

UNITED STATES
NAVAL RADIOLOGICAL DEFENSE LABORATORY
SAN FRANCISCO 24, CALIFORNIA

WEEKLY BULLETIN NO. 174
June 8, 1951

Send items for Bulletin
to Editor, Code 3-226
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Deadline for submitting
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FOR YOUR INFORMATION

DOCTOR SULLIVAN'S RESIGNATION ACCEPTED

As briefly announced in the BULLETIN for May 4, 1951, our Scientific Director, Dr. William H Sullivan is leaving to assume the duties of Chief Research Scientist at Oak Ridge National Laboratory, Oak Ridge, Tennessee.

This will be Dr. Sullivan's third assignment at Oak Ridge. He first went there early in 1944, but after six months was requested to transfer to the Hanford Engineer Works to head a group doing research on plutonium process chemistry problems and fundamental research on the fission products and heavy isotopes. In January 1946, after completion of his war work on the Manhattan Project, Dr. Sullivan returned to Oak Ridge as Senior Chemist, remaining there until requested by General Leslie Groves to serve as U.S. Scientific Representative of the Atomic Energy Commission at the Canadian Atomic Energy Project, Chalk River, Ontario.

Dr. Sullivan served first in an advisory capacity at the U.S. Naval Radiological Defense Laboratory, as a consultant, then accepted the position of Scientific Director on January 12, 1948.

Among Dr. Sullivan's many important contributions to the advancement of science, perhaps the most noteworthy is the Sullivan Chart of Nuclear Species. Nothing like it had ever before been attempted in graphic arts publications. It offers a completely new and unique graphic presentation, utilizing trilinear co-ordinates, of nuclear constants data on every known nuclear species, there being more than one thousand known for the 98 different elements.

Dr. Sullivan's decision to return to Oak Ridge is prompted by the desire to return to the field of basic nuclear science so that he might utilize to greater effectiveness his past training and experience. Another factor of importance has been the advice of his physicians who have admonished him for some time to leave the Bay area for reasons of health.

At Oak Ridge National Laboratory, Dr. Sullivan will assume several duties in the field of scientific administration after completing his initial assignment to set up, prepare the text for, and teach a course concerning Plutonium Project chemistry, including nuclear- and radio-chemistry, separations of radioactive materials and nuclear reactor chemistry, in the Nuclear Reactor Training School.

According to present plans, Dr. Sullivan will terminate employment with the Laboratory about June 15th and shortly thereafter will take Mrs. Sullivan and their two sons on an extended motor trip through the Pacific Northwest, visiting Crater Lake, Banff, Lake Louise, Glacier, Yellowstone, Grand Teton, Jackson Hole, and other points of interest. He plans to report to Oak Ridge National Laboratory by August 1st.

Dr. Sullivan was one of the pioneers of NRDL and to him goes a great part of the credit for building an institution that is playing so important and unique a role in the defense of our country. Continued success to Dr. Sullivan in his return to the field of his choice!

THE SCIENTIFIC DIRECTOR BIDS US FAREWELL

"It is with mixed feelings that I bid farewell to my many fine scientific associates, some of whom have labored long with me during the past three and one-half years of triumphs, trials and tribulations. We strived hard to bring recognition to the Laboratory, and now we can begin to see some of the fruits of our labors. During this same period, the Laboratory has grown in size more than twenty-fold and with its growth and increase in stature have come many changes. The future will bring many more. The Laboratory's place in the family of Naval laboratories becomes more secure with each passing day and, in time, full equalization with them will become a reality.

May I at this time pay tribute also to those fellow-workers who, during these past more than three years, have endeavored zealously to furnish the scientific staff with the tools and services so necessary for the conduct of experimental work.

It is my belief that the mission of the Laboratory will be as important five years from now as it is today, but the emphasis will be shifted to take into account the different problems confronting the Armed Forces, especially the Navy. The present challenging aspects of radiological defense will give way to other radiological problems, particularly those concerning the safety of operations and engineering practices in the fleet.

Although I shall regret terminating the many pleasant and stimulating associations with my professional colleagues, I feel certain that the future will not permit these associations to remain long neglected.

Tempora mutantur nos et mutamur in illis per angusta ad augusta."

