

the WING FOOT CLAN

Goodyear Atomic Corporation

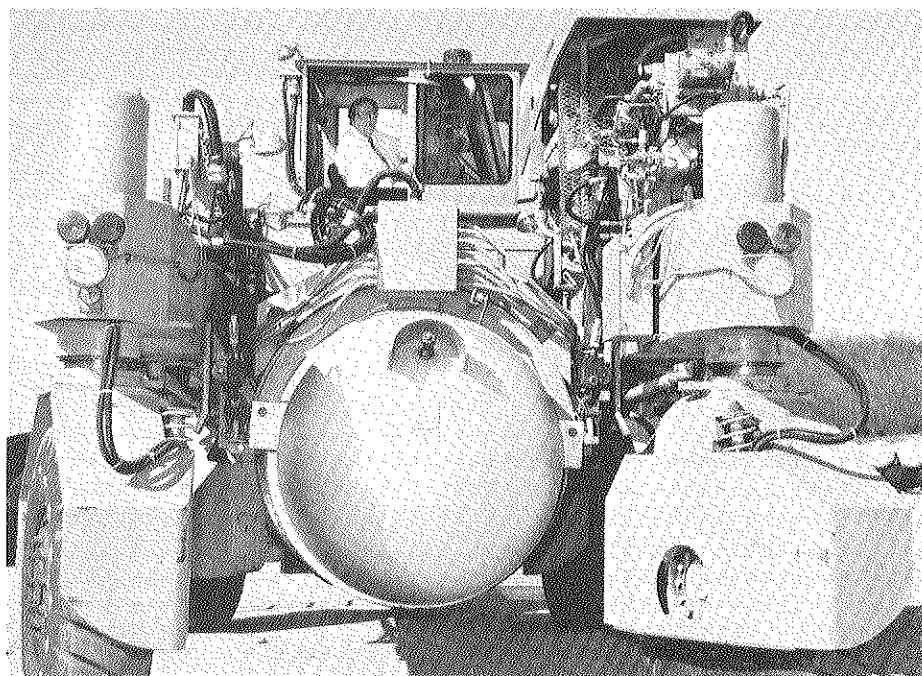
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Dan Gross demonstrates the new Marmon Transmotive straddle carrier for which operators now are being trained. The new vehicle already has demonstrated optimum performance and handling (additional photo on Page 4).

HMCS

Protection through control and documentation

Goodyear Atomic uses many types of hazardous chemicals each year, in containers ranging in size from small bottles to railroad tank cars.

To protect life, health, property and the environment, a strict control and accountability system is used for materials listed as hazardous in Government regulations.

The Hazardous Materials Control System (HMCS) encompasses controls for the acquisition of such materials and the documentation for their location, quantity and reported use at the plant.

Hazardous material is any solid, liquid, or gas which is toxic, flammable, radioactive, corrosive, chemically reactive or unstable upon prolonged storage and is present in a quantity which could pose a threat.

Bob Detoski (D-424) is coordinator of the Hazardous Materials Control System and its Advisory Committee, which has responsibility for assigning health, flammability and reactivity codes to chemicals and materials at the plant.

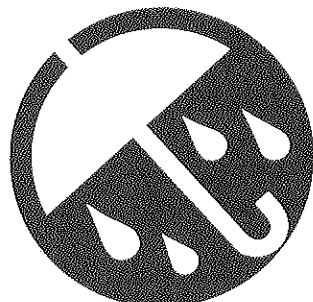
"Chemicals, solvents, radioactive sources and many other hazardous materials have beneficial uses at the plant," Detoski said. "So in order for us to continue to benefit, we have to focus attention on their safe handling."

"The hazards are known and corrective actions have long been identified through safety and protective equipment programs. The Hazardous Materials Control System has the purpose of providing inventory control and identification."

"The system provides for supervisory control and a means of determining whether or not a particular material is actually needed at the plant and if the quantity being requested by a using group is excessive," he added.

Environmental Protection Agency regulations, national fire protection standards, the Clean Water Act, Department of Energy requirements and other sources have been used by the Advisory Committee to establish a list of the hazardous materials in use at the plant.

(Continued on Page 2)



APRIL

Interlock control, better grapple assembly Marmon straddle carrier features many improvements

The first straddle carrier designed specifically for carrying cylinders of uranium hexafluoride now is in service at the Portsmouth Area Uranium Enrichment Plant.

The new carrier, built by Marmon Transmotive in Knoxville, was based on a design by Stradco, Inc., of Jackson, Miss. Goodyear Atomic engineers listed the performance and maintenance problems with straddle carriers which have been in use at the plant and then wrote specifications to be incorporated into the Stradco design, according to Dan Gross (D-621), lead engineer on the project.

Goodyear Atomic's "Straddle Buggy Committee" — which includes the engineers, maintenance representatives and operating personnel — worked with their counterparts at Union Carbide Corporation to prepare the specifications for the new carrier.

The specifications required a positive lift mechanism to prevent dropping of cylinders, features designed to lessen maintenance problems and machine interlock to preclude release of a cylinder while the carrier is in motion.

Gross noted that all straddle carriers now in use at the plant — including two Gerlinger units, one Hyster and

one Clark — were originally designed to serve as lumber carriers. "They have been modified considerably for carrying uranium cylinders, but nothing else has been commercially available."

The Marmon carrier uses a "grapple assembly" similar to that of the Raygo Wagner NCH-35 cylinder stacking machine which was put in service at the plant last summer. "Claws" completely encircle the cylinder. Other straddle carriers depend on four lugs welded to the sides of cylinders to accomplish lift.

Gross said welding specifications for the new carrier were extremely stringent, and that extensive operational testing was completed at the manufacturer's facilities before the unit was ever shipped to the plant.

Controls are built in so that once the carrier has picked up a cylinder and is moving, it can't be released until the machine is stopped and the operator has set the brakes.

It incorporates a hydrostatic drive mechanism so that there is minimal freewheeling — or coasting. Drive motors on two wheels are driven hydraulically from the primary engine. Speed is controlled by a hand throttle and a foot pedal has the start/stop

(Continued on Page 7)

Cost program idea input for 13 years

Sid Secrest (left) has had an idea accepted in each of the Cost Reduction "I"dea Program's 13 years. He received a special award at a recent luncheon from General Manager Nate Hurt for having the most ideas accepted in 1981.



'I'dea personnel are honored

The Cost Reduction "I'dea Program provides a formal way for employees to identify and suggest improvements or a better way of accomplishing work which result in savings.

The program is the primary means through which Goodyear Atomic conducts its cost savings efforts.

At the 13th Annual Cost Reduction Awards Luncheon on March 17, General Manager Nate Hurt noted that innovation and savings are extremely important now in light of competition being posed by foreign nations for uranium enrichment services around the world. "Anything we can do to reduce costs is extremely important to our industry," he said.

A total of 90 employees had one or more ideas accepted in 1981.

Of these, 48 were recognized for having their first idea accepted. There are now 594 members of the Cost Reduction Club.

