.m. until noon. "The Sandia Story" will be shown at 9:30, 10:15, and 11 a.m.

ply Service, General Services Administration. In the center is Percy M. Lum, Chief, Properties and Supply Management, Office of the Controller, U. S. Atomic Energy Commission. Presentation was in Washington.

Editorial Comment

September Song

September may be noted in history as a month in which a number of "firsts" emerged onto the American scene.

On Sept. 1, 1878, the first woman was employed as a telephone operator. She was Miss Emma Nutt, who went to work for the Telephone Despatch Company in Boston.

The first newsboy in history took up his stand on a street corner on Sept. 4, 1833. Ten-year-old Barney Flaherty started selling papers for the New York Sun on that day.

"Uncle Sam" was born on Sept. 7, 1813, when a writer for the Troy (N. Y.) Post used the name as a symbolic reference to the United States.

Now here is one we remember. On Sept. 17, 1947, on the 160th anniversary of the signing of the Constitution, the Freedom Train set out from Philadelphia carrying documents tracing United States history from the discovery of America to the creation of the United Nations.

Another recent first for September occurred on the 30th day of the month in 1939. The first televising of a football game took place. The station was W2XBS in New York.

These bits of history developed during the ninth month of the year, but it is most interesting to note that each of the other 11 months are just as full of big and little events which have made history.

All of which brings forth the observation that the only thing consistent in this world is change.

Service Awards 15 Years



Harold P. Baecker 4541 Oct. 1, 1948

Donald S. Bliss 2344 Oct. 1, 1948

Hiram L. McKinney 4513 Oct. 1, 1948

John C. Sitts 4511 Oct. 1, 1948



Martin E. Grothe 4150 Oct. 4, 1948

Ernest P. Gurule 4614 Oct. 4, 1948

Paul C. Montoya 1521 Oct. 4, 1948

Reuben B. Barwick 4112 Oct. 5, 1948



John M. Lohse 7434 Oct. 5, 1948

Travis A. Allen 4233 Oct. 6, 1948

Merrill T. Muzzey 2412 Oct. 7, 1948

Richard E. Bohannon 7324 Oct. 8, 1948



Tony J. Chavez 4624 Oct. 8, 1948

Frank J. Feery 7523 Oct. 11, 1948

Paul J. Langdon 1313 Oct. 11, 1948

Purdy F. Meigs 2442 Oct. 11, 1948



Ivan M. Moore 2310 Oct. 11, 1948

H. J. Plagge, Jr. 7251 Oct. 11, 1948

Robert E. Reed 1543 Oct. 11, 1948

Bilialdo Sedillo 4575 Oct. 12, 1948

10 Years



Robert B. Yoder 4131 Oct. 12, 1948

Helen A. Neubauer 4420, E. Ronald Burke 7111, John E. Hinde 7213, William A. Sanchez 4631, Ruth D. Kresge 4131, Catherine A. Devarene 4152, Martin J. Vigil 4411, Irene B. Qualle 3126, Russell W. Foster 4352, Frances L. Matheson 4413, Floyd A. Stake 4412, Silas D. Shane 4511, Joseph Crompton 2532, Lucile W. Brett 4574, William E. Hall 4622, William J. Shock 1511, Hazel A. Poteet 4362.



VOCAL EXERCISES — Director Norman Russell Bell stresses high musical standards during rehearsal of the Bel Canto Singers. Sandians shown above are members of the 32-voice group.

Lloyd (John 1533), Dick Bertrand (4114), Frank Taylor (3465), Calla Ann Crepin (3122), Ruth Berg (Richard 1423), Don Rost (3211), and C. E. Abraham (5422). Not shown is Earl Minor (7522). The group will present "Faust" Oct. 24 with the Albuquerque Civic Symphony.



Glorianne Garcia — 3151

'Bel Canto' Group Loves to Sing — Especially If There's An Audience

"Bel Canto" is an Italian phrase which means beautiful singing. The word also describes a vocal style originating in the 17th century which stresses ease, purity, and evenness of tone production as well as agile and precise vocal technique.

The Bel Canto Singers of Albuquerque are appropriately named. The 32-voice group has established a solid reputation among music lovers in Albuquerque since it was organized in 1959 by Norman Russell Bell, director.

Of the 32 musicians in the group seven are Sandia Laboratory employees and three more are wives of Sandians.

Currently the Bel Canto Singers are working on a forthcoming production of the opera "Faust" by Gounod. The concert version will be presented Oct. 24 with the Albuquerque Civic Symphony. The performance will start at 8:30 p.m. at the Albuquerque Civic Auditorium.

The group rehearses once a week for three hours. "It's hard work," Earl Minor (7522) says. "But we enjoy it. Most of us have had some choral experience and love to sing. Being part of this group keeps us musically alert and keeps our voices active."

Membership in the Bel Canto group is by selection after vocal tryouts. Highest musical standards are maintained. In addition to the Faust opera, the Bel Canto Singers' schedule calls for Christmas performances, TV appearances, and programs for organizations holding conventions in Albuquerque.

"This is the fun part," Earl says. "Nothing beats singing for an audience."

UNM Engineering To Offer Series of Solids Lectures This Fall Semester

The Civil Engineering and Mechanical Engineering Departments at UNM have announced a lecture series in solids, with speakers from the graduate faculty in solid mechanics and specialists from outside institutions.

Regular lectures for the course (Sem. I, 1963-64) will be held every other Wednesday at 4 p.m. in Room 235, Civil Engineering Building. The tentative schedule includes lectures in "Cartesian Tensor and Application in Solid

Mechanics," "Classical Theory of Fracture," "Shock Testings," "Shock and Vibration," "Classical Theory of Longitudinal Waves in Solids," "Recent Developments of Longitudinal Waves in Solids," and "Behavior of Sand in One-Dimensional Compression."

All regularly-enrolled graduate students may sign up for this lecture series as C.E. 252 for one hour credit. Further information is available from R. C. Dove, Chairman, Mechanical Engineering Department, 243-8611, ext. 321.

Take a Memo, Please

In life as in baseball, it's the number of times you reach home safely that counts.

Analogue Computer 'Short Course' to Be Shown at Sandia

A series of three 45-minute sound-color films titled "Introduction to Analogue Computers" has been scheduled for showing Oct. 2-4, in Bldg. 815.

The films were produced by Motion Picture Section, Argonne National Laboratory, and narrated by L. C. Just, of the Applied Mathematics Division. They have been recommended for showing at Sandia by the New Mexico Area Chapter, AIEE; Programming Section 7242-1; and Technical and Trades Training Division 3132.

Part 1, an introduction to fundamental concepts associated with analogue computation, and to distinct components and building blocks of the computer, will be shown Wednesday, Oct. 2, 12:05-12:50 p.m. Part 2, a continuation with an example of programming the computer to solve 1st and 2nd order differential equations, will be shown Thursday, Oct. 3, 12:05-12:50 p.m. Part 3, presenting an example of programming of a typical nuclear reactor problem, will be shown Friday, Oct. 4, 12:05-12:50 p.m.

\$129,435 in ECP Funds Have Been Distributed Since Last Campaign

Even as the 1964 Employees' Contribution Plan drive starts Monday, this year's payroll deductions for ECP continue to mount. Sandia Laboratory employees, members of ECP, have contributed a total of \$129,435 to the ECP agencies. As the August checks, totaling \$13,294, were mailed, the following distribution had been made:

Table with 3 columns: Agency Name, August, Year to-date. Lists various charities and their funding amounts.

Advertisement for sandia corporation lab news albuquerque livermore

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GSA Adopts Whitfield Clean Room Concept As Gov't Standard

other interested industry representatives.

Washington Meeting

Extensive followup was required by Sandia members of the working group to collect and compile all comments and suggestions. The working group met again July 22-23 at the Pentagon in Washington, D. C., and prepared a final draft. After adoption by the working group, this document was submitted by Sandia Corporation and the AEC to General Services Administration Aug. 22. Final certification letter to GSA for completion of the standard was dated Sept. 13.

From receipt of authorization from GSA until the standard was completely coordinated among government agencies and industry, six months passed.

"This was the first time that the AEC had ever prepared a federal standard," Mr. King said. "Normally, it takes several years for a federal standard to be prepared, fully coordinated, and adopted. Success of this project was due to the ability and enthusiasm of members of the working group and the cooperation of the agencies concerned."

Group Members

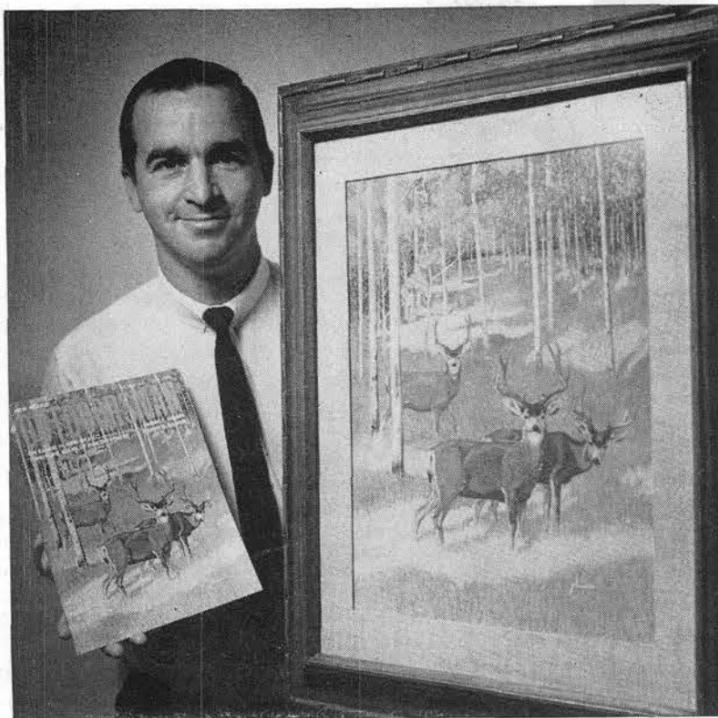
Other members of the working group were T. R. Casberg, Department of Defense; E. M. Do, Boeing Company; Emil Olsen, Garrett Corporation; L. C. Kersey, AEC/ALO; D. E. Koontz, Bell Telephone Laboratories and representative for American Society for Testing Materials; A. L. Lieberman, I.I.T. Research Foundation and AACC representative; William E. B. Mason, Space Nuclear Propulsion Office, NASA/AEC.