-----William H Sullivan

PLEASE NOTE REGULATIONS ON BOOKS BORROWED FROM "CAL"

The weekly trip from our library to the University of California to borrow library material on interlibrary loan is made Tuesday morning. All requests should be in by 4:30 Monday afternoon. Return of books lent us by the University on the dates due, as indicated in the volumes, is requested. Unfortunately, no renewals are permitted.

LAST CHANCE TO GET YOUR BLOOD TYPED!

If you have not yet had your blood typed, go to Building 119 on June 19. Ask for Mr. Wright. This is absolutely the last chance. Knowing your blood type is important to YOU.. It might save your life.

HAVE YOU USED YOUR 1950 ANNUAL LEAVE?

The time for using last year's leave is getting short. June 30, 1951 is the deadline. If you wish to check on the amount due you, contact your Branch secretary. Remember, use it or lose it!

CHECK YOUR "DOG TAG" FOR ERRORS

If your identification tag has any mistakes, please contact Mrs. Albee, Employee Services, Building 508, Ext. 2718. It will take about a month to make corrections. Check for:

Badge number
Spelling of name
Blood type
Religion

HIGHLIGHTS OF "OVERTIME COMPENSATION" TOLD

The Bureau of Ships DAILY ADMINISTRATIVE BULLETIN, Friday, April 20, 1951, featured a history of overtime policies and procedures. We quote it here for those who are interested:

"OVERTIME COMPENSATION"

Authority and Coverage. The authority currently effective for the payment of overtime compensation to full-time per annum employees in the departmental and field services is contained in the Federal Employees Pay Act of 1945, as amended. This applies to all full time civilians who are paid on a per annum basis with specific exceptions not here pertinent since Bureau of Ships has only one position in this category.

Order and Approval. Work in excess of the 40-hour basic work week may be either ordered in advance or approved by the proper official after the work is performed. It may be ordered or approved in blanket form; that is for a group or class of employees. It is unnecessary that each employee be

given a separate and distinct order or that each employee's overtime work must be administratively approved.

Basis for Overtime Pay. Overtime pay is computed on a WEEKLY basis (NOT A DAILY BASIS), in multiples of one hour, for work performed in excess of the 40-hour basic work week established by the Federal Employees Pay Act of 1945.

Each week of the year shall be regarded as a separate and distinct unit for the purposes of computing overtime pay.

Each employee must be in a pay status for 40 hours before he is eligible to receive overtime compensation.

Maximum Salary Limitation. The Federal Employees Pay Act of 1945, as amended, also provides that TOTAL COMPENSATION (basic salary plus overtime pay, night differential, holiday pay, etc.) shall not exceed a rate of \$10,330 per annum or \$397.30 per bi-weekly pay period.

Exceptions to Maximum Salary Limitation. There are positions for which annual salaries in excess of \$10,300 are specifically provided by law (\$10,500, \$10,750, etc.) In these cases the employee is entitled to base pay only.

Rates of Pay - Less Than \$2980. For employees whose basic per annum compensation is less than \$2980, the hourly rate for overtime is $1\frac{1}{2}$ times the hourly rate for straight time.

Rates of Pay - \$2980, or More. For employees whose basic per annum compensation is \$2980 or more, a tapering schedule of overtime rates based on 416 overtime hours (8 hours a week for 52 weeks) is provided in the Pay Act. The purpose of the schedule is to taper off the true "time-and-a-half" rate (\$2.15 per hour at \$2,980), through the higher grades, down to a flat rate of \$1.51. This flat rate remains fixed for all per annum compensation from \$6600 to \$10,250 inclusive. No overtime is payable for basic rates established by law in excess of \$10,330; i.e., \$10,550 or over.

DISREGARD THE CHANGE OF WORKING HOURS SHIPYARD BALLOT FORM

The intent of the issue in the Laboratory of the Shipyard ballot form regarding a proposed change in working hours was to obtain an expression of opinion of Laboratory employees only. It was not intended to be a part of the over-all Shipyard survey.

However, since the use of this Shipyard form has caused misunderstanding on the part of many Laboratory employees, the Laboratory will conduct its own independent survey with a different ballot at a later date, after the Shipyard survey has been completed.

INFORMATION SPECIALIST EXAMINATION TO BE HELD

An unassembled examination for Information Specialist at the following grades has been announced:

GS-9 -- \$4600 - GS-11 -- \$5400 - GS-12 -- \$6400 per year
(A few positions at grades GS-10 (\$5000) and GS-13 (\$7600) may be filled.)

