

Sandia's Radioactivity Monitors Report No Increase in Fallout Since Start of Tests

Sandia Corporation has again been asked by the Atomic Energy Commission to monitor radioactive fallout in the Albuquerque area from the current nuclear test series, "Hardtack," in the Pacific.

The Sandia monitoring station, operated by the Industrial Hygiene Division (3161), is part of a "fallout network" of stations extending from the Proving Ground to locations around the world to detect and measure radiation.

Since the Pacific tests are so far removed from populated areas, exposure to radioactivity in the United States from the tests is expected to be low, the AEC announced. This was supported by Bill Kingsley, supervisor of the In-

dustrial Hygiene Division, who said, "No increase in background count has been measured here since the start of the series."

Several Means Used

Several means are used at Sandia to detect and measure radiation from the tests. A "vacuum cleaner" air sampler mounted on the roof of the Medical Building samples 50 cubic feet of air a minute, collecting particles on a filter. The filter is changed and examined several times a day.

The air sampler uses ordinary vacuum cleaner parts which were modified for the purpose by Allen Hobbs (3161).

Mounted on the roof of the Industrial Hygiene Building is a

scintillator head which feeds directly into an electronic counter, developed by Howard Sander (5150). The system provides a continuous record of background radiation level from fallout and other sources.

New equipment recently installed by the division will permit analysis of the fallout particles to determine the amount and type of radiation present.

Making the fallout surveys for the division are H. L. Rarrick, health physicist, Jerry Everett, chemist, and Dick Womelsduff, electronics technician.



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UNM Sheepskins Ready For Energetic Sandia Students

Spring commencement exercises at the University of New Mexico will find a number of Sandians going forward for Bachelor's or Master's degrees.

Harold M. Barnett (1263-1) will receive a MS in Electrical Engineering. Formerly he was awarded a Bachelor's degree in EE at Texas A. & M. College. He has been at Sandia seven years.

Aeronautical Engineering

Also receiving a Master's degree in Engineering will be Bruce Wilcox (5141-2). His Bachelor's degree was in Aeronautical Engineering, awarded at Rensselaer Polytechnic Institute. Bruce has been with the Corporation a year.

J. L. Martinez (5241) has completed work for his Master's degree

in secondary education. His Bachelor's degree in the same field was also from the University of New Mexico. He has worked for Sandia six years.

A Bachelor's degree in Mathematics will be given Robert Ryan (5241), who did part of his undergraduate study at San Diego State College. He has been with Sandia two years.

BS in Math

Also awarded a BS in Mathematics will be Julian R. Hoffman (5241). He already holds Bachelor's and Master's degrees in Romance Languages from the University of Iowa. Julian came to Sandia two years ago.

Completing work for a Bachelor's degree in English is Dick Volpe (2463). He previously attended Ohio Wesleyan University and the University of Denver, where he majored in art. Dick has been at Sandia six years.

Receiving a Master's degree in Electrical Engineering will be Robert L. O'Nan (1456), a Sandia employee for three years. He already holds a BS in EE from the University of Kansas.

Ray Reed (5131) will receive a Master's degree in Engineering Mechanics this June, but his degree will be from the University of Texas. He had already finished everything except his thesis when he came to work at Sandia a year and a half ago. His BS in Mechanical Engineering was from Texas A. & M. College.

The University of New Mexico will award a BS degree in Chemical Engineering to Robert L. King (2461-4). He was previously a pre-med student at Fort Hays State College. He started with the Corporation in September 1955.

Dr. M. J. Kelly— Bell Labs Head— Visits at Sandia

Dr. Mervin J. Kelly, President of the Bell Telephone Laboratories, visited Sandia Corporation in Albuquerque this week for a briefing on new developments in Sandia's Research and Development organizations.

A member of the Sandia Corporation Board of Directors, Dr. Kelly will visit Sandia's Livermore Branch next week.

Two Nationally Noted Speakers To Lecture Here

Dr. A. D. Franklin of the Ferroelectricity group of the National Bureau of Standards will address a special colloquium Tuesday in the basement conference room, Bldg. 802, beginning at 9:30 a. m. His subject will be "A Survey of Ferroelectric Phenomena." The meeting is being sponsored by Org. 5150.

On Wednesday the president of the Society for Non-destructive Testing, Carlton Hastings, will address the colloquium on the topic, "Modern Methods for Non-destructive Testing." The meeting will begin at 9:30 a. m. in the basement conference room, Bldg. 802, and is sponsored by Org. 1600.

Tickets will not be required for either meeting.



RADIOACTIVE CONTENT of test sample is analyzed by Dick Womelsduff (3161) in connection with fallout monitoring work being carried out by the Industrial Hygiene Division.

Congressional Group Hears Report By Sandian on Bomb Shelter Costs

Shelters built entirely below ground offer the greatest safety from nuclear attack, a Sandia Corporation scientist has reported to a congressional committee studying bomb shelters.

Luke J. Vortman, supervisor of the Experimental Design Section, Weapons Effects Department, was asked to appear before the House Government Operations Subcommittee in Washington, D. C., to recommend structure types and costs for a proposed nation-wide bomb shelter construction program.

The Sandia scientist has written numerous technical papers on the design of blast structures based upon his experiences during nuclear tests in Nevada in 1955 and 1957.

Shelter Costs

From his studies Mr. Vortman estimated shelter costs would range from \$100 to \$700 for each person protected. He emphasized that this figure would vary, depending on the type of shelter built, its location, and other factors.

Shelters should be classified according to the primary protection they will provide, such as blast or fallout shelters, or according to their adaptability to a family or larger group, Mr. Vortman said. "To place undue emphasis on any one attribute," he added, "is like selecting one

style of dress for all purposes, all climates and all people."

At least 60 million rural Americans must have fallout protection and blast protection will be needed by the remaining 110 million urban population, Mr. Vortman said. Of the total population about 40 per cent, or approximately 45 million, are in the urban work force and must have shelter both at home and on the job, he told the group.

Fallout Protection

He estimated that fallout protection alone would cost \$100 per person, or \$22 billion nation-wide. Fallout and blast protection for 25 pounds per square inch (psi) "overpressure" would amount to \$200, or \$37 billion and 100 psi plus fallout would be \$300 per person or \$53 billion nation-wide. A shelter providing fallout and blast protection for 500 psi would be \$700 a person or \$115 billion.

These costs could be reduced slightly, Mr. Vortman added, by utilizing such shelter as existing mines (if they have multiple entrances) and by modifying existing tunnels, large culverts, storm drains and sub-basements.

A more substantial method of reducing costs could be effected by the use of dual-purpose structures, Mr. Vortman suggested. He said that underground rooms could be designed for new homes which people would want as part of their homes and would not regard as something tacked on as a costly afterthought.

"We would like designs which would have utility in the less troubled times we hope for coming generations," Mr. Vortman concluded, "and not designs which a peaceful world would look upon as monuments to the threat of war."

Pres. McRae Speaks to NMMI Graduating Class

Sandia Corporation President James W. McRae has been invited to deliver the principle address at the New Mexico Military Institute commencement exercises.

He will speak Sunday morning at the ceremony in Roswell.

Health Care Plan Deadline June 2

June 2 is final day for sign-up for the Health Care Plan being offered Sandia employees. Already more than 2,800 employees are protected under its provisions.

Hereafter, sign-up will be allowed only during special periods. No date has been set for the next enrollment period.



SANDIA LAB NEWS PHOTOGRAPHER Bill Laskar (front center) received pointers from magazine experts (L to R) Margaret Bourke-White, LIFE; Bert Stern, New York free lancer; Larry Fried, PIX, Inc., and Morris Gordon, photography director, Western Electric. The occasion was the second annual Photojournalism Conference, co-sponsored by the University of Miami and American Society of Magazine Photographers at Coral Gables, Fla.



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Telephones Sandia Base
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Deadline
Friday noon of week
prior to publication



Member Association of Nuclear Editors, Border Council of Industrial Editors, and affiliated with International Council of Industrial Editors.

Take to High Road With Caution

Two types of events will be on the upswing beginning this weekend.

Vacations and automobile accidents will increase.

It has happened in the past and it will happen again this year. Summer time is auto accident time. When roads are good and visibility is good accidents increase.

This long weekend will produce a shocking accident record. The summer will continue to develop the record.

