

## UT Graduate School Sets New Curriculum

Registration Begins Monday, March 19

The Spring Quarter for the Oak Ridge Resident Graduate Program of the University of Tennessee will begin registration Monday, March 19 between 6 and 8 p.m. Registrations will be taken at the Oak Ridge Institute of Nuclear Studies Training Building, located directly behind the Atomic Energy Commission's Administration Building. Classes will begin Tuesday, March 20 with commencement slated for June 3.

Textbooks for the graduate courses will be sold in the Graduate Office in Oak Ridge during registration. This sale does not include books for Knoxville courses.

Registration must be completed by Wednesday, March 28, including the payment of dues.

### Chemistry Courses

Graduate courses offered in Chemistry for the Spring Quarter will be: Chemical Engineering 541, **Research and Design in Chemical Engineering**; Chemistry 441, **Chemistry Bibliography**; Chemistry 582d, **Radiochemistry Laboratory**; and Chemistry 586, **Introduction to Wave Mechanics**.

General business and management courses to be given are: Economics 514, **Economic Theory and Practice**; General Business 511, **Research Methods and Techniques**; and Industrial Management 501-2-3, **Master's Thesis**.

Math courses featured will be: Mathematics 417, **Linear Algebra and Geometry**; Mathematics 453, **Introduction to Analysis**; and Mathematics 467, **Introduction to Mathematical Statistics**.

Engineering courses offered will be: Metallurgical Engineering 583, **Special Topics in Metallurgy**; and Metallurgical Engineering 586, **Metallurgy of Deformation and Fracture**.

The various physics courses to be held include: Physics 453, **Atomic Physics Laboratory**, Physics 373, **Introduction to Atomic and Nuclear Physics**, Physics 463, **Gaseous and Solid States**, Physics 513, **Introduction to Theoretical Physics**, Physics 563, **Mathematical Methods in Physics**, and Physics 623, **Nuclear Structure**.

**Schedules Available**  
Class schedules are available at the graduate office. More information concerning the curriculum may be had by calling telephone Oak Ridge 483-8411, extension 326, or 483-8611, extension 4129.

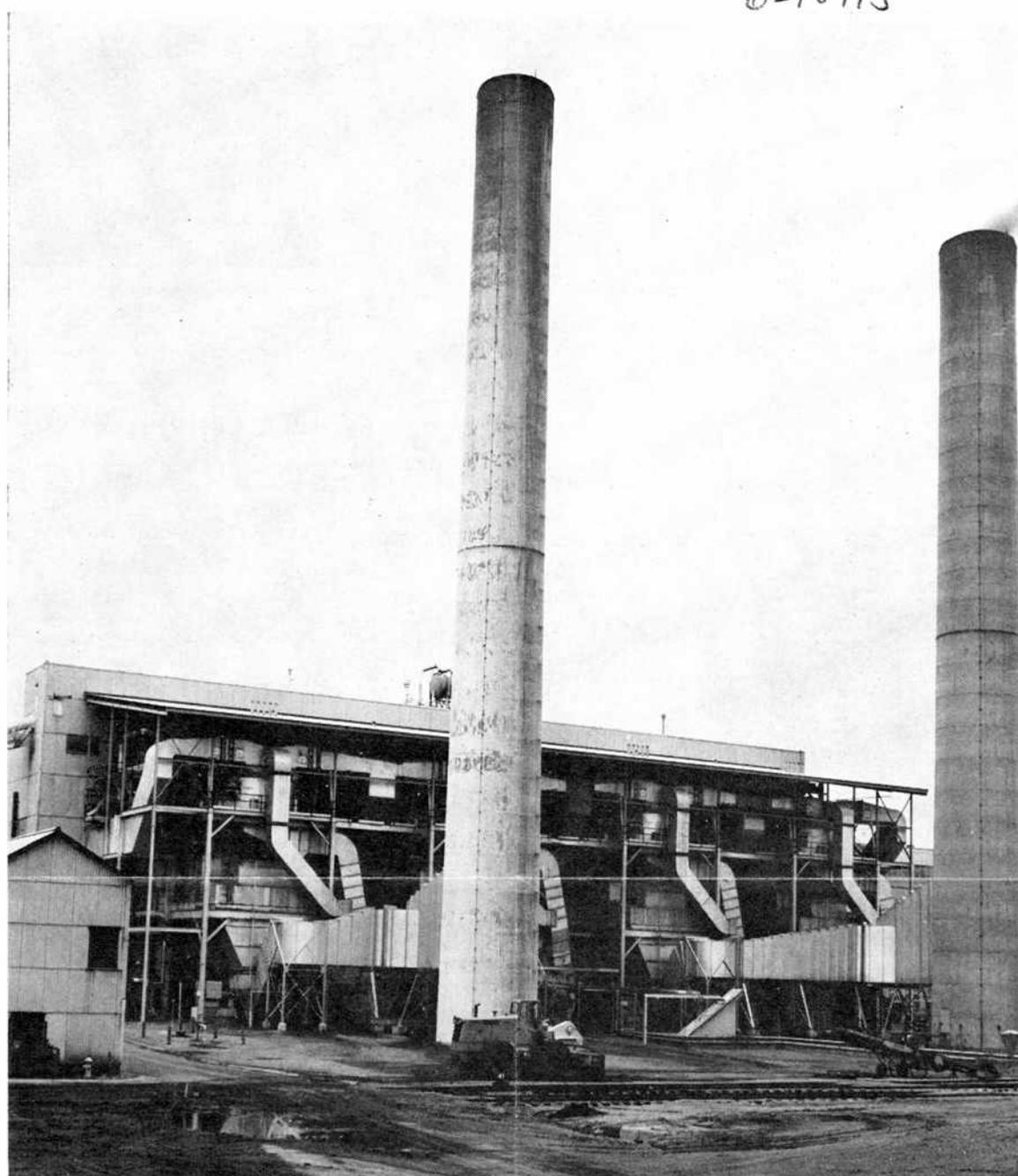
## Evening School Offers New Review Chemistry

A new course, "Review of Practical Chemistry," has been scheduled for the Spring Term by the University of Tennessee Evening School. The course will be given on a non-credit basis at the Oak Ridge High School each Monday, from 7 until 9 p.m., beginning March 28.

