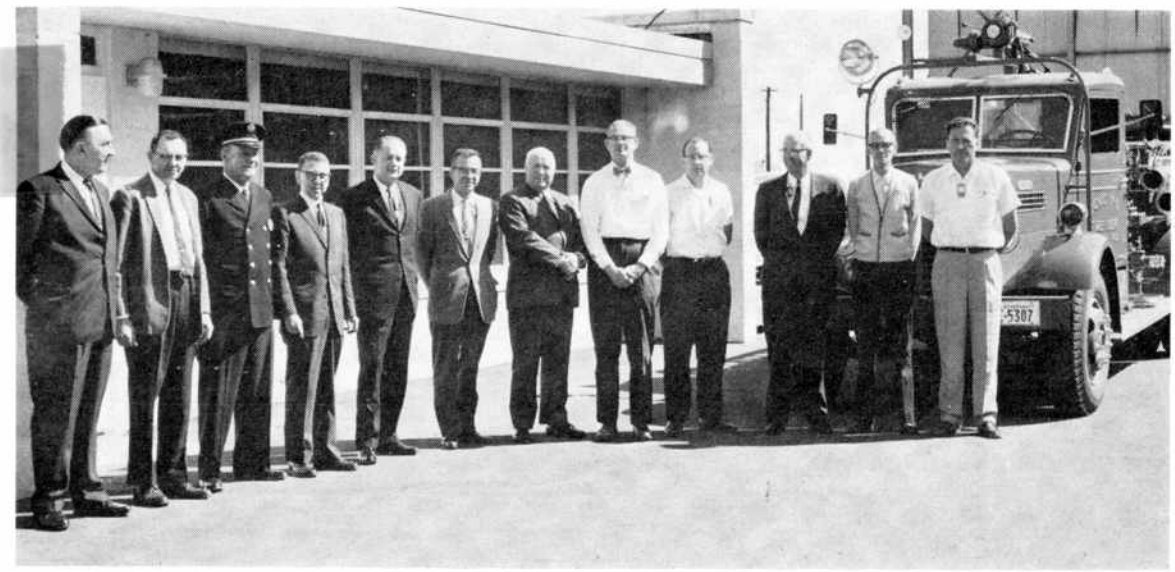
Y12 UCNC

THE BULLETIN

A NEWSPAPER BY AND FOR Y-12 EMPLOYEES OF UNION CARBIDE NUCLEAR COMPANY
DIVISION OF UNION CARBIDE CORPORATION

VOL. 17 — NO. 16 6-11469 OAK RIDGE, TENNESSEE Wednesday, April 17, 1963



DIVISIONAL COORDINATES FOR SPRING Clean-Up Week gathered to formulate plans last week to get Y-12's face all washed and clean. From left are R. T. Cantrell, Marvin Flatt, Captain H. W. Krouse, John Harding, J. H. Fielden, Hugh Rice, A. K. Bissell, R. L. Jamieson, J. T. McMahon. ORNL's W. Y. Gissell, A. N. Norman and John Minchey. G. L. Underwood, M. J. Fortenberry and G. B. Marrow arrived later after the photograph was made.

Chemical And Isotopic Analysis Leaves Little Material Unknown

When a Y-12 product leaves the plant there is very little that is UNKNOWN about its make-up. Dimensional inspections have been carefully made to ensure that requirements in that area have been met; physical tests have been carried out to determine metallurgical properties and to make sure there are no hidden imperfections; finally, chemical and isotopic analyses have been conducted to determine the purity and composition of materials used. In short, the product has gone through a complete certification program which is designed to make certain that the confidence and trust of others in Y-12's ability to deliver reliable goods are justified.

Dimensional inspection and physical testing have been recently discussed in the Bulletin. Chemical and isotopic analysis is the subject of this article. Typical work carried out by Plant Laboratory people in support of the product certification program is described, and some of the people and equipment involved are shown.

Isotopes Measured

Many of the materials going into Y-12 products consist of several isotopes of the same element. For example, three well-known isotopes of uranium, U-234, U-235 and U-238 are present in different quantities in the various assays of this element. Isotopic composition of such materials in a product is normally specified, and the Plant Laboratory must determine the relative amounts present and certify that specifications have been met. The instruments used to measure the isotopic distribution of materials are called mass spectrometers. After a sample of the materials to be analyzed has been placed in one of the mass spectrometers, the instrument automatically adjusts itself, takes readings, and performs calculations to determine the isotopic distribution of the sample. Upon a signal from the console, the isotopic distribution is automatically printed out

Continued on Page 4

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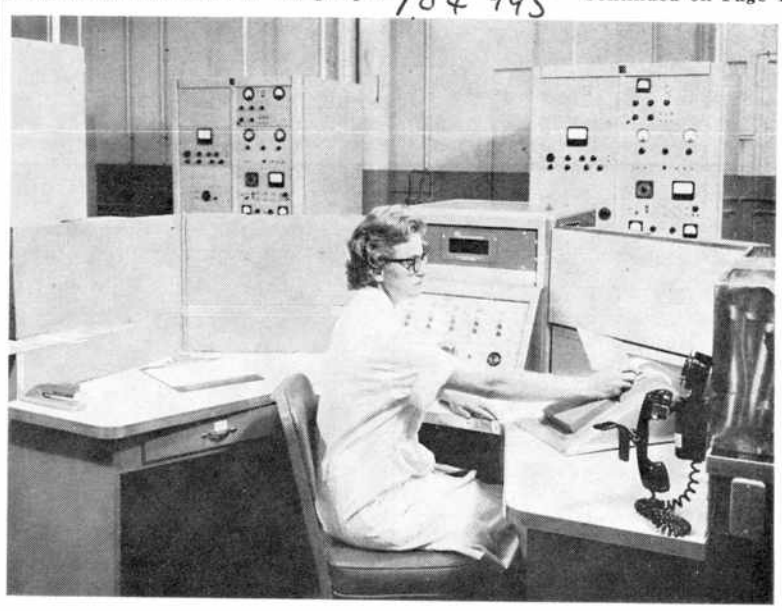

SAMMY MATTINGLY IS SHOWN operating a console which controls five such instruments (two of which are shown in the background) from one point. After a sample of the material to be analyzed has been placed in one of the mass spectrometers, the instrument automatically adjusts itself, takes readings, and performs calculations to determine the isotopic distribution of the sample.