J. R. Mildon, Lear-Sigler Corporation and AACC president; Paul K. Miller, Chief, Technical Staff, GSA; Lt. P. R. Austin, U.S. Air Force representative; J. W. Hodges, U. S. Army representative; and John B. Adams, U.S. Navy representative.

Welcome Newcomers

Sept. 6-23

Albuquerque	
*Carl R. Carlson	9100
Winnie D. Ellis	4333
*Norma J. Emptage	3126
Richard C. Lindberg	2421
*Doris L. Mortensen	3126
Katherine H. Rhodes	3126
Michigan	
Richard L. Fanson, East Lansing	2541
John H. Walker, East Lansing	2564
Returned from Leave	
Margaret A. Crawford	3126
Alice S. Segrist	3126
Carl E. Smith	7252
* Denotes Rehire	



NEXT TO HUNTING, painting is best or vice versa, according to Gordon Snidow (3463). He combines both interests as cover artist for a new magazine, *New Mexico Outdoorsman*. He also handles page design.

Gordon Snidow Painting Appears On Cover of New Sportsmen's Magazine

Two of the biggest pleasures in life for Gordon E. Snidow (3463-3) are painting and hunting. He has combined both interests as artist for a new magazine, *New Mexico Outdoorsman*. The cover of the first issue has a full color painting of three bucks on the cover. Inside is a black and white painting of a marauding bear. Gordon will be a regular contributor to the magazine.

Gordon has been painting animals ever since he was a youngster. He grew up on the plains of Texas and Oklahoma where he made sketches of horses, cattle, deer, buffalo, mountain lions, and smaller wildlife.

While in high school, he studied art by correspondence. After high school, he attended the Art Center School in Los Angeles and graduated with a BPA degree in 1959. In 1960, he joined Sandia Laboratory as a technical illustrator.

Gordon sometimes researches his paintings by taking pictures of animals in the zoo, but usually his inspirations come from incidents during hunting or camping trips. The three bucks on the magazine cover were seen during a jaunt to the Pecos Wilderness country. Later, Gordon sketched the scene from memory, made a full-color preliminary drawing,

and then did the final painting in opaque water colors.

In 1961 the Museum of New Mexico sponsored Gordon's paintings in a one man show. His work is part of the permanent exhibits of the Gilcrease Museum of American History and Art in Tulsa and the W. B. Davis Museum in Duncan, Okla.

Employee Loses Hand In Accidental Detonation Of Explosive Device

One of the more serious job injuries at Sandia Laboratory occurred Tuesday, Sept. 17, dropping the 800,000 man-hour safety record back to zero.

An employee suffered the loss of his left hand, lacerations to his right hand and left eye, and shrapnel wounds on the left side of his abdomen when an explosive device, or devices, detonated accidentally.

He was taken by Sandia ambulance to Bataan Memorial Hospital where his condition is reported as satisfactory.

Investigation into the cause of the accident is continuing.

Prompt first aid given by two fellow employees limited the seriousness of the victim's injuries.

Nuclear Safety Symposium to Hear Talk by Sen. Anderson

Attendance of about 500 is expected at the First National Aerospace Nuclear Safety Symposium in Albuquerque Oct. 1-4, according to D. M. Ellett (1541), chairman of the Trinity Section of the American Nuclear Society.

Reflecting the concern for safety in the development of nuclear power for space applications, the meeting will feature prominent government, military, and industrial leaders. Three members of Sandia Corporation Aerospace Nuclear Safety Department 7410 will participate in the program.

A keynote address from Senator Clinton P. Anderson, chairman of the Senate Aeronautical and Space Sciences Committee, will open the meeting. The address will be read by Frank C. DiLuzio, staff director of the committee and former Deputy Manager of the AEC's Albuquerque Operations Office.

AEC Commissioner James T. Ramey will be the featured speaker at the meeting banquet. He will discuss the relationship between terrestrial and aerospace nuclear safety. Dr. Norris E. Bradbury, Director of the Los Alamos Scientific Laboratory, will discuss "Safety in Science" at a special luncheon.

More than 25 technical presentations are scheduled during the five sessions of the four-day meeting. Opening session will feature Harold B. Finger, Director of Nuclear Systems for NASA and Manager of the AEC-NASA Division of Reactor Development; Frank K. Pittman, Director, AEC Division of Reactor Development; and Col. Charles B. Steward, Director, Directorate of Nuclear Safety, Deputy Inspector General, U. S. Air Force; who will, in turn, discuss NASA, AEC, and Air Force nuclear safety programs.

K. F. Hertford, Manager, AEC Albuquerque Operations Office, will be chairman for the first session, "Safety Programs and Philosophy."

V. E. Blake, Jr. (7410) will be chairman of the "Re-entry and Postmission Disposal" session of the conference. J. L. Colp (7512) will present "Aerospace Nuclear Ground Test Program" and A. J. Clark, Jr. (7412), will present "Aerospace Nuclear Safety Re-entry Flight Test Program."

Chairman for the "Environmental Factors" session will be Joseph A. Lieberman, Assistant Director for Nuclear Safety, Division of Reactor Development, AEC.

Conferees will tour Sandia Laboratory reactor and environmental test facilities Thursday afternoon,

Oct. 3. The next day, a tour of Los Alamos Scientific Laboratory is scheduled. The tour will include Project Sherwood facilities for the study of controlled fusion and the Pajarito Site for remotely controlling critical assemblies.

The meeting is co-sponsored by the American Nuclear Society, Sandia Corporation, Air Force Special Weapons Center, Air Force Weapons Laboratory, AEC Albuquerque Operations Office, USAF Directorate of Nuclear Safety, Los Alamos Scientific Laboratory, and the University of New Mexico. Technical sessions will be held in the New Mexico Union, UNM campus.

Program and registration information is available from Mr. Ellett, ext. 47246, or P. D. O'Brien (5332), ext. 21173.

Sandia Speakers

B. L. Haertjens and G. E. Tucker (both 3311), "Krypton-85 Calibration of Air Monitors Calibrated for Tritium," joint meeting of the Rocky Mountain Section, American Industrial Hygiene Association and the Rio Grande Chapter of the Health Physics Society, in Albuquerque, Oct. 4-5. Mr. Tucker will make the presentation.

G. E. Tucker, W. D. Burnett, and H. L. Rarrick (all 3311), "Sandia Health Physics on Operation Roller Coaster," joint meeting of the Rocky Mountain Section, American Industrial Hygiene Association and the Rio Grande Chapter of the Health Physics Society, in Albuquerque, Oct. 4-5. Mr. Burnett will make the presentation.

M. L. Merritt (5412), "Nuclear Blasting," Engineering Foundation Research Conference on Communion, Andover, N.H., Aug. 16.

R. H. Dungan (1124) and T. F. Murray, Bendix Kansas City, "Effects of Sintering Atmospheres on the Electrical and Ceramic Properties of PbZrO₃-PbTiO₃ Ferro-Electrics," American Ceramic Society Fall Meeting, in October. Mr. Murray will make the presentation.

R. D. Jones (7435), J. C. Mitchell (7431), and R. G. Scharrer (7252), "High-Resolution Telemetry System for Diagnostic Rockets," 1963 National Space Electronics Symposium, Miami Beach, Fla., Oct. 1-3.

E. V. Forsman (1323), "Testing and Reliability of Thermal Batteries," Thermal Batteries Panel Discussion sponsored by the Interagency Advanced Power Group, PIC, New York City, Oct. 4.

G. W. Arnold (5311), "Influence of Growth Rate on Radiation Induced Defects in Quartz," 1963 Gordon Conference on Glass, Tilton, N.H., Aug. 26-30.

J. W. Weihe (5420), "Report of the Joint Committee on Employment Opportunities," meeting of the Board of Governors of the Mathematical Association of America, Boulder, Colo., Aug. 25.

L. E. Sedore Died August 31; Retired From Sandia in '60

L. E. Sedore, a retired Sandia employee, died in Albuquerque, Aug. 31. He was 66.

Mr. Sedore worked at Sandia as an assembler in Division 4221. He retired from the Company in December, 1960.

He is survived by his widow, Mrs. Lillian S. Sedore; a daughter, Mrs. Charles E. Boris, Las Vegas, Nev.; and two sons, Lawrence A. Sedore, Albuquerque; and Donald E. Sedore, Jackson, Mich.



FIRE KILLED 11,800 Americans last year. Fire will destroy more than \$1,690,000,000 in property in 1963. Fire can happen here. Sandia Laboratory has experienced four fires since Jan. 1, 1963, with a total property loss of \$607. Livermore Laboratory has not had a fire in two

years. But fire strikes without warning — at home, at work. Sandia Corporation's year-around fire prevention program will be intensified during National Fire Prevention Week Oct. 6-12 with fire drills, fire extinguisher demonstrations, displays, posters, and inspections.

