

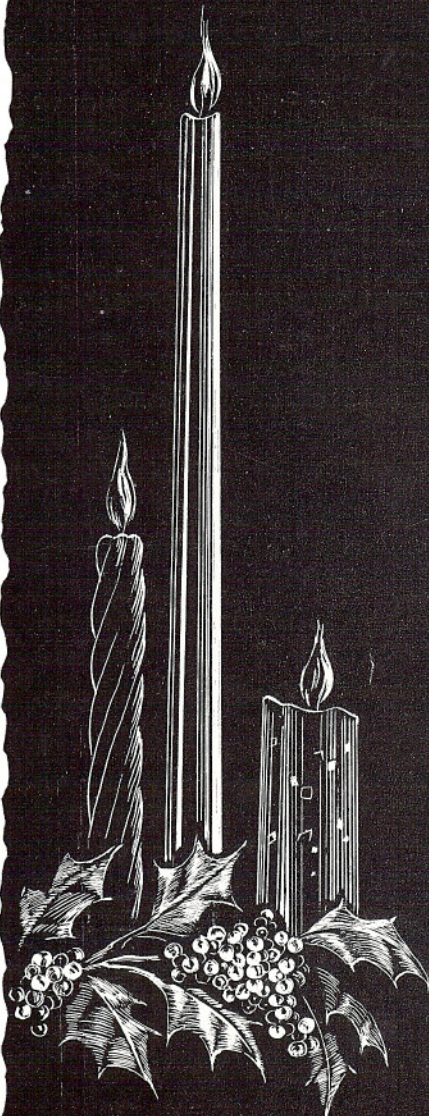
LIBRAZETTE

AN EXCHANGE OF NEWS AND KNOWLEDGE

VOL. 10, NO. 8

NOVEMBER-DECEMBER, 1963

MERRY
CHRISTMAS



Happy New Year

Navy Unveils SUBROC: Called Antisub Warfare Breakthrough

It's Librascope Group

As LIBRAZETTE went to press, President R. W. Lee announced that the Information Systems Group, GPI, will be changed to the Librascope Group, GPI. The change is being made, Mr. Lee said, "to make full use of the name we have so firmly established in the quarter-century of our existence."

At the same time Lee announced that the Glendale branch will become the Surface Equipment Division and the San Marcos Branch will become the Avionics Equipment Division. All changes are effective Jan. 1, 1964.

(GLENDALE) SUBROC, on which the Glendale branch of Librascope has been working for almost six years, was revealed Dec 4 to be the Navy's "long-awaited breakthrough in antisubmarine weaponry."

The announcement came in a public information release to newspapers, radio and TV. Motion picture films shown on TV disclosed that the SUBROC weapon is a submarine-fired combination of torpedo, rocket and aerial depth bomb, armed with a nuclear warhead.

Submarines armed with SUBROC can fire—submerged—at a moving target far beyond submarines armed only with conventional weapons. SUBROC's targets are, of course, enemy vessels, but particularly submerged submarines.

Submarines equipped with SUBROC are members of the SS (N) 593 class, called hunters, because their mission is to hunt down enemy submarines and destroy them.

(Turn to Page 10)

Late News.....

Three new contracts involving production and engineering, have been awarded to the Glendale branch, Librascope division. . . . The Navy's Bureau of Weapons ordered additional MK 113, Mod 5 submarine fire control systems in the amount of \$5,918,300.

. . . A \$3,280,000 contract was awarded by the Air Force System Command's electronic systems division for a third 473L data processing system. . . . Link Division, GPI, awarded an engineering and production contract amounting to approximately \$500,000 for an optical subsystem, to be a part of a space flight simulation system it is producing for NASA.

Centaur Computer A-OK on Flight

(CAPE KENNEDY) Librascope's San Marcos-built computer aboard the Centaur moon probe space vehicle, fired from here Nov 28, has been functioning perfectly since the launch.

Reports on the computer and other functional operations are being radioed back to earth, according to Milan Telian, Centaur project manager for San Marcos.

"All indications from the telemetry are," Telian told LIBRAZETTE, "that the computer, although not actively controlling the guidance for this flight, is doing all that we expected of it."

Telian describes the current missile flight as a test of the vehicle itself and its radical liquid hydrogen fueled propellant system, rather than of the guidance system.

"The computer is in what is called an 'open loop' operation," Telian said.

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WRITERS and editors all are these members of the Spares Provisioning Section of Glendale Engineering, shown with copies of the 12-volume Repair Parts Cross Index, recently completed for the Mk 113, Mod 5 fire control system. The index is the first of its kind. In front row, (L-R), Pat Bergstrom, Harvey Goodwin and Karen Sams. At rear, Bob Marsh, Boc McDonald, Supvr Bob Mothersbaugh, Don Torrence and Ed Lyneis.

Spares Provisioning Group Authors First Navy Spare Parts Cross Index

(GLENDALE) Glendale Engineering's Spares Provisioning Group has just completed the first project of its kind ever commissioned by the Navy—the compilation and writing of a complete repair parts cross index for a major ASW project.

A research, compiling and writing team of eight members of the group, headed by Supvr Bob Mothersbaugh, produced the index. So well received has it been that the Navy has already commissioned a new project covering another ASW system.

The first production is a 12-volume affair and lists every repair support item in the Mk 113, Mod 5, fire control system. Total listings: 5,040 line items, each one of which has four data entries for a total of 20,160 item listings.

This seeming over-duplication is anything but that, according to Mothersbaugh.

"One of the great problems the Navy has had in the past has been the difficulty of keeping track of repair parts, largely because manufacturers, wholesalers, Navy Stores, other Federal agencies frequently used different terminology to describe the same item.

"The index takes cognizance of these different languages and gets right down to basic semantics. We researched mountains of our own documents and the Navy's, talked with engineers and our field service people, reviewed bulging files of communications with fleet personnel

and finally came up with what we believe to be definitive descriptions, symbols, serial numbers and other identifying data.

"The four categories we have set up embrace every significant way of identifying and describing the parts. By cross-indexing we make every identification lead to another, so that we believe it is now impossible to be unable to find a 'language' familiar to the seeker."

