



RECIPIENTS of Data Processing Management Association's Certificate of Professional Data Processing are D. K. Robbins, supervisor of Advanced Development Division 3454 (left), and H. E. Anderson (1442).

Two Sandians Awarded Professional Data Processing Certificates

D. K. Robbins, supervisor of Advanced Development Division 3454, and H. E. Anderson of Statistics Section 1443-1, have been selected to receive the Certificate of Professional Data Processing. The award is presented by the Data Processing Management Association.

The certification program was instituted by the DPMA in 1962 to upgrade the data processing profession by establishing standards for professional qualification similar to those set in the field of engineering.

Certification is granted to candidates who successfully complete a comprehensive written examination, and who meet specified experience and education requirements. The exam is given yearly at approximately 50 university centers throughout the U. S. and Canada. This year, 686 data processors received passing scores on the exam, and were awarded certificates.

AEC and NASA Are Presenting NSFJ With Unique 'Double Feature'

The Atomic Energy Commission and the National Aeronautics and Space Administration are providing an unusual "double-feature" program of both nuclear and space science demonstrations at the National Science Education Exposition in Albuquerque this week.

In an auditorium on the New Mexico State Fairgrounds, specially trained lecturers for AEC's "This Atomic World" and NASA's "Spacemobile" educational programs are using the same stage to present alternate hourly programs which started May 8 and will end May 12.

The 14th National Science Fair-International is underway in Albuquerque and the New Mexico Academy of Science is sponsoring the National Science Education Exposition May 8-12 as part of concurrent activities planned for National Science Fair Week, May 6-12.

Both "This Atomic World" and "Spacemobile" programs have been developed primarily to give students and teachers a better appreciation of the achievements and challenges of America's two newest scientific programs.

There are 11 "This Atomic World" units in operation, offering student assembly programs in 1800 schools each year.

NASA's "Spacemobile" units were inaugurated in 1961, and are operated directly from NASA's Office of Education and Personnel Services in Washington, D. C. In a typical month 16 domestic and six overseas units present some 450 demonstrations to more than 300,000 persons.

AEC's 'Small Town' in Final Judging of Educational Films

"Small Town," a 12-minute security education film produced for AEC/ALO by Sandia Laboratory's Industrial Photographics Division 3465, was selected from some 3000 educational films for final national awards judging at the American Film Festival, May 1-4, in New York City.

It was among 10 finalists in one of 33 categories under consideration.

Written by Alfred H. Miller of ALO's Security Division, the 16-mm film for non-technical audiences has been produced in both black and white and color. As one of 300 finalists, it recently was awarded a Certificate of Participation by the Educational Film Library Association, sponsors of the four-day festival.

Cinematography for the film was done by Robert A. Matthews and M. Wayne Hancock of Section

3465-1. C. E. Spriggs of Sandia's Technical Art Division 3463 created the title illustrations.

The film was selected on the basis of educational and technical excellence, together with subject matter and effectiveness in achieving a given purpose.

Sandia New York Field Office to Move End of Month

The New York Field Inspection office and laboratory (2341-1) will move from 220 Church St., New York City, to Moorestown, N. J., effective May 31. The change will affect some 15 Sandia employees assigned to the organization.

The new address is 1300 East Kings Highway, Moorestown, which is approximately six miles from Camden, N. J. The location will be about 30 minutes from the Philadelphia airport and 45 minutes from downtown Philadelphia.

Concurrent with the move, John G. Wimpling will transfer laterally as supervisor of the New York Area office, replacing C. A. Wells, who will return to Albuquerque. Sam Allen will continue to be supervisor of the Chicago Area office and, in addition, will be acting supervisor of the St. Louis Area office.



VISITING SANDIA LABORATORY last week to attend technical briefings was Harvey G. Mehlhouse, Vice President - Personnel and Public Relations, Western Electric Company, and newly-elected Sandia Corporation Board Member. He is shown above, third from left, talking with R. A. Bice, Sandia Vice President, Engineering for Manufacture; R. W. Henderson, Vice President, Weapon Programs, and S. P. Schwartz, Sandia Corporation President, right. Mr. Mehlhouse was assigned to Sandia from 1952 to 1955.

ASQC Members to Hear Discussion of Flood Control

The Albuquerque Section of the American Society for Quality Control will hold its annual spring banquet at the Alvarado Hotel, May 13.

Social hour will begin at 6:30 p.m.; dinner will be served in the Alvarado Room at 7:30 p.m. Beginning at 8:30 p.m., presentations will be made, and Frank L. Horan, Albuquerque City Attorney, will speak on "Present and Future Flood Control for Albuquerque."

The new slate of officers and executive committee chairman for the Albuquerque Section, ASQC will be introduced at the banquet.

Four-Year University Scholarship Awarded to Walter C. Mooney, Jr.

Walter C. Mooney, Jr. of Project Shops Division 4253 is the recipient of a \$4000, four-year scholarship sponsored by the International Association of Machinists. Under the scholarship, he plans to study mechanical engineering at the University of New Mexico.

Walt was chosen from 819 applicants for the scholarships from the United States and Canada, six of whom entered from New Mexico. Ten scholarship winners were chosen from the applicants.

"No one was more surprised to hear of the award than I," he explained. "There were several reasons why I was practically convinced I wouldn't receive the award, one of which was the age limit for scholarship winners: 35 years. I'll be 35 on my next birthday. I graduated from Newton High School, Newton, N. J., in 1947."

Walt has been at Sandia Laboratory since August 1957, when he started work as a machinists' helper. He also studied mathematics through correspondence courses. He graduated from Sandia's Machinist Apprentice Program in 1961, and shortly thereafter, enrolled at the University of New Mexico. He has completed about 16 credit hours of University work.

Walt is married; he and his wife



—Walter C. Mooney, Jr.—

have two boys, aged 9 and 11. His hobbies include rebuilding automobiles and automobile engines, and he serves as a judge for the New Mexico Jalopy Racing Association at Speedway Park in Albuquerque. He's also active in camping and hunting, and is a playing manager for the Christ Methodist Softball Team.

Sandia Scientists Leaders Of N.M. Academy Seminars

Eight Sandians were included among 87 top scientists from throughout the country who led seminars for high school students and teachers in Albuquerque, May 7-9.

The 350 seminars, sponsored by the New Mexico Academy of Science, were held in conjunction with the 14th National Science Fair - International. Richard S. Claassen, Sandia's Director of Physical Research, was the seminar chairman.

The Sandians participating as leaders and their seminar subjects were: Paul B. Bailey of Applied Mathematics Division 5421, Mathematical Analysis; Everet H. Beckner of Research Division III, 5153,

Plasma Dynamics; Stoughton Bell II of Systems Analysis Division 5422, Novel Applications of Statistics and Probability; Donald R. Morrison, supervisor of Computer and Numerical Analysis Division 5426, Iterative Processes; Joseph A. Schatz of Computer and Numerical Analysis Division 5426, Computability; D. B. Shuster, Director of Field Testing 7200, Relation of Electronics on Future Technology; and G. Milton Wing of Applied Mathematics Division 5421, Difference Equations and Some of Their Applications.

Topics in the fields of mathematics, chemistry, physics, space and life sciences, and applied science were discussed during the sessions held both mornings and afternoons for small groups of interested students and teachers. In addition, major addresses were given during luncheon and evening sessions.

Attendance at the seminars was limited to visiting high school students.
(Continued on Page 3)

AEC to Install New Substation In Sandia Area

Bid invitations to contractors are being issued today by the Atomic Energy Commission for an electrical substation installation project at Sandia Laboratory.

The bids will be opened about May 29. The work includes installation of a new outdoor 1500 KVA unit substation with primary switch section and two secondary breaker sections, a concrete pad, and underground primary feeders. Location will be adjacent to Bldg. 860 in Tech Area I.

The project is to be completed within 45 days after the contractor receives notice to proceed from the AEC. Plant Engineering Department project engineer is R. B. French (4543-1).

Editorial Comment

Twenty Years of Scientific Progress

"Discovery of nuclear fission and of a way to control its release of energy marked the beginning of our new scientific society. Scientific progress since then has equalled that in all previous history of science. The first nuclear reactor in 1942 led to many of today's uses of this new source of energy."—Glenn T. Seaborg, Chairman, U. S. Atomic Energy Commission.

Twenty years after the successful control of nuclear fission there is ample evidence that scientific progress of those two decades has equalled that in all previous history of science.

The world has some 500 nuclear reactors. Nuclear power is used on land, on and under the sea, and in space. Radioisotopes have such broad use that the AEC plant in Oak Ridge has made more than 100,000 shipments. Nearly 2000 students from other countries have received advanced training in nuclear science and technology in the U. S. Some 60 nations now have government agencies devoted to expanding peaceful uses of nuclear energy.

Twenty years ago today we had only one reactor. It was located on a squash court at the University of Chicago.

In the 20 years since the first reactor went critical, Congress has appropriated \$30 billion to develop and operate the national nuclear energy program in the United States. The Atomic Energy Commission's annual budget has grown to \$3 billion. Nearly 130,000 people are employed in the program — 6,700 by the AEC, 121,000 by AEC contractors, and several thousand more in the mining and milling of uranium ore.

In reaching this level of operation there have been a number of significant milestones. To Sandia employees with long service, memory of the events remain vivid. To the more recent arrivals, they are reminders of past accomplishments which help make today's accomplishments possible.

1. First weighable amount of man-made element, plutonium, which reactors were to produce in industrial quantity within two years: September 1942.
2. The world's first reactor goes critical: Dec. 2, 1942.
3. First reactor to produce radioisotopes for large scale distribution, the "X-10" at Oak Ridge, Tenn. Began operating in November 1943.
4. For defense: First atomic detonation, Alamogordo, N. Mex., July 16, 1945.
5. First useful electricity: Four 200-watt bulbs lighted at Experimental Breeder Reactor at AEC Idaho installations, December 1951.
6. First propulsion: Nuclear powered submarine, USS NAUTILUS, 1954.
7. Atoms for Peace: First United Nations Peaceful Uses Conference, Geneva, Switzerland, 1955.
8. First large-scale plant devoted exclusively to producing nuclear power: Shippingport, Pa., December 1957.
9. First use of nuclear energy in space: two of four transmitters in TRANSIT IV-A navigational satellite powered by atomic batteries put in orbit June 1961.
10. First nuclear powered merchant ship: N. S. SAVANNAH, 20,000 tons, placed in operation 1962.

There have been other milestones, known only to the men who need to know. All are monuments to accomplishments of the new breed of scientist.

What Are Your Chances?

What are a driver's chances of having an accident in his lifetime? It depends partly on the distance he drives, according to the National Safety Council.

