

BULLETIN BOARD

Volume 20, Number 30

Published by the BNL Public Information Office

July 21, 1966

AEC, Contractors Given Top Award For Outstanding Industrial Safety

The National Safety Council's highest award for an outstanding industrial safety record, the Award of Honor, was presented to AEC Chair-

man Glenn T. Seaborg at the Commission's headquarters near Germantown, Maryland, on July 12.

La Placa Named For I. Frankuchen Memorial Award

Sam La Placa, Associate in the Chemistry Department and Ph.D. candidate at the Polytechnic Institute of Brooklyn, has been selected for the Institute's I. Frankuchen Memorial Award in crystallography.



Sam La Placa

This award, accompanied by \$500, is named after a crystallographer of international repute and is given to a graduate student for outstanding work in the field.

La Placa, about a year away from his Ph.D., said that the money would go toward the degree.

Dr. Seaborg accepted the plaque on behalf of the Commission and its contractors. The award was presented by Mr. Howard Pyle, President of the National Safety Council, Chicago, Illinois. Mr. Nelson Bortz, Chief of the Bureau of Labor Standards, Department of Labor, participated in the AEC ceremonies.

The award plaque received by Chairman Seaborg reads: "National Safety Council Award of Honor Presented to U.S. Atomic Energy Commission and Contractors for Outstanding Safety Performance, 1965."

This is the sixth time the AEC has earned the award. The previous occasions were for the Commission's safety record in 1955, 1960, 1962, 1963 and 1964.

In 1965 the accident frequency rate of AEC and its contractors was 1.73 injuries per million man-hours worked, as compared with the 6.53

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Mobile Biological Radiation Monitors Acquired by Environmental Monitoring

Over the last few weeks, the Environmental Monitoring Group of the Health Physics Division has acquired over 30 mobile biological radiation monitors - at no cost to the Lab.

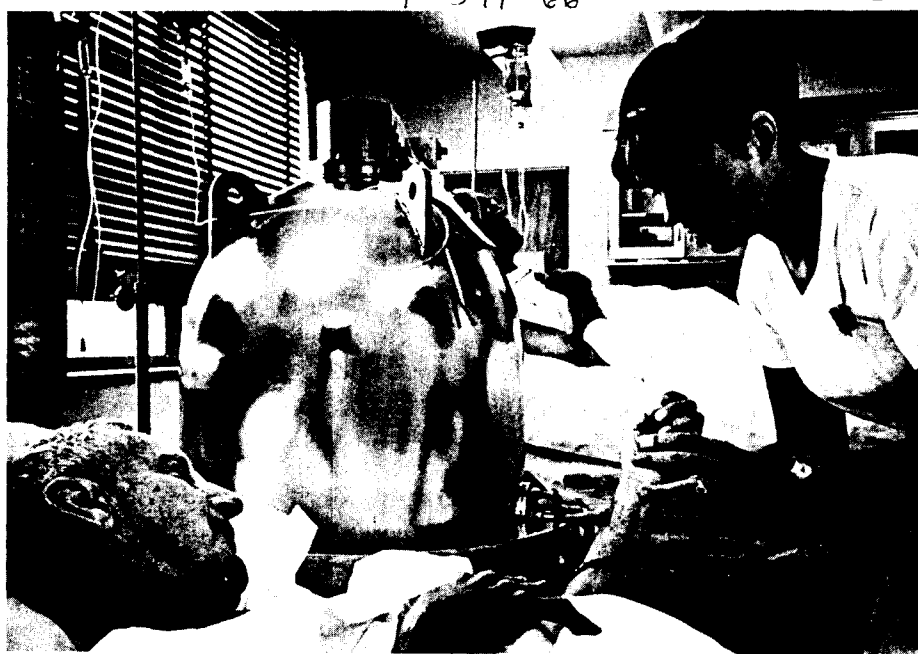
These new, elaborate pieces of apparatus are known as *Chrysemys Marginata* or more commonly, Eastern Painted Turtles, found in large numbers in the nearby Peconic River.

For the past three years, the Environmental Monitoring Group has conducted a summer project to determine downstream profiles of radioactivity concentrations. "We started counting silt and vegetation," according to Environmental Monitoring Supervisor Andrew Hull, "but turtles represent an almost ideal expansion of this effort. They are abundant, easily caught, and can be easily whole-body counted and returned to the stream where we found them. They seem to enjoy the procedure; this year's summer Health Physics trainees, Bob Anger and Jim Carey, have caught one turtle seven times," Hull said. The turtles are identified as HP-1, HP-2, and so on - numbers Environmental Monitoring paints on the shell.