End result of the publishing effort will be to speed up the Navy's spare parts ordering process and to provide an accurate set of tools to establish and maintain effective inventory control all along the supply pipeline leading from manufacturer to vessels at sea.

Members of the writing and research team, in addition to Mothersbaugh, are: Bob McDonald, Harvey Goodwin, Ed Lyneis, Bob Marsh, Don Torrence, Karen Sams and Pat Bergstrom.

The work the group performed on the Mark 113, Mod 5 effort produced a system approach which will make future index compilation a much more ordered process, says Mothersbaugh.

In Memoriam

John Fitzgerald Kennedy
1917-1963

"Ask not what your country can do for you;

"Ask what you can do for your country."

Name W.J. Flanagan Materiel Director

(GLENDALE) William J. Flanagan, materiel manager of the Glendale Branch since Feb., 1961, has been named Director, Materiel, Information Systems Group. He succeeds M. L. Cowan, who has transferred to the Commercial Computer Division.

In his new assignment Flanagan will report to S. L. Briggs, ISG Vice-Pres., Administration.



Flanagan, who holds a BA degree in Business administration from USC, occupied key managerial posts with Pacific Automation and Convair-Astronautics before joining Glendale. He is married, the father of two and makes his home in Glendale.

Nipponese Students Visit Glendale, ISG

(GLENDALE) What do two young Japanese university students think about American business management?

Well, the unsolicited opinion of Itsuo Ishii and Isamu Yoshimoto, economics majors at Waseda University, offered during a tour of ISG's Glendale facilities, is "that American management is the best in the world."

The pair, who are on a six-month tour of the U. S. as part of their education, felt they spoke with the authority that exposure to other nations' business has given them.

"There's nothing like it anywhere else," Yoshimoto declared. He proposes to do a paper on this theme as part of his preparation for a career in financial news writing.

The two visited ISG in the company of H. A. Tollefson, Chief Librarian of Glendale's public library. Tollefson is Chairman of Glendale's Sister City Committee and the two visitors call Hiraoka, Japan, "sister city" of Glendale, their home town.

Sidney L. Briggs, ISG Vice-Pres, Administration, and Ken Slee, ISG's Director of Public Relations and Advertising, explained the GPE-GPI organization to the students, and the relationship between private industry and the government, then took the pair on a tour of Bldgs A-01 and D-11 in Glendale, and CCD in Burbank.

J.E. Barry Joins System & Research

(GLENDALE) James E. Barry, who previously was a member of the scientific and research staffs of North American Aviation, Hughes Aircraft and Lockheed Aircraft, is the newest addition to the ISG Systems and Research Center.



Dr. M. V. Cross, Jr., has appointed Barry a senior staff engineer in the Space and Information Systems section of which Cross is director.

Barry is a 1952 BS-Math graduate of Wayne State University, Detroit, Mich., and was awarded his MS-Math from the University of Michigan in 1954. While studying for his MS degree, he was a member of the University of Michigan Willow Run Research Laboratory staff and designed the multiplexing subsystem for the MIDSAC computer, an interim element of the SAGE defense system.

During his three years with Lockheed's missile systems division, Barry was a senior scientist on the Polaris project. Over a five year span at Hughes, Barry was a part of the scientific and engineering teams on the ALBIS advance missile defense system study, the BAMBI missile interceptor program and the BOSS orbiting weapons system study group.

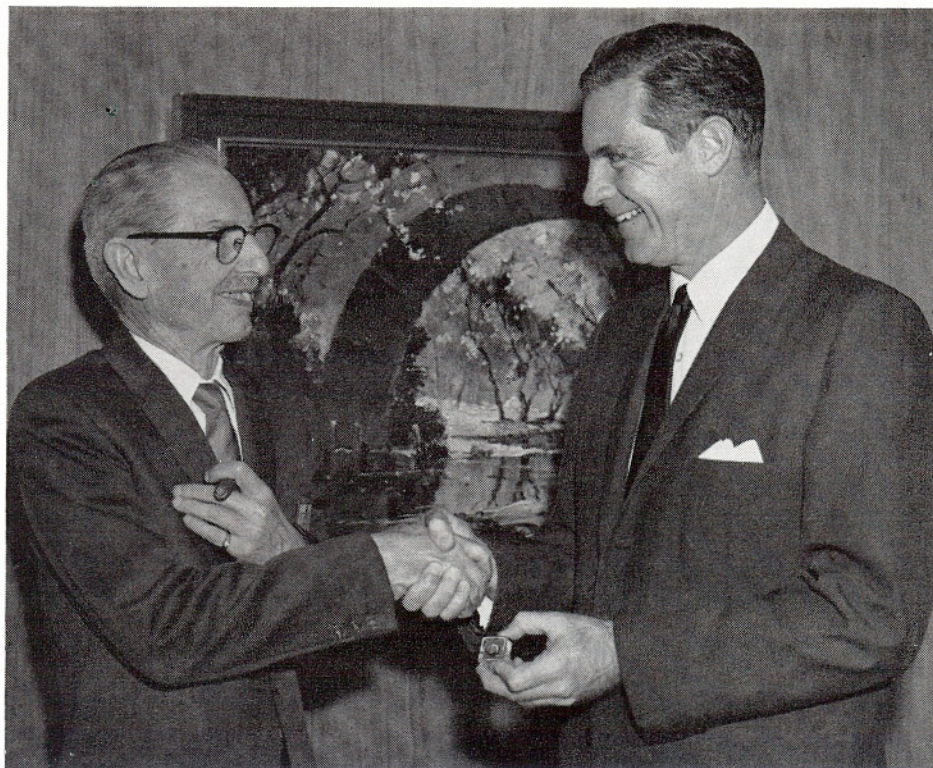
At North American's Space and Information Systems division Barry directed analysis to determine the GOSS project realtime mission and developed the computer and vehicle display requirements for the APOLLO program. He is the inventor or co-inventor on five patent applications involving a card-to-tape translator, a laser flip-flop and three other electronic devices.

Barry, who is married and the father of three, makes his home in Northridge.

