



NUCLEAR DIVISION NEWS

A Newspaper for Employees of the Nuclear Division, Union Carbide Corporation

Vol. 6 - No. 8

April 17, 1975

Ground broken for new heavy ion laboratory

Holifield National Laboratory has broken ground for a new Heavy-Ion Laboratory that will feature a 25 million volt (MV) tandem electrostatic accelerator, the largest machine of its type in the world.

The approximately \$18 million facility, scheduled for completion in 1979, will be a national resource for research on one of the most important new frontiers of nuclear and atomic physics.

This is the effort to accelerate ever larger nuclear particles to the energies required to create reactions with other heavy elements - up to and including the heaviest of those occurring in nature, uranium.

Participating in the groundbreaking ceremonies April 5 were Robert C. Seamans Jr., U.S. Energy Research and Development Administrator, and ERDA Assistant Administrator John M. Teem.

Missions listed

ERDA, through its Division of Physical Research, is providing funds for design and construction of the new facility which will make possible studies of the behavior of nuclear matter over a large portion of the periodic table and of atomic structure over the full range of elements.

Missions of the Heavy-Ion Laboratory will include basic as well as applied research in such fields as nuclear structure, nuclear reactions, nuclear chemistry, atomic physics, biophysics, health physics, solid state physics, and materials damage.

New understanding of fundamental processes in atoms and nuclei will be sought as well as applications based on improved knowledge of the effects of radiation on high-performance materials, such as those used in nuclear power plants.

The first phase of the project, authorized by the Congress in 1974, is already under way with the design of the laboratory complex and the development of technical specifications for construction of the accelerator.

Negotiations are proceeding with prospective suppliers of the accelerator, and a contract award is expected later this spring, when site preparations for the new facility will begin.

The new tandem accelerator will adjoin and interconnect with the Laboratory's present heavy-ion accelerator, the Oak Ridge Isochronous Cyclotron (ORIC). It will operate at a voltage nearly twice that of the largest accelerator of its type now in existence, at Canberra, Australia, and thus will represent a significant advance in the development of machines to accelerate increasingly heavy charged particles to higher and higher energies.

Support facilities

It will be housed in a 152-foot high circular tower, 45 feet in diameter. A three-story addition to the present ORIC building, surrounding the tower on three sides, will house experimental areas and computer and support facilities as well as the accelerator's ion sources and injection system.

A novel feature of the tandem accelerator is its "folded" design, with low-and high-energy acceleration tubes located in parallel in a single column. Negative ions are injected into the low-energy tube and accelerated to a high-voltage terminal at the top of the column which is at positive potential.

Then, after the particles in the beam are stripped of electrons and become positively charged, they are bent by a 180-degree magnet and accelerated in the high-energy tube back to ground potential.

Although the 25 MV tandem accelerator will be a powerful research tool in itself, it will gain additional value as an injector for ORIC. In this way, beams of heavy ions can be accelerated to still higher energies before bombarding target materials.

Presently with ORIC, researchers are able to accelerate elements only as heavy as chlorine, with mass number 35, to energies sufficient to produce nuclear reactions. Combining the new tandem with ORIC will extend this capability up to a mass range of 150.

The ultimate goal, which would require the addition of a larger cyclotron to the Heavy-Ion Laboratory complex, is to be able to accelerate all existing elements up to and including uranium, with mass 238 on the atomic scale.

The Heavy-Ion Laboratory will be operated as a national facility, available equally to users from Oak Ridge, universities, and other laboratories. A users' organization, now numbering 500 scientists from all parts of the United States and abroad, is being organized to participate in the planning of the experimental program with the new facility.

Of fundamental interest to users of the new machine will be discoveries bearing on the possible existence of "superheavy" elements - beyond the heaviest of the man-made elements so far produced - that might be stable for short periods.

Element table extended

The periodic table of the elements - once considered closed at element 92, uranium - has now been extended to element 106 with successive discoveries of heavier man-made elements, beginning with plutonium.

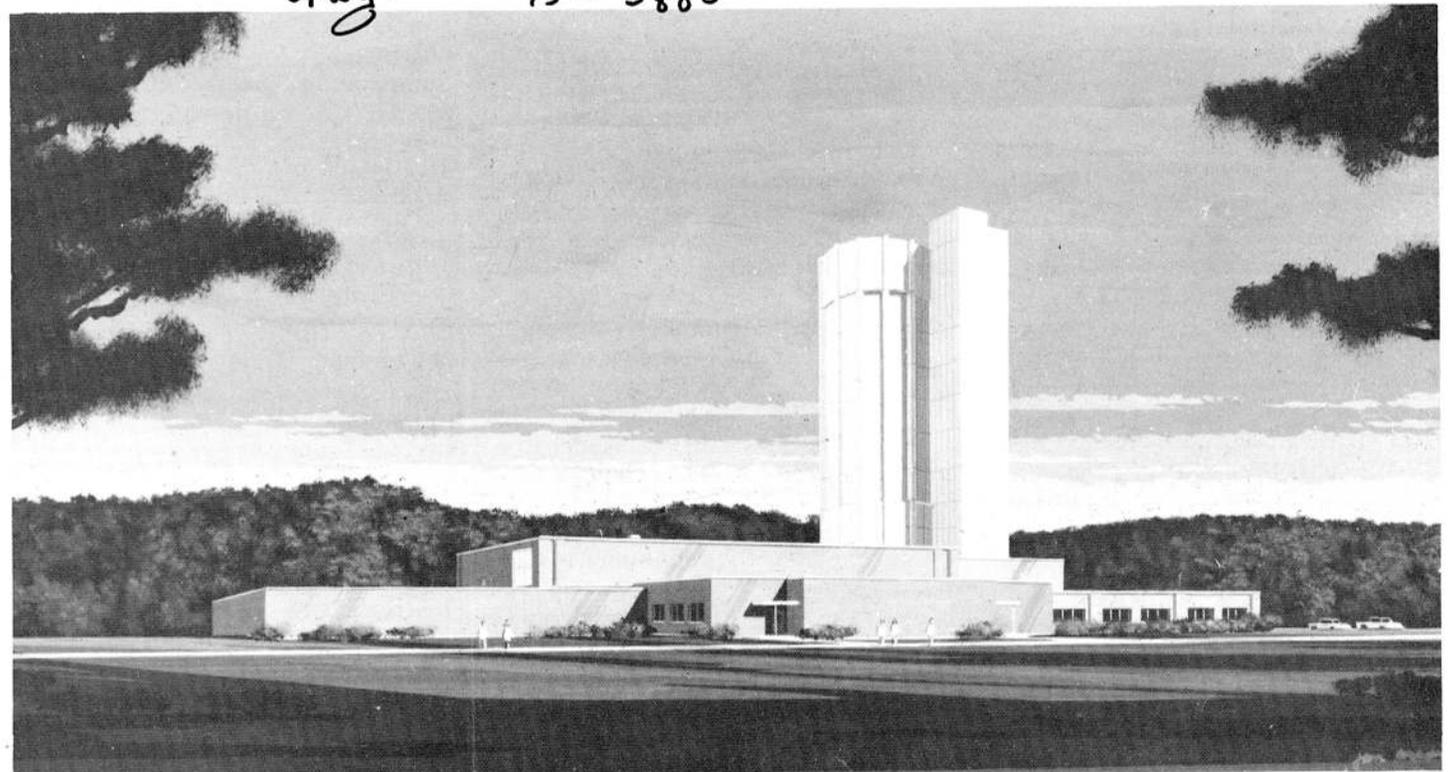
The previously expected limit of new-element production was at 108, due to the increasingly short life times of the heavy elements.

(Continued on page 10)

Additional photos, showing groundbreaking ceremonies at Holifield National Laboratory, are to be found on page 4 of this issue.

Drawg.

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ARTIST'S CONCEPTION — The artist's conception above shows what the new Heavy-Ion Laboratory will look like. The new tandem accelerator will adjoin and interconnect with the present Oak Ridge Isochronous Cyclotron (ORIC), which is in the foreground. Groundbreaking festivities were held recently, with Robert C. Seamans Jr., U.S. Energy Research and Development Administrator, as guest speaker. The facility, which is set for completion in 1979, will be the largest machine of its type in the world.

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Employee pension benefit costs 10.1 cents per payroll dollar

How much do pensions cost? The answer is more difficult than for the other benefits covered so far in this series.

We have discussed the cost of vacations, holidays and other time paid for but not worked, and Social Security. Later we will examine life and hospitalization insurance, the Savings Plan, and finally, all other benefits.

The cost elements of all these can be explained in fairly simple terms, but the number of cost variables in the Pension Plan make its explanation more difficult.

First, let's talk about the Contributory Retirement Plan. Approximately 8.5 percent of Nuclear Division employees participate in it. Since Pension Plan benefits are offset by the amount of Retirement Plan benefits attributable to Company contributions, the Contributory Retirement Plan can be disregarded in determining the Company's costs.