If some words had not yet been written, some cautions had not been made, some steps had not been taken to reduce accidents, we would do so now. But just about everything that can be said has been said.

There have been thoughtful statistical articles. There have been shockers. Accidents have been treated in a light vein and there have been blood and thunder expositions on the subject.

Just about the best thing a motorist can do when he starts out this weekend, or anytime, is to drive carefully, beware of the other fellow, know traffic laws and abide by them.

If it helps any you also might remember that last year 38,700 persons were killed and 2,525,000 were injured in auto accidents.

Sick List

The many friends of Ione Pierson (5142) wish her a speedy recovery. She is now recuperating at her home after hospitalization.

A speedy recovery is wished for Felix Miles and Jesus Lopez (both of 2234-1).

Wishes for a speedy recovery are sent to Benjamin Stricker (2152-1) and Henri Guerin (2153-2), both of whom are on the sick list.

Wishes for a speedy recovery are conveyed to A. F. Cone (5510), who underwent surgery this week.

Sorority Officer

Alice Preist (7423) was appointed state chaplain of her educational, social and philanthropic sorority, Epsilon Sigma Alpha.



Marie Syme, 7231

Take a Memo, Please

Do you know how much time you save by running? It takes three minutes and 54 seconds to walk from the east end of building 887 to the west end of building 800, using the paved streets (no short cuts). It takes one minute and 54 seconds to run the same distance. IF you arrive there, you save two minutes.

Congratulations

Born to:

Mr. and Mrs. Richard C. O'Boyle (7411-2) a daughter, Linda Ruth, on May 9.

Mr. and Mrs. J. C. Zimmerman (1224) a son, John Kyle, on Apr. 10.

Mr. and Mrs. Lyle Davis (2461-3) a daughter, Geri Eileen, on May 4.

Mr. and Mrs. Donald E. Yearout (1263-1) a son on May 15.

Mr. and Mrs. Ralph Plumlee (5150) a son, Geoffrey Stephen, on May 10. Lynnette is on leave from 3154.

Mr. and Mrs. Ted Holland (5142) a son, Craig Robert, on May 9.

Mr. and Mrs. Don Hosterman (7123-3) a son, Scott Donald, on May 14.

Mr. and Mrs. W. R. Wood (5215) a daughter, Karen Renee, on May 7.

Mr. and Mrs. Don Owen (5125) a son, Mathew Knox, on May 15.

Mr. and Mrs. C. B. Batsel (4321) a daughter, Margaret, on May 21.

Mr. and Mrs. Roy Baker (1541) a son, David Michael, on May 15.

Mr. and Mrs. Bob Ruttle (2111-3) a daughter, Gloria Ann, on May 2.

Mr. and Mrs. George Reidel (2551) a son, Steven Twain, on May 1.

Sympathy

To C. L. Janus (2723-3) for the death of his mother in Chicago on May 9.

To J. A. Kersey (1622) for the death of his father-in-law in Richmond, Calif., on May 16.

To James W. Stapp (1611) for the death of his mother at Vero Beach, Fla., on May 6.

G. J. Hildebrandt (2552) for the death of his mother in Chicago last week.

"Have Gunn..."

Friends and co-workers of Hal Gunn (153) held a surprise buffet lunch for him recently marking his 10 years at Sandia. Entertainment at the noon hour affair included a short play entitled "Have Gunn Will Travel."

Surprise Buffet

Department 7240 personnel entertained with a surprise buffet-dance at the Coronado Club May 16 in honor of B. H. Bright, who recently transferred to Department 2520.

Weddings and Engagements

Carmen Garcia has chosen Saturday for her marriage to George Drebing, Jr., of Albuquerque, at Our Lady of Fatima Church. After a short trip to Colorado, the couple will be at home at 424 San Pedro Ave. NE.

Carmen has been at Sandia since December 1956 and is at 7225-6 assigned to 1611.



Miss Acker

Miss Garcia

June 21 has been set for the wedding of Bernadette Acker and Dennis Adkins. The ceremony will be held at the Holy Ghost Church followed by a honeymoon trip to California.

"Bernie" has been with 3153 since last December. Dennis is in division 1613 and has worked for Sandia two years.

Mr. and Mrs. Roque Feliciano Jr., who were married May 8, have returned from their honey-



Mr. and Mrs. Feliciano

moon in Las Vegas, Nev., and are making their home at 10804 East Central.

Roque is employed in organization 2711.

The marriage of Betty Chaney to Bill Nelson of Albuquerque in a ceremony in Bernalillo was announced recently.

Betty has been a compositor in 7121-1 since January 1955.

Making their home at 1305 Coal SE are John P. Myers and his bride, the former Priscilla Quintana. The couple was married at the Holy Cross Catholic Church in Santa Cruz, N. M., and took a honeymoon trip to Pennsylvania.

Priscilla (2225) has been at Sandia a little over a year.

Mary Beth Henry (2221) and Jim Easton exchanged marriage vows on May 17 at the Asbury Methodist Church. The couple honeymooned at Grand Canyon.

Mary Beth has been at Sandia since December 1954.

New Son

Mr. and Mrs. J. R. Cejka (2511) have welcomed a son into their home. The adopted baby, named Erick John, was born May 9.

Sandianotes . . .

Dog Handlers Exhibit Championship 'Pooches' in New Mexico Competition

Annual dog shows held this month in Albuquerque and Santa Fe resulted in championship titles for two dogs owned by Sandians.

Louise "Pat" Patterson (7223-1) entered four of her Welsh Terriers in the shows. Birr Wind Witch finished her championship requirements and was named Best of Opposite Sex. Birr Bright Begay and Birr Sundance each received three points.

Garibars Royalson, an English Springer Spaniel owned by Arthur W. Barth (1442), was named Best of Breed in both shows and is now a champion.

Sandia Radio Amateurs Help Carry Out Mission of Operation Alert

Operation Alert 1958, held by the Civil Defense organization in Albuquerque, had numerous Sandians successfully carrying out problems as members of the Radio Amateur Civilian Emergency Service.

After the alert the radio operators set up and maintained a communications network between six evacuation areas; they tested out a two-meter net between Santa Fe and field headquarters at San Ysidro, and they established contact with Santa Fe on 80 meters to handle essential drill traffic for civil defense purposes.

Participating in the two-day test alert were: Carl Franz (1471), Willie Petty (5513), James Stueber (5224), Brian Ward (1262), Tom Marshall (1265), Dean Snyder (2131).

Burford Eagan (1224), F. E. Anderson (1651), Vaughn Nogle (1413), Norman Elliott (1423),

Johnnie Price (1413), Jack Halliday (1411), Virginia Sims (2232), Paul Scates (2711).

J. H. Harrell (1614), Elmer Morterud (5523), Dan Yearout (1455), Bob Lindsey (1544), Charles Butler (7111), J. B. Braffett (1413) and Jim Lareau (1626).

Lions Club Invites Sandia Men to Join New Organization

Northeast Albuquerque Lions Club has recently reorganized and is now accepting applications for membership, according to Lou Stam (1245), one of the club's organizers.

The club invites men who are interested in learning more about the group to a dinner meeting on Wednesday, June 11, at 7:30 p.m. at the La Mesa Presbyterian Church, 7401 Copper Ave. NE.

Sandianotes . . .

Hardluck Plagues Livermore Fishing Expedition; Prizewinner Escapes

When the annual Livermore Bass Derby, sponsored by the Rad Lab Recreation Association, rolled around recently, "Smokey" Maxwell (8113-1) was ready for a pleasant day's fishing.

Then Ferne Saylor (8113-2), "Cile" McIntosh (8212-3), and Diane Martin (8110) asked if they could go along and learn all about fishing. By the time the two-car caravan took off for Prince Harbor, about 35 miles from Livermore, Diane's son Bill and his friend had joined the party.

This added up to six people in one boat. A little worried, but still looking forward to a quiet day of fishing, Smokey seated everyone in their proper places, explained the necessary safety precautions, and took off.

As Smokey tells it: "Within the next 20 minutes one anchor was thrown overboard without being

connected to the boat, one casting rod and reel went to the bottom of the lake, five lines became tangled, and three fish measuring below the legal limit were caught and thrown back.