LIBRAZETTE is published for all employees of the Information Systems Group, GPI, to keep them informed about Group and GPI plans, policies, products and personnel. LIBRAZETTE is produced by the Communications section, Information Systems Group, at 808 Western Avenue, Glendale 1, Calif. © 1963 by Information Systems Group, General Precision, Inc.

Editor: W. K. Keith

Art and photographic services are provided by the Publications Section, Glendale branch: Keith A. Kinnaird, Art Director; Peter J. Maimone, Supervisor, Art Services. Special art and photo layout by James R. Norwood, Jr., George V. Brull, Roy T. Brown and Andrew M. Cook. Photography by James A. Avera.



JOHN C. DAVIDSON, (L) who retired from AT&T after 29 years of service, is well into his second career — with ISG. Here he receives his five-year service pin from Robert O. Vaughan, Vice-Pres, Marketing, of the Librascope division.

New Schedule

LIBRAZETTE, which has been appearing on an every-other-month basis since Jan 1963, will resume publishing on a monthly schedule, starting with the Feb 1964 issue. Publication date will be the first of each month. Copy deadline for each issue: the 15th day of the preceding month. Your contributions are solicited. Address LIBRAZETTE, Bldg 103, Glendale, or telephone Ext 1252.

Plan New Telephone Network at San Marcos

(SAN MARCOS) The telephone system here is being rebuilt to provide greater efficiency and convenience now and to provide for future growth.

A new three-position switchboard will be supplemented by an internal dial system. When completed the new system will permit each phone user to dial any one of the branch phones. The new system has an ultimate capacity of 200 station lines.

Toll calls in the San Marcos-San Diego area, tie-line calls to Glendale and long distance calls will continue to be made through the switchboard.

Specifications for the new system were written by Larry G. Cahill, ISG telecommunications supervisor.

Retired Once at 65, Starts Over at ISG

(GLENDALE) "AT&T said I was 65 and had to retire, but hell's bells, after 29 years on the job I had just gotten up a full head of steam. So I came over to Librascope and took a job in Publications, and I've been here ever since."

That was John Clyde Davidson talking on the occasion of his fifth anniversary with the company and the award of a service pin from Librascope division Vice-Pres, Marketing, R. O. Vaughan, for whom John is senior proposal coordinator.

At 70-plus, John looks back on his career with the Bell Laboratories and the Westrex Corp, his World War I service as Air Corps pilot and squadron CO, his three years of running his own testing lab in New York and his five years at Brooklyn Polytechnic and Columbia University as "very interesting and lots of fun."

"My present job also is interesting and I get a lot of satisfaction and enjoyment from it. I look forward to every day's effort."

So saying, John lit up another of his ever-present eight-inch cigars and tooled off in the direction of the Reproduction Dept with a bale of copy under his arm, to put another proposal into the works.

Librascope and CCD Donors Join in Giving to Blood Bank

(GLENDALE) Employees of the Librascope Division and the Commercial Computer Division (Burbank) turned out in full force recently to contribute their blood to the Librascope Employees Blood Bank.

Nurse Margery Makalonis and Eileen Brown, Precisioneer secretary, registered 159 donors. Colds, recent immunization shots and other temporary disqualifications brought the total of acceptances down to 125.

Ninety-one of the donors were "regulars," who are consistent givers to the blood bank. The Glendale chapter of the

American Red Cross, administrators of Librascope's bank, awarded three-gallon and two-gallon donor pins to Art Van Essen and Fred Killips in recognition of their continuing support. Killips also served as Chairman of the blood bank drive.

The Roll of Honor for 1963 now includes:

Diana S. Pike
Ellsworth D. Newman
Terry A. Leonetti
Breo Freeman, Jr.
Bradley M. Auten
Linda A. Nilsson
Olga S. Lears
Carl J. Doolittle
Leonard T. Soper
Lloyd W. West
Ralph B. Delle Fave
Bertha A. Montgomery
Mary K. Sherman
William R. Fryear
William J. Murray
Lena S. Allen
Donald F. Kelly
Dallas A. Martin
Margaret A. Bishop
Juan Guarino
Frank B. Marshall
Wilbert R. Angotti
Ruben A. Martinez
Patricia S. Bishop
John W. Johnston
Charles F. Breslin
Betty L. McGinn
Alan W. LaRue
Seymour Roth
Robert L. McIntyre
Nelson E. Manzanarez
Paul Glass
Edwin D. Heminger
Curtis G. Kuhn
Gerald V. Stanzell
Merten D. Wandrey
Frank R. Murtha
Theodore Reynolds, Jr.
Helen Florez
Phillip D. Shipp

Arlington L. Mosher
Samuel T. Long
Harold E. Dodson
Norman E. Bogan
Stephen H. Brinkley
Robert R. Allison
William J. Griman
Wilmer R. Young
Lester L. Eckley
James R. Bakeman
Ann D. Binyon
Richard B. Hillery
Richard M. Bird
Sharon Rae Hanson
Roger J. StClair
Glenn M. Shearer
Wallace H. Robinson
Thomas W. Morris
Eunice E. Morris
Arna C. Wenger
David M. Fein
Marvin R. Gammel
Ella E. Lustig
Marcel A. Loisel
Daniel C. Benner
Betty J. Beavers
William E. Newman
Margaret L. Terrill
Robert G. Peterson
Frederick J. Killips
Richard L. Robinson
Juanita E. Robinson
Doris P. Nordendahl
Gordon A. Pickell
John G. Lincoln
Stephany Przyborowski
Carl L. Miller
Robert McMullen
Oscar A. Schwartz

Juanita K. Delle Fave
Arthur Van Essen
Rowland E. Harr
Richard T. Hesse
Esmund L. Liberty
Sigurd Buck
Armand Chaput
Kenneth R. Mandeville
Robert L. Linsley
Harry H. Okada
Hank VanDerVelden
Lorraine H. DeMay
Edward B. Fauvre
Helen P. Benson
Raymond Goodrich
Dennis R. Johnson
Freddie L. Horton
John E. Resendez
Anne M. Atcherson
Thomas P. Sorenson, Jr.
Clarence R. Linsley
Herbert Meyer
Carl R. Neighbors
David L. Dowling
Donald D. Yeager
Joseph C. DiGiovanni
William J. Nance
Martha A. Ramirez
Ray Sanchez
Vernon D. Larson
Eric Seif
Doniphan K. Barton
Mary E. Kemme
Frank C. Rocha
Peter DeYoung
Richard S. Portugal
Ronald G. Maas
Emery E. Fekety
Patricia J. Smith
Lorenzo D. Swain

Call for Papers

Papers on various aspects of space navigation are solicited by the Institute of Navigation for presentation at its Eastern Regional Meeting, April 30 and May 1, at St. Petersburg, Fla. Deadline for submitting outline to ISG Public Relations is Feb 3, 1964.

