

NUCLEAR DIVISION NEWS

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

Volume 14/Number 4

February 24, 1983



Employees achieve outstanding safety record

Nuclear Division employees achieved another outstanding safety performance record in 1982, sustaining only four occupational injuries that resulted in lost workdays.

The Division's 1982 end-of-year lost workday case incidence rate (LWCIR), based on the number of lost workday cases per 200,000 employee hours, was 0.02. This ties the Division's all-time low rate, established in 1981. Union Carbide's corporate-wide (excluding UCC International) LWCIR for 1982 was 0.13.

'Outstanding achievements'

At a Nuclear Division safety awards luncheon late in 1982, Union Carbide President Alec Flamm offered his "heartiest congratulations to all who have helped contribute to these outstanding safety achievements." He also challenged Division employees to improve their rates for off-the-job accidents as well.

Nuclear Division President Roger F. Hibbs called the safety performance "a tremendous effort and the result of sustained accomplishments by everyone in the Division. We should

all be extremely proud of our wonderful safety record," he said.

Employees at the Paducah Plant led the way by completing their second consecutive year without an occupational lost workday case. At the end of 1982, Paducah employees had worked 885 consecutive days (7,255,120 hours) without a lost workday case — a continuing Nuclear Division record.

During the period May 11, 1980, through June 16, 1982, employees at ORNL worked 767 consecutive days (17,907,911 hours) without a lost workday case, establishing a new Nuclear Division and Corporate Installation record. ORNL and ORGDP tied for the lowest Division installation recordable injury/illness incidence rate, while the Y-12 Plant achieved the lowest off-the-job disabling injury frequency rate.

Special awards

Employees at each installation will be honored for their efforts, having earned awards from DOE and the National Safety Council. Union Carbide's Outstanding Safety

Gold Award was earned by ORNL employees for completing more than 16,000,000 hours without a lost workday injury.

ORNL, Y-12 and the Paducah Plant are eligible for DOE's Award of Excellence, the Department's highest safety award; ORGDP has qualified for the DOE Award of Achievement.

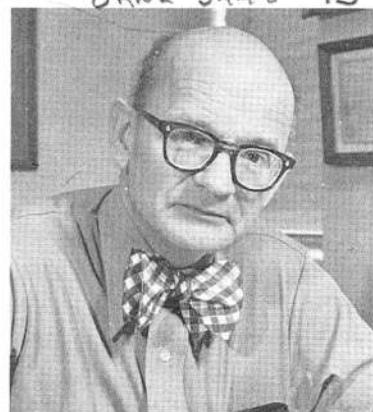
Lost workday cases

All four facilities are expected to receive the National Safety Council's highest award, the Award of Honor, which recognizes either a record of 3,000,000 or more employee hours without a lost workday injury or a specified improvement in LWCIR and lost workday incidence rate.

The Division's LWCIR of 0.02 appears even more outstanding when compared to the 1981 average rate for American industries, which was 2.21.

Of the four lost workday cases that occurred in 1982, two involved finger injuries suffered by machinists (one each at ORGDP and Y-12)

(Please turn to page 8)



Farewell to readers

by T. A. Lincoln, M.D.

This will be the last of a series of over 700 health articles I have provided for Nuclear Division readers since I began writing for the *ORNL News* on September 18, 1953. In this farewell, I would like to share with you what writing these articles has meant to me over the past 28½ years. I would have stopped writing years ago if I had not received sufficient feedback to make me believe my articles were appreciated. Writing this column has played a special role in my professional career, and I have found the effort personally rewarding. I now realize, however, that I must devote every spare moment to the crises and problems in occupational health and medicine that dominate my career as a manager.

When I became ORNL medical director in 1953, I realized that, to succeed in preventive medicine, I would have to devote a great deal of time to health education. I knew that a good way to do this would be to stress prevention each time I saw a patient. Unfortunately,

there was seldom time for this, so I knew that I would be able to influence only a small number of people this way. Thus, an obvious solution was to write articles and present talks on health-related subjects.

I soon realized, however, that I could not take time at work to do the necessary reading and writing. Since I was unmarried at the time, it was fairly easy to do the reading and writing at home. The first few articles consisted largely of quotes or reprints from other published materials. Soon I was reading as much as possible during my spare time and writing on Sunday afternoons. I wrote 42 articles in 1954. After a few months, I began to receive spontaneous comments about my writing from fellow employees, who often would ask questions or express their appreciation. I received many suggestions for future articles.

(Please turn to page 8)



In this issue . . .

ORNL's Ray Millemann inspects a tiny handcar, part of his extensive model railroad system. For more about Millemann and his hobby, turn to page 7.

Other features:

- Question Box page 2
- News About People page 2
- Hale named 'Mayor of Year' page 3
- Y-12 Pride Circles page 4 and 5
- Recreation page 6

News About People



White

Oakes

Skinner

Whinnery

Materials society elects White

C. Woody White, senior research staff member in ORNL's Solid State Division, was recently elected vice president of the Materials Research Society for 1983. White's research involves ion implantation, ion scattering and pulsed laser annealing of solids. He has been a member of the Nuclear Division since 1975.

Oakes named to UCC committee

Thomas W. Oakes, ORNL environmental coordinator and head of the Department of Environmental Management in the Industrial Safety and Applied Health Physics Division, recently was appointed to a five-year term on the Union Carbide Corporation Solid Waste Issues Committee.

The Solid Waste Issues Committee, composed of representatives from each division of the Corporation, was formed to determine guidelines for handling waste materials at each Union Carbide domestic facility.

Skinner to head AAAS section

Dorothy M. Skinner, a senior research scientist in the Biology Division, has been named chairperson-elect to the Biological Sciences Section, the largest section in the 140,000-member American Association for the Advancement of Science (AAAS). She will begin her three-year term in June.

A fellow of the AAAS, Skinner has previously been a member of the Society's nominating and program committees, and a member-at-large of the Biological Sciences Section. Her professional memberships also include the American Society of Biological Chemists, the American Society of Cell Biology, the American Society of Zoologists, the Biophysical Society, the Society for Developmental Biology and the Society of General Physiologists.

Paducah's Whinnery certified

Walter N. Whinnery III of the Process and Material Technology Department of the Paducah Plant's Technical Services Division, has been certified as a professional engineer by the Kentucky State Board of Registration for Professional Engineers.

To be eligible for certification, an applicant must have four years of work experience in engineering and successfully complete a 16-hour written examination. The exam covers all phases of engineering practices, including statics, dynamics, mechanics and materials, fluid mechanics, thermodynamics, electrical theory, economic analysis, chemistry mathematics and nucleonics and wave phenomena.

Question Box

Why have lengthy delay?

QUESTION: Why does the ORNL occupational vision section require such an inordinate amount of time to process a prescription for safety glasses? I experienced a delay of almost eight weeks, which began with my efforts to obtain an appointment to leave the prescription and culminated with a delayed appointment for a fitting.

ANSWER: A review of ORNL's records indicates that the average time from placing an order for glasses to the fitting and delivery of them to the employee is from 18 to 24 days. This includes mailing the order, processing the prescription by the vendor, return mailing time, notification of the employee that his/her glasses have arrived and the time for an appointment for fitting and deliv-

ery. In addition, approximately one week is required for scheduling an appointment for the employee to deliver his/her prescription to the occupational vision section and select frames.

