

No time problems found in long distance riding

179-145



Y-12 CLOCK ADJUSTERS—This van pool of Y-12 employees live in the Central time belt and work in the Eastern one. Most of them agree that there is little problem in remembering where they are at what time. From left are Jack Kluender, Reggie Rowell, Nick Hedgecoth, Seith Sidwell, Jim Akin, Jim Finley, E. W. Cook and Herm Stewart. The van covers more than 120 miles round-trip each day delivering the Crossville natives to Y-12.

There are 243 employees in the Oak Ridge plants who commute more than 50 miles a day to work. Many of these live in another time zone (Central Standard Time). In Paducah, 29 employees drive more than 50 miles to work. Many of these come from other states—by car or vanpool from Illinois and Missouri.

Complications? Mishaps? Interesting entertainment along the way?

We talked to a few of these robust souls recently and found some interesting facts. One man finds it fascinating to get home "before he leaves Y-12!"

David W. Yarbrough, ORNL Metals and Ceramics Division, lives in Cookeville. (He's involved in an ORNL/Tennessee Tech program.) He leaves home at 5 a.m., CST, and drives the 85 miles to Oak Ridge by himself. Yarbrough said he's found it easier to live on Eastern time all the time. He has made the trip for the last four years and says he'll continue "until we run out of gasoline, and then I may have to get a horse."

Jim Finley finds complications with a family "over there" and a job here. A veteran Carbidier, he has been in the carpool since it started. "Most people rush home and sit down and read the paper," he said. "I stroll out to the portal, pick up a newspaper and read it on the way home. The trip does not seem that long."

Finley is in Y-12's Metal Preparation Division, has worked at ORGDP and was with a couple of other Union Carbide divisions before coming to Oak Ridge in 1945. "Generally, when we plan something within the family, we just say the hour... without specifying which hour."

Bill Ebert, superintendent of Y-12's Maintenance Division, has lived in Crossville off and on since 1965, when he and his wife, Vern, bought a farm there. They spent weekends and summers there and moved permanently after the west leg of I-40 was completed over Rockwood Mountain.

"I keep my watch on Eastern time," Bill said. "I'm probably the only one in the van who does. You think nothing of leaving home at 6:30 a.m., but it's funny to get home sometimes before you leave Y-12! You wonder what you're going to do with all that time."

From Finance, Materials and Services at ORGDP, **Millie Orme** said, "I just keep my clocks set on Oak Ridge hours; that's the only way I can keep up with the time."

Herm Stewart, Y-12 Mail Department, works on Eastern time... and enjoys Central time on the weekends. "Keeps life simple if you stay on one time."

New pilot career planning program set

Just off the ground in the Division is a program intended to draw upon the imagination, initiative and ingenuity of employees for what will surely be viewed as a worthy cause... the planning of their own careers. The pilot phase of a newly-developed Career Planning Program is now underway.

Employees have long expressed interest in some source of career information and advice to assist them in planning for the future. Through the Job Opportunity System, Performance Appraisal Program, Affirmative Action Program, Educational Assistance Program, and other means, employees have sought assistance in clarifying their personal career objectives and obtaining an overview of their organization.

In January 1979, a group of employees headed by Carmen Trammell of the ORNL Employee Relations Division began to survey the literature, the experience of other organizations and internal opinion to "get educated" on career planning in general and Division employee concerns in particular. On the basis of their findings, a Career Planning Program was developed.

Key: Individual Responsibility and Initiative

The objective of the program is to enable salaried employees to assume greater responsibility for the management of their own careers.

The program is designed to enable employees to:

- assess their values, interests, skills, and opportunities in a realistic manner;
- make informed decisions about their career objectives; and
- plan a practical strategy for their own career development.

The focus of the program is individual responsibility and resourcefulness in the career planning process. The program will not function as a grievance process, a placement service, or a psychological counseling service.

Career Planning Services

The program involves three main services, all of which will be available to employees in the pilot population on a voluntary basis.

- The **Career Planning Workshop** is a broad assessment experience for employees who are interested in clarifying their personal career objectives and learning how to develop a career strategy. The workshop involves approximately 50 hours over a seven-week period with the time commitment shared by the Company and the employee.

- A **career planning resource center**, located at the ORNL

Central Research Library, contains career planning literature and organizational information. Resource center materials are available through either personal visits to the center or mailed requests for information.

The program was "rehearsed" during the fall with a large and diverse group of employees.

- **Individual counseling** is designed for employees whose career objectives are reasonably well-defined and who are interested in specific information about the work or Division. Counselors are available at each installation in each of five areas: management, technical staff, administrative staff, technical support, and administrative support.

Pilot Implementation

The program will be conducted on a pilot basis with three divisions: General Accounting, ORGDP, Metal Preparation, Y-12; and Chemical Technology, ORNL. The pilot program will last through 1980 and will be evaluated as a basis for consideration of full-scale implementation.

For further information regarding the program, contact Carmen J. Trammell, 4-5924.

Pistol teams collect trophies in state and national contests

Trophies and more trophies. The Carbide Blue Pistol Team from the four Nuclear Division plants has been steadily adding trophies to go along with those already on the shelf. Since the beginning, the team has competed at the Cotton Carnival, Memphis; Music City USA, Nashville; the state championships, Chattanooga; Tennessee and Mississippi Sheriffs and Peace Officers, Laurel, Miss; and the National Police Revolver Championship Match, Jackson, Miss.

During the year, nine matches were held at the DOE pistol range, in addition to the seventh annual DOE championship match. Seven pistol matches were held at the Knoxville Police Department Training Academy. Y-12 alone brought home 70 trophies from these matches.

Gary Miller, Wayne Pierce, Ralph Clough and Jim Wampler, training officer, took the DOE top honors held in early November.

Taking 39 trophies in Nashville this past summer, the 16 Carbide participants walked away with 23 trophies. Competing also in this shootout were representatives from the Tennessee Highway Patrol, Nashville Police Department, Tennessee Wildlife Resources Agency, Southeastern Courier Service, Hamilton County Sheriff's Department, and others from Tennessee, Kentucky, Alabama and Illinois.

