



#### No Dams Please

### Grand Canyon Exhibit Popular Stop in 802

"I like photographs that get you involved in the subject matter." "Some of these make you want to float down the river, but then some others make you afraid to try it." "Wow! Do you always have something like this in the hallway?"

These were some of the comments as employees and visitors had their first look at a Sierra Club photo exhibit by Ernest Braun entitled "Grand Canyon of the Living Colorado." The color photographs of various sizes and subject matter are hung in the main hallway of Bldg. 802. Arrangements for loan of the exhibit were made by Max Linn (3400), a member of the executive committee of the Sierra Club's Rio Grande Chapter.

### Anti-Smog Speaker Here Feb. 28

Joseph Devaney, a Los Alamos physicist and head of the Anti-Smog Federation, will speak about air pollution problems in the Rio Grande valley at a public meeting in Albuquerque Friday, Feb. 28, at 7:30 p.m.

The meeting, sponsored by the local chapter of the Izaak Walton League, will be in the First National Bank, East Central Branch.

Devaney, a pilot, is one of several airborne members of Anti-Smog Federation who say they have traced smoke from the Arizona Public Service Co. Fruitland Plant (near Farmington) all the way to Albuquerque, Monument Valley and even the Grand Canyon.

The Federation is backing strong anti-smog legislation that has been introduced into the state legislature.



# SANDIA LAB NEWS

VOL. 21, NO. 4, FEBRUARY 14, 1969

## Contamination Control

# Clean Rooms Used in Leukemia Fight

Two laminar flow "cleanroom-type" rooms are being used in the fight against leukemia at the University of Texas M. D. Anderson Hospital and Tumor Institute in Houston.

Experts estimate that 70 percent of the patients with acute leukemia die of infectious diseases (the victim's decreased number of white blood cells are unable to prevent and control infection). Therefore, the leukemia patient might stand a better chance for survival if the common contaminants of the hospital environment, which seldom cause infection in healthy humans, can be controlled. The two patient rooms were specially equipped two years ago, and this month Dr. Gerald Bodey of the Institute's Department of Developmental Therapeutics spent a day at Sandia Laboratories to learn to operate a Sandia vacuum probe sampler developed for assaying microbial contamination.

This use of both the laminar flow cleanroom (invented by Willis Whitfield, 1742) and the sampling probe are examples of private or industrial application of devices originally developed for other purposes.

Meeting with Willis and Jack Sivinski (1740), Dr. Bodey said he was "impressed and encouraged" by the institute's experience with the cleanroom-type facilities which have been used by 10 patients for periods ranging from two to four months. Eight of these patients are still living. Currently available anti-leukemic agents must be administered for a six-week period before an improvement is achieved, and it is during this time that protection from infection is particularly important.

"In checking for contamination, we want to be able to look at larger areas of the room and make sure that our methods of sampling are accurate," Dr. Bodey said. This is possible with the vacuum probe sampler. At present, air sampling, surface sampling with swabs, and settling plates are the methods used. "We have experienced in these cleanrooms a 70-fold reduction in the number of potentially pathogenic organisms," the physician continued. Only one settling plate in the special room has collected such organisms; in the normal hospital wards about half the plates would be contaminated. "In surface and air sampling, usually



OPERATION of a vacuum probe sampler to assay microbial contamination was the purpose of a visit to Sandia Laboratories by Dr. Gerald Bodey (center) of the University of Texas M. D. Anderson Hospital and Tumor Institute. He consulted with Jack Sivinski (1740), left, and Willis Whitfield (1742).

70 percent of our samples from the two rooms are sterile," he added.

No one has come up with a proven cure for leukemia, and there are only about 80 long-term survivors of the disease, but Dr. Bodey noted significant advances in treatment in the last 40 years. "In the 1920's and 30's the median survival period for children was three months, now we're up to a median of three years," Dr. Bodey said.

If installation of laminar-flow clean-

room equipment can significantly reduce contamination within hospital rooms, Dr. Bodey visualizes benefits for patients having a wide range of diseases in addition to those with widespread burns, bone marrow transplants, and damage caused by exposure to extensive radiation.

As to the patient's comfort in such rooms, the movement of air is barely perceptible, and the noise from the flow is about the same as that from air conditioning equipment.

## Strictly for Pros

# Tunnel Reentry After Tests Not for the Timid



HAROLD RARRICK (3312), tunnel reentry advisor to the Test Director, stands in front of the Area 16 test tunnel at the Nevada Test Site. Reentry safety for DOD and Sandia events at the Test Site is a continuing Sandia responsibility.

By mid-morning Area 16 of the Nevada Test Site is quiet. Harold Rarrick, standing on the steps of the Test Director's trailer at the forward control point, takes one last look at the tunnel portal some three miles away.

The tunnel entrance is a small black hole on the face of a cliff about half way up the side of the mountain. Near the base of the cliff, the instrumentation trailer park is visible along with the big pipes from the ventilating system which lead into the tunnel. Nothing moves up there.

Harold, supervisor of Health Physics Division 3312, is advising the Test Director on the reentry safety aspects of the shot. It's a job he's performed many times. Reentry safety is a continuing Sandia responsibility for Department of Defense and Sandia nuclear tests in Nevada.

A dozen people congregate in the forward control point. All specialists, the men represent DOD, AEC, various contractors and Sandia.

The meteorologist's weather report indicates that conditions continue to be favorable for testing. Any shift in the wind

can delay a test. Everything indicates readiness.

The test proceeds. Soon, the countdown starts — the old familiar 10-9-8 . . . .

There is no bang.

Eyes shift from the television monitor screens to the various instruments.

It's a good shot, but there is no visible evidence of it yet.

The readings start coming in. They report conditions as expected.

On the TV screens, a cloud of dust is seen slowly rising from the mountain top. A slight, very slight, motion is detected near the base of the mountain. A wave, almost undetectable except to experienced eyes, moves rapidly across the valley floor — the grass moves slightly, a bush wobbles.

Then the trailer rocks. The floor gently rises and returns. The ground shock wave has passed by.

Don Coleman (3313), manning the radiation monitoring readout station, reports the first readings. Negative. Nothing but background levels. It looks very good.

Some 30 miles away, at the Test Site

(Continued on Page Six)

**'Natural, inherent and inalienable rights'**

# Human Rights Act Introduced, Legislators Ask for Strong Bill

Nearly 60 years ago, the framers of the New Mexico Constitution wrote "All persons are born equally free, and have certain natural, inherent and inalienable rights, among which are the rights of enjoying and defending life and liberty, and of acquiring, possessing and protecting property, and of seeking and obtaining safety and happiness."

Nevertheless, discrimination in a form that deprives persons of those "natural, inherent and inalienable rights" has existed in New Mexico. New Mexicans have been, and are discriminated against because of race or color.

Among important bills pending in the current legislature are two which would go a long way to correct this situation.

Senate Bill 79 and House Bill 142, more commonly known as "The New Mexico Human Rights Act," would define and make unlawful discrimination in employment, public accommodations, and housing. Rep. Raymond Garcia, a Sandian, is a sponsor of the house version.

The act also would create a Human Rights Commission which could receive or initiate complaints of discriminatory practices. The commission would be empowered to investigate complaints, attempt conciliation, hold hearings, and obtain court enforcement orders.