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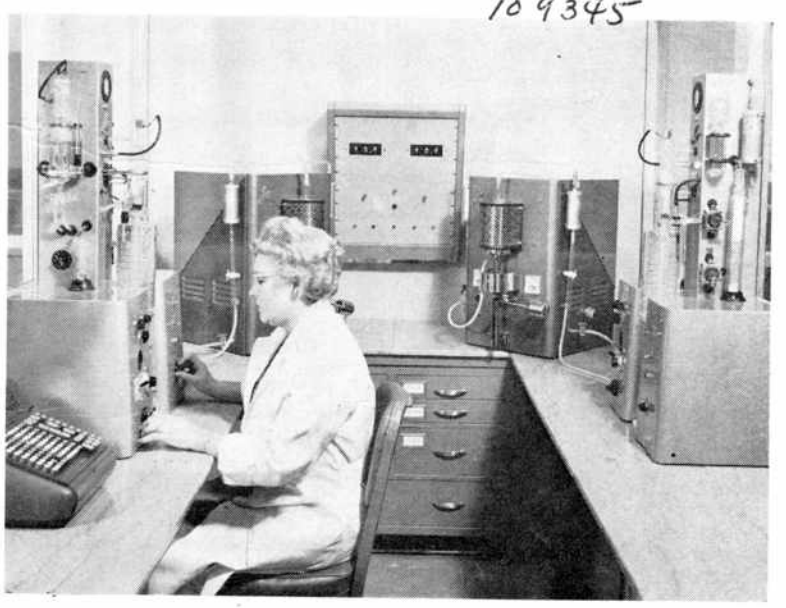

OPERATING A CARBON ANALYZER is Louise Burgess. The analyzer is typical of new equipment used for chemical analyses. Samples which are to be analyzed are contained in small round crucibles. To start the analysis she will place the crucibles in the small furnace, and heat to 3,000 degrees F. As the sample is heated, the carbon in the sample is burned and changed into a gas which flows through a chemical solution. Here it combines with chemical in the solution. The amount of carbon in the sample is measured by the change in conductivity of the solution.

Utilities, Industrial Relations Affect Changes Involving Jim McLain, Joe Smyrl

6-11471

Organizational changes affecting two divisions in Y-12 are effective Monday, April 15. James A. McLain, utilities foreman, has been elevated to the post of assistant shift superintendent on B Shift. He replaces Joseph E. Smyrl who is moving to the Industrial Relations Division.

After five years in the United States Navy, attaining the rank of chief motor machinist mate, McLain came to Y-12 May 1, 1946. He is a native of Sylva, North Carolina.

He lives at Route 2, Kingston, with his family. His wife is the former Gladys Propst. The Mclains have two children Michael and Alan.

Joe Smyrl returns to the Industrial Relations Division after several other assignments in Y-12 since his October 5, 1950 employment. He also is a veteran of the United States Navy, serving during 1944-46. He assumes duties in the Personnel Relations Department.

Smyrl is a native of Lansford, Pennsylvania, and a graduate of Oberlin College, Oberlin, Ohio. He has also done graduate work at the University of Tennessee's extension.

The Smyrls live at 113 East Iona Circle, Oak Ridge. They have three daughters, Elinor, Janet, and Sally; and one son Joseph B. Mrs. Smyrl is the former Mary Turner.

Both McLain and Smyrl extended midnight shifts recently at the paper's request to be photographed. There is a Tootsie Roll for each of them in the Bulletin office.

James A. McLain

6-11470

Joseph E. Smyrl

Trumping A King Saved Soothsayer's Life

A king once called his astrologer in to apply the old acid test. "You pretend to understand astrology as well as medicine and know so exactly the fate of others. Tell me, this moment, how long you yourself have to live!"

Without hesitation and knowing the king's penchant for beheading those who gave the wrong answers, the magician declared, "I shall die just three days before your majesty."

Needless to say, the soothsayer lived to a ripe old age.

SAFETY SCOREBOARD

The Y-12 Plant Has Operated

39 Days Or

1,189,000 Man-Hours

(Unofficial Estimate)

Without A Disabling Injury

Through April 14

Phone 7755

For Daily Report On Accident-Free Hours

Next Week Is Clean-Up Time For All Y-12

Spring-time is not all lilacs and roses . . . it's clean-up time again! The old mops, brooms, and housecleaning activities are due just as sure as the flowers.

Next week, April 21 through the 27, is National Spring Clean-Up Week . . . and Y-12 is no exception.

Co-ordinators from all divisions in Y-12 including Oak Ridge National Laboratory departments here gathered to formulate plans for activities during the busy weeks.