There were 254 ideas submitted in 1981 through the program, equal to the record number set in 1978. The

estimated annual savings for the ideas which were accepted is approximately \$660,000. This compares to \$570,000 in 1980.

C. A. "Sid" Secrest (D-720), has had an idea accepted in each of the program's 13 years. He received a special award at the luncheon for having the most ideas accepted in 1981.

Special awards also were presented to J. B. Alford (D-401) for being the newest employee to have an idea accepted, to Richard W. Craycraft (D-611) and Carl Weghorst (D-072) for the largest dollar savings in the first year, and to John Maple (D-711) for the most innovative idea. Purchasing & Materials earned the divisional award for having the most ideas accepted per employee.

The Cost Reduction "I'dea Program is strongly endorsed by management at all levels. The general manager personally reviews each idea which is submitted as part of the program. Forms are located at various areas throughout the plant.



Special award winners honored at the 13th Annual Cost Reduction Awards Luncheon, photographed with General Manager Nate Hurt (left), included Rich Craycraft, Oron Gleim (representing Purchasing & Materials), Sid Secrest, Brit Alford and John Maple.

GRADUATE PORTRAITS

Sons and daughters of Goodyear Atomic employees or retirees who are being graduated from high school, college or technical schools this spring will be featured in the June issue of The Wingfoot Clan.

Employees should submit a pocket-size photo of the graduate to Public Communications, X-100, M/S 1220, no later than May 21.

Multi-image portraits, those with an extremely dark background or very low contrast photographs prove difficult for reproduction.

Information accompanying the portrait should include the graduate's full name, the name of the school, type of school, name of parent working at GAT and the department where the employee works.

Portraits will be returned following publication.

Hazardous Materials Control System (HMCS)

(Continued from Page 1)

The Advisory Committee makes the determination whether or not a particular material should be on the list. "New materials are added continuously," Detoski noted. "Materials that might be considered neutral often contain pigments or solvents which would pose a hazard." There now are about 280 chemicals and other materials on the list.

The list is available through the plant computer system and to all foremen and others who need to know about the classification of a particular material. Detoski said the list is updated every

quarter and made available to departments as required.

The Stores catalog also notes all materials which are hazardous, Detoski said. Foremen can request new catalogs as they are needed.

The Receiving department affixes a control system label to all hazardous materials when they arrive at the plant, Detoski noted. These labels specify health, flammability and reactivity ratings, principal route of absorption, relevant symptoms of exposure, emergency procedures and unusual hazards in addition to the catalog number and description.

An employee requesting a hazardous

material from Stores must complete an orange "Hazardous Material Stores Disbursement Card" (Form A-2126). These must be signed by a foreman or another member of supervision.

Stores employee Ferman Beavers noted that these cards must be brought or mailed to Stores before the material can be issued or delivered. "When the card is completed and properly signed by supervision, trouble is minimized and delivery of material is not slowed down," Beavers said.

John Brown, another Stores employee, noted that use of the orange card tells an employee that he is receiving a hazardous or toxic material. "The storage systems in Stores also are

coded orange," he explained. "Stores people know they are about to issue a hazardous material and thus need an orange card signed by supervision."

"Without a signed request card, we can't issue or deliver the material," Beavers and Brown explained. Supplies of blank cards are available through Stores on a free issue basis.

"All employees working with hazardous material are expected to be thoroughly trained in their use and knowledgeable of all safety precautions," Detoski said. The system provides a means of letting them know they are in possession of a hazardous material and that it must be used in the proper manner."

USE CODE	DESCRIPTION
01	Radioactive source
02	Pesticide
03	Hospital supplies
04	Classified
05	Engineering Record
10	Solvents
11	Cold hand degreasing
12	Manual liquid spray degreasing
13	Hot vapor degreasing
14	Thinner
15	Stripper
16	Laboratory chemicals
30	Maintenance, Utilities & Operations
31	Acid bath
32	Alkali bath
33	Alkali cleaning (e.g. Steameze)
34	Paint & varnish
35	RCW system maintenance & operation
37	Lubrication
38	Decontamination operation
50	Cleaning agents
54	Janitors supply — small — scale use
55	Janitors supply — large — scale use
70	Reagents
16	Laboratory solvents
72	Laboratory chemicals, other than solvents
99	Other

One of the key elements in the Hazardous Materials Control System (HMCS) is the Stores disbursement card. This card must be completed and signed by supervision and then delivered to Stores before the material can be issued to the user. Stores personnel note that when this procedure is followed, delay in delivery is minimized. The card must include a com-

plete description of the material, catalog number, cost center and expense codes, equipment number if used in a vehicle or equipment, quantity, unit of measure, the building where it will be used and a special hazardous material user code (taken from the back of the card), as well as signature and department/badge of the requisitioner.

A-2126 (8-80)		DATE		CATALOG NUMBER	
HAZARDOUS MATERIAL STORES DISBURSEMENT CARD					
STOREKEEPERS SIGNATURE			SIGNATURE OF REQUISITIONER		
DESCRIPTION			DEPT. NO. BADGE NO.		
_____			CHARGE COST CENTER EXPENSE CODE WORK ORDER OR L. CODE OR MAINT. ACTY.		
_____			EQUIP. NUMBER QUANTITY U/M		
_____			HAZARDOUS MTL. USER CODE BUILDING		
_____			FOR INVENTORY PURPOSES ONLY		
_____			PHY. QTY. QUANTITY DIFFERENCE		AFTER BEFORE
_____			CREDIT DEBIT		
APPROVAL _____					
RC-D/424					



National Secretaries' Week

To recognize the vital role of secretaries in business and industry, a special week is set aside each year in their honor.

This year National Secretaries' Week is April 18-24. Secretaries Day is Wednesday, April 21.

The secretary of today has been defined as "an executive assistant who possesses a mastery of office skills, who demonstrates the ability to assume responsibility without direct supervision, who exercises initiative and judgment, and who makes decisions within the scope of assigned authority."

Their roles have changed in the 1980s with innovation in the fields of word processing, dictation equipment, self-correcting typewriters and computers. Their prime assignments now include more administrative duties, decision making and problem solving in the daily office routine.

Supervisors have the responsibilities of allowing their secretaries to use their knowledge and education to the fullest, assigning more duties as they demonstrate the ability to handle them, and providing them with incentive, opportunity and challenge.

A secretarial career is a valuable profession of which a qualified individual can be proud. What makes a perfect secretary? The requirements differ from supervisor to supervisor. But there are many of them at Goodyear Atomic.

During National Secretaries' Week — and all year long — Goodyear Atomic personnel must recognize their valuable contribution to continued and successful operation of the Portsmouth plant.



Suzanne Cornwell (D-341) uses a word processor for a considerable amount of her work in Accounting. Word processors save time in both compiling and revising documents. Information is stored on a "floppy disk" and can be readily retrieved when needed. A high-speed printer may have speeds of up to 550 words per minute depending on the make and model. There are now more than 15 word processors in use at the plant.

Word processors example of "Office of the Future"

By Vicki Howard

Office automation procedures have been steadily expanding in the United States for the past several years and Goodyear Atomic has been included in this progressive trend. Today's offices are more complex and require computer technology in many areas. The work load in certain departments at GAT, such as Personnel Records, is so great that it is essential to have an efficient system to readily store and retrieve information.