Celebrates Birthday, Retires, Same Day

(GLENDALE) A gal has a right to change her mind—right up to the last minute—and Elizabeth P. Eyraud, of Glendale Bldg 17 assembly area, did just that.

When the Information Systems Group hourly employees retirement income plan was announced several months ago, Mrs. Eyraud declared that, with her 67th birthday drawing near, it was time for her to retire.

But then the idea of such a major change in her life proved unattractive after all, so she asked for, and got, permission to work another year. (The ISG retirement plan permits employees over 65 to work until they are 68, at the convenience of the company.)

But still more thought about the matter produced another change of mind and, on Nov. 29, Mrs. Eyraud, coincident with her 67th birthday, bid farewell to her pin-tapering operator's job, her friends and Librascope.

The day turned out to be quite an occasion. The Precisioneers presented her with an orchid corsage, fellow workers gave her a handsome traveling case and a glamorous robe and there was a big birthday cake, too.

Elizabeth, who will receive monthly payments from the ISG hourly retirement fund in addition to Social Security, joined Librascope April 7, 1952, as a burrer in the machine shop. She was promoted to drill press operator, then to leadman in burring, then to her most recent job, taper pin operator.

Says Foreman Bob Peterson:

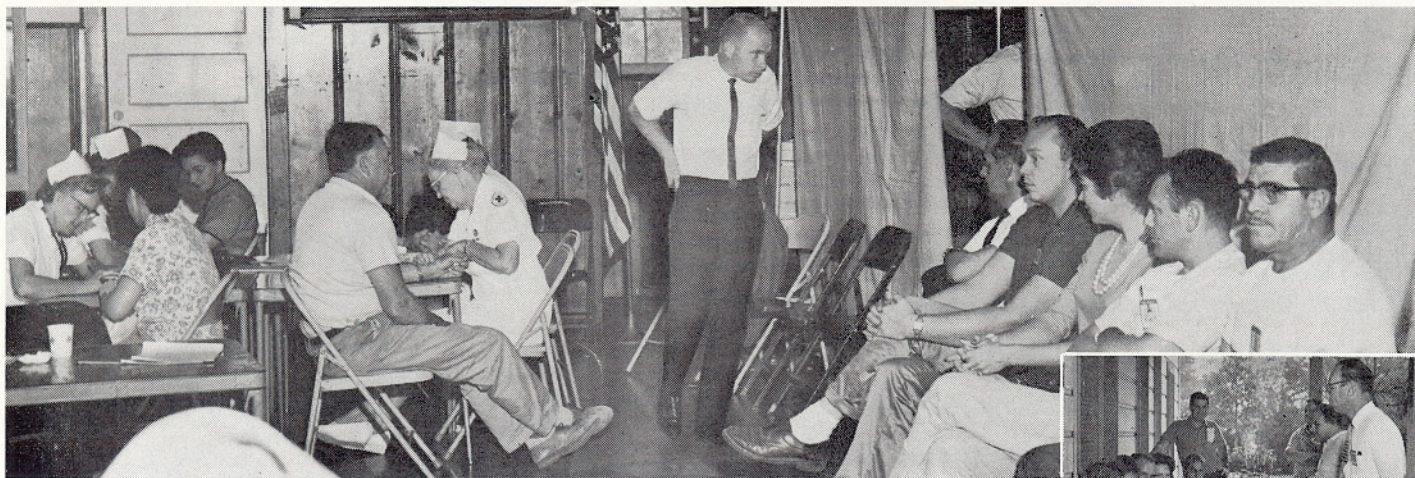
"We're all going to miss Elizabeth, as a person and a co-worker. She was a first-rate operator."

With husband Henry, a garageman who beat Elizabeth to the retirement wire by five years, the ex-Librascoper will "keep right on working, but I won't get paid for it," taking care of their home in Glendale and two cabins in the desert near Pearblossom.

"I'll tell you one thing, my houses are going to get a cleaning like they've never had in the past 10 years," Elizabeth declared on her departure. "I've never had time to do a real job on them up to now!"