Sandia Unions Endorse 1964 ECP Campaign

Message from the President
Office Employees International
Union, Local 251, AFL-CIO



I would like to remind Sandians of one of our economically accepted principles and practices . . . share and share alike. We share because we have common aims, because of our form of government, and because it is the American way of life.

In the Employees' Contribution Plan campaign, most of us will receive a payroll deduction card in the mail. This is our chance to increase our gift to the Albuquerque United Community Fund and seven other agencies. Other Sandians, those who are not members of ECP, will be asked by a volunteer solicitor to share their good fortune with others by joining ECP. ECP has been designed so that you may contribute (by convenient payroll deduction) to the 29 local agencies of UCF and seven other health and welfare agencies.

I feel Sandians should really show their gratitude for services rendered by local UCF agencies and national health agencies. You can do your share when you are asked to pledge.

Paul J. Cruz

Message from the President
International Guards' Union of
America, Local 27



Security is a big concern at Sandia Corporation. Security of another kind, personal security, is a primary part of our life. Let's think for a moment about those people who have no personal security. Their lives have no direction and they live with hunger, pain, and the fear of tomorrow.

These people are helped by the money you give to the Employees' Contribution Plan. ECP agencies provide services of all kinds — vital, necessary, and expensive services. In addition to helping the sick and needy, ECP agencies also provide recreation for normal, healthy youngsters and activities for senior citizens.

As Sandia employees, secure in our life and fortune, we have an obligation. It's called the privilege of service. I urge you to support ECP by giving your fair share. Let's make it 100 per cent participation by Sandia employees.

Robert L. Stewart

Message from the President
Atomic Projects and
Production Workers
Metal Trades Council, AFL-CIO



The Employees' Contribution Plan is a method devised by an employee committee whereby we can contribute by payroll deduction to the Albuquerque United Community Fund and seven other health and welfare agencies. This makes it possible to contribute small amounts over a one-year period, which is much easier than giving one lump sum.

We are fortunate being in a position to contribute rather than being on the receiving end. Those who receive help would much prefer to be in our shoes.

Even though some of us may disagree with the purposes of some of the organizations which receive funds from the Albuquerque United Community Fund, this nevertheless does not lessen the need for, or the good accomplished by, these organizations. They are just as necessary as the others. So when the campaign starts, give all your heart, conscience, and your pocketbook will allow.

Henry R. Welch

Sandia Laboratory Solicitors

Employee Contribution Plan

1100, 1300, 1500
Captain: G. H. Mauldin
Robert E. Moll, Carl J. Cron, Leo White, M. J. Madlener, Jr., Stanley D. Spray, Dwayne L. Mozey, Bert P. Neumon.

1400
Captain: P. J. Komen
John R. Halliday, Richard R. Prairie, David H. Denton, Jr., Robert L. Nagel.

2300, 2600
Captain: J. R. Meikle
Gerald C. Shelton, Robert D. Brooks, Donald J. Hosterman, John M. Stuckey, Linus L. Phillip, Warren C. Schaefer, William J. Meyer, John W. Frizzell.

2400, 2500
Captain: P. W. Callies
Robert J. Reed, Thomas Starr, R. T. Jankowski, David W. Bushmire, James C. Mashburn.

3100
Captain: K. E. Sutton
Mary Harrison, Kendra A. Longfellow, Reinhardt A. Quelle, Harold W. Hanna, C. E. Cundiff, Herbert L. Pitts, Gene W. Abbott, Gary T. Montague, Ann Paxton, Esther M. Allen.

3200, 3300
Captain: H. M. Willis
Hugo Flores, Elio Cultreri, Stanley S. De Vault, Anthony Juskiewicz, Harold L. Rarrick.

3400
Captains: W. W. Ives, J. G. Marsh
John R. Shunny, James C. Gravin, Neil E. Hansen, Phyllis A. Wilson, Mary Lou Cooper, Alice I. Smith, Lorraine E. Miller.

4100
Captain: H. G. Pierce
Elizabeth M. White, Richard G. Jones, Richard F. Jennings.

4200
Captains:
C. E. Runyan, A. C. Taylor, D. A. Watt
Charles E. Jenkins, Bruno Paoletti, James T. South, John Anaya, Clifford L. Shaw, Dale W. Goens, William J. Villanueva, Frank L. Leyba, Jr., David M. Smith, Edwin D. Sutherland, Peter Ferkerich, Fred W. Stewart, Paul W. Benson, Leland L. Pierce, Camille A. Rudeau, Raymond L. Negus, Roman S. Huer, Joseph E. Sul, Jake F. Gonzales, Brad L. Sanders.

4300, 6000, 9000
Captain: L. R. Neibel
Joseph E. Duffy, Polly A. Pine, Charles L. Ray, George S. Bennett.

4400
Captain: D. J. Yarbrough
Richard C. O'Boyle, Roy W. Ewing, Vonna J. Burroughs, Joe C. Garcia, Louis P. Baudoin, Frank R. Emig, Hilda Cruz, George B. Roberts, Kenneth V. Atkisson.

4500
Captains:
L. R. Wilson, S. L. Johnson, J. H. Simmons
Robert W. Hartenberger, Alfred Montoya, Frank J. Tuffs, Louis P. Gallegos, Hyder B. Burress, Herman O. Armijo, Charles H. Weidman, Erineo Jaramillo, Elias Benevidez, Roy A. Furrow, Richard G. Carlisle, Rudolph E. Lovato.

4600
Captains: A. Blain, W. A. Otero
Charlie A. Monroe, Alsid F. La Moria, Ray J. Beall, Marion E. Scott, Robert P. Williams, Theodore F. Pfeffer, Virginia T. Simms, George E. Chaffee, Kelley T. Fosmo, Dorothy F. Pinkerton, Joseph H. Billings, Aileen I. George, William E. Hall.

5100, 5300, 5400
Captain: Glen Seay
Everett H. Beckner, Orval E. Jones, Elmo G. Hirni, Leo L. Flores, James M. Hoffman, Emily G. Young.

7200
Captain: H. S. North
Anthon J. Petersen, Albert T. Marrs, Leo W. Scully, Freddie K. Millsap.

7300
Captain: W. H. Cross
Leo P. Navoda, James H. Stoeber, Richard E. Howell, Phillip S. Young, Robert L. Henderson, Albert R. Elwell, Jr.

7400
Captain: E. L. Harley
Leslie E. Anderson, Gary M. Connell, Thomas G. Banks.

7500
Captain: E. M. Hodges
George W. Buddrius, Vernon J. Glover, Jr., Brooks W. Bell, Clifford K. Diem.

Supervisory Appointments

JAMES H. DAVIS to supervisor, Device Engineering Division 7253, effective Sept. 1. He was previously supervisor of Project Section 1512-1.



Mr. Davis began his Sandia career in 1952 as a member of Project Design Division 1241. He transferred to Project Division 1324 in 1955, and became supervisor of the section now known as Section 1512-1 in 1956.

Before coming to Sandia, he worked for Convair in Fort Worth, Tex., for two years. Prior to that time, he attended Oklahoma State University, where he received a BS degree in mechanical engineering. At Oklahoma State, he was a member of Pi Tau Sigma (mechanical engineering honorary) and Pi Kappa Phi (scholastic honorary).

JOHN H. ZIMMERMAN to supervisor, Device Engineering Section 7253-2, effective Sept. 1.



John came to Sandia Mar. 30, 1954 from Northwestern University, Evanston, Ill., where he received a BS degree in electrical engineering. He was a member of Electrical Design Section 1264-1 until January 1959, when he joined a fuzing systems section. He was a member of the section, now Fuzing Systems Section 1531-2, up to Sept. 1, this year.

He participated in the recent full-scale test series, Operation Dominic. He is a member of Tau Beta Pi (engineering honorary) and of Eta Kappa Nu (electrical engineering honorary); president of the Thunderbird Travel Trailer Club; and a member of the Methodist Men's Club.

JAY J. JOST to supervisor of Machine Shop Section 8223-1, Model Shop Division, Livermore Laboratory.



Jay joined Livermore Laboratory in August 1959 as a machinist, becoming a model and instrument maker in February 1961.

Before coming to Sandia he worked two years as a tool and die maker for the W. A. Schaeffer Pen Company in Fort Madison, Ia. He also worked for seven years as a tool and die maker in the research and development lab of the Chamberlain Corp., Waterloo, Ia.

During World War II, Jay served as an Army Ordnance technician in Europe.

In 1943 he attended the University of Michigan under the Army Specialized Training Program, receiving the equivalent of two years of college study.



SANDIA LABORATORY Fast Pitch All-Stars came out runnersup in the Intra-Base tourney. In front row, from left, are Ron Martell (1521), J. D. Aragon (3452), E. L. Burgess (7522), Dale Landis (4413), Bob Balthaser (7521), and K. J. Deller (5131). Standing are Herb Filusch (7253), Don Hurt (2313), G. W. Smith (5136), Leonard L. Strawderman (4411), Jim K. Fjelseth (7324), Don J. Burns (1321), and Charles D. Salazar (4254). Not shown are Paul Beeson (5321) and Bill Drozdick (4411). All-Stars are selected by league managers.



AMERICAN LEAGUE SOFTBALL CHAMPS — In front row are R. J. Baughman (5131), manager, Ken W. Henry (5322), W. D. Raburn (5321), S. F. Duliere (5135), and A. W. Lynch (5153). Standing are W. E. Warren (5152), J. M. Peek (5152), G. W. Smith (5136), L. D. Wright (5133), and K. J. Deller (5131). Not shown are Paul Beeson (5321), Scott Waddell (5131), Sto Bell (5422), and Lee Heames (5133). Champs beat 24-25-34-4100 in final playoffs.