Utilization of work simplification techniques are encouraged at GAT. These methods may be combined easily with word processing—one form of office automation—to result in increased productivity. Work simplification is a concept; word processing comes with an initial price tag. It has been considered that the savings realized through work simplification may later be applied toward word processors.

Engineering was the first department to utilize a word processor at GAT and soon after that more and more different models of word processors were installed in other areas. The following departments have word processors: Industrial Engineering - IBM OS6; Computer Systems and Procedures - DEC WS 78; Contract Administration - DEC WS 78 (2); Personnel Records - IBM OS6; Employment - IBM OS6; Environmental - DEC WS 78; Finance - DEC WS 78; GCEP - DEC WS 78 (3); Purchasing - DEC WS 78; Safety Analysis - DEC WS 78; Technical Review - CPT 8100 (2); and Maintenance Services - DEC WS 78.

A word processor is a cross between a typewriter and a computer. It has a CRT (Cathode Ray Tube) screen with green on black, black on white or other color variations and a keyboard which is very similar to a typewriter, but with additional keys to "tell" a word processor how to function. The printer is a separate unit. The speed of a printer may range anywhere from 350 wpm to greater than 550 wpm according to the make and model of the printer.

Information is stored on a "floppy disk," which has a capacity of approximately eighty pages of text or more, depending on the manufacturer.

Operators use word processors to draft and revise reports, tables, and any other kind of text that will be revised again and again after the first draft is completed.

Some of the primary capabilities of word processors include the movement of lines, paragraphs or pages of text from one part of a document to another, deletion or addition of material, placement of lists or columns of information in alphabetical and/or numerical order, the printing of form letters with different names and addresses, and printing of justified text (an even right margin).

Word processors save time for both the authors of a document and the machine operators. When a document is revised, the author of the report or article saves time because only the revisions need to be proofread. The most significant time savings is in the revision of a document, which is one of the main purposes of a word processor, because the operator is not required to retype an entire document. It is also quicker and easier to produce material from a word processor than it is on a standard typewriter. Using the CRT screen, the operator also is able to proof the material and correct it before it is printed.

A communications option is available in many makes and models of word processors which enables the operator to send or to receive information from another word processor or computer which has the required capabilities.

A Word Processor User's Group has been established to meet about once a month. In these informal sessions operators exchange ideas and work methods they use on their jobs. The differences among the DEC WS 78, IBM OS6, and the CPT 8100 word processors are also discussed and suggestions made for improvements that the operators believe would increase the efficiency of their processor work.

Demonstrations of the DEC and the CPT systems to date have been given and an IBM OS6 discussion is scheduled for the near future. These demonstrations are being scheduled primarily so that word processor operators can become aware of the functions of other systems.

An evaluation committee also has been formed to improve upon the way word processors are selected at GAT. The committee reviews the functions available on word processors currently on the market, especially in the southern Ohio area, and works to develop means for testing and evaluating these functions and as many word processing systems as is practicable.

Word processors are totally integrated communications systems which are designed to maximize the potential of equipment, procedures and people and one of the most visible indications now that the scope of office work at Goodyear Atomic is subject to a wide range of future progressive change.

1982 World's Fair

The 1982 World's Fair in Knoxville will be an official international exposition, fully licensed and sanctioned by the Bureau of International Expositions in Paris, France. Grand opening for the fair is May 1. It will continue for 184 days through October 31.

FIRE SAFETY

An important subject for school children

Children often save lives — their own, those of their brothers and sisters, and those of others — because they know what to do in case of fire.

The reason is that they have been exposed to fire safety knowledge through classes at their school. As a community service, a group of Goodyear Atomic firemen now are providing fire safety instruction for local children. They eventually will include teenagers and adults.

The Goodyear Public Fire Safety Awareness Program consists of about 45 minutes of instruction in the understanding of fire, fire and smoke detectors, crawling under smoke, evacuation from a burning building, reporting of fires, fire fighting equipment and the "stop, drop, roll" procedure to extinguish clothing fires.

The classes are being presented by plant firemen Mark Lewis, John Cannon and David Marhoover on their own time as a community service. Goodyear Atomic is sponsoring the

program by providing materials and other assistance.

Lewis explained that the firemen hope to conduct the awareness program in three phases. The first will be for pre-school children through third grade, the second for students through junior high school and the third for high school students and adults. Classes are being presented on request from teachers in the area.

The current program is particularly geared toward pre-school and kindergarten students with emphasis on their participation. The program approach will change for subsequent age groups.

Lewis said they hope to eventually involve other GAT firemen in the program and expand it to include safety meetings at the plant.

"Our intent is to help people learn how to protect their families and themselves from fire," Lewis explained. "Deaths and injuries can be prevented if people know what to do."

Maintenance wins attendance honor

Awards of Excellence have been made to 555 Goodyear Atomic employees for their attendance records during calendar 1981. Those receiving

the awards had no chargeable absences last year based upon eligibility criteria for the Attendance Award Program.

Maintenance Division led the way with 335 employees receiving awards. This was 28 percent of the 1,183 employees in the division. Of the 959 hourly employees in the division, 33 percent received an award.

The awards program was established in 1981 to recognize plant employees with exceptional attendance records. Awards were first made for calendar 1980.

Of the 555 employees receiving a certificate for 1981, 208 were also among the 432 employees who received a certificate for 1980.

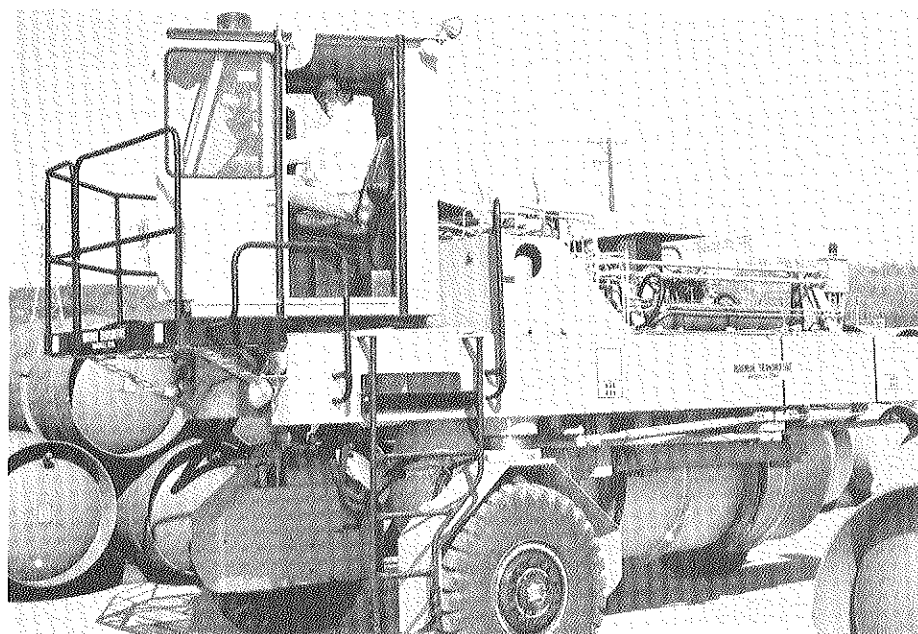
Althouse promoted

Jerry Althouse has been promoted to Development Manager for Goodyear's Lincoln, Neb., belt and automotive hose plant.