"Within the next hour a second anchor was lost overboard, one 22-inch bass weighing four pounds was caught by yours truly, taken to shore, registered and weighed, only to be lost when it was dropped over the side without tying the line to the boat, and seven more bass were caught, none of them legal size."

Smokey went home early, after getting his car stuck in the mud and being pushed out by his crew. The rest stayed for awarding of prizes.

Smokey won a trout reel for his missing, but registered, bass. He plans to try it out as soon as possible—alone.

Need Blood

Friends of ex-Sandian, Le Ora Church (former division secretary in 1262), report that her three-year-old son Larry developed leukemia last December and his condition has become progressively worse. He has had to have many blood transfusions and the number will be increasing. They ask that blood donations be made in his name at the Southwest Blood Bank, 710 Central SE.

Wins Writing Award

First prize in the Lena M. Todd Memorial narrative story contest at the University of New Mexico was won by Karen Quelle, daughter of R. A. Quelle (3152-1).

Karen's story "Other Places; Other Things" was selected as the best story in the student literary magazine by Southwestern writer Paul Horgan. She is a sophomore at the university and plans a creative writing career.

Blue Ribbon Iris

Lucille Long (2222) took a blue ribbon for her Barbara Luddy pink iris at the annual Iris Show, held this month at the Horticultural Building of the State Fair Grounds.



COUNCILMAN for the city of Westmoreland, Calif., is James Hall, Jr., Security Inspector for Salton Sea Test Base. Recently elected, Councilman Hall is serving a four-year term.

Wedding Anniversaries

Celebrating their 31st wedding anniversary on Sunday will be Frances (7423) and Wilbur (5215) Sheaffer.

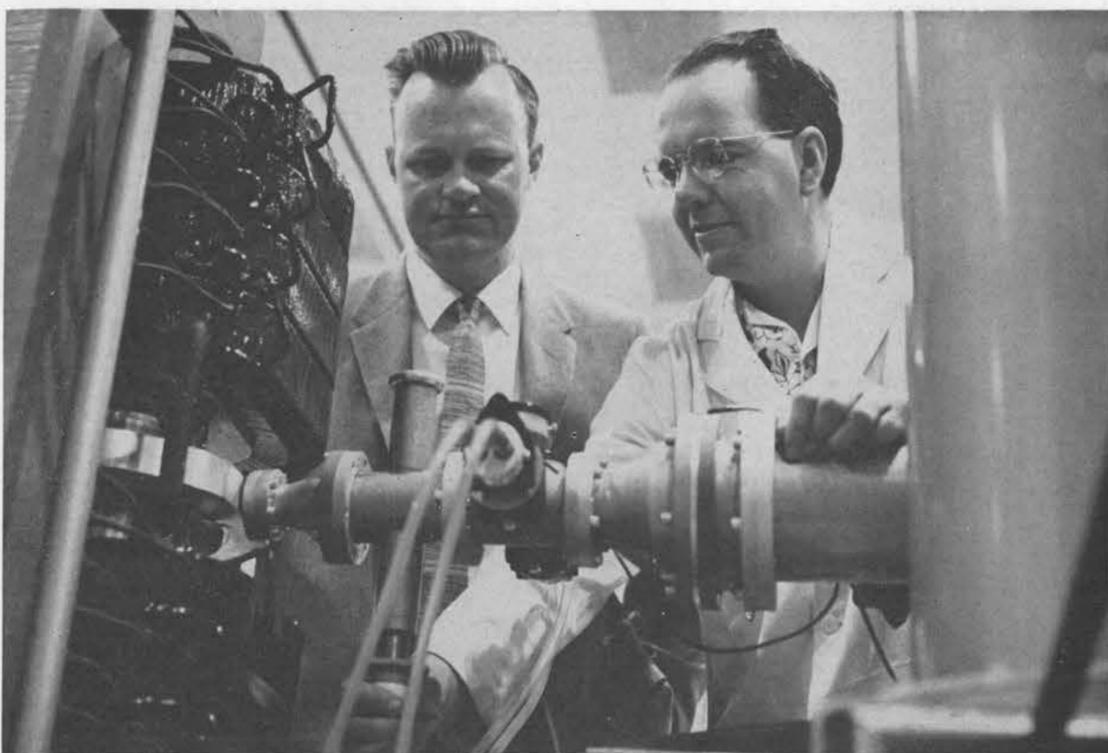
Sarah and Bill Brady (7424) will observe their 10th anniversary on June 5.

Mr. and Mrs. Bonifacio Lopez (2711-6) celebrated their 12th wedding anniversary on May 21. Bonifacio presented his wife with a lovely new set of rings.

Celebrating their 24th wedding anniversary on May 26 were Hugh H. Howe (2461-3) and her husband. The couple observed the big day while visiting friends and relatives in the St. Louis area.

Fisherman's Luck

After discovering a special carp lure in his tackle box, Bob Davis (2414) took off for Elephant Butte Lake, where he had such incredible luck that he went on to Lake Mead in Nevada for two weeks, hoping for the same results.



ADJUSTING A QUARTZ VIEWER for Frank Hudson (left) is Asher Kantz. This is the point where the proton beam enters the analyzing magnet at left. Radiation effect on various materials can be studied.

Completed Van de Graaff Lab Ready For Radiation Studies

Completion of Sandia's newest research facility, the Van de Graaff accelerator laboratory in Bldg. 803, was marked by two programs last week.

On Friday Corporation officials were hosts to AEC personnel and University faculty members. On the following afternoon Sandia employees who have been connected with the facility toured the \$300,000 laboratory.

Since the first Van de Graaff accelerator was developed in 1929 it has been used extensively by technical people for nuclear research. Information obtained from such tests has gone into the design of bombs and reactors. In the post war period it has been also used in radiation damage study and for radiation processing.

Research Studies

The instrument will be used at Sandia in research studies in the radiation effects program. The generator can accelerate protons, deuterons and electrons to energies as high as two million volts. These single types of particles can be used to bombard materials directly at controlled energies and intensities or they may be used to produce X-rays or neutrons.

Direct bombardment is expected to produce molecular changes, or changes in energy levels, within subjected materials. These studies will provide background information for the prediction of radiation effects in materials, parts and components from which means to alleviate radiation damage could be developed.

Fundamental Research

According to Richard Claassen, Physical Sciences Department manager, the initial research project for the accelerator will be to irradiate semi-conductors and plastics with neutrons.

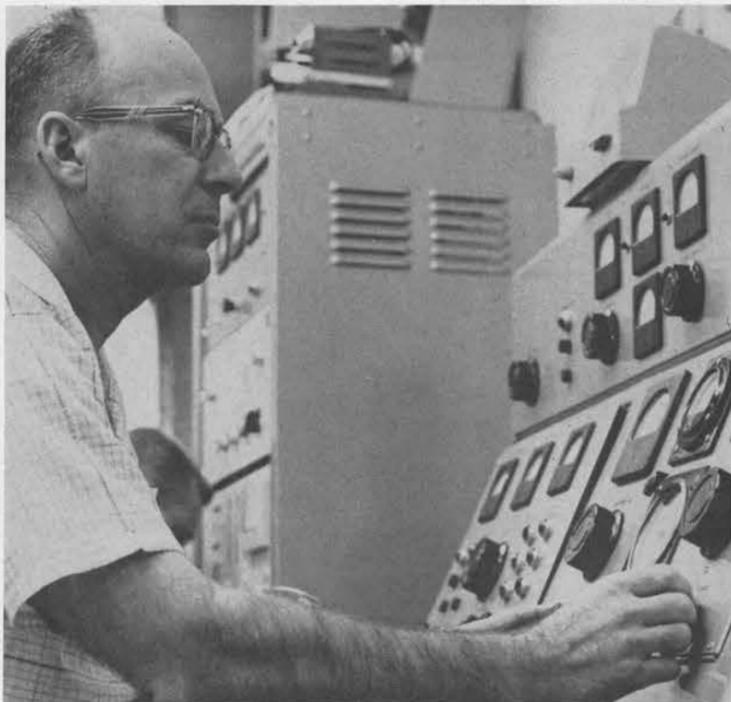
This is one of eight fields of fundamental research in Department 5150.

Sandia's Van de Graaff laboratory, containing 3000 square feet of floor space, is located outside of the Tech Area, just west of Gate 1. The room containing the accelerator is shielded by concrete walls up to four feet thick, although the rest of the building is of conventional construction.