Ancient Greeks Theorized on Possibility of Four Elements

Running parallel with the development of atomic theory is a second concept—that of the elements—which the Greek philosophers developed in their attempts to explain the nature of Man's environment. In this article, we examine the four-element theory of the Greeks and trace its modification and subsequent abandonment by later scientists, including Robert Boyle, A. L. Lavoisier, Joseph Priestley, Henry Cavendish, and J. J. Berzelius.

In the Fifth Century B.C., at about the same time that Leucippus, Democritus, and others were theorizing about the indivisible particles or *atoma* which they thought made up all material things, another philosopher, Empedocles, concluded that all matter was composed of four "elements" . . . earth, air, fire, and water.

With the support of Aristotle (who, we might recall, condemned the theories of the atomists), the four-element theory was widely accepted in spite of vagueness about the implications of such a theory. Aristotle interpreted the four-element theory in an unusual way. He saw all matter to be made up of a single substance called *hyle* (material), which could acquire varying amounts of four qualities: hot, cold, dry, and moist. Thus, the difference between one material and others was considered due to variations in these "qualities"; however, fundamental matter was always the same. Air, for example, was hot and moist; whereas water was cold and moist; fire was hot and dry, and earth was cold and dry.

Nine Elements

Only nine of the elements, as we know them, were known in the uncombined state in ancient times: carbon, sulphur, copper, iron, tin, gold, silver, mercury, and lead. Although they were recognized as differing from one another, they were thought by Aristotle and others to be variations of the primal form of matter, *hyle*. Today, we find the four-element theory, as well as Aristotle's interpretation of it, rather quaint over-simplifications; modern techniques have enabled us to determine that there are more than 100 elements, including those produced artificially, and that earth, air, fire, and water are, in reality, compounds—combinations of elements — mixtures of compounds, and, in the case of fire, the release of energy by chemical reactions.

Aristotle's interpretation of the four-element theory was accepted for the following 20 centuries. Experimenters known as "alchemists" used Aristotle's interpretation in attempts to change common metals into gold. Such attempts failed. It was not until the 20th Century that transmutation of one element into another was accomplished.

It was around 1661 that serious doubts were levied on the four-element theory. In that year, the Irishman Robert Boyle published a book titled *The Sceptical Chymist*, in which he gave his own definition of an element: "I . . . mean by elements . . . certain primitive and simple, or perfectly unmingled bodies; which not being made of any other bodies, or of one another, are the ingredients of which . . . mixt bodies are immediately compounded, and into which they are ultimately resolved . . . I must not look upon any body as a true principle or element . . . which is not perfectly homogeneous, but is further resolvable into any number of distinct substances, how small soever."

Material Substances

From Boyle's time on, the term "element" was applied to material substances; however, since early chemical techniques were



only preparative and descriptive rather than quantitative or analytical, there was no way to determine which substances were elements and which were "mixt bodies" or compounds. Gradually, however, the list of "elements" grew. By the middle of the Eighteenth Century, however, chemistry, primarily through use of the analytical balance, became a quantitative science, and certain standards were set which forced the abandonment of the four-element theory and its interpretations.

In 1774, the French chemist A. L. Lavoisier proved that air is not an element, but a mixture of at least two different gases, oxygen and nitrogen. In 1781, two Englishmen, Joseph Priestley and Henry Cavendish, established the fact that water is a compound of hydrogen and oxygen. In 1789, Lavoisier established the modern concept of an element: "We apply the term elements . . . to bodies to express our idea of the last point which analysis is capable of reaching."

Using this idea, Lavoisier, through experimental studies of chemical reactions, was able to prepare a list of nearly 30 elementary substances, 23 of which are still regarded as elements. And by 1819, a Swedish chemist named J. J. Berzelius had increased the list to 50.

Until the later development of more sophisticated analytical methods using X-rays and spectrophotometry, a material was classified as an element or compound on the basis of its chemical reaction. The chemical composition of a substance can be found either through its decomposition into two or more other substances, or through its formation by the chemical union of two or more known substances.

Further, since the weight of a compound is the sum of the weights of its elements, a given quantity of an element always increases in weight on undergoing a chemical change. The early investigators slowly increased the number of identified elements by studying chemical reactions. By the end of the Nineteenth Century, the number of known elements had risen to 82, and the concept of the nature and structure of matter was about to undergo further change.

20th Century Change

Until the beginning of the 20th Century, an element would have been defined simply as a form of matter which could not be broken down into other forms. But with

the discovery of radioactivity and radioactive decay, which occurs spontaneously and uncontrollably, and nuclear transmutation, which in most cases requires particles of very high energy or neutrons, scientists were obliged to define an element as a form of matter which can't be broken down into a simpler form, nor be produced from simpler forms of matter by ordinary chemical means.

Today, we identify an atom as the smallest possible particle of an element; however, as we know, the atom itself has a complex internal structure, and can be split into subatomic particles. These particles don't have the characteristic properties of the element from which they are derived; therefore, in the sense that the identity of an element is to be retained, the atom may be regarded as indivisible.

John Dalton, whose work in clarifying atomic theory has already been discussed in this series, made up symbols to represent the constituent elements of compounds. His symbol for an atom of oxygen, for example, was a circle, for an atom of hydrogen, a circle with a central dot, and for an atom of nitrogen, a circle with a vertical line through it.

Chemical Symbols

With the growth of the number of elements, Dalton's symbols became more and more cumbersome. The difficulty of providing symbols for all of the new elements was overcome by Berzelius, who devised the system of chemical symbols in use today. He suggested that the initial letter, or letters, of the Latin name of each element should be used to symbolize it. For example, oxygen (oxygenium) was symbolized by O, hydrogen (hydrogenium), by H, gold (aurum) by Au, silver (argentum) by Ag, and so on.

Berzelius' symbols were subsequently combined with subscripts indicating numbers of atoms to provide chemical formulas for compounds. For example, the formula H_2SO_4 indicated that two atoms of hydrogen combine with one atom of sulphur and four atoms of oxygen to produce one molecule of sulphuric acid.

But the molecule—the smallest part of any substance as it normally exists—wasn't distinguished as such in the theorizing of Dalton, Berzelius, or others. The concept of the molecule evolved as a separate theory, and it will be discussed in a forthcoming issue of the *Lab News*.

Purchasing Expert to Discuss Value Analysis Before AIIE

The New Mexico Area Chapter of the American Institute of Industrial Engineers (AIIE) will hold a dinner meeting at the Western Skies on Oct. 8. Featured speaker for the evening will be K. A. Cruise, Director of Purchasing, Bendix Corporation, Kansas City Division. He will discuss "Value Analysis—Objectives and Techniques." He will be introduced by K. S. Spoon, Sandia Corporation Purchasing Agent 4300.



- K. A. Cruise -

Value analysis—or value assurance, value control, value engineering, or value improvement, as it is sometimes known—is a cost improvement technique which identifies the true function of a product and works to fulfill that function at the lowest feasible cost. Basically a team approach to design analysis, it has become the backbone of Secretary of Defense McNamara's cost reduction program.

After defining value analysis, Mr. Cruise will demonstrate some of the basic techniques used in applying value analysis to design and manufacturing methods. He'll illustrate—through his own experiences—the extent of application and cost optimization possible through use of value analysis.

Mr. Cruise, a Bendix employee for 28 years, was named purchasing agent of the Kansas City Division in 1949, and in 1957 he became materials manager. In 1961, his title was changed to Director of Purchasing to conform with titles of other divisional heads at Bendix. He has written over 30 articles for various industrial publications, including "Steel" and "Iron Age."

Guests or non-members of AIIE, as well as members, are encouraged to attend the meeting because of the timeliness of Mr. Cruise's talk and

because of Department of Defense interest in the topic.

Social period for the meeting will begin at 6:30 p.m.; dinner will be at 7. For reservations, call Dave Poli (2542-2), ext. 24102; Ralph Davies (4332), ext. 36235; or Ed Wolski (2563/Paperware Task Group), ext. 25207.

First Aid Classes To Be Offered All Employees, Families

Beginning the week of Oct. 7, Standard and Advanced Red Cross First Aid Training courses will be offered on an out-of-hours basis. Employees and members of their immediate family (14 years or older) are eligible. To enroll in either of the courses, contact Division 3132, ext. 48138.

Plant Engineers Confer . . .



D. R. COTTER, Director of Advanced Systems Studies 9100, discussed the effects of future weapons programs at a meeting of the AEC Integrated Contractors Plant Engineers. Other Sandia speakers included R. A. Ledogar (6030), R. M. Officer (4541), and C. W. Campbell (4000).



H. H. PASTORIUS, manager of Plant Engineering Department 4540, conducted part of the program of a recent meeting of AEC Integrated Contractors Plant Engineers. Representatives of 14 companies attended.

Laboratory Goal Is \$13,000

Livermore Laboratory UBAC Drive Starts Monday



FAMILY COUNSELING leads all other social services provided by the United Crusade in Livermore. This past year, more than 220 children and adults received assistance from the Family Service Agency.

Final preparations have been made for the launching of Livermore Laboratory's largest United Crusade campaign on Monday, Sept. 30. Solicitors in each section will contact employees individually during the drive in the hope of reaching the Laboratory goal of \$13,000.

A kick-off rally, beginning at 8 a.m. Monday and continuing throughout the day, will be held at various locations throughout the Laboratory. All employees will be invited by their solicitors to attend half hour rallies on a voluntary basis. Included in each rally will be a short (11-minute) fact-packed film, "In Your Hands," which shows how Crusade dollars contribute to the improvement of local communities. Following the film a Crusade speaker will give a brief (5-minute) talk and will answer any questions.