The material includes the practical aspects of chemistry as encountered in everyday living and current scientific events.

The course should be of special interest to elementary science teachers or any person interested in a practical introductory course.

No previous chemistry training is required for admission to this course.



TWO STACKS CARRY AWAY the smoke and non-combustible gases from Y-12's steam generating plant. The railroad siding in the foreground is used to bring in the fuel. Out of sight in the photograph to the left is the huge coal pile. 6-10915

## Steam Plant Vital Part Of Operations

Needed Winter And Summer To Help Operate All Y-12

*(Editor's Note: This is the first in a series of articles describing interesting functions within the plant. It is believed that Y-12ers are interested in what fellow-workers are doing. These articles will help define certain aspects of departments and divisions in the plant. Other articles will follow on different subjects.)*

Adjusting a radiator in the office is almost routine procedure, especially during winter's last throes lately. However, providing heat for Y-12 includes a lot more than turning a radiator valve!

The huge, sprawling Steam Plant generates steam the year round, in the winter to warm employees and to help cool them in the summer. Steam is also used in various processing throughout the plant.

### Powers Plant Whistle

The whistle, that all-important signal that tells when quitting time comes, is also powered by steam generated and delivered right here in Y-12.

A recent tour of the plant facilities revealed some interesting facts about this vital plant operation.

Basically, the steam plant consists of four giant boilers. These boilers can be operating all at the same time (in case of extreme weather), or only one can be operating with the other three on a stand-by basis.

### Has Own Controls

Each boiler has its own separate control panel. Then there is a master panel that records data from all four individual panels.

Coal and natural gas are used to fuel the steam-generating boilers. The coal is treated before being fed into the burners. "Treated" means pulverizing it to a very fine consistency . . . about that of talcum powder.

### 250 HP Fans

Giant fans, powered by 250 horsepower motors, force air into the boilers for combustion . . . then force the left-over gases into the towering stacks. Fly-ash, the name operators give to non-combustible materials, is separated from the burner by a centrifuge. The fly-ash is deposited into water and carried out in suspension. It is pumped beyond the ridge southeast of Y-12 and deposited there.

Mill capacity of the hoppers which feed the two pulverizers is six tons each, and since each boiler has two pulverizers, the total capacity per boiler is twelve tons per hour. This means Y-12, with the steam plant operating at full capacity, could use 48 tons of coal an hour! . . . or almost a ton a minute.

### Conveyor Carries Coal

Coal is fed into the coal bunkers above the boilers by a conveyor that carries the fuel up the giant tunnel-like attachment to the plant. Then the coal is fed into the pulverizers by gravity. It is fed from the pulverizer by forced air under slight pressure into the burners. This air is slightly warmed to support com-

Continued on Page 4

## ORGDP Ships Uranium For Final Processing

The Oak Ridge Gaseous Diffusion Plant has made the final shipment of uranium that will make up the first fuel loading for the Atomic Energy Commission's Experimental Gas-Cooled Reactor here.

The 2,870 pounds of uranium left February 27 for Apollo, Pa., where it will be further processed.

The EGCR is scheduled for completion about May next year at an estimated cost of \$40,000,000. The reactor will produce electric power for use in the AEC plants in Oak Ridge, and also will provide experimental facilities.

## SAFETY SCOREBOARD

The Y-12 Plant Has Operated  
Three Days Or  
54,000 Man-Hours  
(Unofficial Estimate)  
Without A Disabling  
Injury  
Through March 11  
Phone 7755  
For Daily Report  
On Accident-Free Hours



H. D. BAKER IS SHOWN AT THE PANEL controlling boiler number two. The four boiler control panels are in front of Baker, and the master panel is at the left. Here, vital statistics are kept on action going on within the boilers. If the lights are out on a panel, that boiler is on stand-by, or not operating. 6-10914

## 1962's First Lost-Time Accident Occurred March 8

The first lost-time accident of the year occurred in Y-12 last week as a truckdriver in Buildings and Grounds fell from a lift-truck on March 8, sustaining a fractured wrist, dislocated thumb and lacerations around the eye. The employee was attempting to step from the running-

board of a lift-truck when he fell about 20 inches to the concrete pavement. He will be away from work about one week. Accident-free days closed at 69 days or approximately 2,360,000 man-hours. This is the 29th such period Y-12 has worked without a disabling injury.

# The Bulletin

Published Weekly By And For  
Y-12 Employees Of  
UNION CARBIDE  
NUCLEAR COMPANY  
Division of



UNION CARBIDE CORPORATION

JAMES A. YOUNG ..... Editor

## OFFICE

Post Office Box Y  
Oak Ridge, Tenn.  
Bldg. 9704-2 Room 149  
Telephone 7109

## Making People Out Of Monkeys New Pasttime

### Darwin Theory Is Reversing Itself

Is EVOLUTION reversing itself?

We sure made a "people" out of a monkey recently when we lured him into an orbital capsule with banana wafers. Sorta frustrating though to have our top space expert only a comparatively few steps up the evolution ladder.

The joker is that people make monkeys out of themselves with less goodies at stake.

A neighbor installed a radar detector on his car then got nabbed for speeding by a cop on a bike.

Some worry about Russian H-bomb fallout then get run over by a friend.

Folks get ulcers over the Laos problem but ignore the delinquency problem on Elm Street.

We eat so much healthy wholesome food we end up unhealthy fat slob.