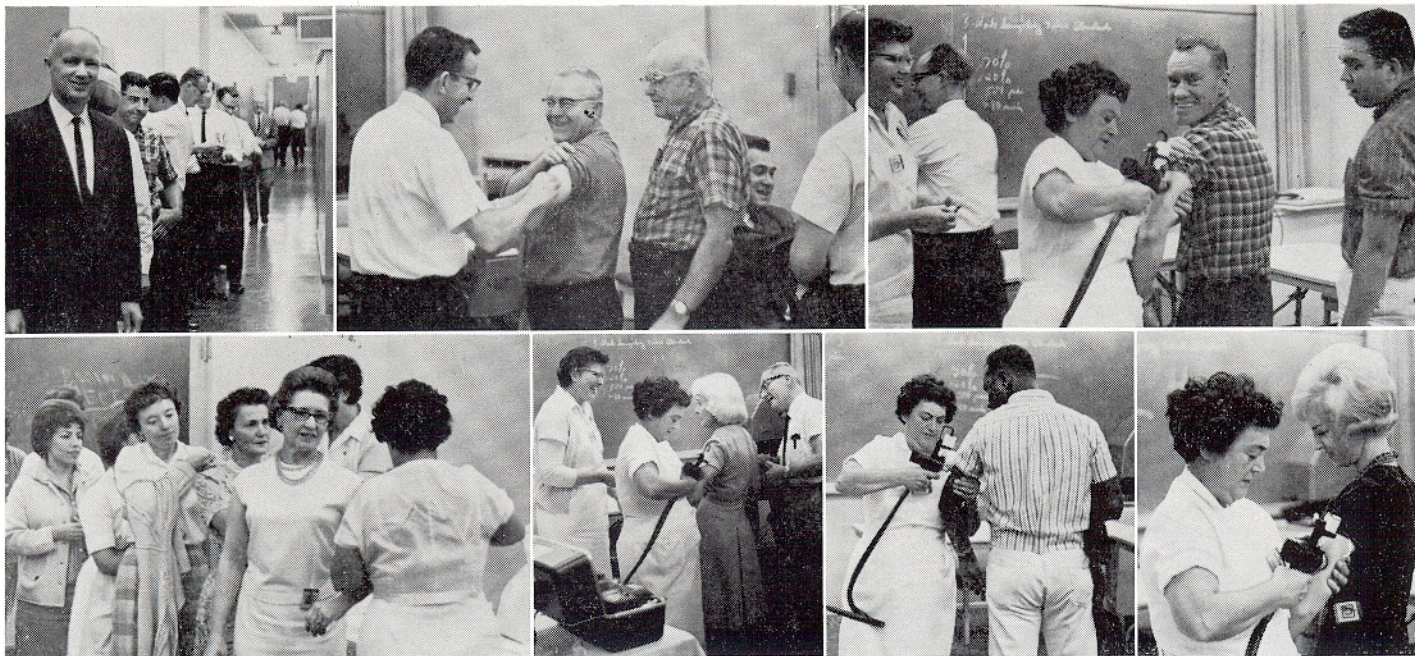


BIRTHDAY and retirement came for Elizabeth Eyraud, Glen-Assembly, on the same day, and co-workers made it an occasion at coffee break time. Gladys Kaiser, (L) and Shirley Roberts (R) help Elizabeth celebrate gifts of traveling case, robe and corsage. (See story at right)



November 1963 Blood Bank





EMPLOYEES of the Glendale branch, Librascope division, the Systems and Research Center and the ISG offices checked in at the mobile clinic Nov 21, to get "shots" as a preventive action against Asian 'flu. They came—228 of them—expecting the familiar needle of the hypodermic, but found that staffers of the Burbank Medical Clinic were equipped with the new "air

gun." Nonetheless, some of them winced—beforehand—just the same, although the "gun" shoots the serum through the skin without leaving a puncture mark. These photos were taken in Bldgs A17, A16 and 103 by Photog Jim Avera, who, when everybody else had their shots, stepped up and got his, too.

ImpAct to Launch Second Campaign

(GLENDALE) Theme of the second step of the ImpAct campaign to build IMProved ACTION into the operations of all company units, is Good Housekeeping, C. S. Godwin, chairman of the ImpAct committee announced Dec 14.

The Good Housekeeping section of the campaign will get under way the first week in January.

"Good Housekeeping" involves every employee and every part of the organization, says Godwin. It embraces personal housekeeping in work areas, covering typewriters and other business machines at the end of the day, keeping files in order, not having more materials on hand than are needed, using safe methods in doing our jobs, keeping equipment in repair—and many more things, such as making use of such things as ashtrays and wastebaskets.

The committee solicits ideas from all employees as to how our housekeeping practices may be improved. Ideas may be sent to any supervisor for forwarding to the evaluation committee.

An inspection of all areas by a Management Good Housekeeping Committee will be made late in January, Godwin said. Commendations to be posted in the departments, will be awarded for areas scoring high on the committee's checklist.

Currently under evaluation are some 90 improved action ideas contributed during ImpAct's first campaign phase, "Operation X-S Paperwork."

Credit Union Meeting

(GLENDALE) The Librascope Employees Credit Union will hold its annual meeting Wednesday, Jan. 29. On the agenda; discussion of the annual dividend rate, current financial status and election of members of the Board of Directors. The meeting will be held in the Training Conference Room of Bldg 103, Glendale, and will start at 4:00 PM.

W.D. Jordan Joins Glendale Engineering

(GLENDALE) Supervisor T. A. Miller of Glendale-Eng's electronic packaging design unit has appointed Engineer William D. Jordan, Jr., to his staff.



Jordan comes to ISG from the RW division of Thompson-Ramo-Wooldridge Corp., where he was an assistant project engineer. Before joining RW in 1958, he was a design engineer with Douglas Aircraft Company.

An ME graduate of Purdue University ('57), Jordan also studied at Princeton University and has taken graduate work at UCLA. He is married and makes his home in Woodland Hills.

C.R. Cole, F.J. Copple In New Assignments

(GLENDALE) Charles R. Cole, who has been Manager of Manufacturing for the 473L program since February, has been appointed Manager of Production Control for the Glendale manufacturing department. Cole succeeds Paul Rothfeld, resigned.

At the same time, Harlan Buseth, Assistant Glendale branch manager, announced the appointment of Frank T. Copple, Manager of Glendale's Manufacturing Support group, to succeed Cole in the 473L program assignment.



COLE



COPPLE

Both Cole and Copple are veteran ISG employees. Cole joined the company 22 years ago and Copple 13 years ago, both starting as journeymen in the machine shop, and progressing steadily to increasingly more important managerial assignments. Along the way, by working nights and attending college by day, Copple acquired his B/S degree in mechanical engineering.



USS HALSEY ... carries Librascope-Built ASROC FCS

(GLENDALE) Another Librascope-equipped unit of the Navy's modern fleet — USS HALSEY (DLG23) — has been completed at the San Francisco Naval Shipyard and is on her way to her first station.

HALSEY's deadly ASROC ASW system include Librascope's fire control system Mk 114, built around the high speed analog computer Mk 53, designed and produced by the Glendale branch.

HALSEY is named for the late World War II naval leader, the famed Admiral

William F. "Bull" Halsey. She is 500 feet long, with a beam of 50 feet and displaces 5,000 tons. Her armament includes the latest in rockets and missiles. In total size she is comparable to a pre-World War II light cruiser, but considerably faster. Ships of her class frequently serve as flagships for commanders of small ASW task forces.

Glendale field service representatives C. V. Main and Q. P. Cummings supervised installation and checked out the Mk 114 system.