For the Company to provide necessary monies for pensions, it has to put aside each year for each employee enough money so that when the employee reaches retirement age, there will be adequate funds to pay a pension for the remainder of the employee's life.

The average Nuclear Division employee works 25 years prior to retirement at age 63 and is expected to live 14 years after retirement. This means that the Company has to put aside enough money during the 25 active years to pay a pension during the 14 retirement years. If you will look again at your J.Q. Carbide report, you will see how much money would be required, at the time of retirement, to purchase the pension that that report estimated you would have.

How much is enough? Union Carbide relies on actuarial consultants to advise it regarding this. The amount required depends on the age of the

work force, the length of service at retirement, the anticipated increase in an employee's earnings level, the expected rate of return on the monies put aside, the increase in value of the investments, and the life expectancy of retirees.

Taking all of these things into consideration, the consultant determined that the amount required in the Nuclear Division in 1974 was 10.1 percent of the annual payroll or 10.1 cents per payroll dollar. The amount in the past few years has not varied significantly from this. You will recall the 1973 figure given in our first article in this series was 9.5 cents per payroll dollar. Future costs are expected to be even higher than the present level.

In our last article we pointed out that the average Nuclear Division employee paid 5.0 cents per payroll dollar in 1974 for Social Security protection - and this was matched by another 5.0 cents from the Company.

A little simple arithmetic tells you, then, that 20.1 cents per payroll dollar (15.1 cents from the employer and 5.0 cents from the employee) is being spent to provide your retirement benefits.

Now let's take a look at our fringe benefits Cost Box Score:

BENEFITS COST BOX SCORE	
Vacations	7.4%
Holidays & Other Time Off with Pay	6.7%
Social Security	5.0%
Pension and Retirement	10.1%
Insurance Plans	—
Savings Plan	—
Other Benefits	—
Total	36.5%

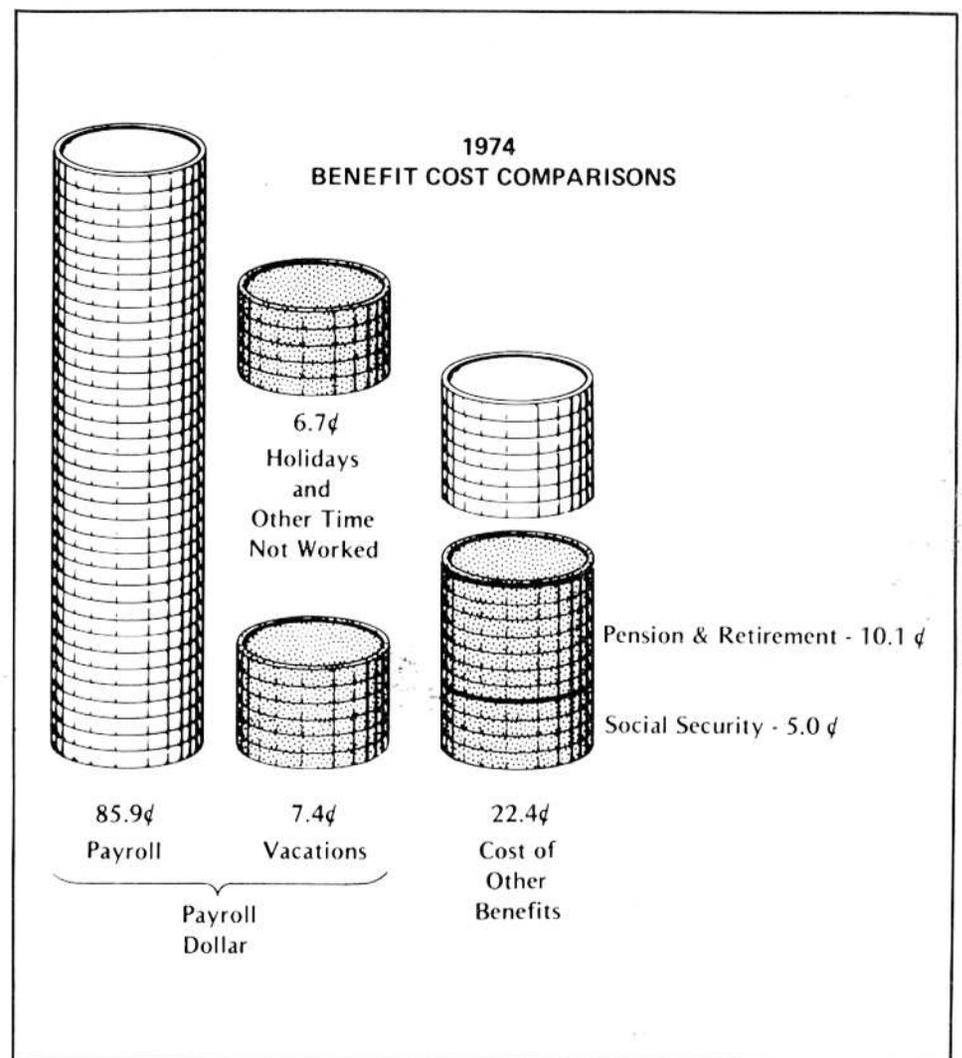
Gray is associate editor of international journal

Robert J. Gray, supervisor of the metallography laboratories, Metals and Ceramics Division, at Holifield National Laboratory, has been appointed associate editor of METALLOGRAPHY. Gray is accepted by



those in the field as the "Dean of American Metallographers." He has published over 70 technical papers on various aspects of metallography and is currently serving on the Editorial Advisory Board of PRACTISCHE METALLOGRAPHIE, a technical publication of Germany.

METALLOGRAPHY is an international journal, which is published in association with the International Metallographic Society. It is dedicated to the preservation and dissemination of technical knowledge on the structure of materials.



Latham, Mrs. Nook promoted in 2 Laboratory divisions

Two employees at Holifield National Laboratory received promotions recently. Otis E. Latham has been promoted to maintenance foreman in the Plant and Equipment Division. Cathryn R. Nook was named a library specialist in the Information Division.



Latham

Mrs. Nook

Latham is a native of Sweetwater. He graduated from Highpoint High School and has taken courses in management from The University of Tennessee. Prior to joining the Laboratory staff in 1966, Latham was employed by the Yale & Towne Lock Company in Lenoir City. He completed the carpentry apprentice program at the Laboratory, and was appointed a supervisory trainee in 1974.

Latham and Carolyn, his wife, have four sons. They live at Route 3, Sweetwater.

Mrs. Nook was born in Philadelphia, Tenn. She received her M.S. degree in library and information science from The University of Tennessee. A former social worker with the Tennessee Department of Social Welfare, Mrs. Nook joined the Nuclear Division staff in 1968.

Mrs. Nook was an assistant librarian in the Central Research Library. She is currently in charge of the Thermonuclear Division Branch Library which is located at the Y-12 Plant.

Mrs. Nook is a member of the Special Libraries Association. Her husband, James C., is an engineer at the Y-12 Plant. They reside at 20 Moore Lane, Oak Ridge.

RIDES — RIDES — RIDES

ORGDP

RIDE or will join car pool from Madisonville or Sweetwater to ORGDP Portal 4, straight day. C.A. Moses, plant phone 3-3135.

RIDE or will join car pool from Maryville to ORGDP Portal 2, straight day. Fletcher Jolly, plant phone 3-9327, home phone Maryville 984-3153.

LABORATORY

RIDE or will join car pool from Kingston to any portal at HNL, 8 a.m. shift. R.A. Crowell, plant phone 3-6259, home phone Kingston 376-5533.

CAR POOL MEMBER from Jackson Square area, Oak Ridge, to East Portal, 8 a.m. shift. Bill Henry, plant phone 3-1102, home phone 483-0858.

Y-12 PLANT

FORM car pool from Lovell Heights, West Knoxville, to North Portal, straight day. Steve Landis, plant phone 3-5413, home phone Knoxville 693-2923.

NUCLEAR DIVISION NEWS



Published twice-monthly for
The Employees Of

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NUCLEAR DIVISION

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EDITORS' ASSOCIATION

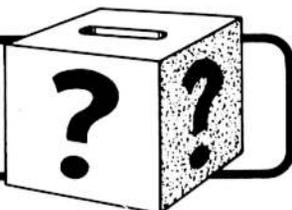
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QUESTION BOX



If you have questions on company policy, let us know. Write the Editor, **Nuclear Division News** (or telephone your question in, either to the Editor, or to your plant contact). Your name will not be used in the question, and you may be given a personal answer if you wish.

QUESTION: A recent question and answer indicated that it was uniform policy throughout the Nuclear Division to provide mounted plaques of Engineering Technician and Registered Engineer certificates. All of those on display, either at central points in buildings or in individual offices, are approximately 8½" x 11", mounted on walnut backs with one notable exception.