A person who drives 12,000 miles a year has one chance in three of having some kind of accident. There is one chance in four that damage will be limited to property, one in 35 that there will be at least one injury, and one in 1300 for a fatality.

One who travels 8000 miles a year stands one chance in five for any accident, one chance in six for a property damage accident, one in 55 for an injury accident, and one in 2000 for a fatal one. A driver who goes 4000 miles a year has one chance in 10 for any accident, one in 11 that it will be property damage, one in 110 for injuries, and one in 4000 for a fatality.

These are your chances, statistically, of being involved in an auto accident, serious or otherwise. The statistics are also a good reminder that injury, or worse, is just one careless move away. Don't let that careless move be yours. Drive as though the careless action will come any minute from the other fellow. Drive defensively.

Congratulations

Mr. and Mrs. Herman Perea (4151-1) a daughter, Pauline Ava, on Apr. 23.

Mr. and Mrs. Norbert F. Siska (2451-2) a son, Steven Mark, on Apr. 1.

Mr. and Mrs. R. W. Durand (2625-2) an adopted baby, Roger Wayne, born Apr. 20.

Mr. and Mrs. William Crawford (4112) a son, Randy Lee, on Apr. 16. Margaret was formerly in Division 4541.

Mr. and Mrs. William O'Trimble (4135-2) a daughter, Pamela Jean, on Apr. 24.

Mr. and Mrs. Donald C. Hanson (7244-2) a daughter, Shari Linn, on Apr. 26.

Mr. and Mrs. George Treadwell (7125) a daughter, Monica Anne, on Apr. 4.

Mr. and Mrs. W. J. Wagoner (3463-3) a son, William J. Jr., on Apr. 29.

Mr. and Mrs. Hugh Church (5414) a daughter, Julia Krystine, on May 4.

Sympathy

To Donald M. Libby (7532-1) for the death of his father-in-law in Maine recently.

To John Hobart (4214) for the recent death of his mother in Cleveland, O.

To W. F. Peay (4252) for the death of his mother Apr. 23 in Albuquerque.

To Nabor Rael (4221-5) for the death of his father Apr. 27 in Belen.



Leo Ortiz (3463-2)
—first in color—



Gordon Snidow (3463-3)
—first in black and white—



John Daniel (8233-3)
—first in slide presentations—

Sandia Corporation Technical Artists Win Honors in TIMA's National Competition

Three Sandia Corporation technical artists were awarded first place in the National Technical Illustrators Management Association exhibit in Los Angeles recently. The artists were John Daniel (8233-3), Gordon Snidow (3463-3), and Leo Ortiz (3463-2). In addition, nine other artists were finalists in the competition.

A series of illustrations describing computer programming for a network analysis problem took first place for John Daniel in the chart and slide presentation category. The series was prepared originally as a training aid.

A drawing of a Sandia Field Test photographer with his equipment took first place for Gordon Snidow in the fulltone black and white illustration category.

A detailed fulltone color drawing of a Sandia-designed unclassified instrument by Leo Ortiz was

the winning entry in the cutaway and color renderings category.

Finalists in the exhibition were Evelyn Bachman (8233-3), R. J. Mickey, T. I. Baggett, Jr., T. M. Clark, Raymond Chavez, C. E. Spriggs, R. H. Newman, J. B. Walston, and W. J. Wagoner (all 3463).

All of the work was displayed at the exhibit, which was held at the California Museum of Science and Industry in Los Angeles from Mar. 27 through Apr. 21.

The first place winning entries are now on tour and will be exhibited in major cities throughout the country. They will also be published in *Industrial Art Methods*, a New York magazine covering activities in the field of technical illustration.

John J. Holmes Died April 27

John J. Holmes, an electrical engineer in Space Projects Division II, 7233, died suddenly Apr. 27. He was 34.

Mr. Holmes had been with Sandia Laboratory nearly six years.

Funeral services were held in Miami, Fla., his former home.

Survivors include his widow, son John, daughter Kathryn, and a sister living in Miami.



Bill Jackson Goes Fishing 'Down Under' For Huge Trout

A couple of years ago, William H. Jackson (4151) was told that the best fishing in the world was in New Zealand. Last month he had to find out for himself just how true this was.

Bill stopped in Hawaii, Tahiti, and Bora Bora en route, but the majority of his time was spent fishing down under.

On North Island, Lake Taupo is considered best. "What they call 'rainbow trout' are more similar to 'steelhead trout' found in our Pacific Northwest," Bill said. These fish begin to move upstream from the large lakes to streams to spawn in early Spring. The minimum legal size is 14 in.

Bill and a new-found Auckland companion received special permission to fish on the Yaiotaka River, which runs through the Hautu prison farm. The first day, Bill caught two four-pounders. The following day, they moved further upstream to a series of deep pools. "Between 10 a.m. and 3 p.m., I took six trout," Bill said. "The smallest was three lbs., and the largest was just under nine."

"As I waded through the shallow water, I could see the fish spawning. I'd make three or four casts, letting the fly drift down to the head of the riffles. When they struck, you'd sit back and hang on," he explained. The trout have a natural instinct to swim upstream toward deep water, then fight to hold their position. The nine-pounder took Bill 30 minutes

to land. He used a four-lb. test, 10-ft. tapered leader. Nymph flies and woolly worms brought the best results.

Before leaving on the trip, Bill tied his own flies. On South Island, where he fished for brown trout, he found the natives using flies on tiny No. 16 and No. 18 hooks. "When you see or feel these big trout take your fly, you count 'one, two' until the fish swallows the fly, then set your hook," he explained.

The waters in this Southern Alps region were tremendous in size and volume of water, and difficult fishing, in Bill's opinion, for a person accustomed to a small stream. It was not unusual to see schools of 15 or 20 brown trout feeding on flies off the water's surface.

He made the 33-mile Milford Track (trail) hike through unspoiled scenery in pouring rain and spent three days in a hut with a trio of New Zealand hunters when rising waters prevented their approach to a particular area. "Their hunting stories were great," he said. "But in New Zealand they are deer 'stalkers' not 'hunters' since it is always open season on the nine species of deer found there. In fact, the government pays a bounty for killing one species."

"The most wonderful thing about the country," Bill said, "was the people. They have a friendliness typical of small communities anywhere, and a culture probably very similar to that in western United States about 50 years ago—including hand-crank telephones."



Sandy Barela (2642-3)

Take a Memo, Please

Working with any machinery requires constant attention. Don't let poor work habits help create safety hazards.

No job is so important and no service is so urgent that we cannot take time to perform our work safely.

Do You Know?

About 18 per cent of the Health Care Plan's benefits are paid for (non-maternity) surgical charges. In a recent 12-month period, those protected by Health Care underwent 3,163 operations. There were 1,977 operations performed in the hospital and 1,186 in doctors' offices. The average charge for all these operations was \$101.42. The smallest surgeon's charge was \$3 and the largest, \$1,687.50.



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Lab Scientists Lead Seminars



Paul B. Bailey

With Sandia since 1961, he holds a BS degree from the University of London King's College and PhD from the University of Washington. He has been a teacher and research specialist.



Everet H. Beckner

With Sandia since 1961, he came here directly from college. He has a BS degree from Baylor University, and MA and PhD degrees in nuclear physics from Rice University.

dents and teachers and Science Fair finalists and their teacher sponsors.

Included among the leading scientists, educators, and top military and space scientists who conducted seminars and met with the students were: Glenn Seaborg, Chairman of the U. S. Atomic Energy Commission and 1951 Nobel Prize winner in chemistry; William Shockley, 1956 Nobel Prize winner in physics; Willard Libby, 1960 Nobel Prize winner in chemistry; Wernher von Braun, Director of the Marshall Space Flight Center; Gen. Bernard Schriever, Chief of the Air Force Systems Command; Adm. Hyman Rickover, Bureau of Nuclear Propulsion; and Edward Teller, national leader in nuclear weapons and technology.

Public lectures were also given by Wernher von Braun and Adm. Rickover.

George C. Dacey, Vice President, Research, 5000, was a seminar speaker on the subject "LASERS" and was also a judge for the AEC special awards.



Stoughton Bell II

Prior to joining Sandia in 1955, he received his AB, MA, and PhD degrees in mathematics from the University of California at Berkeley. He is a University of New Mexico visiting lecturer.



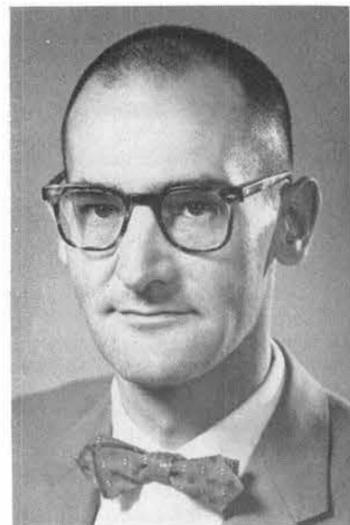
Lambert H. Koopmans

A Sandia Corporation employee since 1958, he received his AB degree in mathematics from San Diego State College, and his PhD from the University of California at Berkeley.



Donald R. Morrison

With Sandia since 1955, he has a Bachelor's degree from Illinois State Teachers College, and a PhM and PhD degrees from the University of Wisconsin. He is a former teacher.



Joseph A. Schatz

A Sandian since 1957, he holds a BS degree from Virginia Polytechnic Institute and a PhD from Brown University. He is a former university instructor in mathematics.



D. B. Shuster

With Sandia Laboratory since 1946, he has been Director of Field Testing since 1959. He played an active part in Operation Plumbbob, Operation Hardtack, and Operation Dominic.



G. Milton Wing

A Sandia employee since 1959, he has BA and MA degrees from the University of Rochester, and a PhD from Cornell University. He taught at universities for 10 years and was a consultant.

AEC to Construct Central Control Bldg. for Environmental Test Area

The Blumenthal Brothers Construction Company of Albuquerque has submitted the apparent low bid of \$194,467 to the Atomic Energy Commission for construction of a central control building for environmental test facilities in Area III.

The work is expected to require about six months for completion. The project includes construction of a one-story reinforced concrete and masonry building to house a data reduction center, range monitor control room, office space,

and instrument development laboratory. Personnel of Environmental Research and Operations Department 7320 will occupy the building.

Installation of an oil-fired hot water heating system, outside utilities, exterior flood lighting, and construction of a gravel surface parking area and fencing will complete the project.

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

Aerospace Compensation Conference To Be Held at Sandia Corporation

Sandia Laboratory's Wage and Salary Administration Department 3110 will host the Ninth Aerospace Compensation Conference, to be held in Albuquerque, May 16-17. The meetings will be held in the Sandia Sphere of Science. The Conference brings together, twice yearly, wage and salary administration personnel from aerospace companies throughout the U.S. to discuss problems of mutual interest.