Seat belts are installed in the car, then never used.

We take a new drug only to learn the side effects are worse than the disease.

Instead of acknowledging we're too lazy to take precautions we say we're so busy we can't afford to take time to keep from getting hurt.

We have a drink to release tension then get tense for another drink.

We buy a car that'll do 125 then get hit by a tree at only 110.

A slow poke is cut around and then we're stalled by some Clyde making a left turn.

We save a buck using a "do-it-yourself" kit only to pay it to a Doc to pump out one of the kids who ate some of the glue.

—The National Safety News

### Accountants Meet Next Week, Dwarf Restaurant

Richard L. Bollard, Southern Division Crime Auditor, Liberty Mutual Insurance Company, Atlanta, Ga., will address the accountants meeting Tuesday, March 20. The Knoxville-Oak Ridge Chapter of the National Association of Accountants will meet then at the Dwarf Restaurant. Dinner is scheduled to begin at 7 p.m.

Bollard will speak on "Internal Control vs Employee Embezzlement." All members and guests are urged to attend this interesting NAA meeting.

### Freak Accidents Have Boy Biting Mailman

Interesting mishaps during 1961 brought this odd accident. In "Freak Squeaks of 1961" is told the story of a mail carrier trying to scare away a barking dog. A small boy runs from the house and bites the mailman on the hand. Like water on a golf course, dogs are normal hazards for mail carriers, but small boys have never been considered such.



Carbiders out in Texas City have a wonderful opportunity to do some "moonlighting." The county is offering a bounty of 50c for every rattlesnake killed. Of course, "moonlighting" means doing extra work after your regular work is done. As far as we are concerned, bounty-hunting, especially the Texas City kind, belongs in the same league with Sky-Diving. Colds and other illnesses would keep us from this activity.

Let's see what activities are going on around Y-12, first in

#### MAINTENANCE

Research Services sends get well wishes to Della Lewis, who is recuperating from a back operation . . . Janet Wende is welcomed in, filling in while Della is off . . . Sympathy is extended to S. L. Jamruz in the death of his mother-in-law in Connecticut . . . W. L. Allen is a welcome sight back on the grounds after a long illness . . . Get well wishes are sent W. F. Stancell, C. J. Cumbie, C. R. Kerr, C. M. Armstrong, and V. A. Stanley . . . B. C. Blitch and E. A. Malone decided to get away from the snows of Tennessee, to enjoy the sands of Florida.



Sandra Deane Cook

This lovely young lady is the pride and joy of "Pop" E. E. Cook, Electrical. She is Sandra Deane Cook, an eighth grade student at South Junior High and a straight "A" student. Sandra was initiated into the National Honor Society last month by her classmates. Some of her activities include the school newspaper, the Rainbow Girls, playing the violin and clarinet, the Dramatics Club, baby-sitting, and writing poetry.

Other Electrical activities include the rolling out the mat to A. D. Nine, W. C. Clary, and W. E. Hall . . . Sympathy to the G. T. Wellborn family on the recent death of his niece . . . K. W. Rainbolt is vacationing, but did not say where . . . On the ailing list are N. L. Derryberry, R. F. Moyers, and B. Cobb. Best wishes are sent to all.

The only thing some people do on time is buy.

#### TECHNICAL

The Beta Four Group of Special Projects tells that the heir to the throne, as well as the little princess, has disrupted the Charles Maberry palace routine with severe cases of flu requiring hospitalization . . . Alex Varlan has abandoned note-book mumble-grumbling these days for a new lingo-jingo — extolling the merits of color TV . . . Maggie Williams has been walking around looking like a Vogue-McCalls-Mademoiselle pattern plate for the past two weeks after giving her sewing machine a workout. Understand her apartment has been getting 1001 decorating ideas sprucing-up also . . . We think Sam Rea is one of the bravest men in town! For a birthday present, he gave his wife, Ruby, a rocking chair. Before she could enjoy it, she had to bake her own (delicious!) cake. The day-of-days was climaxed with a gala

dinner celebration on-the-town . . . Dick Cawood's birthday was observed by his department buddies with the consumption of banana-nut bread and coffee . . . George Drevik has joined the "wee club" by investing in a "beetle-bug" automobile.

With today's progress in transportation, there's no such thing as a distant relative.

#### SHIFT SUPERINTENDENTS AND UTILITIES

On the sick list are E. F. Sosby and J. L. Messenger and best wishes, of course, go to them . . . R. B. Amos is vacationing, but did not say where . . . New car owner in the group is D. Stevens with a beautiful "baby blue" one.

A bachelor is a man who is crazy to marry, but then realizes it in time!

#### INDUSTRIAL RELATIONS

Guard Capt. J. H. Shoemaker is welcomed back to work . . . Get well wishes are sent to H. L. Wolfenbarger's mother . . . The Fire and Guard Department acknowledges a note from Mrs. Walter Queener recently. The sincere letter read: "I want to especially thank all the friends and co-workers of Walter Queener. Words can not express our feelings for your kindness, sympathy and understanding."

A joint account is one that allows your wife to beat you to the draw.

#### MECHANICAL OPERATIONS



Daniel Mace Murphy

This fine little fellow is the two-month old son of D. R. Murphy, General Machine Shop. Needless to say, the whole Murphy family is very proud of him . . . The shop extends sympathy to F. K. Clabough in the death of his grand-father, J. W. Clabough, in Maryville.