Applications must be filed with the Director, 12th U.S. Civil Service Region, Room 128, Appraisers Building, 630 Sansome Street, San Francisco 11, California NOT LATER THAN CLOSE OF BUSINESS JUNE 20, 1951. Appointments made from the registers resulting from this examination will be on an indefinite basis.

For further information as to ability required, experience, et cetera, see Personnel, Building 508, Room 205.

NEW MEMOS AND NOTICES

NRDL Notice 28 May 1951

Subj: Transportation Service

(Secretaries in all offices are requested to keep this notice readily at hand and assist in carrying out its provisions by properly placing calls for transportation.)

NRDL Memorandum No. 36-51 31 May 1951

Subj: Procedure for Making Changes in the Telephone Services Within the Laboratory.

INFORMATION SERVICES NEEDS "INFORMATION"

Inquiries have been directed to the Information Services regarding the activities of Laboratory personnel which have led to the establishment of a Calendar of Events Bulletin Board. This board is attractive, but, at present, a bit blank! It is of little value until we receive the cooperation of the entire Laboratory staff regarding events that are to take place in the future.

Please notify Lillian Cornell, Information Services, Building 351, Ext. 2623, of any speeches, lectures, scheduled visits to the Laboratory, or any other pertinent event.

NEW LABORATORY BUILDINGS STARTED

Ground has been broken and construction started on Building 351-B, a steel frame temporary building which will eventually house Supply and part of Instruments and Technical Developments Branches. All the steel work comprising the shell of the building will probably be completed before August 1.

*

Bids are out for Building 351-A which will be occupied by Chemical Technology Division. The contract will be awarded about July 1, with work starting shortly thereafter. It is expected that it will be ready for occupancy in less than a year from the time work starts. *

VISITORS

Persons who visited the Laboratory this week were:

CAPT R. H. Draeger, (MC) USN, Naval Medical Research Institute, Bethesda, Maryland.

Mr. Joseph S. Oscar, Naval Air Station, Alameda.

Dr. Manuel F. Morales, Naval Medical Research Institute, Bethesda, Maryland.

CDR Jule C. Tate, CEC, USN, Public Works Office, SFNS.

Mr. Harvey F. Matthiesen, Bureau of Ships, Washington, D.C.

LCDR Herbert L. Seidelman, Staff 12 ND, PIO, San Francisco.

Mr. Edward C. Gordon, AEC, Berkeley.

Mr. Willard D. Simpson, PWO, 12ND, San Francisco.

LCDR George D. Roberts, PWO, 12ND, San Francisco.

Mr. Lawrence S. Hauser, PWO, 12ND, San Francisco.

Mr. Jay Froman, USNR, on temporary duty USNRDL.

NEW PERSONNEL

BIOLOGICAL AND MEDICAL SCIENCES DIVISION

Byron P. Davies, a Psychologist, is a native San Franciscan. He finished high school in Los Gatos in 1940, and received a B.A. degree from San Jose State College in 1948. Later he attended graduate school at the University of California. Mr. Davies was last employed by the Veterans' Administration. He and his wife, Jean, and daughter, Lisa, live at 2370 East 24th Street, Oakland, phone ANdover 1-1459. Mr. Davies has one very useful hobby, that of repairing his own car. He is also interested in reading and music.

ENGINEERING SERVICES DIVISION

James Ford, a Laborer, was born in Gilmer, Texas. He attended school in Garland, Texas. Mr. Ford came to the Laboratory from The Chalet, San Francisco. He and his wife, Ethel, have one child, Billie Joe. They live at 1634 Wallace Avenue, San Francisco, phone Valencia 6-2226. Mr. Ford's hobbies are baseball, swimming, and television.

MATERIALS AND ACCOUNTS DIVISION

Rose Dannovsky, a Fiscal Accounts Clerk, hails from St. Paul, Minnesota where she finished high school in 1930. Miss Dannovsky lives at 2355 Polk Street, San Francisco, phone Tuxedo 5-6949. She was last employed as a bookkeeper by Tim Griffin & Son, Furniture dealers, San Francisco. Miss Dannovsky says she is just an average person -- she likes bowling, good music, and dancing, and she sews a little.