Why has one division found it necessary to display postcard-size (4¼ x 5½) reproductions in a back hall? Is it because they have far more Certified Engineering Technicians than Registered Engineers or do they plan to eventually furnish each individual with a larger mounted reproduction on walnut back "when they can afford it"?

Also, since I have been conned into typing this, what about professional secretary certificates?

ANSWER: Discussion with the division concerned revealed that the group display of 4¼" x 5½" plaques in a heavily traveled location (close to the division's Official Bulletin Board) was judged to be the most effective means of recognizing technicians and engineers who have achieved certifications.

Your question prompted a review of this practice and the division concerned is taking appropriate action to have plaques approximately 8½" x 11" mounted on walnut backs and will present these plaques to each employee who has been certified as a technician or as an engineer. You and others concerned may arrange with supervision to have the plaques mounted in offices or work locations.

The division concerned is really quite proud of you and others who have achieved certification status and regrets that the previous practice did not convey this intended message to you.

Some time ago Certified Professional Secretaries were advised individually that they would be provided with plaques if they desired them.

QUESTION: One of the most satisfying experiences to be had at Oak Ridge is the soothing hum of a dial tone, heard after dozens of futile attempts to call Knoxville by dialing "9". Most of us, however, would prefer to use our time and telephones more efficiently, and would gladly sacrifice the sense of accomplishment for the conveniences of hearing that lovely dial tone on the first try. Is there any chance of expanding the capacity of these tie-lines to Knoxville and other cities?

ANSWER: There are at the present time 46 trunk lines to Knoxville.

These are adequate to take care of business calls. If you can't get a line to transact official business, go through the Nuclear Division official operator who will complete the call. If you are trying to place a personal call, place it through the Oak Ridge system and charge it to your home phone.

QUESTION: Is it true that Division Directors are being appointed for periods of five years? If so, what date will be used in figuring these five years? Will it be five years from 1974 or will other years count toward the five years?

ANSWER: The Laboratory's new policy regarding the appointment of Division Directors applies only to basic research divisions, not the engineering-oriented, administrative, service and operating divisions. It is applicable at this time only to the three directors who have been appointed since January 1974. The five-year term starts from the date of appointment. The policy allows for a renewable term for a second five years if this is desired both by the Laboratory Director and the basic research director involved.

QUESTION: Blue Cross offers a supplementary Major Medical policy which provides additional protection up to \$250,000. This coverage costs only 25 cents per month per member, but is available only through group plans. When does UCC-ND plan to provide this benefit to its employees? Although the number of claims will be very low (that's why the cost is low), this added coverage would avoid a financial disaster for those few families involved. Personally, I would be more than willing to pay the 25 cents myself, but this type of policy is not available to individuals; it must be obtained through the group plan.

ANSWER: If, as you indicate, it costs 25 cents per employee per month to increase the maximum to \$250,000, the cost for the Nuclear Division's 15,000 employees would be more than \$3,500 per month or \$42,000 per year.

At the present time our Major and Special Medical Plans offer protection to more than 45,000 employees and their dependents. Only 34 of these have more than \$10,000 charged against their Major-Special Medical eligibility. Only four have exceeded \$20,000, the highest being less than \$24,000. When the maximum was increased from \$20,000 to \$50,000 in October 1973 no employee had exceeded the \$20,000 maximum. Although we cannot be certain that some employee would not exceed the \$50,000 maximum, we do review the matter at regular intervals. We cannot justify increasing the maximum at this time, but certainly would seriously consider doing so if it appeared that any significant number of employees would be affected.

Wayne McLaughlin affirmative action coordinator at ORGDP

B. Wayne McLaughlin, Fabrication and Maintenance Division at the Oak Ridge Gaseous Diffusion Plant, has been appointed Coordinator of the Plant's Affirmative Action Program. McLaughlin is ORGDP's first full-time affirmative action coordinator and will assume duties of his new position on May 1.

McLaughlin is a native of Danville, Va., and graduated from Johnson C. Smith University, Charlotte, N.C. in 1969. Following graduation, he joined Union Carbide's Nuclear Division as a buyer in the Purchasing Division. A year later he transferred to ORGDP's Maintenance Engineering Department, where he engaged in a variety of industrial engineering-type activities, including procedure preparation, cost reduction program coordination, budget and man-power planning, and material management studies.

During the past three and a half years, his primary responsibility has been coordination of the Fabrication and Maintenance Division's Affirmative Action Program. He plans to use techniques developed in the Division's program to help develop a more effective plant-wide program.

"At ORGDP, our aim will be to assure that every employee has an equal chance to achieve," McLaughlin stated. "And all affirmative action activities will be geared in that direction."

McLaughlin interprets his position as "aiding plant managers in avoiding discriminatory practices in hiring, promoting, transferring and terminating employees, and assisting them in achieving full utilization of all employees, including women, blacks and other minorities."

RETIRED ORGDP FOREMAN

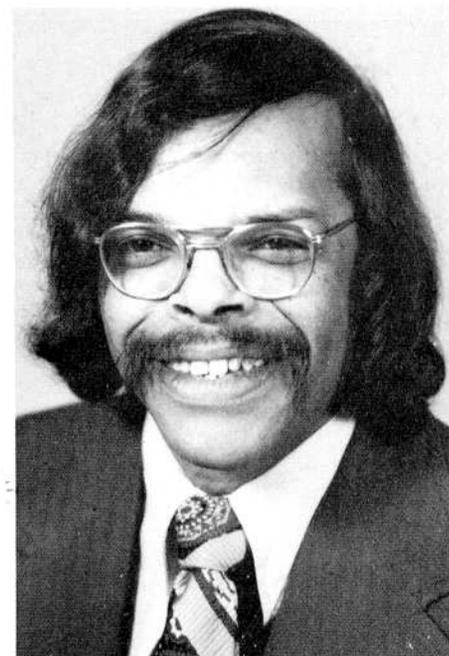
William H. Stanton Sr., 107 Porter Road, Oak Ridge, died April 6, at a Knoxville hospital. He retired from Oak Ridge Gaseous Diffusion Plant as a power operator foreman in 1965, after more than 20 years with Union Carbide. He is survived by his wife, May Schell Stanton; two sons, James A. Stanton, and William H. Stanton Jr., both employed in the Y-12 Plant; nine grandchildren, and three sisters. Funeral services were held at St. Mary's Catholic Church, with burial in Anderson Memorial Gardens.

RETIRED PURCHASING EXPEDITER

Louis M. Haisten, retired from the Purchasing Division, died March 28, in Griffin, Ga. He came to the Y-12 Plant in 1944, and in 1952 transferred to the Purchasing Division. He elected an early retirement in 1973. Survivors include his wife, Ina Briscoe Haisten, a daughter; two brothers, a sister and two grandchildren. Funeral services were held in Highland Memorial Cemetery with the Rev. Joe J. Manos officiating.

FORMER Y-12 UTILITY MAN

Lee R. Bailey, former employee in Y-12's utilities department, died at his 118 Amherst Lane, Oak Ridge, home



B. Wayne McLaughlin

McLaughlin has taken courses at Georgia Institute of Technology and The University of Tennessee and is certified as a federal income tax consultant. McLaughlin is active in several organizations. He is a member of the Board of Directors of the Oak Ridge Community Relations Council, and serves as chairman of the Board for the Oak Ridge Multiservices Association.

In his new position, McLaughlin will report to Joseph J. Vogt, Superintendent of the Employee Relations Division. The program at ORGDP is part of the Nuclear Division's Equal Employment Opportunities organization, which is headed by Charles A. Blake.

McLaughlin lives at 134 Athens Road, Oak Ridge.

March 31. He worked at Y-12 27 years before his retirement in 1971. Survivors include his wife, two daughters, Carole Ann Foust and Patricia L. Whedbee; one son, Clifford A. Bailey; two sisters, two brothers and eight grandchildren. Funeral services were held at Weatherford Mortuary with burial in the Bailey Cemetery, Tazewell.

FORMER ENGINEER

Roy J. Morton, a sanitary engineer who retired from Oak Ridge National Laboratory in 1962, died March 23 in Rockwood. Mr. Morton is survived by his wife, Margaret McNutt Hicks Morton; two sons, four sisters, a brother and three grandchildren. Graveside services were held at Woodlawn Memorial Park Cemetery in Nashville, with the Rev. James Smith officiating.

RETIREE DIES

Clarence J. Horne, who retired from the Laboratory Protection Division at HNL, died March 23. He had worked as a guard for over 16 years when he took normal retirement in 1960. The Horne home is at Route 2, Oliver Springs.

Calendar of EVENTS

TECHNICAL

April 18

Laboratory seminar: James A. Barker, "Career Development and Related Programs at Holifield National Laboratory." 3 p.m., Central Auditorium.

April 21

Laboratory-wide seminar on uranium enrichment: "Isotope Separation Theory and Practice." Ed Von Halle, Oak Ridge Gaseous Diffusion Plant. 3 p.m. Central Auditorium.