Mr. Claassen and Frank Hudson, Physical Chemistry Division supervisor, both worked on thesis problems using Van de Graaff generators. Mr. Claassen received his PhD in Physics at the University of Minnesota and Mr. Hudson's Doctor's degree in Physical Chemistry was from Notre Dame University.

Laboratory Personnel

Working in the laboratory are: Asher Kantz, who had experience with the Linear accelerator at Stanford University while obtaining his Doctor's degree; Irving Auerbach, who holds a PhD in



MONITORING ACCELERATOR when it is in operation is Elmo Hirni. This control panel is located outside of the concrete "vault" housing the Van de Graaff. Sensitive instruments can be used.

Physical Chemistry from Ohio State University, has worked on radiation chemistry of polymers for several years; Herman Stein, who has a MS in Physics, and Dick Berner, a BS in Physics. Completing the staff are staff associates: Floyd McIver, an electronics man from Valparaiso Technical Institute, and Elmo Hirni, who spent several weeks at the accelerator manufacturer's plant to learn about its operation and maintenance.

Employment Inquiries Should Be Referred To Proper Division

Sandia employees have been asked by the Employment Division to refrain from extending job offers to employees of the AEC and other contractors.

The division reports that an increasing number of cases have arisen where Sandia employees have actively negotiated with AEC and contractor employees for employment at Sandia, and that this practice "has caused the Corporation some embarrassment and certainly is inconsistent with the mutual cooperative agreement we have with these other organizations."

The division urged that all employment inquiries should be referred to the Employment Division (3151) at Sandia, or the Personnel Division (8212) at Livermore for action as may be appropriate in each case.

Local Author to Speak At Sanado Women's Club Meeting Planned June 3

Erna Fergusson, noted Albuquerque author, will discuss "My Albuquerque" at a dessert tea planned by the Sanado Women's Club at the Coronado Club June 3.

The tea will begin at 2 p. m. with Mrs. Thomas Pace officiating. Mrs. Robert Hopper and Mrs. William Sharp are in charge of arrangements and the speaker will be introduced by Mrs. E. L. Mahuron.

Erna Fergusson is a native of Albuquerque, her family having settled here in the middle of the last century. She received her BA degree from the University of New Mexico, an MA at Columbia University and an honorary PhD at UNM.

Membership in the club is open to all wives of members of the Coronado Club. Reservations for the dessert tea may be made by post cards addressed to Mrs. Richard Othmer, 2109 Hannett N.E. Checks for dues may be mailed to Mrs. J. E. Gross at 1208 Florida N.E.

Dr. Bliss Speaks

Sandia Corporation Medical Director Dr. Sheldon Bliss spoke before a Western Electric medical conference in New York earlier this month.

His subject was "The Relative Significance of Man-Made Radiation."



STEEL TANK, filled with carbon dioxide and nitrogen under high pressure, is checked by Herman Stein. The electric system enclosed in this tank permits a potential of more than two million volts.

Val Hoffmann Retires From Sandia June 1

Retirement from Sandia Corporation will mark the start of a writing career for "Val" Hoffmann (1621-1), who has been preparing materials for manuals during his six years here.



Val Hoffmann

He has been doing historical research in connection with the experiences of his mother's wagon train trip from Minnesota to the Pacific Northwest in the period before the Civil War. Now Mr. Hoffmann will have the time to get this material into shape for publication.

The Hoffmanns will continue to make their home at 2308 General Marshall NE, but in early June they will visit their daughter and her family in Oklahoma City. Mr. Hoffmann will take advantage of the trip to attend a three-day Writers' Conference at the University of Oklahoma.

Later they will spend some time at their favorite fishing streams in the state of Washington.

Specially Priced Travelers Cheques Ready for Employees

Travelers Cheques, readily negotiable anywhere, provide a convenient and safe way to carry vacation funds. They are available to Corporation employees for personal use at reduced prices from Financial Division (6021).

The service charge to employees is one-third of one per cent of the face value of the cheques: 33 cents for \$100. Cheques are available in denominations of \$20, \$50 and \$100.

Employees may exchange their pay checks, vacation advance checks, or Credit Union checks for Travelers Cheques. Personal checks will also be cashed for purchase of cheques provided the following approvals are obtained: up to \$100, division supervisor; up to \$300, department manager; up to \$500, superintendent; up to \$1,000, general organization head.

To arrange a convenient time to purchase Travelers Cheques, employees should call the teller in advance on ext. 32147. Financial Division tellers are located in Bldg. 626.

Father's Day Buffet Tops Coronado Club Events Next 2 Weeks

Reservations are now being accepted at the Coronado Club for the annual Father's Day buffet June 15. Because of the large number of reservations expected, only the first 350 will be accepted.

The buffet will begin at 5 and continue to 7. Dance music will be provided by Paul Muench and his orchestra from 6 to 10. Admission will be \$2.10 for members and \$2.60 for guests.

Sandia Employee Softball Standings

"A" League		
Team	Wins	Losses
2500-I	3	0
3100	3	0
7400-II	2	1
1400	1	1
AEC	1	1
4100	1	2
4300	1	2
1200-II	0	3
7200	0	3
"B" League		
Team	Wins	Losses
5500	3	0
7400-I	3	1
2100	2	1
2400	2	1
5200	2	1
1200-I	1	1
5100	1	1
2500-II	0	2
1600	0	3
2700	0	3



R. M. Fegan



P. Syroid



Mrs. D. L. Miller



A. F. Cone



N. E. Hansen



F. F. Taylor



J. N. Hansen



G. A. Arnot, Jr.

Coronado Club Members To Elect New Directors June 9

The ninth annual meeting for active members of the Coronado Club will be held June 9 beginning at 7 p. m. in the club's ballroom.

Major business of the meeting will be the election of a new board of directors.

Those eligible to vote are active members of the club who are not delinquent in payment of their dues and who have not joined or rejoined the club within 10 days preceding the meeting.

Free refreshments will be served

at the conclusion of the meeting.

A suggested slate of candidates has been prepared by the club's nominating committee for the eight directors' positions open.

Those suggested are: Robert M. Fegan (AEC), G. A. Arnot, Jr. (1456-4), J. N. Hansen (7411), A. F. Cone (5510), Mrs. D. L. Miller (7220), Paul Syroid (1613), N. E. Hansen (7216) and F. F. Taylor (3123).

Other nominations will be accepted from the floor.

Summer Classes to Be Offered at KAFB

Kirtland AFB Education Section will offer 12 high school courses in a summer session, which civilians may attend on a space available basis.

The classes began this week and will continue until Sept. 4.

Qualified high school teachers will instruct the following courses: American History, 9th Grade English II, Review of Grammar, Review Arithmetic, Algebra I, Algebra II, Advanced Algebra, Slide Rule, Trigonometry, Typing, Book-keeping and Accounting, and Physics.

All classes will meet two nights a week and last two hours each session except typing, which will meet each night Monday through Thursday.

Information may be obtained from M/Sgt. Frank J. Biro, Bldg. T-460 at Kirtland.

K. E. Fields to Resign Position As AEC's General Manager July 1

K. E. Fields, General Manager of the Atomic Energy Commission, will resign his post effective July 1, it was announced by Lewis L. Strauss, Chairman of the AEC.

Mr. Fields, a retired Brigadier General (USA) spent several years in New Mexico with the AEC's Division of Military Applications, during which he was in charge of construction for the expansion of the technical area at Los Alamos and Sandia Laboratory.

Later, as Director of the Division of Military Application he was the Washington staff officer responsible for the field work of the Albuquerque Operations Office. He has been a frequent visitor to New Mexico since his assignment to Washington.



Gen. K. E. Fields

Top High School Science Students Visit Sandia on Armed Forces Day

Outstanding high school science students from the northern half of the state were invited to Albuquerque by Kirtland Air Force Base to visit exhibits at Kirtland and Sandia Base during Armed Forces Day.

Saturday, May 17, the students heard informal addresses by James W. McRae, President of Sandia Corporation and Maj. Gen. Louis T. Heath, Commander of the Field Command, Armed Forces Special Weapons Project at Sandia Base.

Later the group toured the Sandia Corporation-Sandia Base exhibit and later saw movies of some of Sandia Corporation's activities and heard a talk by Stuart C.