Coordinators Named

The following coordinators with their divisions are announced: Maintenance, J. W. Minchey; Finance and Materials, H. P. Rice; Accounting and Budget, Marvin Flatt; Chemical, J. T. McMahon; Engineering, G. L. Underwood; Industrial Relations, R. T. Cantrell; Plant Shift Superintendents and Utilities, A. H. Norman; Technical, A. K. Bissell; Product Certification, R. L. Jamison; Development, G. B. Marrow; Mechanical Operations, John Harding; Special Projects, J. H. Fielden and M. J. Fortenberry. Oak Ridge National Laboratory's W. Y. Gissel is representative for the ORNL group in Y-12.

In industry as well as the home, winter's accumulation of unused, unuseable material can get out of hand. That is one reason the Spring season is chosen for a general tidying, policing up.

Inspection Forms Issued

Special forms were issued the coordinators last week, and a Plant Bulletin was mailed with inspection forms attached for each division. Before and after inspections are recommended with notations on improvements, etc.

The Maintenance Division will assist in the removal of any accumulated trash or rubbish. For the general plant area call the Salvage Department, extension 7972.

Messy or sloppy working areas are not only ugly, they invite fire . . . or, more seriously, invited accidents. Clean, uncluttered working areas offer a more pleasant atmosphere in which to work.

The Security Department states it's a good time to clean out the files also and reduce your holdings of classified materials.

The Bulletin

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

UNION CARBIDE

UNION CARBIDE CORPORATION

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Member *Appalachian Industrial Editors' Association*

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Telephone 7109

Miss Velma Louise Honeycutt

HONEYCUTT-WALLACE

The engagement of Miss Velma Louise Honeycutt to Mr. Keller L. Wallace is announced by her parents, Mr. and Mrs. Willie E. Honeycutt, Route 1, Jacksboro, Tennessee. The bride-to-be's father is in Y-12's Guard Department. The prospective groom is the son of Mr. and Mrs. H. K. Wallace, Clinton.

The bride-elect will graduate from Jacksboro High School in May. She has been active in many school organizations. Her fiance is a graduate of Powell High School. After serving three years in the United States Army, he is presently employed by the Purity Packing Company.

A July wedding is planned.

Rare Compound Found By Smith At ORGDP

The first known compound of the inert gas xenon trioxide (XeO_3) . . that does not contain fluorine has been discovered and identified by D. F. Smith, Oak Ridge Gaseous Diffusion Plant.

Xenon trioxide, a highly-explosive combination of xenon and oxygen, was formed by the slow hydrolysis (chemical decomposition by reaction with water) of XeF_6 by moisture. The white, transparent, non-volatile crystalline compound was found to be explosive by rubbing, pressing, gentle heating, or when in close proximity to aqueous solutions. Detonations have occurred spontaneously when the material was wet or dry.

Smith has been working with the rare xenon-fluorine compounds since late last year, as have staff members at Oak Ridge National Laboratory.

Loose talk is dangerous.

With the golf season upons us, it's a good time for this story. It seems two duffers were playing a round. After the seventh hole one said to the other: "How many strokes did you take on that hole?"

"Let me see now," mused his opponent, "I took eight. No, it was only seven."

"I'll put you down for nine," said the first golfer. "Remember there's a penalty of one stroke on this course of improving your lie."

News is sparsely scattered this week, let's see what lies in . . .

DEVELOPMENT

Metallurgical Development has a needle stuck on announcing births . . . but it's happy news any way. The **Charles Meadors** happily announce the arrival of Robin Lee Meadors on April 7 at the Oak Ridge Hospital. Robin weighed seven pounds, five ounces . . . Congratulations!

Then there's the one about the daughter of the old woman who lived in a shoe. She began married life on a shoestring.

INDUSTRIAL RELATIONS

The Fire and Guard Department welcomes back **B. F. Robinette** after a stay in the hospital.

M. L. Wilkerson is off on military duty somewhere in Florida for two weeks . . . more details later.

Benefit Plans' **Art Hines** took advantage of the long week-end to see the country around Somerset, Kentucky, his old stomping grounds.

A college recruiter was interviewing a prospective gridiron star at one of our high schools. The lad explained he could pass, was an excellent broken field runner, was the best block in the state, could snag a pass at 40-miles per, and made superior grades.

"You have absolutely no faults, then?" asked the recruiter.

"Oh, yes, sir," beamed the bright-eyed youngster. "I lie a little."

MAINTENANCE

Lisa Carole Catlett

Another addition to the proud collection of even prouder grandparents is the little cutie, by name of Lisa Carole Catlett. She is the granddaughter of **William D. Blevins,** Process Maintenance. Her parents Mr. and Mrs. Bill Catlett both are former Carbiders . . . Barbara once was in Purchasing . . . and Bill is a former Y-12er.

With tinted tresses
All the rage . . .
Dames would rather dye
Than tell their age!

FINANCE AND MATERIALS

Reproduction has **Pearl Lindsay** vacationing this week with her husband in Sarasota, Florida.

Deepest sympathy is extended to **Margaret Anderson,** Mail Room, on the recent death of an aunt. **Sam Eubanks** is vacationing in Karns this week with hopes of lots of good fishing weather.

Plant Records has **Dot Park** spending the holiday week-end in Memphis where she participated in the Women's International Bowling Congress tournament . . . **Emma Puckett** is vacationing this week visiting sisters and brothers in Shelbyville and Louisville, Kentucky.

Microreproduction and Engineering Services reports **Helen Ross** vacationing in Daytona Beach, Florida . . . **Don McMurray** and his family spent Easter week-end visiting relatives in Florence, Alabama.

Middle-age has an
Unfortunate quirk—
Work's less fun and
Fun's more work!