As a convenience to employees, payroll deduction will again be available. Deductions of \$1 or more may be made for monthly-paid employees and 25 cents or more for weekly or hourly-paid personnel. The first deduction for weekly-paid personnel will be made Oct. 25. Monthly-paid employees' deductions will begin Oct. 31.

Pledge cards will be given to each employee by the solicitor in his section. These pledge cards must be returned whether or not the individual contributes to the United Crusade. This procedure is required by company auditors to assure proper tabulation of the Crusade gift. Contributors will also receive receipts for income tax purposes, along with window stickers to show that they have contributed. New this year is a message on the receipt cards explaining how employees may avail themselves of United Crusade services, regardless of their financial position. These messages, also printed on wallet-size cards, will be given to each employee.

Squad leaders and solicitors who will conduct this year's campaign are:



A HELPING HAND is extended to children like this little boy through your contribution to the United Crusade. Last year alone, the Children's Hospital of the East Bay provided care for 75 patients from Livermore.

Bargain Services Available Locally Through Your Crusade Contributions

Room and board for a week for only \$1.85 per family? Sounds like a bargain, doesn't it? Yet that is exactly what this amount of your United Crusade contribution will provide through the American Red Cross — one of 80 Crusade agencies and branches serving Alameda County.

But for \$1.85 you can't expect plush accommodations. Rather, this money provides the basic necessities for a family hit by a disaster.

Looking for more bargains?

Only \$1.38 a week will provide training, activities, and supervision of a patrol of boy scouts for one year.

A pledge of 69 cents a week will pay for professional counseling for five families.

This is only a small sample of where your Crusade dollars go to provide necessary health, welfare, and youth services in your community. Last year alone, \$73,000 was returned to Livermore in United Crusade services. Collections in Livermore last year totaled \$45,000.

Among Crusade agencies that provided services to Livermore residents during 1962 were the following:

Boy Scouts activity for 1378 boys.

Catholic Social Service care for 25 families.

Children's Hospital of the East Bay treated 43 private, 8 clinic, and 24 outpatients.

Council of Social Planning assisted 400 people.

Del Valle Girl Scouts provided activities for 950 girls and 300 adults.

Family Service Agency—Alameda County, aided 232 families.

International Institute assisted 26 persons.

Legal Aid Society counseled 40 persons.

Oakland Camp Fire Girls provided activities for 157 girls.

Oakland Visiting Nurse Association

Health Agencies Too

Six local and national health agencies are included in the United Crusade, in addition to 80 other Crusade agencies and branches that serve Alameda County. The health agencies are the American Heart Association, Arthritis and Rheumatism Foundation, Mental Health Society, Multiple Sclerosis Society, United Cerebral Palsy Association, and the American Social Health Association.

tion paid 96 visits to 12 families.

Oakland YMCA provided activities for 234 people.

YWCA provided programs for 104 people.

Salvation Army assisted 269 people.

These figures, obtained by your Crusade Committee from the United Crusade, are printed here to guide you in making your contribution. It is not the committee's intention to tell you what to give. Giving is a personal and voluntary act that only you can decide.

'All For One...'

"All for one — and one for all" could well serve as the motto for the United Crusade at Livermore Laboratory.

All money is collected in one campaign . . . and one gift serves the needs of all 80 Crusade agencies in Alameda County, according to George Mincks (8222), Laboratory Crusade Chairman.

"If all of us contribute this year, there's no reason why we can't meet or beat our goal of \$13,000. By contributing our share, the battle against disease, delinquency, poverty, and hopelessness will be closer to victory," George said.

Squad Leaders

J. S. Gruver (8114), L. E. Guinard (8115, 8116, 8118), J. L. Wilson and I. B. Ward (8120), N. F. Jacobson (8140), J. D. Gilson (8150), Ruth Powers (8160), P. D. Leiserson (8210), F. F. Thome (8220), J. Bacher (8230), H. Stratmann (8240), R. J. Brousseau (7257 and 9120), and C. R. Barnard (8150), executive solicitor.

Solicitors

8114: G. M. Cormany (8114-1), R. W. Finn (8114-2), R. L. Puckett (8114-3), C. C. Pettinger (8114-4), J. L. Stewart (8114-5).

8115, 8116, 8118: P. R. Coronado (8115-1), J. P. Darginis (8115-2 and 3), A. E. Thomas (8121-4), R. P. Martinell (8116-3), N. E. Wilson

(8118-1 and 2).

8120: P. M. Sites (8121-1), L. R. Myers (8121-2), W. M. Folks (8121-3), A. E. Thomas (8121-4), R. P. Noble (8122-2), J. S. Meeks (8122-3), E. R. Fisher (8123-1), D. O. Cook (8123-2), P. L. Stewart (8123-3), J. E. Strandia (8124-1), A. W. Kallom (8124-2), R. H. Schultz (8124-3).

8140: J. M. Mesnard (8141-1), K. W. Shriver (8141-2), H. W. Schmale (8142-1 and 3), D. M. Pierce (8142-2), D. R. Christensen (8143-1 and 2).

8150: L. M. Hall (8151-1), C. Franklin (8151-2), E. T. Herzog (8154), G. R. Waymire (8158).

8160: Jerry Nerton (8161-1), J. J. Russell (8161-2), J. R. Wimborough (8161-3), M. G. Gregory (8165), LeOra Church (8166).

8210: J. A. Wackerly (8213-1), Mary Sites (8213-2), Helen Lee (8213-3), T. Beckley (8212-1, 2, and 4), Marcel Johnson, Jackie Garrett (8212-3), Jean Stuart, A. L. Richards (8214).

8220: W. E. Thomson (8221-1 and 2), C. D. Crowley (8222-1), E. C. Wittebort (8222-2 and 3), F. Petrini (8223-1 and 2), A. D. Andrade (8225-1), J. N. Barnhouse (8225-2), R. R. Richardson (8226-1).

8230: G. M. Damoulos (8231-1 and 2), Rose Lawson (8231-3), Bess Roach (8232-1), Linda Anderson (8232-2), A. J. Bastion (8232-3), Sharon Ham (8232-4), Judith Damoulos (8233-1), D. R. Wilsey (8233-2), G. Hosoda (8233-3), D. R. Rich (8233-4).

8240: W. F. Hodges (8241-1), R. E. Crow (8241-2), H. V. McNabney (8242-1 and 2), Joan Bayless (8243-1), B. J. Riedy (8243-2 and 3), Zelma Creager (8243-4), E. Kurowski (8243-5).

7257: L. E. Hake and W. R. Wall (7257-1 and 7257-4), J. B. Wright (7257-2).

9120: P. T. Schoenemann.

One Gift Works Many Wonders if Given United Way

More than 34,500 voluntary agencies provide a year-round, balanced program of health, welfare, and recreation services helping 25 million American families.

Your once-a-year gift to the UNITED CRUSADE keeps working wonders all through the year.



YOUR SHARE in the United Crusade can be pledged by filling out a card like this one held by Carole Hoff (8212-3). Similar cards will be distributed to all employees on Monday, Sept. 30, by section solicitors. For proper tabulation, all cards must be returned to the solicitor.

One gift works many wonders



UNITED CRUSADE

OCTOBER 1963

Sandia Corporation Now Has Assets Worth \$143.6 Million

Assets of Sandia Corporation totaled \$143.6 million at the end of fiscal year 1963. This figure includes the undepreciated (first-cost) value of buildings and facilities of Sandia Laboratory, Livermore Laboratory, Tonopah Test Range, and Salton Sea Test Base. Salton Sea is no longer used by Sandia, but is carried on the company's books until final disposition by General Services Administration.

Assets of Sandia Laboratory are \$115 million and consist of \$35.4 million in buildings and structures, \$77.9 million in equipment, and \$1.7 million in improvements to land.

Livermore Laboratory assets total \$16.9 million. Of this, \$11.9 million is in equipment, \$4.7 million is in buildings and structures, and \$.3 million in improvements to land.

Tonopah Test Range assets total \$7.6 million. Buildings and structures account for \$1.3 million, \$6 million is the value of equipment, and \$.3 million is the value of improvement to land.

Salton Sea Test Base is valued at \$4.1 million.

All of the plant assets are the property of the Atomic Energy Commission but are used and operated by Sandia Corporation.

The Sandia Laboratory installation includes the main laboratory buildings on Sandia Base and test areas located six miles south—Area III and Coyote Test Field. Sandia land includes some 2840 acres for technical areas and about 32,400 acres in Coyote Test Field.

There are 146 major buildings or test facilities in the Sandia

Base location and eight major installations in Coyote Test Field.

Livermore Laboratory has 10 major buildings in the main tech area and eight test installations in Area 8. Seventy-five acres of land are used by the Corporation at Livermore.

Tonopah Test Range occupies about 405,760 acres and contains two major buildings and 30 instrumentation stations.

Congratulations

Born to:

Mr. and Mrs. A. J. Russo (7421) a daughter, Mary, Sept. 8.

Mr. and Mrs. Ken Johnson (4232-3), a daughter, Cynthia Ann, Sept. 7.

Mr. and Mrs. D. R. Pederson (2453-1), a son, Todd Dean, Sept. 13.

Mr. and Mrs. G. E. Boettcher (1431), a daughter, Karen Marie, Sept. 7.

To Mr. and Mrs. Guy J. Zazzara (4111-4), a son, Michael Anthony, Sept. 12.

Sympathy

To Amy Anez (3241) for the death of her husband, in Albuquerque, Sept. 18.

To Manuel Sanchez (4574) for the death of his son, in Albuquerque, Sept. 14.