In the summer competition, it was Robert Allen, ORGDP; David Jackson, ORNL; Doug Nelson, ORGDP; and Terra Townsend, ORGDP, who won the four-person team in the expert class competition. A second four-person team with Gary Miller, Y-12; Larry Osborn, Y-12; Scott Trotter, Y-12; and Sharon Yaste, ORNL, won the four-person team in the sharpshooter competition. Larry Key, Y-12, and Ralph Clough, Y-12,

won the two-man sharpshooter classification.

In the master class, Robert Allen, ORGDP, was the winner of match one. In the Sharpshooter Class, Key, was first overall sharpshooter after winning match four and taking first place in matches, one, two, three and five. Other sharpshooters were Clough, winning second place in match three, and Osborn, taking second place in matches one and two.

The Marksmanship Class was also dominated by the big Blue Team. Miller took first place in matches two and five, and second place in matches three and four, as well as overall best marksman. Steve Trotter won second place in matches one and five and second best marksman. Gary Trotter took first place in match four.

Townsend was named high woman shooter of the overall match.

The match competition is promoted by the Division as a part of its marksmanship incentive program among all armed plant protection personnel. Competition at local and regional matches is voluntary and at the individual's own expense. The Company does sponsor and support attendance by groups selected from among participants in the team competition on the basis of job performance, individual initiative and effort and demonstrated marksmanship. Currently, six Nuclear Division marksmen belong to the "Governor's Twenty" which represents the top 20 combat shooters in the state.

The highest awards picked up were the national trophies, as well as the DOE laurels.

Next issue. . .

The next issue will be dated December 13. The deadline is December 5.

N79-139



HIGH SHOOTERS—Y-12 pistol champs add to the trophy case in the Security Plant Protection Department. From left are, Gary Miller, Wayne Pierce, Ralph Clough and Jim Wampler, training officer.

79-2866



NASHVILLE HIGHS—Larry S. Key, left, was named best overall sharpshooter at Nashville this summer and Gary L. Miller was named the best overall marksman at the Music City Police Combat Championship match.



BIG CARBIDE BLUES—The Carbide Blue pistol team show off their trophies picked up in recent competition. From left are Larry J. Osborn, Y-12; Doug Nelson, ORGDP; Terra Townsend, ORGDP; Robert Allen, ORNL; Larry S. Key, Y-12; Charles Parks, vice president-

operations; David Jackson, ORNL; Scott Trotter, ORNL; Sharon Yaste, ORNL; Steve Trotter, Y-12; and Gary Miller, Y-12. Others not present were Ralph Clough, Y-12; Carl Jones, Paducah; Thomas Normant, Paducah, and John Smith Jr., Paducah.

question box . . .

If you have questions on company policy, write the Editor, **Nuclear Division News** (or telephone your question in, either to the editor, or to your plant contact). Space limitations may require some editing, but pertinent subject matter will not be omitted. Your name will not be used, and you will be given a personal answer if you so desire.

Evaluation forms

QUESTION: Is it possible to insist that an employee's evaluation be filled out with ink? There is evidence that some have been changed after the supervisor has discussed it with the employee.

ANSWER: Employees' performance evaluations can be filled out in ink, pencil, or typewritten; however, the vast majority of them are done in ink or typed. Once the performance evaluation has been communicated to the employee, any subsequent changes should also be communicated. If an employee thinks that his/her performance evaluation has been changed without this additional communication, the matter should be discussed with the immediate supervisor or the division manager.

Job level inequities

QUESTION: In my department (an Engineering Department at ORNL) there are 11 people, not counting supervisors. Of these, six work in job levels higher than our pay scales. Two of these are doing jobs on a monthly status yet their pay shows them at job level eight. The remaining are paid one to three levels behind the jobs they are performing. This has been the case since 1977.

Immediate supervision claims their hands are tied and that only a certain percentage of departmental personnel are eligible for promotion each year. It seems that employees should be paid for the jobs they do. What is company policy on this point?

ANSWER: The review of individual job assignments to determine proper classification is a major responsibility of Salary Administration. Proper job classification is a prerequisite for administering an equitable salary program. Job evaluation requires the assistance of and recommendations

from the appropriate line organization. If there seems to be an inequity, an employee should discuss this with his/her respective division management and/or with the Salary Administrator serving the organization.

Travel allowances

QUESTION: What is the current policy on the following travel allowances: per diem; travel in personal car to and from airport; parking at airport?

ANSWER: An employee in official travel status is eligible for a daily allowance of \$20 for expenses other than transportation, lodging, official communications, and conference fees.

The per diem allowance is based on the calendar day (midnight to midnight), with \$5 allowed for each 6-hour increment. When the employee is in travel status less than 24 hours, the computation is based on elapsed time between the beginning and ending of the travel, and a \$5 allowance is made for each 6-hour period or fraction thereof. Per diem payments are not made when travel is accomplished or could have been accomplished between the hours of 8 a.m. and 6 p.m. of the same day. Duplicate reimbursement for meals is not allowed when conferences or convention fees are reimbursed or when meals are included in the lodging expense.

Transportation to and from the Knoxville airport is reimbursed as follows: 1) actual cost of limousine or taxi, whichever is more economical, if both are available; 2) actual mileage at 17¢/mile for two round trips by personal car; 3) actual mileage at 17¢/mile for one round trip plus parking fee not to exceed seven days. Parking fees for a longer period of time may be considered if there are extenuating circumstances.



BIG CAST-BIG NAME—The Oak Ridge Playhouse's next production, "The Butterfingers Angel, Mary and Joseph, Herod the Nut, and the Slaughter of 12 Hit Carols in a Pear Tree," will be presented November 30, December 1, 7, 8, 14 and 15 at the Playhouse at 8:20 p.m. In the front row are, from left, Terry Kite, Doug Laverne, Fred Manneschild and Mark Myer. In the rear, Gordon Warner is flanked by Anne Holland and Valery Hulett, right, and Vicky Minor and Eva Robbins, left.

Corporate world of Union Carbide . . .

Union Carbide Corporation will construct a multimillion dollar air separation plant in Brownsville, Tex., chairman William S. Sneath has announced.