In his new position, Althouse will be responsible for all aspects of product development for the Lincoln plant.

Althouse joined Goodyear Atomic Corporation in 1957 as a member of the Technical Squadron training program and was assistant general manager, Operations, at the time of his transfer to Lincoln in 1980.

Jerry has been assigned to development, marketing and production responsibilities at Lincoln since 1980 in order to enable his familiarization with that plant's operations. In his new position, he will be a member of the Factory Council and responsible for the work of the entire Development Department.



Marmon straddle carrier features rotating cab

The cab on the new Marmon Transmotive straddle carrier hydraulically swivels so that the operator has good visibility in the direction of travel or operation. Specifications for the new carrier resulted from the work of the plant's "Straddle Buggy Committee" — which included engineers Dan Gross (in photo) and Jeff Gerz, Don Ferryman and John Simmering.

GAC president urges Congress to support energy, enrichment

The president of Goodyear Aerospace Corporation recently urged Congress to provide strong support of U.S. energy programs and prevent further losses of jobs and dollars to overseas competitors.

Robert W. Clark said in the mid-1970s the U.S. supplied all of the free world's enriched uranium, but in 1981 it supplied only 35 percent of those needs.

Erosion of the U.S. position, he said, not only affects the balance of trade, but also harms the U.S. economy through loss of jobs to competing nations like France and Japan, and to a consortium of German, Dutch and English companies.

Clark testified before the House Subcommittee on Energy Research and Production on March 31. He said over the past 30 years the U.S. sale of enriched uranium for use in nuclear power plants had contributed 8 billion dollars in income, much of it from overseas customers.

At Goodyear Aerospace alone, he said, more than 200 new jobs will be added this year as the company prepares to mass-produce gas centrifuges for the Department of Energy. Goodyear Aerospace has a 90-million-dollar Department of Energy contract to produce centrifuges for the gas centrifuge plant at Portsmouth. Construction of that plant also has provided jobs for 2,300 persons directly, and many others off-site at supplier plants in 41 states, Clark said.

He also urged Congress to provide full funding for the new Gas Centrifuge Enrichment Plant (GCEP) program at Portsmouth and suggested the program be accelerated. An accelerated schedule, he said, would allow the U.S. to save money by using

the less expensive method of enrichment.

"Failure to take advantage of the savings possible through the centrifuge enrichment process will only serve to weaken our competitive position and will result in further loss of market share, a loss that history has shown will be difficult to reverse," Clark said.

He also said further economies can be expected in the centrifuge enrichment process through improvements in machines. Already, he said, experimental machines produced and tested by Goodyear have shown a 21 percent improvement in enrichment efficiency.

Goodyear has invested 51 million dollars in new plants and equipment in Akron to produce gas centrifuges. "Slowdowns and stretch-outs in the program will jeopardize these investments and future investments if the program continues along a path of national uncertainty," he said.

"We feel strongly that the U.S. must maintain a position of world leadership in nuclear technology," Clark said, "and be a reliable supplier of enrichment services if we are to influence — in a positive and constructive fashion — the proper use of nuclear energy in the world."

1982 World's Fair

One-day general admission tickets to the 1982 World's Fair are \$9.95 (\$9.25 for adults over 55). One-day admission for children 4-11 years of age is \$8.25. There is a special two-day admission of \$15.95 for everyone. Children under 4 are admitted free. Season passes are available for \$100. Admission will allow visitors to enjoy exhibits, attractions, pavilions and entertainment at no additional charge.



Bennett



Miller



Simpkins



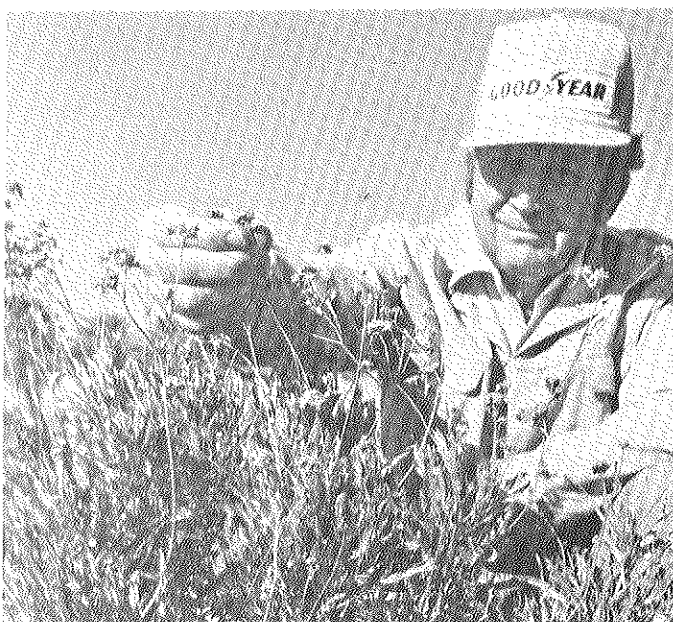
Althouse

Promotions

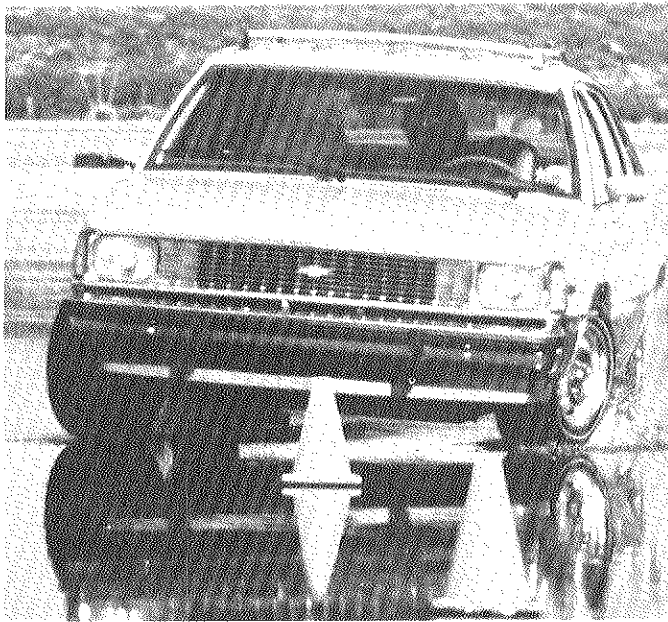
Jerry L. Bennett, police officer, has been promoted to Security Investigator (D-120). He reports to Howard M. Cutright, superintendent, Security.

Carl D. Miller has been promoted to General Foreman, Power Operations (D-851). He reports to S. J. Bednarczyk, supervisor.