G. C. Dacey, Vice President, Research 5000, will present the opening address at the conference: "Advantages of Middle-Age Spread."

The agenda for May 16 includes the following speakers: "The Octile Salary Administration System at Bell Telephone Laboratories," R. C. Fremon, Director of Personnel Planning, Bell Telephone Laboratories; "Performance Rating Program for Professional Employees," E. F. Wells, Wage and Salary Administrator, Radio Corporation of America; "The Fringe Benefit Package at American Bosch Arma," W. G. Tuttle, Vice President - Employee Relations, American Bosch Arma Corporation; and "Staffing and Structures," R. E. Ennis, Salary Administrator, Lockheed Missiles and Space Company. The activity of the first day will be concluded with a business meeting chaired by B. R. Swift, Assistant to the Manager of Industrial Relations, Aerojet General Corporation.

Conference activities on May 17 will include a workshop on "Off-

site Missile Base Compensation Practices," chaired by Mr. Swift; and a workshop on "Latest Developments in the Salary Compensation Field," chaired by D. M. Ramsey, Jr., Compensation Manager, Aerospace Corporation.

On Friday afternoon, conferees will hear W. A. Gardner, Director of Environmental Testing 7300, speak on environmental testing. Then, they will tour Area III facilities.

Arrangements for the conference are being made by T. L. Daniel (3113) and P. D. P w  (3113-1).

Manned Space Flight Topic for AOA Meeting May 23

The American Ordnance Association will present a program on the U. S. Manned Space Program at a meeting at the Four Hills Country Club, May 23.

Donald T. Gregory, Technical Assistant to the Director of the National Aeronautics and Space Administration Manned Space Flight Center at Houston, Tex., will discuss the Manned Space Program. His talk will be followed with a short movie on the subject.

Reservations for the program and dinner may be obtained from R. J. Hansen (4200), T. D. Harrison (2561), or L. R. Neibel (4330). Members are invited to bring their wives, and interested non-members are invited to attend.

Albuquerque-Los Alamos Sportsmen To Compete in Rio Grande Races

Albuquerque and Los Alamos "river rats" will face the challenge of Rio Grande white water in two events this week-end.

On Saturday a slalom course, to be negotiated by canoes and kayaks, will be set up one mile south of Pilar. Jim Brathovde (5414) is in charge of this event which can readily be viewed by spectators alongside U. S. Highway 64. Plastic bottles anchored in fast water will denote turns to be made by participants.

Possible starters for the slalom include Sandians H. H. Patterson (7160), Bob Fellerhoff (5134), Zelma Beisinger (5425), Doug Smith (5132), Richard Baughman (5132), G. A. Fowler (7000) and his son Alan, Ed Graeber (1122), Carl Anderson (5331), Gene Harling (5300), Pete Komen (1422) and son Pete, and Jim Brathovde. Registration may be made before the start of the race at 2 p.m.

On Sunday, the sixth annual white water race will begin at 1

p.m. This event is open to canoes, kayaks, and rubber rafts, and is run down 4.7 miles of difficult white water starting one mile south of Pilar. Mr. Patterson and Stretch Fretwell (LASL) are in charge of the down river race with W. T. Smith (7213) responsible for timing.

Possible Sandia starters for the white water race include Al Hachigian (2313), Chuck Gross (1425), J. H. Hinde (7213), and W. C. Myre (7223).

About 35 families are expected to camp out near Pilar on Saturday night to be on hand for both events. "Most of our people have been practicing at the YMCA pool and have become quite adept at maneuvering their kayaks," Jim said. Several have mastered the "Eskimo roll" in which the kayak is intentionally tipped and then righted again to gain an advantage in going around a boulder or other such situation.

Welcome Newcomers

Apr. 22-May 3

Albuquerque	
William H. Brown	4574
Doyle T. Clark	4574
Richard H. Collins	2331
Marcella M. Hightower	4135
Lawrence D. Long	3441
Margarito L. Martinez	3444
David J. Sanchez	3444
Richard H. Shaw	3444
Colorado	
Robert V. S. Eldridge, Denver	4112
Idaho	
*Kenneth G. Grant, Idaho Falls	4541
Illinois	
Raymond W. Cohrs, Elwood	4542
Rolf E. Lindquist, Wilmette	5322
Iowa	
Eugene W. Zucuski, Newton Falls	1322
Ohio	
Francis F. Neas	4253
Returned from Leave	
Cleo L. Westmark	3446
* Denotes rehired	



SAVINGS BOND AND PLAQUE were awarded to Richard L. Shaum (7222) recently by the Burroughs Corporation for his circuit design utilizing a Burroughs beam switching tube. The award was a special prize in a contest sponsored locally by the Brooks-Feeger Association.

What Is A Reactor? How Does A Reactor Work?

(Editor's Note: The word "reactor" is becoming so commonplace in today's language that it is well for all of us to know a bit about the workings of this instrument. The following article prepared by the Atomic Energy Commission speaks of reactors in general, not any one specific reactor. This information is printed in the belief that a person with a non-technical education can understand how reactors work and what they do.)

Reactor. Fission. Criticality. Strange new words in the nuclear age headlines of today's newspapers, television, magazines, and radio.

What do they really mean? How can they be explained?

Dr. Glenn T. Seaborg, Chairman of the Atomic Energy Commission and one of the nation's leading scientists, declares that today's new scientific terms and much that is going on in this atomic age can be readily understood by non-experts if the attempt is made.

The attitude to be avoided, Dr. Seaborg points out, is a tendency to throw your hands in the air at the first encounter with science and technology and exclaim:

"I can't possibly understand that!"

The truth is that you probably can.

Take "reactor" for example. What is a reactor? How does it work? What does it do?

A tremendous binding force holds the parts of an atom together. Scientists reasoned — and proved it to be true — that if an atom could be split, or fissioned, there would be a great release of energy.

This energy, it was found, is released partly as heat and partly as radiation.

What actually is split, or "fissioned," in an atom is its nucleus or center, which is made up of two types of particles called neutrons and protons.

Fissioning Process

In the fissioning process not only energy but neutrons are released, and it is this fact that leads to the possibility of a chain reaction with its resultant release of a large quantity of energy.

When enough neutrons are released so that the process of these neutrons splitting the nuclei of other atoms becomes continuous and sustained, a reactor is said to have "gone critical" or "reached criticality." The original Fermi reactor in 1942 proved that the buildup of fission energy to "criticality" and subsequent release of this energy could be controlled.

In a chain reaction, the neutrons released by the fissioning of one atom go on to split the nucleus of another, thus releasing more energy and more neutrons which will cause the fissioning of other atoms, etc., etc.

One definition of a reactor is simply that it is an atomic furnace in which the heat and radiation produced by this chain reaction can be controlled and made to serve useful purposes. A scientist's definition would say that a reactor is a device in which the reaction within the nuclei of certain atoms occurs in a controlled, self-sustaining, or chain-reacting manner. A reactor is said to have gone "critical" or to have reached "criticality" when this chain reaction has been achieved.

The Word "Reactor"

The word "reactor"—borrowed from the chemical industry, where it means a vessel used to permit industrial chemical reactions to take place — came into atomic usage shortly after World War II when a more accurate term was needed to describe an atomic "pile."

An atomic pile — literally a pile of graphite bricks enclosing some uranium — produced the first chain reaction under the stands

of Stagg Field at the University of Chicago on Dec. 2, 1942.

In research, testing, and medical reactors and those used for the production of plutonium, the radiation produced in the reactor is put to work.

Research and testing reactors generally include a means by which materials or specimens may be inserted into the reactor for the study of the effects of radiation levels upon them.

In one kind of research reactor, for example, holes are provided through the middle of the reactor in which samples of material may be placed for irradiation. Both the chemical and physical properties of many materials are changed to a considerable degree by exposure to high levels of some kinds of radiation.

Medical Reactors

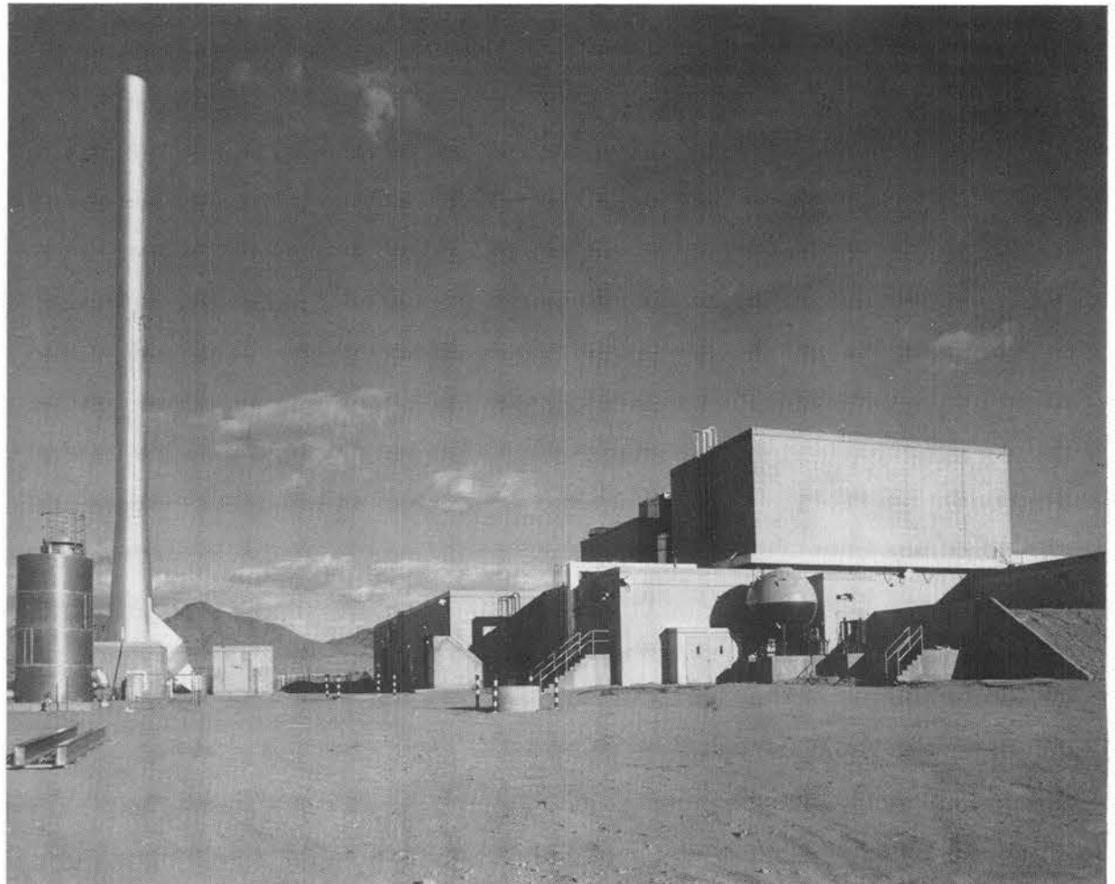
In medical reactors, a special "port" or opening provides for exposure of the patient to a beam of neutrons for treatment of selected brain tumors.