There are instances of delay which we try to avoid but cannot control. One of the most frequent is the failure of the employee (on the first appointment) to bring either the prescription or the divisional authorization for the glasses, or both. Another (rarer) instance is when the lenses, upon return from the vendor, are found not to meet the prescription requirements and must be reordered from the vendor.

Obviously mailing delays, vacations and/or illness will occasionally impact the time required to obtain prescription safety glasses.

Margaret B. Eckerd to supervise computer graphics in ORGDP department

Margaret B. Eckerd has been promoted to supervisor of computer graphics in the Graphic Arts Department of ORGDP's Finance, Materials and Services Division.

Eckerd, a native of Knoxville, attended the University of Tennessee. She first joined the Nuclear Division in 1951 as a draftsman, in ORNL's old Reactor Division. She later was employed as a design and layout artist for DOE's Technical Information Center.

In 1976, Eckerd began work in the Mechanical Engineering Department at ORGDP. She transferred to Finance, Materials and Services in 1978, where she worked as a forms designer and senior illustrator.

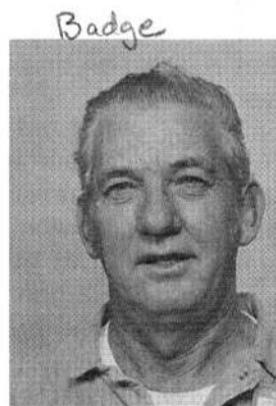
Eckerd is a member of the Tennes-



Eckerd

see Chapter, National Computer Graphics Association. She and her husband, George, live on Sheffield Drive in Knoxville. She has a grown son.

Bobby L. Mowell dies February 15



Mr. Mowell

Mr. Mowell, a Union Carbide employee since 1952, was a native of Jacksboro. He was a member of the Masonic Lodge, Jacksboro; the International Brotherhood of Teamsters Local No. 519; and Solway Baptist Church. Mr. Mowell resided at 9200 Happy Road in the Solway Community.

He is survived by his wife, Thelma Nelson Mowell; a daughter, Mary L. Jernigan of Oak Ridge; a son, Roy Lee of Knoxville, his mother and father, Helen and Lawrence Wilson of Jacksboro; a brother, the Rev. L. V. Mowell of LaFollette; a sister, Irene Martin of Jacksboro; and seven grandchildren.

Bobby L. Mowell, a salvage yard keeper in the Maintenance Division at Y-12, died February 15.

The funeral was held at Martin Funeral Home in LaFollette, and burial was in the Mount Paran Baptist Church Cemetery in Jacksboro.

Anniversaries

ORNL

35 YEARS

Meyer B. Herskovitz, Instrumentation and Controls; Ernest D. Lance, Operations; Frank T. Binford, Operations; Harry O. McNabb, Operations; James A. Harter, Instrumentation and Controls; and Joseph E. Weidley, Plant and Equipment.

30 YEARS

Richard J. Braatz, Engineering; Calvin L. Julian, Plant and Equipment; Paul H. Stelson, Physics; John J. Woodhouse Jr., Metals and Ceramics; and George E. Mellon, Finance and Materials.

25 YEARS

Woodrow W. Pitt Jr., Rowena O. Chester, Francis M. Rau, Kenneth W. Sommerfeld, Charles A. Watson Jr., Arthur J. Shor, Cullie J. Sparks Jr. and William A. Walker.

20 YEARS

Harley H. Ross, James T. McCall, Emily D. Copenhaver, Manfred O. Krause, Clay R. Stewart Jr., Carolyn V. Cornett, Henry J. Hardin, Isabel L. Norton and George D. Price.

Y-12

35 YEARS

Robert N. Rice, Industrial Engineering.

30 YEARS

Homer F. Clayton, Engineering; Herman L. Holsopple Jr., Law Department; William C. George and Rolf C. Rosenvinge, Engineering; Patsy J. Stallard, Health, Safety and Environment; William C. Pullen, Development; Lathrisia P. Tilley, Metal Preparation; Richard T. Bell, Development; Henry L. Hamilton, Fabrication; James M. Seivers Jr., Employee

Relations; Donald G. Scott, Development; and H. L. Morgan, Finance, Materials and Services.

20 YEARS

William C. Hembree, Billy S. Carter, Frederick J. Roettger and Charles M. Rickman.

ORGDP

35 YEARS

Edward D. Wilson, Purchasing.

30 YEARS

Edward E. Cook, Technical Services and Benjamin F. Johnson, Auditing.

20 YEARS

Robert E. Horne Jr., J. Robert Merriman and Mitchell B. Ollis.

PADUCAH

30 YEARS

John D. Boss Jr., Operations; Robert I. Shetler, Operations; Ernest R. Johnson, Plant Engineering; Dentis K. Riley, Utilities and Chemical Administration; Warren E. Scott, Steam Plant, Charles T. McDaniel, Operations; Thomas P. Englert Jr., Plant Services Department; James R. Stephens, High Voltage Switchyards and Distribution Systems; James M. Gage, Process Maintenance; William P. Woods, Materials Department; Margorie Overstreet, Operations; Wilton G. Higgins, Operations Engineering; Daris B. Charlton, Operations Engineering; Charles W. Elliott Jr., Plant Services Department; Anna Rose Davis, Personnel Services; Charles C. Kuppert Jr., Plant Services Department; Ward G. Taylor, Fabrication Shops; Charles H. Biggart, Process Maintenance; and Roger F. Hunt, Process Maintenance.

25 YEARS

Kathelene Smith.



Byron H. Hale

Clinton's Byron Hale selected as Tennessee Mayor of the Year

Byron H. Hale, superintendent of the Estimating Engineering Department in the Nuclear Division's Engineering organization, recently was named Tennessee Mayor of the Year by the Tennessee Municipal League. Hale currently is serving his fourth consecutive term as mayor of Clinton.

A native of Narrows, Va., Hale joined Union Carbide and moved to Clinton in 1953, after serving in the U.S. Army and graduating from Virginia Polytechnic Institute. He began his career with the Nuclear Division as an engineer at the Y-12 Plant and has served in various capacities in the Engineering Division at each of the three Oak Ridge installations.

Held various positions

During the past 30 years, Hale has held positions on every board of directors and committee within the governmental structure of the city of Clinton, including the utilities board, planning commission, building committee and recreation advisory board. He held the office of city councilman for 12 years and also served as city engineer and chairman of the street department.

Hale was elected to his first term as mayor in 1975. During his years of service, the city of Clinton has realized more than \$20 million in capital improvements. He has assisted in implementing two urban renewal projects involving more than \$2 million and including a major "facelift"

of the downtown business district and the addition of 600 free parking spaces in municipal lots.

The city's housing situation also have been improved during Hale's tenure, with the addition of 300 public housing units, highlighted by a modern complex of 150 units for senior citizens in the downtown area.

Other activities

Hale's efforts also were instrumental in the construction of a new elementary school, which houses nearly 900 students. He also helped develop several parks and recreation areas, including the \$1.8-million Clinton Community Center, which opened in 1978.

The Clinton mayor serves as vice chairman, board member and executive committee member of the East Tennessee Development District. He has been a delegate to the National League of Cities and to the Tennessee Municipal League. Hale also serves on the board of the Melton Hill Regional Industrial Development Association and is a member of the Clinton Greater Chamber of Commerce. He holds memberships in the National Society and Tennessee Society of Professional Engineers.