Although the Federal Civil Rights Acts of 1964 and 1968 outlawed discrimination in employment, public accommodations and housing, proponents of the Human Rights Act feel New Mexico should have

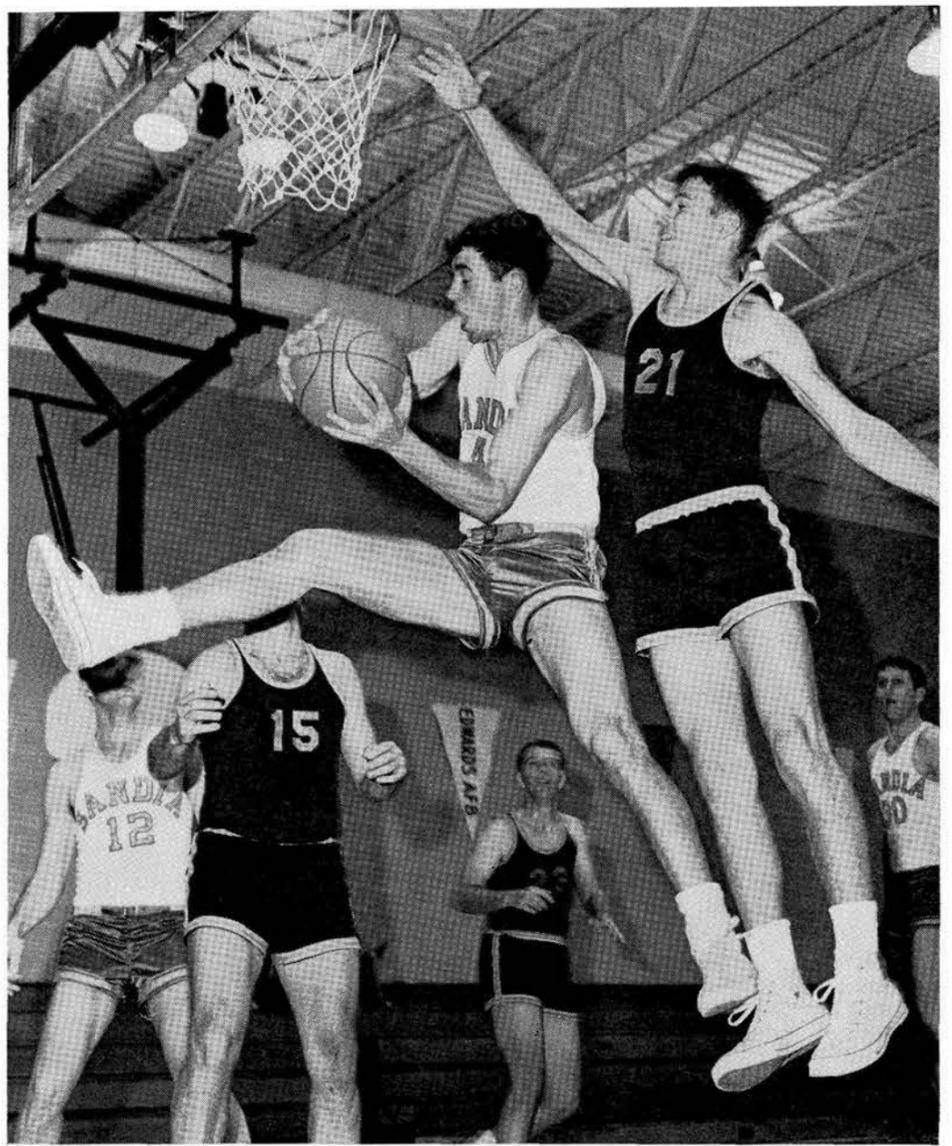
its own machinery to administer and enforce civil rights laws.

Furthermore, the Federal Civil Rights Acts anticipated the enactment of state civil rights laws under which state agencies would administer the laws. For example, these Federal acts require that complaints under the Federal acts first be referred to the state for processing. Also, the Federal acts provide for cooperation by Federal agencies with state agencies and for assistance to them.

The two versions of the Human Rights Act that have been introduced into the Legislature differ slightly in detail but agree generally. Both bills would create a commission whose members would be appointed by the Governor.

Among local organizations supporting the passage of the bill are the AFL-CIO, American GI Forum, Association of University Women, Baha'i, Bernalillo County Grass Roots, B'nai B'rith, LULAC, NAACP, National Conference of Christians and Jews, National Organization of Women, New Mexico Civil Liberties Union, New Mexico Council of Churches, and the Office and Professional Employees Union.

Most of those organizations are members of the New Mexico Citizens Committee on Human Rights, an organization to which Lorella Salazar (3433) has been elected vice president. Lorella and Ken Sutton (3433) were among 50 persons who attended a recent meeting of the Governor's Committee on Human Rights in Santa Fe.



BY GOLLY, YOU'RE RIGHT, it does say "made in Japan." Stu Marquis of Sandia Base grabs a rebound in a recent all-star match. Sandia Labs players are (21) John Spitzer (9411), (15) Don Longcope (1222), and (23) Ken Wischmann (5411). The Labs team lost 65-98.

## Charles Winter Returns to Sandia From AEC Washington



Charles Winter returned to Sandia recently after serving two and a half years as Deputy Director of Military Application for the Atomic Energy Commission's Division of Military Application.

Upon his return from leave of absence, Mr. Winter was named manager of Systems Analysis Department 1710.

While in Washington, Mr. Winter found problems of the AEC's weapons program ranged from the mammoth to the minute. He worked on the weapons program budget for DMA — about one billion dollars. However, this seasonal activity was less frantic than another of his duties — handling the problems of Q-cleared laboratory people who decide at the last moment to make a personal trip behind the iron curtain. Another of his duties was to assist in arrangements for establishment of supplemental test sites at Amchitka (in the Aleutians) and Central Nevada.

Mr. Winter was the first civilian to hold this AEC/DMA post, and he was replaced by another civilian, Fred Tesche, from Los Alamos Scientific Laboratory.

His Sandia Laboratories career has included supervisory positions in both Albuquerque and Livermore.

## Arrange for Passports Well In Advance of Trip

Planning a trip abroad this year? To avoid that last minute frantic wait for your passport, the U.S. Passport Office suggests that you send in your application now.

The volume of passport applications always shows a sharp increase from March to June, which may result in more than the normal wait for issuance.

Employees traveling abroad on official Sandia business are reminded that their plans should be reported to Carl King, Division 3521. Personal travel to Soviet bloc countries should also be reported in advance.

In Albuquerque, passport applications may be obtained at the Federal Building, 600 Gold Ave. SW.

## First Aid Pays Off

### Quick Action, Remembered Training Assist Sandian In Saving Woman's Life

More than 13 years after leaving the service, the first aid training Barney Hatfield (7226) received while in the Navy paid off in a big way. His quick action probably saved the life of a young Albuquerque woman who was seriously injured in an auto accident Jan. 25.

Early that Saturday morning, Barney was driving along Corrales Rd. when two cars collided head-on in front of him on a sharp curve. While a passenger backed Barney's car around the curve and put on the blinker lights to warn approaching motorists, Barney went to the aid of the victims.

In one car the passengers, who were wearing seatbelts, apparently were not seriously injured. In the second car, however, he found two injured persons, an Albuquerque woman and her daughter. "We got the mother out but the daughter was unconscious," Barney said. "Her jaw was broken and she was choking on the blood. I cleared her throat and then put her in a position where the blood could flow

## Roundball Go-Around

### Championship Playoffs At Sandia Base Gym Next Week

Four Sandia Labs teams plus an AEC team will contend for the Sandia Laboratories Basketball Association championship this week and next in a double-elimination playoff tournament. Contending teams are 9400, 7300, 5000, 1000 and AEC. The championship game will be played at 6 p.m., Feb. 17 in the Base Gym. If an additional playoff game is necessary, it will be played the following evening.

A Sandia Labs All-Star team, coached by Jim Hudson (9511) and Jim Freese (5271), won one game and lost two in a

recent Interbase Basketball Tournament at Kirtland AFB. The all-star team, which beat Kirtland 70-51 before losing to Sandia Base 98-65 and to Kirtland in a rematch 69-65, consists of John Spitzer (9411), Larry Ellis (7343), Derek Snyder (1731), Tom Guess (5161), Bob Gardner (4221), Arlin Cooper (2625), Jess Betlack (9425), Art Sharpe (7335), Dave Preston (7344), Larry Rollstin (9324), Don Longcope (1222), Ken Wischmann (5411), Richard Pewe (4121), and Ken Flynn (1551).

## Glenn Fowler Heads Kit Carson Council

Glenn Fowler (9000) was recently re-elected president of Kit Carson Council of the Boy Scouts of America and led the organization in observance of national Boy Scout Week Feb. 7-13. Theme of the week was "America's Manpower Begins with Boypower."

The Kit Carson Council serves 19,000 youngsters in the northern half of New Mexico and the Navajo reservation, which includes part of Arizona.

Some 6000 adult leaders work with the organization. More than 200 of these are Sandia employees who serve as scoutmasters, assistant scoutmasters, troop committeemen, institutional representatives, commissioners, cubmasters and explorer advisors.

## Sympathy

To Ray Powell (3000) for the death of his mother Feb. 5 in Lewiston, N.Y.

To Cora Callender (7216) for the death of her mother in Albuquerque, Feb. 5.

To Don Shuster (1200) for the death of his father in Albuquerque, Feb. 9.