April 25

Computer Sciences Division seminar: "Solution of Sparse Systems of Equations," G.H. Golub, Stanford University, 3 p.m. East Auditorium.

April 28

UT - DuPont lectures: Nicholas J. Turro, Columbia University, "Molecular Photochemistry of Organic Molecules, Mechanistic and Synthetic Applications." 8 p.m. 300 Buehler Hall, UT.

UT - DuPont lectures: Nicholas J. Turro, Columbia University, "Massive Energy Storage and Release Mechanisms of Chemiexcitation." 8 p.m. 300 Buehler Hall.

April 29

Laboratory-wide seminar: Jack Gibbons, UT Environment Center, "Mr. Thompkins in Wonderland: Reflections on a Year in Washington," 3 p.m. Central Auditorium.

May 1

Computer Sciences Division seminar: "System Extensions," C.E. Price. 10 a.m. East Auditorium.

Luncheon planned

The Oak Ridge Chapter of the National Secretaries Association will celebrate Secretaries Day Wednesday, April 23, with a luncheon at the Holiday Inn. Members of the chapter, as well as other area secretaries, are invited and may bring their bosses. Reservations for the luncheon should be made by April 21 through any of the following people: Liz Harris, extension 3-7774; Sheila Glenn, 3-3340; Anne Caylor, 3-6600; Donna Slagle, 3-5458; Sadye Whitten, Oak Ridge telephone 482-2481; and Martha Lyle, extension 3-4636.

Irene Gentry named senior buyer in purchasing group

Irene K. Gentry, secretary to J. Alton Elkins, Manager of Finance for the Nuclear Division, has been promoted. She has transferred to the Purchasing Division where she is a senior buyer.

Mrs. Gentry, the former Irene Kempton, was born in Benham, Ky. but moved to the Knoxville suburbs at an early age. She graduated from Central High School in Fountain City and has attended The University of Tennessee Evening School, studying accounting, economics, business law and psychology. In 1970 she passed the Certified Professional Secretary examination.

Before joining Union Carbide in 1949, she worked with an insurance firm in Knoxville. Mrs. Gentry's career with Union Carbide has involved secretarial work in the design and development department, Engineering Division, Finance and Materials Division, and Purchasing Division.

She and her husband, David E. Gentry, live at 4924 Governorwood Drive, Powell. They have one son, Steve.

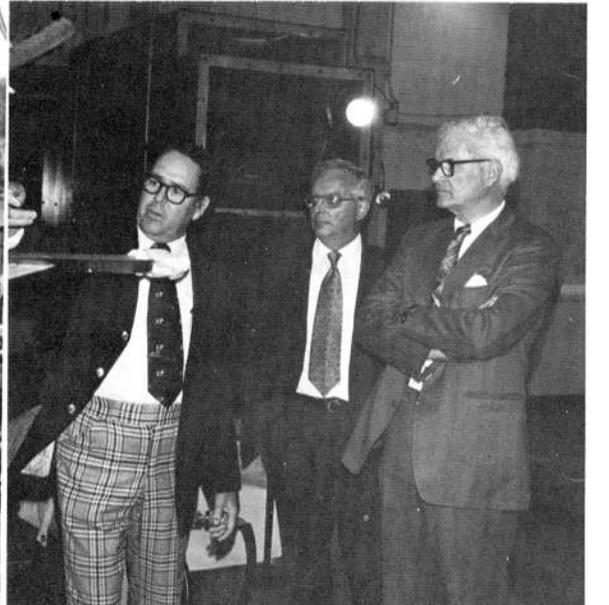


Irene K. Gentry

Next Issue

The next issue will be dated May 1. The deadline is April 23.

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GROUNDBREAKING RITES — Groundbreaking ceremonies were held April 5 at Holifield National Laboratory, marking the beginning of important research in nuclear and sub-atomic physics. The \$18 million structure, planned for completion in 1979, will house a new tandem accelerator, connecting and adjoining the present heavy-ion accelerator, the Oak Ridge Isochronous Cyclotron. Robert C. Seamans Jr., and John

M. Teem, Administrator and Assistant Administrator of the U.S. Energy Research and Development Administration, and Congresswoman Marilyn Lloyd, representing the Third Congressional District of Tennessee, were among visitors at the groundbreaking. The new facility will be housed in a 152-foot high circular tower, 45 feet in diameter. It will be the largest machine of its type in the world when completed.

COMPANY Service

20 25 30

**Y-12 PLANT
30 YEARS**

D. Virginia Hill, laboratory operations; Minnie T. George, building services; Oller C. Collins, electrical and electronics; and Clarence E. Beckham, stores department.

25 YEARS

Ira B. Hogg, C. Ray McGinnis, Roy W. Coker, Allen H. True and Howard Nobles.

20 YEARS

Billy M. Stockton, Fred M. Pickering, Billy G. Cross, James C. Heatherly and Wendell L. Ellis.

**ORGDP
30 YEARS**

James P. Hughes, fabrication shop department; Mary C. Johnson, Plant Superintendent Division; Ruby A. Wilkerson, security department; Eugene B. Alley, isotope analysis department; Kattie B. Harris, janitors department; Everette D. Clark,

machine shop department; Lillian G. Orme, Plant Superintendents Division; William N. Choate, chemical operations administration; Clyde T. Miracle, materials and systems development; Grace V. Meek, traffic, receiving and shipping department; Sam V. Carrington, machine shop department; Thomas J. Walker, Operations Division; Willie B. Stoxstile, grounds maintenance department; Eugene B. Eastridge, TIA barrier manufacturing; and Earl Hembree, cascade maintenance department.

25 YEARS

Frank S. Jones, William R. Smith and James C. Suddath.

20 YEARS

Robert G. McMillan and Ray O. Carden.

**GENERAL STAFF
30 YEARS**

Elva B. Crowder, Auditing Division.

Brown, Edwards, E. Johnson, R. Johnson, Lents promoted

Five additional promotions have been announced at the Paducah Gaseous Diffusion Plant.

Phillip G. Brown has been named an associate chemist in the Laboratory Division. A native of Paducah, he has been at the Paducah Plant more than six years. He holds a B.S. degree in chemistry from Murray State University.

Married to the former Deborah Hayden, Brown lives at 2969 Cornell Street, Paducah. The couple has two children.

Palmer G. Edwards has been promoted to an inspection foreman in the Engineering Division. Born in McCracken County, he attended the Paducah Community College, and joined Union Carbide 23 years ago. He worked at General Motors and the Indiana Central Railroad shops before coming to the Paducah Plant.

Mrs. Edwards is the former Geraldine Perry. They have two sons, and live at Route 8, Paducah.

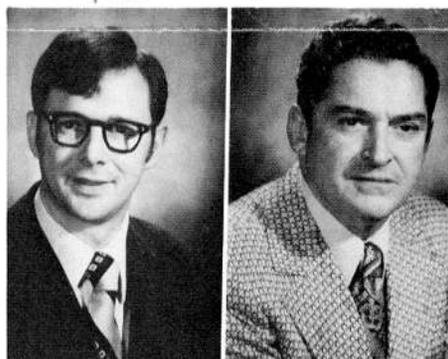
Ernest R. Johnson has also been named an inspection foreman in the Engineering Division. A native of Belknap, Ill., he was in the U.S. Army Signal Corps before joining Union Carbide 22 years ago.

His wife is the former Mary Frances Maupin, and they live at Route 2, Vienna, Ill., with their two sons.

Ronald T. Johnson has been promoted to an associate chemist in the Laboratory Division. A native of Perks, Ill., he holds a B.S. degree in chemistry from Southern Illinois University. He joined Union Carbide almost three years ago.

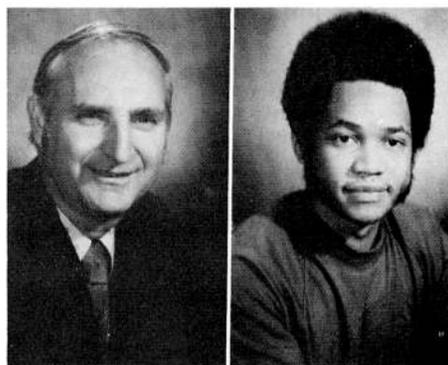
He lives at Grand Chain, Ill.

Robert E. Lents is a senior inspector in the Engineering Division. Born in Marshall County, he was with the Modine Manufacturing Company before joining Union Carbide in 1952.



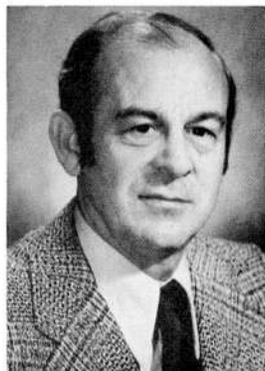
Brown

Edwards



E. Johnson

R. Johnson



Lents

Mrs. Lents is the former Martha Chester. They have a son and daughter, and live at 1734 Sycamore Street, Benton, Ky.