The facility, to be built and operated by the corporation's Linde Division, will produce pipeline oxygen, high purity gaseous nitrogen and refined liquid argon for Union Carbide's chemicals and plastics plant in Brownsville and other industries in the Gulf Coast area. Capacity of the plant will be 1,500 tons per day of oxygen, 1,320 tons per day of nitrogen and 68 tons per day of argon. Completion is scheduled for the third quarter of 1981.

Union Carbide is the leading producer of industrial gases in the

United States and one of the largest in the world. There are more than 100 Linde gas-producing plants in this country, and company affiliates have gas production facilities in 10 other countries, including plants being built in France, Germany, Saudi Arabia, Korea, Canada and Brazil. The company pioneered the industrial gases business in the United States 72 years ago with the production of gaseous oxygen.

The research and development group of Linde is also a leader in new process technology for industrial gases and cryogenic fluids in a wide range of applications, from steel processing to medicine to wastewater treatment.

wanted . . .



Y-12 PLANT

RIDE from West Tyrone to Biology or North Portal, straight day. Christopher Harley, plant phone 4-0208.

TWO PERSON CAR POOL (non-smoker) from Cumberland Estates, Cross Creek Apartments, to North Portal, 7:45 a.m. - 4:15 p.m. shift. Rebecca Valentine, home phone 584-9522.

RIDE or will join **CAR POOL** from Lovell Road - Farragut area to North Portal, 7:40 a.m.-4 p.m. shift. Larry Howington, plant phone 6-2740, home phone Knoxville 966-9478.

ORNL

JOIN CAR POOL from Westhaven/Cumberland Estates area, Knoxville, to West Portal, 8-4:30. Charles Varner, plant phone 4-4100, home phone 584-3860.

JOIN or **FORM CAR POOL** from East Fairview Road/Florida Avenue (East Oak Ridge) area, 8:15-4:45. Fred Baes, plant phone 6-2137, home phone 483-5118.

JOIN or **FORM CAR POOL** with one other driver from Woodland area, Oak Ridge, to East Portal, 8:15-4:45. Bruce Moyer, plant phone 4-6719, home phone 482-9648.

RIDE from Cedar Lane area, Knoxville, to West Portal, 8-4:30. Glenda Carter, plant phone 4-7292.

JOIN CAR POOL from Kingsgate Subdivision, Concord area, to East or North Portal, 8-4:30. Nancy Wright, plant phone 4-6273, home phone 966-5228.

ORGDP

RIDE from Clinton to Portals 2, 3, 4, 7, 8 and 9 from 7:45 a.m.-4:15 p.m. or 8 - 4:30. Ron Isabell, plant phone 4-8628, home phone Clinton 457-5034.

VAN POOL COMMUTER SERVICE available from Cumberland Estates, Knoxville, to ORGDP. 8 a.m.-4:30 p.m. Les Quarles, plant phone 6-0400, home phone Knoxville 584-3024.

JOIN CAR POOL from West Knoxville area to Portal 2 or 4, 7:30 a.m.-4 p.m. shift. Ear Tullos, plant phone 6-0032, home phone Knoxville 693-8899.

division deaths . . .

Charles Clifford Rains, a toolroom attendant in the ORNL Finance and Materials Division, died November 2 at his home. A 32-year ORNL employee, he lived at 117 Wellington Circle, Oak Ridge.

Survivors include his wife, Lou Ella; son, Kenny; and daughters, Peggy Wenton and Linda Beeler.

Funeral services were held at Royce Baptist Church, Oak Ridge, with burial in Oak Ridge Memorial Park.

Max L. Ridge, Paducah Quality Evaluation Department, died in an automobile accident November 10.

Mr. Ridge joined Union Carbide in May, 1976.



Mr. Rains



Mr. Ridge

He is survived by his wife, Mrs. Pamela Ridge of Metropolis; a daughter, Shireen Elizabeth Ridge; three sons, Brian, Thomas and Glenn; a sister, Rebecca Ann Wells; a brother, Patrick Lee; and his grandmother, Mrs. Grace Green of Greenville, Ill.

Energy advisor

Why all the fuss about laboratory fume hoods?

by Douglas J. Dypolt,
ORNL Energy Division

Laboratory fume hoods are energy hogs! Energy is consumed not only to condition (heat and cool) air exhausted by these hoods, but also by electric motors and fans that move the conditioned air. In East Tennessee, the energy consumed annually by a single six-foot fume hood would heat and cool a single-family residence for more than two years.

At ORNL, the bill for the energy needed to operate 700 fume hoods amounts to a million dollars per year. That's what all the fuss is about—the energy consumed in hood operation and acceptable ways to reduce that consumption.

Using the fume hood

The fume hood, one of the most important pieces of laboratory equipment, is generally employed to confine and exhaust various toxic, corrosive, and odorous fumes generated in the laboratory. Air is brought into the face of the fume hood over the back of the fume hood operator and through the sash opening into the hood where noxious fumes are entrained, treated and then exhausted to the atmosphere. Any air exhausted by a fume hood must be replaced by outside air that is conditioned to a temperature compatible with the temperature and humidity requirements of the laboratory.

A few ventilation systems supply unconditioned outside air to the laboratory whenever temperature and humidity conditions permit. However, due to the wide variations in outdoor temperature and humidity, outside air can seldom be used without being either heated or cooled to some extent. Since outside air normally requires either heating or cooling, energy is consumed on virtually a continuous basis. In this article, we'll look at some ways to reduce that consumption.

Earlier usage trends

Before the energy-conscious 70's, the trend was to install at least two fume hoods in each laboratory and exhaust those hoods at full flow at all times. Whether or not the fume hood was in use, 100 percent outside air was cooled to 55°F and then reheated to maintain comfortable conditions in the laboratory. The energy waste was tremendous.

Unfortunately, most of those systems are still operating. Removing old fume hoods and revamping ventilation systems, although practical, becomes expensive, and budget limitations often preclude such an operation. Fume hood owners are reluctant to ask for changes in existing hood systems, even when there are no apparent needs for the hoods in the reasonable future.

Our major effort today is toward educating managers to hold down the number and size of new hood installations as much as possible. This strategy has the most cost-effective, long- and short-range payoff.