Jim Carey releases a turtle.
Photo by Bob Walton

Medical's ECIB Irradiator Allows Variations in Dosage



THE NEW IRRADIATOR - Nurse Muriel Scheu, Medical Department, checks the plastic tubing leading from the patient's artery through the irradiator and back to the patient's vein. This leukemia patient, in his late 60's, has had a stable white blood count for the past 15 months - the length of time he has been taking Extracorporeal Blood Irradiation treatment. The new irradiator was designed by Nuclear Engineering and built in the BNL Shops.

Photo by Bob Walton

Leukemia is the collective name for a half-dozen diseases of the blood-forming organs causing a superabundance of white blood cells. Leukemia patients, anemic, weak, and infection-prone because of the shortage of circulating red blood cells, often have white blood counts 10, 20, 100 times normal.

As the disease progresses, changes occur in the bone marrow, liver, spleen, and lymphatic system. Science does not know what causes this wild, cancer-like proliferation of white blood cells, and as yet, there is no cure.

Using drugs and radiation therapy, doctors try to check the production of white cells and to keep the white blood count at stable levels.

Film Service Hours Changed for Summer

The Film Service in the Gymnasium, 3 Center Street, has revised its summer schedule and is now open daily from 9 a.m. to 3 p.m. during July, August, and September.

This service offers employees substantial discounts on the sale of film, flash equipment, and film processing.

With such treatments and blood transfusions, some patients have years added to their lives.

For the past 18 months, a group of medical researchers under the direction of Dr. Eugene P. Cronkite has been treating a small number of leukemia patients by Extracorporeal Blood Irradiation - the blood is routed outside the body and run through an irradiator where the white blood cells are destroyed by gamma radiation; the blood then returns to the body. Since the white blood cells have a nucleus, they are more susceptible to radiation damage than the non-nucleated red blood cells.

Last week, a new irradiator, designed by Wesley Ripperger and the late Otto Kuhl of Nuclear Engineering, was used for the first time. The new irradiator, fabricated in the BNL shops, is a more sophisticated instrument than the one used previously. Unlike its predecessor, it allows the dosage to be varied by mechanical means. Also, it will treat two patients at the same time.

Besides providing more sophisticated data, Dr. Lewis Schiffer, one of the blood specialists on the

See ECIB, page 3

Touch Football League Planned For Fall, 7-Man Squads Needed

Now is the time for all you Monday morning quarterbacks to take some action. Here's your chance to become a Vince Lombardi, a Johnny Unitas, or a Del Shofner.

For the past few years, there has been a strong interest expressed in organizing a laboratory-wide touch football league.

Last summer a committee was formed to review and modify the official touch football rules in order to make the game as injury-free as possible yet, still challenging. After a few phone calls, seven teams were organized to compete in a six-week season to try out the new rules.

Operating on a shoe-string budget, enthusiasts spent their lunch periods laying out two football fields with string yard markers and boundary lines.

BERA Film Series

Thursday, July 28 at 8:30 p.m.
Lecture Hall
8½

Next week's presentation, starring Marcello Mastroianni and Claudia Cardinale, is the great masterpiece of director Federico Fellini. The film is said to be partly autobiographical, and Fellini has been accused of making a picture that is too personal and, therefore, too inaccessible, complex, and confusing to the movie goer. But this is really not true at all.

The viewer who will go halfway to meet the film and accept it will find it compelling, daring, imaginative, and sometimes hilarious. Like any true art work it simply uses the specific to suggest more general truths in life.

The solid literalist will probably not enjoy the film because it skips freely and without warning between reality and fantasy and, in the end, it becomes difficult to decide which is which. But anyone who has ever had a daydream should not miss this winner of two Academy Awards, including Best Foreign Film of the Year, and the N.Y. Film Critics Circle Award.

Best Foreign Film - National Board of Review...*Masterpiece* - Newsweek, Esquire...*A Film of the Highest Distinction* - Saturday Review...*One of the Year's Ten Best* - Saturday Review, Newsweek, Herald Tribune, New York Times.

Short: "Science Friction"

Stan Vanderbeek's triple-award winning film collage.

-P. Lieberman

A hurried call was put into the Recreation Office for football watches and footballs; and within a week after the softball season ended, the league was on its way.