In production reactors, radiation is used to transmute uranium and thorium into fissionable materials known as plutonium-239 or uranium-233. Plutonium is used for bombs. Uranium-233 presently is used for research purposes and is being developed as a fuel for power reactors. Both materials are potential reactor fuels.

More than 100 research, testing, medical, and production reactors are in operation throughout the United States.

In power reactors, the heat resulting from the controlled splitting of atoms is used to produce electricity for home and industrial use. Heat from reactors also is used as energy for the propulsion of nuclear submarines and surface ships and is expected eventually to be used to propel space vehicles. Heat from reactors can be used for industrial processes and is being used for space heating purposes.

As of September 1962, the nine civilian nuclear plants operating in the United States today produce more than 4.3 billion kilowatt hours of electricity. Another 13 plants are expected to be in operation by mid-1963. The United States then will have an installed generating capacity of more than one million kilowatts of electric power. Nuclear plants also are operating today in Can-



SANDIA ENGINEERING REACTOR FACILITY is located in Technical Area III, south of Sandia Base proper. Sandia uses its reactor primarily to study effects of

nuclear radiation on materials, electronic components and electronic circuitry. The facility also provides for fundamental and applied research using neutrons.

ada, France, West Germany, the Soviet Union, and the United Kingdom.

Putting a Reactor Together

How does a reactor work?

There are five major components of a reactor. The first and the heart of the usual type of reactor now in service is its core. This is where nuclear fuel is assembled in plates or rods arranged in precise geometric pattern within a heavy steel tank called a pressure vessel.

It is in the core that power reactors, for example, generate the heat necessary for the eventual production of electricity. The usual fuel for these reactors is natural uranium enriched with a fissionable type of uranium called U-235, or, as in the case in England, normal natural uranium.

The next component of a reactor is its moderator. This is material which can slow down the neutrons given off by the fissioning of the atoms of the fuel. Thus slowed down, the moderated neutrons can be captured by other fuel atoms and the chain reaction can be kept going.

Graphite, ordinary water, heavy water (water which contains heavy hydrogen instead of ordinary hydrogen) or beryllium are frequently used as moderators. The moderator surrounds the fuel.

The third component of a reactor is its control rods. These rods contain elements such as boron, hafnium, lithium, or cadmium which can completely stop the chain reaction by capturing neutrons so that they cannot continue their fissioning process. The control rods are moved out of the reactor core to permit the reactor to start up and are moved into the core to stop the reactor or to maintain its operation at a desired level.

Reactor Coolants

The fourth component of a reactor is the coolant. In non-power reactors, the function of the coolant is simply to remove heat so it won't become bothersome. In power reactors, however, the intense heat developed by the fissioning of the fuel in the core is transferred by the coolant from the core so that the heat can be converted into mechanical and then

into electrical energy. The coolant may be ordinary water, heavy water, a gas, a liquid metal or an organic material.

In a power reactor system, the heated coolant turns water in a secondary piping system into steam. This is done in a "heat exchanger." The steam is directed into a turbine where it spins the wheels of a generator and produces electricity by nuclear means, the same as that produced by heat from coal, gas or oil — or by water power.

A fifth reactor component is its shielding. This is a body of material surrounding the reactor to prevent neutrons and radiation from escaping from the reactor. The shielding may be made of such dense material as lead and concrete.

Another component of most civilian power reactors and of some research reactors is their containment shell — a heavy, over-all surrounding structure of welded steel which is designed to contain any radioactive materials released by a nuclear accident within the reactor itself.

The diagram printed with this article will give you a picture of the basic component of a typical power reactor.

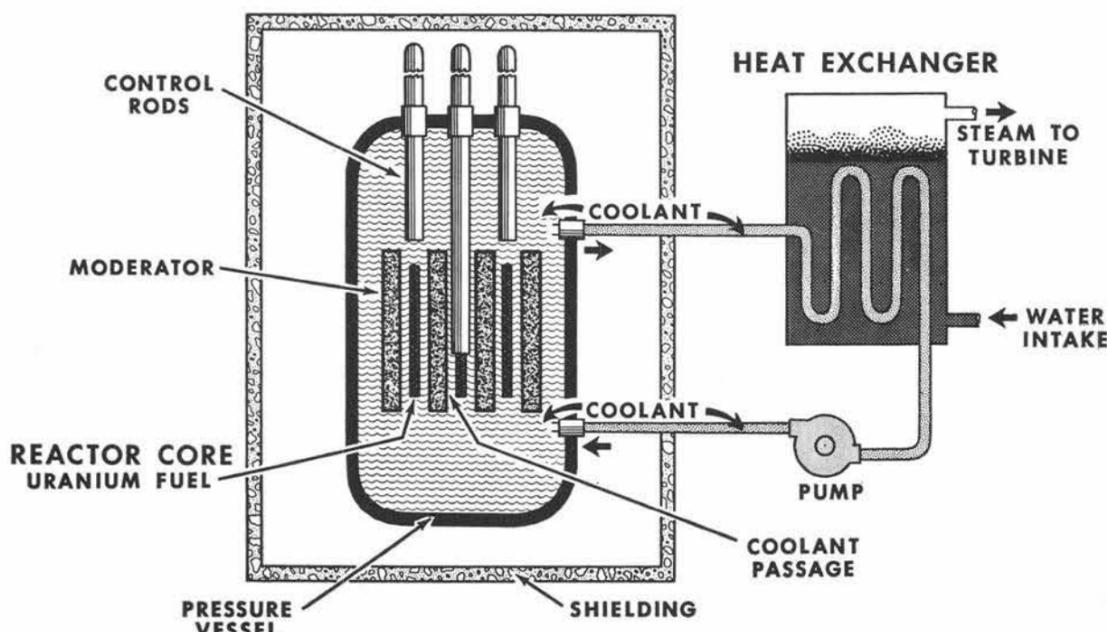
Strict Safety Checks

Are reactors safe? First, there is no possibility that a reactor can explode like an atomic bomb. The chain reaction by which a reactor works is a controlled reaction — not the instantaneous fissioning of a large amount of atomic materials involved in a bomb explosion. Should a power reactor go out of control, for example, the principal nuclear damage would be a melting of its core from the heat associated with the fissioning materials.

Finally, design, construction and operation of all types of reactors — whether for power, research, or other purposes — are carefully controlled by strict Atomic Energy Commission regulations with public safety uppermost in mind.

College and university campuses, hospitals and other medical and research centers, public and private laboratories, and public and investor-owned installations and utilities today are the sites of many reactors, large and small, performing a wide variety of tasks.

More can be expected to dot the landscape tomorrow as the nation's atomic energy program continues to expand.



A REACTOR, basically, is an atomic furnace in which the fissioning or splitting of atoms of nuclear fuel can be controlled and put to useful work. The diagram shows the location of fuel, moderator, control rods, and coolant in a typical power reactor. These components are enclosed within a "pressure vessel" which

serves to contain the various parts of the reactor. The coolant, heated to high temperature by the nuclear fuel, flows through a heat exchanger where it turns water in a secondary system of pipes into steam. The steam then is piped to a turbine which operates an electrical generator for home or industrial power.



CORONADO TECHNICAL INSTITUTE Director is Arthur Russell, center, who is retired from Sandia. Art is currently offering a two year scholarship to a son or daughter of a Sandia Corporation employee.

Tech Institute Offers Scholarship To Son or Daughter of Employee

Coronado Technical Institute is offering a two-year scholarship to a son or daughter of a Sandia Corporation employee. The recipient of the scholarship will be selected on the basis of an essay written on the subject, "The Technical Institute in the Space Age."

To qualify for the scholarship, the writer must graduate from high school in June 1963 with an average grade of "C" or better.

Director of the Coronado Technical Institute is Arthur Russell, who retired from Sandia Laboratory in September 1962 after 10 years as a drafting manual coordinator in Sandia's Drafting organization.

Three years prior to leaving Sandia, Art started planning for an active retirement. He opened the School of Drafting Design at 8200 1/2 Menaul NE. After retirement, he devoted full time to the school and expanded its curriculum into a two-year Technical Institute training program for engineering technicians.

Now, with 15 students enrolled, the Institute's staff includes Lynn E. Castle, another retired Sandian who was supervisor of Technical

and Trades Training Division. Lynn retired from the company in December 1960 after nine years at Sandia and 23 years with Western Electric Company. Lynn instructs English and technical writing courses for the Coronado Institute.

Third member of the staff is C. B. Rothgeb, a retired U.S. Army colonel who formerly commanded the New Mexico Military District. He teaches mathematics courses at the Institute.

Currently, the Institute is preparing for a summer session to begin in June. Classes will be held both daytime and evenings.

In addition to the scholarship for a Sandia dependent, the Coronado Institute is providing two others—one for a son or daughter of an employee of ACF Industries, Inc., and one for a young person whose parent is not employed by either Sandia or ACF. The essay and academic standing are requirements for these scholarships also.

Essays should be mailed to the Coronado Technical Institute, 8200 1/2 Menaul NE, by May 31, 1963.

Most Heart Attack Patients Recover and Lead Active Life

By S. P. Bliss, M.D.

Sandia Corporation Medical Director

This series of articles is concerned with diseases of the heart and blood vessels, which are responsible for most deaths. The first article discussed hardening of the arteries. The next article will be concerned with angina pectoris.

Heart attack occurs when a section of heart muscle is deprived of its blood supply. Although the attack may be sudden, it is usually the result of the slowly advancing process of atherosclerosis in the coronary arteries — the arteries that deliver blood to the heart muscle. A clogged artery may be closed by a blood clot (thrombus) that forms next to a fatty deposit; or the deposits may increase in size, filling in the channel completely. The part of the inner muscle fed by that artery is then cut off from its blood supply, and the result is a heart attack.

Symptoms vary greatly and are not always easy to identify; but when the following symptoms occur, a doctor should be called at once:

1. Severe painful sensation of pressure in the front of the chest, sometimes spreading to the arms, throat, or back and often lasting for hours, especially when accompanied by
2. Sweating
3. Sudden intense shortness of breath
4. Loss of consciousness (occasionally)

Some attacks are accompanied by nausea and vomiting and may

therefore be mistaken for acute indigestion. Only a physician can tell the difference.

After a heart attack, in most cases, a healing process begins almost immediately, and scar tissue begins to form in the damaged area.