Michael R. Simpkins has been promoted to Section Head, Budget and Support Services, in the Engineering Services Department (D-631). He reports to J. B. Fenton, supervisor.



A guayule shrub bush that grows wild in the southwestern United States and Mexico is shown under cultivation by a worker at Goodyear Farms near Phoenix (left). Goodyear recently produced the first new aircraft tires ever made from guayule under contract to the U.S. Navy. Motorists making the transition to front-wheel drive cars will discover a new degree



of snow and wet traction (right) as the cars literally pull themselves through difficult situations. Drivers at Goodyear's test tracks add all-season Arriva tires to evaluate their performance on front-wheel-drive autos.

New cars require good front tires

This year millions of Americans will be learning a new way to drive when they make a transition from rear-wheel to front-wheel-drive cars.

Over half of all the U.S. cars sold this year will be one where the engine drives the front wheels, a rapid change from virtually 100 percent rear-wheel drive vehicles a few years ago.

The transition, however, is nothing new for Goodyear's staff of test drivers who have been working for years with U.S. and foreign-made front-wheel-drive vehicles.

"Basically, it's a difference between pushing and pulling a car," said Bernie Pekar, who has been a Goodyear test driver for 25 years.

"The new cars are lighter and smaller but the way they are set up a lot of them handle better than some of the large cars I have driven," said Pekar, who evaluated original equipment tires for ride and handling.

"The thing that amazes me the most is the ease with which they operate on ice and snow. The car actually pulls itself through snow and ice.

"With front-wheel-drive a car can maintain traction in snow or on wet pavement and you are less likely to skid out. The pulling action gives better control," Pekar said.

This is especially true if the car is equipped with all-season tires such as Tempo or Arriva.

The biggest difference in driving comes in cornering maneuvers.

"When making a turn you should avoid going for the brake as you turn because this slows the front too quickly and the rear of the car can slide around," Pekar warned.

He said the driver should brake before a turn and accelerate gently going through it. If the rear tires begin to slide, moderate acceleration should bring the car back into line. The Goodyear test driver warned that slowing rapidly in this situation can make the situation worse.

"You have to steer your way out of trouble," Pekar said. "In cases of excessive speed in a turn, a front-wheel-drive car can plow nose first toward the outside of the turn. In this case the driver should attempt to straighten the wheels away from the turn while gradually backing off the accelerator.

"As the nose returns, moderate power will get the car back on course, but if the driver then fails to accelerate, the rear end will continue to swing out and another skid will result."

A driver must remember that the front tires are doing almost all the work — steering, drive power and about 60 percent of the braking. But with most of the weight also distributed on the front wheels, the traction is improved, and the front-wheel-drive will pull through many potential problems.

Tires from guayule tested for aircraft use

Rubber aircraft tires made from guayule, the scrubby desert plant that grows wild in the southwestern U.S. and Mexico, will leave an aircraft carrier flight deck at 215 miles an hour in tests being conducted by the U.S. Navy.

Sixteen guayule tires for use on the two main wheels of F-4 aircraft were built at Goodyear's aircraft tire plant at Danville, Va., for laboratory and actual land and carrier testing, said Donald E. Fogelsanger, general manager of Goodyear's aircraft tire operations.

Goodyear and others had previously participated in Navy programs to retread aircraft tires with guayule rubber, but this is the first time new tires have been built of the material, Fogelsanger said.

Actual tire size for the F-4 is 30 x 11.5-14.5, meaning 30 inches in outside diameter, 11.5 inches in shoulder width and 14.5 inches rim diameter.

Guayule, a potential domestic source of natural rubber, could help free the U.S. from dependence on foreign-grown rubber and build the government's emergency stockpile. All natural rubber consumed in the U.S. now is imported. It is preferred over synthetic rubber in aircraft tires because it has higher resistance to heat.

Spurring establishment of a domestic natural rubber industry are government and industry predictions that a worldwide natural rubber shortage of 500,000 metric tons will occur in less than 10 years, Fogelsanger said.

In 1980 Goodyear joined Arizona

State University, Agri-Business Research Corporation of Scottsdale, Ariz., and three Arizona Indian tribes in a cooperative project that sowed the seeds for the domestic natural rubber industry.

Under the project, Arizona desert land — now unused — could someday be planted in guayule, providing industry, employment and improved economic health, while easing the projected shortage of natural rubber.

Guayule rubber is essentially the same as natural rubber now imported from plantations abroad. Goodyear has used guayule to make earthmover tires, auto tires and even shoe soles to demonstrate its similarities to tree-grown rubber.

Now it will go flying on airplanes.

Goodyear faces increased tire sales competition

Goodyear, Bridgestone and Michelin are set to wage what one tire dealer calls "the worst competitive battle in the history of the tire business."

The three companies are out to improve their positions in the growing radial truck tire market.

According to an article in the March 1 issue of "Business Week," Bridge-

stone's recent purchase of the Firestone radial truck tire plant in Nashville is an indication the Japanese manufacturer is ready to challenge Goodyear and Michelin.

According to "Business Week," Michelin holds 40 percent of the radial truck tire market while Goodyear and Bridgestone each have about 20 percent. Goodyear has predicted that demand for truck radials will grow from five million units last year to 10.7 million in 1985.

Goodyear is rolling up its sleeve for the battle, according to the article, having just completed a major expansion at its Danville, Va., plant and planning another expansion at its Topeka, Kan., plant.

"Business Week" also noted that "a sharp improvement in the quality of Goodyear's truck radials within the last two years is impressing truckers and dealers." The magazine conducted a survey that showed Goodyear radials are considered as good as Bridge-

stone's and, thanks to a price that typically trails Michelin's by 10 percent, nearly equal to, if not better than, the French company's product when measured by cost performance.

An executive at one major tire service company was quoted as saying, "Historically, if you wanted a good radial, you only had Michelin to choose from. There's a choice now."

Many tire buyers reportedly believe Goodyear and Bridgestone are beginning to undermine Michelin's leadership in the radial truck tire market. Commercial Lovelace Motor Freight in Columbus, Ohio, for instance, has switched from Michelin to Goodyear within the past year.

"Michelin is going to have to do something to combat a loss of share," said a Commercial vice president.

The article said many trucking executives and dealers believe competition will intensify dramatically. "This is where they're going to go head to head," said one dealer.

the WINGFOOT CLAN

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Corporate achievements, future discussed at meeting

Goodyear Chairman Charles J. Pilliod Jr. said April 5 the company's advanced manufacturing systems, the global spread of its operations and "technology resources unequalled in our industry" will improve an already strong competitive position in the future.

Addressing the annual shareholders meeting, Pilliod also cited an improvement in Goodyear's financial position in 1981 as the firm contradicted general business trends with new sales and earnings records.

Other speakers at the meeting were Robert E. Mercer, president and chief operating officer; Jacques R. Sardas, group executive vice president and president of North American operations; and Ib Thomsen, group executive vice president and president of Goodyear International Corporation.

Pilliod said Goodyear's 1981 results of \$260.3 million in profit on sales of more than \$9 billion were accompanied by a 10 percent reduction in consolidated debt.