Hight, Director of Research (5100).

Sandia guides for the group were Paul Syroid (1613) and Frank Bell (3123).

First Grammar Class Completes Course

Students in Sandia Corporation's first grammar review class feted their instructors, W. F. Carstens (7223) and Jim Fife (7223-1), last Friday at conclusion of the two month course.

The pilot course, held at noon-hour three days a week, was limited to 25 persons and was arranged by Staff Training and Education Section.

Sack Warfare Declared Against Critics; United Chemises Overwhelm Opposition



Susan King (8212-3), "They're all the rage here in California."



Alma Jones (8212-3), "They're different, besides it's the style."

In response to an overwhelming wave of masculine disapproval several Livermore Branch girls agreed recently to break out their favorite chemises and wear them on the same day. Working on the principle that there is safety in numbers, they showed up at work in the latest styles and waited for comments.

Comments they got! Comments that ranged from "Ugh," to "Umm," to "Wow!" As the day ended, the girls had these things to say about the latest fashion. . . .



Claire Grubbs (8221-3), "I don't like them really, just lack the courage of my convictions."



JOAN NIELSEN (8222-2), (left), "They're comfortable." Jerre Clark (8222), "Cool, easy to work in, no binding."



Marguerite Mihoevich (8132), "They really attract attention."



MARGUERITE PAREDES (8111), (left), "They're stylish." Diane Martin (8110), (center), "Next year I'll be adjusted to this year's high fashion trend." Nancy Imlig (8213-2), "Too short, but . . ."



BARBARA STEWARD (8213), (left), "When in Rome . . ." Eddie Berry (8211-1), (center), "Hides the waistline." Lorraine George (8211-1), "Everyone's agin 'em so I'm determined to wear them."



Delfino Jinzo 2235 June 9, 1948
Herbert W. Gentry 2211 June 1, 1948
Jimmie R. Burnside 2152 June 7, 1948
Frank N. Gurule 7319 June 1, 1948



Margaret L. Wetzel 2461 June 7, 1948
Elliott J. Dadian 4361 June 1, 1948
Beulah Sutherland 5241 June 7, 1948
Bernard J. Myer 2442 June 2, 1948

Service Awards
10 YEAR PINS



Donald E. Fitchhorn 7422 June 7, 1948
Robert G. McBride 2473 June 9, 1948
David V. Doleshal 2713 June 7, 1948
Delia S. Stites 2553 June 1, 1948



L. C. Hilderbrand 7232 June 7, 1948
Robley E. Irvin 7111 June 2, 1948
Bill W. Scott 7214 June 3, 1948
William W. Arris 7327 June 7, 1948

Five Year Awards

June 1-6
Joe D. Benton 8122, Robert E. Dewhurst 7232, Glenn R. Elliott 1542, Ernie Gurule 1613, Frank J. Shingola 2742, A. H. Archuleta 2221, Robert W. Hunke 1245, Howard S. Bluestein 2531, Catherine K. Helm 3161, Frank P. Hudson 5150, and G. W. Anderson, Jr. 5230.

June 7-12
Charles B. Inberg 4113, Elvin M. Beezley 7232, William C. Colborne 4122, Dorothy G. Douglas 2713, Peter E. Anders 5214, Bobby G. Edwards 5214.

Leonard G. Parsons 7316, Helen M. Schmuck 2461, Mary Lou Clark 4131, Leopoldo A. Armijo 2163, Roy T. Lovin 2414, Antonio Skender 7232, Maggie A. Wheeler 8221, and James O. Avis 7241.

Two Year Certificates

June 1-6
Robert T. Derick 7315, William E. Smith 1263, Melvin M. Newsom 1264, Julian R. Hoffman 5241, Cherry Lou Burns 3125, Barbara E. Steward 8212, Charles A. Sandoval 1462, Merrill A. Palmer 5232, William W. Burns 1411, George E. Overturf 1542, M. L. Quisenberry

7411, Robert H. Austin 7316, Frank L. King, Jr. 2533, Agnes I. Titer 3122, J. N. Edgeington, Jr. 1471, John H. Lloyd 1264, William L. Lemmon 1411, Lynn T. Ritchie 5242.

Robert E. Hoffer 8114, Frank C. Comiskey 7242, Kathleen R. Morgan 7226, Edith E. Lockwood 7225, Charles S. Johnson 7113, Lewis W. McEwen 1224, James E. Matthews 5521, Willie C. Montano 2474, and R. Gabaldon, Jr. 2462.

June 7-12
Johnny M. Canfield 1464, Everett W. Galer 5243, Frederick H. Hannah 3164, Albert D. Ford, Jr. 8132, William A. Keeler 1282, Leon J. Keck 5255, Leslie E. Kaff 1215.

James T. Boag 1473, Wilson T. Bot-er 5142, W. M. Sigmon, Jr. 1612, Jack E. Houston 1473, H. E. Schildknecht 1472, Sam L. Jeffers 1218, Raymond Pena 7411.

Lester H. Ptacek 1452, Donald E. Fjelseth 1621, Jack W. Tennant 7412, Gary L. Sheldon 8132, Tim F. Elliott 7322, Bob O. Wood 7326, Polly Ann Pine 4333, Daniel E. Power 5241.

Warren Nilchee 2414, Doris N. Brothers 7225, Orvalle W. Graham 3211, Fred A. Duimstra 1474, Peter D. Evanoff 1472, Lester L. Brown 7122, Thomas O. Taylor 7314, and Dolores V. Chavez 4315.

Welcome Newcomers

May 12-23

Albuquerque	
Dixie S. Baca	7225
Ruth Birdseye	7225
Alice T. Boggs	2471
Nina M. Clark	7225
Leona B. Cooper	2222
Norman J. Cowden	7225
Martha A. Couch	2553
Shirley A. Dean	7225
Louise K. Dickerson	7225
Mary Alice Duran	2474
Roy L. Hay	2461
Warner H. Jones, Jr.	4135
Ellen E. Martin	2711
Ann A. McClelland	1621
Lawrence E. Null	7412
Barbara T. Reis	7225
Barbara N. Rush	2464
L. Calvin Sexton, Jr.	7225
Helen M. Spriggs	2531
Glenda C. West	3151
M. Ann Whipple	4333
Dolores F. York	1246
William E. Young	
California	
Barbara K. Atkinson, Oakland	8114-2
Leona H. Ewing, Pleasanton	8221-3
Mary M. Inouye, Livermore	8212-3
Loraine K. Miles, Livermore	8222-2
John F. Thorp, S. San Francisco	8212-1
Dolores D. Van Noy, Livermore	8211
Colorado	
Thomas E. Latta, Grand Junction	5113
Michigan	
Robert E. Ingram, Athens	2553
Rehired	
Marie T. Ryanczak	4141
Katherine A. Scott	7226
Dorothea C. Taunton	7225
Returned from Leave	
Marcella C. Noble	2461
Theodora M. Martinez	7233
John W. Arnold, Sulphur, La.	5142



ALL IN THE FAMILY—Mrs. Frank Moon admires Eagle Scout pin awarded her husband in the same ceremony in which son, Dale, won a similar honor. Father and son work jointly on tests.

Frank Moon Earns Eagle Scout Award; 34 Years Since His Last Merit Badge

When young Dale Moon went before his Explorer Scout Troop 286 to receive an Eagle badge last week to his surprise his father, Frank (4360), received an identical award.

A year ago Frank decided it would be fun to finish the requirements for the high award. When he left scouting back in 1924 in Macomb, Ill., he lacked two merit badges of the 21 required for the eagle badge.

First there was a two day hunt throughout Albuquerque for his 1916 issue scout book, which had been sold from youngster to youngster. It was located and Frank determined which tests he had already passed.

Cramming—Study

Then there was cramming from library books in order to pass tests in citizenship in home and community and citizenship in nation-world citizen.

The forestry badge required some hard work—he and his 14-year-old son and a friend built an eight foot wide fire lane 300 feet long in the Jemez Mountains. This feat was accomplished in four hours with shovels.

Personal Fitness

The most difficult test for Frank was passing the personal fitness requirement. The rule book says the individual must run the mile in seven minutes "if over age 14." Frank figured seven and one-half minutes was good enough for a man of 51.