Production Control produces news that Tom LaRue received a nice birthday present . . . a baby boy, at Baptist Hospital, Knoxville, March 4. They named him Lynn David . . . Congratulations to Milton Carey on the birth of his first grandchild, Ann Felice, in Oak Ridge on March 1. Milton was busy passing out cigars and candy . . . Another first grandfather is Ernie Kennedy whose grandson, Robert Brian, was born in Knoxville March 6 . . . Welcome to Bob Bass, C. F. Peterson, J. C. Turbyville, and J. B. Newsome who came from other departments in



RECIPIENTS OF FEBRUARY'S POSTER CONTEST prizes with awards are shown above. V. B. Gritzner, of the Mechanical Operations Division, presents Jack Conn the first prize of a handsome piece of luggage. Conn is in Y-12's General Machine Shop. Second place winner was Russell P. Smith, Jr., of Product Processing, in Chemical Operations Division.

## Jack Conn, Rus Smith Take Prizes In Safety Poster Contest On The Safe Use Of Solvents

### New Contest Stresses Interest In Safety

Winners in the February Poster Contest, sponsored by the Safety Department, are announced as Jack Conn, General Machine Shop, and Russell P. Smith, Jr., Product Processing. Conn, first place winner, chose the luggage for his award, and Smith took the electric percolator.

February's theme was "The Safe Use of Solvents." Conn's poster showed animal hides at the top curing. Rubber gloves were spotted at the bottom of the poster, correlating skin care with curing and the protective measures taken to guard the hands and skin. His poster will be adapted for use in the plant during May.

#### New Entries Coming In

With March already half gone, entries are being taken in the current competition. Prizes offered are a golf cart and a Corning ware set, offered to please either male or female winners. March's theme is "Maintaining Interest in Safety." The wide latitude of this subject offers employees ample opportunity for many and varied poster ideas.

Rules have been printed many times in the Bulletin. Simple and easy to follow, the rules apply to all employees in the Y-12 area, plus members of their families.

#### Prizes Ideal

With Spring coming on, golf addicts would find the cart an ideal summer companion. The Corning ware set would make an ideal gift to the little lady. Either award would be welcomed in the home.

Let's see March's entries exceed any of them!

Y-12 . . . The Leo Scalfs took an early vacation to West Palm Beach and came back with glorious tans . . . Kathy Mills flew to Cincinnati recently to visit some friends over the week-end . . . Ed Cothron decided to join the foreign car clan and bought a fire engine red one . . . Bob Stouff says he's enjoying those extra hours of sleep since he moved from Alcoa to Oak Ridge . . . Get well wishes to Harold Babb's brother, who is in the Oak Ridge Hospital.

That's all for this week. See you, soon.

#### WOODED ARKANSAS

Arkansas is the most heavily-wooded of the states. It is estimated the present stand of marketable timber is in excess of 30 million board feet, according to state figures.

## Texas Youngster Corrects Bulletin

A youngster out in Texas has taught us a thing or two. Recent "Citizenship Quizzes" run in The Bulletin were picked up and carried in other publications. The Seadrifter, from Port Lavaca, Texas, a publication of Union Carbide Chemicals Company, reports young Nanci Bransford, an employee's daughter, came up with the following.

One question stated, "Is any large group of people living within the continental limits of the United States still denied the right to vote for a President?" The answer given was yes, the people of Washington, D. C. Miss Bransford pointed out that the 23rd amendment to the Constitution, ratified in 1960, allows the residents of Washington a ballot in national elections only.

She also pointed out that question one asked "Where does the American flag fly 24 hours a day?" The answer given was the nation's Capitol building. The young miss points out that the nation's banner flies at all times also at the Marine Corps Memorial, Arlington, Va., Tomb of the Unknown Soldier, Fort McHenry near Baltimore, and Francis Scott Key's grave at Frederick, Md.

The next time somebody asks what the "younger generation is coming to," tell them that sometimes they're a lot smarter than their elders!

## Y-12ers Celebrating 15, 10 Year Anniversaries

Congratulations to the following Y-12ers who will observe 15 and 10-year anniversaries with Carbide within the next few days.

#### 15 YEARS

Paul C. McRee, Radiation Safety, March 20.

#### 10 YEARS

John B. Moneymaker, Stores, March 14.

Bruce L. Loflen, Instrument Engineering, March 14.

Hal H. Payne, Area Five Maintenance, March 17.

William I. Galyon, Tool Engineering, March 17.

Bobby F. Rutherford, Radiation Safety, March 17.

Edgar F. Poe, Jr., Electrical, March 17.

Conley B. Stooksbury, Product Processing, March 17.

Martin L. Gardner, Production Control, March 17.

Harvey E. Coppock, Electrical, March 20.

# Spring Fishing Rodeo Opens Saturday As Anglers Have 8 Species Categories

Striped Bass, Largemouth, Smallmouth, Crappie, Trout, Sauger, Walleye, Bream Are Eligible

Several inquiries have been received on the Spring Fishing Rodeo. The quarterly contest starts Saturday, March 17 and continues through June 11. Entries are available in the Recreation Office, Room 149, Building 9704-2. If an employee can not manage to drop by to pick up applications, he may telephone 7109 for entry blanks.



**TO PROVE THAT** the big ones are now being caught, just take a look at this largemouth bass, pulled from the Watt's Bar headwaters recently by H. C. Nichols, Beta Two. Nichols says he caught the whopper on an artificial plastic worm. Although the entry was too early for the Spring contest, it will be a strong contender in the annual fishing competition now going on.

Eligible species include such finny monsters as smallmouth, largemouth, and striped bass, walleye, sauger, crappie, trout, bream or bluegill. Fish entered in the Spring contest must be caught between the hours of 12:01 Saturday, March 17, through midnight of Monday, June 11.

### Enter Both Contests

The same fish may be entered in both existing contests. That is, an application may be filed in the quarterly contest and also put into the Annual Fishing Contest. Annual applications must be accompanied by a photograph. Quarterly blanks require no photograph, but certification must be made as to the size and weight of the species by the dock operator.

Quarterly rules state that no contestant will be eligible for more than one prize. Of course, all fish must be caught in Tennessee waters.