## SANDIA LAB NEWS

Published Bi-Weekly

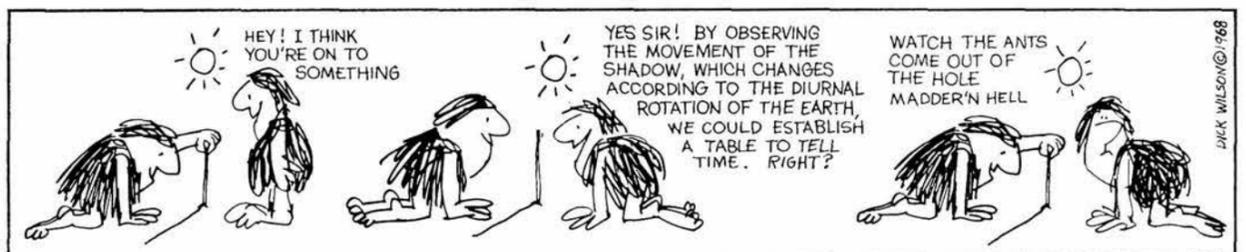


SANDIA LABORATORIES

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LIVERMORE, CALIFORNIA

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DICK WILSON © 1968

# LIVERMORE NEWS

VOL. 21, NO. 4

SANDIA LAB NEWS

FEBRUARY 14, 1969



NEW THREE-COORDINATE MEASURING MACHINE is used by John Barnhouse (8226) to check the hole configurations in mounting pads. Recently operational, the equipment is accurate to  $\pm .0005$  of an inch and prints inspection reports automatically.

## New Measuring Machine Speeds Mechanical Inspection Process

Inspection of prototype and contractor-supplied mechanical parts is being done faster these days in Sandia Laboratories Livermore's Inspection Division 8226.

The increased inspection efficiency is a result of a recently installed contact-measuring machine which measures the dimensions of a part, compares them with those specified on the drawing of the part, and prints the results. Inspection reports—prepared manually before—are now done automatically. Mathematical calculations normally made by the inspector have been eliminated.

Tony Norwich, supervisor of Inspection Section 8226-2, explains that "... following the old style set-up inspection routine, it took us 40 man-hours to measure 1256 holes to  $\pm .003$  of an inch in a printed wiring board drill fixture. With this equipment, the same fixture can be inspected to  $\pm .0005$  of an inch in less than four hours. And inspectors find the automatic part-alignment feature of the equipment a vast time-saver over the datum-point method of inspection."

Equipped with a small, digital computer and a Teletypewriter, the machine takes measurements and transmits them to a display counter by means of an electro-optical system. A print-out is then produced that shows deviations from the desired pattern, which had previously been programmed into the computer. Parts 48 inches long, 36 inches wide and 39 inches high can be measured.

"Although we now use only the basic inspection computer programs," continues Tony, "the programmers are working to expand the machine's capability. We are especially interested in using the equipment to measure templates, conical shapes and spherical radiuses. When we can do this the time-consuming use of special jigs and gages can be substantially reduced."



SANDIA ARTIST Ed Watchepino (8233) points out design he created for Livermore's Centennial Seal. Observing are Centennial Committee members Dave Bray (8181) and Paul Heppner (8154). Seal will appear on official letters, envelopes and other literature of the committee during the year-long observance.

## RLRA Announces '69 Tour Schedule

The travel program recently announced by the LRL Recreation Association (RLRA) travel club for 1969 includes tours of the East Coast, Alaska, Hawaii, Canada, the Holy Land, and the Orient.

LRL or Sandia employees (at both Albuquerque and Livermore laboratories), and members of their immediate families, are eligible to participate by joining the RLRA. Basic tours are sponsored jointly with the Kaiser Employees Club, Shell Development Recreation Association, Crockett Culture Club, and the California State Employees Association.

The 1969 tour program again encompasses a wide variety in terms of places,

## Bob Norvill VP for Chamber of Commerce

Bob Norvill (8233) has been elected to serve a one-year term as a vice president of the Livermore Chamber of Commerce. The Chamber has over 300 members. As head of the Economic Development Council, Bob will work chiefly with the five committees set up to increase employment and business activity in Livermore. The committees are presently studying taxation, transportation facilities, industrial development, agriculture, and tourism.

Long active in Chamber of Commerce affairs, Bob has been a member since 1964, and recently completed a three-year term as a member of the Board of Directors. He was the Chamber's Chabot College Liaison Chairman in 1968.

## Ralph Clark First To Get MS Degree Under OYOC Plan



Ralph Clark was awarded a Master of Science degree in electrical engineering recently from the University of California at Berkeley. His master's research project concerned a frequency modulation technique to

measure the characteristics of an unknown electronic circuit.

He is the first employee from either Livermore or Albuquerque to complete his graduate work under the One Year on Campus (OYOC) Plan of Sandia's Graduate Education Program. Through the OYOC Plan, Ralph attended classes on a full-time basis while in residence at the university.

Ralph is an engineer in Test Projects Division 8124, presently involved in environmental testing of various weapons sub-systems. Previously, he evaluated the accuracy of data systems. He joined Sandia Laboratories Livermore in July 1966, following graduation from Oregon State University.



## Death

Stanley Glasky, a model and instrument maker in Machine Shop Section 8223-1, died suddenly Tuesday evening, Feb. 4. He was 48.

Stanley joined Sandia Laboratories at Livermore as a machinist nearly 10 years ago and had worked in the machine shop since that time.

Survivors include his widow Betty, a daughter Paulette Jane, and his grandson Philip. Burial was in St. Michaels Cemetery in Livermore.

## Sympathy

To Chuck Hoyle (8314) for the death of his father-in-law in Los Angeles, Dec. 30.

To Gordon Miller (8321) for the death of his mother in Richland, Wash. Jan. 27.

To Judy Slagel (8322) for the death of her mother in Sacramento, Jan. 20.

## Why Not?

One of Livermore's finest, Joan Hall (8255) asks, "Why not give up smoking?" Do you have an answer?



SNOW? IN LIVERMORE? It did on Jan. 29, 1969. To record the unusual phenomenon, a photographer took a picture of an unidentified secretary caught between buildings during the event. Long-time residents of Livermore recall snowfall in 1920, 1933, and a noticeable white cover in 1957. No official weather data exist to refute their statements.

Additional information regarding the travel program may be obtained from Rae McCarthy (LRL/Livermore), ext. 7556; or Marian Crew (LRL/Berkeley), ext. 5901.

# Nondestructive Testing Techniques Are Valuable Laboratory Tools

When you thump a watermelon and listen for that deep "klunk" that tells you that it's ripe, you've performed a non-destructive test. You have gathered pass or reject information while the item undergoing test is virtually unchanged.

Techniques used by Sandia's Nondestructive Testing Laboratory in Bldg. 860 are much more sophisticated than thumping a ripe watermelon; in fact, the technology of nondestructive testing has become as sophisticated as any in the engineering disciplines.

The NDT lab is part of Environmental Testing Department 7320 under George Roth.

In addition to x-rays and gamma radiation, the NDT lab uses ultrasonic sound waves, magnetic flux, penetrating liquids, eddy-currents and infrared radiation to examine everything from raw material to sealed components.

Lab personnel can detect cracks, holes, voids, porosity, weld defects, casting defects, forging defects, inclusions, delaminations, tubing and bar defects and lack of bonds.

They can look at internal structure, detect and measure corrosion remotely, find fatigue cracks, measure density and hardness, determine alloy composition, and perform physical measurements of complex shapes or sealed configurations.

Nondestructive testing has applications throughout the Laboratory, says Bob Baker (7322), one of the project leaders for the NDT lab. Bill Mottern (7322) is project leader for the x-ray, gamma radiation and infrared facilities.

In the nuclear weapons business, the NDT men believe that engineers cannot afford to assume that materials are sound or conform to specifications, or that manufacturing processes are performed without error.

For example, exotic combinations of materials such as metal or glass fibers impregnated with epoxy or rigid adhesive binders are used in a variety of applications. Materials are formulated in this manner to create certain properties not found in homogeneous materials.

These properties are usually critical, and nondestructive testing is used to in-

sure that the materials do, in fact, meet specifications. For a fiberglass-epoxy material, the lab would determine density by x-ray radiation gaging techniques and would determine porosity and delamination by ultrasonics, or surface fracture by liquid penetrants.

Every hardware project should be continuously evaluated from start to finish in terms of possible nondestructive testing, the NDT staff believes. As an example, the manufacture of a precision shoulder bolt shows how NDT can save time and effort:

To start with, is the basic material the correct withdrawal from raw stocks? A simple eddy-current test can determine this. Are there any defects in the raw material? A large number of bolts could be machined, completed, and used before this kind of defect would show up in use. A nondestructive test should be performed before machining.