The new ORNL Environmental

Sciences Laboratory is an example of a concerted effort to limit the number of fume hoods. Twenty-nine fume hoods were installed in this 78,000-square-foot, 27-laboratory building. A reduction of 25 hoods was accomplished by informing managers of the energy wasted by unnecessary fume hoods. This reduced load accounts for an estimated 17 percent savings in the total energy requirements of the building.

Face velocity

Face velocity, the speed at which the air enters the face of the fume hood, also affects the amount of air exhausted by the hood. It is intended to be high enough to keep the hazard in the fume hood. Present face velocity guidelines indicate a minimum velocity range of 50 feet per minute (fpm) for low toxicity, non-radioactive operations and up to 200 fpm for radioactive operations. Consequently, the energy penalty varies by a factor of four, depending on the face velocity selected. Energy waste can be minimized by selecting an adequate but not excessive face velocity.

Sash position determines the area of the hood face through which the air will pass. Since velocity and area determine the volume of air exhausted, it is important to establish the proper sash position. The sash can provide a protective barrier between the operator and the operation at some height below the fully open height.

It is evident that improper selection of both the face velocity and sash position can result in eight times the energy usage for non-bypass hoods. Sash position made less difference when bypass-type hoods were used, since a constant exhaust rate was maintained. Consequently, a step toward energy conservation has been taken by no longer requiring the use of bypass-type hoods.

Time management

The ability to shut down the exhaust system on select laboratory fume hoods, when the hoods are not in use, can result in considerable energy savings. The laboratories are normally vacant 70 percent of the time. Since many fume hoods are used sporadically, some fume hoods may be shut down when not in use and during off-duty hours.

Before a fume hood can be considered for intermittent service, the work performed in the hood must be categorized. Only those hoods containing operations that leave non-toxic residue in the hood system are eligible for intermittent shutdown.

Reduction of air flow through hoods during non-use periods is a possibility if complete shutdown is not. Considerable effort has been made to develop a method for classifying fume hoods and developing suitable operating/monitoring hardware according to the velocity/toxicity relationship, so that velocity reduction or shutdown can be made acceptable.

Auxiliary air laboratory fume hood systems have also been used to reduce energy waste. Unlike the conventional fume hood that uses

100-percent conditioned room air, the auxiliary air fume hood requires approximately 40-percent room air and 60-percent outside air. Since the outside air is not cooled in summer and is heated to only 60-65°F in winter, the energy penalty can be reduced slightly. However, the first cost of the auxiliary air system is high due to additional equipment such as fans, ductwork and heating coils that condition and deliver the outside air directly to the fume hood.

Supplemental air fume hoods

Scientists at Los Alamos Scientific Laboratory have recently questioned whether auxiliary air fume hoods operate satisfactorily. Adequacy of personnel protection and actual life-cycle-cost savings are two main areas of concern. Energy audits indicate the auxiliary air systems may not, cost effectively, conserve energy unless the system is operated continuously. Personnel protection concerns hinge around whether or not noxious materials are routed away from the operator while the auxiliary air fume hood is in normal operation.

Questionable performance by the auxiliary air system has led to the development of the supplemental air system. This system delivers make-up (again uncooled, only partially heated) air close to the fume hood so that the supplemental air blankets and then enters the face of the hood.

Like the auxiliary air system, the supplemental air system requires additional equipment leading to increased capital investment. Unfortunately, only a slight reduction in energy waste is realized after a much-increased first cost.

Energy savings potential

The potential to save far more than 50 percent of the energy consumed by fume hoods exists at the present time. Energy can be saved by selecting an adequate face velocity with the sash at the working position. Adopting various time management (off-duty reduced-flow or shutdown) procedures and employing supplemental air fume hoods and devices to reduce air flow through the fume hood are all viable energy reduction methods.

However, the best method to reduce the energy penalty and capital investment at the same time can be achieved by eliminating unnecessary fume hoods in the design stage. Design engineers have the responsibility to educate managers about the energy-consuming nature of all fume hoods and the value of trimming hood installations to meet confirmed needs. It is evident that fuel shortages and rising energy costs will necessitate the design, installation and operation of the most cost-effective, energy-efficient systems available.

about
people. . .



Mazur

Cleland

Peter Mazur, leader of the theoretical and applied cryobiology group in ORNL's Biology Division, has accepted a one-year term as a Sigma Xi National Lecturer, beginning July 1, 1980.

Lecturers for Sigma Xi, a national scientific research society, are featured in the society's publication, *American Scientist*, as being available on invitation to present one of their announced lectures to the chapters and clubs of Sigma Xi. Mazur's basic lecture will be "Stopping Biological Time: The Biological, Medical, and Agricultural Implications of Frozen Living Cells."

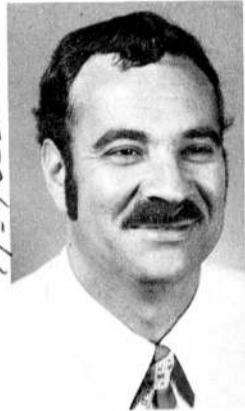
Mazur joined Union Carbide in 1959 following a two-year appointment as a National Science Foundation Postdoctoral Fellow at Princeton University. He is a Fellow of the American Association for the Advancement of Science and was a founding member of the International Society for Cryobiology, which he has served both as vice president and as president.

John W. Cleland, Solid State Division, ORNL, has received the 1979 Radiation Industry Award presented by the American Nuclear Society (ANS). The award recognizes outstanding contributions to the application of radiation technology in industry. It consists of an engraved certificate and a \$1,000 honorarium.

Cleland was cited for "pioneering research on the neutron transmutation doping of semiconductors that has led to the important industrial application of neutron transmutation doping (NTD) of silicon for use in semiconductor devices."

Cleland has been with Union Carbide for 30 years. A native of Ohio, he is a graduate of Monmouth College and holds a master's degree in physics from Purdue University. He is a member of the American Physical Society, American Association for the Advancement of Science, American Association for Crystal Growth and Sigma Xi.