PRODUCTION CERTIFICATION

Thomas M. West

The **Stanley R. Wests,** 205 East Tennessee Avenue, are beaming over the recent graduation of their son Thomas M. West. Tom received his BS degree in Industrial Engineering at the University of Tennessee recently. He is taking graduate work and serving as an instructor's assistant at UT. The student's father is in Y-12's Physical Testing.

Whoever said working on a Holiday was fun, hasn't tried it lately. Let's go to K-town!

Star-Gazers Plan Meeting April 30

An organizational meeting of the Carbide Astronomical Society will be held at 8 p.m. Tuesday, April 30, in Cheyenne Hall, Oak Ridge.

The major objective of the Society will be to bring together people who possess a common interest is astronomy. There are tentative plans for a class in telescope making and one in general astronomy and star study. When funds are available, a reference library will be provided for the use of the members and, if enough interest is shown, a group telescope project will be started. The Society will be able to furnish members with a 10 per cent discount toward the purchase of books on astronomy and allied sciences.

The only requirement for members is a general interest in astronomy. Interested Y-12ers should contact Bill Roddy, extension 6-1404, or Justin Long, extension 6838.

RED IF BY SEA

Danish ships bound for Greenland are painted bright red for maximum visibility in the foggy northern waters.

CLEMENTS-ALLISON

Miss Eleanor Allison was married at 7:30 p.m., Friday, March 1, at Rivoli Baptist Church, Macon, Georgia, to Mr. William Murphy Clements Jr. The Reverend James Bodenhamer, Macon, officiated. Mrs. James Bodenhamer was organist and vocal selections were presented by Arthur Allen, Macon.

The bride is the daughter of Mr. and Mrs. Thomas H. Allison, 109 Regent Circle, Oak Ridge. Her father is in Y-12's Guard Department. The groom is the son of Mr. and Mrs. William M. Clements, Macon, Georgia.

The bride's sister, Miss Marie Allison, was maid of honor. She wore a yellow brocade dress with matching hat and carried a corsage of white carnations.

The bride was given in marriage by her father. She wore a white princess style dress of chantilly lace over white taffeta. Her view, of shoulder length, fell from a pearl crown. She carried a bouquet of white carnations and orchids.

The groom chose his father to act as his best man and ushers were Ronnie Clements, brother of the groom; and Johnny N. Smith, cousins of the groom.

The couple is residing at 842 Boulevard Avenue, Macon, Georgia.

ORCMA Presents Varied Concert

The Oak Ridge Symphony Orchestra will perform in concert Saturday, April 20, at the Oak Ridge High School auditorium. The concert begins at 8:15, and will present a preview of the forthcoming "Marriage of Figaro" as the overture to Mozart's magic opera will open the program. Mozart's Concerto for Clarinet, featuring Joseph Longo of the Chicago NBC Orchestra, will follow. This is Mozart at his best, with difficult cadenzas added to the symmetrical patterns.

A short modern piece, "Canto" by the young Alabama composer, Richard Willis, will also be featured. Schumann's Fourth Symphony will conclude the concert. This is the symphony that Robert Schumann presented as a birthday gift to his pianist-wife Clara Wieck.

The concert is on the regular Oak Ridge Musical Association regular series, and season tickets may be used. Additional tickets will also be available at the door prior to the overture.

Group Insurance Gives More Than Just Dividend

Employees at the three Carbide facilities in Oak Ridge last week shared a total $233,411 in group insurance dividends distributed by mail. This amount represented 18.47 per cent return in the premium payments which were made by employees in 1962 for group life insurance and sickness and accident insurance under the Company's Group Insurance Plan.

In addition to this dividend, employees or their families received an additional $1,847,190 in benefits under the sickness and accident and death benefit provisions of the Group Insurance Plant during 1962.

ONE IF BY LAND

A British Royal Air Force pilot, stationed in Egypt, while flying along the coast of Egypt, discovered an ancient city underneath the sea. Captain John T. Cull reported a horseshoe discoloration in the shoreline waters. Divers discovered an ancient city pattern!

Mrs. William Murphy Clements Jr.

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

10 YEARS

William E. Davis, Security Department, April 17.

John H. Qualls, Production Machining, April 17.

Robert A. Robinette, SS Control, April 18.

Julius L. Eller, Research Services, April 20.

Lytle W. West, Beta Two, April 20.

Luther Thurman Jr., Product Processing, April 20.

James Lefevers, Product Processing, April 20.

Raymond K. Barnett, Beta Two, April 20.

Rollin E. Plemons, Beta Two, April 20.

Billy F. Wright, Product Processing, April 20.

James P. Cook, Chemical, April 20.

Billy O. Miller, Product Processing, April 20.

Everett R. Dougherty, Product Processing, April 20.

Samuel D. Rea, Special Projects, April 20.

Solen J. Vaden, General Machine Shop, April 20.

Donald F. Bougrand, Chemical, April 21.

Daniel B. Braden, Beta Two, April 21.

Edward P. Bostic, Beta Two, April 21.

James S. Peterman, Alpha Five Cascade Operations, April 21.

William W. Randles, A-2 Foundry, April 22.

Glen D. Mowery, Alpha Five Cascade Operations, April 22.

Ira J. O'Neal, Forming, April 22.

Larson Is Conference Speaker At Gatlinburg

Approximately 100 scientists and engineers are expected to attend the Conference on the Physical Metallurgy of Beryllium to be held in Gatlinburg, Tennessee, April 30 and May 1.

The meeting is sponsored by Y-12, and will consist of a general discussion of the result of beryllium metallurgy research and development work performed by American and British scientists and engineers.

Dr. C. E. Larson, vice president of Union Carbide Nuclear Company, will speak at the conference dinner April 30.