During manufacturing operations, are defects like grinding or heat treating cracks being induced in the bolts? NDT can discover defects of this nature. Was the heat treatment performed and is the hardness within the proper range? NDT can measure these characteristics.

After installation of the bolts in a critical location, are there any service-induced defects? Corrosion, stress corrosion and fatigue cracks could all be disastrous to the application. Again, nondestructive testing can provide answers, prevent costly errors, and save time and money.

NDT is also used extensively before, during and after other environmental or performance testing, Bob Baker says. "A test item may have failed because of some defect which was present before the test. This condition is often impossible to determine after failure. A nondestructive test performed before the environmental test can remove the uncertainty. The removal of uncertainty is one of the strongest recommendations for nondestructive testing."

The NDT staff is available for consultation to all Laboratories organizations. A new Technical Memorandum (SC-TM 68-891), "Nondestructive Testing Facility," describes services and facilities of the organization in technical detail.

Accompanying photographs show some of the equipment and techniques used in the NDT lab.



Above —

SURFACE FLAWS show up rapidly when subjected to magnetic particle techniques of nondestructive testing. This part has been bathed in a fluorescent solution and current applied to create a magnetic field which traps small particles in the solution in minute cracks or surface flaws. The flaws become visible under ultraviolet light. Operator is Jerry Stoker.

Right —

"IMMERSCOPE" scans a test item with a beam of ultrasonic sound waves to detect internal flaws in the material. The surrounding water helps eliminate echoes. Operator is Ed Bishop. The moving probe (blurred in photo) is programmed to scan to the extent of the dimensions of the test item.



JERRY STOKER demonstrates capability of an infrared scanning camera to perform temperature analysis by training its scanning mirror on the face of Diane Cleveland (3126). The camera can detect minute temperature differences, which may indicate defects, over a range from -170° to 250° C. It is not dependent on external sources of illumination, but responds only to the infrared energy radiated by all objects.

Right —

THERMOGRAPH of Diane Cleveland (3126) produced by the infrared camera shows variation of skin temperature. Black areas are "cold" while the light areas are "hot" In addition to thermograph, the instrument provides digital and punched tape readout.



"VIDAGAGE" is a nondestructive test machine that uses ultrasonic sound waves to measure dimensions. Ed Bishop here uses the portable instrument to measure wall thickness in a sealed cylinder.



## Retiring



John Ballantine, Jr., supervisor of Mechanical Measurements Section 4213-2, will retire the end of this month after more than 18 years with the Laboratories. John has worked the entire time in mechanical and electrical inspection organizations and has been a supervisor for 17 years. Before joining Sandia in November 1950, he had his own business in Texas and Kansas.

The only definite retirement plans John has made will be to sell his home in Albuquerque and move to California. "We hope to settle somewhere in the Placerville area—halfway between our daughter in Nevada and our son in California," John says. "That area has lots of art galleries, antique shops and beautiful landscapes. These things appeal to my wife and me. I don't like to loaf all the time so I'll find something to keep me busy, but I am going to enjoy my retirement."



Mike Bucklin, a material handler in Material Services Division 4614, will retire Feb. 28. Starting at Sandia in January 1951, Mike has worked as a janitor and equipment cleaner, spent about nine years in transportation, and has been in his present job for three years. Mr. and Mrs. Bucklin plan to remain in Albuquerque at their home at 804 Forrester NW. They have three daughters; two of them are living at home.

Mike has recently been in ill health and his immediate retirement plans consist of "taking it easy for awhile." After he regains his health, he hopes to resume his interest in fishing and hunting—"just being out in the woods and being active."



Vera Miller of Central Technical Files Section 3428-1 is retiring Feb. 26. She was employed by Sandia in July 1961 and has been in her present job since 1962.

Vera and her husband reside at 5308 Constitution Ave. NE. "I haven't been well recently," Vera says, "so I'm just going to rest and recuperate. When I get to feeling better, we hope to visit the Holy Land and several places of interest in the United States." She also plans to resume her hobby of flower arranging—centerpieces, corsages and wedding arrangements.



Juan A. Sanchez of Janitorial Service Section 4574-4 is retiring the end of this month. He was employed in October 1951 and has been with janitor services the entire time. Juan had worked with the Santa Fe Railroad for 20 years before joining the Laboratories.

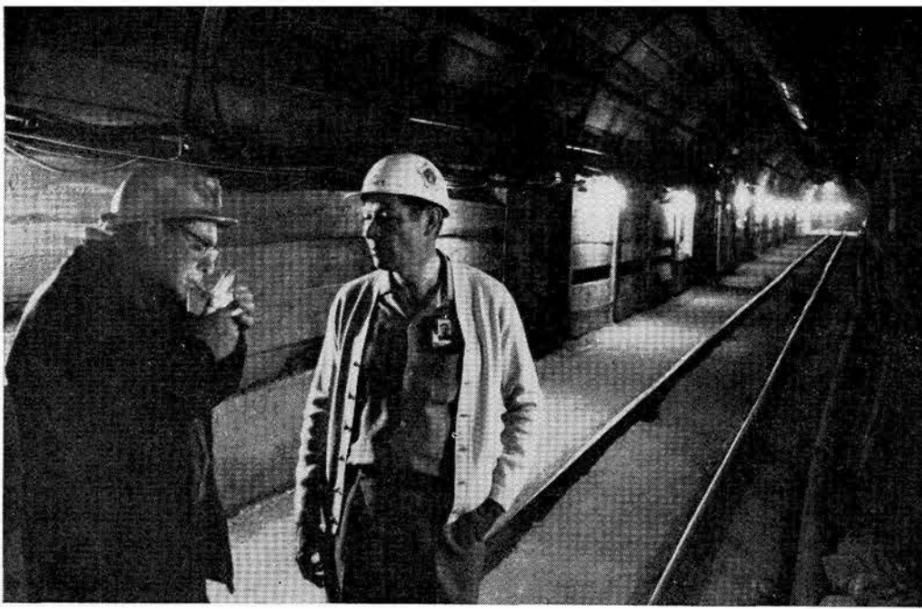
Mr. and Mrs. Sanchez will continue to live in Albuquerque. They also own a small farm near Belen and Juan says farming will occupy much of his time following retirement—that is, when he isn't fishing up in the northern part of the state.

Juan was raised in Belen and moved to Albuquerque in 1922. He says at that time the present site of the Laboratories was an area of tall grass, dotted with sheep and cattle. Much of what is now within the Albuquerque city limits consisted of small ranchos.

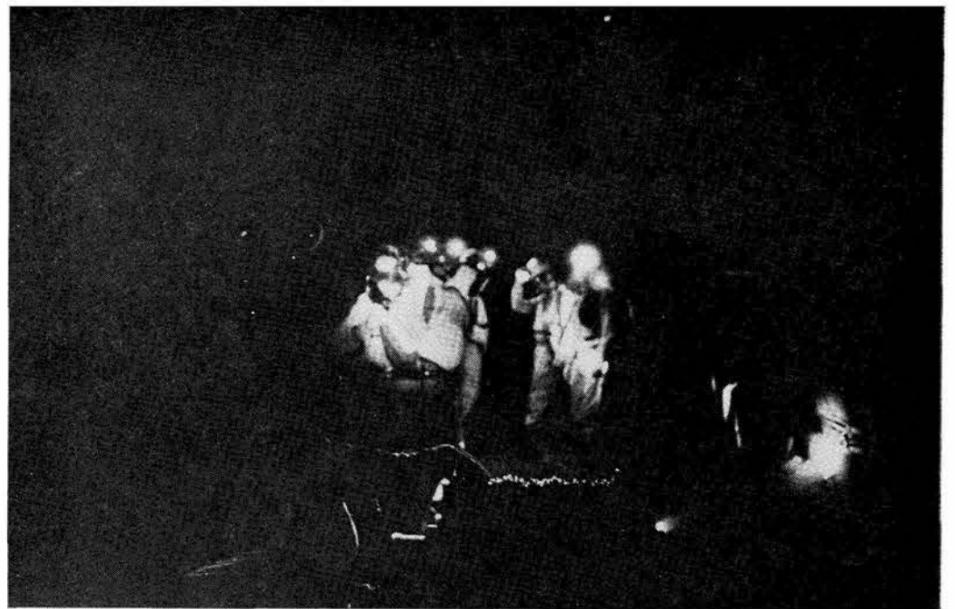
Mr. and Mrs. Sanchez have two married children—a daughter in California and a son in Albuquerque. They have five grandchildren. Juan says they will visit their daughter for a short time following his retirement.