SUBROC Biggest Project In Librascope's History

(GLENDALE) SUBROC is the biggest single project in the history of the Information Systems Group, since the founding of the original company—Librascope, Inc.—in 1937.

Much of the Glendale branch engineering department's design staff and facilities was engaged on the project since it was launched in 1958.

In terms of specifications to be met, necessary complexity of design, scope of the problems encountered—which always were many and always were changing—SUBROC made larger demands than any other project before or since.

Glendale branch engineering, then known as Shipboard Engineering Dept of Librascope, was chosen by the Navy's Bureau of Weapons to design the fire control system, as a subcontractor to Good-year Aerospace Corporation, prime contractor for SUBROC. Technical direction was provided by the Naval Ordnance Laboratory, White Oak, Maryland.

The impact of SUBROC and other contracts on the Librascope organization was felt in many areas. Total personnel went from less than 2,000 employees to a peak of 4,258 as the company staffed-up to

meet the engineering and production requirements.

Our "population explosion" also created a need for more physical facilities. This brought about the construction of Bldg A17 and the leasing of several large buildings from Grand Central Industrial Centre and an almost constant program of reconstruction in older buildings to meet ever-changing needs. The housing problem was eased, at various times, by leasing large trailers, particularly for "job-shop" drafting and engineering tasks.

Much new equipment of all kinds, ranging from drafting tables to huge numerically-controlled production machinery, also had to be purchased.

Raymond D. Gable

(GLENDALE) Raymond D. Gable, a member of the Glendale branch machine shop staff since September, 1958, died Oct. 22 following a prolonged illness. Funeral services were held Oct. 25 and burial was in Valhalla Cemetery, North Hollywood.

Tell Major Changes In Glendale Branch

(GLENDALE) Major changes in the structure of the Glendale branch, aimed at making the organization more competitive in the marketplace, go into effect Jan. 1. All areas of the branch are affected.

"The new structure strengthens our capabilities in every area, by grouping related functions in such a way that lines of communications are drastically reduced, thus speeding-up our ability to respond quickly to customer needs." Tom D. Bryant, Glendale Vice-Pres. and Branch Manager, told LIBRAZETTE.

By transfer, consolidation and establishment of new functions, the restructuring has produced a better organic relationship with the promise of greater operating efficiency, Bryant said.

"For instance," Bryant declared, "Operations, newly-established, includes Production Planning (Production - Material Control, Purchasing and Industrial Engineering); Production (Machine Shop and Assembly); Product Assurance (Quality Control, Reliability, Inspection, Standards and Liaison Engineering) and Manufacturing Engineering.

"In newly-established Logistics we have grouped all customer service functions, such as installation engineering, field service, customer training, customer repair service, spares and provisioning, and publications.

"In our new Program Management staff office we have Program Planning, the Program Managers and Contracts Administration. This puts together, under one head, functions which are closely related and interdependent."

For the time being, the 473L design engineering effort retains separate project status; all other design engineering functions in the branch are brought together under the designation of Design Engineering. Brought together also, are Glendale's Advanced Applications Group and the former Command and Control department's Applications Engineering.

Unchanged in function and reporting are Washington Engineering, Finance and Personnel.

Named to head the new groups are: Program Management—A. D. Larson, Director, with H. C. Applegate as Assistant Director; Operations—Harlan Buseth, Manager; Operations Planning, O. S. Dwire, Director; Product Assurance—W. J. Picker, Director; Design Engineering—J. L. Deitz, Director and L. L. Wolman, Technical Director; Applications Engineering, L. H. Bentley, Director; Logistics—J. R. Pelamati, Director; 473-L Project Engineering—L. L. Wolman, Director.

Air Force Testing 665A Computer Set

(SAN MARCOS) San Marcos' AN/ASN-24 (V) digital computer is flying high these days, as the Air Force puts the 665A reconnaissance-strike flight control system through its paces.

The computer and its peripheral gear are "performing very well, just as expected," says Tom A. Zander, 665A program manager for San Marcos. Laboratory and flight tests have so far consumed 800 hours, under the most rigorous conditions.

"We've had no failures and the only malfunctions were in a group of vendor-supplied components. These have been satisfactorily replaced, without delay to the flight-test program."

Eighteen high-altitude flights have been made so far, all at altitudes of 35,000 feet or better. The "test-bed" is a Boeing KC-135 jet transport, the military version of the Boeing 707 airliner. The flights have averaged four hours each.

The computer set used in the 665A tests is almost identical with the computers San Marcos is building for the Air Force's Lockheed C-141, jet cargo and troop transport plane. However, in its C-141 configuration the AN/ASN-24 computer carries a much bigger workload, says Zander.

The computer provides outputs to display devices for the pilot, co-pilots and navigator's stations, to the auto-pilot and to a data annotation system. The latter photographically records all navigational information on a film strip concurrently with film exposures in the 665A reconnaissance cameras.

Project Engineer Gerald A. Ohlson and Field Service Engineer Floyd D. Johnson have been on each flight and report that the KC-135 is very like its civilian 707 sister, but somewhat lacking in the comforts that airline passengers receive. "However, there is hot coffee!"

The flights are made out of Wright-Patterson Air Force Base, near Dayton, O. Ohlson and Johnson have been stationed there since early in the year.

As of Dec 1, the AN/ASN-24 (V) computer had been flight tested in all operational modes, except for autopilot control and the extreme weather of polar regions.

Seek NEP/CON Papers

The National Electronic Packaging Conference, to be held June 9-11 in New York City, is soliciting papers for presentation at the session. Outlines and abstracts should be submitted through the ISG Public Relations Office. Entrants are eligible for cash awards under the ISG Employee Writing Incentive Program.



SANTA CLAUS and his helper, Mary Christmas, were the center of attention at the Precisioneers Annual Christmas party for the children of Glendale area employees Dec 7, at Hoover High school in Glendale. Meeting Santa for the first time was Eric Brown, grandson of Eileen Brown (R), Precisioneer treasurer.

'Flu Booster Shots

"Booster shots" for the Asian flu immunizations given in November to employees of the Librascope division, will be available to all who wish them on a date in January to be announced later.