"Precise financial planning, restrained capital expenditures and

strict inventory control resulted in a consolidated debt reduction of \$140 million, lowering our debt ratio to 35 percent," he said.

In discussing the company's competitive ability, Pilliod noted that "in the recessive economies of the United States and Europe in 1981, Goodyear moved farther ahead of its competition, gaining market share in both areas as well as in Latin America and the upsurging economies of Southeast Asia.

"Our modernization of production capacity over the past five years, our geographic diversification and strong advances in technology have positioned us to lengthen our lead."

Thus, he continued, while preliminary indications are that net income for the first three months of 1982 will be approximately 25 percent lower than 1981's strong first quarter, "it does not shake our confidence about the future.

"We are ready to take advantage of any upturn later this year in the United States and Europe, or for the intensified competition that continued

stagnation could bring.

"Projections given in the current economic climate are suspect at best, but I feel true improvement will be reflected in the economy over the balance of the year, both here and abroad," Pilliod said.

"While thoughts may vary as to timing and methods, the administration's program to balance the budget over the next few years, as well as that of reducing government regulation, is one we can all support," Pilliod said. "Also, monetary restraint is needed. It has played an important role in reducing inflation and a step backward by increasing the money flow at this time would be disastrous.

"With faith and confidence — we can and will move ahead," he said. "I feel the economy has bottomed out, and if confidence can be restored, all the other elements are there to put us on the move both here and abroad to a lasting recovery."

Noting the approach of the April 20 deadline in negotiating a new master contract with the United Rubber Workers, Pilliod said successful completion "will depend on the willingness of both parties to accept that the key to both our goals is securing an agreement which will contribute to competitive, profitable operations."

That, he said, "is the only way in which we can hope to provide the jobs and economic security uppermost in the minds of our employees and, at the same time, an adequate return for our shareholders which will encourage the continued investment so necessary to growth in productivity and jobs.

Goodyear's emphasis on innovative technology, Pilliod said, "is not only for development of new, high quality products but also for improved work methods, more efficient equipment and better materials."

He said the most dramatic evidence of the company's commitment to technological leadership is the \$100 million World Technical Center now in the last half of completion in Akron. "This, along with our technical centers in Luxembourg, France and Northern Ireland, our Research Division in Akron and our research and development operations in every manufactur-

ing facility, gives us technology resources unequalled in our industry."

Pilliod went into some detail to describe Goodyear's diversification posture as it exists today, pointing out that the company's major line — tires — "is divided geographically so that this business is split on an approximately even basis between domestic and foreign operations.

"Our foreign tire business, in turn, is further broken down into 27 countries, providing diversification through the varying economies in these nations.

"Due to the size of our business in the United States, product diversification plays a more important part. Here, depending on the economic conditions, tires will represent 55 to 60 per-

(Continued on Page 7)

CLOSE-OUT SALE

Duo-Therm now is offering a special "Close Out" price to Goodyear and subsidiary employees on its Hearth Heater fireplace system and glass door assembly.

While quantities last, Goodyear Atomic employees can buy the Hearth Heater and glass door assembly in a set for \$169.95 plus shipping of \$25 for a total of \$194.95.

However, the company is in the process of negotiating to sell its entire line of Hearth Heater products and reserves the right to completely refuse an order once its present inventory is exhausted. Once that occurs, the line will no longer be available at all through Duo-Therm.

The Hearth Heater is a heat recovery system which can be installed in masonry fireplaces. Heat that is normally lost up the chimney is recovered by two heat chambers that project into the fireplace opening. An automatic fan gently circulates warm air into the house.

A price list/order form and measurement sheet to be sent to Duo-Therm, along with a personal check or money order, are available from Irma Blakeman in the Human Resources Department, X-100 Building.

Tire refund program grows

Goodyear's employee tire refund program thrived during 1981 as jumps were recorded in tires purchased, amounts refunded and overall participants.

Total refunds paid out under the program were more than \$3.7 million. Employees and retirees received \$890,168 more in 1981 as compared to 1980.

Tire refund requests were up more than 20 percent from 49,723 in 1980 to 59,949 in 1981.

A total of 37,012 employees and retirees participated in the program, up 15 percent from 1980. There were 156,932 tires purchased as compared to 127,731 in 1980.

Many Goodyear Atomic employees participated in 1981 and made 1,874 requests for refunds. We applied for refunds on 8,502 tires and 145 changeovers totalling \$193,400. In 1980 Goodyear Atomic employees and

retirees claimed 1,588 refunds on 6,577 tires for a total of \$147,105 in refunds.

Under the program, an employee or retiree and relatives residing in their home can receive a partial refund for six Goodyear tires each calendar year for each vehicle owned by the individual.

A 30 percent refund is paid on the actual purchase price for all radial auto and Wrangler Radial Light Truck/RV tires. Other automobile tires qualify for a 25 percent refund, along with truck tires under 8.25-20, motorcycle tires, boat trailer tires, camper tires, farm service tires and garden tractor tires. Bicycle tires, tubes, truck tires size 8.25-20 and over, competitive brand tires, retreads and racing tires are not eligible for refunds.

Tire refund forms, literature and information are available from Administrative Services.

Goodyear executive discusses economics at second luncheon

Rob Loughridge, director of Economic and Strategic Planning for The Goodyear Tire & Rubber Company, was the guest speaker during GAT's second "Brown Bag" luncheon. The third in the series of pilot programs will be April 29 with the special Taj Majal film which was sponsored by Goodyear.



Retirees

Four Goodyear Atomic employees are retiring effective April 1.

Arthur B. Steger, Waverly, senior engineer (D-601), is taking normal retirement after almost 40 years of service.

Samuel H. Hulett, Portsmouth, senior engineer (D-905), is taking normal retirement after more than 16 years of service.

Norman W. James, Waverly, senior engineer (D-611), is taking normal retirement after almost six years of service.

Howard Vogel, Portsmouth, maintenance mechanic 1/C (D-714), elected to take early retirement after more than 28 years of service.

Pilliod speaks to shareholders

(Continued from Page 6)

cent of our business with the balance made up of defense, chemical and industrial rubber products and a host of others including automotive-related."

Mercer said Goodyear in 1981 followed a strategy of capitalizing on investments and expansions from prior years, taking advantage of new technologies and consolidating assets, including the experience, talent and initiative of the company's people.

He said that the quality of the company's products is the highest ever, and is being delivered with improved productivity and greater efficiency.

Thomsen said that as Goodyear's competition "is becoming global, so is the economic environment becoming more interdependent than ever. The partial insulation from world economies, which used to exist in most of the developing world, is now being sacrificed in favor of more open market policies.

"With global spread of operations and ready availability of top-of-the-line products, we remain better poised than any of our competitors to take advantage of such open market policies."

Straddle carrier

(Continued from Page 1)

function. When an operator releases the foot pedal, the compression of the hydraulic fluid virtually brings the carrier to a stop. The two non-drive wheels have standard drum-type brakes.