## Events Calendar

- Feb. 17—Ballet West, one of America's new ballet companies. UNM Popejoy Hall.
- Feb. 19—Albuquerque Symphony Orchestra, violin soloists Amiram Sheffet and Kathie Jarrett. UNM Popejoy Hall.
- Feb. 20-23, Feb. 27-March 2—Harold Pinter's "The Homecoming." Old Town Studio, 1208 Rio Grande NW, for reservations tel. 242-4602.
- Feb. 22-23—Springtime Campground, San Mateo Mountains southwest of Socorro. N.M. Mountain Club, leader Mary Dey, tel. 256-1970.
- Feb. 24-25—Musical comedy "The Apple Tree." UNM Popejoy Hall.
- March 1—Loop trip above Cochiti Dam. N.M. Mountain Club, leader Bill Grohe, tel. 243-1051.
- March 1-2—YWCA charter bus trip to White Sands National Monument and Carlsbad Caverns. For information tel. 247-8841.



FINAL INSPECTION of the test tunnel prior to the detonation is made by Harold Rarrick (3312), left, health physics supervisor, and Byron Murphey (9100), scientific advisor for the nuclear test.



REENTRY TEAM, wearing rad-safe protective clothing and Draeger breathing units, are dimly seen by the illumination of miner's lights worn on their helmets. No electrical power goes into the test tunnel after a shot.

*Continued from Page One*

# Sandia Responsible for Test Tunnel Reentry Safety

main control point, a team of Sandians also report readings from the wide network of radiation monitoring instruments.

Here again, the reports are negative for radiation outside the tunnel. Everything appears to be contained behind the massive gas-seal door in the tunnel.

George Wenz, Division 3312 health physicist, begins to smile. Quiet and cautious by nature, George rarely makes optimistic statements. His conversation tends to reflect fact.

"In a few minutes, we'll know for sure," he tells Harold on the phone.

The readings continue.

They wait for the seismic reports from the geophones indicating collapse of the cavity — the last hazard event which

might cause a vent and possible release of contamination onto the site.

Sandia provides geophone service at the Test Site. Leo Brady (9131) has placed his sensitive ground shock sensors in tunnels, drifts and shafts for many of the Nevada shots.

Soon he reports that the cavity has collapsed.

Deep in the mountain the nuclear detonation created a round cavity containing the fireball and all byproducts of the blast. The molten material on the ceiling of the cavity has cooled slightly and the pressure has somewhat diminished. The roof of the cavity has now fallen to the floor.

What kind of cracks have been created? What kind of pressure is forcing the gases toward the surface? What is the composition of the gas?

In the Sandia RAMS (Remote Area Monitoring System) room at the main control point, George Wenz is noting readings from the Sandia instruments in the tunnel and portal area.

On the surface, there is no increase in background radiation levels. Inside the tunnel, the readings are about right. George is answering two phones at once.

He smiles again. "It's OK," he says.

At the forward control point, Harold checks instruments with Don Coleman. He waits another 10 minutes and checks again.

He tells Byron Murphey (9100), scientific advisor to the AEC Test Manager for the event, that everything looks good. The portal area is clean.

About another mile and a half distant from the forward control point, a small caravan of vehicles is pointed away from the test area. They are ready for immediate withdrawal, if conditions change.

The group of men near the vehicles drink coffee and listen to the readings coming over the radio net. Their job is to drive to the portal area and remove data film from the instrumentation trailers.

The group includes a team of rad-safe personnel, some employees of REECO, the

Test Site support contractor, and various scientific experimenters and instrumentation specialists.

All wear rad-safe clothing.

When the order comes from the Test Director, the rad-safe team climbs into its vehicle and drives rapidly toward the portal area. Once at the site they take radioactivity readings and report to the test control point. Harold compares their readings with the Sandia remote sensor readings. The readings are verified. The word is passed to the remainder of the caravan. The vehicles move to the portal site and the data is recovered. The rad-safe people continually take readings. Film recovery is completed and the vehicles depart.

\* \* \*

The Test Director and project leaders confer. The next job is reentry of the tunnel and recovery of scientific experiments from the test chamber in the tunnel.

Harold reports that it may be possible to start this operation on the next day.

The conference breaks up. It has been another successful test, the culmination of months of effort and planning.

\* \* \*

That afternoon, Harold, George, Herb Abbot (3312), Don Coleman ((3313), and Don Parker (3311) confer with the REECO rad-safe team to plan the reentry operation.

George has analyzed the readings from inside the tunnel and reports heavy concentrations of toxic gas deep inside the chamber. He figures the tunnel will be clear, however, up to the gas-seal door. From there to the test chamber special precautions will be required.

The group discusses the entire problem and agrees on the reentry plan. The operation will start early the next day.

\* \* \*

A Draeger unit is a special breathing apparatus developed for tunnel and mining operations. Similar to SCUBA gear, it permits mobility of movement while assuring a constant supply of fresh oxygen.

George Wenz leads the first recovery team into the tunnel. All wear rad-safe

protective clothing and the Draeger units. They carry monitoring instruments, and their helmets are fitted with miner's lights. This will be the only illumination in the tunnel. All power lines have been disconnected to prevent a possible explosion.

The first team's mission is to penetrate the tunnel as far as possible and survey for hazards (toxic or explosive gases, radiation, undetonated high explosive, tunnel damage).

Health Physics Division provides constant cable connected communications with the reentry team.

The team moves into the tunnel, riding the first distance in the little railroad cart which had been used in the tunnel excavation. George reports to Harold on the other end of the communications system.

The team reaches the first seal and manages to open the heavy door without difficulty. They move cautiously further into the tunnel taking readings with their instruments. George reports back the readings and the physical condition of the tunnel.

Harold asks questions, makes notes, and keeps an eye on the clock.

"Better start out now, the oxygen is getting low," he says.

Their conversation has been recorded on tape.

\* \* \*

A second reentry team has been standing by for rescue if necessary. When the first team emerges from the tunnel, experimenters discuss with George and Harold the mission of the second team. A number of miners will enter with this team to remove the debris and open the second seal.

George reports that the ventilation system is functioning.

Herb Abbot leads the second team in.

\* \* \*

Later, a third team and a fourth team go into the tunnel, each time with a backup team ready. A complete picture of tunnel conditions is emerging.

The chamber containing the experiments presents a number of problems.

The decision is made that George will lead the final reentry team through the experimental drift to this chamber.

Late that afternoon, the team goes into the tunnel. At the experimental chamber door, George and the other team members crawl the final distance. They work in the chamber for about a half hour, passing information to Harold and the Test Group Director. It is just 30 hours after shot time.

No problems are encountered. The exacting operation is quickly performed. Each man on the team is a specialist, experienced in the nuclear testing business, thoroughly professional.

\* \* \*

By the end of the week, the recovery operation is complete. The tunnel is sealed and test activities shift to another location. Division 3312 personnel return to Albuquerque to plan for the next test project.

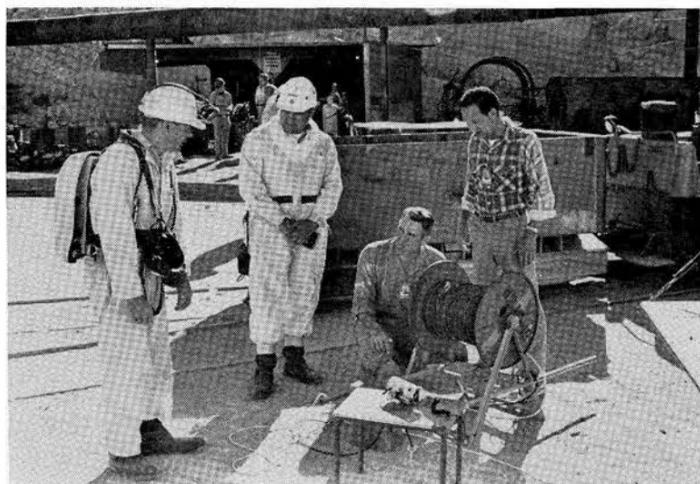
"It's almost routine," Harold says. "We try to make it that way. When your responsibility is reentry safety, then you check, double check, and re-check everything. It's that kind of a job."



GAS SAMPLES from inside the test tunnel are piped to this gas chromatograph for analysis by Don Parker (3311), left, and Billy Smith, REECO health physicist.



"IT'S A GOOD SHOT," George Wenz (3312) reports to the Test Director after checking the readouts from remote radiation sensors. The instruments show that all by-products of the nuclear test have been trapped inside the tunnel.