UP THE LADDER

(GLENDALE) Promotion of Robert D. Hill from office services assistant to Supervisor, Office Services in the Glendale branch, is announced by Carl W. Plath, Jr., branch supervisor of administrative services.



Hill was one of several candidates who appeared before the Supervisory Selection Board.

Subsequent to joining the ISG organization as a property accounting clerk four years ago in the then Burbank branch, Hill enrolled in Valley College to study accounting, business law and kindred subjects, currently is working for an AA certificate in Supervision.

Married and the father of three, Hill makes his home in Arleta.

Precisioneers Play Santa For Children

(GLENDALE) Hundreds of children of Glendale branch and ISG office employees thronged the auditorium of Hoover High School, Glendale, Dec 7, for the Precisioneers' favorite activity of the year—the Annual Children's Christmas Party.

A mountain of gifts was presented to the youngsters, who ranged in age from babes in arm to the near 'teens, by Santa Claus and his helpers.

Preceding the gift giving was a gala program of entertainment, featuring professional performers and Glendale's own favorite clown, Ralph Rousseau, and Al Fonseca, master of the piano and the organ.

A committee of 22 Precisioneers and their spouses worked on the planning of the party and played active roles in making it a success. The committee was headed by Jack Naimoli and Lee Norvell, who were assisted by:

Ken Cantrell, Lois Benjamin, Bill Cawthra, Norma Babcock, Fred Killips, Rosa Morrison, Mr. and Mrs. Dave Fein, Pete Lavardo, Irene Blanco, Mrs. Jack Naimoli, Gloria Teele, John Guarino, Vic Orlando, Joanne Guarino, Don Mann, Kay Small, Mike Kayta, Norman Lowe, and Eileen Brown.

Glendale Manufacturing Forms New Customer Support Group

(GLENDALE) In one recent week orders for \$986,000 worth of repair parts, spares and alteration kits were received by the Glendale branch, Librascope division.

At the current rate of business, this phase of our operations will ring up almost \$3,500,000 on the company cash register this year.

Next year will see a very sizeable increase, possibly to \$4,500,000—just for taking care of what we build.

In recognition of the importance of these short-run sales to the company and to our customers—principally the U.S. Navy, Glendale has established a Customer Service Support Section. The new section has direct control over all manufacturing phases of the work.

Named to head the new section is Les Hey, who has been relieved of his previous assignment as Superintendent of Assembly, to organize and direct the new support effort. He reports to Harlan Buseth, Assistant Branch Manager and Manager, Manufacturing.

The new section "rides herd" on every order in the short-run category. Hey participates in and approves price and delivery proposals prior to receipt of formal orders from the customer.

Hey also has responsibility for the prompt processing of all customer repair proposals, requests for quotes—and for meeting cost goals.

The new customer service support section is a self-contained production management unit, Buseth said in announcing its formation, and "virtually a business within a business."

"Les Hey has had plenty of experience in running a business," Buseth told LIBRAZETTE. "Before he came to us Les had been a machinist, foreman of a shop and owner of his own business. Since becoming a part of our organization he has gone from foreman, to general foreman to superintendent."

The new section occupies quarters in Bldg A05, close by the Customer Service Section which it supports. CSS, headed by Supervisor Charles Baumgard, conducts all negotiations with customers and originates the manufacturing orders. The two sections work hand in hand.

Hey has assembled a staff of 14 specialists to conduct the new section's business. Members of the group include:

Order writers—Betty Matten and Cleo Moore; Inventory Control—Rusty Dunham; Follow-Up Men—Jack Williams, Jack Albert, Charles Norcutt, Ralph Hoffman, Dominic Sunzeri and Matt Kimmel; Stock Clerk—Art Donofrio; Methods Analyst—Moe Lehman; Planner—Don Basaker and Secretary—Ruth Guriel.

Customer Service Big Part of Business

(GLENDALE) Over the years, as its business expanded under the impact of increasing customer needs, Librascope's Glendale division has seen the service aspects of its operations grow from virtually zero to become a substantial part of current business.

As each major system has gone into service with its customers, the need to support the system has developed in parallel. These support activities now include:

Field Service (system checkout after installation by customer, and emergency repairs);

Customer Training (instruction of customer personnel in operation and maintenance of our equipment, conducted at Glendale or customer-location);

Customer Service (liaison with customer in processing requests for quotes, price negotiation, etc., on orders for spares, repair parts, alteration kits, overhaul, modification.)

Total dollar volume of this portion of Glendale's annual business is currently ranging close to \$5,000,000, equal to the whole company's annual volume in 1950!

Appoint Edgar E. Price To Washington Engin'g

(WASHINGTON) Edgar E. Price, veteran Navy ordnance and optics expert, has joined the staff of the Washington Engineering Office as an optical engineer.

A graduate of the University of Rochester's Institute of Optics, Price joined the Navy's Bureau of Ordnance as a physicist following graduation, became a Navy officer in 1942. He retired last year with the rank of Lieut.-Commander.

Throughout his 20 years in service, Price served in ordnance, optics and logistics associated with anti-submarine warfare. He is the author of several papers on optics and holds patents on four optical devices.

Price is married, the father of four and makes his home in Rockville, Md.

GPE Quarterly Report

(TARRYTOWN) General Precision Equipment Corp., parent company of General Precision, Inc., and ISG, paid regular quarterly dividends Nov. 27 of 30¢ on its common stock, \$1.18 on its cumulative preferred and 40¢ on its cumulative convertible preference stock.

For the nine months ending Sept. 30 GPE reported consolidated net sales of \$163,033,173, as compared to \$163,020,970 for the same period in 1962. Profits, after taxes, were \$2,304,934 and \$3,002,789, respectively.

Backlog of all GPE companies at approximately \$200,000,000. Overall prospects for a continuing volume of business, at or above present levels, are good.



HERE'S newly-formed production management group which operates in support of Glendale's Customer Services Section to give special attention to manufacture of repair, alteration and maintenance parts of Librascope-built equipments. In front row (L-R), Domenic Sunzeri, Rusty Dunham, Les Hey, Manager of the group, Betty Matten, Chuck Norcutt and Matt Kimmel. Rear row: Moe Lehman, Jack Albert, Jack Williams, Don Basaker and Ralph Hoffman. Not on hand for the camera: Art Donofrio and Ruth Guriel.