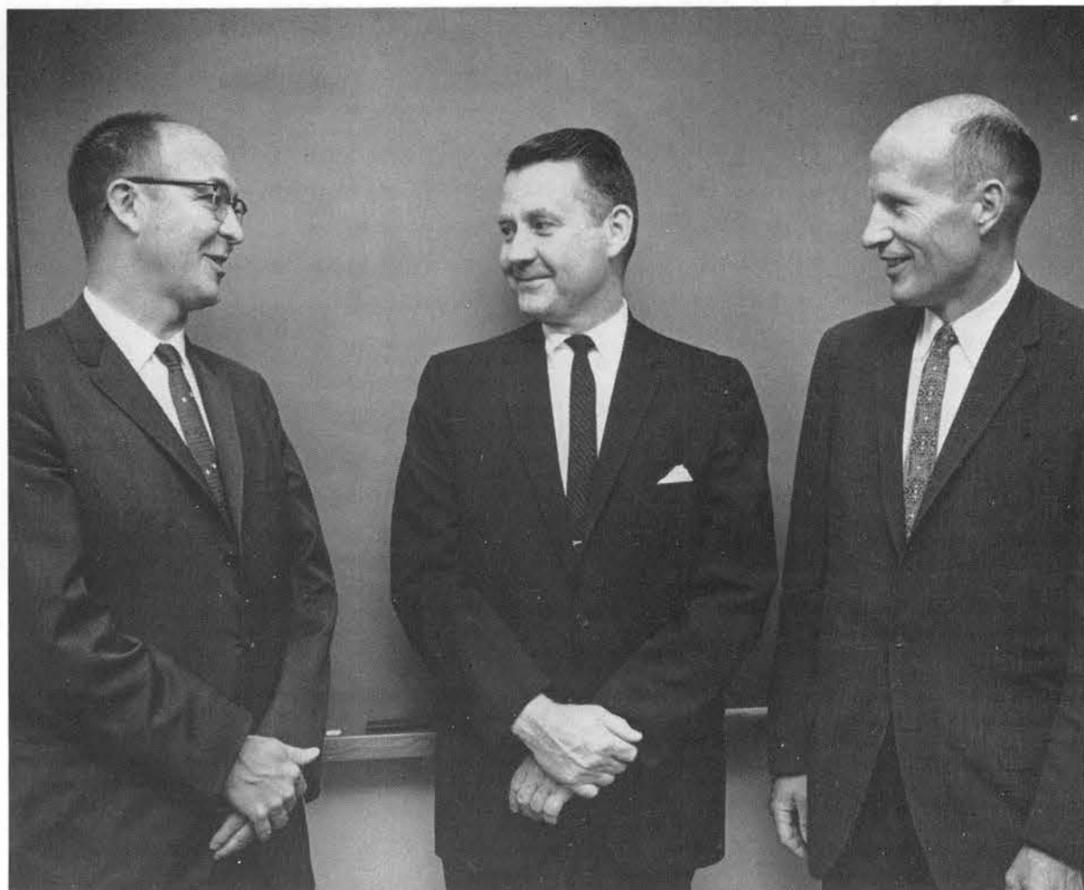
At the same time, small arteries nearby get wider to deliver blood to the area of the heart muscle that needs it. This process is called collateral circulation.

Treatment is aimed at giving the heart an opportunity to heal. For selected patients, doctors may prescribe anticoagulants (anti-clotting drugs) in the hope of preventing formation of new blood clots.

The time needed for the patient to get back on his feet depends on the extent of the damage to the heart muscle, the rate of healing, and whether or not complications develop. Most patients are able to return to work after recovery, although some may have to make adjustments in their jobs and manner of living.

Heart attacks are more common in men than in women.

Some of the medical terms for heart attacks are coronary thrombosis, coronary occlusion, and myocardial infarction.



J. B. BOCK, Western Electric Company Personnel Corporation. He talked with R. B. Powell, Sandia Corporation Vice President, Personnel, left; and W. C. Scrivner, Sandia Corporation Personnel Director, right.

Nation's Best Young Scientists Here for NSF-I

The National Science Fair-International, estimated to be the largest conference in Albuquerque's history, is underway. Four-hundred students are competing in the Fair, with exhibits in all fields of science from astronomy to zoology. An estimated 7000 visitors are attending the Fair.

Sandia Corporation employees have taken an active part in recent weeks in making preparations for the event, and other Sandians are participating in various Fair presentations.

In addition to the student science projects, which will be open to public viewing for the last time today, the Fair includes scientific and technological displays of some 31 scientific and research organizations. These displays, which will be open to public viewing until May 12, include a computer installation programmed to provide biographical data on any fair participant in less than one minute, a model of an atomic power plant; a model of a fractional distillation column; a display of the Telstar satellite; and many other displays, models, and presentations.

Another part of the Fair, the National Science Seminar program, is not open to the public at large. Seminar speakers from Sandia are the subject of another story in this issue of the Lab News. Other seminar speakers include Dr. Werner Von Braun, Dr. Edward Teller, Dr. Glenn Seaborg, Dr. Stanislaw Ulam, Dr. William Shockley, Dr. Harlow Shapley, Dr. Willard Libby, Vice Admiral Hyman Rickover, and General Bernard A. Schriever.

Science Fair events are being held on the New Mexico State Fairgrounds at the Tingley Coliseum and in adjacent fair buildings.

R. F. Brodsky to Speak to Members of ASME May 11

The last meeting of the season for the New Mexico Section, American Society of Mechanical Engineers will feature a talk on "The Space Age 'Model T'" by R. F. Brodsky, former Sandian who is now chief engineer of the Space-General Division, Aerojet General Corporation.

The dinner meeting is scheduled for Saturday, May 11, at Four Hills Country Club. Mr. Brodsky will be introduced by E. H. Draper, Vice President, Development, who is vice president of Region 8 of ASME. Program chairman is E. H. Copeland (7331).

Service Awards

15 Year Pins



Ray J. Beall
4613
May 26, 1948



Samuel Blaylock
4573
May 18, 1948



Howard C. Carmedy
4612
May 17, 1948



Lloyd D. Chapman
4518
May 13, 1948



Harold D. Howell
2441
May 17, 1948



Roger H. Johnson
4251
May 19, 1948



Norman A. Littrell
7251
May 17, 1948



Herbert V. McNabney
8242
May 17, 1948



Adolfo Martinez
7231
May 17, 1948



Jesse V. Parker
4221
May 26, 1948



John Puhara, Jr.
4413
May 19, 1948



William B. Russell
4371
May 19, 1948



Victor Southerland
4614
May 26, 1948



Charles A. Weaver
3242
May 17, 1948



Lewis S. West
4573
May 20, 1948

10 Year Pins May 13-26

Frances R. Ellis 4360, Ross J. Sinkey 2452, Robert E. Dick 7536, R. E. Wonderlich 2344, Parker F. Jones 7183, Fred V. Wyatt 7242, Joe T. Evans 4514, Leota M. Hoffert 3462.

Joe N. Skelton 4514, Alsid F. Lamoria 4623, Fred K. Silva 7521, Frank W. Corner 4131, William G. Fribley 3242, Rupert F. Shattuck 4253, William W. Wacek 1431, Jessie O. Waddles 4624, and George W. Treadwell 7125.



DISCUSSING PROGRAM for the 1963 National Telemetering Conference are T. J. Hoban, Jr. (7212), left, program chairman; and A. P. Gruer (7530), publicity chairman. About 2000 space-age scientists and engineers are expected here May 20-22 to attend the conference.

An Albuquerque Event

Sandia Engineers Help Stage Nat'l Telemetering Meeting

About 2000 space-age scientists and engineers are expected in Albuquerque May 20-22 for the 1963 National Telemetering Conference. With A. E. Bentz, supervisor of Aerospace Nuclear Safety Division III, 7113, as chairman, Sandians have contributed major planning to the conference and will participate in the program.

T. J. Hoban, Jr., supervisor of Ordnance Test Projects Division I, 7212, is program chairman for the conference and is assisted by J. E. Hinde, supervisor of Telemetering Component Control Section 7213-2. A. P. Gruer, manager of Quality Assurance Operations Department 7530, is publicity chairman.

Glenn A. Fowler, Vice President, Development, will be the featured speaker at a conference luncheon Wednesday, May 22. His subject will be "Instrumentation for Nuclear Ordnance."

C. L. Schuster of Division 7212 will present a paper during the In-flight Data Analysis and Storage session of the conference. Title of his paper is "An Airborne Vibration Analysis System."

W. C. Myre, supervisor of Space Projects Division I, 7232, will be chairman of this session. T. L. Pace, supervisor of Electronic Trajectory Measuring Systems Division 7221, will be chairman of the session on "Telemetry Systems—Applications and Environmental Factors."

"Missions Unlimited With Telemetering" is the theme of the con-

ference. Applications of telemetering in space, bio-medicine, oceanography, and industry will be discussed in 45 technical papers during nine conference sessions. In addition, conferees will attend three workshop sessions and visit a display of advanced telemetry equipment.

Banquet speaker May 22 will be Dr. R. L. Smith-Rose, President of the International Union of Scientific Radio (URSI), Vice President of Britain's Institution of Electrical Engineers, and Director of the Radio Research Station, Department of Scientific and Industrial Research, Slough, Bucks, England. His topic will be "Radio and International Geophysical Research."

Dr. Smith-Rose is best known for his contributions to radio wave propagation, ionospheric and tropospheric research, radio atmospheric noise studies, and research programs for the International Geophysical Year.

One of the highlights of the conference program will be the presentation of the National Telemetering Conference Award. Recipient will be Dr. Myron H. Nichols, Professor of Physics, San Diego State College, and consultant to space age industries.

Conference headquarters will be the Hilton Hotel in Albuquerque with the equipment display in the downtown Albuquerque National Bank building. Program information and registration forms are available from Richard Rust, Brooks-Feeger Association, 1238 Ortiz NE.



A. E. Bentz
—Conference Chairman—



Dr. R. L. Smith-Rose
—Banquet Speaker—

Sandia Training Group Helps Stage Leadership Conference

Seven persons in Personnel Research, Training and Education Department 3130 helped a Student Leadership Development Conference at the University of New Mexico last Saturday. Student government officials and officers of campus organizations attended the conference to discuss qualities of leadership.

The Sandians worked with small groups of students meeting in the conference rooms of the New Mexico Union. Some of the material presented was adapted from the Sandia in-hours training program, "Leading Staff Meetings."

Those participating were D. J. Jenkins, Department 3130 manager; J. A. Smith, Division 3131 supervisor; E. H. Wilson, Section 3131-1 supervisor; and H. E. Frankel, W. H. Bailey, F. H. Hannah, and R. N. Rose of the Training organization.