CABLE COMMUNICATIONS SYSTEM for the reentry teams is discussed by (l to r) George Wenz, Herb Abbot, Don Coleman (all 3212) and Chuck Floyd, REECO electronics specialist.

## Service Awards

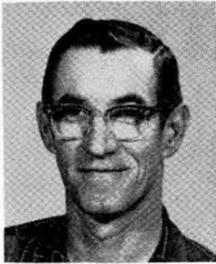
### 20 Years



Alfred Aldrich  
9224



Leslie Cole  
4233



Wayne McCrory  
3126



Julian Moody  
7451



Leroy Paulson  
7226



Rudolph Sadler  
2321

### 15 Years



Robert Boyles  
3520



William Brady  
7631



Clarence Carter  
7424



James Farmer  
4513



Charles Freund  
4363



Ernest Hall  
9323



Johnnie Harlow  
3520



Ken Helmstadter  
8153



Powell Henderson  
3520



Harold Jeblick  
2491



Willard Neese  
7651



Wilson Payne  
7341



Lewis Pearl  
3520



George Revels  
7351



Mickey Sanchez  
4623

### 10 Years

Feb. 14-27

Albert Heckes 1212, Richard Miller 3455, Richard Sieben-  
forcher 4152, Mary Wormeli 4517, Arsenio Baca 4613, Milton  
Prucha 2642, Ubbie Hammer 8233.

Charles Romano 8243, Robert Colgan 3454, Robert Beasley  
7223, Robert Workhoven 7322, Donald Kuehl 9221, Nancy  
Wallace 3126, and Frank Zack 3320.

## Speakers

P. A. Stokes (1211), "Intrusion Monitoring for the Unattended Seismological Observatory"; R. E. Spaulding (9214), "Nuclear Test Detection Satellites," IEEE Winter Convention on Aerospace and Electronics Systems, Feb. 11, Los Angeles.

W. R. Barton (9324), "Some Aspects of Parachuting at Sandia," American Society of Certified Engineering Technicians, Jan. 6, Albuquerque.

R. M. Jefferson (9141), "Sandia Pulsed Reactor II"; R. L. Coats (9142), "The Sandia Booster Assembly"; J. A. Reuscher (9142), "Thermomechanical Analysis of Fast Burst Reactors"; P. D. O'Brien (9522), "Fast Burst Reactor Operational Incidents," UNM Fast Burst Reactor Symposium, Jan. 28-30, Albuquerque.

C. E. Land (5153), "Ferroelectric Research Spinoff," Albuquerque Petroleum Club, Jan. 22.

H. D. Arlowe (7335), "Disk Recording Applications," ISA Chapter, University of New Mexico, Jan. 17.

S. J. Buchsbaum (5000), "Worldwide Progress in Fusion Research," Trinity Section of the American Nuclear Society, Jan. 17, Santa Fe.

A. J. Clark, Jr. (9520), "The AEC Method of Contracting with Industry," American Management Association course on Fundamentals of Program and Project Management, Feb. 13, Los Angeles.

C. S. Johnson (7271), "A View of the State of the Union," Lions Club, Feb. 1, and Breakfast Lions Club, Feb. 6; "ESP," Civitan Breakfast Club, Feb. 18; "The Challenge and Chance of a Career in Science or Engineering," West Mesa High School physics class, Feb. 20.

H. D. Sivinski (1720), "Man in the Space Environment," Manzano High School, Feb. 4; and Downtown Lions Club, Feb. 18; "The Role of Planetary Quarantine in the Search for Extra-terrestrial Life," New Mexico Section, American Society of Civil Engineers, Feb. 14, Albuquerque.

M. J. Landry (7271), "Lasers—How They Work," Duke City Civitan Club, Feb. 25.

## SEGA Golf Tourney Scheduled Feb. 21

The Sandia Employees Golf Association (SEGA) will kick off the 1969 golf season with tournaments Friday, Feb. 21, at both Los Altos and the UNM south course. Any Sandia or AEC employee who wishes to compete should contact G. W. Smith (9252).

During the 1969 season, SEGA will conduct evening and weekend league play for those interested in handicap match competition. In addition, tournaments are scheduled throughout the summer in Albuquerque, Socorro and Santa Fe.

SEGA membership information is available from either Preston Herrington (9226) or O. J. Foster (3126).

## Youth Plans Cited By PFP Official

"You can't fool these kids and you can't make enormous promises to them," Herb Leonard, an official of the President's Plans for Progress national committee, told Sandians involved in youth motivation and EEO programs.

Mr. Leonard, who is national coordinator for youth motivation programs, spoke to Sandians, Albuquerque school officials, representatives of community action groups, and members of the Albuquerque Human Resources Council at a meeting in the Science Sphere Friday, Jan. 31.

A loaned executive from the National Distillers & Chemical Co., Mr. Leonard outlined some of the successes and problems of the youth motivation program since it was started in 1965. "It's time now to move in to secondary and elementary schools," he said.

The Human Resources Council is starting a pilot program of youth motivation in Washington Junior High in an effort to reduce the drop-out rate. Sandians involved are Walt Dodd (3254) and Don Wolfe (3432).

Accompanying Mr. Leonard for the Albuquerque visit was Bob Garcia, manager of Equal Employment Opportunity Special Assignment Department 3260, who has been working in Washington on programs relating to Spanish-speaking and Indian minorities.

## Sandia Shows SNAP 19 and 27 at Winrock

An exhibit featuring a SNAP 19 and a SNAP 27 will be furnished by Sandia for display at Winrock during National Engineers' Week Feb. 16-22. Several Sandians are members of the Albuquerque Engineers' Week committee which plans engineering displays, tours of engineering facilities in the area and a luncheon for Albuquerque engineers at the Hilton Hotel on Wednesday, Feb. 19.

Participating Sandians from the American Society of Mechanical Engineers are Floyd McFarling (9521), technical advisor for the SNAP exhibit, and Stephen Neff (4214). Representing the American Institute of Industrial Engineers will be Stan Kimball (2626).

Speaker at the luncheon will be Leon Cole, a director in the Department of Housing and Urban Development (HUD). Mr. Cole will talk on urban transportation and urban development in conformance with the week's theme — "Engineering . . . Partner in Rebuilding Urban America."

The SNAP exhibit, which will be on display for the entire week, is being designed by Bob Morris of Graphic Design Section 3463-3. Community Relations Division 3433 is responsible for arrangements.

## SHOPPING CENTER

### CLASSIFIED ADVERTISING

Deadline: Friday noon prior to week of publication unless changed by holiday. A maximum of 125 ads will be accepted for each issue.

#### RULES

1. Limit: 20 words
2. One ad per issue per person
3. Must be submitted in writing
4. Use home telephone numbers
5. For Sandia Corporation and AEC employees only
6. No commercial ads, please
7. Include name and organization
8. Housing listed here for rent or sale is available for occupancy without regard to race, creed, color, or national origin.

### FOR SALE

#### MISCELLANEOUS

KODAK EKTAR 180mm f2.5, Pentamount, ideal for sports or wildlife photography, \$50. Simmons, 282-3214.

DESK, enameled pine, 42w 17d 30h, 7 drawers w/metal pulls, \$10. Roberts, 255-9527.

WARD'S sweeper, \$30. Eaves, 299-7728 after 5.

RARE, SIGNED, numbered autobiography of Albert Einstein, volume contains essays & critical writings, \$100. Wolfe, 268-6864.

STELLA Harmony guitar w/case, best offer. Peterson, 256-7514.

MAN'S watch band, Speidel Twist-O-Flex, gold, \$6. Work, 299-8104.

GE REFRIGERATOR w/top freezer, \$50; tweed rocker-lounger w/ottoman, \$25; jig saw; antique chairs. Klikoff, 268-6659.

STORAGE SHED, 6'x8', wood, white paint. Odell, 299-8135.

4 X 8 FT. utility trailer w/4' sides; wide oval tires w/mag wheels. Gary, 256-7325.

ICE SKATES, small boys' figure, GGM sizes 11 & 12, \$4 ea., size 15 w/guards, \$8. Jones, 255-7924.

MOBILE HOME, 8x37, refinished kitchen area, sleeps five, \$1600. Hawk, 265-2228.

PIANO, Simpson, walnut spinet, \$375. Forsman, 299-5570.

SUZUKI 1966 Trail 80. Gilbert, 299-9141.