To Rudolph E. Lovato (4575-2) for the death of his father-in-law, Sept. 8 in Albuquerque.

To H. J. Bowen (7214) for the death of his wife, Sept. 14, in Albuquerque.

To Serafino Carillo (6021-1) for the death of his mother-in-law in Belen recently.

Plane Mishap Doesn't Discourage Woman Pilot

"You never heard anything so quiet in all your life," Irene Kay (4131-4) says. She is describing what happens when the engine in a light plane quits at 10,000 ft. over Tijeras Canyon. Irene and two other women pilots were in the plane. Mrs. John W. Sutherland was at the controls.

She managed to land the plane with slight damage in an open field east of Sandia Base. Irene received "only a few scratches and bumps."

The women were returning home from a convention of women pilots in Omaha, Neb. Irene, a pilot for the past four years, is not discouraged. She plans to continue flying and attend the convention again next year.

Football Party for Members Tomorrow At Coronado Club

The Coronado Club will feature a regular buffet this evening with a social hour featuring Sol Chavez' band. Prices for the buffet: adults, \$1.95; children, \$1.45.

Tomorrow evening, the Club will feature a UNM Football party for Club members and their guests. Football tickets for the UNM-Texas Western evening game will be available at the Club until noon tomorrow. After the game, the snack bar will remain open, and there'll be dancing to the music of Tommy Kelly's band. Buses will be available to transport the fans to the game from the Club and back again.



LEROY HASSEBROEK (4441) serves as volunteer superintendent of the New Mexico State Fair photography exhibit. He has just completed his second year in charge of the show but has been active in arranging it for the past 14 years. Enchanted Lens Camera Club co-sponsors.

Sandian who serves . . .

Popular State Fair Competition in Photography Planned by Sandia Man

Many State Fair visitors consider the photography exhibit one of the highlights of Fair attractions. Photographs from all over the world are displayed.

Volunteer Superintendent of the State Fair photo exhibit is LeRoy Hassebroek (4441) who has just completed his second year in charge of the display. He has been active in arranging the exhibit for the past 14 years.

"I've seen it grow from an entirely amateur exhibit into the International Pictorial and Portrait Print Salon. Outstanding photographers from around the world submit their work. The

amateur section is still part of the show but the quality has become professional in recent years."

The exhibit is arranged in cooperation with the Enchanted Lens Camera Club. LeRoy was a charter member of the group and has served two terms as president.

An accomplished amateur photographer, LeRoy's own prints have won awards at the State Fair show in the past. He was official State Fair Rodeo photographer for eight years.

"That was work," he says; "my job now is pure pleasure."

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

- DRILLING RIG, complete string of tools and new cable, \$825 total price. Netz, AX 9-7036.
- 12 GAUGE SHOTGUN, Winchester model 12. Martinez, AL 5-6785.
- UNEREL 2" target scope w/eye pieces for 10 and 14 power mounts and case, \$90. Ivy, 268-8733.
- BATHROOM HEATER, large portable electric, \$10; blue clothes hamper, \$3. Stricker, 256-3830.
- FM-AM TUNER, can be adapted for multiple stereo, twelve tubes and rectifier, \$30. Henry, 1828 Florida NE, 256-2467.
- VIOLIN w/case, standard size, \$50. Martinez, AX 9-1918.
- LOTS in Tres Pistas Canyon; 21" TV, \$40; 20 acres in Torreon, \$150 per acre; Philco TV, \$75. Wein, AX 9-1160.
- DODGE 4-speed 1/2-ton panel, 2-1 ton engine, 8,000x15 nylon, R&H, \$190. Baudoin, 3512 Espejo NE, AX 9-8101.
- HAIR CLIPPERS, electric, used, \$3 and \$5; steel bench legs, \$10. Lewis, AX 9-7217.
- FREE KITTENS to gentle foster parents, one male, one female, house broken. Levy, AX 9-6286.
- '62 SCOUT 80, 4-wheel drive, 7000 miles, trailer hitch, power lock differential, \$2000. Zelnio, AM 8-5614.
- FREZZER, Norge 18 cu. ft. upright, \$150; child's swing set, large, \$15. Cleveland, 298-0218.
- DINING ROOM SET, table and 6 chairs, w/table pad, \$49. DeHaan, DI 4-4805.
- BOX TRAILER w/new tires, \$75; 8" table saw, \$45; Holtan collegiate trombone, \$35; Getzen trumpet, \$35. Reed, AX 9-1684.
- TV-RADIO-RECORD PLAYER in blond wood cabinet, in need of electrical repair, \$25. McMaster, AM 8-8062 after 5:30 p.m.
- STROLLER w/canopy, basket, \$10; car bed, \$5; Cosco folding net playpen, \$5; infanseat, \$3; car seat, \$3. Dyckes, AX 9-7280.
- '59 CUSHMAN SCOOTER Eagle, white, extras; '60 Cushman scooter Eagle, turquoise, extras. Schafer, 3637 Georgia NE, 299-4634 after 5 p.m.
- 3-BDR, den, WB FF, 1 1/2 baths, utility room, garage, Fatima 2 blocks, \$1,300 down, \$134 Month. O'Neil, AM 5-0877.
- NC-303 RECEIVER, \$275; Globe DSB 100 transmitter w/VFO and VOX, \$95; roll-top operating desk of blond ash, \$45; automobile overload springs, \$5. Bauer, AL 5-7774.
- '56 PONTIAC station wagon, one owner, \$300. Dameron, AX 8-4192.

- BEDSPREAD, hand crocheted, white, double bed, Lucky Star design, \$100. Hayes, 855-9425.
- DINETTE TABLE w/2 extra leaves, white and gold formica, seats 8, \$12.50. Haley, DI 4-3919.
- 3-BDR, hw/floors, pitched roof, a/c, landscaped, three years old, no money down. Coca, 1624 Princeton SE.
- SLIDE TROMBONE, Beeson - Stratford w/professional mouthpiece. Lewis, 877-3489.
- LAFAYETTE B flat cornet w/case and music stand. Wright, AM 5-0519 after 5 p.m.
- 2-BDR HOUSE w/1/2 acre, 1708 Lena Dr. near Five points, no down, \$10,000 at 6%, \$65/mo. Brunacini, DI 4-6831.
- COMPLETE HARDWARE for overhead garage door, \$5. Hostetler, AL 6-3803.
- MAHOGANY TV table, square, turntable top, \$5; 2 solid, blond end tables, need refinishing, \$3/ea; hand lawnmower, \$5 Cowham, 298-4249 after 5 p.m.
- '54 FORD STATION WAGON, standard, V-8, R&H. Morrison, AX 9-7004.
- SOFA, 2-piece turquoise sectional, \$15. Petrini, 298-0433.
- BOSTON BULL DOG PUPS, 6weeks old, females, \$35; no papers. Koppel, DI 4-2706.
- CUTCO CUTLERY made by Wear-Ever Aluminum Inc., new, never used, complete \$160 set, sell for \$75. Cashion, 242-3345.
- 2 CHEST-OF-DRAWERS, \$5 ea.; electric room heater, \$5. Pope, AL 5-6702.
- NC125 RECEIVER, \$75; DX 100 transmitter, \$90, accessories available. Wahlenmaier, AL 5-9953 after 5 p.m.
- RIFLE, .22, bolt-action, Remington clip; Ruger single six; 35 MM camera Petri; sell or trade. Showers, 911 Chama, AL 5-9279.
- FIREPLACE WOOD, cut to 20 in. lengths, split, delivered and stacked. Sandgren, AX 9-5007.
- BELL AMPLIFIER, model 2122, 80 watts; wire recorder, Webcor model 228-1, 70 watts, 21" Sylvania TV w/Halolights. Nissen, AL 5-5657.
- RELOADING DIES, 6.5 x 55 MM, used on only 100 cartridges, \$7. Taylor, AL 6-3774.
- WINCHESTER MODEL 88 lever-action rifle, .308 cal., Lyman receiver sight, carrying strap, \$109; Ranch oak book-case headboard double bed w/winner springs, matching 5-drawer chest, \$75. Kubiak, 256-1513.
- '56 TRIPACER, VHT-3 superhomer, LF receiver, 360 hrs. SMOH, sell equity, turquoise and white finish. Moore, 256-2748.
- LATE MODEL 4-bbl. Ford V-8's and manifold for '55-'57 Ford V-8's, \$20. Kite, 255-8208.
- PRE-HUNG INTERIOR DOOR, 30"x80", all hardware included, right opening, \$7.50. Mitchell, 298-0257.
- COMMUNICATIONS RECEIVER, National NC-98, general coverage, 5-40 Mc, w/matching speaker, \$75. Moore, 256-6065.
- HAM RECEIVER, late model Heathkit Mohawk w/SSB, \$230. Kroth, 256-9756.
- '57 FORD Del Rio, 2-dr., Ranchwagon, R&H, Fordomatic, Thunderbird engine, \$500. Holt, 255-1426.
- YOUTH BED, blond, chifferobe to match; 120 bass Wurflitzer accordion. Demaree, AX 9-0055.
- REFRIGERATOR, General Electric, copper-tone finish, \$75. Trascina, 299-2285.
- SIX-YEAR CRIB, \$7. Smith, AX 8-0767.