Sports Car Picnic

A short rally followed by a picnic will be held by the Rio Grande Region of the Sports Car Club of America on Sunday, May 12. Registration is from 12:30-1:30 p.m. at 515 Wisconsin NE. Participants should bring their own lunch. Further information can be obtained from Ann Van Camp (1122).

Sandia Authors

Current or forthcoming articles by Sandia authors in technical journals include the following:

W. W. Allison (3211), "High Pressure S. S. Fittings," April issue, *Journal of the American Society of Safety Engineers*.

C. F. Bild (1100), "Contamination Control—Cleaning and Verification," May issue, *Contamination Control Magazine*, Western Regional Branch of the American Association for Contamination Control.

J. A. Baldwin, Jr. (5311), "Electron Paramagnetic Resonance Investigation of the Vacancy in Diamond," Mar. 15 issue, *Physical Review Letters*.

L. C. Beavis (1413) and D. L. Stewart (4233), "Two Ultra High Vacuum Radio Frequency Feedthroughs," April issue, *Review of Scientific Instruments*.

R. C. Marsh (2564), "Adaptability of Laminar Air Flow for Contamination Control," May issue, *Contamination Control Magazine*.

W. J. Whitfield (2564), "State of the Art (Contamination Control) and Laminar Air Flow Concept," May issue, *Contamination Control Magazine*.

D. L. Hanson (5425), "On the Representation Problem for Stationary Stochastic Processes with Trivial Tail Field," March issue, *Journal of Mathematics and Mechanics*.

C. M. Stover (7223), "A New Aluminum Oxide Humidity Element," June issue, *Review of Scientific Instruments*.

Sandia Engineers Give Students Two Science Demonstrations

Two science demonstrations were presented by Sandia engineers at the Livermore Mathematics Association's second annual Field Day May 4 at Livermore High School.

Joe Stiegler (8127-2) demonstrated and explained the principles of radio telemetry, and Hal Brumfield (8115-2) demonstrated the use of quick-foaming plastics. Assisting them were Jim Rego (8223-2) and H. D. Sorensen (8124-3). Watching the demonstrations were more than 200 elementary and high school students from Livermore and Pleasanton who attended the field day.

The demonstrations were scheduled between academic sessions in which top math students vied for prizes in mathematics competition. Awards were presented by John S. Foster, Jr., Director of Lawrence Radiation Laboratory at Livermore.

Hal Brumfield repeated his plastics demonstration May 6 at a Naval Reserve meeting at the Lawrence Radiation Laboratory.



YABBA DABBA DOO! Two holes-in-one during one round of golf on the Los Altos short course recently brought gleeful shouts from A. M. Watson (3242). He sank the singles on holes 5 and 9, each about 100 yds. He took up golf about a year ago and now only stows his clubs while performing duties as a Sandia Laboratory Security Inspector.

Sandia Speakers

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

David L. Field (7513), "Surveying and Evaluating Supplier Quality Systems," 17th annual convention of the American Society for Quality Control, May 20-21, Chicago.

A. F. Cone (7510) and H. F. Dodge of Rutgers University (a Sandia consultant), "A Cumulative-Results Plan for Small-Sample Inspection," 17th annual convention of the American Society for Quality Control, May 20-21, Chicago. Mr. Cone will make the presentation.

T. D. Harrison (2561), "Computer Applications in Quality Control Operations," 17th annual convention of the American Society for Quality Control, May 20-21, Chicago.

J. L. Hartley (2411), J. L. Chamberlin of the National Bureau of Standards, and W. D. Huff (2411), "Dew Point Apparatus of High Accuracy," 1963 National Symposium on Humidity and Moisture, May 20-23, Washington, D.C.

R. T. Meyer (5153), "An Improved Oscillographic Camera Technique for Time-Resolved Mass Spectrometer Data Recording," 11th annual Conference on Mass Spectrometry, May 19-24, San Francisco, Calif.

A. F. Cone (7510), "Quality Reliability Relationships," Electronics Industry Association Symposium, Apr. 23, Los Angeles, Calif.

J. R. Banister (5153), "Magnetohydrodynamics Research at Sandia Corporation," Engineering College of the University of Arkansas, May 2, Fayetteville, Ark.

Ishmael Ortega (1122), "Chromatographic Liquid Leak Detection," AEC Analytical Procedures Conference, Apr. 10-11, Albuquerque.

J. P. Burger (1122), "Number Average Molecular Weight Determination of Polymers by Vapor Pressure Osmometry," AEC Analytical Procedures Conference, Apr. 10-11, Albuquerque.

D. C. Bokneckt (1122), "Some Metallurgical Problems Solved by the Electron Microprobe," AEC Analytical Procedures Conference, Apr. 10-11, Albuquerque.



FOUR YEARS without a security infraction is the record achieved by the Sandia Area Office AEC/ALO. The ALO "Silver Chip" award is in recognition of the achievement. Shown presenting award to Sue Dadian, Record Clerk, SAO, is W. C. Roussel, Director, Security Division, ALO, as Andrew A. Walker, Chief, Security Branch, SAO, looks on.

Garnets Champs Of Coronado Club Jewelette League

The Garnets team emerged as champions of the Jewelette Bowling league recently. Team members Cindy Williams (AEC), Dottie Blalock (3423), Margie Baca (4335), and Mina Carnicom (3211) defeated seven other teams during four rounds of league play at the Coronado Club.

Cindy Williams and Mina Carnicom teamed to win the doubles championship in the Jewelette League tournament at the end of the season. Mary Erbert (wife of Virgil Erbert, 9130) was the singles champ.

Coronado Club Has Members-Only Party Scheduled for May 18

Coronado Club events for mid-May include the Club's annual free cocktail party and a special Mexican buffet, with music by the Sand City Jazz Band.

On May 18, the Club will have its annual members-only cocktail party from 6:30 to 8 p.m. A roast beef buffet will be served from 7 to 8:45 for \$1.50 per person. Dancing will be from 9 to 1 a.m.

The Sand City Jazz Band will also provide dance music for the social hour from 5:30 to 7:30 p.m. May 24. A special Mexican buffet will be served; adults \$1.25, children \$1.

La Granada Room will be open for dancing from 9 p.m. to 1 a.m. on May 25. Music will be provided by Max Apodaca.

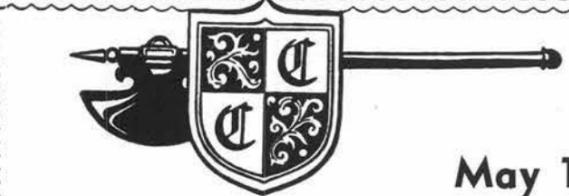
NSF-I Finalists Turn to Sandians in Time of Crisis

Visitors to the National Science Fair-International, while enjoying the professional appearance and high quality of the student exhibits, probably seldom thought about the preparations necessary for such an event.

The exhibits, prepared by students at schools across the country, had to be transported, by one way or another, to the Tingley Coliseum in Albuquerque. Many of the exhibits consisted of delicate scientific instruments, of test animals, or of insects or plant material. Naturally, when many of the students unpacked their exhibits, they found themselves suddenly pressed with some unusual needs.

One student used a boa constrictor in his exhibit. The boa is unusually prone to effects of changes in temperature, and the snake to be used in the exhibit died on the way. He was replaced, however, and the exhibit was presented.

coronado club



May 10-25

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday					
12	Duplicate Bridge 7 p.m.	13	Adult Dance Instruction Basic 7:00 p.m. Advanced 8:30 p.m.	14	Game Night 8 p.m.	15	BossaNova, Mambo Merengue Instr. 8:00 p.m.	16	Social Hour—4:45-7:30 Combo—5:30-7:30 Regular Buffet Adults \$1.95 Children \$1.40	17	Free Cocktail Party 6:30-8:00 Special Roast Beef Buffet—7-8:45 Free Dance 9-1
19	Duplicate Bridge 7 p.m. Reservations Required	20	Adult Dance Instruction Basic 7:00 p.m. Advanced 8:30 p.m.	21	Ladies Bridge 1:15 p.m.	22	BossaNova, Mambo Merengue Instr. 8:00 p.m.	23	Social Hour—4:45-7:30 Combo—5:30-7:30 Special Mexican Buffet Adults \$1.25 Children \$1.00	24	Dancing—9-11 No Charge LaGranada Room No Food Served

EVENTS

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

- '50 HUDSON, best offer buys. Wheeler, AL 6-6230.
- GYM DANDY swing set, \$15. Sanchez, AM 8-5427.
- KENMORE vacuum cleaner, \$5; portable water type air cooler, \$20; bamboo bar w/3 stools, \$25. Womack, 299-5564.
- 38-PASSENGER SCHOOL BUS, 4-spd. transmission, suitable for modification to family camper, \$175. Martin, CH 3-3135.
- '50 FORD, 4-dr. V-8, \$95; bull skull, bleached, 28" horns, make offer. White, AL 5-9479.
- 2-BDR. CABIN, sun deck, furnished, on stream near fishing lake in Manzanos, can be seen weekends. Kennedy, AX 9-7126.
- '57 DODGE 2-dr. HT sedan, automatic transmission, PS, PB, a/c, \$550. Sinnott, AX 9-1300.
- MAN'S 26" bicycle, woman's 26" bicycle, \$6 each or 2/\$10, need paint. Berger, 11620 Bellamah NE, 298-4234.
- '55 PONTIAC HT coupe, R&H, w/w, four used 8.20x15 w/w tires. Wilson, AX 8-0049.
- GRAY Hi-Lo wool carpet, 40 yds., no holes or spots, \$75. Shane, AL 5-5673.
- 3-BDR., 1 3/4 bath, carpet, drapes, built-ins, landscaped, a/c, 1304 Alcazar NE, \$17,300, \$700 down FHA. Reed, AL 5-8094.
- KENMORE portable dishwasher, \$75. Eiffert, 344-5486.
- COUCH AND CHAIR, light brown, \$30 or best offer. Perea, AL 5-6902 after 4:45 p.m.
- JEEP MOTOR, 4-cylinder flat head, \$50. Felter, AX 8-4330 after 5:30 p.m.
- 1740 SQ. FT., \$15,900 GI and FHA appraisal, SE location, 1 3/4 bath, f/a heat, a/c, patio 48'x26'. Barber, AL 6-9638.
- DELUXE BRICK TRIPLEX, large 2-bdr. apts., electric kitchens, carpets, excellent rental record. McCoy, AX 8-0193 after 5 p.m.
- HALLICRAFTER, late model SX101A, \$260. Elrod, 344-6609.
- SCREEN DOOR w/lock and grille, standard size, \$5. Harper, AX 8-0146.
- AIR CONDITIONER, 4200 cfm, 2-speed, \$70. Metzgar, CH 2-1028.
- GAS HEATER, 50,000 BTU, will heat small house, priced far below cost. Shreve, DI 4-7146.
- POODLES, AKC reg., miniature, black, \$65. Precit, AX 9-3438.
- '57 CHEVROLET BELAIRE 4-dr. V-8, PS, PB, Power Glide, radio, white w/red interior, \$750. Horstman, AL 6-1471 evenings.
- GAS RANGE, Magic Chef, full size w/electric clock and timer, \$35. Horn, 299-1856.