In his spare time, Hale raises cattle on his farm in the Marlow area. He and his wife, the former Sue Holladay of Huntingdon, have a son and a daughter.

China photographs exhibited at Museum

A photographic exhibition on the People's Republic of China will be presented in the lobby of the American Museum of Science and Energy March 7 through April 17.

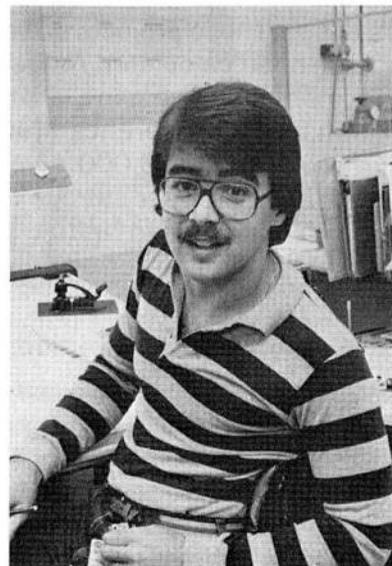
The exhibit, "In China: Photographs by Eve Arnold," features more than one hundred photos providing glimpses of the life, culture,

landscapes and commerce of modern China.

"In China" will be open to the public during regular Museum hours (9 a.m.-5 p.m. Monday through Saturday and 12:30-5 p.m. Sunday), and there is no admission charge. For more information, call the Museum at 576-3200.

UNION
CARBIDE

Published every other week
for employees such as:



Kenneth S. Davis, ORNL
Information Division.

Nuclear Division News

UNION CARBIDE CORPORATION
NUCLEAR DIVISION
Post Office Box Y
Oak Ridge, Tenn. 37830

EDITOR (Y-12)
Cindy Ross Lundy, 574-1643

ORNL
574-4163

ORGDP
Ruby A. Miller, 574-8092

PADUCAH
Laura Quigley, Bell 208

INTERNATIONAL
ASSOCIATION
OF BUSINESS COMMUNICATORS

Y-12 Pride Circles identify, find solutions to work-related problems

Goal Diggers, Records Rushettes, Blues Crew, Stepping Stones, Strippers and Firey Furnace Four may sound like names for sports teams or pop singing groups. But these are also names of a few of the groups who participate in the Y-12 Plant's Pride Circle Program.

Pride circles, also referred to as "quality circles," are small groups of employees, performing similar work, who voluntarily meet for an hour each week to identify, analyze and find solutions to quality and other work-related problems. These problems and solutions are then presented to management for possible action.

Used first in Japan

Quality circles were first used in Japan during the early 1960's. American companies became interested in the concept in the 1970's and, by 1980, an estimated 230 companies had formed circles.

In October 1980, Y-12 initiated a pilot program involving six circles in six divisions. The acronym, PRIDE (for Productivity through Recognition, Involvement and Development of Employees), was selected to describe the program.

Y-12's "pioneer" circles were so successful in identifying and presenting solutions to problems in their work areas that the program gradually was expanded to include all Y-12 divisions. Thirty circles were organized during 1981, and by the end of 1982 there were 72 circles with about 650 employee-members.

All Pride Circles involve four groups of people: circle members, circle leaders, facilitators and managers. As the Y-12 program expanded, a series of courses was developed to train each of these groups.

Circle members receive 10 hours of training in how to identify problems, collect and analyze data, determine and correct causes, and communicate their ideas to management.

ers and facilitators study statistical methods, problem solving, group dynamics, leadership and motivation. (A circle leader is usually the supervisor of the work group. Facilitators are division representatives who train and assist the circle leaders, coordinate circle activities and serve as liaisons with management.)

Managers who have, or are interested in having, circles within their areas receive 7½ hours of training to help them better understand the pride circle concept. The program, as well as training for participants, is administered through the Human Resource Development Department of the Employee Relations Division.

Ray Smith, program administrator, said, "Through Pride Circles, employees can direct their energies toward solving problems that hinder them from carrying out their jobs efficiently and effectively. This enables managers to spend less time putting out brushfires and more time planning, organizing, leading and developing their people."

Lines of communication

Y-12 Pride Circles have been very successful in opening the lines of communications between employees within the circles and between employees and their management. After circle members have tackled a problem and arrived at a solution, they have the opportunity to present this information to management. Management reviews their recommendations and, wherever possible, makes arrangements for implementation. Almost all of the more than 200 recommendations circles have made to Y-12 management have been or will be implemented.

Winfred E. Shoopman, member of the Alpha 5 Alertness Circle, Assembly Division, said: "Being part of our circle has given me a real sense of achievement. I feel that I'm



THE MIRACULOUS MICROFILMERS — Steve Weaver reports the results from a survey to other members of the Laverta Hardin, Lynda Wilson, Lori Richardson, Terry Ma

being looked at instead of looked over and that my contribution to the quality of our product is important." His supervisor/circle leader, James R. Pugh, added "Having a circle has certainly made my job easier. The employees seem to have a better understanding of my role and are willing to share the burden. Our productivity has increased and there has been a definite improvement in our relationships with one another."

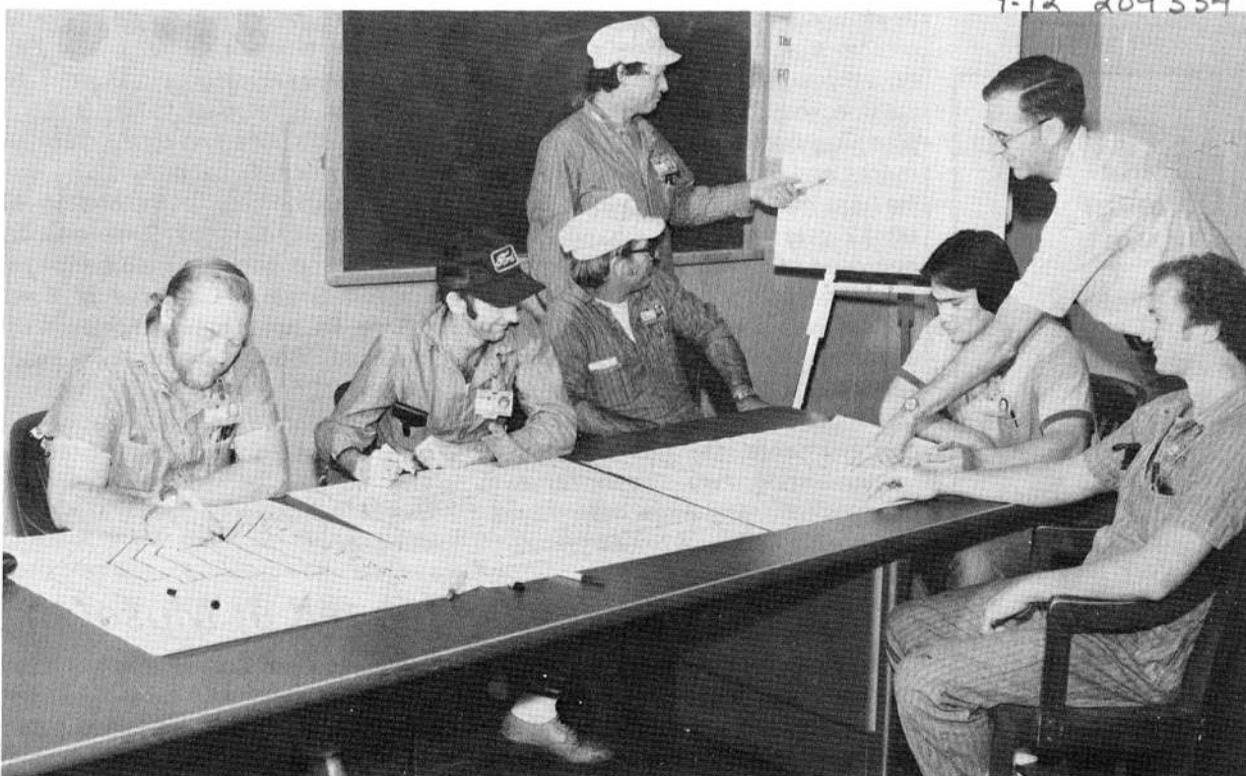
Often circle members are able to solve problems without help from management. "The sharing of ideas and information is very important," said George A. Yarborough, facilitator of eight circles in the Security, Plant Protection and Utilities Division. "Sometimes, during circle discussions, we find that one person's problem can be solved by another person's past experience."