### Winners By Weight

Weight, as usual, determines the winner. In case of ties in the weight division, length and girth, in that order, shall be used to determine winners.

With Spring's advent next week, the good ones have begun to bite in local waters.

Fish must be taken on rod or cane pole and line. No giggered or grappled fish is eligible for entry.

### Keep Blanks Handy

Keep entry blanks in your tackle box, so that when a fine fish is taken, the dock operator can verify its species, weight, length and girth before you leave the scene.

Entries in the quarterly contest must be in the Recreation Office by noon Wednesday, June 13. Judging is done by the judging committee and entries can not be returned. Winners will be announced in the Bulletin shortly after judging.

# Guttersnipes Fall Victims To Could B's

Y-12's only team in the Kingston League for Carbide bowlers got clipped last week. The Guttersnipes fell by three points to the ORGDP Could B team. The Head Pins took three from the Sparemen also.

Despite the gallant efforts of Everett Strunk, Alley Cads, who rolled a 241 scratch game, and a 267 handicap game, his team lost to the league-leading Rookies by three points. The Alley Cads also took team handicap highs with 1055, and 2907.

### League standings follow:

Team	W	L
Rookies	23	13
Guttersnipes (Y-12)	20	16
Alley Cads	20	16
Head Pins	19	17
Could B's	16	20
Sparemen	9	29

### WASHINGTON LEGEND

George Washington is attributed with the statement describing the flag, "We take the stars from heaven, the red from our mother country, separating it by white stripes, thus showing that we have separated from her, and the white stripes shall go down to posterity representing liberty." There is no proof he ever said it.

# Atoms Fall In Play-Off To Hot Peons

In a play-off game last week in the Carbide Basketball League, Y-12's Atoms fell gallantly to the Peons from Oak Ridge Gaseous Diffusion Plant. The slim score margin was 45-43. The Peons now will face the Lab Demons, also from ORGDP, to determine who is champion of the first half of league play.

Leading scorers for the winners were Henderson, 18; Mothershed, eight; and Zeltner with six. For the losing Atoms it was Brooks, 20; Cothron, eight, and Beard seven.

In last-half of league play last week two Y-12 teams clashed as the Jaybirds took the Hoopniks 50 to 24.

Jerry Babb and Tommy Verner led the victors with 15 tallies, and Buddie Scott scored 10. For the losers it was Ferguson, 12, Delmain, eight.

### League standings follow:

Team	W	L
Atoms	6	1
American Eagles	6	1
Lab Demons	5	2
Peons	4	2
Jay Birds	3	3
Kingston Five	2	5
Hoopniks	1	5
B Shift	0	7

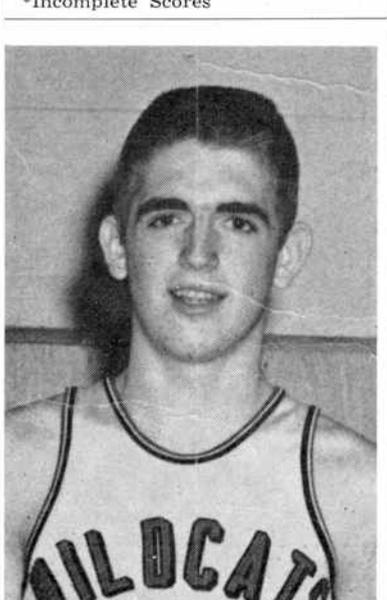
# Y-12 Skeeters Take 1st Place In League

Two Y-12ers climbed into the lead in the All Carbide Skeet League last Sunday. Don Pitt and Avis Collins are the new leaders, thanks to Collins' fine scratch firing of 24/25 and his handicap single round of 297.978/300. They also took scratch singles with a 43/50 team score, while Swartout-Welfare took handicap highs with 582.632/600.

Bill Sahr-Jack Stewart finished second in the league with a 2289.-513 standing. Jim Patterson and J. P. Murray wound up in third place in the last shoot-outs.

### League standings follow:

Team	Score
Pitt-Collins	2299.736
Sahr-Stewart	2289.513
Patterson-Murray	2283.351
Bahler-Brewster	2261.730
Swartout-Welfare	2275.684
Wiest-Tunnell	2270.998
Case-Hamby	2263.866
*Brundage-Bell	1716.360
*Davy-Asmanes	1686.182
*Hodges-Patton	1675.907
*McNabb-Montgomery	1590.807
*Wilson-Weathersby	569.279



# Dry Hides Win, Rodders Split

Bezik Has Hot Night At Alleys

The D League for Carbide Bowlers saw plenty of action last week, thanks to some fancy bowling by Y-12er Max Bezik, of the Dry Hides team.

Bezik's 277 and 671 handicap games were the tops in this series for the night. The Beryls took high handicap series scores with a 2947.