The meeting will conclude with a panel discussion on the future of beryllium research and development.

CHEMICAL'S H. J. SEARCY AND his son Charles caught 140 pounds of Crappies recently in Blue Springs dock. The haul took only three hours. Young Searcy is sports editor on the Cleveland (Tennessee) Banner. (It's a good thing the possession limit on crappies has been removed, isn't it?)

Independents Have Improved In 22 League

The Independents surged forward last week in the 22 Calibre Rifle League for Carbiders by taking five points with a lead in handicap firing of 1443.766. ORNL's team fired 1443.413, and Y-12ers fired 1441.690. In scratch firing it was Y-12: 1394; ORNL: 1419; and Independents: 1405.

Y-12 team took only two points.

High men on the Y-12 squad were Art Hensley shooting 284 scratch, and George Peterson with a target tally of 282. He was followed closely by Bert Searles with 281.

Handicap firings were led by Peterson with 290.460. Al Blay came in second with 289.746 and Hensley's score of 287.718 was third.

League standings follow:

Team	Points
ORNL	53
Y-12	38
Independent	29

Hey, Y-12 Has Hay For Sale!

Hey, there's hay for sale again in and around Y-12. No, we haven't gone in for the cash crop program . . . not yet.

The contract for cutting, and the removal of hay from grounds inside and outside the Y-12 perimeter fence is now up for bid. All of the area mowed must be raked with a farm-type rake and the hay removed from the land soon enough to prevent the smothering of new growth.

Any inside areas must be mowed by properly cleared personnel, of course. The special conditions applying to sale number UCNC-709 are available in contract bid forms from the Sales Office — Government Property of Union Carbide Nuclear Company, P. O. Box M, Oak Ridge. Details may be had by dialing extension 4601.

So, if it's hay you want, we got it . . . but bids must be submitted by Monday, April 29.

Sunflowers Keep Slim C Holdings

Bowlers Have One More Week Rolling

The lead in the C League for Y-12 bowlers changes almost every week now . . . but not this week. It will all be over by then. Last week the Sunflowers moved into first place by one point with a four-point win over the Screwballs. The Big Five, despite their hot night, registered only two points in their tilt with the Hookers.

The Par Busters took three from the Strikers, and the Rodders got the same number from the SP's. Splitting two points each were the Hi Lifers and C Shift.

Tom Overton, Big Five, got big scores of the night with a 245 scratch game, 261 handicap single. His 648 scratch, 696 handicap series were high also. The Sunflowers took singles highs with 952 scratch and 1059 handicap totals. The Big Five got series highs with 2689 scratch and 2995 handicap totals.

League standings follow:

Team	W	L
Sunflowers	38	18
Big Five	37	19
Hi Lifers	33	23
Par Busters	33	23
Strikers	32	24
Lucky Strikes	31	25
Rounders	31	25
Rodders	26	30
Hookers	22	34
Screwballs	18	38
SP's	18	38
C Shift	17	39

"Just a room — I'll manage my own bath!"

Rippers Take Tilt For Classic Crown

Victory Comes Easy Over Swingsters

The big Classic League for Y-12 bowlers dwindled down to two teams hot after each other's hides. A roll-off last week gave the crown to the Rippers by 96 pins. In their contest with the Swingsters, the Rippers surrendered only one point as they allowed the Swingsters to take the last of the three matches.

Total pin count gave the decision to the Rippers with 2924 against 2828.

Total pin in series saw a tie between Sterling Ryder, Rippers, and Sewell Brown, Swingsters, each with 560.

The Classic crown holders consist of Al and Wayne Groppe, Sterling Ryder, Jim Galloway, and Jay Holzknecht.

The 16-team Classic race has the longest course on the bowling alleys . . . it is also Y-12's oldest bowling competition.

Teeny Golfers Laying Summer League Plans

More Summer athletics are being planned for Y-12ers. The miniature golf play is set to commence Wednesday, May 29.

Two member teams will compete in the Putt-Putt Leagues. (Last year two separate leagues constituted play on the baby greens.)

The miniature golf will be played this year on the Par-Tee Miniature Golf Course at the Driving Range on the Turnpike. League play will be 35 cents only for league games, at this course.

A three-point system of scoring will be used this year . . . one point for the low score on the front nine . . . one for the low score on the back nine . . . and another point for total low points.

Teams (both men and women) wishing to enter should call Recreation, telephone 7109 and enter their names. Teams will be taken until 4:30 p.m., Monday, May 27.

This type golf may be little . . . but it's big fun!

Season's 1st Golf Contest Locale Moved

A change has taken place in the plans for the initial Golf Tournament for Y-12ers. The locale of the first green will be the Wallace Hills Golf Course, near Maryville. Tee-offs for the May 27 classic play will be taken next Tuesday April 23 at 7:30 in the Recreation Office.

To get to the Wallace Hills Golf Course take Highway 129 (it goes by the Airport serving Knoxville). From there take the bypass and turn right at the T intersection on 411-S. From this point it is 2.9 miles to Wallace Hills on the right side of Highway 411. A sign identifies the course.