Thus far, more than half of the recommendations made by Pride Circles have potential for cost savings. Those projects on which cost savings have been calculated range from developing a more effective gage location, storage program and file reference system at an estimated saving of \$108,000 a year, to replacing and finding proper storage for a steel tubular scaffolding at an initial saving of \$1000 and the potential for additional long-term saving.

Significant contributions

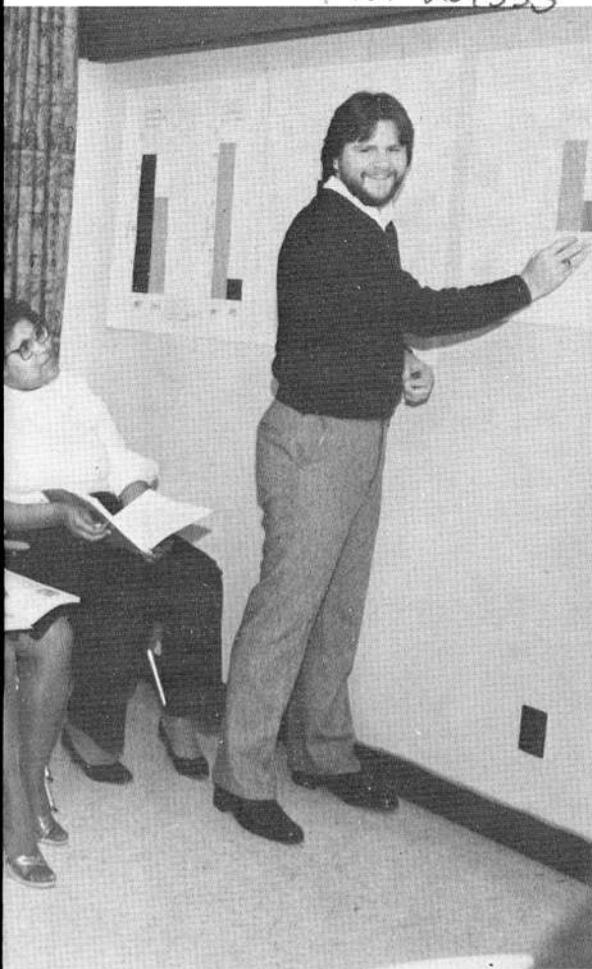
The latter project was recognized as one of the most significant contributions employees made to the Plant's safety program during 1981. Another circle development — an improved inventory control method for machined parts — resulted in an annual \$70,000 saving, and received a DOE Weapons Complex Recognition Award in 1982.

H. Von Evans, member, and James B. Brannum, leader, of the Devil's Pride Circle in the



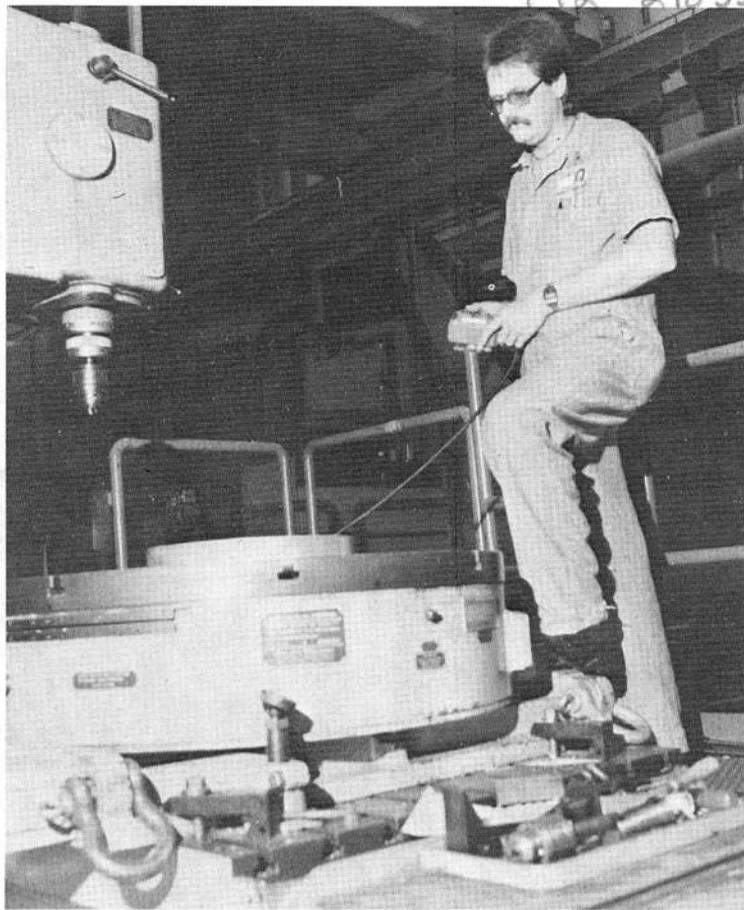
THE EARWITS — Members of the Earwits Circle, Maintenance Division, prepare charts and graphs for a presentation to management. Seated, from left, are Paul Galyon, Frank Wilson, Roger Weigand, John Phillips and David Hammontree. H. C. Pedigo and C. F. Chandler are standing.

4-12 209333



Finance, Materials and Services Division, Miraculous Microfilers Circle. From left, are [unclear], Marlene Prater and Julia Pryor.

4-12 210530



THE WRONG RIGHTERS — Glen Bell, Fabrication Division, demonstrates the use of a remote control for the rotary table on the P&W jig bore machine. Implementation of this recommendation by the Wrong Righters Circle resulted in an estimated savings of \$2800 per year.

Maintenance Division, discussed the merits of team work in instituting change. The group, composed of pipefitters and millwrights, provides outside utility services to Y-12 and Townsite. For years they had used pickup trucks which were inadequate to transport all the equipment needed to accomplish a wide range of tasks.