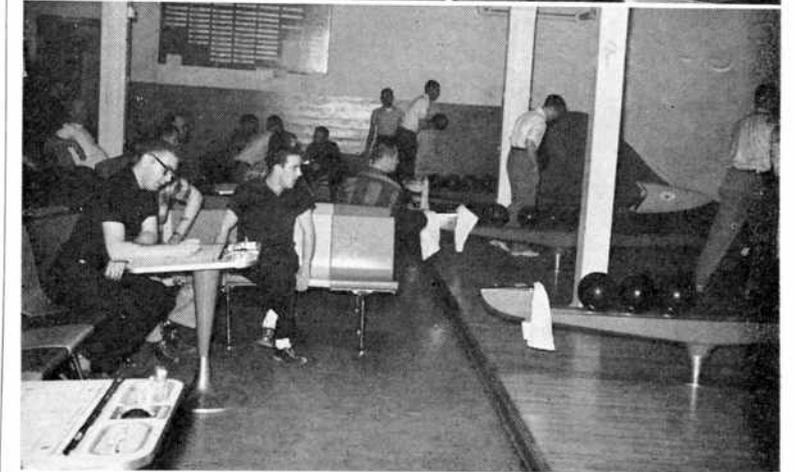
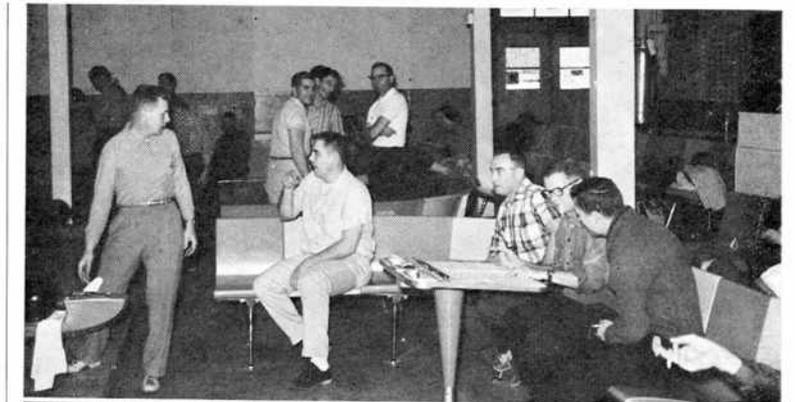
Bezik's fancy footwork accounted for his team racking three points from the Gassers.

The other team belonging to Y-12 split two points with the ORINS team.

### League standings follow:

Team	W	L
Sh Booms	17	7
Kemix	15	9
Beryls	15	9
ORINS	13	11
Termites	12½	11½
Pin Heads	12	12
Dry Hides (Y-12)	11	13
Rodders (Y-12)	11	13
Alley Rams	11	13
Gassers	10	14
Hephex	7	17
Guttersnipes	5½	18½

Be sure all classified documents are transmitted according to security regulations.



A CROWD TURNED OUT FOR C SHIFT'S big bowling party recently. It was held at the Oak Terrace Lanes, March 2. High handicap games were taken by H. Meadows and W. J. Grubb. High handicap series were won by J. C. Bryan, H. A. Lay and J. W. Halsey. More than 36 men participated in the competition. Above are typical scenes of the shindig.

# Bowling Contest Deadline Nears

All-Carbide Bowling Tournament Is Set

Friday, March 16, is the deadline for entering the All-Carbide Bowling Tournament. The event is set at the Oak Terrace Lanes for Saturday and Sunday, March 31, April 1 and the following week-end, April 7, 8.

All league secretaries have entry blanks. These applications must be in the Recreation Office by 4:30 p.m. Friday. The entries must be accompanied by the fees. Fees are \$1.15 prize money and \$1.35 bowling fee. All-Events fee, which is optional, will be 50 cents per bowler. Total entry fee for team, doubles, singles, and All-Events is \$8 per person.

Cash prizes will be awarded on a handicap basis. Trophies will be given to high scorers in both scratch and handicap events. No bowler, however, may win trophies in the same event. For instance, high bowler with both scratch and handicap tops would take the scratch trophy only. Second bester would then be awarded the handicap trophy.

The Bulletin goofed last week in enthusiastically crowning a woman's champion for Y-12. High scratch score in All Events went to Peggy Hardin, with a fine 1346 score. Irene Carmack took high handicap honors in All-Events with a 1716 score. Apologies to both fine bowlers for the slip-up in scoring. Their team efforts as well as their individual games, both warrant the label of champion.

The big tournament will wind up plant activity as far as bowling is concerned. Most league play will be completed by that time also.

### LUCKY OLD SUN

In all the other bodies in the solar system, that is, our solar system, were put together the sun would still be almost 700 times heavier than this accumulated mass!

# Y-12's Rifles Knock Down Independents

The Y-12 team in the 22-Rifle League for Carbiders last week maintained their neck and neck race for first place by clipping the Independents for two points. Winning in both scratch and handicap tallies the Y-12 men came up with scores of 1126 to 1101 in scratch, and 1159.915 to 1156.224 in handicap scores.

Jack Huff led Y-12ers with a 289 scratch score, followed by Bob Powers' 284. Handicap leaders were also Huff with 290.191 and Powers' 289.499. High Independents were Dave DeWalt with 289 and 290.191, followed by George Patterson's 279 scratch score and Gerald Holcombe's handicap score of 289.586.

### League standings follow:

Team	W	L
Y-12	24	7
ORNL	24	7
Independents	14	17
ORGDP	0	31

# Rollmasters Win In 5:45 League

Only Four Points From First Place

Y-12's Rollmasters rolled over their opponents last week in the Wednesday 5:45 League for Carbide Bowlers. They took the Lab Demons for three points.

High games were rolled by Clyde Bolen, Planners, with 215 pushed to 243 handicap game with Bob Teague, Cast Offs, taking high scratch series honors with 597. The Planners took team handicap game highs with 1038 while the Pirates took series handicaps with 2964.

### League standings follow:

Team	W	L
Planners	66½	41½
Head Pins	66	42
Rollmasters (Y-12)	62	46
Mix-Ups	58	50
Cast Offs	55½	52½
Sandbaggers	55	53
Wallops	54½	53½
Lab Demons	54	54
Woodpeckers	50½	57½
Pirates	46	62
Wacos	42	66
Rookies	40	68

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6-10919



**THREE Y-12 STATISTICIANS** will participate in the Quality Control Clinic set for the University of Tennessee Thursday and Friday, March 15 and 16. They are, from left, J. Pat Reavis, H. Alan Lasater, and Eric E. Johnson. The clinic is being sponsored by the Northeast Tennessee and the Tennessee Sections of the American Society for Quality Control.