Since Frank has been in choir work for some 30 years, the music badge was a snap.

The biggest job was keeping Frank's prospective award a secret from Dale. The youngster has been in scouting work since he was eight.

Perfect Game Pitched In Sandia Softball

Cliff Rudy (2443) pitched a perfect game against the 1600 team, winning the game 7 to 0. Cliff struck out 12 batters and no balls were hit out of the infield. The game was played May 19.

On May 21 Rudy engaged in a pitcher's duel with George Kinoshita (1264). George let go four hits and Rudy allowed two hits. The game ended with a score of 2 to 1 in favor of the 2400 team.



EAGLE SCOUT AWARDS, presented by Explorer Troop 388, found Bruno Paoletti (2152) and his wife on hand to congratulate their son. Bruno is the assistant post advisor.

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CLASSIFIED ADVERTISING
Deadline: Friday noon prior to week of publication unless changed by holiday.
RULES
1. Limit: 20 words
2. One ad per issue per person
3. Must be submitted in writing
4. Use home telephone numbers
5. For Sandia Corporation and AEC employees only
6. No commercial ads, please
7. Include name and organization.

FOR SALE
COMPLETE BED and new mattress, never been used, \$20 or best offer. Radwanski, AL 6-2468, 336 Tennessee NE.
AIR CONDITIONERS, 1 1/2 ton Mathis and 3/4 ton Philco refrigerated units, sell both for \$200. Lorenzo, AX 9-0347 after 5, 9604 Apache NE.
DEEP FREEZE, Philco 13 ft. chest type, needs minor repair, \$75. Koetter, AM 8-1009, 1108 Indiana SE.
OLDS TROMBONE w/case and mute, nearly new, \$90; '55 German Opel Sedan, radio, \$950. Hynes, AX 9-0001 after 5.
CALORIC GAS STOVE, \$35. Yates, AL 5-9194 after 5.
DINING ROOM TABLE, mahogany, w/extension and six matching chairs, \$65. Russo, AM 8-1267.
6 ROOM HOUSE, two bedrooms, den, dining room, etc., in the La Hacienda development, every improvement. Kinsley, AL 5-4919, 1221 Morningside NE.
PORTABLE ICEBOX, \$5. Flowers, AL6-1656.
TWO HOUSES, one 3 bedroom and one 4 bedroom; 1 3/4 baths, sprinklers, carpets and drapes, many other extras. Jackson, AX 9-3156.
RECORD CABINET, walnut finish, two shelves. Henry, AL 6-2467.
'52 PLYMOUTH, 2-door, R&H, clean, \$300 cash, terms for slightly more. Cameron, AX 9-6576.
'52 HARLEY DAVIDSON '74'; '56 Maico motorcycle; .300 Savage, archer's bow, Detron Metal Detector, sell or trade. Krzyzkowski, AL 5-1991, 333 Espanola NE.

2 BRM HOUSE, den, air-conditioning, fireplace, landscaped, walled, patio, garage, \$700 down, \$13,550 total. Jones, CH 7-8642, 2726 San Joaquin SE.

'57 FORD push button radio, transistor and aerial, \$25. Gillespie, AX 9-4480 after 5.

.22 CALIBER REVOLVER, Smith and Wesson K-22, special grips, hammer and trigger, fired less than 100 rounds, \$65. Shunny, AX 9-2787.

'55 BUICK Special, 2 door Riviera, R&H, air conditioning, all power. Fischer, nights, Ext. 23136, days & weekends, 2110 Lead SE.

LUGGAGE RACK, car top, \$6. Burns, 1319 Dartmouth Dr. NE.

4 BRM HOUSE, 1 3/4 baths, garage, patio, electric range, drapes, carpeting, walled, landscaped, GI or FHA loan. Chase, AX 9-4982, 1212 Dorothy NE.

TRAILER 2-wheel camper, 6 ft. w/cooking and sleeping facilities, \$247 or will trade. Padilla, AL 6-0701.

2 BRM TRAILER w/automatic washer, will sell, trade or rent. Frock, AL 6-5684.

WARD POWER KRAFT, 3/4 h.p., 1725 rpm, 60 cycle. Pitti, AL 6-1629, 836 Georgia SE.

36" GAS RANGE, \$65; chrome dinette set, \$15. Montgomery, AL 6-7753.

LEATHERETTE COUCH, washable, green, \$25; straight-backed chair, needs upholstery, \$3.50; new muffler for Plymouth 6-cylinder, \$4. Hogue, AX 9-1807.

STAUFFER OFFICE gym, w/automatic timer, save \$100. Braffett, CH 2-5429.

KROEHLER SOFA, grey frieze, 2-cushion, \$25. Sherwin, AL 5-8866.

CAR COOLER, evaporative window type, \$10; Teeter-Babe jumper, \$3. Stixrud, DI 4-7873.

'48 CHEVROLET Fleetline, 2 door, R&H, turn signals, \$225. Davis, AL 6-4962 after 5, 1108 Alcazar NE.

BATHROOM SET, shower, stool, lavatory, valves, \$40; washing machine motors, \$5 each; 6v siren, driving lights, \$10; altimeter, \$5. Meissen, 232 Utah NE.

1 BRM HOME, large den, fireplace, newly decorated, attached garage, \$9,800, \$1,000 down. Stiver, AM 8-0929, 429 General Patch NE.

'46 PLYMOUTH club coupe, '55 engine, R&H, dependable, \$150. Campbell, CH 2-7347, 1708 Buena Vista Dr. SE.

NEXT DEADLINE FOR SHOPPING CENTER ADS Friday Noon, June 6

STEAMER TRUNK, fair condition, \$10. Browning, AX 9-6255.

NEW UNITED 3-4-5-6-7 variable power rifle scope, wide field, \$31. Brown, AM 8-0215.

PLATFORM ROCKER, bedspread, w/2 pair matching drapes; 16" wire fencing, bathinette, teeter-babe, car seat, training chair. Meyers, AL 6-2372, 1016 Dakota SE.

'57 FRIGIKING auto air conditioner, cost \$368, sell for \$190. Ward, AL 6-9286, 2909 Valencia NE.

STAINLESS STEEL BOAT, 16 ft., and trailer, \$295. Pfeffer, AL 6-3200, 533 Arizona SE.

PARROT, Amazon Redhead, complete w/cage. Reed, AX 9-1608, 9601 Hannett NE.

ALUMINUM AWNING, Zepher, angle style, 24" H x 48" D x 64" wide, white enamel w/green trim. \$15. Cundy, AL 5-0381.

'58 MOTORCYCLE, Triumph Competitor Cub, \$175 cash for equity, take over payments, may be refinanced. Walker, CH 2-5701.

SHORT HANDLE shovel, post hole digger, pitch fork, electric motor, paper cutter, no reasonable offer refused. Fletcher, AL 5-0797 after 5.

HEALTH COURSE, 8 1/2 months at American Health Studio, \$15. Martin, Ext. 47162.

'49 MERCURY, 2 door, trade for boat and motor or guns of same value. Pans, AL 5-2990.

HAND PAINTINGS, oil, miscellaneous sizes, will sell or trade for anything of value. Shelton, AL 5-1887 after 5.

'57 PLYMOUTH Belvedere, 4-door hardtop, fully equipped, reasonably priced, must see to appreciate. Hapsas, AX 9-5345 after 5.

MONTGOMERY WARD 9 cu. ft. refrigerator, \$95; Maytag Washer, wringer type, \$65; PAVELKO, CH 6-1670 noon and evenings.

CHROME DINETTE, living room set, 7' Norge refrigerator, 35 lb. freezer. Sweatman, Ext. 31187, 3035-33rd Pl., Sandia Base.

POWER MOWER, 4-cycle reel-type, \$30; playpen, \$5; baby scale, \$1; Booodle buggy, \$12.50. Wiesch, AL 6-7236.

GAS RANGE, \$40; lightweight rug, approx. 7 1/2 x 12 ft., \$10; 6-year-old size cotton mattress, \$5. Peterson, AX 9-5921.

ENGLISH BICYCLE, Man's Raleigh No-weight gears, front and rear brakes and lights, \$30. Farner, AX 9-6007.

BOXER PUPPIES, AKC registered, 3 male and 3 female, \$35 choice. Gibson, CH 2-4296, 429 63rd NW.