ANTIQUES: pair rosewood ladies chairs, \$50; large cradle, \$40; shelf clock, \$25; pair brass sconces, \$15; youth chairs. Lambert, 344-9012.

SKI BOOTS, Koflach, ladies narrow, size 8, used 1 yr., \$12. Garst, 299-5870.

CHESAPEAKE Bay retriever, female, 1 yr., reg. AKC Field Champ stk., good w/birds & children, partly trained. Johnson, 298-1011.

2-WHEEL utility trailer, approx. 4'x8'x2' box, \$50. Lems, 218 Bryn Mawr SE, 255-3483 after 5.

DOUBLE BED w/dresser, \$40; couch & matching chair, \$50; stereo, \$25; dryer, needs work, \$10. Husa, 268-1271.

WESTINGHOUSE clothes dryer, \$25. Osborn, 298-6158.

COMPLETE HAM STATION, Mohawk receiver, Johnson invader, antenna relay, mike, phone patch, two 6' racks, extra parts; Army command tent w/liner & center pole. Mills, 636-2149.

SEAR'S Coldspot refrig., 10 cu. ft., white, freezer on top, \$35; Frigidaire Imperial 40" elec. stove, white, timer, deep-well, \$75. Boyes, 268-0145.

100" TURQUOISE SOFA. Hackard, 268-8148 after 5.

GRAY formica dinette w/4 chairs, \$20; J. C. Higgins 20" girl's bike, \$12.50; solid maple highchair, \$5. Trump, 299-5162.

28" THREE-SPEED Hercules bicycle, \$15. Kingsley, 299-1226 after 3:45.

GUN CABINET, Early American fruit wood finish, retail \$160, asking \$100. Wilson, 282-3225.

OLD ELGIN Ladies pendant watch, carved, 14K gold, hunting case \$90. Fisher, 265-0626.

'65 YAMAHA 80 Trail bike, street & trail sprockets, new nobby tires, 6700 miles, best offer over \$135; 513 T Remington 22 target rifle w/hook & butt plate. Honeycutt, 299-7544.

CUSTOM-BUILT sofa hidabed, completely upholstered, \$55. Vaughan, 299-5676 after 5:30.

FENCE, chainlink, 6'x50', new, \$20. Haskell, 345-0355.

BOX SPRINGS & mattress w/bed frame full size. Kohl, 268-3754.

'69 MODEL LANGE ski boots, 9 1/2 N, guarantee good till fall '69, \$80. Buchanan, 299-7487.

DISHWASHER, GE Mobilemaid, yellow. Johnson, 298-0296.

COLDSPOT refrig., white, 12'x15' moss green carpet w/pad; new 30" gas range, yellow; portable Whirlpool aqua dishwasher. Rose, 256-2307.

BICYCLES one 24" boy's, one 26" girl's. Luna, 268-7662.

NORGE electric clothes dryer, \$35; acrilon plush-pile blue carpet, 13'x17', \$75; Frigidaire auto air conditioner components, make offer. Chandler, 296-3323.

4-PC. BEDROOM suite; 9-pc. dining rm. suite; sofa, chair, commode table. Browning, 299-6384.

PROJECTION SCREEN, Radiant Colormaster, 50" x 50", \$18. Klecolka, 282-5286.

REFRIGERATOR and stove, \$75 each. McIlroy, 8806 Aztec Rd. NE, 296-7275.

20" BIKE & boy's size 6 blue suit. Bowen, 255-8195.

FULL BUCO HELMET w/bubble shield, used only once, still in box, new, \$38, make offer. Campbell, 268-8445.

KANGAROO FUR COAT, white, new, size 12. Stephenson, 256-9192.

REBUILT Frigidaire refrigerator; 4-burner 24" gas range; 4-drawer 37x25x27" metal cabinet. Claibough, 299-0721.

RELAX-A-CIZOR, deluxe model, \$100. Carlson, 299-7253.

HEATER, gas, 60,000 BTU/hr. overall size 24"d, 30"w, 45"h, \$25. Romero 344-0302.

LADIES 15-lb. bowling ball, bag & shoes; set of Hardy Boys books. Moore, 268-9658.

MINIATURE SCHNAUZERS, 2 mos. old, AKC, no shedding, no odors, champion blood lines. Jones, 298-3891.

HO gauge train and 4 x 8-ft. landscaped layout, including houses, animals, & accessories, \$75. Brewer, 298-6018.

PRECISION RADIATION model scintillator, \$150; commercially made golf cart, fiberglass body, no motor or batteries, \$35. Ernst, 344-8694.

LABRADOR RETRIEVER PUPPIES, AKC reg., both yellow & black available, train now for next hunting season. Benson, 268-9727.

CRAFTSMAN power hack-saw, used hand-type, \$50; oxyacetylene torch & cutting attach., used, \$50. Mullin, 898-0285.

THREE-PIECE curved sectional sofa, cocoa brown tweed, solid construction, \$85. Carlsten, 296-2586 after 5.

### CARS AND TRUCKS

'62 RED VOLKS, \$700. Dudley, 298-6955 after 6.

'55 OLDS, \$175. Kennedy, 298-4603.

'63 FORD Fairlane 500 sedan, 260 V8 engine, AT, PS, one owner, \$650. Folkins, (1) 867-2825.

'64 STUDE Commander, 6-cyl. standard, low mileage, \$550. Kross, 255-3088.

'67 GALAXIE 500, 4-dr. HT, 289 engine, PS, factory air, under 25,000 miles \$2175. Morgan, 299-2850.

'63 CORVAIR Spyder, super charger, conv., 4-spd. trans., R&H, w/w, \$700. Buss, 298-1589.

'62 FORD Galaxie, AC, radio, PS, 390 Thunderbird engine, 64,000 miles, \$450. Schelby, 344-5522.

'65 FORD 2-ton truck. Newton, 255-2074.

'66 FORD F-250 deluxe camper special, ranger cab, bucket seats, 352 V8, AT, limited-slip, AC, PB, auxiliary tank, \$2225. Kramm, 268-5078.

'64 FORD truck, 1/2-ton, 8' styleside, V8, limited slip, 4-spd., 43,000, make offer, available approx. March 1. Bruce, 299-2542.

'61 FORD F-100, V8, 4-spd., deluxe cab, LWB, shell camper. Gillette, 298-0919.

'62 FORD station wagon, PB, PS, 352 CID engine, \$450. Hart, 298-8012.

'66 MAROON Mustang HT, V8, 289HP, console, factory-made 8-track stereo, auto. stick shift, 34,000 miles, \$1500 cash. Covington, 268-4995 after 5.

### REAL ESTATE

NE HEIGHTS, 3-bdr., 1 1/4 baths, patio, dbl. garage, fenced back, carpeted, near schools, 5/4% FHA, \$2000 equity, \$16,150 total. Bodine, 296-3620.

NE HOME, 3 or 4-bdr., 1 1/4 baths, new carpet, fp, garage, den, DR, fallout shelter or photo rm., dbl. patio, \$19,500. Zimmerman 296-1058.

ROBERSON 3-bdr., \$18,500, den, fp, 1 1/4 baths, new carpet, drapes, extras, 1420 Sq. Ft., 5 1/4% FHA, Snowheights/Erbbe NE. Meyer, 298-4825.

HOUSE, Sandia/Bellehaven school districts, 1850 sq. ft. living area, low payments, low interest. McCullough, 299-7426.

4 1/2% VA, 3-bdr., 1 1/4 baths, Mankin w/19'x21' custom den/bar — w/bp, garage, carpeting, drapes, covered patio, sprinklers, fenced, \$17,500 FHA, less for cash to \$8500 equity. Chavez, 265-1146.

EASTDALE, \$350 down, 2-bdr., adjoining school, park, shopping, lg. R-2 corner, bar, panelling, carpet, range & refrig., 220V etc. Bascom, 299-9044.

LOT, Manzano Springs, easy terms. Evererd, 265-2303.

DOUBLE 1-bdr., all furnished apt., SE Heights, no qualifying, \$11,850, small down. Chavez, 298-5091.

MOSSMAN 3-bdr., den, 1 1/4 baths, 2-car garage, \$19,500, less for cash equity in 4 1/2% loan, 2804 Dakota NE. LeRoy, 296-2953.

### FOR RENT

3-BDR., 1 bath, 1-car garage, Los Altos area. Available immediately, \$135 per mo. Patterson, 243-6219.

UNFURNISHED, 2-bdr. apt. Parsons, 268-7094 after 5:30.

### WANTED

RIDE to Bldg, 802 from 9608 Shoshone NE, 8 a.m.-5 p.m. Abbott, 299-9567.