The referees and timekeepers were supplied by the competing teams and, aside from some scheduling problems and tripping over the strings, the season was quite successful.

This year the league will be playing on the new recreation fields and BERA has bought all the necessary equipment, including down indicators and lined yard and boundary lines.

Referees for the games have been recruited from the Longwood High School physical education teachers.

Application for league entry are now at the Recreation Office. The season will begin September 1 and end on October 13. Play is tentatively scheduled for Thursday evenings at 5:30 but will be rescheduled as the interest indicates. At least seven men are required to enter a team. Six are on the field during play.

An entry fee of \$10 per team must accompany its application to help defray the cost of officials. The entry deadline is Friday, August 12. Individuals with no team affiliation can call the Recreation Office, Ext. 391, for registration in the player pool.



PUTT-N-PAR

Bogey Olé

The Par Point Tournament at Middle Island Country Club finished last week with the following results.

- 1st - Mike Rothbart - 40 Points (trophy and 1 doz. golf balls)
- 2nd - Len Baker - 39 points (trophy and ½ doz. golf balls)
- 3rd - Frank Walsh - 37 points (trophy and 3 golf balls).

This tournament proved that there is a very active interest in the BERA Golf Association.

Our Next Tournament begins July 22, and is our Annual BGA OPEN. The rules and regulations have been sent to each member in the mail. We will try to provide some results each week on this tournament.

Bridge Group Reminder

The Hospitality Committee bridge evening for women will be held in the Recreation Building in the apartment area. The group meets again Tuesday evening, July 26, from 8 p.m. until 11 p.m. or thereabouts, and every second and fourth Tuesday of each month thereafter. All welcome, especially newcomers.

Around the Base Pads . . . by Bob Carciello

Second Half Standings

Brookhaven League

Team	Won	Lost	Pct.
Batmen	4	1	.800
Metallurgy	2	2	.500
Medical	2	2	.500
Blue Jays	2	2	.500
Old Timers**	0	3	—

Results past two weeks: Batmen 7 - Blue Jays 4; Batmen 13 - Metallurgy 11; Blue Jays 9 - Medical 5.

National League

Team	Won	Lost	Pct.
Dirty Sox	3	1	.750
Phase Outs***	3	2	.600
Bubble Boys	3	2	.600
Floorwalkers	1	3	.250
Phoubars	1	3	.250

Results past two weeks: Phoubars 15 - Phase Outs 13; Phase Outs 16 - Bubble Boys 8; Bubble Boys 12 - Floorwalkers 8; Phase Outs 18 - Dirty Sox 8.

Laboratory League

Team	Won	Lost	Pct.
Make Ups	4	0	1.000
Deadwoods**	3	1	.750
Potsareebies	2	2	.500
Mets	2	3	.400
Mixups	0	5	—

Results past two weeks: Mets 19 - Mixups 4; Make Ups 16 - Potsareebies 8; Deadwoods 24 - Mixups 2; Make Ups 9 - Mets 7.

**denotes first half winner

Children Enjoy Scavenger Hunt

Last Tuesday, the children in the BNL Summer Recreation Program participated in the 1966 Scavenger Hunt. There were many varied items which had to be collected. A live fly in a jar, a live mother with blonde hair and blue eyes, a branch with nine leaves were just a few of the items collected. Prizes were given to the winning team.

Next week's special event will be a Treasure Hunt.

Cafeteria Menu

Week Ending July 22	
Monday, July 18	
Roast Leg of Lamb	.65
Ham Steak Hawaiian	.65
Little Links/Mashed Potatoes	.60
Tuesday, July 19	
Pot Roast of Beef	.65
Veal Patty/Brown Gravy	.65
Spanish Rice	.60
Wednesday, July 20	
Roast Turkey/Dressing	.65
Beef Stew/Vegetables	.65
French Toast/Bacon	.50
Thursday, July 21	
Fresh Ham/Pan Gravy	.65
Liver & Onions	.65
Corned Beef Hash/Tomato Sauce	.55
Friday, July 22	
Swordfish Steak	.65
Baked Chicken	.65
Franks & Beans	.55
Cheese Omelette	.50

'Keep-to-the-Right' Applies to Bikes, Too

One of the signs of summer here is the sight of many employees and associates wheeling about the site on bicycles.