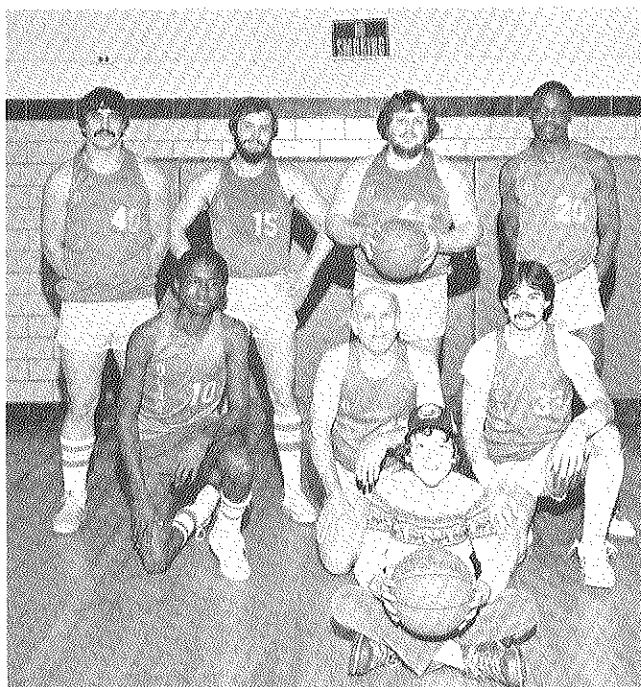
"Repair problems should be minimized since there is no direct power transmission from the primary engine to the wheels except for hydraulic lines," Gross noted. "Drive shaft replacement is a major repair procedure common to the other straddle carriers."

"It's a more complex piece of equipment," he added, "but made necessary in order to gain safety features such as the positive grapple assembly and interlock control logic."

Studies are under way to adapt technology of the new carrier to other straddle buggies now in use at the plant.

John Simmering, Uranium Operations (D-820), is training operators to use the new Marmon carrier. He and the operators "have no complaints with it. Once you operate the unit and see it move, it's not as complicated as it looks. We feel it will surpass any other carrier in performance and safety."

Gross and Simmering echoed the feelings of all engineers and committees involved in the project and the machine operators. "As far as we're concerned, the Marmon carrier is a prototype in concept and design for straddle carriers of the future in the uranium enrichment industry."



OCAW is victor in 1982 company basketball tourney

The OCAW basketball team (left) won the finals over the Hustlers (below) on March 8. Championship team members were (back row) Gabby Smith, Ferman Beavers, Denny Bloomfield, Al Watkins, (front row) John Watkins, Sam Ray, Paul Bloomfield and (seated) team manager Scott Bloomfield. Hustlers are (back row) Richard Grant, Bob Galliff, Tom Gentry, Tom Motley, Robert Hairston, (front row) Jeff Ragland, Tyrone Adams, Ted Galliff, Vince Kennedy, Ron Baker and (seated) team manager Stacey Ragland.



Employee wins magazine's fishing award

By Hank Eblen

Sports Afield magazine has announced the award of a "Best in Species" angling citation to one of Goodyear Atomic's employees.

Sam Peters, Mechanical Engineering (D-621), received a silver insignia and a parchment certificate commemorating his achievement.

Sam won the award for Tennessee by catching a seven pound, nine ounce walleye in that state's Dale Hollow



Sam Peters caught this seven pound, nine ounce walleye in Tennessee's Dale Hollow Lake last year and received a Sports Afield magazine award.

Lake on March 28, 1981. This was the largest walleye taken in the state in 1981.

The magazine's annual State Fishing Awards program encompasses all 50 states and has the purpose of encouraging the catching of fish on sporting tackle.

Basketball honors

Kathy Detillion, a senior at Eastern High School and the daughter of Delbert Detillion (D-351), was named in March to the first team All-Ohio Class A girl's basketball team by the Associated Press.

The 5-6 senior guard averaged 24 points per game for Eastern's Lady Eagles, who were undefeated during the regular season and advanced to regional semifinals. Kathy scored 1,634 points during her career at Eastern.

She hit 62 percent of her attempts from the floor, 229 of 367, and 26 of 36 free throws for 72 percent. She also had 42 rebounds, even as a point guard, as well as 159 assists and 101 recoveries.

She is the first girl from Pike County to gain an All-State first team rating.

Time equals money, losses considerable

Grand larceny is nailing American industry to the tune of at least \$120 billion annually and probably more, according to a special report issued in New York.

The larceny is not at gunpoint nor in the form of pilferage, theft of equipment or other typical crimes against business such as fraud, arson or kickbacks.

It takes the form of time stolen by employees from the companies that issue their paychecks.

The report by Robert Half, who heads a financial, accounting and data processing executive recruiting firm in New York called Robert Half International, Inc., shows that time-theft's effect on the economy is devastating.

The report estimates that in 1981 employee time-theft averaged 4 hours 18 minutes per employee, per week. The first time-theft survey conducted in 1970 showed that the practice cost industry an average of 3 hours 30 minutes per employee per week.

When combined with "conventional" crimes against industry that amount to approximately \$40 billion lost annually to stolen equipment, pilferage, arson and other crimes, time-theft probably costs industry and the economy from \$160 to \$190 billion per year.

Half's figures came from interviews with corporate executives of 312 firms across the country.

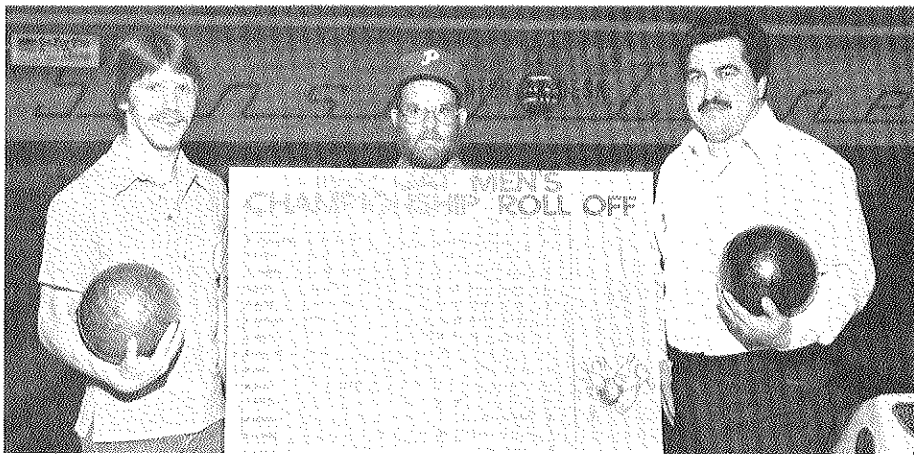
The survey recognizes that all employees require some respite from workday activities and that no matter how conscientious, all employees will do some "goofing off."