Council on radiation protection and measurement elects Richmond

Chester R. Richmond, associate director for Biomedical and Environmental Sciences at Holifield National Laboratory, has been elected to a six-year term on the National Council on Radiation Protection and Measurements.

The Council, which was founded in 1929, has about 65 members. It is an organization of nationally-recognized scientists who share the belief that significant advances in radiation protection and measurement can be achieved through cooperative effort.

Richmond is a native of South Amboy, N.J. He received his B.S. degree in biology from New Jersey State College, and his M.S. in biology and Ph.D. in biology-physiology from the University of New Mexico.

Prior to joining the Laboratory staff in 1974, Richmond was associated with the Los Alamos Scientific Laboratory in New Mexico. For about three years he worked with the U.S. Atomic Energy Commission's Division of Biology and Medicine in Washington, D.C.

Richmond was one of five U.S. scientists selected last year to receive the AEC's Ernest Orlando Lawrence Memorial Award for significant contributions to the development, use or control of atomic energy. He was specifically cited for "meritorious research on the radiation biology of internally deposited radionuclides, for outstanding contributions to the resolution of radiation protection problems, and for significant administrative contributions to the AEC's research program."

The author of more than 70 scientific papers, Richmond has concentrated his work on the comparison of the metabolism of several radionuclides in different animal species. This work has provided an important basis for the extrapolation of data from animal experiments to human beings, and has been essential in the development of radiation protection standards.



Chester R. Richmond

centrated his work on the comparison of the metabolism of several radionuclides in different animal species. This work has provided an important basis for the extrapolation of data from animal experiments to human beings, and has been essential in the development of radiation protection standards.

Division Deaths

Francis E. McKinney, head of the Technical Publications Department in Holifield National Laboratory's Information Division, died March 28 following a fall in a Puerto Rican cave he was exploring.



Mr. McKinney

Mr. McKinney, a graduate of Auburn University, joined the HNL Isotopes Information Center in 1965 after three years with Marshall Space Flight Center. He transferred to Technical Publications in 1972, and was named department head in December of 1974.

He was president of the East Tennessee chapter of the Society for Technical Communication, and a member of the East Tennessee Grotto of the National Speleological Society. Mr. McKinney was serving his fourth term on the board of directors of the Oak Ridge Playhouse. He had also served on the Oak Ridge Arts Festival Board and Arts Council.

Survivors include his wife, Jill Dudrow McKinney, 102 Olean Road, Oak Ridge; a daughter, Julie, and a son, Terry; his parents, Mr. and Mrs. E.H. McKinney, Citronelle, Ala.; six brothers, and one sister.

A memorial service was held at Weatherford Mortuary Chapel with the Rev. Robert Hoffstetter officiating. Interment was in Oak Ridge Memorial Park.

LECTURE — APRIL 18

Harold E. Edgerton, professor of electrical engineering at Massachusetts Institute of Technology, will present a lecture as part of the Appalachian Inventors Fair and Industrial Exhibition on April 18. The lecture entitled, "The World of Strobe and Sonar," will be held at 8:15 p.m. in the auditorium of the new American Museum of Atomic Energy in Oak Ridge.

The fair, which will have more than 50 displays of inventions by local people, will be open to the public from 1 to 5 p.m. on April 18, and from 10 a.m. till 5 p.m. on Saturday, April 19. The program is sponsored jointly by Scientists and Engineers for Appalachia and Oak Ridge Associated Universities.

LABORATORY RETIREE DIES

Robert H. Beidel died April 2 at his home at 100 Nasson Lane, Oak Ridge. Mr. Beidel was a labor relations specialist at Holifield National Laboratory prior to taking early retirement in December of 1974. He is survived by his wife, Oleta Potts Beidel; a son, Robert G.; and a daughter, Sandra Beidel (who works in the Library at HNL). Graveside services were held April 5 at Oak Ridge Memorial Park, with the Rev. Harry Lorenz officiating.

New Museum dedicated April 5

AEC



OFFICIALS DEDICATE MUSEUM — Robert J. Hart, Manager of the Oak Ridge Operations of the U.S. Energy Research and Development Administration, dedicated the new Museum in Oak Ridge April 5. From left, are the Rev. Harry J. Lorenz, pastor of Grace Lutheran Church and president of the Oak Ridge Ministerial Association; Phillip L. Johnson, executive director of Oak Ridge Associated Universities; John M. Teem, assistant administrator of

ERDA; Hart; Sydney H. Eiges, American Revolution Bicentennial Administration; Berry C. Williams, field representative for U.S. Representative Joe L. Evins; Marilyn Lloyd, U.S. Representative; and Robert C. Seamans Jr., Administrator of the U.S. ERDA. Hart was master of ceremonies for the rites, attended by some 250 citizens. The museum is a major tourist attraction in Oak Ridge.



BICENTENNIAL OFFICIAL GREETSS CONGRESSWOMAN — Sydney H. Eiges, assistant administrator for U.S. Resources Development greets Congresswoman Marilyn Lloyd at the Museum dedication recently.



BALANCED APPROACH TO ENERGY — Robert C. Seamans Jr., U.S. Energy Research and Development Administrator, urges local citizens to rededicate efforts to a new balanced approach to energy. Seamans was the principal speaker at the dedication of the new Museum.



PLAQUE DEDICATED — Berry Williams, left, administrative aide to Congressman Joe L. Evins, and Mayor Al K. Bissell, Oak Ridge, view the plaque acknowledging Evins' efforts in behalf of the Museum.



TRIES MANIPULATOR — Congresswoman Marilyn Lloyd tries her hand at the manipulators at the American Museum of Atomic Energy as Robert C. Seamans Jr., U.S. ERDA Administrator, looks on at right.

E bonds may be converted to H bonds for tax gains

If you ever expect to need extra money (and who doesn't?) for retirement or education of the children, there's a simple solution available to Nuclear Division employees right now.

The U.S. Savings Bond payroll deduction campaign is in full swing in all four of the plants, slated to wind down the end of this month. There is no easier, surer way to insure financial security than through the payroll savings plan.

Many advantages

Gold, silver and other glamorous investments lose their siren lure when compared to the stability of the bond.

Manyfold are the advantages of the savings bond. First, there's the security, and practical non-destructibility of it . . . you can lose it, burn it, or misplace it . . . and it will be replaced. It draws interest which is exempt from local and state income tax, and has an advantage even on Federal income tax (you can defer responsibility until the bond is cashed, or until you reach retirement when your income is reduced). There is another advantage in educational savings. The bond can be put in the child's name, and with a parent as beneficiary. At the end of the first year, file a Federal income tax return in the child's name, listing increase in bond value as income to the child. This establishes "intent," and no further returns need be filed or paid as long as the child's total income does not exceed the amount of his personal exemption. Thus, when bonds are cashed to meet college costs, all accrued interest is free from Federal tax.

Conversion factor

Another option, being pointed out in the current campaign, is the con-

version of E bonds to H bonds which pay out interest as they earn through a semiannual Treasury check. Thus you keep your principal intact; have a steady guaranteed income for 10 years (and 10 more if you exercise the extension privilege); and, when the H Bonds are cashed, the tax you finally pay on accumulated E Bond interest will be at your low post-retirement rate.

E Bonds may be exchanged for H Bonds at any time in multiples of \$500, but you can get the highest tax savings if the exchange is made after you become 65.

You can sign up for as little as 50 cents per week, or \$2 per month, and bonds may be purchased in any denomination you desire when the cash has accumulated.

Campaign directors are busy now distributing the necessary information on the multiple advantages of savings through payroll deductions. It doesn't cost a cent, but adds to the security of your future.

Campaign leaders

Heading the campaign for the four plants is John D. Nicol, Fabrication and Maintenance at the Oak Ridge Gaseous Diffusion Plant. His chairmen include Roy D. Williams, Y-12 Plant; Lee C. Porter, ORGDP; Roger E. Perry, Holifield National Laboratory; and David D. Barclay, Paducah Gaseous Diffusion Plant.

More than 51 percent of Nuclear Division employees are already on payroll savings. More than \$2.2 million dollars was spent last year in the four installations . . . and this is purchase price of bonds, not maturity value.

So, if you are not part of that 51 percent, come on and join in . . . it's pure joy.

TAKE STOCK IN AMERICA

Buy U.S. Savings Bonds

FORMER Y-12 UTILITY MAN

Lee R. Bailey, former employee in Y-12's utilities department, died at his 118 Amherst Lane, Oak Ridge, home March 31. He worked at Y-12 for 27 years before his retirement in 1971. Survivors include his wife; two daughters; one son; two sisters, two brothers and eight grandchildren. Funeral services were held at Weatherford Mortuary with burial in the Bailey Cemetery, Tazewell.