Besides adding a continental touch and providing good, healthy exercise, these bicycles go a long way toward curbing the demand for official motor vehicles, easing traffic flow, and cutting down on parking congestion.

However, in the interest of safety, all cyclists are reminded that they should operate their bicycles under the same rules of the road as those which govern automobiles. Specifically, this includes obeying traffic control devices and keeping as near to the right side of the road as is practicable at all times.

Undelivered Mail

The BNL Mail Room (Bldg 179, Ext. 565) is holding undelivered mail for the following:

- Mr. Hugh C. Ressler
- Mr. J.L. Merritt
- Mr. Tommy Woods
- Mr. J.W. Speiter
- Darryle Mott
- Mr. Hans Anderson
- Dr. V.J. Chapman
- Dr. Courtland H. Davis
- Miss S. Lancaster
- Dr. Peter Miescher
- Dr. Marshall Upton

Unclaimed mail will be returned to the sender after one week.

Movie Tonight

Thursday, July 21, at 8:30 p.m. in the Lecture Hall, BERA Film Series presents "King Solomon's Mines" and two short subjects.

First Nuclear Power Generator In Space, has 5th Anniversary

The first nuclear power generator in space marked its fifth anniversary recently, on June 29. This historic generator, developed by the AEC has traveled about 724,000,000 miles (over 25,000 times around the earth) and continues to provide power aboard the Navy's Experimental Navigational Satellite 4-A.

The grapefruit-size five-pound, three-watt nuclear generator was installed to supplement solar power on the 175-pound drum-shaped satellite launched from Cape Kennedy in 1961 which is still signaling intermittently to tracking stations around the world.

AEC, Contractors

Continued from page 1

all-industry average computed by the National Safety Council, or a frequency rate of 3.13 injuries per million man-hours for the chemical industry where operational safety problems may be considered comparable with those of the atomic energy program.

There were no lost-time radiation injuries in 1965 arising out of the handling or processing of radioactive materials by AEC or contractor employees.

During 1965, eleven AEC Awards of Honor and twenty-one AEC Awards of Merit were earned by field offices and contractor organizations.

Groundbreaking



SPADEWORK - Dr. T. Keith Glennan (left), President of AUI, Dr. Maurice Goldhaber, Lab Director, and Mr. Donald Moore (right), Director of Engineering and Construction of the Brookhaven Office of the AEC, begin the construction for the new Lecture Hall-Cafeteria Building. Photo by Bob Walton

TVA Plans Giant Nuclear Power Unit

The country's biggest user of coal, the Tennessee Valley Authority, announced it will build its first and the nation's biggest nuclear-fueled commercial power station.

TVA said it will cost an estimated \$247 million. The Federally owned power system awarded a contract for the construction of two electric generating units for the plant to General Electric Co. The two nuclear generators will have a combined capacity of 2.2 million kilowatts.

The contract for the generators totals \$122,698,000, TVA said. The remainder of the estimated \$247 million cost of the facility will go for construction of the plant, for land acquisition and other engineering costs, it said.

TVA will get the nuclear fuel for the two generators and free services such as reprocessing of spent fuel directly from GE at a guaranteed maximum cost.

The vast Government power system, based in Knoxville, Tennessee, operates in seven Southeastern states. It produced some 8 percent of the electric power in the U.S. and consumes nearly 5 percent of the nation's soft-coal output.

The price apparently was to TVA's satisfaction. It estimates the nuclear station will save more than \$8 million a year over a coal-burning alternative, for a total saving of about \$100 million in the twelve-year period in which the cost of the fuel for the nuclear plant is guaranteed.

TVA invited bidders to submit separate bids for both nuclear and coal-fueled generators. It also invited another firm to submit bids for a coal unit.

The first nuclear-powered generating unit is planned for operation in 1970; the second a year later. The generating station will be located on an 840-acre tract at Browns Ferry in northern Alabama, some 110 miles northwest of Decatur.

New ECIB Irradiator Made Here 3-1483-66



THE BITS AND PIECES - Spread out like a psychologist's mechanical aptitude test, the new irradiator for the Extracorporeal Blood Irradiation project waits to be put together in the Heavy Machine Shop. Left to right are the device's designers and fabricators: From Nuclear Engineering are: Adolph Oltmann, Supervisor, Design Group; Tim Malloy, Designer; and Wesley Ripperger, Design Engineer. From the Shops are: Alex Hanson, Foreman, Heavy Machine Shop; Hardie Fuller, Machinist; Joe Mamina, Experimental Machinist; Frank Wywiurka, Experimental Welder; and Charles Brockner, Welder. Photo by Bob Walton

Continued from page 1

search team, said that the new device could conceivably cut down the time that a patient is hooked up to it. Some patients spend daily four-hour sessions hooked up to the irradiator. Others are treated once a week.