Annie C. Wong, a Cost Accounting Clerk, was born in San Francisco. She graduated from Commerce High School in 1938, and was formerly an employee of Stellar Neglige Inc. Mrs. Wong and her husband, Henry, have three daughters, Henrienne, Suzanne, and Joanne. The Wongs live at 1274 Quesada Avenue, San Francisco, phone Mission 7-0357. Sewing is Mrs. Wong's chief interest.

NUCLEONICS DIVISION

Anthony J. Benedetti, a Laboratory Mechanic (Electronics) recently added to Instruments Branch, comes from Portland, Oregon. He attended Mission High School and City College in San Francisco. Before coming to the Laboratory, Mr. Benedetti worked at the Presidio as a radio transmitter attendant. He lives at 423 Mangels Avenue, San Francisco, phone JUniper 6-1876. Mr. Benedetti's hobbies are music, golf, tennis, speed boating, and dramatics.

Robert Lincoln Hopton, a Physicist, is a newcomer to Physics Branch. He was born in Seattle, Washington, where he graduated from high school in 1942. He attended the University of Washington, receiving a B.S. degree in 1949. Mr. Hopton worked with television repair in Long Beach before he came to USNRDL. He lives at 1579 - 8th Avenue, San Francisco, phone Lombard 4-9247. His diversions include amateur radio, photography, and model airplanes.

SPECIAL OPERATIONS DIVISION

Charles Fernand Ksanda, a Physicist, has recently come to Military Evaluations Branch. Mr. Ksanda is a native of Washington, D.C. in which vicinity he received his education. He graduated from Central High School, Washington in 1937, and received a B.S. degree from the University of Maryland in 1941. Later he attended the graduate school of George Washington University and the University of Maryland. Mr. Ksanda was

formerly employed in the Explosion Research Section, Bureau of Ships, Washington, D.C. He and his wife, Audrey Jean, live at Green Way, San Rafael. Writing is Mr. Ksanda's hobby.

TECHNICAL INFORMATION DIVISION

Shirley Eloise Pearson, a Clerk-Typist newly arrived at the Reproduction Section, was born in Glenrock, Wyoming. She graduated from high school in San Francisco in 1944, and transferred to the Laboratory from SFNS Design Section. Mrs. Pearson and her husband, Amos, live at 1332 Carlton Avenue, Menlo Park, phone Davenport 2-1554. Her hobbies are gardening and knitting.

Hertha Petersen Bengtson, a Librarian, is a native of Denmark. She graduated from Galileo High School, San Francisco in 1926. Her B.A. degree was received at the University of California in 1931, and she continued graduate work at the University in 1932. Before joining the Laboratory Library staff, Mrs. Bengtson was Engineering Librarian at Stanford and later at the University of California. She and her husband, Thore, live at 634 Homer Avenue, Palo Alto, phone Davenport 3-9235. Mrs. Bengtson enjoys gardening, bridge, and hiking.

STAFF ACTIVITIES

Dr. Cecil Entenman recently went to the Argonne National Laboratory, Chicago, and the Atomic Energy Commission, Washington, D.C., for discussion of the Longevity Project, after which he will attend a Thermal Panel Meeting at the Naval Materials Laboratory, New York.

Dr. Ralph W. Brauer has also gone to Argonne Laboratory and AEC. He will also visit Memphis, Tennessee, for consultation with Dr. Quigley of the University of Tennessee.

Mr. Robert L. Penn is in Los Angeles for the purpose of interviewing an applicant for employment at USNRDL.

LCDR Clarence A. Grubb is in Los Alamos, New Mexico, on his way to Washington, D.C., Bureau of Yards and Docks, in connection with Laboratory matters.

Messrs. Wesley E. Shelberg, William B. Lane, and James L. Mackin have gone east on matters of importance to the Laboratory with respect to surface active agents, detergency evaluations, and industrial films. This business will take them to the Army Chemical Center, Edgewood, Maryland; Atlas Powder Company, Wilmington, Delaware; Naval Air Experimental Station, Philadelphia; General Dyestuff Corporation, Easton, Pennsylvania, and New York; American Cyanamide Company, Stamford, Connecticut; Mellon Institute of Industrial Research and University of Pittsburgh School of Public Health, Pittsburgh; Blockson Chemical Company, Joliet, Illinois;

and Armour and Company, Chicago.