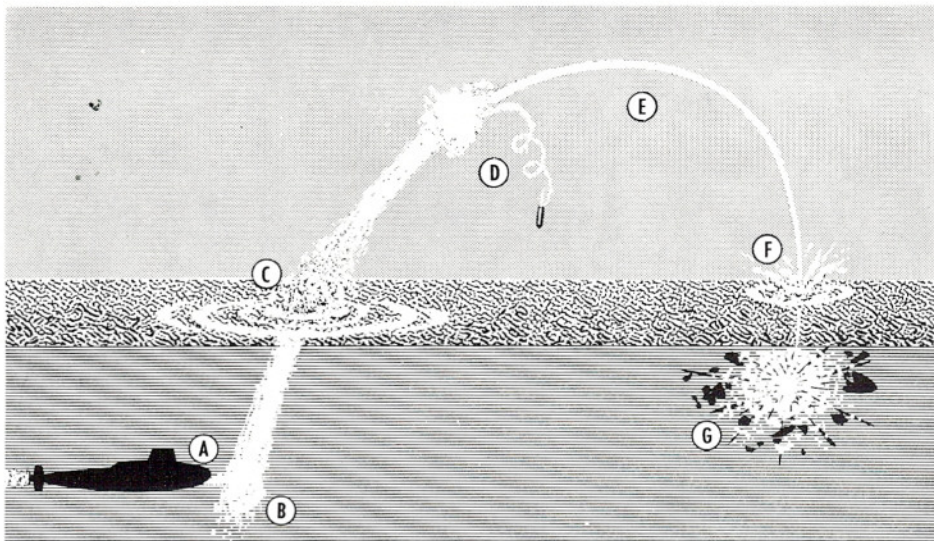
SUBROC..... (from page 1)

SUBROC thus adds a new weapon to the Navy's antisubmarine warfare arsenal. Heretofore the Navy relied on a combination of surface ships, airplanes and conventional submarines to find the target and destroy it.

Launched from regular torpedo tubes in the hunter sub, SUBROC cuts in its solid-fuel rocket engine when well ahead of the launching vessel and still under water. SUBROC then thrusts upward and out of the sea and flies, at supersonic speed, as a rocket.

At a predetermined point rocket and warhead separate, and the explosive charge continues onward, guided by aerodynamic fins to its target.

Ships equipped with SUBROC are expected to be on station late in 1964. Several have already been built, others are under construction.



SUBROC missile is fired from submarine (A), its rocket motor ignites (B), and leaves the water (C). At (D) rocket motor separates from nuclear depth bomb which continues on path (E) under automatic control; it reenters water (F), explodes and destroys enemy submarine (G).

CENTAUR.... (from page 1)

"This means that it receives all its regular information inputs from the vehicle's sensors and goes through every processing step except that of feeding instructions to the guidance control mechanisms.

"We will have a chance to compare the computer's record against the record of the vehicle's performance on the flight, when all the telemetered reports become available, within a few weeks."

The next Centaur firing is scheduled for a date some time in February. This, Telian said, will be a "closed loop" flight, with the computer actively functioning as a part of the guidance system.

George C. Henderhan

(GLENDALE) Funeral services for George C. Henderhan, 18-year veteran employee of Commercial Computer and Librascope divisions of ISG, were held Dec 6, at Glen Haven Memorial Park. He died Dec 3, at 42, following an operation.

Many in the large number of mourners were fellow employees and the honor guard at graveside was composed of members of Boy Scout Troop 14 of Burbank, of which Mr Henderhan was assistant scoutmaster.

In his 18 years with the company Mr Henderhan had held virtually every skilled classification in the machinist family of jobs. He was a former Foreman of the Glendale branch Model Shop and, at the time of his death, was a Mechanical Engineering Associate and assistant to CCD Staff Engineer Willard J. Opocensky.

Mr Henderhan is survived by his widow, Geraldine; a son, Monty, 11; his parents, Mr and Mrs Walter Henderhan; two brothers, Robert and Howard, the latter of Glendale's production control department, and a sister, Mrs Helen Crise.

Winning \$360 With LGP-21 "Just a Job of Programming"

(LAS VEGAS) The Commercial Computer Division's display at the Fall Joint Computer Conference here had a more than usual flood of visitors as the result of a non-commercial and non-scientific demonstration of capability by CCD's LGP-21 computer.

Before an audience of computer scientists, gambling visitors to the Tropicana's casino, newsmen and tourists, the LGP-21 was pitted against a professional blackjack dealer and took \$360 from "the house" in just 50 minutes.

"It was purely a demonstration of the capability designed into the computer," Emmett Hutchins, CCD research programming director, told LIBRAZETTE. "The ability to cope with complicated engineering, property control and other data processing problems, is equally adaptable to the problems of chance involved in gambling. It was just a matter of programming for this particular assignment."

Hutchins admitted to "boning up" on the game, and to receiving programming help from Dave Herrmann, his boss, and Don Warren, of the ISG Systems and Research Center, a mathematician and "student of the game."

At the conference display center, CCD had a working sample of the LGP-21, and displays of its new memory units, ranging from the eight-inch model to the huge multi-disc 36-inch mass memory.

Unfortunately for the pocketbook of Hutchins, who stood beside the LGP-21 and provided "translation" for the machine, the contest was only a friendly demonstration. The Tropicana got its money back!



"Just a job of programming"
—Emmett Hutchins

Truman D. Gee

(GLENDALE) Stricken by a heart attack while hunting for deer in mountainous country near Salina, Utah, Truman D. Gee, Glendale branch mechanical technician, died Oct. 23. He was 48 and had been with the ISG organization since December, 1957.

Funeral services were held Oct. 28 and burial was in the Newhall Cemetery, with many fellow employees in attendance. He is survived by his widow and six children.

Mr. Gee, who served in the Army's Corps of Engineers during World War II, was one of the military technicians who worked on the development of the atom bomb at Los Alamos, N.M.