## Statistical Services Supply Three To Aid Quality Control Clinic Thursday, Friday

### Third Annual ASQC Clinic Set At U-T

The Statistical Services Department is contributing heavily to the Quality Control Clinic to be held at the University of Tennessee Thursday and Friday, March 15, 16. The clinic is sponsored by the Northeast Tennessee Section and the Tennessee Section of the American Society for Quality Control, in cooperation with UT.

H. Alan Lasater will act as general chairman for the annual clinic. This will be the third clinic the ASQC has held. Lasater is also chairman of the Tennessee section of the society. He will speak Friday on Significance Testing.

J. Pat Reavis will moderate a panel on Control Charts for Attributes in Friday's session of the clinic. He is also acting as program chairman for the training sessions. Both Lasater and Reavis are graduates of UT.

Eric E. Johnson will act as moderator in Friday's session as he discusses Control Charts for Variables. He is a graduate of Creighton University, Omaha, Neb., and holds an MS in Chemistry from that school.

All three statisticians have done graduate work in statistics at UT.

### Carbide's Expenditures To Equal Last Year's

Union Carbide Corporation spent \$167 million for new facilities in 1961 and expects its construction expenditures this year to be approximately the same, according to the annual report just mailed to stockholders. In 1960, expenditures reached a peak of \$219 million.

About 66 per cent of the total spent in 1961 was for new facilities for the production of chemicals and plastics. A substantial amount (about 25 per cent) was also spent on building new plants for producing oxygen and other industrial gases.



Get well wishes are sent the following Y-12ers who were patients last week in the Oak Ridge Hospital:

George C. Meredith, Product Processing; Charles J. Mitchell, Area Five Maintenance; William L. Harper, Chemistry Development; Lewis M. Hayes, Beta Four Assembly and Forming; Claude M. Williams, Production Inspection; Andrew Skritnansky, Methods Evaluation; George I. Miller, Beta Two; William E. Thomas, Machine Maintenance; Rufus Voyles, Janitors Department; A. M. Schrader, Process Maintenance; C. J. Cumbie and N. L. Derryberry, Electrical.

### Epitaph Inspires Man To Life Of Devotion

An epitaph on a gravestone is credited with inspiring John Ballard to devote 32 years to the welfare of his fellow man. Ballard, a Red Cross Field Director, now in Greece, found a tombstone for Henry Martin Tupper, founder of Shaw University, Raleigh, N. C. The inscription read: "He counted not his life dear unto himself, but to others that he might lift Godly, his brothers."

Ballard is stationed at the Athens airport, where he and his Red Cross volunteers, help serve American military personnel and their dependents.

### STARS IN YOUR EYES

Of the other eight planets in the solar system only five are visible from the earth with the naked eye. Mercury, Venus, Mars, Jupiter and Saturn can be seen, while Uranus, Neptune and Pluto are visible only with the aid of field glasses or good telescopes.

## Steam Plant

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 bustion. Extreme temperatures at the burners go as high as 3000°F. There is little manual operation at the steam plant, but operators are needed to check water conditions before it enters the boiler, check water in the boiler, check steam purity, check gages, adjust controls, and keep the boilers operating as needed. Operators also see that the fly-ash and slag removal is done properly.

**Water Is Treated**  
 Coal is not the only material that has to be treated. Local water is too hard to be fed directly into the boilers for steam generation. An elaborate system of water softening, mainly the removal of calcium and carbonates, is instrumental in preparing the water for use in the boilers.

The boilers are rated at tremendous horsepower with a capacity of continuous steam rate of 250,000 pounds per hour, or in total more than a million pounds of steam.

Air flow into the boilers goes into astronomical figures also. A furnace that is operating has a total air flow at roughly 452,000 pounds per hour.

**Gas Used Also**  
 Both coal and gas are used, as stated. They are not used in combination. That is, a furnace must be set to burn one or the other.

Safety is a big factor in operating the steam plant. The plant has operated since May, 1955 without a serious, disabling injury. Safety glasses, face shields, rubber gloves, aprons, safety shoes and shin guards are standard pieces of apparel around the plant. Although there is no coal-carrying or ash-hauling done manually, the work does involve normal powerhouse precautions because of high temperatures required to manufacture the steam. A final temperature of 500°F at 250 pounds pressure per square inch is required to maintain steam pressure throughout the plant's steam systems.

**In Utilities Division**  
 The Steam Plant is the responsibility of the Utilities Division. T. C. Wilson is the general foreman at the steam plant. Approximately 25 employees work to keep the steam up and heat supplied to the plant.

Y-12's whistle has some little claim to fame. It is always the signal for this valley's residents that the New Year has arrived. The Steam Plant is Y-12's signal of comfortable temperatures, either in winter or summer, and ample steam pressure to perform operational jobs as well.