LTJG Glen Sheline, USN, is also on an extended trip eastward in connection with Radiological Defense matters and the recruiting of personnel. He will visit Washington, D.C., Richmond, Virginia, New York City, Rochester, New York, Cleveland, Ohio, and Stillwater, Oklahoma.

PERSONNEL TRANSPORTATION

Ride Wanted

San Francisco

Lillian Cornell (Tech. Info.)
639 - 14th St.
(Between Market and Dolores)
MA 1-9566

Rose Dannovsky (Mat. & Acct.)
2355 Polk St.
(Near Van Ness and Union)
TU 5-6949

Margaret Wells (Proj. Off.)
1995 Oak St.
(Near Stanyan)
SK 2-1119

Peninsula

Hertha P. Bengtson (Tech. Info.)
634 Homer Ave.
Palo Alto
DA 3-9235
(Wants ride from Paul St.
Station to Shipyard at
7:38 A.M. and return to
station after work).

MISCELLANY

Galileo and the Telescope

Galileo did not invent the telescope. A report published in 1608 said of the glasses made in Holland: "They serve well in sieges and on similar occasions, for a distance of a league or more everything can be examined as clearly as if it were quite close to us; and even the stars which ordinarily do not appear to our sight and to our eyes, on account of their small size and the weakness of our vision, can be seen by means of this instrument."

The optical innovation had been handled by many people in several countries for an extended period before Galileo first heard about it in the year 1609. Galileo, then professor of mathematics at the University of Padua, chanced to be in Venice, some twenty-five miles away. So Galileo narrated the episode over a decade later in Il Saggiatore, which he published in 1623.

"The news arrived that a Dutchman had presented Count Maurice with an eyeglass which showed distant objects as perfectly as if they were quite close. At this report I went back to Padua, where I was then living, and set about thinking this problem over. The first night after my return I solved it. The following day I made the instrument, and gave an account of it at Venice to the same friends. Finally, on the advice of one of my sympathetic supporters, I presented it to the Doge before the full Collegio. That most serene prince munificently renews my appointment as a reward for the invention presented to him, and confirms me for life in the professorship at the University of Padua, with a salary twice that which I had before."

The instrument Galileo presented to the Venetian government in 1609 magnified ten times. By the beginning of the next year he succeeded in raising the magnifying power to twenty. With this increase he found the mountains on the moon and the satellites of Jupiter. In August 1610 he informed Kepler that his best instrument was about thirty-two.

The available materials and methods of production yielded only one satisfactory instrument out of every ten made in his workshop. Yet, despite these handicaps, with the limited tool which he devised and built himself, he brought the long era of naked-eye observation to an end, and within a relatively brief period he made a series of discoveries perhaps unequaled in the history of astronomy or even in the history of science.

--- Edward Rosen

The Scientific Monthly March 1951

Thomas Edison, when asked how he would spend his time in Eternity, quickly replied, "Experimenting, if there are any facilities."

People who aren't afraid to roll up their sleeves seldom lose their shirts.

--- W. H. Newton

CALENDAR OF EVENTS

Engineering and Scientific Meetings
in the Bay Area

SATURDAY, JUNE 9 (Radio)

6:30 PM Over KGO, San Francisco

Subj: "Science Editor"

A commentary on the news of the week from scientific laboratories throughout the world.

SUNDAY, JUNE 10 (Radio)

12:30 PM Over KCBS, San Francisco

Speaker: Dr. Ralph Emerson, Associate Professor of Botany.
Subj: "This Moldy World." The University of California Explorer tells the story of molds, ranging from those which rot electric insulation to those which attack man.

MONDAY, JUNE 11

8:00 PM Audio Engineering Society, at Room 100, Science-Engr. Bldg. CCFS, Phelan & Ocean Aves., San Francisco.

Speaker: Mr. Ross H. Snyder, Station KJBS,
Subj: "Mechanical Influences on the Fidelity of Phonograph Record Reproduction."

6:30 PM Society for Advancement of
(dinner) Management, at Engrs. Club,
206 Sansome St., San Francisco

Speaker: Mr. Marvin Bower,
Firm Managing Partner,
McKinsey & Co. Management
Consultant.

Meeting 7:45 PM

Subj: "Unleashing Executive Power."

FRIDAY, JUNE 15

8:00 PM Natl. Assoc. of Power Engrs., at 3053 - 16th St., San Francisco.

Subj: Visit to Plant Asbestos Co. Movie and slides.