ORGDP announces promotions



Beeler



Buchanan



Curtis



Suter

Four promotions have been announced at ORGDP. Milton O. Beeler has been named a shift supervisor in Cascade Operations; Thomas C. Buchanan a supervisor in the Maintenance Division; Bobby W. Curtis an administrative services

supervisor in the General Accounting Division; and Richard W. Suter a supervisor in the Maintenance Division.

Beeler, a native of Knoxville, worked as a lab technician at ORTEC before joining Union Carbide in 1974.

He and his wife, the former Karen Wilmoth, live at 334 Jefferson Avenue, Oak Ridge. They have two daughters, Tiffany and Allison.

Buchanan was born in Dundalk, Md., and worked for General Electric before coming to ORGDP in 1977.

He is married to the former Beverly Paugh, and the couple lives at 421 Skyline Drive, Kingston. They have two children, Carol Anne and Tommy.

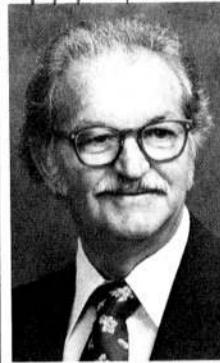
Curtis is a native of Calhoun, Tenn., and has been with Union Carbide since 1954. Most recently she was the plant manager's secretary. She has attended Knoxville Business College and the University of Tennessee.

She and her husband, Clayton, live on a farm near Loudon. They have a daughter, Lee Ann.

Suter was born in Kokomo, Ind., and came to Oak Ridge in 1967. He served in the U.S. Navy and worked with Union Carbide in Kokomo for 10 years. He also worked for the Cabot Corporation there and the U.S. Nuclear Company in Oak Ridge.

Mrs. Suter is the former Judith Coopridge. They live at 709 Sunset Drive, Kingston, and have three children, Kathy, Margi and Tim.

retirements.



Clarence C. Crisp
Electrical
Y-12
26 years service



Herman M. Jenkins
General Foundry
Y-12
32 years service



Joseph W. McNeal
Research Services
Y-12
24 years service



Robert W. Miller
Buildings, Grounds
Y-12
34 years service

Summer programs announced

Applications are now being accepted for ORNL 1980 summer employment programs. Brief descriptions of the available programs, according to the experience and educational requirements, follow.

For students who have completed high school: Youth Opportunity Program—provides employment for disadvantaged youth with potential for post-high school endeavors.

For students who have completed one or two years of college: (1) Summer Administrative Support Program—employs students to work in administrative support divisions. (2) Summer Janitorial Program—provides replacement janitorial employees during summer vacation periods.

For undergraduate students who have completed the junior year of college: (1) Oak Ridge Associated Universities (ORAU) Student Research Participation Program—for students majoring in physical, life, environmental or social science, engineering or mathematics. (2) A program for students meeting the requirements of the ORAU program, but for whom no ORAU funds are available.

For college graduates: (1) ORNL Summer Research Internship—limited to outstanding college graduates and graduate students. Its purpose is to identify students with potential for outstanding graduate school performance. (2) Forestry Program—participants assist in seasonal activities connected with the Forestry Management Program administered by the ORNL Environmental Sciences Division, including timber marking, timber type mapping, natural area survey and summarizing inventory data.

Special Affirmative Action Program—accommodates selected minority and women candidates

whose circumstances warrant special consideration.

ORAU Faculty Participation Program—provides opportunities for research not available at participants' home institutions.

ORNL Faculty Participation Program—participants further ongoing divisional research programs.

Applications for most of these programs must be received by early January. For more information, contact the ORNL Office of University Relations, 4-5922.

Y-12 promotions



Blanc



Landers

Eleanor C. Blanc has been promoted to a lieutenant in the Plant Protection Department at Y-12 and Clay C. Landers has been named a foreman in the Maintenance Division.

Blanc, a native of Knoxville, joined Union Carbide in 1977 after working as a drivers' license examiner with the state of Tennessee and as a meter maid for the City of Knoxville.

She lives at 5221 Rowan Road, Knoxville, and has four children, Mike, Eddie, Bub and Cindy.

Landers, a native of Bartow, Fla., has a BS in industrial education and an AS in electronic engineering. He came to Y-12 in 1970 after working in civil service.

He and his wife, the former Nancy Fisher, live at Route 4, Kingston. They have two sons, David and Donald.

anniversaries. . .

Y-12 PLANT

35 YEARS

Ruby P. McCloud, Product Certification Administration; Willie T. Cale, Building Services; Clifford R. Stiles, Special Services; Allen B. Townsend, Development Division; and John A. Stewart, Beta 2 Chemistry.

25 YEARS

Don R. Carr, Onva K. Clotfelter, Raymond C. Glandon, Billy R. Lundy, Fred Marshall, Marion R. Nations, Ernest D. Collins, Charles E. Foster, Ernest D. Freels, Harold L. Goldston, William C. Smith (adjusted to October 15), Merle R. Emery, Joe H. Hamilton, Bobby M. Rutherford, John S. Wilson, Billy D. Cantrell, Hubert R. Cannon, Gilbert L. Carson, Walter A. Dosssett, Lawrence E. Kinkaid, Emery W. Mahan, George M. Martin III, John A. McCall, Samuel E. McSpadden, Jack J. Miller and Sheila C. Rowan.

20 YEARS

Albert T. Gladson, Mary P. LeCroy, Robert E. Banken, Richard C. Cawood, Zelma T. Laurendine, Richard E. Myers and David D. Owens.

ORNL

35 YEARS

Thomas S. Mackey, Operations; Augustine N. Smith, Engineering Technology; and Margaret H. Wilson, Engineering Technology.

25 YEARS

Charles W. Nestor Jr., Carol P. Coker, Lyman R. Brasier and Vernon T. Carmony Jr.

20 YEARS

James S. Hansard and Earl E. Waugh.

ORGDP

35 YEARS

Bruce P. Holbrook, Operations; and Julius Foster, Engineering.

25 YEARS

Robert E. Symons, Hugo K. Hughes, Jim G. O'Kain, Robert B. Meyers Jr. and Victor Allen.

20 YEARS

Fredrick M. Postma Jr.

UT grad school sets schedule

The UT Oak Ridge Resident Graduate Program will hold registration for winter quarter on January 3-4, from 12 to 6 p.m.