'57 GOLIATH Station wagon, 2 cylinder, fuel injection. Edwards, AX 9-5496.

'57 MOTORCYCLE, 250 CC Maico. Miller, Ext. 3-7282.

LOTS: C-6, C-8, C-29, D-10, H-1, H-2, K-4, K-5, K-6, K-7 in Skyland, South Highway 10, \$695, discount for cash. Biigel, AX 9-7318.

3 BRM HOUSE, 14 x 26 living room, fireplace, separate DR, 1 3/4 baths, sunken patio, 2-car garage, carpeting. Stricker, AX 9-5596, 10709 Snow Heights Blvd. NE.

LUGGAGE: 2 Wardrobe trunks, \$15 each; Steamer trunk, \$10; rawhide Fortnighter, \$10; Pullman Case, \$6; hat and shoe case, \$5. Barnett, AL 5-7465.

BED-DIVAN, wine-colored, \$10; 78 RPM automatic record player, 10 and 12 in. records, \$12. Smith, AX 9-7160.

SPRINKLER HEADS, fifty Champion, new, \$17.50. Hayes, AX 9-5491.

'56 VOLKSWAGEN, Deluxe Sedan, low mileage, clean, \$1500. O'Neill, AL 5-6355.

HAND MOWER, Clemson, w/glass catcher, \$15. Stoever, AL 6-2439, 1009 Indiana SE.

WANTED
LESLIE SPEAKER, Ptacek, AX 9-2623.
HOMES FOR KITTENS, 4, housebroken. Malpas, AL 6-1356.
BARREL SET, 100 to 150 pounds. LaFond, AM 8-1966.
TO RENT, 2 or 3 bedroom home, furnished or partly furnished. Poole, AX 9-2642.

TO TRADE, three bedroom house and furniture for two bedroom trailer. Brooks, AX 9-5679 after 5 p.m.

GIRL TO SHARE apartment with two other girls. Scott and Bode, AM 8-2157 after 5.

OLD RIFLES and pistols, will trade 22 rifle, 12 ga. shotgun, or will pay cash. Zaluga, DI 4-1564.

CHILD CARE in my home, 2810 Altez NE, Hoffmantown, former Doctor's assistant. Blakeney, AX 9-0171.

MATURE WOMAN for baby sitting in my home, must have transportation, Princess Jeanne, 2 to 5 p.m. five day week. Comolli, AX 9-5820.

TO BUY small boat or 4-man GI raft. Hungate, AL 6-6545.

FOR RENT
3 BRM HOUSE, 1 1/2 bath, air conditioner, patio, NE heights, available June 1. Peterson, AX 9-5921.
UNFURNISHED one bedroom duplex, new, extra large, \$70 per month. Amador, 1229 Forrester NW.

MISCELLANEOUS
STUD SERVICE AKC registered pug in exchange for one choice pup of litter. Alarid, CH 5-4373.
WISH TO LOCATE registered male pug for service. Fite, AM 8-1385.

LOST AND FOUND
LOST—Turquoise dangle earring, birth certificate of Kenneth M. Dawson, Sandia Corp. 10 year tie chain. Sheaffer pencil, Esterbrook pen, Sandia Corp. 5 year pin, silver dollar money clip w/\$10; brass frame sun glasses, Ronson butane lighter engraved Emily Wood, Ray Ban sun glasses, black wool stole, tan jacket w/white elastic, silver cuff link w/figure 8, lunch bucket, tan leather tobacco pouch, Ford keys in brown case, man's yellow gold wedding band, etched flower design; girl's bicycle, green and white trim. LOST AND FOUND, Ext. 26149.
FOUND—Willow lighter, safety glasses, Social Security card of Tommy Tapia, small black and silver ball point pen, Aladdin Anglers thermos, purple drop earring. LOST AND FOUND, Ext. 26149.

Pooles Attend Presidio Reception in Honor of Deputy Secretary Quarles

R. E. Poole, Vice President at Livermore, renewed an old friendship last week.

Mr. and Mrs. Poole attended a reception at the Presidio in San Francisco for Deputy Secretary of Defense Donald A. Quarles and Mrs. Quarles.

During the period Mr. Quarles was President of Sandia Corporation, Mr. Poole was Vice President, Development, in Albuquerque.

The reception was given by Lt. Gen. Charles D. Palmer, Commander of the Sixth Army.

Supervisory Appointments

ANDREW C. ELLINGSON to supervisor of Section A, 1541-1, Development Division I.

"Andy" has been working in the Electronic Test Equipment Department since September 1952.



Previously he was principal of the high school at Kaycee, Wyo., for five years. Andy also taught math and science at the same school and at Wallace, S. D., each for two years.

During World War II he served four years in the Navy working with radar and radio facilities.

He holds a Bachelor's degree in Mathematics from Augustana College in Sioux Falls, S. D., and has attended courses at the University of Wyoming.

Andy is a member of the Institute of Radio Engineers, the Instrument Society of America and is a registered professional engineer in New Mexico.

JAMES A. KENAGY to supervisor of Specialties Division B, 2124, Model Shops.



"Jim" has been at Sandia since September 1952, most of the time in Job Evaluation, where he has been a section supervisor for two and one-half years.

For one year he worked jointly with Manufacturing Relations Engineering and Purchasing in helping set up the supplier-buyer relationship now used.

Jim came to Sandia from the University of Wyoming where he received a BS and MA in Industrial Arts.

Previously he served six and one-half years in the Navy, most of the time on board ship as an engineering officer.

He is a past member of Chi Gamma Iota, college honorary, and is a member of the American Institute of Industrial Engineers.

WALTER W. WESTMAN, JR., to supervisor of Section C, 1541-3, Development Division I.

"Walt" has been in the Electronic Test Equipment Department all of his four years with Sandia Corporation.



He came to Albuquerque from the University of Washington where he was awarded a Bachelor's degree in Electrical Engineering.

Previously he was in Alaska for five and one-half years where he ran a communications station at Kodiak for the Civil Aeronautics Authority.

Walt also formerly worked five and one-half years in the fabrication department of Boeing Aircraft at Seattle.

During World War II he served two years in the South Pacific with the Navy as a radio technician.

Walt is a member of Tau Beta Pi, engineering honorary, Sigma Xi, scientific honorary, the Institute of Radio Engineers and is a registered professional engineer in the state of New Mexico.

AEC Commissioner Discusses Suspension of Nuclear Tests

Dr. Willard F. Libby, a commissioner of the United States Atomic Energy Commission, delivered the following address recently at Amherst College. His comments on the subject are of considerable importance and of great interest.

A principal question of the moment is whether nuclear testing should be halted.

Strong arguments are made that the radioactive fallout is sufficiently hazardous—even though it be of very small magnitude relative to amounts of radiation we normally receive from natural sources—that testing should be stopped.

Other arguments are that the stopping would be a substantial step towards disarmament—a step which the Soviet Union claims to have taken already—and one which it is further argued we can well afford since we presumably are far ahead of the Soviets in nuclear armament.

Finally, it is argued that the stopping of testing will likely lead to general abstinence from nuclear testing so the entry of additional powers into the nuclear arms race thus will be prevented.

All of these arguments for stopping tests are powerful, but I believe each has important weaknesses which must be carefully examined.

Radioactive Fallout

First, as to radioactive fallout, the magnitude of any deleterious effects of radioactive fallout from nuclear tests is necessarily very small compared to such ordinary experiences as living on a mountain or in a brick or stone house, wearing a radium dial wrist watch, or taking X-rays. Now, these effects, known to be so small as to be unobservable, nevertheless, can be calculated to be finite.

However, such calculations are based on general knowledge of the effects of radiation at higher intensities and in higher doses, and they have been widely quoted in the nuclear test ban discussions.

The effects of fallout radiation are in all probability deleterious both to the health and genetically, but this cannot be said to have been scientifically proven beyond doubt since measurements have never been made on any animal or organism for the effects of radiation delivered at such low rates and in such small amounts as is that from radioactive fallout from weapons testing.

Nevertheless, perhaps to be safe we should assume the worst which even then is necessarily less than living in a brick house, or on a hill, etc., and thus is not large enough to be observable in any individual case, because our past experience shows us that whatever the effects of such doses are, they are very, very small.