But it points out some typical time-theft mechanisms that rob employers and help create havoc in the economy:

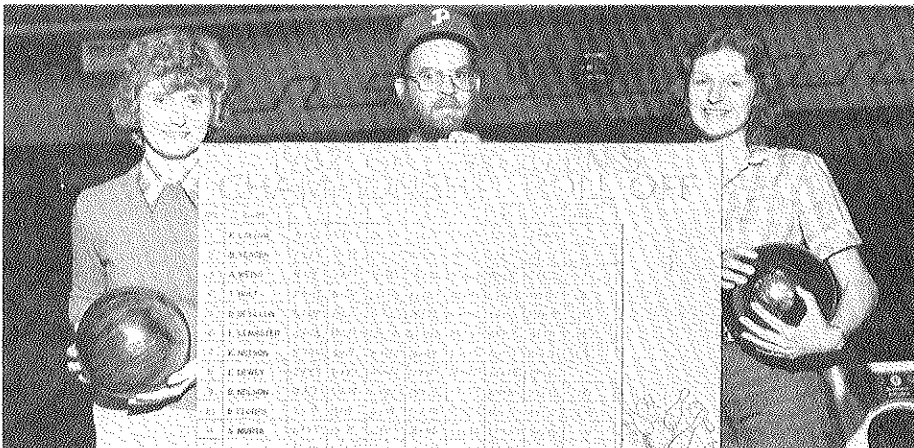
- consistent late arrival at work
- consistent early departure
- lengthy lunch periods
- unwarranted "sick" days
- unreasonable time spent socializing with co-workers
- reading non-pertinent literature on the job
- conducting personal business on the job
- taking overly long coffee breaks
- lack of attentiveness to work
- making numerous lengthy personal phone calls
- deliberate work slowdowns to force overtime
- lunching in office then taking full lunch period
- operating a personal business on the side

The Half report says a worker stealing 4 hours 18 minutes per week deprives the company of more than six full 35-hour workweeks over a year's time.

In 1980, the study showed the average theft of time per employee per week was four hours five minutes. The theft increase of 13 minutes during 1981 reflects the largest year-to-year increase since the study began, Half said.



Mike Hensley, Gary Doerr, Dan Flores



Jealene Deacon, Gary Doerr, Alene Weiss

Bowling Champions

Alene Weiss, Systems & Programming (D-962), and Dan Flores, Electrical Engineering (D-611), are the 1982 company bowling champions. The runners-up were Jealene Deacon, wife of Gene Deacon, Process Technology (D-521), and Mike Hensley, Mail Service (D-981).

The championship was an event of March 6 at Sunset Lanes in Portsmouth. A total of 29 bowlers competed in the tournament, 15 in the men's category and 14 for the women's championship. The Peterson Point System determined the rankings.

Bowlers in the men's roll-off ranked as follows: Dan Flores, Mike Hensley, Dave Weiss, Ed Henry, Joe Slone, Rich Day, Bill Johnson, Chuck Whittaker, Tony Thomas, Steve Battle, Ralph Strickland, Dan Gash, Mark Scott, Dave Richter and Pete Cyrus.

Women bowlers ranked as follows: Alene Weiss, Jealene Deacon, Rita Robbins, Sandy Murta, Lucille LeMaster, Phyllis Lallow, Barbara Yeager, Tillie Bolt, Edith Dewey, Barbara Nelson, Debbie Detillion, Jeanette Langford, Kathy Nelson and Becca Flores.

Gary Doerr, organizer of the tournament, extended thanks to scorekeepers Bill Johnson, Alene Weiss, Marty Redden, Dan Gash, Walt Johnson, Randy Nelson, Dave Weiss, Marty Redden Jr. and Peg Multer.

Cost awards are presented

Al Williamson and Susan Black (left) passed out the awards to employees who had a Cost Reduction "Idea" accepted in 1981 during a March luncheon. There are now 594 members of the Cost Reduction Club.



Diamond miner's best friend is a dependable Goodyear tire

The world's highest diamond mine, perched nearly two miles up in this tiny mountain kingdom on the roof of Africa, is the setting for one of the most unusual uses for ordinary truck tires.

Surrounded by the peaks of the Maluti and Drakensberg mountain ranges in the southern Africa country of Lesotho, the Letseng-la-Terai mine called on Goodyear to supply 22 ordinary-looking truck tires to cradle and rotate a 45-ton drum that filters diamonds from dirt scooped from the excavation.

About \$25 million in diamonds are mined annually from the remote area at an altitude of 10,560 feet where weather extremes can cycle through four seasons in a single day.

In addition to the drum application, where officials say the tires probably will outlast the life of the mine, Goodyear also supplies most of the off-road tires used on 35-ton earth-movers that carry ore from the

350-foot-deep open pit operation.

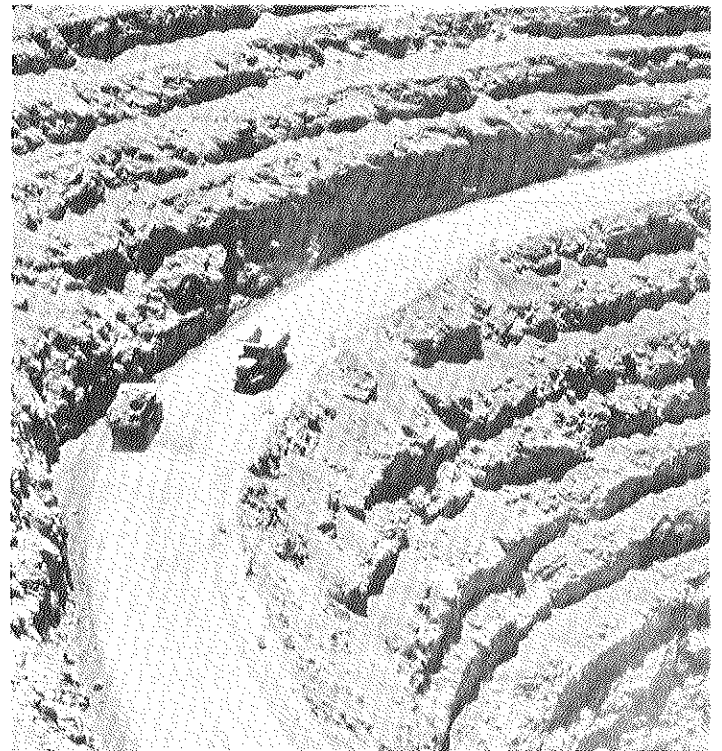
Lesotho is a tiny kingdom about one-fourth the size of Ohio, completely surrounded by the Republic of South Africa. About 700 are employed at the Letseng-la-Terai mine, which was started in 1977. At that time 24,000 tons of equipment had to be trucked 100 miles up a rough, single-lane road to begin work on the mine's main pit.

Unlike more commonly mined minerals that are found in veins lying relatively parallel to the earth's surface, diamonds are found in more vertical circular or elliptically shaped "pipes." The so-called pipes generally are 600 to 3,000 feet in diameter.

Officials say operations in the main pit probably will be economically feasible for about one more year, or until the depth reaches 460 feet. There is, however, a smaller satellite "pipe" nearby and work already has begun on a pit that will be more than 300 feet deep in about four years.

Diamonds in the rough

Down-to-earth products like Terex and Caterpillar earth-mover trucks rolling on Goodyear tires work in the seemingly mystical world of diamond mining. Here trucks pass on the grade from a mine in the African mountain kingdom of Lesotho.



Goodyear Atomic Corporation

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