The program serves the graduate educational needs of employees in the fields of engineering, science and business. Carbide employees interested in taking refresher courses or management courses to supplement a technical education or in obtaining masters or doctoral degrees are encouraged to enroll in the program.

An added incentive to employees considering enrollment is the fact that Union Carbide will reimburse half the tuition cost as each course is completed and the other half if a degree program is completed.

For more information, please contact Veronica Maya or Gerald E. Hills at 576-3429. The program office is located at 246 Laboratory Rd., behind the DOE building.

NUCLEAR DIVISION NEWS

UNION CARBIDE CORPORATION
NUCLEAR DIVISION

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recreationotes. . .

Bowling league standings

Y-12 C. . .

The Mini-Strikes lead the league. . . as the Sunflowers and Big Five tie for second place. Willie Wilson holds second place for the season high series with 716. John Bryan has second position for the season high game of 274.

UCC Mixed. . .

The race continues between the Alley Cats and the Go Getters in the UCC Mixed League, with the Cats one-half game out front. Bonnie Cooper rolled a 535 series recently, as Ellen Queener took the high scratch game of 221. For the men, it was Bill Jago throwing a 545 scratch series, 231 high game.

ORNL C. . .

The Alley Rads continue their hold on the C League. The Hit Men and Remkeys are in second and third places. The weekly highs went to the Remkeys for a series of 3056. Fadnek, Cellar Dwellers, won individual highs with a 676. Rickard, Knuckleheads, took a 240 single game. McCarthy, Alley Rads, posted a 219 high scratch game.

Patent granted. . .

To Gary L. Haag and David W. Holladay of ORNL for "Method of Immobilizing Carbon Dioxide from Gas Streams."

ORGDP sets dance December 15

The annual ORGDP Christmas dance, "Winter Wonderland," will be held Saturday, December 15, at the Oak Ridge Civic Center. This year's dance is chaired by the Auditing Division.

The evening will begin at 7:30 with a social hour and light hors d'oeuvres. Dancing starts at 9 p.m. with music by Barnstorm, a versatile local group featuring easy listening, rock, disco and country.

Tickets are \$8.50 per person and are available in all ORGDP divisions.

Y-12 Classic. . .

The Ridgers and Splinters are tied for the Classic League lead. The Has Beens rolled a recent high team series of 3122. Les Edwards, Kingpins, rolled a 253 high weekly game. Herm Stewart, Has Beens, blasted a 701 for high weekly series, putting him in fourth place for the season.

K-25 Tuesday. . .

The Fearless 5 have a three point lead over the Shifters in the K-25 Tuesday League. M. N. Strickland, Fearless 5, won all the weekly prizes recently, rolling a 235/615 scratch tally with a 259/687 handicap total.

ORNL A. . .

The Dynamics took the lead over the Zots recently in the A League. The Dynamics rolled a 3176 high series. Wood had a 660 weekly handicap while Hawkins took a 253 single game high.

UCC Monday. . .

After the position round, there are four teams tied for first place. . . Charlies Angels, Good Luck Four, Free Spirits and Strike Force. The high team game and series belong to the Psychols who posted an 801/2335. Individual highs went to Churchill Moore, 629 series; Norman Teasley, 240 game; Shirley Williams, 602 series; and Janice Kelso, 224 single game.



The Barnstorm



MAGIC ACT—Larry and Jeff Bohanan will display sleight of hand at the Christmas parties set December 22 for Carbide employees' children. Parties are set at 9 and 11 a.m., and again at 1 and 3 p.m.

Bohanan repeats at parties

More plans are announced for the Christmas parties for Carbide children set Saturday, December 22, at the Oak Ridge High School auditorium.

Larry Bohanan, Y-12 Graphic Arts Department, will perform feats of magic for the parties, with the help of his wife, Patsy, and son, Jeff. . . along with his host of puppets. The show was developed especially for the children's parties and will feature Frostie the Snowman.

Young Bohanan has been into legerdemain for some time and

recently won the magic convention youth contest in Indiana. He will perform in Costa Rica next summer.

Times for the parties are 9 and 11 a.m. and 1 and 3 p.m. Ticket applications must be received by December 14 to assure delivery in time for the big event.

Inge Williams will also be featured with her canine stars, featuring Silky, a Samoyed that balances on a ball.

The ticket application is repeated below.

Application for Tickets

to

Christmas Parties

FOR CHILDREN OF OAK RIDGE UNION CARBIDE EMPLOYEES
(AGES 2-10 ONLY)

SATURDAY, DECEMBER 22

Plant _____

Employee's Name _____

Home Address _____

City _____ Zip _____

Plant Address _____ Mail Stop _____

Number of Tickets (Children) _____

Number of Tickets (Adults) _____

—CHECK TIME PREFERRED—

Saturday, December 22
Only

9 A.M. _____ 11 A.M. _____ 1 P.M. _____ 3 P.M. _____

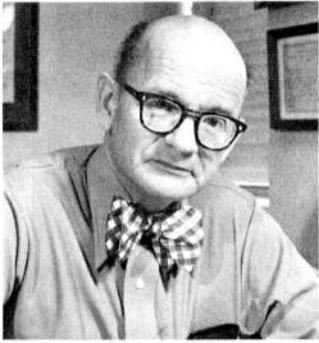
Please mark first and second choice (write in space "1" or "2") as only a limited number of tickets will be issued for each party. Preference will be given to early applicants and if tickets for first choice are exhausted, tickets for second choice will be issued.

Return this form, properly and completely filled out, to the Carbide Recreation Office, Building 9711-5, Mail Stop 1, Y-12 Plant. Please apply for tickets before December 14.

Savings Plan-Personal Investment Account

	Fixed Income Fund	UCC Stock	Equity Investment Fund
December 76	13.0553	59.2723	8.8166
December 77	14.2017	40.9096	8.0427
August 79	16.4042	42.3163	9.7902
September 79	16.5240	43.1458	9.8398
October 79	16.6451	40.7645	9.4576

Note: Fixed Income Fund unit values reflect interest additions to achieve the guaranteed effective annual interest rate of 9.1% for 1979. Union Carbide stock values are the average cost of stock purchased during the month. Equity Investment Fund unit values represent the month-end market value of securities held by the Fund. The price of each unit is determined by dividing the total value of the securities by the number of units in the Fund.