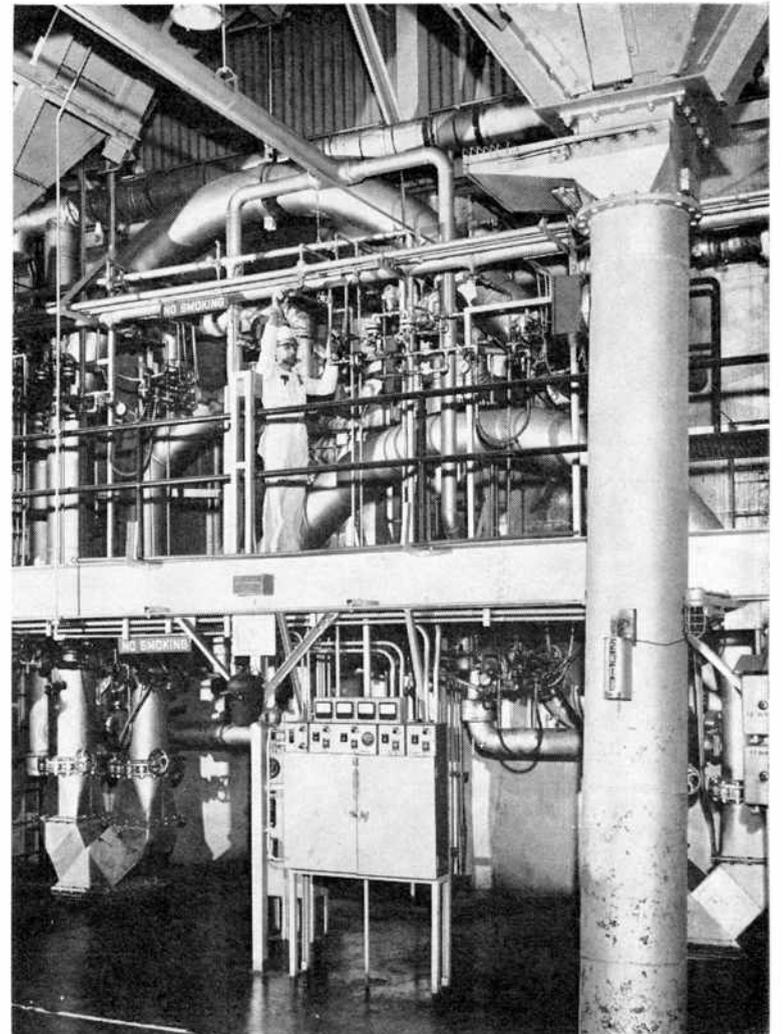
### Linde Names Flood New Executive Vice President

Robert F. Flood has been appointed executive vice-president of Linde Company, division of Union Carbide Corporation, in a recent announcement from William B. Nicholson, division president.

Flood joined Carbide in 1935 as an engineer at the development laboratory of Linde in Newark. He served in various capacities in Linde's sales organizations in Chicago, Detroit, Cleveland, and Indianapolis before he moved to New York in 1953 as an assistant sales manager. He has been a vice-president of the company since 1959. Having attended Georgetown University, Flood holds a degree in business and engineering administration from Massachusetts Institute of Technology.

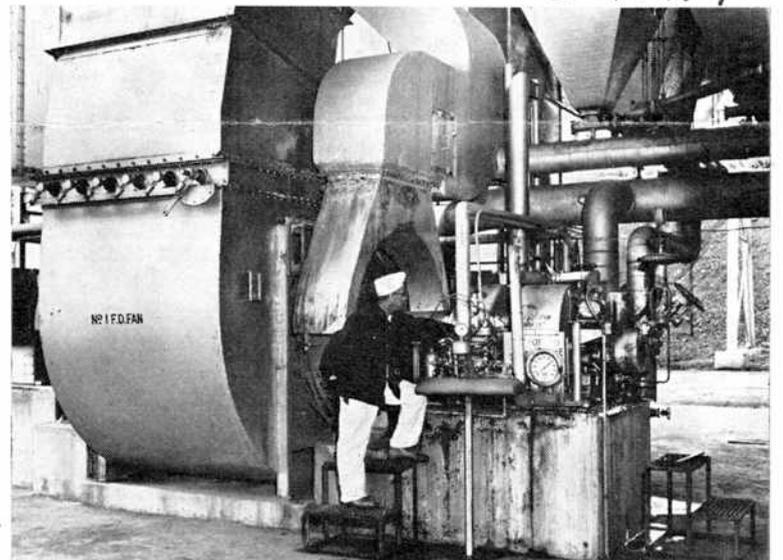
### New Plants Are Added To UCC's Overseas Works

Union Carbide International Company's affiliated companies overseas completed several major construction projects during 1961. These included new chemical plants in India and Italy; new plastics plants in Australia, Belgium, and India; new battery plants in Malaya and Venezuela; and major expansions of facilities



**AN INSIDE VIEW OF THE PLANT** shows W. F. Huffman checking the gages on the boiler. The shaft through which the coal drops is seen to the right. The coal is dropped into the pulverizer where it is crushed to the consistency of talcum powder before it is fed into the burners. Each boiler contains four burners, with the pulverizers handling two burners each.

6-10917



**THE HUGE OUTSIDE FANS** that pull air into the boilers for combustion, then force the non-combustible gases into the stacks, are checked by J. Y. Burchfield. The fans are capable of power up to 250 horsepower.



**Ride wanted from Highland Drive vicinity, Fountain City, to Bear Creek Portal, straight day.** R. C. Cawood, plant phone 7-8821, home phone Knoxville 687-1734.

**Ride wanted from Beaver Ridge, Byington Road, to West Portal, straight day.** W. L. Cox, home phone Knoxville 588-1169.

**Riders wanted from Cedar Lane, Central, in Norwood, Inskip Area to any portal, straight day.** G. W. Denise, plant phone 7763, home phone Knoxville 687-0674.

ties at several plants producing chemicals, plastics, calcium carbide, and dry batteries. Work has also started on two new jointly-owned plastics plants in Japan and Sweden.

Be alert to the continuing duty we have as employees to safeguard classified information.

### New Music Will Be Given By ORCMA

Oak Ridge Civic Music Association will present a new dimension in music Saturday, March 17, at the Oak Ridge High School. The Lukas Foss Improvisation Chamber Ensemble will play their "new music" for Oak Ridge audiences.

The unusual group was founded in 1957 by Lukas Foss, well-known American composer, pianist and professor. After a formal debut in 1959, the group toured the country, appearing with the New York Philharmonic and the Philadelphia Orchestra, as well as at the Tanglewood and Aspen Festivals.

The music the group plays is neither composed nor wholly ad-libbed, but is improvised within a structured rhythm and harmonic framework. The resulting music is exciting and intriguing to audiences, who are quick to grasp the "hit or miss" element involved.

The concert is slated to begin at 8:15 Saturday. Tickets will be available at the box office prior to the concert.