Possible solutions

After analyzing the problem, the group recommended that a specially equipped utility-type truck be purchased. During their presentation to management, group members emphasized how the truck would enable them to reduce the number of trips back to the shop to pick up additional equipment, and would result in savings of both time and gasoline. In dollar figures, they estimated the saving to be \$6000 the first year and \$13,000 each succeeding year. The truck was purchased and two more have been ordered. "In addition to saving money, the convenience and appearance of the new truck have increased our pride in what we do," Evans said.

Although not all Pride Circle projects have resulted in cost savings, most have led to long-term payoffs in terms of more efficient operation, better communication and greater job satisfaction for those involved.

Robby Reynolds, member of the Utility Engineering Circle, said the Circle's recommendation to management will be to simplify a procedural form. "Working with the procedure had always been a problem, but when we took it apart we found we had been going beyond its scope. The activity helped us better understand what management was trying to accomplish in establishing the procedure in the first place. We now feel more a part of the Utilities organization and that we've contrib-

uted to our own welfare and that of the Plant," Reynolds said.

When asked what benefits she derives from her involvement in the program, Betsy Fraley, facilitator for the Finance, Materials, and Services Division, said: "It has helped me better develop my interpersonal and communications skills. I have also been inspired by watching circle members channel their frustrations into something productive. They often come up with very creative solutions to problems that were previously thought unsolvable."

Gordon Fee, Y-12 Plant Manager, is excited about the Pride Circle program. "Through our circles, employees are helping solve existing problems and designing ways to prevent future problems. This team effort is affecting quality and productivity in a very positive way at all levels in the plant. We each have a commitment to accomplish our jobs effectively and efficiently, and our Circles provide the reinforcement, recognition and open and honest relationships needed to fulfill that commitment," he said.

4-12 211288



Ray Smith

Save Energy/ Share the Ride

ORNL

VAN POOL RIDER NEEDED from West Knoxville (Cedar Bluff, Middlebrook Pike, Vansdale Road, Cloth World, Kingston Pike) to any portal except South, 8-4:30. Leon, plant phone 4-5723; home phone 693-3211.

WILL JOIN VAN OR CAR POOL from 25W area (North Clinton) to any portal. Contact Gary, plant phone 4-5614.

BUS POOL MEMBERS NEEDED from the Burlington Area, Asheville Highway, heading in the direction of I-640, stopping at Broadway and Tazewell Pike. The next stop is Papermill and Weisgarber, then to Cloth World on Kingston Pike. The next stop, via Kingston Pike, is Lovell Heights Shopping Center, then on via Pellissippi Parkway to all portals, 8-4:30. P. R. Long, plant phone 4-4154; or Twana Taylor, 4-7281.

RIDE NEEDED from Oak Ridge Highway between Karns and Solway to East Portal, 8:15-4:45. Peterson, plant phone 4-4483; home phone 690-3989.

VAN POOL RIDERS NEEDED from East Knoxville — down Middlebrook Pike, Cedar Bluff and back down Middlebrook Pike to Pellissippi Parkway to East and West Portals, 8-4:30. Contact A. J. Boatwright, plant phone 4-6041; home phone 970-4231.

Y-12

RIDERS NEEDED TO JOIN CAR POOL from Farmington or Bexhill subdivisions, Ebenezer Road, West Knoxville, to Y-12, any portal, 8-4:30. Contact Theresa Stone, 6-5056 or Scott Krebbs, 6-0527.

JOIN CAR POOL from Lake City to Central Portal, 7:30-4. Anita Stubbs, plant phone 4-3263; home phone 426-2590.

CAR POOL MEMBER NEEDED from Country Club Apartments, Middlebrook Pike, to East or North Portal, 8-4:30. Cindy Lundy, plant phone 4-1643; or Julie Robinson, plant phone 4-1651.

NEED RIDER from Walker Springs Road, Cedar Bluff area, to any portal, 7:30-4. Jerry Whittaker, plant phone 4-0886; home phone Knoxville 693-4718.

BUS POOL RIDERS NEEDED from Knoxville, I-40 at Alcoa Highway (Expo Inn), 8-4:30. Joel Horton, plant phone 4-3121; home phone Maryville 983-9160.

ORGDP

CAR POOL MEMBERS WANTED from east end of Oak Ridge to any portal, day shift. Phone Doug Janney at 4-9448, home 483-1619; or Sam Blumkin at 4-8145, home 483-7865.

Carbide bowling highlights . . .

Carbide Family Mixed...

In the Carbide Family Mixed League, recent men's highs were rolled by P. J. Allen, 227/265 scratch and handicap games; and Dave Foster, 552/618 scratch and handicap series. In women's action, J. J. Saffell rolled a 190 scratch game, Becky Woods a 233 handicap game, Tillie Plaza a 456 scratch series, and Becky Woods and Happi Chamblee 610 handicap series.

ORNL A...

The Woodchoppers now lead the ORNL A League, followed by ORAU and the Gutterfinks. Recent highs were posted by Joe Arwood with a 275/730 handicap game and series.

Y-12 Classic...

The Ridgers still hold the lead in the Y-12 Classic League, trailed by the Kingpins and Pendulum. Recent weekly highs were rolled by Ray Edwards, 272 handicap game, and Ken Brown, 686 handicap series.

ORGDP Women's...

The Woodbees retained the lead in the ORGDP Women's League, ahead of the Chocolate Chips and Spotters. Jean Bangham was bowler of the week after posting scores of 235/214/225, for a 674 series.

K-25 Tuesday...

The Team took over the lead in the

K-25 Tuesday League, trailed by the All Stars and City Slickers. Recent high scores included D. Pollitt's 625 scratch series and L. M. Hart's 671 handicap series and 252/271 scratch and handicap games.

Carbide Lenoir City...