BOY'S BIKE, 24", & 20" girl's bike, top cond. Sektnan, 296-5396.

USED World Book encyclopedia. Kuehl, 299-5842.

METAL SKIS, 180 to 185 cm. Carlson, 299-7253.

PORTABLE TV set in good working order. Moore, 268-9658.

### LOST AND FOUND

LOST—green-leather covered button, blue stocking cap, white crash helmet, men's white gloves, green notebook w/addresses & phone no's., 1' piece steel cable attached to small handle, "Successful Inventor's" handbook, elbow-length black gloves, Parker ball point pen, service manual for Karman Chia, 5 keys on ring. LOST AND FOUND, tel. 264-2757, Bldg. 610.

FOUND—Blue all-weather jacket, man's cuff link, bracelet w/stones, pierced earring, 2 keys on ring. LOST AND FOUND, tel. 264-2757, Bldg. 610.

## Coronado Club Activities

# Make Reservations Right Now For New England Seafood Mar. 1

Today is the deadline for making reservations for the fabulous New England Seafood dinner scheduled at the Club Saturday, March 1. Early reservations are necessary to order the clams and live lobsters from Maine.

The Club's kitchen staff aims to prepare these delicacies to perfection for the big evening. Along with the seafood dinner, the Club will present a free wine taste and dancing from 9 p.m. to 1 a.m. Cost for the whole works (lobster, clams on the half-shell, etc.) is \$6 per person. Call the Club office right now, tel. 264-4561, and make your reservations.

## Contamination Control Symposium Set March 3; Sandians on Program

The 5th Annual Contamination Control Symposium sponsored by the Rio Grande Chapter of the American Association for Contamination Control will be held Monday, March 3, at White Winrock Motor Hotel. Dan Garst (1742) is general chairman.

Attendance is expected to reach about 100 and will include representatives in the research, manufacturing, aerospace, medicine and microbiology aspects of contamination control, Dan says. The program format departs from those of former years in that papers will be presented on many diversified subjects, while one session will be devoted entirely to a series of short papers by local speakers.

Sandians participating in the program will include Jack Sivinski (1740), who will moderate the morning session of the symposium; Richard Bice (7000), who will discuss "Controlling Contamination of Our Natural Resources" at the Symposium luncheon; Bill Neitzel (5414), who will discuss "High Volume Real Time Aerosol Sampler"; and Dan who will present "NASA Contamination Control Handbook."

Doug Ballard (5425) is responsible for Symposium registration. Willis Whitfield (1742) is program chairman.

## Mardi Gras Cancelled

The Mardi Gras event originally scheduled for tomorrow night at the Club has been cancelled. The orchestra booked for the occasion cancelled and a replacement could not be obtained.

\* \* \*

## Social Hours

Tonight Frank Chewiwie will make happy music for the seafood buffet. Cost is \$1.25 for adults, \$1 for kids.

The Club will also observe George Washington's birthday on Friday, Feb. 21 (by closing) so the social hour that evening has been cancelled.

On Friday, Feb. 28, the Mexican food addicts can live it up while Sol Chavez and the mighty Duke City Brass hold the bandstand.

Don't forget the Tuesday night social hours starting at 5 p.m.

\* \* \*

## Teen Go-Go

The kids will enjoy The Kidds, a rock and roll group, at the monthly teenage go-go scheduled Saturday, Feb. 22, from 7:30 to 10:30 p.m. Member parents should pick up tickets at the Club office.

\* \* \*

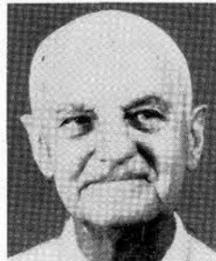
## Bridge

Duplicate bridge meets Tuesdays at 7 p.m. Ladies bridge meets Thursday, Feb. 20 at 1 p.m. Sandia Lab bridge meets Thursday, Feb. 27, at 7 p.m.



ALL HEART GIRL Connie Myers (3126/3511) reminds you that February is National Heart Month. Sandians will give nearly \$10,000 to the New Mexico Heart Association this year through the Employees Contribution Plan.

## Deaths



Mr. Price



Mr. Holcomb



Mr. Talley

Malcolm S. Price, Sr., a retired Sandia employee, died Jan. 19 after a long illness in Vestal, N. Y. He was 82.

He retired in December 1956 after working at the Laboratories nine years as a toolkeeper in the Development Shops.

Survivors include two sons who live in New York.

\* \* \*

Marvin Holcomb, a staff member in Product Acceptance Equipment Design II Division 2452, died Feb. 7 after a short illness. He was 37.

He had worked at Sandia Laboratories since June 1957.

Survivors include his widow, two sons and a daughter.

\* \* \*

James L. Talley, an order analyst in Administrative Support Division III, died Feb. 8 after a short illness. He was 57.

He had worked at Sandia Laboratories since March 1953.

Survivors include his widow, one daughter and one son.

## PAGE EIGHT

SANDIA LAB NEWS  
FEBRUARY 14, 1969

## Sandia Safety Signals



ALLOW YOURSELF  
MORE INTERVAL!

## Getting on the Freeway

When entering a freeway, get on at traffic speed. Don't stop at the end of the ramp. While on the entry ramp and acceleration lane, you must match the speed of traffic and blend in. If you enter slowly, you may force other drivers to brake or change lanes suddenly.

## Sandia Takes Fifth In Fire Prevention

Fifth place in the 1968 National Fire Prevention contest was earned by Sandia Laboratories. Sandia's fire prevention program, conducted by Field and Plant Operations Engineering Division 4544 under Ward Hunnicutt, was judged one of the best of the 138 U.S. and Canadian entries in the industrial division of the annual contest sponsored by the National Fire Protection Association.

The honor is a continuation of the record the Laboratories has earned through the years — in 1967 Sandia received the third place award and in 1966 Sandia earned the Grand Award.

## Supervisory Appointment



RICHARD L. COATS to supervisor, Reactor Development Division 9142, effective Feb. 1.

Dick joined Sandia in 1966 as a staff member in Reactor Development Division 5223 (later changed to 9142) where he has worked until his present promotion.

In 1966 he earned his PhD in engineering sciences from the University of Oklahoma. He holds a Master's in nuclear engineering and a BS degree also from this school.

A veteran, Dick served from 1959-63 with the Navy's nuclear power program.

He is a member of the American Nuclear Society.

## Congratulations

Mr. and Mrs. G. H. Mauth (9213), a son, Kevin Douglas, Jan. 28.

Mr. and Mrs. Jake Sanchez (4151), a daughter, Devonne Renee, Jan. 23.

Mr. and Mrs. Kenneth Grothaus (2343), a son, Jeffrey, Jan. 19.

Mr. and Mrs. Fred Reinhardt (2343), a son, Jason Fredrick, Dec. 27.

Mr. and Mrs. Ron Hall (4332), a son, Jason Eric, Feb. 4.

# Take Note

George Wayland (3122) has been named to the Insurance Advisory Committee of the State Corporation Commission. The committee advises and makes recommendations to the State Insurance Commission on insurance matters affecting the state. George will serve as a consumer insurance representative.

\* \* \*

Don Mattox, supervisor of Ceramics and Surface Physics 5442, has been elected chairman of a committee of the Thin-Film Division of the American Society of Testing and Materials. The function of his committee is to write ASTM specifications for products or testing techniques.

\* \* \*

Lloyd Nelson (5271) is chairman of an effort to raise funds to send the Del Norte High School Band to St. Louis to perform at a national convention of music educators, a signal honor for the youngsters in the band.

The 72-member band will present a program Sunday, Feb. 23, at 4 p.m. at Popejoy Concert Hall at UNM. The admission of \$1 will go into a travel fund. The band will perform in St. Louis on March 7.

\* \* \*

Cecil Jordan, supervisor of Security Standards Division 3511, participated in the observance of the Notre Dame Law School's 100th anniversary last week. At the same time, he exchanged his LLB degree for the new Juris Doctor degree now awarded all Law School graduates. The JD degree follows a recommendation of the American Bar Association to put law graduates on the same academic level as graduates of other professional schools.

\* \* \*

Charlie Hines (3513) has been appointed vice chairman of the State Parks and Recreation Commission by Gov. David Cargo. He previously served as a member of the commission for two years. As vice chairman, Charlie will help make policy for the present 22 state parks and the 10 in a planning stage. A proposal of the Commission, now before the legislature, would establish a Central Rio Grande Park extending from Cochiti to Belen.