NEXT DEADLINE
FOR SHOPPING CENTER ADS
Friday Noon, Oct. 4

- 8 MM REVERE turret lens movie camera, \$25; Jackson audio signal generator, \$30; Ludwig snare drum, \$30. Laskar, AX 9-1024.
- SOLID CORE DOOR, 29 1/2" wide w/hinges and door knob, \$15. Martin, 299-1748.
- APPALOOSA MARE, 5 years old, Reg., Tolbert, 282-3438.
- '55 FORD V-8 2-dr., R&H. Harwi, 298-3876.
- EICO 35 watt single channel high fidelity amplifier. Petersen, AX 9-3941.
- FLUTE, Bundy w/music stand and music, \$75. Angel, AX 8-0384.
- '59 FIAT 500 convertible. Wagner, 299-2347.
- HONEYWELL T852A electric clock thermostat, \$32; car top camp box w/mounts plus food box, \$15. Lettetter, 299-4343.
- 2-WHEEL LUGGAGE TRAILER; 5 HP Mercury motor; 16' Ark. Trvl. alum. boat and trailer; 16" bowling ball, make offer. Peckum, 256-3363.
- TWO PERMANENT A. Q. H. A. mares, also two permanent fillies. Drones, TR 7-9144 or TR 7-2474.
- GONSET TRANSMITTER, GSB-100, 100 watts CW-SSB-PM, 25 W AM \$225; Collins receiver, 75A SSB-AM-CW, CW 3.1 K filter C\$425. Senter, AL 5-0594.
- '57 OLDSMOBILE 98 convertible, \$550. Barefoot, 877-0310 after 6 p.m.
- '57 FIAT "600", Multipla (station wagon), 30 miles per gal., 5 passenger, \$295. Tornabene, 242-8554 after 5:30 p.m.
- WINCHESTER MODEL 94, .30 caliber rifle, \$35; trumpet w/case, \$50. Love, 298-6640.
- GE REFRIGERATOR, 1948 model, family size, \$35. Scheiber, 299-4743.
- FREE PERSIAN KITTENS, 7 weeks old, weaned. Lynes, AM 8-0144.
- 2-PIECE living room set, gray tweed, \$30; black recliner chair, \$10; coffee table, \$2; end tables, \$10. Perea, 1505 Gloria NE, 298-3059.
- FIVE 15" wheels, \$50; '52 Pontiac, R&H, Hydramatic, tinted glass free with this purchase. Petterson, AX 9-0164.
- 30-GAL. ELECTRIC HOTWATER HEATER, \$30; 2 refrigerators, \$20 and \$40. Galbreath, 344-7263.
- 2-WHEEL UTILITY TRAILER, 49"x72" inside, licensed made from 1/2-ton pickup box, \$50; '61 DKW 2-dr., \$700. Nelson, Placitas.
- EXERCYCLE, 2-speed; Central Electronics Model 10A exciter; ping pong folding table w/casters; 35mm projector. Small, AX 9-0023.
- '57 CHEVROLET V-8, 4-dr., standard shift, requires light mechanical work, first offer over \$400. Tafaya, 840 Loma Hermosa Dr. NW, 243-7277.
- SHORT TOP OR CAB for International Scout, used for 3 months, will sell for half price, \$31. Moore, AM 8-4135 after 5 p.m.
- GAS RANGE, everything works, \$10. Smith, 299-9187.
- FLUTE and guitar. Brown, 1328 Princeton NE, 243-7948.

- PISTOL, 38 S&W w/holster and box of shells, \$30. Montano, DI 4-3797.
- BABY BASSINETT, pad, skirt; sterilizer and formula kit, maternity clothes, size, 10-12, all seasons, various prices. McKinley, AM 8-4779.
- '57 BMW ISETTA 300 series, 100 MPG, \$175. Shoemaker, 877-2470.
- '62 FORD GALAXIE 500 convertible; '56 Plymouth Fury coupe. Matlock, AL 5-0109.
- KROLL BABY CRIB and mattress, \$10; corner speaker cabinet w/15" speaker, \$15. Stueber, AX 9-2414.
- STUDIO COUCH, 7' long, biege and gold, \$45. Fite, AL 5-6943.
- 3-BDR HOME, 1 3/4 baths, fireplace, carpet, landscaped. Murfin, 298-0760.
- SOFA, 9' mohair, \$75; drapes, \$10. Smith, AL 5-7389.
- MOSSBERG 20 gauge shotgun, bolt action, 3-shot magazine, multiple adjustable choke, \$25 or trade on 16 guage pump. Shock, 877-3728.
- '58 INTERNATIONAL pickup, 3/4 ton, 4-wheel drive, 2-speed trans.; Dachshund female puppy, 2 1/2 months old. Frettem, AX 9-1588.
- '62 COISAIR Travel Trailer, 13', self-contained, used on one trip. Jenkins, 8000 Zuni SE.
- PORTABLE TYPEWRITER, Remington Quiet-Riter, \$60; snare drum and music stand, \$25. Taya, DI 4-2775, 125E1 Pueblo Rd. NW.
- '63 FORD FAIRLANE 500, 4-dr., V-8, Fordomatic, a/c, safety belts, padded dash and visor, tinted windshield, \$2750, 5200 actual miles. Ludwick, 299-2557 Fri., Sat., or Sun.
- 8 MM MOVIE CAMERA, Wollensack, 3 lens turret (wide angle, normal, and telephoto), cost \$200, sell for \$79. Abeggs, 298-2498.
- CUSHMAN EAGLE SCOOTER, extra accessories. Irving, AX 9-1969.
- '63 PORCHE COUPE, yellow/black, factory radio, fog lights, chrome ski rack, will consider VW trade. Tanner, AM 8-7748.
- STEEL CASEMENT WINDOW, two sashes w/screens, 53" x 38", \$10. Schimke, 299-2819 after 5 p.m.
- NEW 67-piece set Winfield china, Dragon Flower design, 50% off. Carter, DI 4-6563.
- '55 PONTIAC HT COUPE, R&H, w/w, \$350; 2 15" wheels for Chevrolet, \$5/ea.; 2 8:20x15 used w/w tires, \$3/ea. Wilson, AX 8-0049.
- 3-BDR, 1 1/2 bath, near base, schools, shopping, a/c, carpet, drapes, 932 Florida SE. Ahr, AM 5-0653.
- 3-BDR, 1 1/2 bath, Hoffman Brick, \$600 down, FHA, 2523 Gen. Bradley, NE. Gilpin, AX 9-1100.
- '57 FORD FAIRLANE 500, 2-dr. HT, V-8, std. trans, R&H, new paint, \$450. Nelson, 265-1072.
- WESTINGHOUSE ELECTRIC DRYER, rebuilt and guaranteed, \$35; Golden Book Encyclopedia 20 volumes, \$10; children's leather jackets, \$3/ea. Elliott, AL 6-7909.
- ACCORDIAN, year old w/case and music stand, \$125. Stevenson, 298-3677.
- KIRBY VACUUM CLEANER, all attachments including floor polisher, \$20. Luna, AX 9-2488.
- 3-BDR, 1 1/2 bath, den w/fireplace, covered patio, garage, a/c, carpet, drapes, walled yard. Roybal, 3309 Cagua NE, AL 6-6981.

- '62 VW MICROBUS Deluxe model, radio, two-tone red and white, seat belts, \$2095. Norton, BU 2-3165.
- PLATINUM WIG and form, never worn, \$30 or best offer. Domolecny, AX 9-5529.
- 3-BDR, 1 1/2 bath, walled, a/c, carpet, 85'x120' lot, 3404 Cherez Rd., NE, \$11,250. Smith, AX 8-0767.
- 3-BDR, pitched roof, 1 3/4 bath, wb fireplace, a/c, CFA heat, landscaped, sprinklers, \$700 down FHA, \$16,900 FHA appraisal, 11200 Bellamah NE. Hurt, 299-7263.
- '50 DESOTO, R&H, \$150; bassinette w/skirt, pad, \$7; 6-sided folding playpen, \$8. Gelder, 299-0134.
- GIRL'S 20" bicycle, \$15 or best offer. Latta, AX 9-9380.
- 21" RCA with new pix tube. Healy, 298-1755.
- CAMPING TRAILER, 15 1/2', Flamingo, sleeps 7. Will take \$1000. Archuleta, 255-6781.

WANTED

- WILL CARE FOR pre-school child in my home, 3-5 years, 4716 Delamar Ave NE. Montoya, DI 4-6222.
- TO TRADE: \$2000 equity on 3-bdr, 1 1/2 bath, fenced, carpeted, landscaped home in Snow Vista for a paid up 1962 or 1963 station wagon. Simon, DI 4-4465.
- CEMENT MIXER, 2 cu. ft. capacity. Stephenson, AX 9-9114.
- BABY sitting nights, days or weekends. Sanders, 255-6834 or 299-7902.
- ESTABLISHED, dependable North Valley carpool needs driver, Rio Grande, Candelaria area. Frauenglass, 345-0119.
- VIOLIN w/case, beginner 1/2 or 3/4 size. Schroll, AX 9-9142.
- RIDE for vicinity of Bell and Florida Streets SE to Area I. Casey, AM 8-9298.
- TURNING PLOW for Ford tractor, 3-point hook up; also post hole digger. Jolly, TR 7-2474.
- TO TRADE: deer rifle, 30-40 Krag for F.M. short wave receiver 30 to 50 mc. Pritchard, 268-9618.
- HOME for nice Boxer cross puppies. Tolbert, 282-3438.
- GOOD USED concrete mixer. Nelson, Placitas.
- TRADE '55 Ford Ranchwagon V-8, OD, R&H, for 1/2-ton pickup. Hurt, 299-7263.
- CAR POOL MEMBERS, Princess Jeanne area to parking lot near Bldg. 832. Lindsey, AX 8-0818.
- TRADE 1958 Dodge station wagon for smaller car of equal value. Wheeler, AL 6-6230.