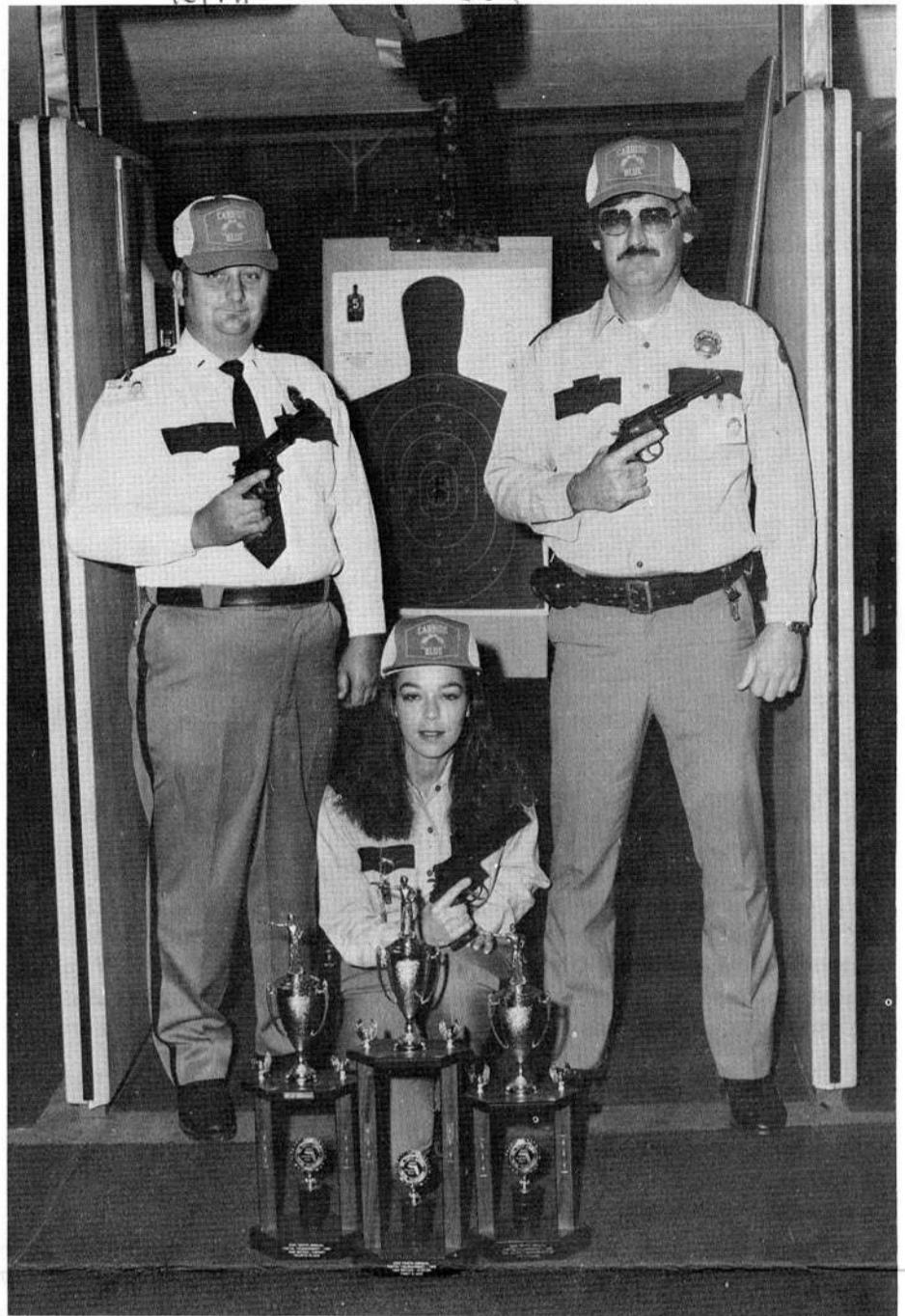
The Fantastic 4 and Par Busters lead the Lenoir City League as action begins in the second half of the season. Individual highs were rolled by John McNabb, 214 game, and Carl Thompson, 621 series.

Monday Mixed...

The Hi Rollers continue to lead the UCC Monday Mixed League, followed by the Lucky Strikes and Omega-gas. Individual leaders are Bill Muenzer (670) and Penny Jessen (585), high scratch series; Dean Treadway (256) and Brenda Williams (234), high scratch games; Treadway (714) and B. Williams (692), high handicap series; and Rufus Williams (257) and Jewell Mathews (250), high handicap games.

Carbide Wednesday...

The Sues Sooners retained the lead in the Carbide Wednesday Men's League, just ahead of the Amps and Protectors. Recent highs were rolled by Roy Dukes, 629 scratch series; Dave Stacy, 224 scratch game; Lou Finley, 672 handicap series; and Wayne Bryan, 244 handicap game.



TEAM TAKES HONORS IN FLORIDA — Members of the Carbide Blue Pistol Team recently participated in a Security Training Conference and pistol match in St. Petersburg, Fla. Winners included Harry L. Williams, a lieutenant in the ORGDP Security and Plant Protection Division, expert class; Kim N. Thomas, security inspector in Y-12's Security, Plant Protection and Utilities Division, sharpshooter; and C. Ralph Clough, ORGDP security inspector, master class. Although Thomas has been a member of the team for only eight months, she has also won in shooting competitions in Georgia and Mississippi.

Volleyball league standings . . .

Here are the final 1983 standings in the Carbide Volleyball League:

CARBON LEAGUE - NORTH DIVISION		
Team	Won	Lost
Beech-Nuts	34	2
Prime Time Players	29	7
Volleybawlers	29	7
Net Profits	28	8
Condensed Matter	22	14
6-Pack	21	15
Solid Gold	15	21
Irish Setters	14	22
"The Crew"	10	26
Bombers	9	27
Smackers	9	27
Scobies	8	28
Short Circuits	6	30

CARBON LEAGUE - SOUTH DIVISION		
Team	Won	Lost
SHHEEEE*	33	6
Generics	33	6
Twelve Pack	32	7
Mug Huggers	30	9
P.O.I.	22	14
Alligators	22	17
Dymcas Darlings	21	18
Odds & Ends	17	22
Absolute Zeros	14	25
Mustangs	14	25
Midnet Spikers	11	25
Protocol Jerks	10	29
Totally Grody	7	32

* Won championship in playoff.

ATOMIC LEAGUE		
Team	Won	Lost
Profusion	39	3
Brainbusters	31	11
Dirty Half Dozen	29	13
BMS Super Dinks	22	20
Chestnut Point	20	22
Artie's Army	19	23
Bruise Brothers	5	37
Dinkers	3	39

Paducah sports

The beginning of the spring sports season at Paducah is just a few weeks away. For the fishing contest, scheduled for March, the Outdoor Games Committee is considering a revised schedule. Watch future *Nuclear Division News* issues for information on fishing dates.

An organizational meeting for the upcoming softball season also will be held in March, with season openers set for May. If you are interested in playing softball or forming a team, contact Tom Brazell, Bell 309 or PAX 640.

Driving tips for icy streets

Icy-driving conditions like those experienced by Carbide employees in January 1982 and 1983 will increase the chances of employees becoming involved in vehicular accidents. Recently, there were seven accidents in the three-plant area because of icy road conditions.

The following driving tips for preventing accidents and injuries during icy road conditions have been provided by the Y-12 Safety Department.

- Drive with caution at all times.
- Be aware of the road conditions before going to and returning from work.
- Prevent driving in peak-hour traffic by leaving for work earlier than usual.
- Stay on primary roads and avoid secondary-road shortcuts.
- Ensure that your vehicle remains on the shoulder of the road,

when driving on hills and around elevated curves.

- Use caution when approaching and crossing bridges. Avoid crowding other motorists at hazardous locations — leave a "way out" for out-of-control vehicles.

- Descend an icy hill cautiously, using the road shoulder as much as possible. Travel slowly!

- Avoid stopping at the base of an icy hill to prevent being slammed into by other descending vehicles.

- Exercise caution when accelerating. If needed, put your vehicle in neutral and allow the pull of gravity to take effect. Beware of skidding!

- Be careful not to slip and fall on an icy road, if you must leave your car.

The above "tips" are just that. Each hazardous situation must be handled by the driver on a case-by-case basis.

ORNL's Millemann models home-state railroads

For many years, "home" for Ray Millemann of ORNL's Environmental Sciences Division was Oregon — a region of snow-capped mountains, lush forests and roaring rivers. In his basement, he is slowly recreating a small part of his home state by building a model railroad based on railroads in the Columbia River area.

Like many model railroad enthusiasts, Millemann first became interested in trains as a youngster. "I was given a toy electric train for Christmas one year and have loved the hobby ever since," he says. Since then, his interest has matured significantly. Millemann's goal is to create a working model railroad with as much realism and authenticity as possible.