Medicine Chest

Urine colors

by T. A. Lincoln, M.D.

(Editor's Note: Dr. Lincoln alternates his regular column with "The Medicine Chest," where he answers questions from employees concerning health in general. Questions are handled in strict confidence, as they are handled in our Question Box. Just address your question to "Medicine Chest," NUCLEAR DIVISION NEWS, Building 9704-2, Stop 21, Y-12, or call the news editor in your plant, and give him or her your question on the telephone.)

QUESTION: What is the significance of the various shades of urine? What is our body telling us? Can we learn to "read" our urine as perhaps a daily signpost?

ANSWER: The gross appearance of urine was of great importance to ancient physicians. As late as 1886, the textbook *Prognostics*, by Adams, said, "If the urine is reddish, the sediment consistent and smooth, the infection will be more protracted but still not fatal. . . . Clouds carried about in urine are good when white, but bad if black. . . . Fatty substances floating on the surface are to be dreaded, for they are indications of melting."

The higher the liquid intake the lighter the color becomes

The amber-yellow color of urine is due to the pigment urochrome. It is a yellowish compound made from urobilin, a breakdown product of hemoglobin of the blood. The amount of urochrome is increased during fever and starvation. It is thought to be roughly proportional to metabolic activity, so it is increased when the thyroid is overactive. The darkness of this pigment is also closely related to concentration. A person who drinks a great deal of liquid will have a pale urine, while a person who is dehydrated will have a darker urine.

A person who takes B vitamins has probably noticed that his or her urine is a much darker amber color and has the characteristic vitamin B odor. Excretion reflects oversaturation of tissue stores. When one sees and smells vitamin B in the urine within an hour after a multivitamin tablet, one can probably assume that he or she already has an overabundant supply of the vitamin.

Medication sometimes produces a red or orange coloration

A cloudy urine is usually caused by phosphates that have been precipitated in an alkaline urine and are of no significance. A little vinegar added to the urine will make the cloudiness go away. Urate crystals may cause cloudiness in an acid urine but these go away when warmed.

When the cloudiness remains, even after acid is added or the urine is warmed, it may be caused by white blood cells that indicate an infection. When excess red blood cells are present, the urine may have a pinkish cloudiness. A great amount of blood, of course, colors the urine red.

Red or orange urine is sometimes produced when certain medicines are taken. A few persons who have a certain genetic makeup excrete red urine after eating beets.

Yellow-brown or green-brown urine is caused by liver disease or jaundice. When the biliary tract is severely obstructed, the urine may be dark green.

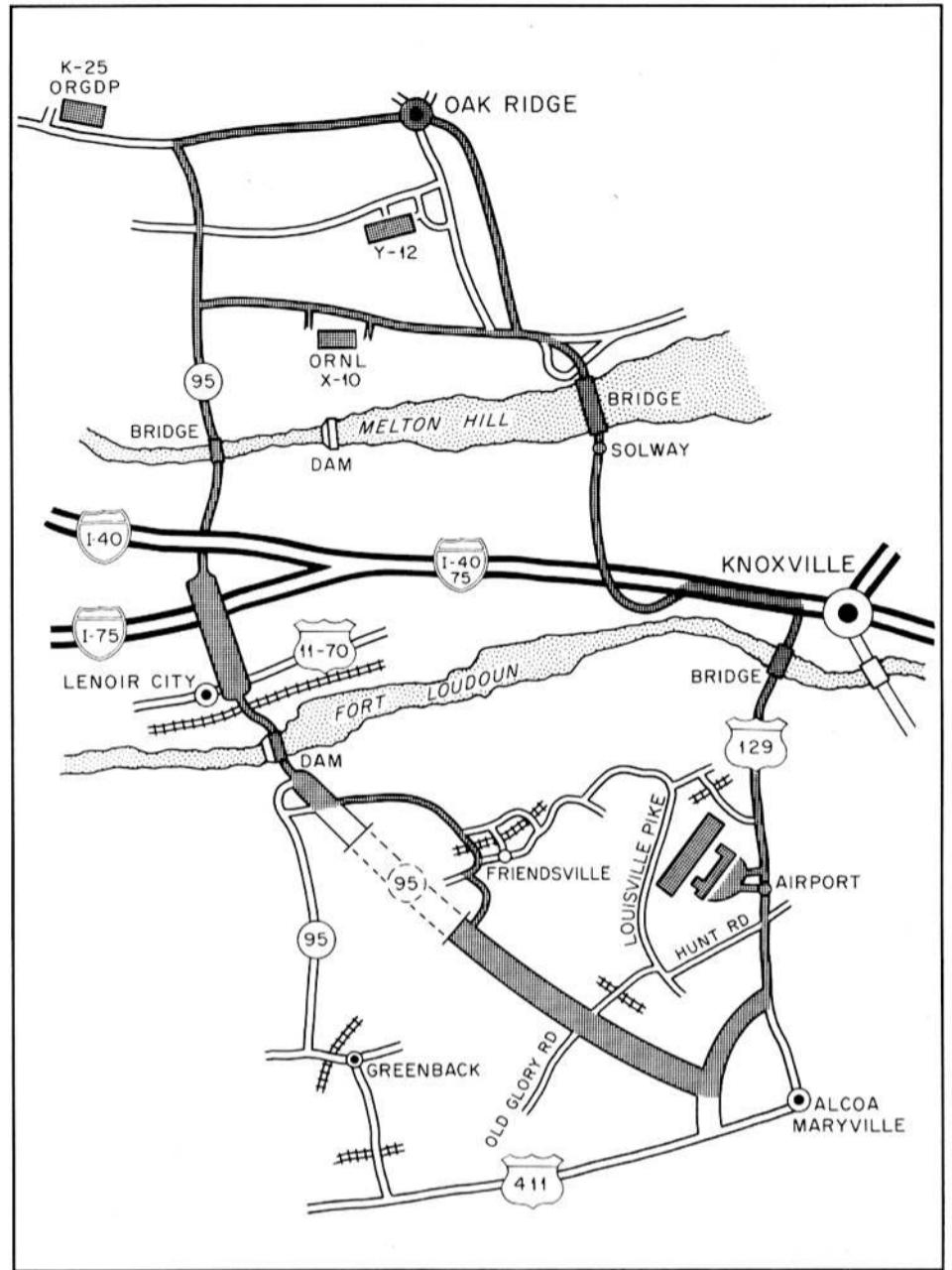
Urine normally has a characteristic aroma, but its cause is unknown. This may distress analytical chemists, who can identify almost anything, even if it is present in only a few parts per billion. Perhaps no one has thought it worth studying.