Division Deaths

Albert Gronstrom, design engineer in the Engineering Division, died in an Alabama hospital April 8.

A native of Richmond, R.I., Mr. Richmond joined Union Carbide in 1944. He was a member of the Tennessee Society of Professional Engineers, and was employed in the Oak Ridge Gaseous Diffusion Plant at the time of his death.



Mr. Gronstrom

Survivors include his wife, Anna Dean Webb Gronstrom, 371 East Drive, Oak Ridge; a daughter, Jean Eby; a son, Alan Gronstrom; and a brother, Edgar Gronstrom.

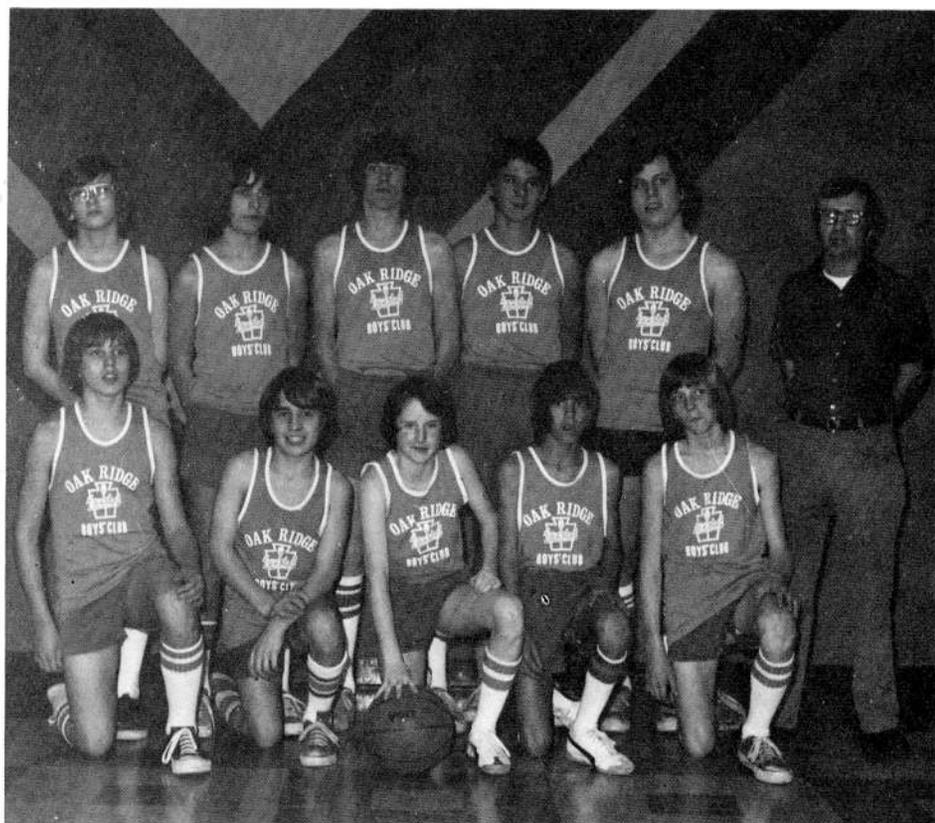
Masonic services were held at Weatherford Mortuary April 10, and graveside services were held at Anderson Memorial Gardens. The Rev. Joseph Easterly presided at the last rites.

RETIRED Y-12 MACHINIST

Willis F. Cooper, former employee in Y-12's area 5 maintenance, died April 18 in a Knoxville hospital. Mr. Cooper worked at Y-12 from 1950 until 1972 when he was given a medical termination. He is survived by his wife, Mary Foggarty Cooper, Pleasant Ridge Rd., Knoxville; two sons, his mother, Edith Cooper, one brother and one sister, as well as one granddaughter. Services were held at the Holy Ghost Catholic Church, Knoxville, and burial followed in the Tennessee Valley Memorial Gardens.



SAVINGS BOND COMMITTEE AT ORGDP — The 1975 Savings Bond kick-off meeting was held last week at the Oak Ridge Gaseous Diffusion Plant. Seated from left are Gary L. Calvert, reports and materials; Bob E. Seyfried, publicity; Lee C. Porter, chairman; Judy W. Leach, secretary; and Ken L. Brady, Engineering. Standing are Bill A. Davis, Operations; Robert J. Wertz, Laboratory; Tony A. Angelilli, Gaseous Diffusion Development; Susan H. Lowe, Auditing; Mary M. King, Employee Relations; Fay B. Duncan, Operations Analysis and Planning; Mary L. Bailey, Capacity Expansion; Carolyn M. Rule, Industrial Participation; Suzie P. Reed, Finance, Materials and Services; Lynn J. Carpenter, Separation Systems; Norman E. Sparks, General Accounting; Jack H. Ziegler, Computer Sciences; and Joe O. Alexander, Purchasing. Not pictured is George E. Bullock, Security and Plant Protection.



MIDGET CHAMPS — The Oak Ridge Boys Club tournament champions were coached by Fred Jeffers and Jack West, both of Y-12. They won five of eight games during the regular season and marched through the tournament without effort. In the front row, front left, are John Chesney, Vana Smiddy, Mark Jeffers, Mark West and Melvin Martin. In the second row are Gary Hatfield, Gordon Lacy, Tony Lee, Chris Hubner, Jonathon Barrack and Coach Jeffers.

SOFTBALL LEAGUES NOW FORMING

Carbide Softball League will get underway shortly, with a deadline of April 25 for team entry announced this week. Entry forms may be obtained from the Recreation Department, 9711-5, Y-12 Plant, or by telephoning 3-5833.

Just call in and give the name of your team, your manager and co-manager. They'll do the rest.

FISHING RODEOS

Two fishing rodeos are planned shortly by Y-12 shift people. E, F, G, H and J Shifts are holding their bass-crappe rodeo at Bayside Boat Dock, Saturday, April 19. Fishing is from 6 a.m. until 7 p.m. Three awards in three different species will be given: smallmouth, largemouth and crappie.

A door prize of an electric motor will also be awarded.

C Shift is planning another big contest at Bayside Tuesday, April 22. In addition to the prizes listed for the other rodeo, C Shift will also award a stripe and rough fish award.

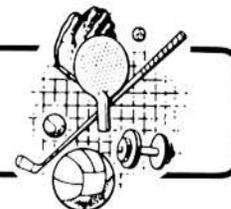
Fishing in the C rodeo begins at 5 a.m. and lasts until 5 p.m.

HIGH POWER RIFLE LEAGUE

Jack Huff, Y-12, won the first match of the All Carbide High Power Rifle League with a 471 out of a possible 500. Don Kiplinger, Laboratory, was second with a 464; and Larry Weston, also of the Laboratory, was third with a 457. Other scores showed: Harry Hoy, Y-12, 453; W.I. Gaylon, Y-12, 440; V.L. Fowler, Laboratory, 420; W.S. Denton, Y-12, 412; Hugo Bertini, Laboratory, 411; J.S. Crowell, Laboratory, 400; L.M. Toth, Laboratory, 391; R.D. Allen, ORGDP, 383; P. Ellis, ORGDP, 350; and J.C. Franklin, Y-12, 339.

All Nuclear Division riflemen may participate in league action.

RECREATIONOTES



CHILDREN'S MUSEUM SETS SPRING FESTIVAL

There's a happening in Oak Ridge Saturday, April 19, you won't believe. It's the Appalachian Spring Festival, sponsored by the Children's Museum of Oak Ridge.

From 10 a.m. until 4 p.m. there'll be Scottish dancing, mountain clogging, picking and singing, pottery-making, lace-making, broom-making, grass basketry, pressing flower pictures, metalsmithing, butter churning, wood turning and whittling, Indian beadworking, hominy making, rag rug braiding, quilting and the making of primitive furniture.

You can also have your portrait sketched or a silhouette cut just like they did in colonial times. Outdoor folk games, executed by Carbider Bill Henry, who is an ex-marble champion, will be featured on the grounds, as Henry will demonstrate the ancient art of mumblety peg.

A noontime snack will also be available on the grounds with baked beans and ham hocks, greens, cornbread - either with or without cracklins - apple butter, turnips, carrot salad, bread pudding, home-churned buttermilk, lemonade, sassafras tea and coffee and colas for those who cannot break away from 20th century habits.

Selma (Mrs. Ted) Shapiro, director of the Children's Museum, is heading the Festival committee, along with Joyce Maienschein, Bill Countess, Sara Gillespie, Sharon Fields and Henry.

A full day of activities and sights should keep the expected crowds entertained for the full six hours. Admission is only \$1 for students and \$2 for adults.

Plan now to attend the Appalachian Spring Festival. Sassafras tea may not really be your cup, but there's bound to be something there you will like. The Children's Museum is in the old Highland View School, at the corner of Highland Avenue and West Outer Drive.