He views model railroading as an art form. Quoting a pioneer in model railroading, Millemann says, "It is like a theatrical production with the tracks as a stage, trains as the actors, the structures and scenery the stage setting, and operation (movement of freight and passengers) as the plot."

His model railroad is based on two competing railways located on the southern and northern banks of the Columbia River — the Union Pacific and the Spokane Portland and Seattle, which is now a part of the Burlington Northern system. The era is set in the early 1950's. Millemann says: "During the post-World War II period, railroads throughout America were using both steam and diesel locomotives. It is an interesting era to model."



Millemann began working on his model railroad more than four years ago. His first task was to perform extensive research on the Columbia River area and its railroads. "My research has included taking photographs of the area, its structures, towns, and railroads and reading many books on the subject. I've studied topographical maps and aerial photographs and have obtained blueprints of railroad yards from the two railway systems."

His model railroad is on an "HO" scale with one mile equaling 60 feet. It is big enough to enjoy visually, but

small enough to work a large layout into a moderately sized room. Even so, a bit of "stage theatrics" must be employed for realism. "You must use a little magic in building model railroads. If you want to model five miles of actual rail, you would need 300 feet on an HO scale. Nobody has that much room unless they are building in a coliseum."

Millemann says, "Instead, you selectively compress the area and tracks, and use backdrops so that you can't see all the railroad at once. Mirrors are also used to enhance depth and distance. Compression is applied to buildings as well."

Millemann has completed most of the layout, laid most of the track and is rapidly completing all electrical work. "I have begun building structures such as lumber mills and have completed a rail yard." His layout is a wall-around type which follows the wall of the 25' x 26' room with a peninsula to the center. "This allows me to get close to the layout to follow the trains using tethered hand-held throttles."

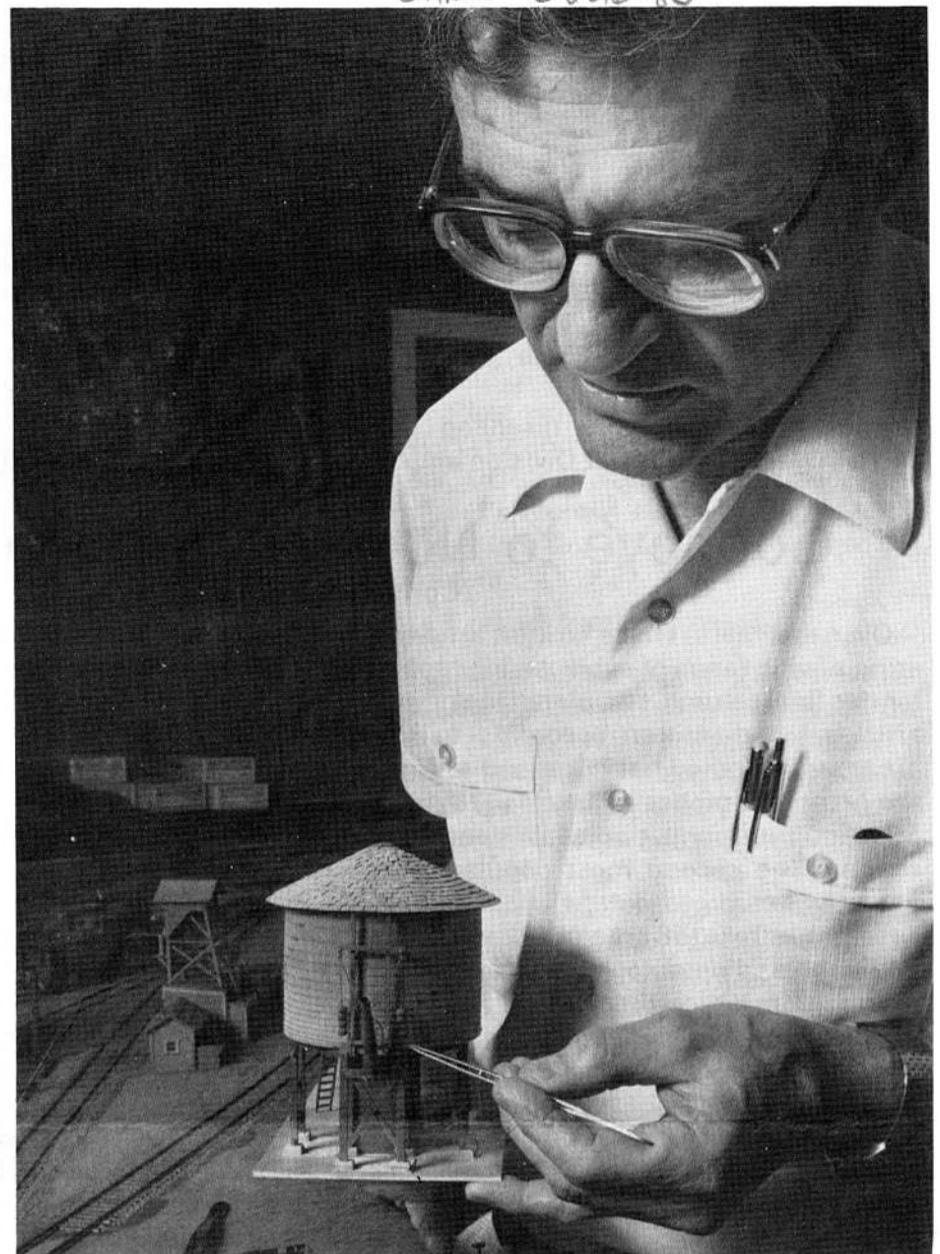
Some of the rolling stock and structures will be or have been built from scratch. Millemann's tools include a lathe, a milling machine, drill press, resistance soldering unit and a wide variety of other hand tools. "Since I am trying to be as realistic as possible, I've "weathered" the rolling stock, structures and scenery based on careful observation and photographs of the originals."

When completed, Millemann intends to operate his railroad in the same manner as a real railroad. "For realism, you actually have your trains perform work, to appear and disappear off the layout onto the staging area. Work involves delivering and picking up loads from industries along the railroad such as canneries and lumberyards.