A urine that smells especially bad or foul probably indicates an infection. Nearly everyone has probably noticed the characteristic odor of urine an hour or two after eating asparagus. A congenital metabolic disorder of amino acid metabolism produces a urine that smells like maple syrup. It has been said that urine from persons with the metabolic disorder phenolketonuria smells "mousey."

Diabetes tests simple and sure

In 600 B.C., Sasruta, a Hindu physician, noted that urine from people with diabetes tasted sweet. It wasn't until 1674 that this sweetness was rediscovered and used as a diagnostic test by Thomas Willis. He said that diabetic urine tasted like dilute honey. These sweet tastes probably occur only when large amounts of sugar are being excreted. Sensitive and simple tests are now available for testing sugar in the urine.

Microscopic and chemical examinations of urine are of great value in diagnosing many diseases. The gross appearance and odor of urine are now hardly noted in the laboratory. Nevertheless, much can be learned by examining urine only by sight and smell. Unfortunately, it is such a crude health index that it is hardly worth studying except to note gross changes. A red urine is probably of greatest consequence and should be reported to a physician immediately.



MISSED YOUR PLANE?—With the recent construction and repair work on Interstate 40 and Alcoa Highway, many Nuclear Division travelers have found themselves delayed by traffic on their way to McGhee-Tyson airport. Some, in fact, have even missed their flights as a result. This map, which is not drawn to scale, shows an alternate route from Oak Ridge to the airport. Travelers who wish to avoid I-40/Alcoa Highway may take Highway 95 south by Lenoir City, then turn left onto the bypass and follow 129 to the airport, as shown by the shaded area on the lower half of the map. This route covers approximately 40 miles from Oak Ridge and requires about an hour's driving time.



HOLD ON HARRY—David Giltner, left, Stella Bell and Jerry Huebschmann, discuss how long Harry can hold on and how he might meet his fate as part of Paducah's "Hold On, Harry" contest in which \$525 in savings bonds will be awarded to contest winners. The time and means of Harry's ultimate fate will be selected at random thereby allowing each entry an equal opportunity to win. All entries must be received in the Safety Department by Friday, December 7, 1979 to be eligible.

79-4631

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Becky Durham



John T. Houston

No time problems found

(Continued from page 1)

Becky Durham, ORGDP Receiving Department, said, "At first it was a hassle; but, just like anything else, you get used to it. You have to know what you're doing so you won't miss any important appointments. I get a big kick out of it. Sometimes I ask for a time check on my CB radio. The truckers all 'come back' with 'Which time do you want—Music City (Nashville), K-Tel (Knoxville) or Cooky (Crossville) time?'"

Edward G. Bohlmann, ORNL Chemistry Division, said the time difference "really makes it hell to get up." He said it also means that he has to go to bed extremely early. Bohlmann, who has lived in Tansi Village, just outside Crossville, since last spring, said he hopes he won't have to make the trip for very much longer. He plans to retire to his new home within a year and a half.

Leslie E. Ottinger, ORNL Instrumentation and Controls Division, said he has no real problems, except having to get up an hour earlier (4:45 a.m., CST). "We have one big advantage—we get home by about 4:20 p.m., our time," he explained. Ottinger has been making the 50-mile trip from his home in Crossville since August of 1978. He said he keeps his watch set on Central time.

John T. Houston, ORNL Metals and Ceramics Division, has commuted from his Crossville home for some 20 years. He said he's long since adjusted to the time difference and that it doesn't bother him. Houston said he keeps all his timepieces set on Central time, because "it's less confusing for my family."

Norman E. Hinkle, ORNL Energy Division, said the time difference has caused one major problem at home—he has already left for work (at 5:45 a.m., CST) before anyone else has even got up. "My wife works evenings, so we communicate by

means of a note on the refrigerator door," he added. Hinkle, of Crossville, said the time difference and distance problem also make it inconvenient for him to work at odd hours or on weekends.

Edward Caruthers, Barrier Maintenance, works the seven-day rotating shift. "It's no problem. I leave home at 1:30 p.m. and get to work at 3:40. I leave work at midnight and get home at 11:50 p.m. The way I look at it, it's just a matter of numbers. The physical time is the same, only the numbers are different."

James S. McKinney, Paducah Plant Engineering, "We leave about 6 a.m. every morning and it takes us about an hour to get to work. It's about 45-50 miles."

"The biggest problem is the fact that Tennessee has no income tax and we must pay Kentucky state taxes, but there is no reciprocity system."

"Our road doesn't have much traffic on it and that makes it a little faster."

Clayton Pratt, Paducah Plant Engineering, "Well, I've worn out many a good car going back and forth."

"At one time, there was talk of making people buy two license plates, one for Illinois and one for Kentucky, but thankfully, that never came to pass. We had six people in a carpool for about 26 years, but I moved and it became inconvenient to continue. It takes us about an hour and 10 minutes to get home. I've gotten accustomed to the drive. I've never really minded driving."

Arville Almon, Cascade Operations, Paducah, "I really don't have any particular problems. It takes us about an hour to get to work. I came over to see about a job when the plant was started and I've been here ever since. There are really no differences in working in Kentucky and living in Missouri."

Safety Scoreboard

Time worked without a lost-time accident through November 20:

Y-12 Plant.....	229 Days	7,654,000 Employee-Hours
Paducah	180 Days	1,925,000 Employee-Hours
ORGDP.....	343 Days	10,955,396 Employee-Hours
ORNL	29 Days	670,880 Employee-Hours



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