VOLLEYBALL LEAGUE

The Jokers won the Nuclear League; the Diggers the Atomic League; and Artie's Army took the Carbon League in final standings. Then, not to be content with league laurels, the same teams rebounded to take tournament honors also, as the season closed.

**Final standings:
NUCLEAR LEAGUE**

Team	W	L
Jokers	38	4
Electric Bananas	33	9
Rad-Fizz	27	15
Pogo's	26	16
Anti-Quarks	19	23
Bawlers	11	31
Maxwell Demons	9	33

CARBON LEAGUE

Artie's Army	37	5
Computes	29	10
The Group	25	17
M & C's	24	18
Soulistics	21	21
Bombers	16	26
Adam Smashers	10	32

ATOMIC LEAGUE

Diggers	42	3
Taxi Squad	34	11
Quarks	26	16
The Pubs	9	33
Rejects	9	33
Old Men	9	33

ORGDP BOWLING

The Tuesday League still belongs to the All Stars with little chance of any other team challenging their 76 point lead in the race. B.O. Griggs and J.E. Shoemaker tied recently for a high game, 220 scratch. George Marrow put a 608, 671 series on the books.

The ORGDP Women's League will go to the Up-Towners with no sweat. Vernice Clower's 538/628 series topped a recent night of action, as Irene Carmack rolled a 230 handicap single.

The Wednesday League still goes to the Planners, three ahead of the

Y-12 BOWLING

The Rounders hold a not-so-safe lead in the C League, as action soon grinds to a halt. Otis Rackley's recent 692 handicap series set the boards up. His Sunflowers also hold a high single handicap tally of 1099!

A roll-off in the Mixed League to see who won the second half was necessitated, as the Friskies and Goofers tied for laurels. The Friskies won it, then returned to the hardwood the next night, and downed the Rollers by a mere 13 pins to take the league championship. The Rollers had won the season's first half.

The Smelters and Tigers are hot-at-it with a mere point advantage for the Smelters as the Classic League rolls down. Bill Ladd again demonstrated expertise on the pins with a 247 scratch game, a 250 handicap game, and a 648 handicap series.

ORNL BOWLING

A League top standing has again returned to the hands of ORAU, a scant four points ahead of the Ten Pins. Close behind are the Limits, Misfits and Woodchoppers, still within firing distance of the top rung.

The ORNL Ladies' League belongs to the Pickups, only two ahead of the Bowling Aces. Brena Stevens 197 single, and 538/640 series topped a recent night of action.

The Remkeys take a slight lead in C League competition, as the Damagers fall back two points. John White's 620 series highlighted a night in April.

The Oops team still dominates the Family Mixed League, as the Team No. 1 makes a move toward the top slot. Sally Stockstill and Bill Smith dominated action recently.

Mix-Ups in late standings. Gary McFarland's single of 259 and Dan Kessel's series of 665 topped bowling in mid-April.

Tee-Off Time Application for April 26

(Check Appropriate Plant)

- ORGDP — Dead Horse Lake
- Y-12 — SOUTHWEST POINT
- LABORATORY — WHITTLE SPRINGS

Check

LEADER

Phone

Bldg.

Time Preferred

COMPLETE AND RETURN TO YOUR RECREATION OFFICE

Entries must be received prior to drawing on April 23, 2 p.m.

ORGDP — Building K 1001 — C-Wing — MS 122

Y-12 — Building 9711-5

ORNL — Building 2518

Tee-off times for all tournaments will be drawn on Wednesdays prior to each Saturday's tournament. Golfers are responsible for reserving their own carts by contacting the pro shop following drawing for tee-off times.

The Medicine Chest

By T. A. Lincoln, M.D.

QUESTION: "I am troubled by a problem my physician calls 'Raynaud's disease'. When I experience relatively cold conditions, my fingers and toes turn white and become very cold from lack of blood. I am 43 years old and have had this condition for seven years or more. What causes it to start? What can be expected from this condition? Will it get worse? What harm can it do? Is there any type of medicine, diet, exercise, or doctor that can help to reduce or cure this condition?"



ANSWER: Raynaud's disease or phenomenon is usually just a distressing cold allergy but infrequently it can lead to difficult complications. Secondary Raynaud's disease can be a serious problem and can rarely lead to the amputation of fingers or toes. The secondary disease is sometimes associated with the severe circulatory disease associated with arteriosclerosis or several rare neurologic or connective tissue diseases. It can be a late complication of crushing injuries to the hand or arm and can occur with certain chronic drug intoxications.

I assume you have the more common cold hypersensitivity type. It is a physical allergy and most patients have or have had multiple allergy problems such as hay fever, hives, asthma or eczema.

Typically the onset begins a few minutes after exposure of the fingers or toes to the cold. Sometimes just holding a glass which contains a beverage and ice cubes will be enough to set it off. After the fingers get chilled, they swell, become extremely tight or numb and turn pale or bluish in color. They may be painful and itch. As the attack subsides, redness and throbbing may occur.

The basic mechanism which causes this phenomenon is only partially understood. The swelling which occurs is due to loss of tissue fluid through the walls of the capillaries. Studies show that small arteries in the finger dilate in response to the cold stimulus and attempt to bring extra blood to the fingers. The veins, however, do not dilate equally so the blood cannot flow through. A back-up pressure is created which forces out tissue fluid into the surrounding tissue in the fingertip. Such a reaction would not normally especially cool the fingers. Apparently due to the release of special chemical substances called kinins, the whole process is so severe that the backup pressure impairs the inflow of arterial blood to the capillaries. The total circulation is thereby severely reduced, cooling the fingers.

Individuals with Raynaud's phenomenon secondary to other

diseases can develop gangrene. Repeated severe attacks of just the allergic form can lead to tissue atrophy, producing thin, shiny fingers.

When I was an intern, we had a man about 50 years old who was a chronic patient in the city-county hospital. In his case, it was the universal opinion of all the experts that his severe disease was related to a sensitivity to the effects of nicotine in tobacco. He had lost all his fingers and both legs up to the middle of his thighs because he refused to quit smoking. He was still able to hold a cigarette holder between the stub of his right thumb and the side of his hand. We all wondered what he would do when he lost that last stub!

The main treatment of cold hypersensitivity is to keep the extremities warm. Loose fitting gloves and shirts with long sleeves are necessary in the winter. The circulation to the hands and feet must not be restricted by any tight clothing or carrying a handbag or briefcase. Drug treatment is not satisfactory, although some recent success has been reported using cyproheptadine hydrochloride. Obviously, smoking must be completely and totally stopped because nicotine grossly impairs the circulation to the extremities. Most simple allergic cases can be adequately managed by the above steps. If the condition appears to be progressive and gangrene has to be feared, a sympathectomy can be used. Unfortunately, it gives only temporary relief.

QUESTION: "Since a bout with the Asian flu about five years ago, I have had chronic bronchitis. Every six months I report to a heart and lung specialist for an examination. My last one cost \$97.00. Many of these tests (EKG, etc.) are done on my routine physical examination here at work. Since these examinations are not applicable to Major Medical, and certainly not eligible for basic insurance coverage, am I not wasting money on these duplications?"

ANSWER: I would think so. Why don't you tell your specialist that these laboratory tests are performed periodically at work and you can borrow them? Remember, however, that he may need recent tests and your last physical examination may have been performed several months ago.

QUESTION: "Since aspirin increases the clotting time of blood, does the regular use of aspirin increase menstrual flow?"

ANSWER: I am not aware of any studies performed to answer this question. Aspirin in large doses does reduce the prothrombin level. Prothrombin is a clotting factor produced in the liver. When it is too



"NOW THE FIRST THING YOU DO IS..." — Elmer Breidert, Paducah Gaseous Diffusion Plant, instructs one of his adult swimming classes at the City pool. More than 60 adults participate in the program each summer. His program for children is the second largest in the state of Kentucky.

Carbider teaches life-saving, swimming techniques in Paducah

"There is no greater satisfaction than having taught someone to do something that might save their life one day," says Elmer C. Breidert, Operations Division at the Paducah Gaseous Diffusion Plant.

Breidert is a volunteer instructor of swimming and life saving techniques. He started his volunteer service shortly after arriving in Paducah in 1953. An avid swimmer since his childhood in St. Louis, Mo., Breidert set up a "learn to swim program" for Carbide employees and their families through the plant recreation department. More than 500 people were taught to swim through this program, which was held each Saturday morning.

Program for children

Breidert later decided to start a beginners' swimming program for children age 12 and under. This program was well under way when it was learned that many of the children's parents (who did not work at Carbide) did not know how to swim. This resulted in an adult beginners' swimming class, which was sponsored by the local chapter of the American Red Cross.

Breidert estimates that from 800 to 1,000 children and from 60 to 80 adults participate in the program each summer. The Paducah program for children is the second largest in the state of Kentucky.