The theory behind Extracorporeal Blood Irradiation is simple - the patient's arteries and veins are extended artificially by plastic tubes. These tubes are semi-permanently implanted by surgery in a vein and in an artery, usually in the forearm. When the patient is not connected to the irradiator, the tubes in his arm are joined in a "U".

Under treatment, the tubes are connected to similar tubes that lead to and from the irradiator. The pa-

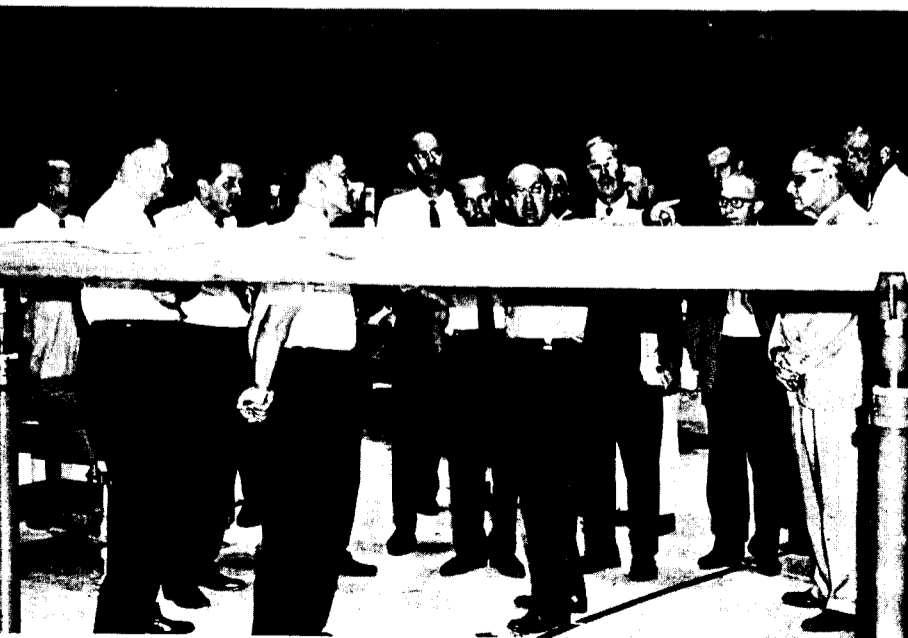
tient's blood, pumped by the heart, flows through the tube into the irradiator where the tube is wrapped around a four-inch slug of cobalt-60. By changing the number of turns the tubing takes around the slug, and by raising or lowering the slug, the dosage can be controlled.

Patients report that the treatment causes no discomfort.

Tickets Available Personnel Services

Recreation Office - 3 Center Street
Discount coupons for Jones Beach "Mardi Gras" with Louis Armstrong are now available in the Recreation Office.

General Advisory Committee at the HFBR 17-340-66



GUIDED TOUR - Behind a drift tube, Harry Palevsky (center), Physics Department, explains the workings of the HFBR to the General Advisory Committee to the AEC and members of the Staff. The GAC meets four times a year at different locations. Photo by Bob Walton

**USNR RESEARCH CO. 3-9
BROOKHAVEN NATIONAL LABORATORY
UPTON, N.Y. YA 4-6262 EXT. 591**

DRILL SCHEDULE

FOR QUARTER ENDING 30 SEPTEMBER 1966

20*	THE NAVY	DR. M. GREENWOOD
JULY	SEALAB PROGRAM	NEW LONDON, CONN.
10	THE 14-FT CRYOGENIC	DR. W. FOWLER
AUG.	BUBBLE CHAMBER PROJECT	BNL
17	TWELVE YEARS	DR. R. CONARD
AUG.	AFTER THE FALLOUT	BNL
14	ATTEND BROOKHAVEN	
SEPT.	LECTURE	
21	EARTH-BASED ANALYSIS	H.B. HALLOCK
SEPT.	OF THE LUNAR SURFACE	(GRUMMAN)

*SOCIAL HOUR
Members of the BNL Staff and guests are welcome at all except the 20 July Lecture. Tickets will be required for this lecture.