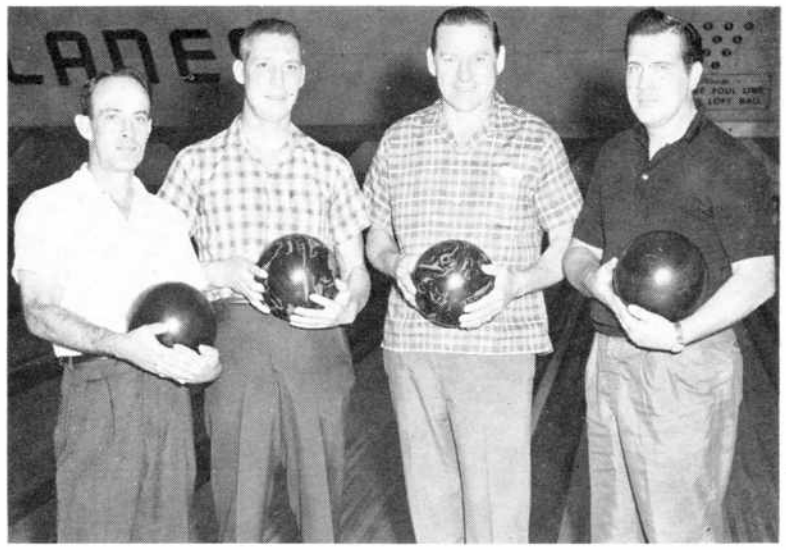
From the Airport, via the By-Pass, it is 8.6 miles to the golf course.

Green fees for Wallace Hills is only $2.

The 7:30 a.m. signing up time Tuesday will, as always, be on a first-come, first-served basis . . . so you'd better be there on time.

ROLL OUT DER BARREL

Beer-loving West Germans drank 462 million gallons of daught beer in 1960, a postwar record.



ONE OF THE LAST bowling leagues left in action still is the E League with its six-team "day-light" men. The Pintwisters, above, are Omer Rhea, Captain Jack Williams, Curtis Hallmark and Harry Hays. The 'Twisters didn't do so well in their first season in the new league . . . but will come charging out next year, just wait and see!

E Bowling League Rolls-Off Pinquins, 4-Squares For Tops

The Pinquins eked out a one-point lead to take the last half crown in the E League for Y-12 bowlers this week, necessitating a roll-off with the Foursquares. The Pinquins took four points from the Pintwisters, while the Ten Pins clobbered the Foursquares for three. (The Foursquares took the first half league pennant.)

The Cannonballs routed the Alleybees for three points also.

Fred Rasko, Foursquares, who lacked only one pin to sweep the entire individual's events, took high scratch game of 201. His series play was 528 scratch and 624 handicap. W. B. Burrell, Cannonballs, blocked the rout with a 234 single handicap.

The Cannonballs swept the board teamwise with scores of singles in line of 655 scratch, 814 handicap. Their 1797 series in scratch events and 2274 in handicap were high also.

Thus the Foursquares and Pinquins wind up action this week in Y-12's youngest bowling league.

Final standings follow:

Team	W	L
Pinquins	36	24
Foursquares	35	25
Alleybees	30	30
Ten Pins	29	31
Cannonballs	28	32
Pintwisters	22	38

Cool Cats Capture Mixed League Top

Will Roll-Off With Pin Plasters

The Cool Cats took the crown of the Mixed League for Y-12 bowlers for the last half recently by three points over the Ghosts. Their three point win last week was over the Pin Plasters. The Ghosts also took three from the Toppers. The Goofers took four from the Alley Cats . . . and the Scrappers scrapped the Phantoms for the full count.

The Cool Cats will roll off this week with the Pin Plasters, who took the first-half pennant.

Last week's highs saw the husband and wife team of the Ghosts take high singles. Joyce Gillihan had a scratch game of 184, and a handicap score of 234. Charlie had a 241 scratch, 266 handicap single. Joyce continued her sweep by taking series with 478 scratch and 628 handicap. Bob Hagood, Alley Cats, had high male series with a 602 scratch, 657 handicap tally.

The Goofers took team highs with singles of 673 scratch and 831 handicap. Their series totals were 1944 scratch and 2418 handicap.

Final league standings:

Team	W	L
Cool Cats	39	17
Ghosts	35	21
Goofers	31	25
Scrappers	29	27
Alley Cats	28½	27½
Pin Plasters	26½	29½
Phantoms (Sob!)	21	35
Toppers	14	42

Slo Pitch Meeting Called For Monday

Organizing Crowd Sets Kick-Off

With dandelions and crocuses (or is it croci?) in full-bloom folks are beginning to get out the ole bats and swing at a couple of gravels. Soon "batter-up" will take the place of "where's my coat?"

The Slo Pitch League for Y-12 sportsmen is about to get underway. The Recreation Office is calling together team representatives for an organizational meeting Monday, April 22, at 7 p.m. in Central Employment's Cheyenne Hall on the Turnpike.

Teams represented at the initial meeting should already have selected managers and associates to be present then.

Contracts for signing up players are now available from the Recreation Office, Room 149, Building 9704-2. Telephone extension 7109, drop a note, or drop by.

When "play ball" is heard, be there.

Cancer Also Strikes At Nation's Economy

Each year cancer deprives the national economy of 50,000 man-years of productivity. Since cancer strikes oftenest in the later years, many of its victims are highly trained, skilled personnel. The dollar loss is inestimable. The annual hospital bill for cancer is estimated to be about $350,000,000.

BULK RATE
U. S. Postage
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NUCLEAR COMPANY
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POSTMASTER: DO NOT FORWARD. IF ADDRESSEE HAS MOVED, RETURN TO SENDER IMMEDIATELY.

Metals Society Sets Meeting Tomorrow

Space Problems To Be Discussed

The Oak Ridge Chapter of the American Society for Metals will meet tomorrow, Thursday, April 18 at the Alexander Motor Hotel, Oak Ridge. The social hour begins at 6:30, with dinner at 7 p.m. and the technical session at 8.