LOST AND FOUND

- LOST—Saltaire diamond ring lost in 880, pipe, Yale bike lock, black patent leather shoe, bifocal glasses, unprocessed film, florentine gold cufflink, safety prescription glasses, dark rim glasses in TSO case. LOST AND FOUND, ext. 29157.
- FOUND—Safety glasses, cuff link w/working gears. LOST AND FOUND, ext. 29157.

FOR RENT

- LARGE HOUSE, 4-bdrs, den, princess Jeanne area, \$175, four month sublease or normal lease. Nelson, ext. 22231.
- LEASE FURNISHED SE House, decorated, 3-bdr, 1 bath, first month's rent returned when good condition maintained, \$147.50. Campbell, AL 6-1015.

Sandia Lab Certifies First Apprentice in Electronics

John E. Hager (4233-3) is the first graduate of Sandia's four-year Electronics Apprenticeship Program. He received certification as an electronics technician on Sept. 3.

The course requires some 7656 hours of training, including 848 hours of classroom theory (studied in-hours); 360 hours of related subjects such as mathematics, physics, and drafting (studied out-of-hours); and 6448 hours of shop skills such as electronic fabrication, inspection methods, and printed circuits. "It was an interesting course," John said, "and it kept me busy thinking about electronics for three and a half years." There are currently 21 students enrolled in the program.

John entered the course with some credit work in electronics, so that he graduated in less than the four normally required for the course.

He maintained consistently high grades for the entire course.

He came to Sandia in 1958, and worked for a year in Documents Control Division I, 2461. Then, he transferred to Printed Circuitry Section 4233-3, where he returned after graduation.

Before coming to Sandia, John worked for the Crane Company in Lima, O., for three years, and for Westinghouse Corporation in Lima for two years. He's married and has



- John E. Hager -

one child.

The Electronics Apprenticeship Program was developed at Sandia by the joint efforts of Technical and Trades Training Division 3132 and Electronics and Standards Department 4230.

Sandia Toastmasters Elect Four Employees to Officer Positions

Four Sandians have been elected to new offices in the Sandia Toastmasters' Club. Wayne Sebrell (1542-2) will serve as president for the forthcoming term, beginning Oct. 3. Tom Edrington (7419-1) will serve as executive vice president; Bob Wyllie (4112-2) will be educational vice president; and Bob Summers (2441-1) will be secretary. The election took place Sept. 5.

Three-fourths of the membership of Sandia Toastmasters (#765) is comprised of Sandia employees. Members include Rudy Baca (2643-3), Bill Bramlett (3242), Chet Corbin (4224-4), Lee Deeter (2440), Hal Goddard (1443-2), Al Hall (4221), Lew Henchey (7419-1), Pete Hernandez (7212), Chuck Jennings (1124-3), Roger Johnson (4253), Bob Quinlan (2412-1), Dean Thornbrough (7251-1), and Jim Williams (2444-1).

The Toastmasters' organization

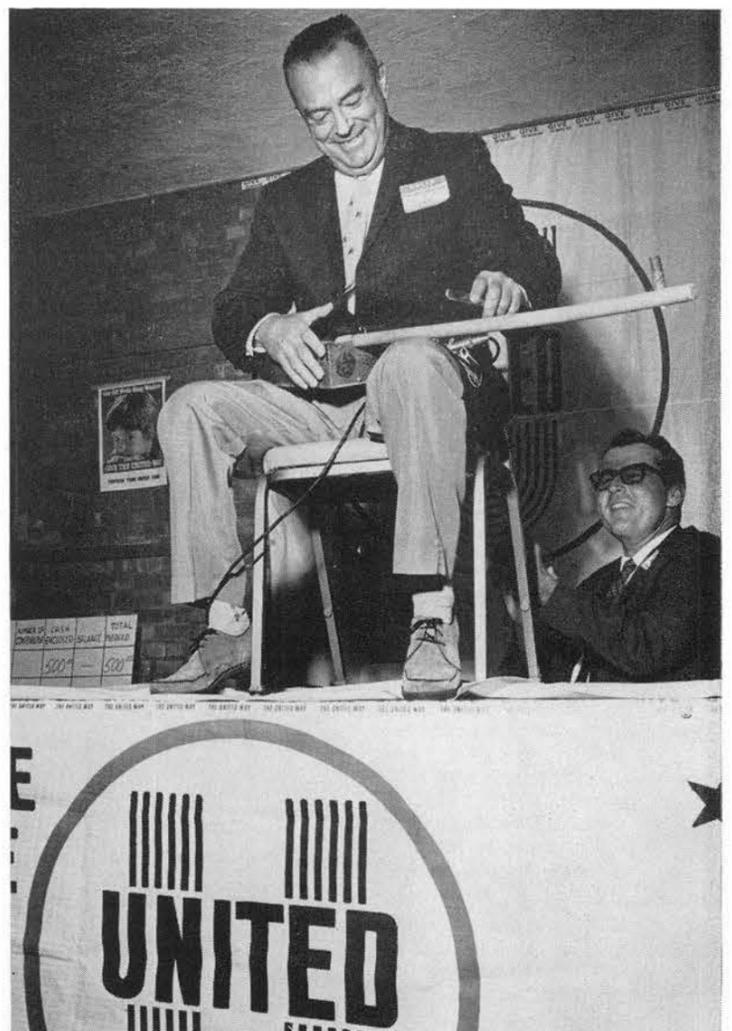
provides its members with opportunities to improve their abilities to speak in public, conduct meetings, and develop executive abilities. It fosters self improvement through practice, mutual constructive criticism, and the delegation of responsibilities within the organization. The Sandia Club holds meetings Thursdays at 6 p.m., at Lobo Joe's restaurant.

F. W. Adams Dies From Wound Received In Gun Accident

Frank W. Adams, a staff member of Division 4152, died in Albuquerque on Sept. 10. He was 47. His death was the result of an accidental bullet wound received while he was cleaning a gun.



Mr. Adams is survived by his widow, Mrs. Phoebe B. Adams; two sons, Lynn W. Adams, Fort Polk, Pa., and Wayne W. Adams, Albuquerque; a daughter, Carolyn Gay Adams, Albuquerque; his mother, two brothers, and three sisters.



SMASH HIT of the recent United Community Fund Key Man meeting was K. F. Hertford and his "genuine Tibetan Samisen." With live music and a unique monologue he preached the cause of living music drives for giving the United Way, emphasizing, in particular, the pledge.

Adroit Manipulator of Tibetan Samisen Tells Pointed UCF Story

They're not Tibetan customs, these United Community Fund campaigns, but Kenner F. Hertford used that exotic country to make his point at the recent "Key Man" meeting of the Albuquerque United Community Fund.

Mr. Hertford, Manager of the Albuquerque Operations Office of the AEC, wrapped up the meeting for the key men with perhaps the most unusual summation ever given a UCF rally. Calling on his knowledge of music (it's real) and his early life in Tibet (that's fantasy) and

a unique musical instrument, Mr. Hertford got his point across to the UCF workers—what they do is just, necessary, vital, and compassionate, and the UCF drive must succeed.

"If anyone here," Mr. Hertford told his audience, "thinks this instrument is merely a cigar box, broomstick, and steel string, I'm going to leave right now."

No one budged so he continued his evangelism of the need for gaining empathy to make the drive a success—and much of it was set to music.

Mr. Hertford, knew his Tibetan samisen well ("... it is hand carved from trees grown above 17,000 feet and the string is spun from the wool of the holy yak..."). He has played such an instrument off and on for the past 40 years and always for an equally good cause.

Though he didn't put the words in English he was heard singing in native tongue the familiar land-of-the Dalai-Lama folk song, "One Gift Works Many Wonders," but it sounded strangely similar to a sentimental ballad familiar to everyone!

W. D. Price to Retire Sept. 30

William D. Price, formerly a plant protection inspector in Division 4576, Salton Sea Test Base, will retire Sept. 30.

Mr. Price came to Sandia in August 1953, and worked at Salton Sea for the entire time since then. He has been on leave from the Company since December 1962.

After retirement, Mr. Price will continue to reside with his family in Indio, Calif.

M.A. McCutchan Named To El Rito Committee on Vocational Education

M. A. McCutchan, supervisor of Technical and Trades Training Division 3132, addressed a meeting of the Albuquerque Sales Executive Club Monday, Sept. 23. "Maintaining Human Assets" was the title of the talk. Mr. McCutchan is chairman of the State Advisory Council on Adult and Vocational Education and a sub-committee chairman of the Advisory Council on Creation of a Vocational-Technical Institute for the Albuquerque Public Schools.

Mr. McCutchan was also appointed by New Mexico Gov. Jack M. Campbell last week to serve with an action committee on vocational education at Northern New Mexico School at El Rito.

Radio Club Members To Sell Equipment

The Albuquerque Radio Club is sponsoring an auction of radio gear, to be held at the Development Center for the Blind, Yale and Miles Road SE, Oct. 9, 7 p.m.

Surplus radio gear will be bought and sold at the auction. More information is available from Ed Bales (2441), AX 9-4548; or John Kanode (7312), CH 3-0493.



NEW OFFICERS of Sandia Toastmasters Club elected Sept. 5 include (l to r) Tom Edrington (7419-1), executive vice president; Bob Wyllie (4112-2), educational vice president; Bob Summers (2441-1), secretary; and

Wayne Sebrell (1542-2), president. Bob Wyllie holds "traveling" trophy presented to speaker who makes best presentation at each meeting. Officers will take office Oct. 3. Sandians make up three-fourths of club.

Sandia's Safety Record

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

Livermore Laboratory HAS WORKED 780,500 MAN HOURS OR 152 DAYS WITHOUT A DISABLING INJURY