About 50 percent of the adults involved in the program each year come from outside Paducah. Some come from as far as 40 miles away in Southern Illinois and Western Ken-

low, spontaneous bleeding may occur. Usually it is a nosebleed, bleeding gums or a gastro-intestinal hemorrhage. Vaginal bleeding is not common. The bleeding tendency is roughly proportional to the salicylate blood level, but it rarely occurs unless large doses of aspirin such as 25 tablets a day are consumed for several days. If a woman were taking an anticoagulant medicine for treatment of phlebitis or after a heart attack, a much lower dose of aspirin could cause bleeding. In general, discreet use of aspirin should not increase menstrual flow.

tucky. The Paducah program is a cooperative effort on the part of many people. More than 50 volunteers work each summer as certified instructors, instructor's aids and office administrative aids.

Trains instructors

In addition to teaching regular swimming classes, Breidert is the local water safety instructor trainer. During the last 21 years he has trained many of his students from the beginner stage through the water safety instructor stage.

Training for water safety instructors is held about once a year. From six to 10 students are usually trained each summer. To qualify they must: be at least 17 years old; have completed senior life saving training; reached a certain maturity level; and applied for water safety instructor training.

Another Carbider, Dan Stitt, assists Breidert in the swimming programs. He is considered the life-saving instructor expert because he has taught more courses in life saving than anyone else in the program. Stitt works in the PGDP Plant Engineering Division.

Breidert and Stitt are often called on by the Paducah Park and Recreation Department to qualify lifeguards on the basis of life saving skills.

Attended aquatic schools

Breidert attended aquatic schools at both Camp Limberlost in LaGrange, Ind., and Camp Oconomowoc in Wisconsin. He is water safety chairman for the McCracken County Chapter of the American Red Cross, and has served as a merit badge counselor of swimming and life saving for the Boy Scouts.

The Breiderts are a family of swimmers, with one exception. "My wife, Dottie, is one of the best instructors we have, and she can't swim a lick," said Breidert. "She knows all the techniques and helps out a lot with the kids in shallow water." The Breiderts have six children. Five of them have been certified as water

(Continued on page 10)



AWARD-WINNING JOURNAL STAFF — The award-winning Nuclear Safety journal staff includes, front l to r: Walter H. Jordan, Myrtle Sheldon, Angelyn Puckett and William B. Cottrell. Back row: William R. Casto, Edward W. Hagen, Dunlap Scott and Joel Buchanan. Not pictured are Donald G. Jacobs, Frank N. Browder and J. Richard Engel.

Honors gleaned by journal

The Nuclear Safety journal, a bi-monthly publication edited by Holifield National Laboratory personnel, has won the Award of Merit in the technical journal category of the sixth international publications competition sponsored by the Society of Technical Communication.

Awards in May

The STC will present awards at its 22nd International Technical Communications Conference in Anaheim, Calif., May 15.

Earlier this year the journal was named the top technical journal in this region by the East Tennessee chapter of the STC.

The magazine has a circulation of over 6,000 and has been in publication since 1959. It is sent to research facilities, utilities, industries and government agencies throughout this country and to more than 30 foreign nations. Subscriptions are handled through the U.S. Government Printing Office in Washington, D.C.

Other experts

Although the editing of the journal is a responsibility of the Reactor Division, technical experts from other Laboratory divisions are also utilized. The general editorial staff consists of William B. Cottrell, Reactor Division, editor; Walter H. Jordan, HNL consultant, advisory editor; Myrtle Sheldon, Technical Information Division, editorial reviewer; and Angelyn Puckett, Reactor Division, staff secretary. Section editors are: Joel R. Buchanan, Reactor Division, General Safety Considerations; Edward W. Hagen, I & C Division, Control and Instrumentation; Frank N. Browder, Chemical Technology Division, Plant Safety Features; Don G. Jacobs, Health Physics Division, Consequences of Effluent Release; William R. Casto, Operations Division, Operating Experiences; and Dunlap Scott, Reactor Division, Accident Analysis. Scott recently replaced J. Richard Engel, Reactor Division, who is concluding a period of service as a section editor.

swimming, life - saving

(Continued from page 9)

safety instructors, and the sixth will probably get certified as soon as she becomes of age.

"There is a lot of fun and challenge involved in teaching people how to swim," said Breidert. "We have people of all ages in our program. Last summer, we helped a woman over 60 years of age learn to swim. She did very well too, except when it came to diving," he recalls.

Breidert would like to see two additions to the swimming program in Paducah: (1) a program for the physically handicapped, and (2) a group similar to the "Master Swimmers" in Oak Ridge. He realizes the problems involved in setting up a program for the handicapped, but feels that there is a great need for one.

Organizing the masters should be easy, since almost everyone in Paducah knows how to swim - thanks to Breidert.

Ground broken for new lab

(Continued from page 1)

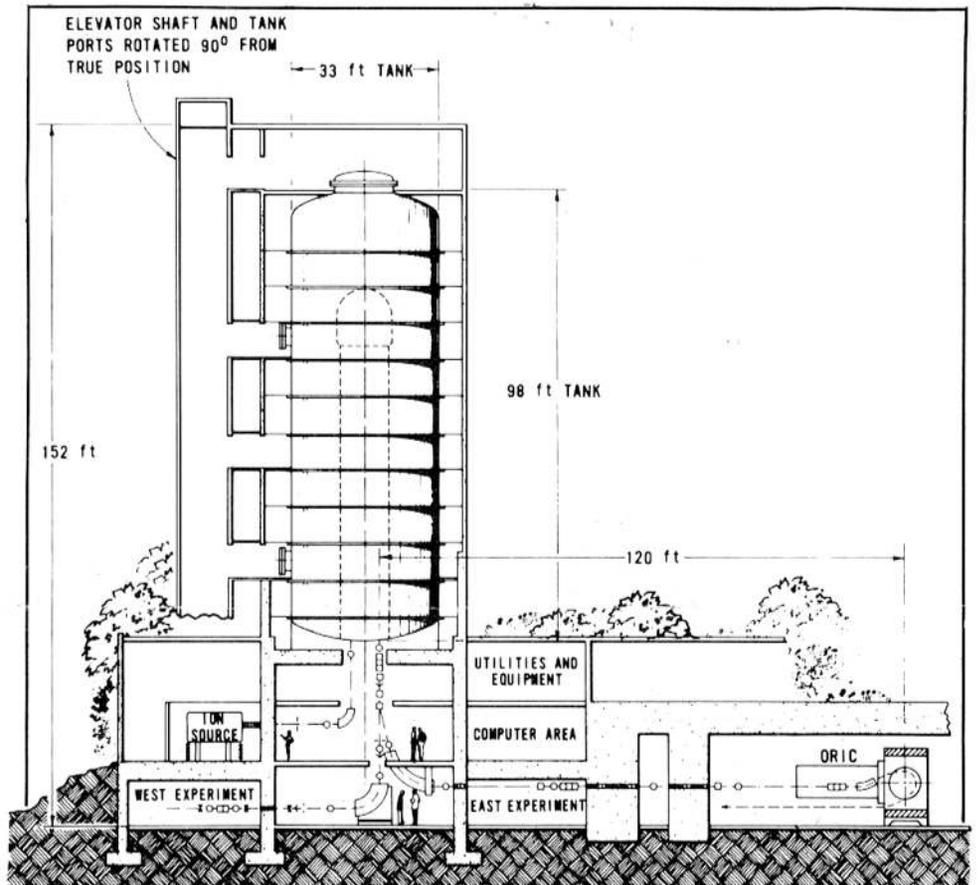
However, a few years ago, theorists predicted that this limit might be breached or leapfrogged.

Calculations showed that if nuclei containing about 114 protons, i.e. element 114, could be put together they might have a very long life time - perhaps even years. The best method available for producing such superheavy elements would be to bombard uranium with uranium. However, the energies required to produce the latter reaction would require a more powerful cyclotron.

In the realm of applied research, heavy ions are vital to understanding the long-term effects of radiation on materials, such as those used in nuclear power plants.

The heavy ions create radiation damage in materials at rates thousands of times greater than can neutrons from a nuclear reactor. Thus, tests of new materials that would take years of exposure in existing reactors can be performed in a few hours with energetic heavy ions.

Director of the Oak Ridge Heavy-Ion Laboratory is James B. Ball and the deputy director is John A. Martin. Both are members of the Physics Division, whose director is Paul H. Stelson. Overall administration is provided by Alexander Zucker, Holifield National Laboratory associate director for the physical sciences.



ELEVATION VIEW — The 152-foot tower shown in the drawing above will house the vertically mounted 98-foot high pressure vessel for the new 25 million volt tandem electrostatic accelerator.



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NUCLEAR DIVISION SAFETY SCOREBOARD

Time worked without a lost-time accident through April 10:

Paducah	24 Days	190,000 Man-Hours
ORGDP	3 Days	96,000 Man-Hours
Laboratory	3 Days	93,000 Man-Hours
Y-12 Plant	37 Days	1,144,000 Man-Hours