Small Effects

Therefore, since the effects from nuclear testing fallout, though very small, probably do exist, and if they do exist probably are bad; we all agree that they should be reduced and controlled and eliminated if possible.

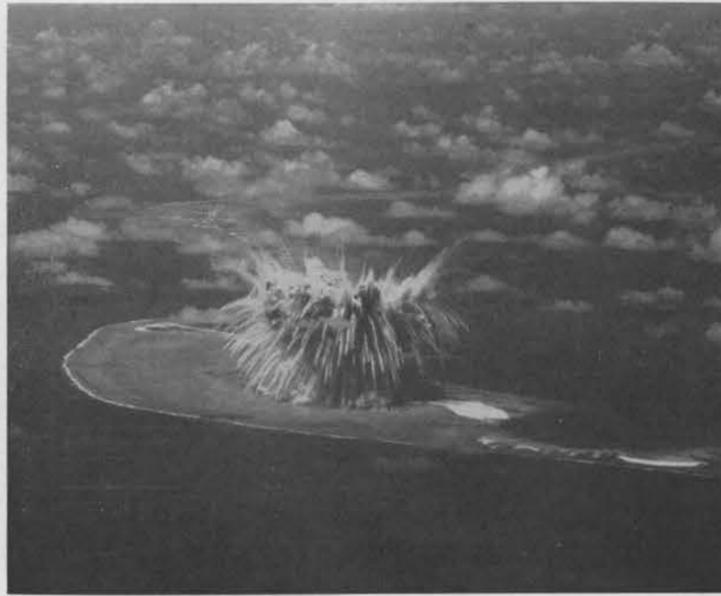
Some people immediately go from this point in the reasoning, which up to this point is generally agreed, to the conclusion that nuclear tests should be stopped because of the fallout hazard.

This conclusion is erroneous, I believe, because the benefits of continued testing are so great as to outweigh the minute hazard of test fallout to health and genetics.

What are these benefits and why should we continue nuclear weapons tests? The answer in its simplest form is, in my opinion, that they are necessary for the defense of our country and of the free world.

Because we are a democracy, we are cast in the role of defenders and we cede to totalitarian governments the role of aggressors. There is an enormous distinction in this statement of simple fact.

The targets of the attacker are large (i.e., our cities). The tar-



Arguments for stopping tests have weaknesses

gets of the defenders are small (i.e., enemy planes and missiles).

The weapons of the defender, therefore, need to be far more sophisticated in design than those of the aggressor. They must be both more accurate and more numerous than the weapons of the aggressor.

Transition Period

We are now, as you know, in a transition period insofar as nuclear weapon design is concerned. In the case of every new weapon which has ever been invented, defense is late in overtaking the great advantage which accrues to the users of new weapons in surprise attack.

We are just at the beginning of development of defensive atomic weaponry. Our position must be one of certainty that we cannot only retaliate against aggression but that we can blunt it if it comes.

Therefore, in defense of ourselves and our allies, we cannot place our dependence upon obsolete and obsolescent weapons systems and we cannot waive the use of defensive arms.

A further very important reason for continued testing is that we are in process of learning how to reduce the fallout from our weapons so their use in war would not necessarily bring the awful scourge of local fallout.

There is absolutely no doubt that local radioactive fallout from surface fired nuclear weapons which receive an appreciable part of their energy from the fission reaction is one of the two great threats of atomic war.

Attack on This Country

It is estimated that an attack on this country could well cause millions of deaths in this way unless we had an adequate Civilian Defense plan for local fallout, which at the present we do not have. Were we forced to defend against an attack on NATO, the availability of tactical nuclear weapons of limited radioactive fallout would make possible a defense which did not endanger non-combatants and friendly countries by local radioactive fallout from weapons fired in defense.

We must have further tests to complete this development in the smaller bomb yield range which is especially important for tactical use. To date we have accomplished this change only in the higher yields and further work is necessary for the kiloton class of bombs.

In view of these facts, I believe the defensive value of nuclear tests outweighs the hazards of radioactive fallout.

Admittedly, this is a conclusion based on judgment and people may differ, but no one can claim that there are obviously over-riding health or genetic considerations which require the halting of tests.

Banning of Tests

Secondly, the argument is advanced that we should agree to a test ban as an initial step in dis-

armament, and that we should no longer insist on linking a test ban to a ban on weapons production, as proposed by our government in the disarmament discussions last year.

There is a point in connection with this position that is very important, and which I would like to mention. Namely, it is not testing, but the bombs that are dangerous.

A cessation of testing does nothing to prevent the accumulation of stockpiles of nuclear weapons which once built can never be controlled again, and two or three years of production on the part of the United States and U.S.S.R. is of enormous importance to the future peace of the world.

I am afraid that an agreement on testing would lull the people of the world into a false sense of security, particularly in the Western World. During a separate ban on testing the U.S.S.R. could accumulate the sizeable stockpile of megaton yield weapons necessary to a surprise annihilation attack on the United States and the NATO countries. We might be left essentially defenseless except for the retaliation threat of the SAC.

Finally, I would like to discuss two related points about nuclear explosions which bear directly on the question of testing.

Future Testing

These are the possibilities of non-military or peaceful applications of nuclear explosions and the possibility that much of the testing can in the future be done under conditions of no radioactive fallout.

Both developments rest on a technique which was established last September when the underground shot in our last Nevada test series—Operation Plumbbob—was found to yield no radioactive fallout, the radioactive fission products being so tightly encased in fused rock that not even ground water contamination resulted.

It therefore appears to be very likely that all except weapons effects tests can be done in this way. Of course, it is clear that testing for effects on military equipment, housing, etc., could not



Dr. W. F. Libby

be done, but a method does seem to exist now by which a limitation on the fallout from testing could be implemented.

So, there may be intermediate positions for consideration between unrestricted testing and a complete ban which are realistic and do remove the worrisome radioactive fallout, or at least greatly reduce it.

Peaceful Uses

Whatever we do agree to, I hope exception will be made of the peaceful uses of nuclear explosions. We would then be allowed to go forward, perhaps under the aegis of the disarmament authority and perhaps with the full collaboration of other nations, with the development of this new possible way of moving earth to make harbors or dig canals, of making atomic power, of making isotopes, of making aquifers for water storage by crushing rock, of transforming chemicals on an enormous scale, of improving mining properties and oil fields, etc.

There is a natural law, I think, which requires us not to turn our backs on nature. If we have chances to discover new things about matter and its behavior, and new ways of doing things, and do not grasp these opportunities, we pay very dearly for having committed what is essentially an unnatural act.

I think no man or nation can disregard that fact and remain healthy very long. We must proceed with the non-military applications of nuclear explosions under any conditions! Let us all hope these will be conditions of real disarmament fully implemented and inspected.

Tech Writers Elect

Howard Sieberman (7123) was elected president of the Albuquerque chapter, Society of Technical Writers and Editors, during a dinner-meeting last week. Outgoing president is Lee Parman (7223).

Other new officers are: John Cowan (7123), vice president; George "Doc" Roberts (7422), secretary, and John Chapp (Lytle Engineering), treasurer.

They will take office June 1 for a one-year term.

Radio Club to Meet

Sandia Base Radio Club will have as its speaker June 10 M/Sgt. T. L. Sims, who will discuss "Double Sidebands." The meeting will begin at 8 p.m. in the old PX building on Sandia Base.

Bond Drive Satellite Goes To Washington For More Service

Impressed by the ingenuity of the Savings Bond Committee in publicizing the "Share in America" campaign, United States Treasurer Ivy Baker Priest has requested that the simulated satellite be sent to Washington, D. C., for use in other bond drives.

L. M. Jercinovic, 7140, chairman of the Sandia bond drive, and J. C. Leslie, 4111, publicity chairman, are making arrangements to have the satellite reworked by the Tele-metering Division, 5215, to simplify the wiring and auxiliary equipment.

The device will be sent by the

Treasury Department to communities where bond drives are being held and will be returned to Sandia after it has served its purpose.

At a special luncheon held downtown last week the Sandia Corporation Committee was cited for its work in the bond drive. With results virtually complete, the total for new subscribers to the payroll plan for purchasing bonds stands at approximately 800. Added to the 319 employees who were previously participating, the grand total is approximately 1100 with \$300,000 per year being saved in the form of bonds.