5KW120V Onan generator; Welsh Mtn. Pinto pony, no papers, year old filly sired by Appaloosa champion. Illing, 268-7932.

3/4 HP MOTOR, 110V or 220V repulsion induction, \$30. Henry, 256-2467.

BEAGLE, 1 yr. old male (no papers), has robes and distemper shots. O'Connor, 898-2331.

SEARS Taperlite luggage, ladies 3-piece, new; 125 white fireplace bricks, new; 125 red bricks, new, need cleaning. Lotz, 299-2804.

1931 MODEL-A pickup, new engine, first \$440 drives it away. Collins, AM 8-3612.

4-BDR. and den home, 1770 sq. ft. living area, NE location, corner lot, many extras. Brighton, 298-6924.

EDDIE BAUER DOWN JACKET, warm but worn, size 38, \$25; diamond ring, \$250; '53 MG TD. Hertzler, 265-0964.

3-BDR. MANKIN HOME, NE Heights, partly furnished, near schools and shopping, low down payment. Wilhelm, AL 5-2561.

1 PR. RED CAFE DRAPES, 60x42" wide, \$1; Hi-Fi or TV stand, \$2; baby electric bottle sterilizer, \$5. Nix, 298-4282, 2813 Virginia NE.

17" TV Packard Bell console, \$40; Frigidaire, \$50; electric Universal range, \$40. Erickson, 298-6961 after 5 p.m.

GUITAR with pickup and case, \$95; mandolin w/pickup and case, \$45; mangle, \$20. Abbott, AX 9-8860.

18" CRAFTSMAN JIG SAW w/motor and stand, \$40. Liguori, AL 6-3613.

'60 MORRIS MINOR 2-dr., R&H, 4-speed transmission. Kinoshita, 9412 Snow Heights NE, AX 9-6491.

FEDERAL ENLARGER, Model 269, \$15; Brumberger darkroom light, \$3; film developing tank, \$2; paper cutter, \$5; 3-way easel, \$9. Warden, AL 5-0557.

VW microbus rear seat, swing type, \$5; new Ford Econoline right front passenger seat, \$10. Brathovde, AM 5-0783.

'50 CHEVROLET 4-dr. sedan, mechanically good, needs body work, can be seen at 6408 Kiowa NE, as is \$60. MacGibbon, 256-3107.

TWO-WHEEL UTILITY TRAILER w/4.50x6" tires. Catch, AM 8-8095 before 3 p.m.

OFFICIAL SOAP BOX DERBY WHEELS complete w/axles, paid \$15, sell for \$5. Gillon, 255-9162.

WARDS CAMPER, 18'x7' fold away type, used once, cost \$535, sell for \$450 cash or terms. Bourne, 299-0788 after 5 p.m.

TWO-WHEEL HAULING TRAILER, metal frame, springs, 42x72" wooden bed w/bumper hitch, \$50. Barber, 299-4287.

ONE BUCK RABBIT, eight months old, good track, choice of black or white. Breitenbach, 268-7900.

THREE-PIECE SECTIONAL. Warnke, 733 Valencia SE.

COUCH AND CHAIR, extra large, \$25; VW bucket seats, \$4 each Campbell, 10913 Elvin NE, AX 9-9195.

21" ROTARY LAWN MOWER, Deluxe Lawn Boy, adjustable RPM. Bishop, AX 9-0649.

'47 CHEV. 4-dr.; '53 Ford 4-dr.; 2-wheel trailer; natural gas stove. Tyson, 116 Columbia Dr. SE, Sundays only 8 a.m. to 1 p.m.

NEW SKI BOOTS, lady's Cortina (double), 6 1/2 narrow, including boot tree, \$40. Thomas, ext. 40179.

DAVEN-BED, gray tones, wood inset on one end, \$70. Kochmann, AX 9-5133.

NO QUALIFYING, 2-bdr. house, near Highland High, a/c, f/a heat, hw/floors, landscaped, sprinklers front and back walled. Stone, AM 8-8942.

NEXT DEADLINE FOR SHOPPING CENTER ADS Friday Noon, May 17

BOSTON BULLDOG PUPPIES, 3 males, 2 females. Morris, 920 Kentucky SE, AL 6-0152.

'52 BUICK, standard shift, 4-dr., 2-tone, \$150 or best offer. Brown, DI 4-6831.

FRIGIDAIRE ELECTRIC RANGE, Cook-Master oven control, timer, appliance outlet, deepwell, deluxe model, white enamel, \$75. Browning, 2616 Virginia NE, AX 9-0169.

WESTINGHOUSE refrigeration air conditioner sheet metal hood for casement window, best offer; 6" wall cups for hauling. Muzzey, 268-0914.

1-3/4 ACRE cabin site at El Vado, tall timber, overlooking lake, \$150 down, \$15 a month. Trumble, AX 8-3397.

MYLAR RECORDING TAPE, 7" reels, 1/2-mil., 2400 feet per reel, \$2.50 per reel. Smith, 268-2141.

PICNIC ICE CHEST, aluminum case, 22x13x13", \$2; cabinetmakers vise, oak jaw, opens 8", new, \$2.50. Hill, CH 3-3493.

'53 FORD 2-dr., new battery and starter, \$225. Dill, AM 8-3796 after 5 p.m.

ZUNDAPP BELLA motor scooter, 150 cc., 4 speeds, double seat, 3600 miles. Corll, 268-2746.

FREE, Persian Kittens, six weeks old. Lynes, AM 8-0144.

REMINGTON M722, cal. 222, Weaver scope mounts (no scope) and sling. Westfahl, 298-4716.

'61 CHEVY IMPALA convertible, V-8, full power, new tires. \$1850. McClellan, 256-0329.

CHIHUAHUA MALE 2-yr-old, can be registered, \$15. Berry, 299-4765.

'53 BUICK Special, one owner, stick shift, Fresh Air heater and defroster, \$150. Harker, 282-3435.

LAWN MOWER, Sear's Craftsman, silent action w/grass catcher, \$10. Freyermuth, AX 9-2053.

KENMORE automatic washer, \$15; electric iron, \$2; 3/4-HP electric motor, \$8; complete set of lessons and book DeVries Electronic Course. Schiess, AL 5-3252.

'55 CHEVY 2-dr., 6-cyl., \$235. Moore, AX 9-2781.

AUTOMATIC WASHER, Deluxe Westinghouse, \$50. Bliss, 255-7980.

'49 CHEVY 2-dr., new battery, '63 license, \$90. Beatty, AX 9-3429.

GAS RANGE, Hardwick, 36", broiler, utility drawer, lighted oven, \$40. Asselin, AX 9-9270.

'47 CHRYSLER 4-dr., 6-cyl., Windsor, \$85; Hallicrafter receiver, \$40. Atkinson, 299-3250.

'62 INTERNATIONAL SCOUT Positive traction rear end, Warren locking hubs, twin gas tank, large heater, full cab. Cooper, 877-4674.

UNUSED CARPET, nylon filorama, foam back, 8 1/2x12, \$40 Jacobson, 297-5627.

BOX SPRING AND MATTRESS, new in original wrapping, \$119 new sell for \$77; Silhouette relaxizer folding couch w/timer, \$55. Welker, AX 9-1179.

5-PIECE DEN SET, \$75; 6-yr. baby bed and mattress, \$10; work bench and shelves, \$20. Sircic, AX 9-8916.

TWIN HOLLYWOOD BEDS, Englander box springs and mattresses, \$50. Wentz, AX 9-3402.

Sandia Laboratory Handicap Bowling Tourney Completed

Mary Walker (3451) took the singles championship of the First Annual Sandia Laboratory Women's Bowling Tournament held recently at the Coronado Club. Her score of 655 was high for the three-game series.

Frances Bourgeois (3126) and Ruth Brown (4211) tied with Doreen Westfall (5335) and Kendra Longfellow (3151) for the doubles crown. Both teams bowled 1227.

Jim Leonard Takes Top Golf Honors in Socorro Tourney

J. A. Leonard (7147) strolled away from the New Mexico Institute of Mining and Technology golf course recently with the low gross crown of the first Sandia Employee Golf Association tournament of the season. The tournament was played at Socorro.

Low net winner was Gino Carli (2452). Winning team members were M. S. Chavez (3452), M. R. Madsen (7324), G. W. Guist (4412), and G. M. Goralczyk (7523). The tourney drew 88 entries.

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DISCUSSING PROGRAM of the recent Clean Room Conference are, from left, J. C. Bregar, general supervisor of Western Electric Company's Allentown Plant; H. E. Bridgers, Bell Telephone Laboratories, Allentown; Willis Whitfield (2564), inventor of the Whitfield Clean Room; and Dr. D. E. Koontz, Bell Telephone Laboratories, Murray Hill. Some 150 representatives of federal agencies, military, and AEC contractors met here Apr. 9-10 to organize a working group to draft federal standards and specifications for building clean rooms.

Technical Writers Organization Seeks High Writing Standards

This is another in a series of articles describing the activities of member organizations of the New Mexico Council of Technical and Scientific Societies.

STWP, the Society of Technical Writers and Publishers, is a professional association whose members are concerned with writing, editing, and production of publications in applied and physical sciences.

Interests of the Albuquerque Chapter extend to presenting awards to students for excellence of descriptive material in Science Fair exhibits, sponsoring technical writing courses at the University of New Mexico, and assisting placement of qualified technical writers.

Headed by John T. Williams (2323), chairman, the Albuquerque Chapter encourages education and training in the profession. Members share ideas and techniques with other organizations, and help improve technical writing standards.

The local group made cash awards during the recent Regional Science Fair to a junior and a senior high school student whose exhibits were judged to be the best in descriptive and display technique. Nine STWP members surveyed more than 300 exhibits in the Fair before making the awards.

"This is part of our promotion of technical writing as a profession," John says.

STWP's interest in technical writing education led to conducting a survey course at UNM Community College. Several members of the Society discussed types of tech writing and editing performed in the Southwest. The course material, which also stressed writing techniques and methods of problem solving, is currently being revised for future presentation.

Membership of the Albuquerque Chapter is 30, a drop from previous years. "We helped organize the Trinity Chapter of STWP to serve El Paso and Las Cruces,"

John said, "and some of our former members now belong to the new chapter—a loss to us, but a gain for the National Society."