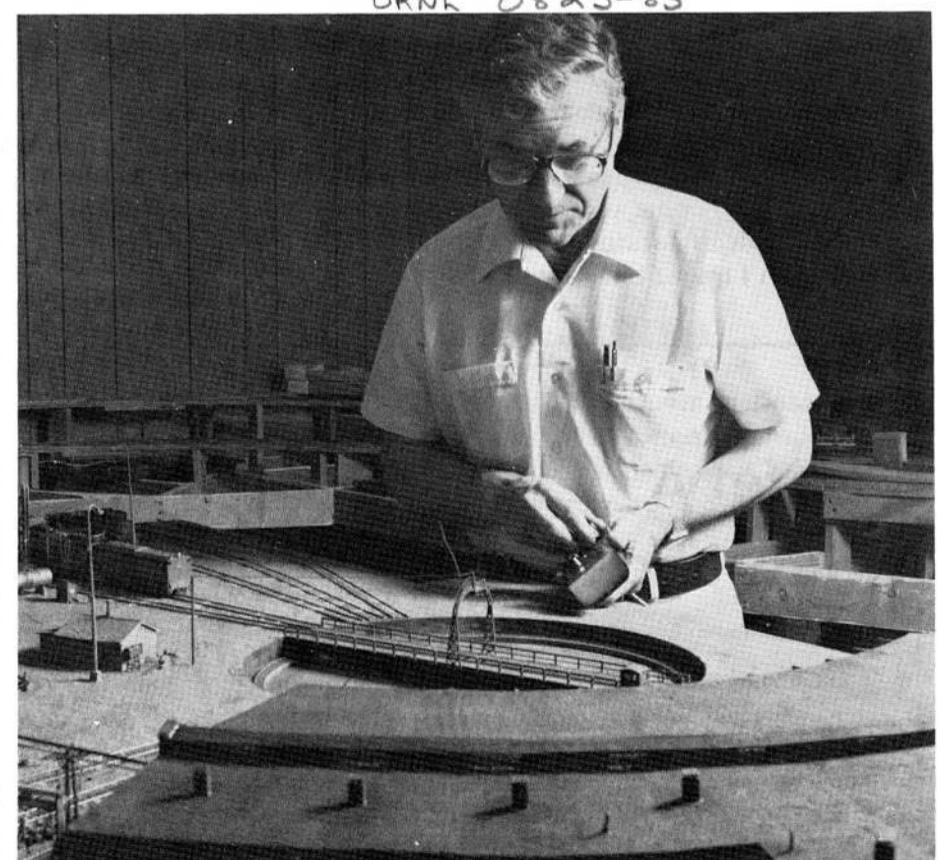
"As a part of my research, I had to find out exactly what industries are present and determine what raw materials they require and what products they ship. Using this information, I put together an operating system on cards," Millemann says.

Each operating session will be different, but will simulate the work a real railroad does. It will require five or six people to operate the system. "Some will be designated as engineers and will actually be running the trains. Another will be a yard master who will put together trains by demand consisting of box cars, tankers or refrigerated cars to create trains — all in the same manner as a real railroad," he explains.

Millemann tries to spend several hours each day on his project and expects to finish it in about ten years. "You never really finish a model railroad because there is always something to do, which is part of the fascination and challenge of the hobby."



HANDMADE WATERTOWER — Each shingle for this structure was individually cut from plastic and attached to the roof. Millemann's goal is to create as much realism as possible in his model railroad.



ENGINE TERMINAL — Millemann operates a locomotive in a railyard carefully modeled after a Union Pacific yard located in Oregon.

Outstanding safety record achieved

(Continued from page 1)

when their hands were caught between machinery parts. Another injury occurred at Y-12 when an office supervisor suffered a wrist laceration in a fall. In the fourth case, an ORNL pipefitter suffered burns on the ankles, legs and torso when steam escaped from a valve bonnet.

Nuclear Division employees experienced 130 recordable occupational injuries and three illnesses, resulting in a recordable injury/illness incidence rate of 0.81 (also based on 200,000 employee hours). This performance sets a new Division record, bettering the previous low of 0.94, established in 1981.

Some 178 off-the-job disabling injuries were suffered by Nuclear Division employees

last year, including three fatalities. Of the 178 injuries, 79 occurred in homes, 55 in transportation and 44 in public. Two of the fatalities resulted from automobile accidents and the third occurred when an employee was accidentally shot at home. These disabling injuries resulted in a frequency rate of 2.63, another all-time Division low.

The number of workdays lost due to these off-the-job injuries totaled 4,693 (excluding charges for fatalities). Although this figure also is a record low for the Nuclear Division, employees are encouraged to continue their efforts to prevent disabling injuries — both on and off the job. Remember, a perfect safety record is the ultimate goal!



RECEIVES QA CERTIFICATE — Bob Foust of ORNL's Plant and Equipment Division (center) accepts a quality assurance certificate of recognition from Ken W. Sommerfeld (left), ORNL executive director, as Jim Trout, a supervisor in the Plant and Equipment Division, looks on. During a recent test drop of a 22-ton shipping cask at the Tower Shielding Facility, Foust helped to prevent stress damage to poles used to restrict movement of the cask after impact by connecting them with tie cables.

Goodbye to Nuclear Division readers

(Continued from page 1)

Over the years, I have written articles covering a wide range of subjects. In preparation for this final column, I tabulated the number of articles I had written according to subject area. I was somewhat surprised to find that the greatest number of articles (76) involved infectious and parasitic diseases and immunizations. The second most popular group of topics was cardiovascular and circulatory diseases and stroke (58 articles). Next were mental health and neurological diseases (35) and nutrition, including diets and vitamins (34).

I have sometimes been called a "fanatic" about the value of exercise and the dangers of smoking. I did write 27 articles on exercise but only 11 on smoking. My family, and possibly my editors, may have thought I was preoccupied with sex, but I wrote only seven or eight articles on the subject. I felt that it was a reasonably popular topic and that I might lose the attention of some of my readers unless I occasionally provided them with a little medical titillation.

Although the comments I received from readers, the republication of some of my articles in other papers or magazines and an interview on National Public Radio did provide satisfaction, one of the most valuable aspects of my writing was the discipline that it instilled. And, having to review a subject sufficiently so that I could write about it in a way that was easily understood forced me to "dig" deeper than I might have otherwise.

I am grateful to the editors of the *ORNL* and *Nuclear Division News* for allowing me almost complete freedom in expressing myself the way I thought best. Sometimes my articles may not have been examples of outstanding journalism, but they were clearly "me"! When I made occasional technical mistakes, I would hear about them immediately from my readers. Only two of my articles were rejected for publication. About 20 years ago, an article on alcoholism was rejected because its subject was thought to be inappropriate for a company publication. Later, however, 16 columns on the same subject were accepted.

I am especially grateful to Peggy Harris, who served as my secretary for many years while I was at ORNL. She also relayed my articles to the *News* editors after I moved to UCC Headquarters five years ago. I never missed a deadline, but there were many close calls, and she saved me several times with special, last-minute efforts.

I was extremely lucky to have such a patient and understanding wife, Pat, and family. They understood the importance of this column to me, and Pat also served as my most valuable critic.

I still may submit infrequent articles to the *Nuclear Division News* in the future, whenever the material meets other needs and might still be useful to readers. Thank you all for your support. I will miss you.

A note of thanks . . .

Since the inception of the *Nuclear Division News* in February 1970, Dr. T. A. Lincoln's medical columns have been an integral part of the publication.

In fact, a readership survey conducted during the mid-1970's indicated that his articles (including his regular columns and his question-and-answer series called "Medicine Chest") were among the newspaper's most popular and well-read features.

To say that we, and our readers, will miss his column is an understatement. Those of us at the *Nuclear Division News* would like to thank him for all of his contributions through the years and wish him continued success in his personal and professional endeavors.

— C.R.L.

Safety Scoreboard

Time worked without a lost-time accident through February 16:

Y-12 Plant	26 Days	891,000 Employee-Hours
ORGDP	370 Days	8,419,460 Employee-Hours
ORNL	245 Days	5,229,226 Employee-Hours
Paducah	932 Days	7,574,569 Employee-Hours

Safety tip: when driving in snow or ice, do everything — accelerating, braking and steering — more slowly.



UNION CARBIDE CORPORATION
NUCLEAR DIVISION
P.O. BOX Y, OAK RIDGE, TENNESSEE 37830

BULK RATE
U.S. Postage
PAID
Permit #70
Union Carbide
Corporation



ADDRESS CORRECTION REQUESTED