Special speaker will be Dr. William R. Lucas, George C. Marshall Space Flight Center, Huntsville, Alabama. He will speak on "Material Problems Associated with Space Vehicle Boosters."

William R. Lucas

Dr. Lucas received his BS degree from Memphis State College and took an M.S. and Ph.D. from Vanderbilt University. He was with the Department of Chemistry at Memphis State until 1952 when he joined the research and development team at Huntsville. When the Marshall Space Flight Center was established in July, 1960, Dr. Lucas become a part of the organization. He is now chief of the engineering materials branch of the propulsion and vehicle engineering division. His work involves the materials problems associated with the development of boosters for the lifting of multi-ton loads into orbit around the earth and deep space.

Dinner reservations are being taken by Oak Ridge National Laboratory's J. Wheeler, on extension 6680.

ASM members also urge members to reserve Saturday, May 25, for the Annual Ladies Night festivities.

WHERE ARE YOUR FIVE?

The United States owns about five acres of trees for every person in this country.

Signing Blood Replacement Card Is Good Way To Help Co-Worker In Time Of Need

Y-12ers helping Y-12ers . . . that's the new blood program arranged by the local American Red Cross and the Oak Ridge Hospital.

No UCNC employee need pay for blood now . . . or ever. But, blood replacement donors are needed.

The April 3 issue of the Bulletin described the provisions of the new blood program now in effect at the hospital.

The need to expand the donor list is urgent. If an employee failed to fill out the first agreement run April 3, another one is repeated below.

The procedure is simple. When blood is needed in the Oak Ridge Hospital, a telephone call to the Oak Ridge Chapter of the American Red Cross, telephone number 483-5641 will do it. Just give them the patient's name and badge number and the amount of blood he has needed. He will NOT be billed. The Red Cross will then make the necessary arrangements for replacing any amount of blood used.

If you failed to fill out the first form, please sign this one. Mail the signed form back to the Benefit Plans Office, Room 143, Building 9704-2.

It's your way of helping your fellow employee, when he needs it most.

BLOOD DONOR AGREEMENT

I agree to my name being placed on the list of volunteer blood donors maintained by the Oak Ridge Chapter of the American Red Cross for the purpose of providing free blood at the Oak Ridge Hospital.

I also agree to report to the Oak Ridge Hospital for the purpose of giving blood when I am called by the Red Cross.

Name _____ Age_____ Date_____

Blood Type (if known)_____Home Phone_____

Installation _____ Plant Phone_____

Home Address _____

_____

Return signed form to Y-12 Benefit Plans Office, Room 143, Building 9704-2.

Two Deaths Saddened Y-12 Plant Last Week

Rites For Carroll And Jamieson Held

Y-12 was saddened last week by the deaths of two employees . . . Mr. Ezra C. Carroll, 415 Victor Drive, Knoxville, and Mr. Gilbert A. Jamieson, 114 Maple Lane, Oak Ridge.

E. C. Carroll

Mr. Carroll, who passed away Monday, April 8, had been in Y-12 since September 12, 1951. He was a member of the Ridgeview Baptist Church and a Mason. Born in Stony Point, Hawkins County, Tennessee, Mr. Carroll was in Y-12's Beta Two at the time of his death.

He is survived by his wife, Mrs. Nellie Simpson Carroll; daughters, Faye, Sharon and Gayle; sons, Wayne, Ronald and Lynn; mother, Mrs. F. T. Carroll; sisters, Mrs. Everett Wright, Mrs. Herbert Seidell, Wilmington, Delaware, Mrs. Earl Wolfe, Kingsport, Mrs. Haskell Quarry, Surgoinsville; brothers, Charles and Howard Carroll, Kingsport.

Funeral services were held Thursday at 2 p.m., April 11, at the Ridgeview Baptist Church with the Reverends Gene Dutton and Leon Dawson officiating. Interment followed in the Tennessee Valley Memory Gardens. The Masons officiated at the graveside ceremonies.

Mr. Gilbert A. Jamieson, active in civic affairs in Oak Ridge, died Sunday, April 7, in Oak Ridge. The family home is at 114 Maple Lane, Oak Ridge.

Mr. Jamieson, a production coordinator in Production Control, came with UCNC June 24, 1944 at the Oak Ridge Gaseous Diffusion Plant. He transferred to Y-12 October 1, 1961.

G. A. Jamieson

A native of Pittston, Pennsylvania, Mr. Jamieson attended Lincoln Academy, Newark, N. J.; the National Radio School, Washington; and the University of Tennessee extension, Oak Ridge.

The prominent and longtime Oak Ridger is survived by his wife, Mrs. Ruth Ganci Jamison; daughters, Miss Mary Ann Jamieson, and Mrs. Sandra Harp.

Funeral services were conducted at the Martin Funeral Home at 10 a.m. Wednesday, April 10. The Reverend William Reginold, of St. Mary's Catholic Church officiated. Burial was in the Anderson Memorial Gardens.

Mr. Jamieson's family requested that any memorials should go to the American Cancer Society, an organization he devoted much of his time to.