Nationally, STWP is an outgrowth of four organizations that successively merged to form STWP. The Society has 3000 members in 47 U.S. chapters and individual members in England, India, and Sweden. STWP publications are the *Review* and the *STWP Newsletter*.

The Albuquerque Chapter was chartered about nine years ago. Since its formation, the group has always handled the preparation of material for the Tech Calendar, a schedule of activities of New Mexico Technical and Scientific Societies. Raymond Lewis (2323) is the current calendar coordinator.

Officers of the Albuquerque Chapter include Mrs. Winifred Gregory (KAFB), vice chairman; Robert M. Petrone (2322), secretary-treasurer; H. B. Young (4422), chairman; D. H. Emrick (2322), education and public relations chairman; and G. B. Roberts (4422), publications chairman.

Employee Injured When Overhead Light Fixture Strikes His Ladder

Sandia Laboratory's safety record was broken May 3 when an employee was injured while working on an overhead light fixture.

The employee was standing on a 10-ft. ladder (about seven ft. from floor level) changing a fluorescent lamp and cleaning the fixture when a nut came loose in the eyebolt of the fixture, causing it to strike the ladder. The ladder fell and the employee suffered multiple fractures of the right arm and a severely sprained left arm.

At the time of the accident, Sandia Laboratory's safety record had reached 59 days or 2,156,000 man hours without a lost-time injury.

Promotions

Frank R. Garcia (4574) to Janitor
 Louis P. Gallegos (4574) to Janitor
 Ernesto P. Olguin (4574) to Janitor
 Pablo L. Baca (4621) to Dismantler
 Frank Garcia, Jr. (4233) to Plate Maker
 Louise A. Lewis (3421) to Library Assistant
 Alan L. Richards (8214) to Stockkeeper
 Paula K. Neighbors (8114) to Draftsman
 Edwin C. Hawn (4233) to Staff Assistant—
 Technical
 Jack V. Almstad (8123) to Staff Assistant—
 Technical
 B. W. Schneider (5151) to Staff Assistant—
 Technical
 George W. Perkins (8234) to Staff Assistant—
 Administrative
 W. G. Vander Lean (2541) to Staff Associate—
 Technical
 Bettye A. Libby (3126) to Secretarial-Typist
 Carolyn A. Nelson (3126) to Secretarial-
 Stenographer
 Eunice W. Frank (3126) to Secretarial-Typist
 Bobby R. F. Collins (3444) to Mail Clerk
 Dorothy W. Calloway (3453) to Data Processing
 Clerk
 James J. Furtado, Jr. (8232) to Bindery Operator
 Judith A. Damoulos (8212) to Typist
 John T. Knox (8232) to Camera Operator
 Judith A. Jackson (8233) to Library Assistant
 Kenneth L. Kluge (8232) to Mail Clerk
 William E. Scott, Jr. (8214) to Service Clerk
 Sylvester Grisby (8123) to Technical Assistant
 Joe L. Silva (4573) to Cleaner
 Florencio Romero (4575) to Laborer
 Ina Alice Tipton (3453) to Record Clerk
 George Hernandez (4233) to Plate Maker
 Robert D. Bryant (8234) to Stock Analyst
 Richard L. Chapman (3341) to Staff Member—
 Administrative
 Roy Palmer (4621) to Dismantler
 Frank A. Toys (3462) to Bindery Operator
 Jo Ann Aiken (2561) to Data Processing Clerk
 Melbra J. Clark (3126) to Secretarial-Typist
 Frank Speakman (4153) to Investigator
 June F. Ridge (8123) to Service Clerk
Supervisory Lateral Transfers
 H. E. Christenson from 3153-1 to 2625-3
 J. E. Miller from 8243-4 to 8214-1
 K. J. Bennett from 8214-1 to 8243-4
 J. D. Appel from 7124-1 to 7147-1
 C. H. Bidwell from 1421 to 9100 Staff
 R. G. Fleming from 4231-2 to 4234-3
 W. B. Feas from 7513-3 to 7534-1
 G. H. Bradley, Jr. from 7534-1 to 7513-2
 W. T. Dobbins from 2451-3 to 4231-2
 M. L. Glaze from 8213 to 8212
 N. J. Renaud from 8232 to 8213
 J. H. Davis from 7124-2 to 7124-1
 L. F. Stravnsnik from 7124-3 to 7124-2
 W. F. Peay, Jr. from 4211 to 4252
 J. A. Southwick from 2444 to 2422
 D. G. Beatson from 7246-4 to 7241-6
 V. M. Brewster from 7241-5 to 7244-4
 D. C. Hanson from 7244-3 to 7244-2
 R. L. Johnson from 7244-2 to 7244-3
 F. H. Vishaway from 4613-3 to 4613-1
 J. M. Miller from 4613-1 to 4613-2
 W. L. Paxton from 4613-2 to 4613-3
 R. A. Kavet from 2531-2 to 2535-1
 T. W. Strome from 1321-1 to 2532-3
 V. G. Redmond from 2532-3 to 2531-2
 W. Dzugan from 8212-1 to 8212-2
 J. W. McKiernan from 7147 to 7119
 J. D. Appel from 7147-1 to 7119-1
 R. R. Moore from 7147-2 to 7119-2

J. M. Stueber Author Of Article Appearing In 'CQ Magazine'

An article by James M. Stueber (7232) appears in the April issue of *CQ Magazine*, amateur radio journal. Title of the article is "A Product Detector for the HQ-129X." It describes modification to a communications receiver. This is the seventh article Jim has placed in amateur radio publications. It is accompanied by photographs taken by B. K. Laskar (3432).

Livermore Laboratory Safety Record Drops At 238 Calendar Days

Livermore Laboratory's safety record of 238 calendar days, or 1,263,379 man-hours without a disabling injury, ended Friday, Apr. 26. On that day, an employee who had earlier reported receiving a knee injury was sent home after a re-examination by the Medical organization. The employee had reported that he received the injury while stepping up on a workbench.

Supervisory Appointments

DALE A. YOUNG to supervisor of Programming Section 5426-1, Computer and Numerical Analysis Division.



Dale has been at Sandia for 11 years, working in the Mathematical Research organization.

Previously, he was at the Pasadena, Calif., annex of the Naval Ordnance Test Station for eight months, working with analog computers used as hydrodynamic simulators.

He received a BS degree in mathematics from Colorado State University in June 1951 and has taken some graduate courses at the University of New Mexico. Dale is a member of Kappa Mu Epsilon, honorary society.

RALPH W. GRIFFIN to supervisor of Branch Shop Section 4252-4, Machine Shop Division.



Ralph has been at Sandia Laboratory 11 years as a Model and Instrument Maker and as a Layout Man.

His previous experience includes some 20 years in his field. He was with Magnavox in Kentucky for five years as a lead tool and die maker; four years with Mitchell Machinery in Paducah, Ky., as a general machinist and tool and die maker; one year with the C&M Railroad in Springfield, Ill.; eight years with the Illinois Central Railroad as a general machinist; and two years with Walter T. Kelly in general maintenance work.

Ralph served his apprenticeship with the Illinois Central Railroad.

SAM T. MANCUSO to supervisor of Workmen's Compensation and Medical Services Division 3341.



During the 11 years Sam has been at Sandia Laboratory, he has worked in Cost Accounting, Procedures Auditing, and Employee Benefits and Services organizations in addition to his present division. In 1957 he was promoted to supervisor of Workmen's Compensation and Medical Services Section 3341-1.

Previously he was in public accounting in Portales, N.M., for three years and in administrative work for the Bureau of Mines in Amarillo, Tex., for a year and a half.

Sam has a BA degree in business and economics from Eastern New Mexico University (Portales).

During World War II, he served four years in the Army.

LEONARD M. CLAUSEN to supervisor of Assembly and Maintenance Section 2323-2, Military Manuals Division.



Leonard has worked in the Technical Manual Department since he came to Sandia Laboratory nine years ago.

His prior experience includes two years as a publications engineer for The Boeing Company in Wichita, Kan.; two years as high school principal in Elmdale, Kan.; and five years teaching industrial arts in a high school.

During World War II, Leonard served four years in the Army Air Corps.

He received his BS degree in education from Kansas State Teachers College and took one year of graduate work there.

T. J. WILLIAMS to supervisor of Capacitors, Delay Lines and Transformers Development Section 1432-1, Electronic Components Division.



"T. J." has worked in Electronic Components Department since he came to Sandia in 1955.

Previously he served two years at Aberdeen Proving Ground as a radar instructor during the Korean conflict, and worked one year in the gas power tube section of Westinghouse Electric in Pittsburgh.

T. J. was graduated from the University of New Mexico in 1952 with a Bachelor's degree in electrical engineering and received his MS in 1961 after attending school part-time under Sandia's Educational Aids Program.

He is a member of Sigma Tau and Pi Mu Epsilon, honorary societies, and is a registered professional engineer in New Mexico.

MARLIN A. POUND to supervisor of Employment and Personnel Development Section 8212-1, Personnel Division, Livermore Laboratory.



Marlin joined Sandia at Livermore in July 1957 as a Personnel representative.

Since then, he has also handled the Laboratory's technical institute and college recruiting programs.

Before coming to Sandia, he served two years as a Marine Corps first lieutenant.

Marlin graduated from the University of New Mexico in 1955 with a Bachelor's degree in business administration.

For the past three years Marlin has been a member of the curriculum advisory committees for Stockton College and Modesto Junior College, and has served on a panel for the state department of education.

He is a member of the American Society for Engineering Education.

RICHARD L. DURHAM to supervisor of Classification Section 8233-4, Technical Information Division, Livermore Laboratory.



Dick came to Sandia at Livermore in August 1958 to work in the Security organization.

He was concerned with physical and technical security functions until 1961 when he became the Livermore Laboratory classification representative.

An Army veteran of six years, Dick was in the Counter Intelligence Corps, San Francisco Region, where he served as branch chief for three years. Earlier tours of duty took him to Europe and Alaska.

Graduating from West Point, Dick received his BS degree in engineering in 1953. He attended Stanford University from 1947 to 1948, studying aeronautical engineering. He also completed courses at the Army's intelligence, artillery, and air ground operations schools.

He is a member of the U. S. Military Academy Association of Graduates, the California State Division of the International Association for Identification, and the Bay Counties Peace Officers Association.

Sandia's Safety Record

<p>Sandia Laboratory HAS WORKED 140,000 MAN HOURS OR 4 DAYS WITHOUT A DISABLING INJURY</p>	<p>Livermore Laboratory HAS WORKED 61,000 MAN HOURS OR 12 DAYS WITHOUT A DISABLING INJURY</p>
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