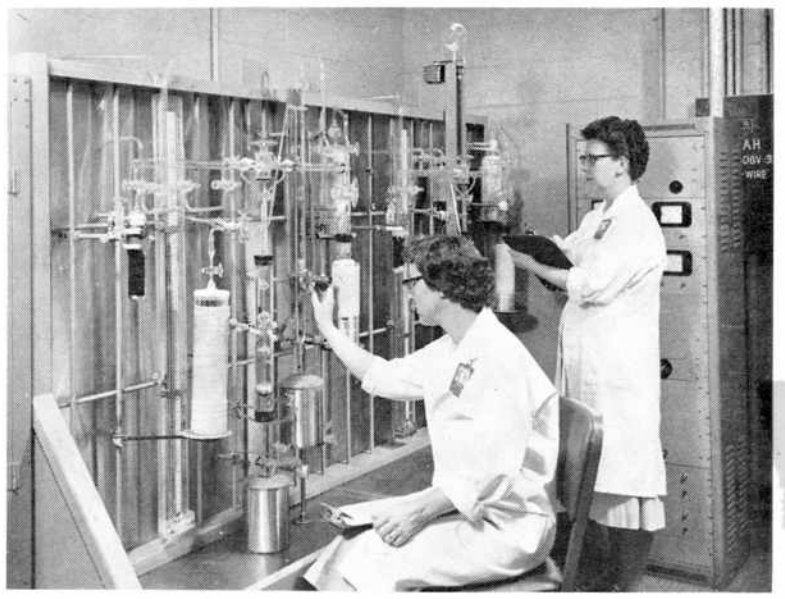
Sincere sympathy is sent to each family in their losses.

Word Definition Brings Literary Quote To Mind

A rather puzzled reader of a recent issue of the Bulletin stumbled over the word "hiatus" in the Tom Goodpasture degree story. A hiatus is defined as an opening; a gap; a break with a part missing; a slight pause.

Sorry if this was over one dear reader's head. It brings to mind the lines from Whittier's classic "School Days". . .

"I'm sorry that I spelt the word,
I hate to go above you,
Because," . . . the brown eyes lower fell,
"Because, you see, I love you."



ELIZABETH TOMLINSON takes pressure readings from a manual BET apparatus on the left, while Charlene Asbury records data from an automatic one on the right. The sample Elizabeth is analyzing is immersed in liquid nitrogen in a tall tape-wrapped container on her left. The complicated equipment shown is used to remove all air from the sample container, fill the container with helium gas, remove the helium gas, and then fill the container with nitrogen gas. Several sets of pressure and temperature readings are taken in the process.

Chemical And Isotopic Analysis

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for reporting. Isotopic content of materials can be determined within one-tenth of one per cent.

Personnel of the Plant Laboratory are often asked to determine the amount of various elements present in small quantities in materials. The method of analysis depends on the type of material being analyzed and the element being looked for. Many of the analyses requested are made using specialized apparatus.

The samples for carbon analysis are heated to 3,000 degrees in the small furnaces. As the sample is heated, the carbon in the sample is burned and changed into a gas which flows through a chemical solution in the equipment. Trained personnel are able to detect quantities of carbon as small as ten parts in a million with this equipment.

Minute Impurities Detected

Materials to be used in Y-12 products must usually be analyzed for very small amounts of impurities. The analyses are required to certify that the products meet specifications set forth by design agencies and, in some cases, to aid in experimental and development work being done in our plant. Sometimes analyses for minute quantities of impurities are also needed to maintain control of plant processes. Analyses for these very small amounts of impurities are done by spectrochemical methods. By use of modern spectrographic equipment Y-12 analyists can detect amounts of impurities as small as one part in a million. To determine the amount of impurities in a sample, the sample is burned in an intense arc. As the sample burns, it emits light rays of different wave lengths or frequencies, each wave length of frequency being characteristic of a particular element or kind of material. The amount of light emitted in these characteristic frequencies is measured, and the amount of each impurity is determined from these measurements. Since the arc in which the sample is burned is too bright to look at with the naked eye, the burning station is concealed under the covers on the side of the instrument. The amounts of impurities are printed on a printer from the console of the instrument.

Careful records are maintained by Laboratory personnel on all analyses. In the certification program these records become a part of the history of the individual product concerned. Complete accuracy is essential.

Powdered Solids Measured

In addition to isotopic, chemical and spectrographic analyses, Plant Laboratory's personnel also make certain physical measurements of materials, sometimes for certification purposes and sometimes for development projects. Surfaces area, particle size and density of powdered solids are typical of the physical measurements performed by the laboratory.

Typical of the instruments used for physical measurement is the BET apparatus which is used to measure the surface area of powders. (B, E, and T are the last initials of the men who developed this measurement technique.) The complicated equipment is used to remove all air from the sample container, fill the container with helium gas, remove the helium gas, and then fill the container with nitrogen gas. Several sets of pressure and temperature readings are taken in the process. Determination of the surface area is based on the fact that nitrogen will be absorbed on, or cling to, the surface of each grain of the powder whereas helium does not have this property. By measuring the different volumes of helium and nitrogen required to fill the sample container, it can be calculated how many molecules of nitrogen are used to blanket the particles of the sample and, from this, the total surface area of all the particles in the sample is determined.

Ability And Perservance

Good analytical work requires well-trained personnel who have ability and perservance. It can be said without question that the people of the Y-12 Plant Laboratory carry out their responsibility for doing high quality work in the best Y-12 tradition.

Teamwork plays a major part in most all undertakings regardless of the mission. At Y-12 this is particularly true with reference to the product certification program. The most modern and specialized equipment available for this type work in the country today is operated by personnel in the various departments carrying out this important program. However, the teamwork of the people involved, their determination to maintain high standards of competence, and their personal integrity are infinitely more valuable to the success of this program than the most costly and complex machines obtainable. The men and women in this program are doing vital work and are doing it well.

In Traffic There Are Five Other Cars To Watch

At least five cars besides your own concern you while you are driving, says the National Safety Council. They are the one ahead, the one behind, the one approaching in the opposing lane, the one ready to enter from a side street, and the one parked at the curb. Be prepared for any of them to do anything without warning.